```
***This UCI was generated using Multi Simulation Manager. Pollutant contributions
***from all the point and nonpoint sources  was reduced by 75% (mult factor of 0.25
***to original mult factors).
*** This uci has Schematic block using NLCD 2011.
*** and uses a Point Source wdm file that uses 2015 (not 2009) data for all years
*** as well as using 2009 litter application data for all years
*** and has been extended back to start in 1992
***On Feb 6, 2018, Anurag added NACA PS and reduced Echo output level to decrease run time.
RUN

GLOBAL
  UCI Created by WinHSPF for IRW
  START       1992/01/01 00:00  END    2009/12/31 24:00
  RUN INTERP OUTPT LEVELS    1    1
  RESUME     0 RUN     1                        UNITS    1
END GLOBAL

FILES
<FILE>  <UN#>***<----FILE NAME------------------------------------------------>
MESSU      24   ..\..\..\..\Temp\IRW.ech
          91   ..\..\..\..\Temp\IRW.out
          93   ..\..\..\..\Temp\IRW_PERLND.out
WDM1       25   IRW_base.wdm
WDM2       26   WDM_Input\IRW_MET.wdm
WDM3       27   WDM_Input\PointSource2015.wdm
WDM4       28   EFDC.wdm
BINO       92   ..\..\..\..\Temp\IRW_PERLND.hbn
BINO       95   ..\..\..\..\Temp\IRW_IMPLND.hbn
BINO       94   ..\..\..\..\Temp\IRW_RCHRES.hbn
END FILES

OPN SEQUENCE
   INGRP              INDELT 01:00
     PERLND      21
     PERLND      22
     PERLND      23
     PERLND      24
     PERLND      25
     PERLND      26
     PERLND      27
     PERLND      28
     PERLND      29
     PERLND      30
     PERLND      32
     IMPLND      26
     IMPLND      27
     IMPLND      28

     PERLND      41
     PERLND      42
     PERLND      43
     PERLND      44
     PERLND      45
     PERLND      46
     PERLND      47
     PERLND      48
```

PERLND 49
PERLND 50
PERLND 52
IMPLND 46
IMPLND 47
IMPLND 48

PERLND 61
PERLND 62
PERLND 63
PERLND 64
PERLND 65
PERLND 66
PERLND 67
PERLND 68
PERLND 69
PERLND 70
PERLND 72
IMPLND 66
IMPLND 67
IMPLND 68

PERLND 81
PERLND 82
PERLND 83
PERLND 84
PERLND 85
PERLND 86
PERLND 87
PERLND 88
PERLND 89
PERLND 90
PERLND 92
IMPLND 86
IMPLND 87
IMPLND 88

PERLND 101
PERLND 102
PERLND 103
PERLND 104
PERLND 105
PERLND 106
PERLND 107
PERLND 108
PERLND 109
PERLND 110
PERLND 112
IMPLND 106
IMPLND 107
IMPLND 108

PERLND 121
PERLND 122
PERLND 123
PERLND 124

PERLND 125
PERLND 126
PERLND 127
PERLND 128
PERLND 129
PERLND 130
PERLND 132
IMPLND 126
IMPLND 127
IMPLND 128

PERLND 141
PERLND 142
PERLND 143
PERLND 144
PERLND 145
PERLND 146
PERLND 147
PERLND 148
PERLND 149
PERLND 150
PERLND 152
IMPLND 146
IMPLND 147
IMPLND 148

PERLND 161
PERLND 162
PERLND 163
PERLND 164
PERLND 165
PERLND 166
PERLND 167
PERLND 168
PERLND 169
PERLND 170
PERLND 172
IMPLND 166
IMPLND 167
IMPLND 168

PERLND 181
PERLND 182
PERLND 183
PERLND 184
PERLND 185
PERLND 186
PERLND 187
PERLND 188
PERLND 189
PERLND 190
PERLND 192
IMPLND 186
IMPLND 187
IMPLND 188

```
PERLND    201
PERLND    202
PERLND    203
PERLND    204
PERLND    205
PERLND    206
PERLND    207
PERLND    208
PERLND    209
PERLND    210
PERLND    212
IMPLND    206
IMPLND    207
IMPLND    208

PERLND    221
PERLND    222
PERLND    223
PERLND    224
PERLND    225
PERLND    226
PERLND    227
PERLND    228
PERLND    229
PERLND    230
PERLND    232
IMPLND    226
IMPLND    227
IMPLND    228

PERLND    241
PERLND    242
PERLND    243
PERLND    244
PERLND    245
PERLND    246
PERLND    247
PERLND    248
PERLND    249
PERLND    250
PERLND    252
IMPLND    246
IMPLND    247
IMPLND    248

PERLND    261
PERLND    262
PERLND    263
PERLND    264
PERLND    265
PERLND    266
PERLND    267
PERLND    268
PERLND    269
PERLND    270
PERLND    272
```

IMPLND 266
IMPLND 267
IMPLND 268

PERLND 281
PERLND 282
PERLND 283
PERLND 284
PERLND 285
PERLND 286
PERLND 287
PERLND 288
PERLND 289
PERLND 290
PERLND 292
IMPLND 286
IMPLND 287
IMPLND 288

PERLND 321
PERLND 322
PERLND 323
PERLND 324
PERLND 325
PERLND 326
PERLND 327
PERLND 328
PERLND 329
PERLND 330
PERLND 332
IMPLND 326
IMPLND 327
IMPLND 328

PERLND 341
PERLND 342
PERLND 343
PERLND 344
PERLND 345
PERLND 346
PERLND 347
PERLND 348
PERLND 349
PERLND 350
PERLND 352
IMPLND 346
IMPLND 347
IMPLND 348

PERLND 361
PERLND 362
PERLND 363
PERLND 364
PERLND 365
PERLND 366
PERLND 367

PERLND 368
PERLND 369
PERLND 370
PERLND 372
IMPLND 366
IMPLND 367
IMPLND 368

PERLND 381
PERLND 382
PERLND 383
PERLND 384
PERLND 385
PERLND 386
PERLND 387
PERLND 388
PERLND 389
PERLND 390
PERLND 392
IMPLND 386
IMPLND 387
IMPLND 388

PERLND 401
PERLND 402
PERLND 403
PERLND 404
PERLND 405
PERLND 406
PERLND 407
PERLND 408
PERLND 409
PERLND 410
PERLND 412
IMPLND 406
IMPLND 407
IMPLND 408

PERLND 421
PERLND 422
PERLND 423
PERLND 424
PERLND 425
PERLND 426
PERLND 427
PERLND 428
PERLND 429
PERLND 430
PERLND 432
IMPLND 426
IMPLND 427
IMPLND 428

PERLND 441
PERLND 442
PERLND 443

PERLND 444
PERLND 445
PERLND 446
PERLND 447
PERLND 448
PERLND 449
PERLND 450
PERLND 452
IMPLND 446
IMPLND 447
IMPLND 448

PERLND 461
PERLND 462
PERLND 463
PERLND 464
PERLND 465
PERLND 466
PERLND 467
PERLND 468
PERLND 469
PERLND 470
PERLND 472
IMPLND 466
IMPLND 467
IMPLND 468

PERLND 481
PERLND 482
PERLND 483
PERLND 484
PERLND 485
PERLND 486
PERLND 487
PERLND 488
PERLND 489
PERLND 490
PERLND 492
IMPLND 486
IMPLND 487
IMPLND 488

PERLND 501
PERLND 502
PERLND 503
PERLND 504
PERLND 505
PERLND 506
PERLND 507
PERLND 508
PERLND 509
PERLND 510
PERLND 512
IMPLND 506
IMPLND 507
IMPLND 508

PERLND 521
PERLND 522
PERLND 523
PERLND 524
PERLND 525
PERLND 526
PERLND 527
PERLND 528
PERLND 529
PERLND 530
PERLND 532
IMPLND 526
IMPLND 527
IMPLND 528

PERLND 541
PERLND 542
PERLND 543
PERLND 544
PERLND 545
PERLND 546
PERLND 547
PERLND 548
PERLND 549
PERLND 550
PERLND 552
IMPLND 546
IMPLND 547
IMPLND 548

PERLND 301
PERLND 302
PERLND 303
PERLND 304
PERLND 305
PERLND 306
PERLND 307
PERLND 308
PERLND 309
PERLND 310
PERLND 312
IMPLND 306
IMPLND 307
IMPLND 308

PERLND 621
PERLND 622
PERLND 623
PERLND 624
PERLND 625
PERLND 626
PERLND 627
PERLND 628
PERLND 629
PERLND 630

PERLND 632
IMPLND 626
IMPLND 627
IMPLND 628

PERLND 561
PERLND 562
PERLND 563
PERLND 564
PERLND 565
PERLND 566
PERLND 567
PERLND 568
PERLND 569
PERLND 570
PERLND 572
IMPLND 566
IMPLND 567
IMPLND 568

PERLND 581
PERLND 582
PERLND 583
PERLND 584
PERLND 585
PERLND 586
PERLND 587
PERLND 588
PERLND 589
PERLND 590
PERLND 592
IMPLND 586
IMPLND 587
IMPLND 588

PERLND 641
PERLND 642
PERLND 643
PERLND 644
PERLND 645
PERLND 646
PERLND 647
PERLND 648
PERLND 649
PERLND 650
PERLND 652
IMPLND 646
IMPLND 647
IMPLND 648

PERLND 601
PERLND 602
PERLND 603
PERLND 604
PERLND 605
PERLND 606

PERLND	607
PERLND	608
PERLND	609
PERLND	610
PERLND	612
IMPLND	606
IMPLND	607
IMPLND	608

PERLND	661
PERLND	662
PERLND	663
PERLND	664
PERLND	665
PERLND	666
PERLND	667
PERLND	668
PERLND	669
PERLND	670
PERLND	672
IMPLND	666
IMPLND	667
IMPLND	668

RCHRES	100
RCHRES	714
RCHRES	702
RCHRES	716
RCHRES	412
RCHRES	608
RCHRES	728
RCHRES	402
RCHRES	108
RCHRES	609
RCHRES	602
RCHRES	604
RCHRES	204
RCHRES	208
RCHRES	102
RCHRES	638
RCHRES	318
RCHRES	214
RCHRES	202
RCHRES	306
RCHRES	901
RCHRES	718
RCHRES	703
RCHRES	404
RCHRES	723
RCHRES	502
RCHRES	302
RCHRES	312
RCHRES	322
RCHRES	514
RCHRES	314
RCHRES	916

```
    RCHRES    902
    RCHRES    804
    RCHRES    904
    RCHRES    504
    RCHRES    308
    RCHRES    738
    RCHRES    806
    RCHRES    732
    RCHRES    515
    RCHRES    742
    RCHRES    802
    RCHRES    505
***     RCHRES     918  This is a dummy reach
    RCHRES    304
    RCHRES    316
    RCHRES    324
    RCHRES    938
    RCHRES    805
    RCHRES    414
    RCHRES    606
    RCHRES    326
    RCHRES    206
    RCHRES    212
    RCHRES    722
    RCHRES    807
    RCHRES    906
    RCHRES    704
    RCHRES    705
    RCHRES    908
    RCHRES    612
    RCHRES    516
    RCHRES    706
    RCHRES    725
    RCHRES    216
    RCHRES    418
    RCHRES    420
    RCHRES    614
    RCHRES    406
    RCHRES    408
    RCHRES    416
    RCHRES    508
    RCHRES    110
    RCHRES    506
    RCHRES    507
    RCHRES    512
    RCHRES    639
    RCHRES    120
    RCHRES    708
    RCHRES    518
    RCHRES    522
    RCHRES    523
    RCHRES    712
    RCHRES    924
    RCHRES    912
    RCHRES    724
    RCHRES    726
```

```
    RCHRES     736
    RCHRES     746
    RCHRES     130
    RCHRES     101
    RCHRES     104
    RCHRES     140
    RCHRES     150
    RCHRES     160
    RCHRES     600
    RCHRES     610
    RCHRES     524
    RCHRES     620
    RCHRES     630
***     RCHRES     928 This is a dummy reach
    RCHRES     635
    RCHRES     637
    RCHRES     640
    RCHRES     650
***     RCHRES     932 This is a dummy reach
***     RCHRES     942 This is a dummy reach
***     RCHRES     946 This is a dummy reach
***     RCHRES     948 This is a dummy reach
    RCHRES     922
    RCHRES     936
    RCHRES     808
    RCHRES     660
    RCHRES     670
    RCHRES     800
    RCHRES     810
    RCHRES     820
    RCHRES     830
    RCHRES     748
    RCHRES     751
    RCHRES     752
    RCHRES     809
    RCHRES     840
    RCHRES     850
    RCHRES     914
    RCHRES     860
    RCHRES     870
    RCHRES     880
    RCHRES     890
    RCHRES     900
***     COPY         1
***     COPY         2
***     COPY         3
***     COPY         4
***     COPY         5
***     COPY         6
***     COPY         7
***     COPY         8
***     COPY         9
***     COPY        10
***     COPY        11
    COPY       100
    COPY       900
```

```
    COPY      914
    COPY      928
    COPY      918
    COPY      924
    COPY      932
    COPY      942
    COPY      948
    COPY      946
***GENER 800 is to get the composite concentration of 900, 914 and 916
***COPY 800 will be used to sum the flows and concentrations
    COPY      800
    GENER     800
  END INGRP
END OPN SEQUENCE

PERLND
  ACTIVITY
*** <PLS >            Active Sections                          ***
*** x -  x ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
  21       1   0   1   1   1   1   1   0   0   0   0   0
  22  24   1   0   1   1   1   1   0   1   0   1   1   0
  25  30   1   0   1   1   1   1   1   0   0   0   0   0
  32       1   0   1   1   1   1   0   1   0   1   1   0
  41       1   0   1   1   1   1   1   0   0   0   0   0
  42  44   1   0   1   1   1   1   0   1   0   1   1   0
  45  50   1   0   1   1   1   1   1   0   0   0   0   0
  52       1   0   1   1   1   1   0   1   0   1   1   0
  61       1   0   1   1   1   1   1   0   0   0   0   0
  62  64   1   0   1   1   1   1   0   1   0   1   1   0
  65  70   1   0   1   1   1   1   1   0   0   0   0   0
  72       1   0   1   1   1   1   0   1   0   1   1   0
  81       1   0   1   1   1   1   1   0   0   0   0   0
  82  84   1   0   1   1   1   1   0   1   0   1   1   0
  85  90   1   0   1   1   1   1   1   0   0   0   0   0
  92       1   0   1   1   1   1   0   1   0   1   1   0
 101       1   0   1   1   1   1   1   0   0   0   0   0
 102 104   1   0   1   1   1   1   0   1   0   1   1   0
 105 110   1   0   1   1   1   1   1   0   0   0   0   0
 112       1   0   1   1   1   1   0   1   0   1   1   0
 121       1   0   1   1   1   1   1   0   0   0   0   0
 122 124   1   0   1   1   1   1   0   1   0   1   1   0
 125 130   1   0   1   1   1   1   1   0   0   0   0   0
 132       1   0   1   1   1   1   0   1   0   1   1   0
 141       1   0   1   1   1   1   1   0   0   0   0   0
 142 144   1   0   1   1   1   1   0   1   0   1   1   0
 145 150   1   0   1   1   1   1   1   0   0   0   0   0
 152       1   0   1   1   1   1   0   1   0   1   1   0
 161       1   0   1   1   1   1   1   0   0   0   0   0
 162 164   1   0   1   1   1   1   0   1   0   1   1   0
 165 170   1   0   1   1   1   1   1   0   0   0   0   0
 172       1   0   1   1   1   1   0   1   0   1   1   0
 181       1   0   1   1   1   1   1   0   0   0   0   0
 182 184   1   0   1   1   1   1   0   1   0   1   1   0
 185 190   1   0   1   1   1   1   1   0   0   0   0   0
 192       1   0   1   1   1   1   0   1   0   1   1   0
 201       1   0   1   1   1   1   1   0   0   0   0   0
```

202	204	1	0	1	1	1	1	0	1	0	1	1	0
205	210	1	0	1	1	1	1	1	0	0	0	0	0
212		1	0	1	1	1	1	0	1	0	1	1	0
221		1	0	1	1	1	1	1	0	0	0	0	0
222	224	1	0	1	1	1	1	0	1	0	1	1	0
225	230	1	0	1	1	1	1	1	0	0	0	0	0
232		1	0	1	1	1	1	0	1	0	1	1	0
241		1	0	1	1	1	1	1	0	0	0	0	0
242	244	1	0	1	1	1	1	0	1	0	1	1	0
245	250	1	0	1	1	1	1	1	0	0	0	0	0
252		1	0	1	1	1	1	0	1	0	1	1	0
261		1	0	1	1	1	1	1	0	0	0	0	0
262	264	1	0	1	1	1	1	0	1	0	1	1	0
265	270	1	0	1	1	1	1	1	0	0	0	0	0
272		1	0	1	1	1	1	0	1	0	1	1	0
281		1	0	1	1	1	1	1	0	0	0	0	0
282	284	1	0	1	1	1	1	0	1	0	1	1	0
285	290	1	0	1	1	1	1	1	0	0	0	0	0
292		1	0	1	1	1	1	0	1	0	1	1	0
301		1	0	1	1	1	1	1	0	0	0	0	0
302	304	1	0	1	1	1	1	0	1	0	1	1	0
305	310	1	0	1	1	1	1	1	0	0	0	0	0
312		1	0	1	1	1	1	0	1	0	1	1	0
321		1	0	1	1	1	1	1	0	0	0	0	0
322	324	1	0	1	1	1	1	0	1	0	1	1	0
325	330	1	0	1	1	1	1	1	0	0	0	0	0
332		1	0	1	1	1	1	0	1	0	1	1	0
341		1	0	1	1	1	1	1	0	0	0	0	0
342	344	1	0	1	1	1	1	0	1	0	1	1	0
345	350	1	0	1	1	1	1	1	0	0	0	0	0
352		1	0	1	1	1	1	0	1	0	1	1	0
361		1	0	1	1	1	1	1	0	0	0	0	0
362	364	1	0	1	1	1	1	0	1	0	1	1	0
365	370	1	0	1	1	1	1	1	0	0	0	0	0
372		1	0	1	1	1	1	0	1	0	1	1	0
381		1	0	1	1	1	1	1	0	0	0	0	0
382	384	1	0	1	1	1	1	0	1	0	1	1	0
385	390	1	0	1	1	1	1	1	0	0	0	0	0
392		1	0	1	1	1	1	0	1	0	1	1	0
401		1	0	1	1	1	1	1	0	0	0	0	0
402	404	1	0	1	1	1	1	0	1	0	1	1	0
405	410	1	0	1	1	1	1	1	0	0	0	0	0
412		1	0	1	1	1	1	0	1	0	1	1	0
421		1	0	1	1	1	1	1	0	0	0	0	0
422	424	1	0	1	1	1	1	0	1	0	1	1	0
425	430	1	0	1	1	1	1	1	0	0	0	0	0
432		1	0	1	1	1	1	0	1	0	1	1	0
441		1	0	1	1	1	1	1	0	0	0	0	0
442	444	1	0	1	1	1	1	0	1	0	1	1	0
445	450	1	0	1	1	1	1	1	0	0	0	0	0
452		1	0	1	1	1	1	0	1	0	1	1	0
461		1	0	1	1	1	1	1	0	0	0	0	0
462	464	1	0	1	1	1	1	0	1	0	1	1	0
465	470	1	0	1	1	1	1	1	0	0	0	0	0
472		1	0	1	1	1	1	0	1	0	1	1	0
481		1	0	1	1	1	1	1	0	0	0	0	0

```
 482 484   1   0   1   1   1   1   0   1   0   1   1   0
 485 490   1   0   1   1   1   1   1   0   0   0   0   0
 492       1   0   1   1   1   1   0   1   0   1   1   0
 501       1   0   1   1   1   1   1   0   0   0   0   0
 502 504   1   0   1   1   1   1   0   1   0   1   1   0
 505 510   1   0   1   1   1   1   1   0   0   0   0   0
 512       1   0   1   1   1   1   0   1   0   1   1   0
 521       1   0   1   1   1   1   1   0   0   0   0   0
 522 524   1   0   1   1   1   1   0   1   0   1   1   0
 525 530   1   0   1   1   1   1   1   0   0   0   0   0
 532       1   0   1   1   1   1   0   1   0   1   1   0
 541       1   0   1   1   1   1   1   0   0   0   0   0
 542 544   1   0   1   1   1   1   0   1   0   1   1   0
 545 550   1   0   1   1   1   1   1   0   0   0   0   0
 552       1   0   1   1   1   1   0   1   0   1   1   0
 561       1   0   1   1   1   1   1   0   0   0   0   0
 562 564   1   0   1   1   1   1   0   1   0   1   1   0
 565 570   1   0   1   1   1   1   1   0   0   0   0   0
 572       1   0   1   1   1   1   0   1   0   1   1   0
 581       1   0   1   1   1   1   1   0   0   0   0   0
 582 584   1   0   1   1   1   1   0   1   0   1   1   0
 585 590   1   0   1   1   1   1   1   0   0   0   0   0
 592       1   0   1   1   1   1   0   1   0   1   1   0
 601       1   0   1   1   1   1   1   0   0   0   0   0
 602 604   1   0   1   1   1   1   0   1   0   1   1   0
 605 610   1   0   1   1   1   1   1   0   0   0   0   0
 612       1   0   1   1   1   1   0   1   0   1   1   0
 621       1   0   1   1   1   1   1   0   0   0   0   0
 622 624   1   0   1   1   1   1   0   1   0   1   1   0
 625 630   1   0   1   1   1   1   1   0   0   0   0   0
 632       1   0   1   1   1   1   0   1   0   1   1   0
 641       1   0   1   1   1   1   1   0   0   0   0   0
 642 644   1   0   1   1   1   1   0   1   0   1   1   0
 645 650   1   0   1   1   1   1   1   0   0   0   0   0
 652       1   0   1   1   1   1   0   1   0   1   1   0
 661       1   0   1   1   1   1   1   0   0   0   0   0
 662 664   1   0   1   1   1   1   0   1   0   1   1   0
 665 670   1   0   1   1   1   1   1   0   0   0   0   0
 672       1   0   1   1   1   1   0   1   0   1   1   0
 END ACTIVITY

 PRINT-INFO
*** < PLS>                    Print-flags                    PIVL  PYR
*** x  - x ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
  21  672   6   6   6   6   6   6   6   6   6   6   6   6   1   12
 END PRINT-INFO

 BINARY-INFO
*** < PLS>              Binary Output Flags                    PIVL  PYR
*** x  - x ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
  21  672   6   6   6   6   6   6   6   6   6   6   6   6   1   12
 END BINARY-INFO

 GEN-INFO
***          Name                Unit-systems   Printer BinaryOut
*** <PLS >                         t-series Engl Metr Engl Metr
```

*** x -	x	in	out			
21	Forest	1	1	93	0	92	0
22	Pasture1	1	1	93	0	92	0
23	Pasture2	1	1	93	0	92	0
24	Pasture3	1	1	93	0	92	0
25	Grass/Shrub/Barren	1	1	93	0	92	0
26	Developed, Open	1	1	93	0	92	0
27	Developed, Low	1	1	93	0	92	0
28	Developed, Med/High	1	1	93	0	92	0
29	Wetlands	1	1	93	0	92	0
30	Cropland	1	1	93	0	92	0
32	Pasture1-Litter	1	1	93	0	92	0
41	Forest	1	1	93	0	92	0
42	Pasture1	1	1	93	0	92	0
43	Pasture2	1	1	93	0	92	0
44	Pasture3	1	1	93	0	92	0
45	Grass/Shrub/Barren	1	1	93	0	92	0
46	Developed, Open	1	1	93	0	92	0
47	Developed, Low	1	1	93	0	92	0
48	Developed, Med/High	1	1	93	0	92	0
49	Wetlands	1	1	93	0	92	0
50	Cropland	1	1	93	0	92	0
52	Pasture1-Litter	1	1	93	0	92	0
61	Forest	1	1	93	0	92	0
62	Pasture1	1	1	93	0	92	0
63	Pasture2	1	1	93	0	92	0
64	Pasture3	1	1	93	0	92	0
65	Grass/Shrub/Barren	1	1	93	0	92	0
66	Developed, Open	1	1	93	0	92	0
67	Developed, Low	1	1	93	0	92	0
68	Developed, Med/High	1	1	93	0	92	0
69	Wetlands	1	1	93	0	92	0
70	Cropland	1	1	93	0	92	0
72	Pasture1-Litter	1	1	93	0	92	0
81	Forest	1	1	93	0	92	0
82	Pasture1	1	1	93	0	92	0
83	Pasture2	1	1	93	0	92	0
84	Pasture3	1	1	93	0	92	0
85	Grass/Shrub/Barren	1	1	93	0	92	0
86	Developed, Open	1	1	93	0	92	0
87	Developed, Low	1	1	93	0	92	0
88	Developed, Med/High	1	1	93	0	92	0
89	Wetlands	1	1	93	0	92	0
90	Cropland	1	1	93	0	92	0
92	Pasture1-Litter	1	1	93	0	92	0
101	Forest	1	1	93	0	92	0
102	Pasture1	1	1	93	0	92	0
103	Pasture2	1	1	93	0	92	0
104	Pasture3	1	1	93	0	92	0
105	Grass/Shrub/Barren	1	1	93	0	92	0
106	Developed, Open	1	1	93	0	92	0
107	Developed, Low	1	1	93	0	92	0
108	Developed, Med/High	1	1	93	0	92	0
109	Wetlands	1	1	93	0	92	0
110	Cropland	1	1	93	0	92	0
112	Pasture1-Litter	1	1	93	0	92	0

121	Forest	1	1	93	0	92	0
122	Pasture1	1	1	93	0	92	0
123	Pasture2	1	1	93	0	92	0
124	Pasture3	1	1	93	0	92	0
125	Grass/Shrub/Barren	1	1	93	0	92	0
126	Developed, Open	1	1	93	0	92	0
127	Developed, Low	1	1	93	0	92	0
128	Developed, Med/High	1	1	93	0	92	0
129	Wetlands	1	1	93	0	92	0
130	Cropland	1	1	93	0	92	0
132	Pasture1-Litter	1	1	93	0	92	0
141	Forest	1	1	93	0	92	0
142	Pasture1	1	1	93	0	92	0
143	Pasture2	1	1	93	0	92	0
144	Pasture3	1	1	93	0	92	0
145	Grass/Shrub/Barren	1	1	93	0	92	0
146	Developed, Open	1	1	93	0	92	0
147	Developed, Low	1	1	93	0	92	0
148	Developed, Med/High	1	1	93	0	92	0
149	Wetlands	1	1	93	0	92	0
150	Cropland	1	1	93	0	92	0
152	Pasture1-Litter	1	1	93	0	92	0
161	Forest	1	1	93	0	92	0
162	Pasture1	1	1	93	0	92	0
163	Pasture2	1	1	93	0	92	0
164	Pasture3	1	1	93	0	92	0
165	Grass/Shrub/Barren	1	1	93	0	92	0
166	Developed, Open	1	1	93	0	92	0
167	Developed, Low	1	1	93	0	92	0
168	Developed, Med/High	1	1	93	0	92	0
169	Wetlands	1	1	93	0	92	0
170	Cropland	1	1	93	0	92	0
172	Pasture1-Litter	1	1	93	0	92	0
181	Forest	1	1	93	0	92	0
182	Pasture1	1	1	93	0	92	0
183	Pasture2	1	1	93	0	92	0
184	Pasture3	1	1	93	0	92	0
185	Grass/Shrub/Barren	1	1	93	0	92	0
186	Developed, Open	1	1	93	0	92	0
187	Developed, Low	1	1	93	0	92	0
188	Developed, Med/High	1	1	93	0	92	0
189	Wetlands	1	1	93	0	92	0
190	Cropland	1	1	93	0	92	0
192	Pasture1-Litter	1	1	93	0	92	0
201	Forest	1	1	93	0	92	0
202	Pasture1	1	1	93	0	92	0
203	Pasture2	1	1	93	0	92	0
204	Pasture3	1	1	93	0	92	0
205	Grass/Shrub/Barren	1	1	93	0	92	0
206	Developed, Open	1	1	93	0	92	0
207	Developed, Low	1	1	93	0	92	0
208	Developed, Med/High	1	1	93	0	92	0
209	Wetlands	1	1	93	0	92	0
210	Cropland	1	1	93	0	92	0
212	Pasture1-Litter	1	1	93	0	92	0
221	Forest	1	1	93	0	92	0

222	Pasture1	1	1	93	0	92	0
223	Pasture2	1	1	93	0	92	0
224	Pasture3	1	1	93	0	92	0
225	Grass/Shrub/Barren	1	1	93	0	92	0
226	Developed, Open	1	1	93	0	92	0
227	Developed, Low	1	1	93	0	92	0
228	Developed, Med/High	1	1	93	0	92	0
229	Wetlands	1	1	93	0	92	0
230	Cropland	1	1	93	0	92	0
232	Pasture1-Litter	1	1	93	0	92	0
241	Forest	1	1	93	0	92	0
242	Pasture1	1	1	93	0	92	0
243	Pasture2	1	1	93	0	92	0
244	Pasture3	1	1	93	0	92	0
245	Grass/Shrub/Barren	1	1	93	0	92	0
246	Developed, Open	1	1	93	0	92	0
247	Developed, Low	1	1	93	0	92	0
248	Developed, Med/High	1	1	93	0	92	0
249	Wetlands	1	1	93	0	92	0
250	Cropland	1	1	93	0	92	0
252	Pasture1-Litter	1	1	93	0	92	0
261	Forest	1	1	93	0	92	0
262	Pasture1	1	1	93	0	92	0
263	Pasture2	1	1	93	0	92	0
264	Pasture3	1	1	93	0	92	0
265	Grass/Shrub/Barren	1	1	93	0	92	0
266	Developed, Open	1	1	93	0	92	0
267	Developed, Low	1	1	93	0	92	0
268	Developed, Med/High	1	1	93	0	92	0
269	Wetlands	1	1	93	0	92	0
270	Cropland	1	1	93	0	92	0
272	Pasture1-Litter	1	1	93	0	92	0
281	Forest	1	1	93	0	92	0
282	Pasture1	1	1	93	0	92	0
283	Pasture2	1	1	93	0	92	0
284	Pasture3	1	1	93	0	92	0
285	Grass/Shrub/Barren	1	1	93	0	92	0
286	Developed, Open	1	1	93	0	92	0
287	Developed, Low	1	1	93	0	92	0
288	Developed, Med/High	1	1	93	0	92	0
289	Wetlands	1	1	93	0	92	0
290	Cropland	1	1	93	0	92	0
292	Pasture1-Litter	1	1	93	0	92	0
301	Forest	1	1	93	0	92	0
302	Pasture1	1	1	93	0	92	0
303	Pasture2	1	1	93	0	92	0
304	Pasture3	1	1	93	0	92	0
305	Grass/Shrub/Barren	1	1	93	0	92	0
306	Developed, Open	1	1	93	0	92	0
307	Developed, Low	1	1	93	0	92	0
308	Developed, Med/High	1	1	93	0	92	0
309	Wetlands	1	1	93	0	92	0
310	Cropland	1	1	93	0	92	0
312	Pasture1-Litter	1	1	93	0	92	0
321	Forest	1	1	93	0	92	0
322	Pasture1	1	1	93	0	92	0

323	Pasture2	1	1	93	0	92	0
324	Pasture3	1	1	93	0	92	0
325	Grass/Shrub/Barren	1	1	93	0	92	0
326	Developed, Open	1	1	93	0	92	0
327	Developed, Low	1	1	93	0	92	0
328	Developed, Med/High	1	1	93	0	92	0
329	Wetlands	1	1	93	0	92	0
330	Cropland	1	1	93	0	92	0
332	Pasture1-Litter	1	1	93	0	92	0
341	Forest	1	1	93	0	92	0
342	Pasture1	1	1	93	0	92	0
343	Pasture2	1	1	93	0	92	0
344	Pasture3	1	1	93	0	92	0
345	Grass/Shrub/Barren	1	1	93	0	92	0
346	Developed, Open	1	1	93	0	92	0
347	Developed, Low	1	1	93	0	92	0
348	Developed, Med/High	1	1	93	0	92	0
349	Wetlands	1	1	93	0	92	0
350	Cropland	1	1	93	0	92	0
352	Pasture1-Litter	1	1	93	0	92	0
361	Forest	1	1	93	0	92	0
362	Pasture1	1	1	93	0	92	0
363	Pasture2	1	1	93	0	92	0
364	Pasture3	1	1	93	0	92	0
365	Grass/Shrub/Barren	1	1	93	0	92	0
366	Developed, Open	1	1	93	0	92	0
367	Developed, Low	1	1	93	0	92	0
368	Developed, Med/High	1	1	93	0	92	0
369	Wetlands	1	1	93	0	92	0
370	Cropland	1	1	93	0	92	0
372	Pasture1-Litter	1	1	93	0	92	0
381	Forest	1	1	93	0	92	0
382	Pasture1	1	1	93	0	92	0
383	Pasture2	1	1	93	0	92	0
384	Pasture3	1	1	93	0	92	0
385	Grass/Shrub/Barren	1	1	93	0	92	0
386	Developed, Open	1	1	93	0	92	0
387	Developed, Low	1	1	93	0	92	0
388	Developed, Med/High	1	1	93	0	92	0
389	Wetlands	1	1	93	0	92	0
390	Cropland	1	1	93	0	92	0
392	Pasture1-Litter	1	1	93	0	92	0
401	Forest	1	1	93	0	92	0
402	Pasture1	1	1	93	0	92	0
403	Pasture2	1	1	93	0	92	0
404	Pasture3	1	1	93	0	92	0
405	Grass/Shrub/Barren	1	1	93	0	92	0
406	Developed, Open	1	1	93	0	92	0
407	Developed, Low	1	1	93	0	92	0
408	Developed, Med/High	1	1	93	0	92	0
409	Wetlands	1	1	93	0	92	0
410	Cropland	1	1	93	0	92	0
412	Pasture1-Litter	1	1	93	0	92	0
421	Forest	1	1	93	0	92	0
422	Pasture1	1	1	93	0	92	0
423	Pasture2	1	1	93	0	92	0

424	Pasture3	1	1	93	0	92	0
425	Grass/Shrub/Barren	1	1	93	0	92	0
426	Developed, Open	1	1	93	0	92	0
427	Developed, Low	1	1	93	0	92	0
428	Developed, Med/High	1	1	93	0	92	0
429	Wetlands	1	1	93	0	92	0
430	Cropland	1	1	93	0	92	0
432	Pasture1-Litter	1	1	93	0	92	0
441	Forest	1	1	93	0	92	0
442	Pasture1	1	1	93	0	92	0
443	Pasture2	1	1	93	0	92	0
444	Pasture3	1	1	93	0	92	0
445	Grass/Shrub/Barren	1	1	93	0	92	0
446	Developed, Open	1	1	93	0	92	0
447	Developed, Low	1	1	93	0	92	0
448	Developed, Med/High	1	1	93	0	92	0
449	Wetlands	1	1	93	0	92	0
450	Cropland	1	1	93	0	92	0
452	Pasture1-Litter	1	1	93	0	92	0
461	Forest	1	1	93	0	92	0
462	Pasture1	1	1	93	0	92	0
463	Pasture2	1	1	93	0	92	0
464	Pasture3	1	1	93	0	92	0
465	Grass/Shrub/Barren	1	1	93	0	92	0
466	Developed, Open	1	1	93	0	92	0
467	Developed, Low	1	1	93	0	92	0
468	Developed, Med/High	1	1	93	0	92	0
469	Wetlands	1	1	93	0	92	0
470	Cropland	1	1	93	0	92	0
472	Pasture1-Litter	1	1	93	0	92	0
481	Forest	1	1	93	0	92	0
482	Pasture1	1	1	93	0	92	0
483	Pasture2	1	1	93	0	92	0
484	Pasture3	1	1	93	0	92	0
485	Grass/Shrub/Barren	1	1	93	0	92	0
486	Developed, Open	1	1	93	0	92	0
487	Developed, Low	1	1	93	0	92	0
488	Developed, Med/High	1	1	93	0	92	0
489	Wetlands	1	1	93	0	92	0
490	Cropland	1	1	93	0	92	0
492	Pasture1-Litter	1	1	93	0	92	0
501	Forest	1	1	93	0	92	0
502	Pasture1	1	1	93	0	92	0
503	Pasture2	1	1	93	0	92	0
504	Pasture3	1	1	93	0	92	0
505	Grass/Shrub/Barren	1	1	93	0	92	0
506	Developed, Open	1	1	93	0	92	0
507	Developed, Low	1	1	93	0	92	0
508	Developed, Med/High	1	1	93	0	92	0
509	Wetlands	1	1	93	0	92	0
510	Cropland	1	1	93	0	92	0
512	Pasture1-Litter	1	1	93	0	92	0
521	Forest	1	1	93	0	92	0
522	Pasture1	1	1	93	0	92	0
523	Pasture2	1	1	93	0	92	0
524	Pasture3	1	1	93	0	92	0

525	Grass/Shrub/Barren	1	1	93	0	92	0
526	Developed, Open	1	1	93	0	92	0
527	Developed, Low	1	1	93	0	92	0
528	Developed, Med/High	1	1	93	0	92	0
529	Wetlands	1	1	93	0	92	0
530	Cropland	1	1	93	0	92	0
532	Pasture1-Litter	1	1	93	0	92	0
541	Forest	1	1	93	0	92	0
542	Pasture1	1	1	93	0	92	0
543	Pasture2	1	1	93	0	92	0
544	Pasture3	1	1	93	0	92	0
545	Grass/Shrub/Barren	1	1	93	0	92	0
546	Developed, Open	1	1	93	0	92	0
547	Developed, Low	1	1	93	0	92	0
548	Developed, Med/High	1	1	93	0	92	0
549	Wetlands	1	1	93	0	92	0
550	Cropland	1	1	93	0	92	0
552	Pasture1-Litter	1	1	93	0	92	0
561	Forest	1	1	93	0	92	0
562	Pasture1	1	1	93	0	92	0
563	Pasture2	1	1	93	0	92	0
564	Pasture3	1	1	93	0	92	0
565	Grass/Shrub/Barren	1	1	93	0	92	0
566	Developed, Open	1	1	93	0	92	0
567	Developed, Low	1	1	93	0	92	0
568	Developed, Med/High	1	1	93	0	92	0
569	Wetlands	1	1	93	0	92	0
570	Cropland	1	1	93	0	92	0
572	Pasture1-Litter	1	1	93	0	92	0
581	Forest	1	1	93	0	92	0
582	Pasture1	1	1	93	0	92	0
583	Pasture2	1	1	93	0	92	0
584	Pasture3	1	1	93	0	92	0
585	Grass/Shrub/Barren	1	1	93	0	92	0
586	Developed, Open	1	1	93	0	92	0
587	Developed, Low	1	1	93	0	92	0
588	Developed, Med/High	1	1	93	0	92	0
589	Wetlands	1	1	93	0	92	0
590	Cropland	1	1	93	0	92	0
592	Pasture1-Litter	1	1	93	0	92	0
601	Forest	1	1	93	0	92	0
602	Pasture1	1	1	93	0	92	0
603	Pasture2	1	1	93	0	92	0
604	Pasture3	1	1	93	0	92	0
605	Grass/Shrub/Barren	1	1	93	0	92	0
606	Developed, Open	1	1	93	0	92	0
607	Developed, Low	1	1	93	0	92	0
608	Developed, Med/High	1	1	93	0	92	0
609	Wetlands	1	1	93	0	92	0
610	Cropland	1	1	93	0	92	0
612	Pasture1-Litter	1	1	93	0	92	0
621	Forest	1	1	93	0	92	0
622	Pasture1	1	1	93	0	92	0
623	Pasture2	1	1	93	0	92	0
624	Pasture3	1	1	93	0	92	0
625	Grass/Shrub/Barren	1	1	93	0	92	0

```
 626    Developed, Open              1    1   93    0   92    0
 627    Developed, Low               1    1   93    0   92    0
 628    Developed, Med/High          1    1   93    0   92    0
 629    Wetlands                     1    1   93    0   92    0
 630    Cropland                     1    1   93    0   92    0
 632    Pasture1-Litter              1    1   93    0   92    0
 641    Forest                       1    1   93    0   92    0
 642    Pasture1                     1    1   93    0   92    0
 643    Pasture2                     1    1   93    0   92    0
 644    Pasture3                     1    1   93    0   92    0
 645    Grass/Shrub/Barren           1    1   93    0   92    0
 646    Developed, Open              1    1   93    0   92    0
 647    Developed, Low               1    1   93    0   92    0
 648    Developed, Med/High          1    1   93    0   92    0
 649    Wetlands                     1    1   93    0   92    0
 650    Cropland                     1    1   93    0   92    0
 652    Pasture1-Litter              1    1   93    0   92    0
 661    Forest                       1    1   93    0   92    0
 662    Pasture1                     1    1   93    0   92    0
 663    Pasture2                     1    1   93    0   92    0
 664    Pasture3                     1    1   93    0   92    0
 665    Grass/Shrub/Barren           1    1   93    0   92    0
 666    Developed, Open              1    1   93    0   92    0
 667    Developed, Low               1    1   93    0   92    0
 668    Developed, Med/High          1    1   93    0   92    0
 669    Wetlands                     1    1   93    0   92    0
 670    Cropland                     1    1   93    0   92    0
 672    Pasture1-Litter              1    1   93    0   92    0
 END GEN-INFO

 ATEMP-DAT
*** <PLS >     ELDAT    AIRTEMP
*** x -  x      (ft)    (deg F)
  21          241.       40.
  22           53.       40.
  23          100.       40.
  24          136.       40.
  25          250.       40.
  26          160.       40.
  27           43.       40.
  28          -38.       40.
  29          -72.       40.
  30          299.       40.
  32           53.       40.
  41          297.       40.
  42          190.       40.
  43          302.       40.
  44          267.       40.
  45          301.       40.
  46          271.       40.
  47          332.       40.
  48          332.       40.
  49          -22.       40.
  50          -53.       40.
  52          190.       40.
  61          234.       40.
```

62	103.	40.
63	151.	40.
64	192.	40.
65	237.	40.
66	145.	40.
67	179.	40.
68	258.	40.
69	-95.	40.
70	-95.	40.
72	103.	40.
81	-82.	40.
82	-94.	40.
83	-88.	40.
84	-87.	40.
85	-85.	40.
86	-101.	40.
87	-49.	40.
88	-40.	40.
89	-228.	40.
90	-123.	40.
92	-94.	40.
101	140.	40.
102	71.	40.
103	129.	40.
104	141.	40.
105	168.	40.
106	144.	40.
107	234.	40.
108	267.	40.
109	153.	40.
110	38.	40.
112	71.	40.
121	152.	40.
122	70.	40.
123	118.	40.
124	139.	40.
125	184.	40.
126	114.	40.
127	208.	40.
128	217.	40.
129	19.	40.
130	229.	40.
132	70.	40.
141	-100.	40.
142	-35.	40.
143	-41.	40.
144	-63.	40.
145	-87.	40.
146	-93.	40.
147	-40.	40.
148	-16.	40.
149	-212.	40.
150	-61.	40.
152	-35.	40.
161	48.	40.
162	-53.	40.

163	-25.	40.
164	6.	40.
165	42.	40.
166	-28.	40.
167	-21.	40.
168	18.	40.
169	-122.	40.
170	-88.	40.
172	-53.	40.
181	62.	40.
182	-88.	40.
183	-75.	40.
184	-75.	40.
185	2.	40.
186	-69.	40.
187	-48.	40.
188	-38.	40.
189	-157.	40.
190	-39.	40.
192	-88.	40.
201	64.	40.
202	-37.	40.
203	-25.	40.
204	-28.	40.
205	16.	40.
206	-2.7	40.
207	18.	40.
208	18.	40.
209	20.	40.
210	231.	40.
212	-37.	40.
221	32.	40.
222	-42.	40.
223	-22.	40.
224	-53.	40.
225	6.	40.
226	-38.	40.
227	-21.	40.
228	234.	40.
229	-8.	40.
230	-34.	40.
232	-42.	40.
241	-15.	40.
242	12.	40.
243	16.	40.
244	10.	40.
245	7.	40.
246	24.	40.
247	37.	40.
248	44.	40.
249	-43.	40.
250	5.	40.
252	12.	40.
261	-72.	40.
262	-40.	40.
263	-29.	40.

264	-35.	40.
265	-61.	40.
266	-42.	40.
267	71.	40.
268	56.	40.
269	-226.	40.
270	-226.	40.
272	-40.	40.
281	-12.	40.
282	-112.	40.
283	-68.	40.
284	-70.	40.
285	-21.	40.
286	-53.	40.
287	-136.	40.
288	-139.	40.
289	-177.	40.
290	154.	40.
292	-112.	40.
301	-115.	40.
302	-132.	40.
303	-110.	40.
304	-106.	40.
305	-139.	40.
306	-102.	40.
307	-47.	40.
308	-43.	40.
309	-255.	40.
310	-61.	40.
312	-132.	40.
321	-81.	40.
322	-92.	40.
323	-99.	40.
324	-122.	40.
325	-85.	40.
326	-142.	40.
327	-221.	40.
328	-258.	40.
329	-336.	40.
330	-214.	40.
332	-92.	40.
341	-35.	40.
342	-51.	40.
343	-50.	40.
344	-53.	40.
345	-52.	40.
346	-34.	40.
347	-22.	40.
348	-20.	40.
349	-86.	40.
350	-1.	40.
352	-51.	40.
361	100.	40.
362	18.	40.
363	89.	40.
364	90.	40.

365	69.	40.
366	99.	40.
367	63.	40.
368	10.	40.
369	37.	40.
370	-75.	40.
372	18.	40.
381	53.	40.
382	74.	40.
383	69.	40.
384	57.	40.
385	46.	40.
386	83.	40.
387	105.	40.
388	111.	40.
389	47.	40.
390	65.	40.
392	74.	40.
401	61.	40.
402	-8.	40.
403	13.	40.
404	9.	40.
405	30.	40.
406	-14.	40.
407	-60.	40.
408	-60.	40.
409	-185.	40.
410	285.	40.
412	-8.	40.
421	148.	40.
422	-32.	40.
423	48.	40.
424	114.	40.
425	121.	40.
426	30.	40.
427	-63.	40.
428	-77.	40.
429	-112.	40.
430	-112.	40.
432	-32.	40.
441	68.	40.
442	69.	40.
443	86.	40.
444	99.	40.
445	33.	40.
446	57.	40.
447	9.	40.
448	27.	40.
449	-77.	40.
450	13.	40.
452	69.	40.
461	10.	40.
462	41.	40.
463	38.	40.
464	23.	40.
465	44.	40.

466	67.	40.
467	95.	40.
468	93.	40.
469	-43.	40.
470	84.	40.
472	41.	40.
481	13.	40.
482	45.	40.
483	44.	40.
484	32.	40.
485	48.	40.
486	45.	40.
487	51.	40.
488	57.	40.
489	-5.	40.
490	36.	40.
492	45.	40.
501	-58.	40.
502	-11.	40.
503	-18.	40.
504	-35.	40.
505	-28.	40.
506	5.	40.
507	57.	40.
508	47.	40.
509	-210.	40.
510	-210.	40.
512	-11.	40.
521	-105.	40.
522	-31.	40.
523	-43.	40.
524	-46.	40.
525	-94.	40.
526	-54.	40.
527	-51.	40.
528	-43.	40.
529	-104.	40.
530	-32.	40.
532	-31.	40.
541	-30.	40.
542	-20.	40.
543	-17.	40.
544	-39.	40.
545	-43.	40.
546	-64.	40.
547	-134.	40.
548	-147.	40.
549	-206.	40.
550	24.	40.
552	-20.	40.
561	-156.	40.
562	-160.	40.
563	-162.	40.
564	-177.	40.
565	-146.	40.
566	-169.	40.

567	-164.	40.
568	-192.	40.
569	-357.	40.
570	-70.	40.
572	-160.	40.
581	-10.	40.
582	9.	40.
583	12.	40.
584	9.	40.
585	-22.	40.
586	1.	40.
587	-6.	40.
588	-1.	40.
589	-170.	40.
590	79.	40.
592	9.	40.
601	-48.	40.
602	-20.	40.
603	-12.	40.
604	11.	40.
605	-77.	40.
606	-11.	40.
607	30.	40.
608	14.	40.
609	-139.	40.
610	-11.	40.
612	-20.	40.
621	-44.	40.
622	-129.	40.
623	-98.	40.
624	-87.	40.
625	-39.	40.
626	-116.	40.
627	-135.	40.
628	-147.	40.
629	-250.	40.
630	-205.	40.
632	-129.	40.
641	229.	40.
642	225.	40.
643	278.	40.
644	217.	40.
645	249.	40.
646	217.	40.
647	190.	40.
648	295.	40.
649	30.	40.
650	30.	40.
652	225.	40.
661	134.	40.
662	-12.	40.
663	38.	40.
664	57.	40.
665	137.	40.
666	34.	40.
667	-49.	40.

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  668          -42.       40.
  669         -118.       40.
  670          -55.       40.
  672          -12.       40.
  END ATEMP-DAT

  PWAT-PARM1
*** <PLS >                  Flags
*** x -  x CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC  HWT IRRG IFRD
   21  672    0    1    1    1    0    0    0    0    1    1    0    0    0
  END PWAT-PARM1

  PWAT-PARM2
*** < PLS>    FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
*** x  - x              (in)   (in/hr)      (ft)            (1/in)   (1/day)
*** Met Seg PCP_18 21-30 (Mostly C soils with some B)
   21          0.75       7.2     0.09       200    0.1493       3.     0.992
   22            0.       5.8    0.065       350    0.0223       3.     0.980
   23            0.       5.8    0.065       300    0.0386       3.     0.980
   24            0.       5.8    0.065       250    0.0910       3.     0.980
   25          0.00       6.2     0.06       250    0.1057       3.     0.970
   26          0.00       5.0     0.04       250    0.0897       3.     0.960
   27          0.00       5.0     0.04       300    0.0542       3.     0.960
   28          0.00       5.0     0.04       300    0.0355       3.     0.960
   29          0.00       4.5     0.25       300    0.0363       3.     0.995
   30          0.00       5.5     0.05       250    0.1228       3.     0.975
   32            0.       5.8    0.065       350    0.0223       3.     0.980
*** Met Seg PCP_24 41-50
   41          0.75       7.2     0.10       200    0.1570      1.5     0.985
   42            0.       5.7    0.065       350    0.0217      1.5     0.975
   43            0.       5.7    0.065       300    0.0385      1.5     0.975
   44            0.       5.7    0.065       250    0.0920      1.5     0.975
   45          0.00       6.2     0.05       250    0.0972       1.     0.965
   46          0.00       5.0     0.04       250    0.0872       1.     0.960
   47          0.00       5.0     0.04       300    0.0592       1.     0.960
   48          0.00       5.0     0.04       300    0.0592       1.     0.960
   49          0.00       4.5     0.25       300    0.0480       1.     0.985
   50          0.00       5.5     0.06       400    0.0124       1.     0.965
   52            0.       5.7    0.065       350    0.0217      1.5     0.975
*** Met Seg PCP_26 61-70 Baron @ DM
   61          0.75       6.3    0.081       200    0.1576      0.5     0.970
   62            0.       4.8    0.066       350    0.0237      0.5     0.960
   63            0.       4.8    0.062       300    0.0383      0.5     0.960
   64            0.       4.8    0.058       250    0.0877      0.5     0.960
   65          0.00       5.5     0.05       250    0.1105      0.5     0.965
   66          0.00       4.5     0.04       300    0.0698      0.5     0.950
   67          0.00       4.5     0.04       300    0.0406      0.5     0.950
   68          0.00       4.5     0.04       350    0.0291      0.5     0.950
   69          0.00       4.0     0.25       300    0.0707      0.5     0.985
   70          0.00       5.0     0.06       300    0.0707      0.5     0.960
   72            0.       4.8    0.066       350    0.0237      0.5     0.960
*** Met Seg OK348506 (STILWELL 5 NNW) 81-90
   81          0.75       8.3    0.100       200    0.1677      2.5     0.992
   82            0.       8.0    0.070       350    0.0207      2.5     0.982
   83            0.       8.0    0.070       300    0.0391      2.5     0.982
   84            0.       8.0    0.070       250    0.1005      2.5     0.982
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85	0.00	8.0	0.050	250	0.1234	2.5	0.975
86	0.00	5.0	0.040	300	0.0707	2.5	0.960
87	0.00	5.0	0.040	350	0.0278	2.5	0.960
88	0.00	5.0	0.040	350	0.0220	2.5	0.960
89	0.00	4.5	0.300	300	0.0329	2.5	0.995
90	0.00	7.0	0.060	300	0.0552	2.5	0.975
92	0.	8.0	0.070	350	0.0207	2.5	0.982

*** Met Seg PCP_11 101-110 KARST (Partial)

101	0.75	7.2	0.09	250	0.1184	5.	0.992
102	0.	5.8	0.06	400	0.0189	5.	0.980
103	0.	5.8	0.06	300	0.0346	5.	0.980
104	0.	5.8	0.06	300	0.0713	5.	0.980
105	0.00	6.2	0.06	300	0.0645	5.	0.970
106	0.00	5.0	0.04	300	0.0425	5.	0.960
107	0.00	5.0	0.04	350	0.0265	5.	0.960
108	0.00	5.0	0.04	400	0.0195	5.	0.960
109	0.00	4.5	0.25	350	0.0263	5.	0.995
110	0.00	5.5	0.05	350	0.0222	5.	0.975
112	0.	5.8	0.06	400	0.0189	5.	0.980

*** Met Seg PCP_06 121-130

121	0.75	8.5	0.17	250	0.1049	1.5	0.998
122	0.	7.5	0.12	400	0.0174	1.5	0.985
123	0.	7.5	0.12	300	0.0336	1.5	0.985
124	0.	7.5	0.12	300	0.0690	1.5	0.985
125	0.00	7.0	0.09	300	0.0680	1.5	0.975
126	0.00	6.0	0.06	300	0.0343	1.5	0.970
127	0.00	6.0	0.06	300	0.0343	1.5	0.970
128	0.00	6.0	0.06	350	0.0257	1.5	0.970
129	0.00	4.5	0.25	350	0.0239	1.5	0.999
130	0.00	7.0	0.10	350	0.0248	1.5	0.987
132	0.	7.5	0.12	400	0.0174	1.5	0.985

*** Met Seg WESTVILL 141-150

141	0.75	7.2	0.10	200	0.1748	3.	0.990
142	0.	6.2	0.07	400	0.0185	3.	0.980
143	0.	6.2	0.07	300	0.0374	3.	0.980
144	0.	6.2	0.07	250	0.0946	3.	0.980
145	0.00	6.5	0.05	250	0.1251	3.	0.975
146	0.00	5.0	0.04	250	0.0841	3.	0.960
147	0.00	5.0	0.04	300	0.0318	3.	0.960
148	0.00	5.0	0.04	350	0.0238	3.	0.960
149	0.00	4.5	0.25	350	0.0227	3.	0.995
150	0.00	7.0	0.06	250	0.0913	3.	0.975
152	0.	6.2	0.07	400	0.0185	3.	0.980

*** Met Seg PCP_12 161-170 KARST

161	0.75	7.0	0.10	250	0.1392	5.	0.992
162	0.	5.5	0.07	400	0.0176	5.	0.980
163	0.	5.5	0.07	300	0.0343	5.	0.980
164	0.	5.5	0.07	300	0.0799	5.	0.980
165	0.00	6.0	0.065	250	0.0893	5.	0.970
166	0.00	5.0	0.05	300	0.0461	5.	0.960
167	0.00	5.0	0.05	300	0.0337	5.	0.960
168	0.00	5.0	0.05	350	0.0299	5.	0.960
169	0.00	4.5	0.25	300	0.0379	5.	0.995
170	0.00	5.5	0.06	400	0.0150	5.	0.975
172	0.	5.5	0.07	400	0.0176	5.	0.980

*** Met Seg PCP_17 181-190 KARST

181	0.75	7.0	0.12	250	0.1362	3.	0.992
182	0.	5.5	0.08	400	0.0174	3.	0.980
183	0.	5.5	0.08	300	0.0338	3.	0.980
184	0.	5.5	0.08	300	0.0709	3.	0.980
185	0.00	6.0	0.07	250	0.0806	3.	0.970
186	0.00	5.0	0.04	300	0.0392	3.	0.960
187	0.00	5.0	0.04	350	0.0254	3.	0.960
188	0.00	5.0	0.04	350	0.0209	3.	0.960
189	0.00	4.5	0.25	300	0.0402	3.	0.995
190	0.00	5.5	0.05	400	0.0162	3.	0.975
192	0.	5.5	0.08	400	0.0174	3.	0.980
*** Met Seg PCP_09 201-210							
201	0.75	8.0	0.15	250	0.1199	2.0	0.998
202	0.	7.0	0.12	350	0.0203	2.0	0.985
203	0.	7.0	0.12	300	0.0363	2.0	0.985
204	0.	7.0	0.12	300	0.0749	2.0	0.985
205	0.00	6.5	0.10	300	0.0538	2.0	0.975
206	0.00	5.5	0.06	300	0.0479	2.0	0.970
207	0.00	5.5	0.06	300	0.0744	2.0	0.970
208	0.00	5.5	0.06	300	0.0744	2.0	0.970
209	0.00	4.5	0.25	300	0.0700	2.0	0.999
210	0.00	6.0	0.08	300	0.0419	2.0	0.987
212	0.	7.0	0.12	350	0.0203	2.0	0.985
*** Met Seg PCP_07 221-230							
221	0.75	8.0	0.15	250	0.1250	2.0	0.998
222	0.	7.0	0.12	350	0.0202	2.0	0.985
223	0.	7.0	0.12	300	0.0364	2.0	0.985
224	0.	7.0	0.12	250	0.0811	2.0	0.985
225	0.00	6.5	0.10	250	0.0894	2.0	0.975
226	0.00	5.5	0.06	300	0.0617	2.0	0.970
227	0.00	5.5	0.06	300	0.0374	2.0	0.970
228	0.00	5.5	0.06	300	0.0339	2.0	0.970
229	0.00	4.5	0.25	350	0.0219	2.0	0.999
230	0.00	6.0	0.08	300	0.0353	2.0	0.987
232	0.	7.0	0.12	350	0.0202	2.0	0.985
*** Met Seg PCP_21 241-250							
241	0.75	8.0	0.15	250	0.1195	2.0	0.998
242	0.	7.0	0.12	350	0.0211	2.0	0.985
243	0.	7.0	0.12	300	0.0333	2.0	0.985
244	0.	7.0	0.12	300	0.0660	2.0	0.985
245	0.00	6.5	0.10	300	0.0681	2.0	0.975
246	0.00	5.5	0.06	300	0.0484	2.0	0.970
247	0.00	5.5	0.06	300	0.0375	2.0	0.970
248	0.00	5.5	0.06	350	0.0284	2.0	0.970
249	0.00	4.5	0.25	350	0.0244	2.0	0.999
250	0.00	6.0	0.08	300	0.0681	2.0	0.987
252	0.	7.0	0.12	350	0.0211	2.0	0.985
*** Met Seg PCP_16 261-270							
261	0.75	8.5	0.17	250	0.1386	1.5	0.998
262	0.	7.5	0.12	350	0.0221	1.5	0.985
263	0.	7.5	0.12	300	0.0374	1.5	0.985
264	0.	7.5	0.12	250	0.0881	1.5	0.985
265	0.00	7.0	0.09	250	0.1068	1.5	0.975
266	0.00	6.0	0.06	250	0.0816	1.5	0.970
267	0.00	6.0	0.06	300	0.0321	1.5	0.970
268	0.00	6.0	0.06	350	0.0226	1.5	0.970

269	0.00	4.5	0.25	300	0.0508	1.5	0.999
270	0.00	7.0	0.10	300	0.0508	1.5	0.987
272	0.	7.5	0.12	350	0.0221	1.5	0.985

*** Met Seg PCP_14 281-290 (mostly B soils)

281	0.75	8.5	0.15	200	0.1449	5.	0.992
282	0.	7.5	0.11	400	0.0173	5.	0.980
283	0.	7.5	0.11	300	0.0349	5.	0.980
284	0.	7.5	0.11	250	0.0913	5.	0.980
285	0.00	7.2	0.07	250	0.1112	5.	0.970
286	0.00	5.0	0.05	250	0.0974	5.	0.960
287	0.00	5.0	0.05	300	0.0729	5.	0.960
288	0.00	5.0	0.05	300	0.0553	5.	0.960
289	0.00	4.5	0.25	300	0.0583	5.	0.995
290	0.00	6.0	0.05	300	0.0535	5.	0.975
292	0.	7.5	0.11	400	0.0173	5.	0.980

*** Met Seg PCP_05 301-110 (mostly B soils)

301	0.75	8.5	0.17	200	0.1601	1.5	0.998
302	0.	7.5	0.12	400	0.0160	1.5	0.985
303	0.	7.5	0.12	300	0.0339	1.5	0.985
304	0.	7.5	0.12	250	0.0842	1.5	0.985
305	0.00	7.0	0.09	250	0.0897	1.5	0.975
306	0.00	6.0	0.06	250	0.0841	1.5	0.970
307	0.00	6.0	0.06	300	0.0464	1.5	0.970
308	0.00	6.0	0.06	300	0.0442	1.5	0.970
309	0.00	4.5	0.25	350	0.0244	1.5	0.999
310	0.00	7.0	0.10	400	0.0155	1.5	0.987
312	0.	7.5	0.12	400	0.0160	1.5	0.985

*** Met Seg COOKSON 321-330 (Mostly D Soils)

321	0.75	8.5	0.090	200	0.1651	2.5	0.992
322	0.	8.0	0.065	350	0.0218	2.5	0.982
323	0.	8.0	0.065	300	0.0385	2.5	0.982
324	0.	8.0	0.065	250	0.0942	2.5	0.982
325	0.00	7.5	0.060	250	0.1168	2.5	0.975
326	0.00	5.0	0.045	250	0.1065	2.5	0.960
327	0.00	5.0	0.045	250	0.0810	2.5	0.960
328	0.00	5.0	0.045	300	0.0571	2.5	0.960
329	0.00	4.0	0.200	300	0.0689	2.5	0.995
330	0.00	6.0	0.050	250	0.1270	2.5	0.975
332	0.	8.0	0.065	350	0.0218	2.5	0.982

*** Met Seg PCP_20 341-350

341	0.75	8.0	0.15	250	0.1165	2.0	0.998
342	0.	7.0	0.12	400	0.0186	2.0	0.985
343	0.	7.0	0.12	300	0.0362	2.0	0.985
344	0.	7.0	0.12	250	0.0851	2.0	0.985
345	0.00	6.5	0.10	300	0.0733	2.0	0.975
346	0.00	5.5	0.06	300	0.0474	2.0	0.970
347	0.00	5.5	0.06	300	0.0359	2.0	0.970
348	0.00	5.5	0.06	350	0.0287	2.0	0.970
349	0.00	4.5	0.25	300	0.0482	2.0	0.999
350	0.00	6.0	0.08	350	0.0260	2.0	0.987
352	0.	7.0	0.12	400	0.0186	2.0	0.985

*** Met Seg PCP_23 361-370

361	0.75	8.0	0.15	250	0.0943	2.0	0.998
362	0.	7.0	0.12	350	0.0216	2.0	0.985
363	0.	7.0	0.12	300	0.0386	2.0	0.985
364	0.	7.0	0.12	300	0.0645	2.0	0.985

365	0.00	6.5	0.10	300	0.0676	2.0	0.975
366	0.00	5.5	0.06	300	0.0707	2.0	0.970
367	0.00	5.5	0.06	300	0.0535	2.0	0.970
368	0.00	5.5	0.06	300	0.0369	2.0	0.970
369	0.00	4.5	0.25	300	0.0577	2.0	0.999
370	0.00	6.0	0.08	350	0.0295	2.0	0.987
372	0.	7.0	0.12	350	0.0216	2.0	0.985

*** Met Seg PCP_22 381-390 Osage Creek

381	0.75	7.1	0.16	250	0.0995	1.0	0.997
382	0.	5.9	0.125	400	0.0183	1.0	0.992
383	0.	5.9	0.125	350	0.0295	1.0	0.992
384	0.	5.9	0.125	300	0.0567	1.0	0.992
385	0.00	6.5	0.10	300	0.0617	1.0	0.990
386	0.00	5.5	0.08	300	0.0406	1.0	0.987
387	0.00	5.5	0.08	350	0.0285	1.0	0.987
388	0.00	5.5	0.08	350	0.0228	1.0	0.987
389	0.00	4.5	0.25	300	0.0391	1.0	0.995
390	0.00	6.0	0.07	300	0.0724	1.0	0.987
392	0.	5.9	0.125	400	0.0183	1.0	0.992

*** Met Seg PCP_08 401-410

401	0.75	6.7	0.11	200	0.1600	2.	0.985
402	0.	5.7	0.065	350	0.0228	2.	0.975
403	0.	5.7	0.065	300	0.0390	2.	0.975
404	0.	5.7	0.065	250	0.0950	2.	0.975
405	0.00	6.2	0.05	250	0.1135	2.	0.970
406	0.00	5.0	0.04	250	0.0852	2.	0.960
407	0.00	5.0	0.04	300	0.0461	2.	0.960
408	0.00	5.0	0.04	300	0.0461	2.	0.960
409	0.00	4.5	0.25	300	0.0518	2.	0.995
410	0.00	5.5	0.06	300	0.0465	2.	0.970
412	0.	5.7	0.065	350	0.0228	2.	0.975

*** Met Seg PCP_15 421-430

421	0.75	7.2	0.09	250	0.1392	3.	0.992
422	0.	5.8	0.065	400	0.0192	3.	0.980
423	0.	5.8	0.065	300	0.0374	3.	0.980
424	0.	5.8	0.065	250	0.0816	3.	0.980
425	0.00	6.2	0.06	300	0.0626	3.	0.970
426	0.00	5.0	0.04	300	0.0646	3.	0.960
427	0.00	5.0	0.04	300	0.0305	3.	0.960
428	0.00	5.0	0.04	350	0.0210	3.	0.960
429	0.00	4.5	0.25	300	0.0395	3.	0.995
430	0.00	5.5	0.05	300	0.0395	3.	0.975
432	0.	5.8	0.065	400	0.0192	3.	0.980

*** Met Seg PCP_02 441-450 Flint Cr.

441	0.75	7.5	0.12	250	0.0865	1.9	0.998
442	0.	6.5	0.08	350	0.0214	1.9	0.985
443	0.	6.5	0.08	300	0.0342	1.9	0.985
444	0.	6.5	0.08	300	0.0609	1.9	0.985
445	0.00	7.0	0.07	300	0.0669	1.9	0.975
446	0.00	5.0	0.045	300	0.0518	1.9	0.970
447	0.00	5.0	0.045	350	0.0270	1.9	0.970
448	0.00	5.0	0.045	400	0.0188	1.9	0.970
449	0.00	4.5	0.25	300	0.0402	1.9	0.999
450	0.00	5.5	0.07	400	0.0182	1.9	0.987
452	0.	6.5	0.08	350	0.0214	1.9	0.985

*** Met Seg PCP_00 461-470 Osage Creek

461	0.75	7.1	0.16	250	0.0922	1.0	0.997
462	0.	5.9	0.125	400	0.0166	1.0	0.992
463	0.	5.9	0.125	350	0.0293	1.0	0.992
464	0.	5.9	0.125	300	0.0593	1.0	0.992
465	0.00	6.5	0.10	300	0.0390	1.0	0.990
466	0.00	5.5	0.08	300	0.0381	1.0	0.987
467	0.00	5.5	0.08	350	0.0261	1.0	0.987
468	0.00	5.5	0.08	350	0.0210	1.0	0.987
469	0.00	4.5	0.25	300	0.0321	1.0	0.995
470	0.00	6.0	0.07	400	0.0140	1.0	0.987
472	0.	5.9	0.125	400	0.0166	1.0	0.992

*** Met Seg PCP_03 481-490 Osage Creek KARST (partial)

481	0.75	7.3	0.16	300	0.0758	1.0	0.997
482	0.	5.9	0.085	400	0.0170	1.0	0.992
483	0.	5.9	0.085	350	0.0281	1.0	0.992
484	0.	5.9	0.085	300	0.0494	1.0	0.992
485	0.00	6.5	0.07	300	0.0486	1.0	0.990
486	0.00	5.5	0.045	350	0.0286	1.0	0.987
487	0.00	5.5	0.045	400	0.0194	1.0	0.987
488	0.00	5.5	0.045	400	0.0160	1.0	0.987
489	0.00	4.5	0.25	350	0.0232	1.0	0.995
490	0.00	6.0	0.06	350	0.0270	1.0	0.987
492	0.	5.9	0.085	400	0.0170	1.0	0.992

*** Met Seg PCP_19 501-510

501	0.75	8.0	0.15	250	0.1153	2.0	0.998
502	0.	7.0	0.12	400	0.0194	2.0	0.985
503	0.	7.0	0.12	300	0.0320	2.0	0.985
504	0.	7.0	0.12	300	0.0696	2.0	0.985
505	0.00	6.5	0.10	300	0.0614	2.0	0.975
506	0.00	5.5	0.06	300	0.0410	2.0	0.970
507	0.00	5.5	0.06	350	0.0217	2.0	0.970
508	0.00	5.5	0.06	400	0.0195	2.0	0.970
509	0.00	4.5	0.25	300	0.0390	2.0	0.999
510	0.00	6.0	0.08	300	0.0390	2.0	0.987
512	0.	7.0	0.12	400	0.0194	2.0	0.985

*** Met Seg PCP_04 521-530 Sager Cr.

521	0.75	5.5	0.06	250	0.1003	.5	0.992
522	0.	4.5	0.04	400	0.0138	.5	0.985
523	0.	4.5	0.04	350	0.0245	.5	0.985
524	0.	4.5	0.04	300	0.0312	.5	0.985
525	0.00	5.0	0.045	300	0.0713	.5	0.975
526	0.00	4.0	0.035	300	0.0326	.5	0.970
527	0.00	4.0	0.035	350	0.0251	.5	0.970
528	0.00	4.0	0.035	350	0.0201	.5	0.970
529	0.00	4.5	0.25	300	0.0585	.5	0.995
530	0.00	5.0	0.05	500	0.0079	.5	0.975
532	0.	4.5	0.04	400	0.0138	.5	0.985

*** Met Seg PCP_10 541-550 (mostly B soils)

541	0.75	8.5	0.17	250	0.1274	1.5	0.998
542	0.	7.5	0.12	400	0.0191	1.5	0.985
543	0.	7.5	0.12	300	0.0337	1.5	0.985
544	0.	7.5	0.12	250	0.0871	1.5	0.985
545	0.00	7.0	0.09	300	0.0799	1.5	0.975
546	0.00	6.0	0.06	250	0.0847	1.5	0.970
547	0.00	6.0	0.06	300	0.0657	1.5	0.970
548	0.00	6.0	0.06	300	0.0593	1.5	0.970

549	0.00	4.5	0.25	300	0.0402	1.5	0.999
550	0.00	7.0	0.10	400	0.0154	1.5	0.987
552	0.	7.5	0.12	400	0.0191	1.5	0.985

*** Met Seg OK344672 (Kansas 2 NE) 561-570 (Mostly B Soils) Flint Cr.

561	0.75	7.8	0.13	200	0.1855	1.5	0.995
562	0.	6.8	0.085	400	0.0153	1.5	0.985
563	0.	6.8	0.085	300	0.0356	1.5	0.985
564	0.	6.8	0.085	300	0.0704	1.5	0.985
565	0.00	7.0	0.07	250	0.1329	1.5	0.980
566	0.00	5.0	0.05	250	0.1062	1.5	0.970
567	0.00	5.0	0.05	250	0.0948	1.5	0.970
568	0.00	5.0	0.05	250	0.0812	1.5	0.970
569	0.00	4.5	0.30	350	0.0230	1.5	0.997
570	0.00	6.5	0.07	400	0.0139	1.5	0.975
572	0.	6.8	0.085	400	0.0153	1.5	0.985

*** Met Seg PCP_13 581-590 (mostly B soils)

581	0.75	8.5	0.17	250	0.1246	1.5	0.998
582	0.	7.5	0.12	350	0.0206	1.5	0.985
583	0.	7.5	0.12	300	0.0346	1.5	0.985
584	0.	7.5	0.12	250	0.0855	1.5	0.985
585	0.00	7.0	0.09	250	0.1098	1.5	0.975
586	0.00	6.0	0.06	300	0.0701	1.5	0.970
587	0.00	6.0	0.06	300	0.0634	1.5	0.970
588	0.00	6.0	0.06	300	0.0545	1.5	0.970
589	0.00	4.5	0.25	350	0.0290	1.5	0.999
590	0.00	7.0	0.10	350	0.0207	1.5	0.987
592	0.	7.5	0.12	350	0.0206	1.5	0.985

*** Met Seg PCP_01 601-610 Flint Cr.

601	0.75	7.5	0.12	250	0.0932	1.9	0.998
602	0.	6.5	0.08	400	0.0164	1.9	0.985
603	0.	6.5	0.08	350	0.0287	1.9	0.985
604	0.	6.5	0.08	300	0.0425	1.9	0.985
605	0.00	7.0	0.07	300	0.0724	1.9	0.975
606	0.00	5.0	0.045	300	0.0428	1.9	0.970
607	0.00	5.0	0.045	350	0.0221	1.9	0.970
608	0.00	5.0	0.045	350	0.0253	1.9	0.970
609	0.00	4.5	0.25	300	0.0367	1.9	0.999
610	0.00	5.5	0.07	350	0.0210	1.9	0.987
612	0.	6.5	0.08	400	0.0164	1.9	0.985

*** Met Seg TAHLEQUA 621-630

621	0.75	7.5	0.120	200	0.2006	1.8	0.995
622	0.	6.5	0.080	400	0.0182	1.8	0.985
623	0.	6.5	0.080	300	0.0380	1.8	0.985
624	0.	6.5	0.080	250	0.0902	1.8	0.985
625	0.00	6.0	0.070	250	0.1150	1.8	0.975
626	0.00	5.0	0.055	250	0.0840	1.8	0.960
627	0.00	5.0	0.055	300	0.0473	1.8	0.960
628	0.00	5.0	0.055	300	0.0331	1.8	0.960
629	0.00	4.5	0.300	400	0.0156	1.8	0.995
630	0.00	6.0	0.070	400	0.0196	1.8	0.975
632	0.	6.5	0.080	400	0.0182	1.8	0.985

*** Met Seg WEBBERS 641-650 (Mostly D Soils)

641	0.75	8.5	0.090	250	0.1070	2.	0.992
642	0.	7.5	0.065	400	0.0171	2.	0.982
643	0.	7.5	0.065	300	0.0346	2.	0.982
644	0.	7.5	0.065	300	0.0546	2.	0.982

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  645        0.00      7.0   0.060      250   0.0948      2.    0.975
  646        0.00      5.0   0.050      300   0.0688      2.    0.960
  647        0.00      5.0   0.050      300   0.0435      2.    0.960
  648        0.00      5.0   0.050      300   0.0388      2.    0.960
  649        0.00      4.0   0.200      350   0.0227      2.    0.995
  650        0.00      5.0   0.050      500   0.0084      2.    0.975
  652          0.      7.5   0.065      400   0.0171      2.    0.982
*** Met Seg AR035354 (ODELL 2 N) 661-670 (Mostly D Soils)
  661        0.75      6.7   0.065      250   0.1398      2.    0.985
  662          0.      5.7   0.045      400   0.0193      2.    0.975
  663          0.      5.7   0.045      300   0.0382      2.    0.975
  664          0.      5.7   0.045      250   0.0883      2.    0.975
  665        0.00      6.2   0.045      250   0.1012      2.    0.970
  666        0.00      5.0   0.040      300   0.0692      2.    0.960
  667        0.00      5.0   0.040      300   0.0400      2.    0.960
  668        0.00      5.0   0.040      300   0.0344      2.    0.960
  669        0.00      4.5   0.200      300   0.0408      2.    0.995
  670        0.00      5.5   0.050      300   0.0502      2.    0.970
  672          0.      5.7   0.045      400   0.0193      2.    0.975
  END PWAT-PARM2

  PWAT-PARM3
*** < PLS>    PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
*** x  - x   (deg F)   (deg F)
*** Met Seg PCP_18 21-30 (Mostly C soils, with some B and D)
   21          40.      35.       2.       2.     0.18     0.010     0.001
   22   24      40.      35.       2.       2.     0.15     0.005     0.001
   25          40.      35.       2.       2.     0.15     0.005     0.001
   26   28      40.      35.       2.       2.     0.10     0.003     0.001
   29          40.      35.       2.       2.     0.30     0.040     0.200
   30          40.      35.       2.       2.     0.15     0.002     0.001
   32          40.      35.       2.       2.     0.15     0.005     0.001
*** Met Seg PCP_24 41-50
   41          40.      35.       2.       2.     0.23     0.010     0.001
   42   44      40.      35.       2.       2.     0.13     0.005     0.001
   45          40.      35.       2.       2.     0.13     0.005     0.001
   46   48      40.      35.       2.       2.     0.10     0.003     0.001
   49          40.      35.       2.       2.     0.30     0.040     0.200
   50          40.      35.       2.       2.     0.20     0.002     0.001
   52          40.      35.       2.       2.     0.13     0.005     0.001
*** Met Seg PCP_26 61-70 Baron Fork @ DM
   61          40.      35.       2.       2.     0.28     0.070     0.001
   62   64      40.      35.       2.       2.     0.20     0.030     0.001
   65          40.      35.       2.       2.     0.18     0.030     0.001
   66   68      40.      35.       2.       2.     0.15     0.010     0.001
   69          40.      35.       2.       2.     0.35     0.070     0.200
   70          40.      35.       2.       2.     0.15     0.020     0.001
   72          40.      35.       2.       2.     0.20     0.030     0.001
*** Met Seg OK348506 (STILWELL 5 NNW) 81-90
   81          40.      35.       2.       2.     0.25     0.010     0.001
   82   84      40.      35.       2.       2.     0.18     0.005     0.001
   85          40.      35.       2.       2.     0.20     0.005     0.001
   86   88      40.      35.       2.       2.     0.15     0.003     0.001
   89          40.      35.       2.       2.     0.30     0.040     0.200
   90          40.      35.       2.       2.     0.15     0.002     0.001
   92          40.      35.       2.       2.     0.18     0.005     0.001
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*** Met Seg PCP_11 101-110
  101          40.     35.     2.      2.     0.18    0.010    0.001
  102  104     40.     35.     2.      2.     0.15    0.005    0.001
  105          40.     35.     2.      2.     0.15    0.005    0.001
  106  108     40.     35.     2.      2.     0.10    0.003    0.001
  109          40.     35.     2.      2.     0.30    0.040    0.200
  110          40.     35.     2.      2.     0.15    0.002    0.001
  112          40.     35.     2.      2.     0.15    0.005    0.001
*** Met Seg PCP_06 121-130
  121          40.     35.     2.      2.     0.25    0.010    0.001
  122  124     40.     35.     2.      2.     0.20    0.005    0.001
  125          40.     35.     2.      2.     0.20    0.005    0.001
  126  128     40.     35.     2.      2.     0.15    0.003    0.001
  129          40.     35.     2.      2.     0.30    0.040    0.200
  130          40.     35.     2.      2.     0.15    0.002    0.001
  132          40.     35.     2.      2.     0.20    0.005    0.001
*** Met Seg WESTVILL 141-150
  141          40.     35.     2.      2.     0.20    0.010    0.001
  142  144     40.     35.     2.      2.     0.11    0.005    0.001
  145          40.     35.     2.      2.     0.13    0.005    0.001
  146  148     40.     35.     2.      2.     0.10    0.003    0.001
  149          40.     35.     2.      2.     0.30    0.040    0.200
  150          40.     35.     2.      2.     0.15    0.002    0.001
  152          40.     35.     2.      2.     0.11    0.005    0.001
*** Met Seg PCP_12 161-170
  161          40.     35.     2.      2.     0.22    0.010    0.001
  162  164     40.     35.     2.      2.     0.18    0.005    0.001
  165          40.     35.     2.      2.     0.18    0.005    0.001
  166  168     40.     35.     2.      2.     0.10    0.003    0.001
  169          40.     35.     2.      2.     0.30    0.040    0.200
  170          40.     35.     2.      2.     0.15    0.002    0.001
  172          40.     35.     2.      2.     0.18    0.005    0.001
 *** Met Seg PCP_17 181-190
  181          40.     35.     2.      2.     0.18    0.010    0.001
  182  184     40.     35.     2.      2.     0.15    0.005    0.001
  185          40.     35.     2.      2.     0.15    0.005    0.001
  186  188     40.     35.     2.      2.     0.10    0.003    0.001
  189          40.     35.     2.      2.     0.30    0.040    0.200
  190          40.     35.     2.      2.     0.15    0.002    0.001
  192          40.     35.     2.      2.     0.15    0.005    0.001
*** Met Seg PCP_09 201-210
  201          40.     35.     2.      2.     0.28    0.010    0.001
  202  204     40.     35.     2.      2.     0.23    0.005    0.001
  205          40.     35.     2.      2.     0.23    0.005    0.001
  206  208     40.     35.     2.      2.     0.18    0.003    0.001
  209          40.     35.     2.      2.     0.30    0.040    0.200
  210          40.     35.     2.      2.     0.20    0.002    0.001
  212          40.     35.     2.      2.     0.23    0.005    0.001
*** Met Seg PCP_07 221-230
  221          40.     35.     2.      2.     0.28    0.010    0.001
  222  224     40.     35.     2.      2.     0.23    0.005    0.001
  225          40.     35.     2.      2.     0.23    0.005    0.001
  226  228     40.     35.     2.      2.     0.18    0.003    0.001
  229          40.     35.     2.      2.     0.30    0.040    0.200
  230          40.     35.     2.      2.     0.20    0.002    0.001
  232          40.     35.     2.      2.     0.23    0.005    0.001
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*** Met Seg PCP_21 241-250
 241          40.     35.     2.      2.     0.28    0.010    0.001
 242  244     40.     35.     2.      2.     0.23    0.005    0.001
 245          40.     35.     2.      2.     0.23    0.005    0.001
 246  248     40.     35.     2.      2.     0.18    0.003    0.001
 249          40.     35.     2.      2.     0.30    0.040    0.200
 250          40.     35.     2.      2.     0.20    0.002    0.001
 252          40.     35.     2.      2.     0.23    0.005    0.001
*** Met Seg PCP_16 261-270
 261          40.     35.     2.      2.     0.25    0.010    0.001
 262  264     40.     35.     2.      2.     0.20    0.005    0.001
 265          40.     35.     2.      2.     0.20    0.005    0.001
 266  268     40.     35.     2.      2.     0.15    0.003    0.001
 269          40.     35.     2.      2.     0.30    0.040    0.200
 270          40.     35.     2.      2.     0.15    0.002    0.001
 272          40.     35.     2.      2.     0.20    0.005    0.001
*** Met Seg PCP_14 281-290
 281          40.     35.     2.      2.     0.22    0.010    0.001
 282  284     40.     35.     2.      2.     0.18    0.005    0.001
 285          40.     35.     2.      2.     0.18    0.005    0.001
 286  288     40.     35.     2.      2.     0.10    0.003    0.001
 289          40.     35.     2.      2.     0.30    0.040    0.200
 290          40.     35.     2.      2.     0.15    0.002    0.001
 292          40.     35.     2.      2.     0.18    0.005    0.001
*** Met Seg PCP_05 301-110
 301          40.     35.     2.      2.     0.25    0.010    0.001
 302  304     40.     35.     2.      2.     0.20    0.005    0.001
 305          40.     35.     2.      2.     0.20    0.005    0.001
 306  308     40.     35.     2.      2.     0.15    0.003    0.001
 309          40.     35.     2.      2.     0.30    0.040    0.200
 310          40.     35.     2.      2.     0.15    0.002    0.001
 312          40.     35.     2.      2.     0.20    0.005    0.001
*** Met Seg COOKSON 321-330
 321          40.     35.     2.      2.     0.32    0.010    0.001
 322  324     40.     35.     2.      2.     0.28    0.005    0.001
 325          40.     35.     2.      2.     0.25    0.005    0.001
 326  328     40.     35.     2.      2.     0.15    0.003    0.001
 329          40.     35.     2.      2.     0.25    0.040    0.200
 330          40.     35.     2.      2.     0.15    0.002    0.001
 332          40.     35.     2.      2.     0.28    0.005    0.001
*** Met Seg PCP_20 341-350
 341          40.     35.     2.      2.     0.28    0.010    0.001
 342  344     40.     35.     2.      2.     0.23    0.005    0.001
 345          40.     35.     2.      2.     0.23    0.005    0.001
 346  348     40.     35.     2.      2.     0.18    0.003    0.001
 349          40.     35.     2.      2.     0.30    0.040    0.200
 350          40.     35.     2.      2.     0.20    0.002    0.001
 352          40.     35.     2.      2.     0.23    0.005    0.001
*** Met Seg PCP_23 361-370
 361          40.     35.     2.      2.     0.28    0.010    0.001
 362  364     40.     35.     2.      2.     0.23    0.005    0.001
 365          40.     35.     2.      2.     0.23    0.005    0.001
 366  368     40.     35.     2.      2.     0.18    0.003    0.001
 369          40.     35.     2.      2.     0.30    0.040    0.200
 370          40.     35.     2.      2.     0.20    0.002    0.001
 372          40.     35.     2.      2.     0.23    0.005    0.001
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*** Met Seg PCP_22 381-390 Osage Creek
  381          40.      35.       2.       2.      0.08     0.010     0.001
  382  384      40.      35.       2.       2.      0.04     0.005     0.001
  385          40.      35.       2.       2.      0.04     0.005     0.001
  386  388      40.      35.       2.       2.      0.03     0.003     0.001
  389          40.      35.       2.       2.      0.20     0.040     0.200
  390          40.      35.       2.       2.      0.04     0.002     0.001
  392          40.      35.       2.       2.      0.04     0.005     0.001
*** Met Seg PCP_08 401-410
  401          40.      35.       2.       2.      0.20     0.010     0.001
  402  404      40.      35.       2.       2.      0.11     0.005     0.001
  405          40.      35.       2.       2.      0.11     0.005     0.001
  406  408      40.      35.       2.       2.      0.10     0.003     0.001
  409          40.      35.       2.       2.      0.30     0.040     0.200
  410          40.      35.       2.       2.      0.20     0.002     0.001
  412          40.      35.       2.       2.      0.11     0.005     0.001
*** Met Seg PCP_15 421-430
  421          40.      35.       2.       2.      0.22     0.010     0.001
  422  424      40.      35.       2.       2.      0.18     0.005     0.001
  425          40.      35.       2.       2.      0.18     0.005     0.001
  426  428      40.      35.       2.       2.      0.10     0.003     0.001
  429          40.      35.       2.       2.      0.30     0.040     0.200
  430          40.      35.       2.       2.      0.15     0.002     0.001
  432          40.      35.       2.       2.      0.18     0.005     0.001
*** Met Seg PCP_02 441-450 Flint Creek
  441          40.      35.       2.       2.      0.27     0.010     0.001
  442  444      40.      35.       2.       2.      0.17     0.005     0.001
  445          40.      35.       2.       2.      0.15     0.005     0.001
  446  448      40.      35.       2.       2.      0.10     0.003     0.001
  449          40.      35.       2.       2.      0.30     0.040     0.200
  450          40.      35.       2.       2.      0.20     0.002     0.001
  452          40.      35.       2.       2.      0.17     0.005     0.001
*** Met Seg PCP_00 461-470 Osage Creek
  461          40.      35.       2.       2.      0.08     0.010     0.001
  462  464      40.      35.       2.       2.      0.04     0.005     0.001
  465          40.      35.       2.       2.      0.04     0.005     0.001
  466  468      40.      35.       2.       2.      0.03     0.003     0.001
  469          40.      35.       2.       2.      0.20     0.040     0.200
  470          40.      35.       2.       2.      0.04     0.002     0.001
  472          40.      35.       2.       2.      0.04     0.005     0.001
*** Met Seg PCP_03 481-490 Osage Creek
  481          40.      35.       2.       2.      0.08     0.010     0.001
  482  484      40.      35.       2.       2.      0.04     0.005     0.001
  485          40.      35.       2.       2.      0.04     0.005     0.001
  486  488      40.      35.       2.       2.      0.03     0.003     0.001
  489          40.      35.       2.       2.      0.20     0.040     0.200
  490          40.      35.       2.       2.      0.04     0.002     0.001
  492          40.      35.       2.       2.      0.04     0.005     0.001
*** Met Seg PCP_19 501-510
  501          40.      35.       2.       2.      0.28     0.010     0.001
  502  504      40.      35.       2.       2.      0.23     0.005     0.001
  505          40.      35.       2.       2.      0.23     0.005     0.001
  506  508      40.      35.       2.       2.      0.18     0.003     0.001
  509          40.      35.       2.       2.      0.30     0.040     0.200
  510          40.      35.       2.       2.      0.20     0.002     0.001
  512          40.      35.       2.       2.      0.23     0.005     0.001
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*** Met Seg PCP_04 521-530 Sager Creek
 521          40.     35.     2.      2.     0.15    0.010    0.001
 522  524     40.     35.     2.      2.     0.09    0.005    0.001
 525          40.     35.     2.      2.     0.10    0.005    0.001
 526  528     40.     35.     2.      2.     0.08    0.003    0.001
 529          40.     35.     2.      2.     0.30    0.040    0.200
 530          40.     35.     2.      2.     0.10    0.002    0.001
 532          40.     35.     2.      2.     0.09    0.005    0.001
*** Met Seg PCP_10 541-550
 541          40.     35.     2.      2.     0.25    0.010    0.001
 542  544     40.     35.     2.      2.     0.20    0.005    0.001
 545          40.     35.     2.      2.     0.20    0.005    0.001
 546  548     40.     35.     2.      2.     0.15    0.003    0.001
 549          40.     35.     2.      2.     0.30    0.040    0.200
 550          40.     35.     2.      2.     0.15    0.002    0.001
 552          40.     35.     2.      2.     0.20    0.005    0.001
*** Met Seg OK344672 561-570 (Kansas 2 NE) Flint Creek
 561          40.     35.     2.      2.     0.25    0.010    0.001
 562  564     40.     35.     2.      2.     0.18    0.005    0.001
 565          40.     35.     2.      2.     0.17    0.005    0.001
 566  568     40.     35.     2.      2.     0.15    0.003    0.001
 569          40.     35.     2.      2.     0.35    0.040    0.200
 570          40.     35.     2.      2.     0.18    0.002    0.001
 572          40.     35.     2.      2.     0.18    0.005    0.001
*** Met Seg PCP_13 581-590
 581          40.     35.     2.      2.     0.25    0.010    0.001
 582  584     40.     35.     2.      2.     0.20    0.005    0.001
 585          40.     35.     2.      2.     0.20    0.005    0.001
 586  588     40.     35.     2.      2.     0.15    0.003    0.001
 589          40.     35.     2.      2.     0.30    0.040    0.200
 590          40.     35.     2.      2.     0.15    0.002    0.001
 592          40.     35.     2.      2.     0.20    0.005    0.001
*** Met Seg PCP_01 601-610 Flint Creek
 601          40.     35.     2.      2.     0.27    0.010    0.001
 602  604     40.     35.     2.      2.     0.17    0.005    0.001
 605          40.     35.     2.      2.     0.15    0.005    0.001
 606  608     40.     35.     2.      2.     0.10    0.003    0.001
 609          40.     35.     2.      2.     0.30    0.040    0.200
 610          40.     35.     2.      2.     0.20    0.002    0.001
 612          40.     35.     2.      2.     0.17    0.005    0.001
*** Met Seg TAHLEQUA 621-630
 621          40.     35.     2.      2.     0.21    0.010    0.001
 622  624     40.     35.     2.      2.     0.14    0.005    0.001
 625          40.     35.     2.      2.     0.14    0.005    0.001
 626  628     40.     35.     2.      2.     0.12    0.003    0.001
 629          40.     35.     2.      2.     0.30    0.040    0.200
 630          40.     35.     2.      2.     0.16    0.002    0.001
 632          40.     35.     2.      2.     0.14    0.005    0.001
*** Met Seg WEBBERS 641-650
 641          40.     35.     2.      2.     0.30    0.010    0.001
 642  644     40.     35.     2.      2.     0.15    0.005    0.001
 645          40.     35.     2.      2.     0.15    0.005    0.001
 646  648     40.     35.     2.      2.     0.08    0.003    0.001
 649          40.     35.     2.      2.     0.25    0.040    0.200
 650          40.     35.     2.      2.     0.15    0.002    0.001
 652          40.     35.     2.      2.     0.15    0.005    0.001
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*** Met Seg AR035354 (ODELL 2 N) 661-670 (Mostly D Soils)
  661          40.      35.       2.       2.     0.17     0.010     0.001
  662  664      40.      35.       2.       2.     0.09     0.005     0.001
  665          40.      35.       2.       2.     0.09     0.005     0.001
  666  668      40.      35.       2.       2.     0.08     0.003     0.001
  669          40.      35.       2.       2.     0.25     0.040     0.200
  670          40.      35.       2.       2.     0.12     0.002     0.001
  672          40.      35.       2.       2.     0.09     0.005     0.001
  END PWAT-PARM3

  PWAT-PARM4
*** <PLS >     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP
*** x -  x      (in)      (in)                  (1/day)
*** Met Seg PCP_18 21-32 (Mostly C soils with some B and D)
   21          0.1      1.2      0.35      1.5      0.5      0.45
   22   24      0.1      0.8      0.18      1.2      0.4      0.35
   25          0.1      0.5      0.16      1.5      0.4      0.35
   26   28      0.1      0.5      0.12      1.2      0.4      0.35
   29          0.1      2.0      0.30      3.0      0.7      0.40
   30          0.1      1.0      0.15      1.5     0.45      0.35
   32          0.1      0.8      0.18      1.2      0.4      0.35
*** Met Seg PCP_24 41-52
   41          0.1      1.5      0.35      3.5      0.6      0.45
   42   44      0.1      0.8      0.18      1.2      0.5      0.35
   45          0.1      0.5      0.16      1.5      0.5      0.35
   46   48      0.1      0.5      0.12      1.0      0.5      0.35
   49          0.1      2.0      0.30      3.0      0.7      0.40
   50          0.1      1.0      0.15      1.8      0.5      0.35
   52          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg PCP_26 61-72 Baron @ DM
   61          0.1      1.2      0.35      2.7      0.5      0.45
   62   64      0.1      0.8      0.18      1.8      0.4      0.35
   65          0.1      0.5      0.16      1.8      0.4      0.35
   66   68      0.1      0.5      0.12      1.5      0.4      0.35
   69          0.1      2.0      0.30      3.0      0.7      0.40
   70          0.1      1.0      0.15      1.8     0.45      0.35
   72          0.1      0.8      0.18      1.8      0.4      0.35
*** Met Seg OK348506 (STILWELL 5 NNW) 81-92
   81          0.1      1.2      0.35      2.5     0.52      0.45
   82   84      0.1      0.8      0.18      2.0     0.45      0.35
   85          0.1      0.6      0.16      1.8      0.5      0.35
   86   88      0.1      0.8      0.12      1.5      0.5      0.35
   89          0.1      2.0      0.30      3.0      0.7      0.40
   90          0.1      1.0      0.15      1.8      0.5      0.35
   92          0.1      0.8      0.18      2.0     0.45      0.35
*** Met Seg PCP_11 101-112 KARST (partial)
  101          0.1      1.2      0.35      2.2      0.5      0.45
  102  104      0.1      0.8      0.18      1.9      0.4      0.35
  105          0.1      0.5      0.16      2.0      0.4      0.35
  106  108      0.1      0.5      0.12      1.8      0.4      0.35
  109          0.1      2.0      0.30      3.0      0.7      0.40
  110          0.1      1.0      0.15      1.8     0.45      0.35
  112          0.1      0.8      0.18      1.9      0.4      0.35
*** Met Seg PCP_06 121-132
  121          0.1      1.5      0.35      3.5      0.6      0.45
  122  124      0.1      0.8      0.18      1.2      0.5      0.35
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 125          0.1      0.5      0.16      1.5      0.5      0.35
 126  128      0.1      0.5      0.12      1.0      0.5      0.35
 129          0.1      2.0      0.30      3.0      0.7      0.40
 130          0.1      1.0      0.15      1.8      0.5      0.35
 132          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg WESTVILL 141-152
 141          0.1      1.2      0.35      2.5      0.52     0.45
 142  144      0.1      0.7      0.18      1.2      0.45     0.35
 145          0.1      0.5      0.16      1.5      0.5      0.35
 146  148      0.1      0.5      0.12      1.0      0.5      0.35
 149          0.1      2.0      0.30      3.0      0.7      0.40
 150          0.1      1.0      0.15      1.8      0.5      0.35
 152          0.1      0.7      0.18      1.2      0.45     0.35
*** Met Seg PCP_12 161-172 KARST
 161          0.1      1.2      0.35      2.2      0.55     0.45
 162  164      0.1      0.8      0.18      1.9      0.5      0.35
 165          0.1      0.5      0.16      2.0      0.5      0.35
 166  168      0.1      0.5      0.12      1.8      0.5      0.35
 169          0.1      2.0      0.30      3.0      0.7      0.40
 170          0.1      1.0      0.15      1.8      0.5      0.35
 172          0.1      0.8      0.18      1.9      0.5      0.35
*** Met Seg PCP_17 181-192 KARST
 181          0.1      1.2      0.35      2.2      0.55     0.45
 182  184      0.1      0.8      0.18      1.9      0.5      0.35
 185          0.1      0.5      0.16      2.0      0.5      0.35
 186  188      0.1      0.5      0.12      1.8      0.5      0.35
 189          0.1      2.0      0.30      3.0      0.7      0.40
 190          0.1      1.0      0.15      1.8      0.5      0.35
 192          0.1      0.8      0.18      1.9      0.5      0.35
*** Met Seg PCP_09 201-212
 201          0.1      1.5      0.35      3.5      0.6      0.45
 202  204      0.1      0.8      0.18      1.2      0.5      0.35
 205          0.1      0.5      0.16      1.5      0.5      0.35
 206  208      0.1      0.5      0.12      1.0      0.5      0.35
 209          0.1      2.0      0.30      3.0      0.7      0.40
 210          0.1      1.0      0.15      1.8      0.5      0.35
 212          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg PCP_07 221-232
 221          0.1      1.5      0.35      3.5      0.6      0.45
 222  224      0.1      0.8      0.18      1.2      0.5      0.35
 225          0.1      0.5      0.16      1.5      0.5      0.35
 226  228      0.1      0.5      0.12      1.0      0.5      0.35
 229          0.1      2.0      0.30      3.0      0.7      0.40
 230          0.1      1.0      0.15      1.8      0.5      0.35
 232          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg PCP_21 241-252
 241          0.1      1.5      0.35      3.5      0.6      0.45
 242  244      0.1      0.8      0.18      1.2      0.5      0.35
 245          0.1      0.5      0.16      1.5      0.5      0.35
 246  248      0.1      0.5      0.12      1.0      0.5      0.35
 249          0.1      2.0      0.30      3.0      0.7      0.40
 250          0.1      1.0      0.15      1.8      0.5      0.35
 252          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg PCP_16 261-272
 261          0.1      1.5      0.35      3.5      0.6      0.45
 262  264      0.1      0.8      0.18      1.2      0.5      0.35
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 265          0.1     0.5     0.16     1.5     0.5     0.35
 266  268     0.1     0.5     0.12     1.0     0.5     0.35
 269          0.1     2.0     0.30     3.0     0.7     0.40
 270          0.1     1.0     0.15     1.8     0.5     0.35
 272          0.1     0.8     0.18     1.2     0.5     0.35
*** Met Seg PCP_14 281-292
 281          0.1     1.2     0.35     1.5    0.55     0.45
 282  284     0.1     0.8     0.18     1.2     0.5     0.35
 285          0.1     0.5     0.16     1.5     0.5     0.35
 286  288     0.1     0.5     0.12     1.0     0.5     0.35
 289          0.1     2.0     0.30     3.0     0.7     0.40
 290          0.1     1.0     0.15     1.8     0.5     0.35
 292          0.1     0.8     0.18     1.2     0.5     0.35
*** Met Seg PCP_05 301-312
 301          0.1     1.5     0.35     3.5     0.6     0.45
 302  304     0.1     0.8     0.18     1.2     0.5     0.35
 305          0.1     0.5     0.16     1.5     0.5     0.35
 306  308     0.1     0.5     0.12     1.0     0.5     0.35
 309          0.1     2.0     0.30     3.0     0.7     0.40
 310          0.1     1.0     0.15     1.8     0.5     0.35
 312          0.1     0.8     0.18     1.2     0.5     0.35
*** Met Seg COOKSON 321-332
 321          0.1     1.2     0.35     2.5    0.55     0.45
 322  324     0.1     0.6     0.18     2.0    0.50     0.35
 325          0.1     0.5     0.16     1.8    0.50     0.35
 326  328     0.1     0.8     0.12     1.5     0.5     0.35
 329          0.1     2.0     0.30     3.0     0.7     0.40
 330          0.1     0.6     0.15     1.5    0.50     0.35
 332          0.1     0.6     0.18     2.0    0.50     0.35
*** Met Seg PCP_20 341-352
 341          0.1     1.5     0.35     3.5     0.6     0.45
 342  344     0.1     0.8     0.18     1.2     0.5     0.35
 345          0.1     0.5     0.16     1.5     0.5     0.35
 346  348     0.1     0.5     0.12     1.0     0.5     0.35
 349          0.1     2.0     0.30     3.0     0.7     0.40
 350          0.1     1.0     0.15     1.8     0.5     0.35
 352          0.1     0.8     0.18     1.2     0.5     0.35
*** Met Seg PCP_23 361-372
 361          0.1     1.2     0.35     3.5     0.6     0.45
 362  364     0.1     0.8     0.18     1.2     0.5     0.35
 365          0.1     0.5     0.16     1.5     0.5     0.35
 366  368     0.1     0.5     0.12     1.0     0.5     0.35
 369          0.1     2.0     0.30     3.0     0.7     0.40
 370          0.1     1.0     0.15     1.8     0.5     0.35
 372          0.1     0.8     0.18     1.2     0.5     0.35
*** Met Seg PCP_22 381-392 Osage
 381          0.1     1.2     0.35     2.6    0.60     0.45
 382  384     0.1     0.8     0.18     1.7    0.50     0.35
 385          0.1     0.5     0.16     2.0     0.5     0.35
 386  388     0.1     0.5     0.12     1.2    0.45     0.35
 389          0.1     2.0     0.30     3.0     0.7     0.40
 390          0.1     1.0     0.15     1.5     0.5     0.35
 392          0.1     0.8     0.18     1.7    0.50     0.35
*** Met Seg PCP_08 401-412
 401          0.1     1.2     0.35     2.5     0.5     0.45
 402  404     0.1     0.6     0.18     1.2     0.4     0.35
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 405          0.1     0.5     0.16     1.5     0.4     0.35
 406  408     0.1     0.5     0.12     1.0     0.4     0.35
 409          0.1     2.0     0.30     3.0     0.7     0.40
 410          0.1     1.0     0.15     1.8    0.45     0.35
 412          0.1     0.6     0.18     1.2     0.4     0.35
*** Met Seg PCP_15 421-432
 421          0.1     1.2     0.35     1.5     0.5     0.45
 422  424     0.1     0.8     0.18     1.2     0.4     0.35
 425          0.1     0.5     0.16     1.5     0.4     0.35
 426  428     0.1     0.5     0.12     1.2     0.4     0.35
 429          0.1     2.0     0.30     3.0     0.7     0.40
 430          0.1     1.0     0.15     1.5    0.45     0.35
 432          0.1     0.8     0.18     1.2     0.4     0.35
*** Met Seg PCP_02 441-452 Flint Creek
 441          0.1     1.2     0.35     2.5     0.6     0.45
 442  444     0.1     0.8     0.18     1.2     0.5     0.35
 445          0.1     0.5     0.16     1.5     0.5     0.35
 446  448     0.1     0.5     0.12     1.0     0.5     0.35
 449          0.1     2.0     0.30     3.0     0.7     0.40
 450          0.1     1.0     0.15     1.8     0.5     0.35
 452          0.1     0.8     0.18     1.2     0.5     0.35
*** Met Seg PCP_00 461-472 Osage
 461          0.1     1.2     0.35     2.6    0.60     0.45
 462  464     0.1     0.8     0.18     1.7    0.50     0.35
 465          0.1     0.5     0.16     2.0     0.5     0.35
 466  468     0.1     0.5     0.12     1.2    0.45     0.35
 469          0.1     2.0     0.30     3.0     0.7     0.40
 470          0.1     1.0     0.15     1.2     0.5     0.35
 472          0.1     0.8     0.18     1.7    0.50     0.35
*** Met Seg PCP_03 481-492 Osage KARST (partial)
 481          0.1     1.2     0.35     2.8    0.60     0.45
 482  484     0.1     0.8     0.18     1.7    0.50     0.35
 485          0.1     0.5     0.16     2.0     0.5     0.35
 486  488     0.1     0.5     0.12     1.2    0.45     0.35
 489          0.1     2.0     0.30     3.0     0.7     0.40
 490          0.1     1.0     0.15     1.5     0.5     0.35
 492          0.1     0.8     0.18     1.7    0.50     0.35
*** Met Seg PCP_19 501-512
 501          0.1     1.5     0.35     3.5     0.6     0.45
 502  504     0.1     0.8     0.18     1.2     0.5     0.35
 505          0.1     0.5     0.16     1.5     0.5     0.35
 506  508     0.1     0.5     0.12     1.0     0.5     0.35
 509          0.1     2.0     0.30     3.0     0.7     0.40
 510          0.1     1.0     0.15     1.8     0.5     0.35
 512          0.1     0.8     0.18     1.2     0.5     0.35
*** Met Seg PCP_04 521-532 Sager Creek
 521          0.1     1.5     0.35     2.5    0.55     0.45
 522  524     0.1     0.8     0.18     1.7    0.50     0.35
 525          0.1     0.5     0.16     2.0    0.50     0.35
 526  528     0.1     0.5     0.12     1.2    0.45     0.35
 529          0.1     2.0     0.30     3.0     0.7     0.40
 530          0.1     1.0     0.15     2.0     0.5     0.35
 532          0.1     0.8     0.18     1.7    0.50     0.35
*** Met Seg PCP_10 541-552
 541          0.1     1.5     0.35     3.5     0.6     0.45
 542  544     0.1     0.8     0.18     1.2     0.5     0.35
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  545          0.1      0.5      0.16      1.5      0.5      0.35
  546  548      0.1      0.5      0.12      1.0      0.5      0.35
  549          0.1      2.0      0.30      3.0      0.7      0.40
  550          0.1      1.0      0.15      1.8      0.5      0.35
  552          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg OK344672 561-572 (Kansas 2 NE) Flint Creek
  561          0.1      1.2      0.35      2.2     0.55      0.45
  562  564      0.1      1.0      0.18      1.3     0.45      0.35
  565          0.1      0.6      0.16      1.7      0.5      0.35
  566  568      0.1      0.8      0.12      1.0      0.5      0.35
  569          0.1      2.0      0.30      3.0      0.7      0.40
  570          0.1      1.2      0.15      2.0      0.5      0.35
  572          0.1      1.0      0.18      1.3     0.45      0.35
*** Met Seg PCP_13 581-592
  581          0.1      1.5      0.35      3.5      0.6      0.45
  582  584      0.1      0.8      0.18      1.2      0.5      0.35
  585          0.1      0.5      0.16      1.5      0.5      0.35
  586  588      0.1      0.5      0.12      1.0      0.5      0.35
  589          0.1      2.0      0.30      3.0      0.7      0.40
  590          0.1      1.0      0.15      1.8      0.5      0.35
  592          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg PCP_01 601-612 Flint Creek
  601          0.1      1.2      0.35      2.5      0.6      0.45
  602  604      0.1      0.8      0.18      1.2      0.5      0.35
  605          0.1      0.5      0.16      1.5      0.5      0.35
  606  608      0.1      0.5      0.12      1.0      0.5      0.35
  609          0.1      2.0      0.30      3.0      0.7      0.40
  610          0.1      1.0      0.15      1.8      0.5      0.35
  612          0.1      0.8      0.18      1.2      0.5      0.35
*** Met Seg TAHLEQUA 621-632
  621          0.1      1.2      0.35      2.2     0.55      0.45
  622  624      0.1      0.8      0.18      1.3     0.45      0.35
  625          0.1      0.6      0.16      1.5      0.5      0.35
  626  628      0.1      0.8      0.12      1.0      0.5      0.35
  629          0.1      2.0      0.30      3.0      0.7      0.40
  630          0.1      1.0      0.15      1.8      0.5      0.35
  632          0.1      0.8      0.18      1.3     0.45      0.35
*** Met Seg WEBBERS 641-652
  641          0.1      1.2      0.35      2.5      0.6      0.45
  642  644      0.1      0.6      0.18      2.0      0.5      0.35
  645          0.1      0.5      0.16      1.8      0.5      0.35
  646  648      0.1      0.8      0.12      1.5      0.5      0.35
  649          0.1      2.0      0.30      3.0      0.7      0.40
  650          0.1      0.6      0.15      1.5      0.5      0.35
  652          0.1      0.6      0.18      2.0      0.5      0.35
*** Met Seg AR035354 (ODELL 2 N) 661-672 (mostly D soils)
  661          0.1      1.2      0.35      3.0     0.55      0.45
  662  664      0.1      0.6      0.18      2.0     0.45      0.35
  665          0.1      0.5      0.16      1.8      0.5      0.35
  666  668      0.1      0.8      0.12      1.5      0.5      0.35
  669          0.1      2.0      0.30      3.0      0.7      0.40
  670          0.1      0.6      0.15      1.5      0.5      0.35
  672          0.1      0.6      0.18      2.0     0.45      0.35
  END PWAT-PARM4

  PWAT-STATE1
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*** < PLS> PWATER state variables (in)

*** x	- x	CEPS	SURS	UZS	IFWS	LZS	AGWS	GWVS
21		0.00	0.00	2.0	0.00	7.5	1.20	0.00
22	28	0.00	0.00	1.3	0.00	6.0	0.80	0.00
29		0.00	0.00	3.0	0.00	5.5	2.60	0.00
30		0.00	0.00	1.3	0.00	6.5	0.80	0.00
32		0.00	0.00	1.3	0.00	6.0	0.80	0.00
41		0.00	0.00	2.0	0.00	6.5	0.80	0.00
42	48	0.00	0.00	1.3	0.00	5.6	0.60	0.00
49		0.00	0.00	3.0	0.00	4.7	2.60	0.00
50	52	0.00	0.00	1.3	0.00	5.6	0.60	0.00
61		0.00	0.00	2.0	0.00	7.5	1.20	0.00
62	68	0.00	0.00	1.3	0.00	6.0	0.80	0.00
69		0.00	0.00	3.0	0.00	5.5	2.60	0.00
70		0.00	0.00	1.3	0.00	6.5	0.80	0.00
72		0.00	0.00	1.3	0.00	6.0	0.80	0.00
81		0.00	0.00	2.0	0.00	6.5	0.80	0.00
82	88	0.00	0.00	1.3	0.00	5.6	0.60	0.00
89		0.00	0.00	3.0	0.00	4.7	2.60	0.00
90		0.00	0.00	1.3	0.00	5.6	0.60	0.00
92		0.00	0.00	1.3	0.00	5.6	0.60	0.00
101		0.00	0.00	2.0	0.00	7.5	1.20	0.00
102	108	0.00	0.00	1.3	0.00	6.0	0.80	0.00
109		0.00	0.00	3.0	0.00	5.5	2.60	0.00
110		0.00	0.00	1.3	0.00	6.5	0.80	0.00
112		0.00	0.00	1.3	0.00	6.0	0.80	0.00
121		0.00	0.00	2.0	0.00	6.5	0.80	0.00
122	128	0.00	0.00	1.3	0.00	5.6	0.60	0.00
129		0.00	0.00	3.0	0.00	4.7	2.60	0.00
130		0.00	0.00	1.3	0.00	5.6	0.60	0.00
132		0.00	0.00	1.3	0.00	5.6	0.60	0.00
141		0.00	0.00	2.0	0.00	6.5	0.80	0.00
142	148	0.00	0.00	1.3	0.00	5.6	0.60	0.00
149		0.00	0.00	3.0	0.00	4.7	2.60	0.00
150		0.00	0.00	1.3	0.00	5.6	0.60	0.00
152		0.00	0.00	1.3	0.00	5.6	0.60	0.00
161		0.00	0.00	2.0	0.00	7.5	1.20	0.00
162	168	0.00	0.00	1.3	0.00	6.0	0.80	0.00
169		0.00	0.00	3.0	0.00	5.5	2.60	0.00
170		0.00	0.00	1.3	0.00	6.5	0.80	0.00
172		0.00	0.00	1.3	0.00	6.0	0.80	0.00
181		0.00	0.00	2.0	0.00	7.5	1.20	0.00
182	188	0.00	0.00	1.3	0.00	6.0	0.80	0.00
189		0.00	0.00	3.0	0.00	5.5	2.60	0.00
190		0.00	0.00	1.3	0.00	6.5	0.80	0.00
192		0.00	0.00	1.3	0.00	6.0	0.80	0.00
201		0.00	0.00	2.0	0.00	6.5	0.80	0.00
202	208	0.00	0.00	1.3	0.00	5.6	0.60	0.00
209		0.00	0.00	3.0	0.00	4.7	2.60	0.00
210		0.00	0.00	1.3	0.00	5.6	0.60	0.00
212		0.00	0.00	1.3	0.00	5.6	0.60	0.00
221		0.00	0.00	2.0	0.00	6.5	0.80	0.00
222	228	0.00	0.00	1.3	0.00	5.6	0.60	0.00
229		0.00	0.00	3.0	0.00	4.7	2.60	0.00
230		0.00	0.00	1.3	0.00	5.6	0.60	0.00
232		0.00	0.00	1.3	0.00	5.6	0.60	0.00

241		0.00	0.00	2.0	0.00	6.5	0.80	0.00
242	248	0.00	0.00	1.3	0.00	5.6	0.60	0.00
249		0.00	0.00	3.0	0.00	4.7	2.60	0.00
250		0.00	0.00	1.3	0.00	5.6	0.60	0.00
252		0.00	0.00	1.3	0.00	5.6	0.60	0.00
261		0.00	0.00	2.0	0.00	6.5	0.80	0.00
262	268	0.00	0.00	1.3	0.00	5.6	0.60	0.00
269		0.00	0.00	3.0	0.00	4.7	2.60	0.00
270		0.00	0.00	1.3	0.00	5.6	0.60	0.00
272		0.00	0.00	1.3	0.00	5.6	0.60	0.00
281		0.00	0.00	2.0	0.00	7.5	1.20	0.00
282	288	0.00	0.00	1.3	0.00	6.0	0.80	0.00
289		0.00	0.00	3.0	0.00	5.5	2.60	0.00
290		0.00	0.00	1.3	0.00	6.5	0.80	0.00
292		0.00	0.00	1.3	0.00	6.0	0.80	0.00
301		0.00	0.00	2.0	0.00	6.5	0.80	0.00
302	308	0.00	0.00	1.3	0.00	5.6	0.60	0.00
309		0.00	0.00	3.0	0.00	4.7	2.60	0.00
310		0.00	0.00	1.3	0.00	5.6	0.60	0.00
312		0.00	0.00	1.3	0.00	5.6	0.60	0.00
321		0.00	0.00	2.0	0.00	6.5	0.80	0.00
322	328	0.00	0.00	1.3	0.00	5.6	0.60	0.00
329		0.00	0.00	3.0	0.00	4.7	2.60	0.00
330		0.00	0.00	1.3	0.00	5.6	0.60	0.00
332		0.00	0.00	1.3	0.00	5.6	0.60	0.00
341		0.00	0.00	2.0	0.00	6.5	0.80	0.00
342	348	0.00	0.00	1.3	0.00	5.6	0.60	0.00
349		0.00	0.00	3.0	0.00	4.7	2.60	0.00
350		0.00	0.00	1.3	0.00	5.6	0.60	0.00
352		0.00	0.00	1.3	0.00	5.6	0.60	0.00
361		0.00	0.00	2.0	0.00	6.5	0.80	0.00
362	368	0.00	0.00	1.3	0.00	5.6	0.60	0.00
369		0.00	0.00	3.0	0.00	4.7	2.60	0.00
370		0.00	0.00	1.3	0.00	5.6	0.60	0.00
372		0.00	0.00	1.3	0.00	5.6	0.60	0.00
381		0.00	0.00	2.0	0.00	7.5	1.20	0.00
382	388	0.00	0.00	1.3	0.00	6.0	0.80	0.00
389		0.00	0.00	3.0	0.00	5.5	2.60	0.00
390		0.00	0.00	1.3	0.00	6.5	0.80	0.00
392		0.00	0.00	1.3	0.00	6.0	0.80	0.00
401		0.00	0.00	2.0	0.00	6.5	0.80	0.00
402	408	0.00	0.00	1.3	0.00	5.6	0.60	0.00
409		0.00	0.00	3.0	0.00	4.7	2.60	0.00
410		0.00	0.00	1.3	0.00	5.6	0.60	0.00
412		0.00	0.00	1.3	0.00	5.6	0.60	0.00
421		0.00	0.00	2.0	0.00	7.5	1.20	0.00
422	428	0.00	0.00	1.3	0.00	6.0	0.80	0.00
429		0.00	0.00	3.0	0.00	5.5	2.60	0.00
430		0.00	0.00	1.3	0.00	6.5	0.80	0.00
432		0.00	0.00	1.3	0.00	6.0	0.80	0.00
441		0.00	0.00	2.0	0.00	6.5	0.80	0.00
442	448	0.00	0.00	1.3	0.00	5.6	0.60	0.00
449		0.00	0.00	3.0	0.00	4.7	2.60	0.00
450		0.00	0.00	1.3	0.00	5.6	0.60	0.00
452		0.00	0.00	1.3	0.00	5.6	0.60	0.00
461		0.00	0.00	2.0	0.00	7.5	1.20	0.00

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462  468     0.00     0.00     1.3     0.00     6.0     0.80     0.00
469          0.00     0.00     3.0     0.00     5.5     2.60     0.00
470          0.00     0.00     1.3     0.00     6.5     0.80     0.00
472          0.00     0.00     1.3     0.00     6.0     0.80     0.00
481          0.00     0.00     2.0     0.00     7.5     1.20     0.00
482  488     0.00     0.00     1.3     0.00     6.0     0.80     0.00
489          0.00     0.00     3.0     0.00     5.5     2.60     0.00
490          0.00     0.00     1.3     0.00     6.5     0.80     0.00
492          0.00     0.00     1.3     0.00     6.0     0.80     0.00
501          0.00     0.00     2.0     0.00     6.5     0.80     0.00
502  508     0.00     0.00     1.3     0.00     5.6     0.60     0.00
509          0.00     0.00     3.0     0.00     4.7     2.60     0.00
510          0.00     0.00     1.3     0.00     5.6     0.60     0.00
512          0.00     0.00     1.3     0.00     5.6     0.60     0.00
521          0.00     0.00     2.0     0.00     7.5     1.20     0.00
522  528     0.00     0.00     1.3     0.00     6.0     0.80     0.00
529          0.00     0.00     3.0     0.00     5.5     2.60     0.00
530          0.00     0.00     1.3     0.00     6.5     0.80     0.00
532          0.00     0.00     1.3     0.00     6.0     0.80     0.00
541          0.00     0.00     2.0     0.00     6.5     0.80     0.00
542  548     0.00     0.00     1.3     0.00     5.6     0.60     0.00
549          0.00     0.00     3.0     0.00     4.7     2.60     0.00
550          0.00     0.00     1.3     0.00     5.6     0.60     0.00
552          0.00     0.00     1.3     0.00     5.6     0.60     0.00
561          0.00     0.00     2.0     0.00     6.5     0.80     0.00
562  568     0.00     0.00     1.3     0.00     5.6     0.60     0.00
569          0.00     0.00     3.0     0.00     4.7     2.60     0.00
570          0.00     0.00     1.3     0.00     5.6     0.60     0.00
572          0.00     0.00     1.3     0.00     5.6     0.60     0.00
581          0.00     0.00     2.0     0.00     6.5     0.80     0.00
582  588     0.00     0.00     1.3     0.00     5.6     0.60     0.00
589          0.00     0.00     3.0     0.00     4.7     2.60     0.00
590          0.00     0.00     1.3     0.00     5.6     0.60     0.00
592          0.00     0.00     1.3     0.00     5.6     0.60     0.00
601          0.00     0.00     2.0     0.00     6.5     0.80     0.00
602  608     0.00     0.00     1.3     0.00     5.6     0.60     0.00
609          0.00     0.00     3.0     0.00     4.7     2.60     0.00
610          0.00     0.00     1.3     0.00     5.6     0.60     0.00
612          0.00     0.00     1.3     0.00     5.6     0.60     0.00
621          0.00     0.00     2.0     0.00     6.5     0.80     0.00
622  628     0.00     0.00     1.3     0.00     5.6     0.60     0.00
629          0.00     0.00     3.0     0.00     4.7     2.60     0.00
630          0.00     0.00     1.3     0.00     5.6     0.60     0.00
632          0.00     0.00     1.3     0.00     5.6     0.60     0.00
641          0.00     0.00     2.0     0.00     6.5     0.80     0.00
642  648     0.00     0.00     1.3     0.00     5.6     0.60     0.00
649          0.00     0.00     3.0     0.00     4.7     2.60     0.00
650          0.00     0.00     1.3     0.00     5.6     0.60     0.00
652          0.00     0.00     1.3     0.00     5.6     0.60     0.00
661          0.00     0.00     2.0     0.00     6.5     0.80     0.00
662  668     0.00     0.00     1.3     0.00     5.6     0.60     0.00
669          0.00     0.00     3.0     0.00     4.7     2.60     0.00
670          0.00     0.00     1.3     0.00     5.6     0.60     0.00
672          0.00     0.00     1.3     0.00     5.6     0.60     0.00
END PWAT-STATE1
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  MON-INTERCEP
*** <PLS >  Interception storage capacity at start of each month (in)
*** x -  x JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Met Seg PCP_18 21-32
   21      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
   22   24 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
   25      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
   26   28 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
   29      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
   30      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
   32      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_24 41-52
   41      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
   42   44 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
   45      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
   46   48 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
   49      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
   50      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
   52      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_26 61-72
   61      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
   62   64 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
   65      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
   66   68 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
   69      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
   70      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
   72      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg OK348506 (STILWELL 5 NNW) 81-92
   81      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
   82   84 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
   85      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
   86   88 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
   89      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
   90      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
   92      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_11 101-112
  101      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
  102  104 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
  105      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
  106  108 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
  109      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
  110      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
  112      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_06 121-132
  121      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
  122  124 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
  125      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
  126  128 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
  129      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
  130      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
  132      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg WESTVILL 141-152
  141      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
  142  144 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
  145      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
  146  148 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
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 149      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 150      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 152      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_12 161-172
 161      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 162  164 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 165      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 166  168 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 169      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 170      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 172      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_17 181-192
 181      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 182  184 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 185      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 186  188 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 189      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 190      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 192      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_09 201-212
 201      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 202  204 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 205      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 206  208 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 209      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 210      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 212      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_07 221-232
 221      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 222  224 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 225      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 226  228 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 229      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 230      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 232      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_21 241-252
 241      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 242  244 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 245      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 246  248 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 249      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 250      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 252      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_16 261-272
 261      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 262  264 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 265      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 266  268 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 269      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 270      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 272      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_14 281-292
 281      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 282  284 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 285      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 286  288 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
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 289      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 290      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 292      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_05 301-312
 301      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 302  304 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 305      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 306  308 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 309      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 310      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 312      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg COOKSON 321-332
 321      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 322  324 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 325      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 326  328 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 329      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 330      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 332      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_20 341-352
 341      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 342  344 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 345      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 346  348 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 349      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 350      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 352      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_23 361-372
 361      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 362  364 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 365      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 366  368 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 369      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 370      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 372      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_22 381-392
 381      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 382  384 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 385      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 386  388 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 389      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 390      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 392      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_08 401-412
 401      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 402  404 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 405      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 406  408 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 409      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 410      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 412      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_15 421-432
 421      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 422  424 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 425      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 426  428 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
```

429 0.04 0.04 0.05 0.06 0.06 0.08 0.1 0.08 0.06 0.04 0.04 0.04
430 0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15 0.1 0.07 0.05
432 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_02 441-452
441 0.07 0.07 0.08 0.1 0.16 0.2 0.22 0.22 0.2 0.16 0.080.075
442 444 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
445 0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
446 448 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
449 0.04 0.04 0.05 0.06 0.06 0.08 0.1 0.08 0.06 0.04 0.04 0.04
450 0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15 0.1 0.07 0.05
452 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_00 461-472
461 0.07 0.07 0.08 0.1 0.16 0.2 0.22 0.22 0.2 0.16 0.080.075
462 464 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
465 0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
466 468 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
469 0.04 0.04 0.05 0.06 0.06 0.08 0.1 0.08 0.06 0.04 0.04 0.04
470 0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15 0.1 0.07 0.05
472 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_03 481-492
481 0.07 0.07 0.08 0.1 0.16 0.2 0.22 0.22 0.2 0.16 0.080.075
482 484 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
485 0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
486 488 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
489 0.04 0.04 0.05 0.06 0.06 0.08 0.1 0.08 0.06 0.04 0.04 0.04
490 0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15 0.1 0.07 0.05
492 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_19 501-512
501 0.07 0.07 0.08 0.1 0.16 0.2 0.22 0.22 0.2 0.16 0.080.075
502 504 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
505 0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
506 508 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
509 0.04 0.04 0.05 0.06 0.06 0.08 0.1 0.08 0.06 0.04 0.04 0.04
510 0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15 0.1 0.07 0.05
512 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_04 521-532
521 0.07 0.07 0.08 0.1 0.16 0.2 0.22 0.22 0.2 0.16 0.080.075
522 524 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
525 0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
526 528 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
529 0.04 0.04 0.05 0.06 0.06 0.08 0.1 0.08 0.06 0.04 0.04 0.04
530 0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15 0.1 0.07 0.05
532 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_10 541-552
541 0.07 0.07 0.08 0.1 0.16 0.2 0.22 0.22 0.2 0.16 0.080.075
542 544 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
545 0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
546 548 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
549 0.04 0.04 0.05 0.06 0.06 0.08 0.1 0.08 0.06 0.04 0.04 0.04
550 0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15 0.1 0.07 0.05
552 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg OK344672 561-572
561 0.07 0.07 0.08 0.1 0.16 0.2 0.22 0.22 0.2 0.16 0.080.075
562 564 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
565 0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
566 568 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05

```
 569      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 570      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 572      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_13 581-592
 581      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 582  584 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 585      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 586  588 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 589      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 590      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 592      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg PCP_01 601-612
 601      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 602  604 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 605      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 606  608 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 609      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 610      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 612      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg TAHLEQUA 621-632
 621      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 622  624 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 625      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 626  628 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 629      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 630      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 632      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg WEBBERS 641-652
 641      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 642  644 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 645      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 646  648 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 649      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 650      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 652      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
*** Met Seg AR035354 (ODELL 2 N) 661-672
 661      0.07 0.07 0.08  0.1 0.16  0.2 0.22 0.22  0.2 0.16 0.080.075
 662  664 0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 665      0.04 0.040.0450.058 0.06 0.08 0.08 0.08 0.08 0.07 0.05 0.04
 666  668 0.05 0.05 0.05 0.07 0.07 0.09 0.09 0.09 0.09 0.09 0.05 0.05
 669      0.04 0.04 0.05 0.06 0.06 0.08  0.1 0.08 0.06 0.04 0.04 0.04
 670      0.04 0.04 0.04 0.04 0.07 0.13 0.16 0.16 0.15  0.1 0.07 0.05
 672      0.05 0.050.0550.075 0.11 0.13 0.15 0.15 0.12 0.08 0.07 0.06
 END MON-INTERCEP

 MON-LZETPARM
*** <PLS >  Lower zone evapotransp   parm at start of each month
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
*** Met Seg PCP_18 21-30
*** Met Seg PCP_18 21-32
  21       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  22   24 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  25      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  26   28 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  29      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  30      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
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  32      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_24 41-52
  41       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  42   44 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  45      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  46   48 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  49      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  50      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
  52      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_26 61-72
  61       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  62   64 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  65      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  66   68 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  69      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  70      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
  72      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg OK348506 (STILWELL 5 NNW) 81-92
  81       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  82   84 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  85      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  86   88 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  89      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  90      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
  92      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_11 101-112
 101       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 102  104 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 105      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 106  108 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 109      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 110      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 112      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_06 121-132
 121       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 122  124 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 125      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 126  128 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 129      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 130      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 132      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg WESTVILL 141-152
 141       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 142  144 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 145      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 146  148 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 149      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 150      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 152      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_12 161-172
 161       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 162  164 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 165      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 166  168 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 169      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 170      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
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 172      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_17 181-192
 181       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 182  184 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 185      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 186  188 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 189      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 190      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 192      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_09 201-212
 201       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 202  204 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 205      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 206  208 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 209      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 210      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 212      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_07 221-232
 221       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 222  224 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 225      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 226  228 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 229      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 230      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 232      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_21 241-252
 241       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 242  244 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 245      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 246  248 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 249      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 250      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 252      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_16 261-272
 261       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 262  264 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 265      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 266  268 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 269      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 270      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 272      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_14 281-292
 281       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 282  284 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 285      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 286  288 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 289      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 290      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 292      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_05 301-312
 301       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 302  304 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 305      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 306  308 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 309      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 310      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
```

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 312      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg COOKSON 321-332
 321       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 322  324 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 325      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 326  328 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 329      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 330      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 332      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_20 341-352
 341       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 342  344 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 345      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 346  348 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 349      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 350      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 352      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_23 361-372
 361       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 362  364 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 365      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 366  368 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 369      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 370      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 372      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_22 381-392
 381       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 382  384 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 385      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 386  388 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 389      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 390      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 392      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_08 401-412
 401       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 402  404 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 405      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 406  408 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 409      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 410      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 412      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_15 421-432
 421       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 422  424 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 425      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 426  428 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 429      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 430      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 432      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_02 441-452
 441       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 442  444 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 445      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 446  448 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 449      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 450      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
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 452      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_00 461-472
 461       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 462  464 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 465      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 466  468 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 469      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 470      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 472      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_03 481-492
 481       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 482  484 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 485      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 486  488 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 489      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 490      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 492      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_19 501-512
 501       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 502  504 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 505      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 506  508 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 509      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 510      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 512      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_04 521-532
 521       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 522  524 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 525      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 526  528 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 529      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 530      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 532      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_10 541-552
 541       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 542  544 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 545      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 546  548 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 549      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 550      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 552      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg OK344672 561-570
 561       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 562  564 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 565      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 566  568 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 569      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 570      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
 572      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_13 581-592
 581       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
 582  584 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
 585      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
 586  588 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
 589      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
 590      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
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  592      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg PCP_01 601-612
  601       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  602  604 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  605      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  606  608 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  609      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  610      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
  612      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg TAHLEQUA 621-632
  621       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  622  624 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  625      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  626  628 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  629      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  630      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
  632      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg WEBBERS 641-650
  641       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  642  644 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  645      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  646  648 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  649      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  650      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
  652      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
*** Met Seg AR035354 (ODELL 2 N) 661-670
  661       0.2  0.2  0.3  0.4  0.5 0.55 0.65 0.65 0.65  0.6 0.35  0.2
  662  664 0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  665      0.15 0.15 0.19 0.25  0.3  0.4 0.45 0.45 0.45  0.4 0.25 0.15
  666  668 0.19 0.19 0.28  0.3  0.4  0.5  0.5  0.5  0.5  0.3  0.2 0.19
  669      0.19 0.19 0.28  0.3 0.45 0.45 0.45 0.45 0.45 0.45  0.4 0.19
  670      0.15 0.19 0.19 0.25 0.35 0.55 0.65 0.75  0.5 0.15  0.1  0.1
  672      0.19 0.19 0.25  0.3  0.4  0.5 0.55 0.55 0.55  0.5  0.3 0.19
  END MON-LZETPARM

*** SECTION NITR
  SOIL-DATA
    <PLS > SOIL LAYER DEPTHS AND BULK DENSITIES  ***
    # -  #          DEPTHS (IN)              BULK DENSITY (LB/FT3) ***
          SURFACE   UPPER   LOWER GROUNDW SURFACE   UPPER   LOWER GROUNDW   ***
   22   24    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
   32         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
   42   44    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
   52         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
   62   64    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
   72         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
   82   84    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
   92         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  102  104    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  112         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  122  124    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  132         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  142  144    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  152         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  162  164    0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
  172         0.39    5.61   35.30    60.0    74.9    95.5    84.3    83.7
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 182  184   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 192        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 202  204   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 212        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 222  224   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 232        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 242  244   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 252        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 262  264   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 272        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 282  284   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 292        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 302  304   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 312        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 322  324   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 332        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 342  344   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 352        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 362  364   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 372        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 382  384   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 392        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 402  404   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 412        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 422  424   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 432        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 442  444   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 452        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 462  464   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 472        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 482  484   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 492        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 502  504   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 512        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 522  524   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 532        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 542  544   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 552        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 562  564   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 572        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 582  584   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 592        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 602  604   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 612        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 622  624   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 632        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 642  644   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 652        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 662  664   0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 672        0.39   5.61  35.30   60.0   74.9   95.5   84.3   83.7
 END SOIL-DATA

*** Plant uptake of nitrogen - yield-based method
 SOIL-DATA2
  <PLS >    SWILTP    UWILTP    LWILTP    AWILTP ***
  # -  #   (IN/IN)   (IN/IN)   (IN/IN)   (IN/IN) ***
```

22	24	0.01	0.005	0.05	0.18
32		0.01	0.005	0.05	0.18
42	44	0.01	0.005	0.05	0.18
52		0.01	0.005	0.05	0.18
62	64	0.01	0.005	0.05	0.18
72		0.01	0.005	0.05	0.18
82	84	0.01	0.005	0.05	0.18
92		0.01	0.005	0.05	0.18
102	104	0.01	0.005	0.05	0.18
112		0.01	0.005	0.05	0.18
122	124	0.01	0.005	0.05	0.18
132		0.01	0.005	0.05	0.18
142	144	0.01	0.005	0.05	0.18
152		0.01	0.005	0.05	0.18
162	164	0.01	0.005	0.05	0.18
172		0.01	0.005	0.05	0.18
182	184	0.01	0.005	0.05	0.18
192		0.01	0.005	0.05	0.18
202	204	0.01	0.005	0.05	0.18
212		0.01	0.005	0.05	0.18
222	224	0.01	0.005	0.05	0.18
232		0.01	0.005	0.05	0.18
242	244	0.01	0.005	0.05	0.18
252		0.01	0.005	0.05	0.18
262	264	0.01	0.005	0.05	0.18
272		0.01	0.005	0.05	0.18
282	284	0.01	0.005	0.05	0.18
292		0.01	0.005	0.05	0.18
302	304	0.01	0.005	0.05	0.18
312		0.01	0.005	0.05	0.18
322	324	0.01	0.005	0.05	0.18
332		0.01	0.005	0.05	0.18
342	344	0.01	0.005	0.05	0.18
352		0.01	0.005	0.05	0.18
362	364	0.01	0.005	0.05	0.18
372		0.01	0.005	0.05	0.18
382	384	0.01	0.005	0.05	0.18
392		0.01	0.005	0.05	0.18
402	404	0.01	0.005	0.05	0.18
412		0.01	0.005	0.05	0.18
422	424	0.01	0.005	0.05	0.18
432		0.01	0.005	0.05	0.18
442	444	0.01	0.005	0.05	0.18
452		0.01	0.005	0.05	0.18
462	464	0.01	0.005	0.05	0.18
472		0.01	0.005	0.05	0.18
482	484	0.01	0.005	0.05	0.18
492		0.01	0.005	0.05	0.18
502	504	0.01	0.005	0.05	0.18
512		0.01	0.005	0.05	0.18
522	524	0.01	0.005	0.05	0.18
532		0.01	0.005	0.05	0.18
542	544	0.01	0.005	0.05	0.18
552		0.01	0.005	0.05	0.18
562	564	0.01	0.005	0.05	0.18
572		0.01	0.005	0.05	0.18

```
582  584     0.01     0.005     0.05     0.18
592          0.01     0.005     0.05     0.18
602  604     0.01     0.005     0.05     0.18
612          0.01     0.005     0.05     0.18
622  624     0.01     0.005     0.05     0.18
632          0.01     0.005     0.05     0.18
642  644     0.01     0.005     0.05     0.18
652          0.01     0.005     0.05     0.18
662  664     0.01     0.005     0.05     0.18
672          0.01     0.005     0.05     0.18
END SOIL-DATA2

CROP-DATES
 <PLS >            CROP 1          CROP 2          CROP 3    ***
 # -  # NCRP     PM PD   HM HD     PM PD   HM HD     PM PD   HM HD ***
 22   24    1      1  1   12 31
 32         1      1  1   12 31
 42   44    1      1  1   12 31
 52         1      1  1   12 31
 62   64    1      1  1   12 31
 72         1      1  1   12 31
 82   84    1      1  1   12 31
 92         1      1  1   12 31
102  104    1      1  1   12 31
112         1      1  1   12 31
122  124    1      1  1   12 31
132         1      1  1   12 31
142  144    1      1  1   12 31
152         1      1  1   12 31
162  164    1      1  1   12 31
172         1      1  1   12 31
182  184    1      1  1   12 31
192         1      1  1   12 31
202  204    1      1  1   12 31
212         1      1  1   12 31
222  224    1      1  1   12 31
232         1      1  1   12 31
242  244    1      1  1   12 31
252         1      1  1   12 31
262  264    1      1  1   12 31
272         1      1  1   12 31
282  284    1      1  1   12 31
292         1      1  1   12 31
302  304    1      1  1   12 31
312         1      1  1   12 31
322  324    1      1  1   12 31
332         1      1  1   12 31
342  344    1      1  1   12 31
352         1      1  1   12 31
362  364    1      1  1   12 31
372         1      1  1   12 31
382  384    1      1  1   12 31
392         1      1  1   12 31
402  404    1      1  1   12 31
412         1      1  1   12 31
422  424    1      1  1   12 31
```

```
  432        1      1  1   12 31
  442  444   1      1  1   12 31
  452        1      1  1   12 31
  462  464   1      1  1   12 31
  472        1      1  1   12 31
  482  484   1      1  1   12 31
  492        1      1  1   12 31
  502  504   1      1  1   12 31
  512        1      1  1   12 31
  522  524   1      1  1   12 31
  532        1      1  1   12 31
  542  544   1      1  1   12 31
  552        1      1  1   12 31
  562  564   1      1  1   12 31
  572        1      1  1   12 31
  582  584   1      1  1   12 31
  592        1      1  1   12 31
  602  604   1      1  1   12 31
  612        1      1  1   12 31
  622  624   1      1  1   12 31
  632        1      1  1   12 31
  642  644   1      1  1   12 31
  652        1      1  1   12 31
  662  664   1      1  1   12 31
  672        1      1  1   12 31
  END CROP-DATES

  SED-PARM1
*** <PLS >  Sediment parameters 1
*** x -  x  CRV VSIV SDOP
   21  672    1    0    1
  END SED-PARM1

  SED-PARM2
*** <PLS >      SMPF      KRER      JRER     AFFIX     COVER      NVSI
*** x -  x                          (/day)          lb/ac-day
*** Forest
   21           1.0     0.279       2.0     0.012       1.0       0.8
*** Pasture1 (Slope < 2.5%)
   22           1.0     0.290       2.0     0.012       1.0       1.0
*** Pasture2 (2.5% < Slope < 4.0%)
   23           1.0     0.296       2.0     0.012       1.0       1.0
*** Pasture3 (Slope >= 4.0%)
   24           1.0     0.288       2.0     0.012       1.0       1.0
*** Grass/Shrub/Barren
   25           1.0     0.272       2.0     0.012       1.0       2.0
*** Developed, Open
   26           1.0     0.284       2.0     0.012       1.0       2.0
*** Developed, Low
   27           1.0     0.276       2.0     0.012       1.0       2.0
*** Developed, Med/High
   28           1.0     0.268       2.0     0.012       1.0       2.0
*** Wetlands
   29           1.0     0.177       2.0     0.012       1.0       1.0
*** Cropland
   30           1.0     0.298       2.0     0.012       1.0       2.0
```

*** Pasture with Litter Applied

32	1.0	0.290	2.0	0.012	1.0	1.0
41	1.0	0.280	2.0	0.012	1.0	0.8
42	1.0	0.294	2.0	0.012	1.0	1.0
43	1.0	0.300	2.0	0.012	1.0	1.0
44	1.0	0.286	2.0	0.012	1.0	1.0
45	1.0	0.265	2.0	0.012	1.0	2.0
46	1.0	0.285	2.0	0.012	1.0	2.0
47	1.0	0.286	2.0	0.012	1.0	2.0
48	1.0	0.266	2.0	0.012	1.0	2.0
49	1.0	0.193	2.0	0.012	1.0	1.0
50	1.0	0.290	2.0	0.012	1.0	2.0
52	1.0	0.294	2.0	0.012	1.0	1.0
61	1.0	0.286	2.0	0.012	1.0	0.8
62	1.0	0.303	2.0	0.012	1.0	1.0
63	1.0	0.306	2.0	0.012	1.0	1.0
64	1.0	0.298	2.0	0.012	1.0	1.0
65	1.0	0.274	2.0	0.012	1.0	2.0
66	1.0	0.289	2.0	0.012	1.0	2.0
67	1.0	0.321	2.0	0.012	1.0	2.0
68	1.0	0.362	2.0	0.012	1.0	2.0
69	1.0	0.180	2.0	0.012	1.0	1.0
70	1.0	0.280	2.0	0.012	1.0	2.0
72	1.0	0.303	2.0	0.012	1.0	1.0
81	1.0	0.291	2.0	0.012	1.0	0.8
82	1.0	0.300	2.0	0.012	1.0	1.0
83	1.0	0.306	2.0	0.012	1.0	1.0
84	1.0	0.295	2.0	0.012	1.0	1.0
85	1.0	0.282	2.0	0.012	1.0	2.0
86	1.0	0.294	2.0	0.012	1.0	2.0
87	1.0	0.331	2.0	0.012	1.0	2.0
88	1.0	0.342	2.0	0.012	1.0	2.0
89	1.0	0.175	2.0	0.012	1.0	1.0
90	1.0	0.278	2.0	0.012	1.0	2.0
92	1.0	0.300	2.0	0.012	1.0	1.0
101	1.0	0.319	2.0	0.012	1.0	0.8
102	1.0	0.333	2.0	0.012	1.0	1.0
103	1.0	0.344	2.0	0.012	1.0	1.0
104	1.0	0.332	2.0	0.012	1.0	1.0
105	1.0	0.294	2.0	0.012	1.0	2.0
106	1.0	0.335	2.0	0.012	1.0	2.0
107	1.0	0.360	2.0	0.012	1.0	2.0
108	1.0	0.363	2.0	0.012	1.0	2.0
109	1.0	0.244	2.0	0.012	1.0	1.0
110	1.0	0.412	2.0	0.012	1.0	2.0
112	1.0	0.333	2.0	0.012	1.0	1.0
121	1.0	0.313	2.0	0.012	1.0	0.8
122	1.0	0.328	2.0	0.012	1.0	1.0
123	1.0	0.337	2.0	0.012	1.0	1.0
124	1.0	0.329	2.0	0.012	1.0	1.0
125	1.0	0.279	2.0	0.012	1.0	2.0
126	1.0	0.334	2.0	0.012	1.0	2.0
127	1.0	0.339	2.0	0.012	1.0	2.0
128	1.0	0.337	2.0	0.012	1.0	2.0
129	1.0	0.231	2.0	0.012	1.0	1.0
130	1.0	0.300	2.0	0.012	1.0	2.0

132	1.0	0.328	2.0	0.012	1.0	1.0
141	1.0	0.293	2.0	0.012	1.0	0.8
142	1.0	0.311	2.0	0.012	1.0	1.0
143	1.0	0.323	2.0	0.012	1.0	1.0
144	1.0	0.313	2.0	0.012	1.0	1.0
145	1.0	0.287	2.0	0.012	1.0	2.0
146	1.0	0.299	2.0	0.012	1.0	2.0
147	1.0	0.343	2.0	0.012	1.0	2.0
148	1.0	0.380	2.0	0.012	1.0	2.0
149	1.0	0.170	2.0	0.012	1.0	1.0
150	1.0	0.317	2.0	0.012	1.0	2.0
152	1.0	0.311	2.0	0.012	1.0	1.0
161	1.0	0.321	2.0	0.012	1.0	0.8
162	1.0	0.342	2.0	0.012	1.0	1.0
163	1.0	0.352	2.0	0.012	1.0	1.0
164	1.0	0.341	2.0	0.012	1.0	1.0
165	1.0	0.300	2.0	0.012	1.0	2.0
166	1.0	0.333	2.0	0.012	1.0	2.0
167	1.0	0.345	2.0	0.012	1.0	2.0
168	1.0	0.307	2.0	0.012	1.0	2.0
169	1.0	0.223	2.0	0.012	1.0	1.0
170	1.0	0.366	2.0	0.012	1.0	2.0
172	1.0	0.342	2.0	0.012	1.0	1.0
181	1.0	0.329	2.0	0.012	1.0	0.8
182	1.0	0.363	2.0	0.012	1.0	1.0
183	1.0	0.373	2.0	0.012	1.0	1.0
184	1.0	0.355	2.0	0.012	1.0	1.0
185	1.0	0.304	2.0	0.012	1.0	2.0
186	1.0	0.358	2.0	0.012	1.0	2.0
187	1.0	0.381	2.0	0.012	1.0	2.0
188	1.0	0.384	2.0	0.012	1.0	2.0
189	1.0	0.222	2.0	0.012	1.0	1.0
190	1.0	0.452	2.0	0.012	1.0	2.0
192	1.0	0.363	2.0	0.012	1.0	1.0
201	1.0	0.333	2.0	0.012	1.0	0.8
202	1.0	0.343	2.0	0.012	1.0	1.0
203	1.0	0.352	2.0	0.012	1.0	1.0
204	1.0	0.347	2.0	0.012	1.0	1.0
205	1.0	0.298	2.0	0.012	1.0	2.0
206	1.0	0.346	2.0	0.012	1.0	2.0
207 208	1.0	0.368	2.0	0.012	1.0	2.0
209	1.0	0.219	2.0	0.012	1.0	1.0
210	1.0	0.284	2.0	0.012	1.0	2.0
212	1.0	0.343	2.0	0.012	1.0	1.0
221	1.0	0.324	2.0	0.012	1.0	0.8
222	1.0	0.335	2.0	0.012	1.0	1.0
223	1.0	0.346	2.0	0.012	1.0	1.0
224	1.0	0.337	2.0	0.012	1.0	1.0
225	1.0	0.299	2.0	0.012	1.0	2.0
226	1.0	0.332	2.0	0.012	1.0	2.0
227	1.0	0.309	2.0	0.012	1.0	2.0
228	1.0	0.242	2.0	0.012	1.0	2.0
229	1.0	0.309	2.0	0.012	1.0	1.0
230	1.0	0.350	2.0	0.012	1.0	2.0
232	1.0	0.335	2.0	0.012	1.0	1.0
241	1.0	0.333	2.0	0.012	1.0	0.8

242	1.0	0.365	2.0	0.012	1.0	1.0
243	1.0	0.367	2.0	0.012	1.0	1.0
244	1.0	0.372	2.0	0.012	1.0	1.0
245	1.0	0.341	2.0	0.012	1.0	2.0
246	1.0	0.355	2.0	0.012	1.0	2.0
247	1.0	0.371	2.0	0.012	1.0	2.0
248	1.0	0.375	2.0	0.012	1.0	2.0
249	1.0	0.258	2.0	0.012	1.0	1.0
250	1.0	0.318	2.0	0.012	1.0	2.0
252	1.0	0.365	2.0	0.012	1.0	1.0
261	1.0	0.314	2.0	0.012	1.0	0.8
262	1.0	0.342	2.0	0.012	1.0	1.0
263	1.0	0.349	2.0	0.012	1.0	1.0
264	1.0	0.352	2.0	0.012	1.0	1.0
265	1.0	0.305	2.0	0.012	1.0	2.0
266	1.0	0.317	2.0	0.012	1.0	2.0
267	1.0	0.374	2.0	0.012	1.0	2.0
268	1.0	0.394	2.0	0.012	1.0	2.0
269	1.0	0.255	2.0	0.012	1.0	1.0
270	1.0	0.355	2.0	0.012	1.0	2.0
272	1.0	0.342	2.0	0.012	1.0	1.0
281	1.0	0.316	2.0	0.012	1.0	0.8
282	1.0	0.338	2.0	0.012	1.0	1.0
283	1.0	0.346	2.0	0.012	1.0	1.0
284	1.0	0.339	2.0	0.012	1.0	1.0
285	1.0	0.301	2.0	0.012	1.0	2.0
286	1.0	0.315	2.0	0.012	1.0	2.0
287	1.0	0.327	2.0	0.012	1.0	2.0
288	1.0	0.318	2.0	0.012	1.0	2.0
289	1.0	0.242	2.0	0.012	1.0	1.0
290	1.0	0.342	2.0	0.012	1.0	2.0
292	1.0	0.338	2.0	0.012	1.0	1.0
301	1.0	0.327	2.0	0.012	1.0	0.8
302	1.0	0.347	2.0	0.012	1.0	1.0
303	1.0	0.358	2.0	0.012	1.0	1.0
304	1.0	0.356	2.0	0.012	1.0	1.0
305	1.0	0.305	2.0	0.012	1.0	2.0
306	1.0	0.321	2.0	0.012	1.0	2.0
307	1.0	0.342	2.0	0.012	1.0	2.0
308	1.0	0.338	2.0	0.012	1.0	2.0
309	1.0	0.246	2.0	0.012	1.0	1.0
310	1.0	0.388	2.0	0.012	1.0	2.0
312	1.0	0.347	2.0	0.012	1.0	1.0
321	1.0	0.257	2.0	0.012	1.0	0.8
322	1.0	0.280	2.0	0.012	1.0	1.0
323	1.0	0.283	2.0	0.012	1.0	1.0
324	1.0	0.273	2.0	0.012	1.0	1.0
325	1.0	0.230	2.0	0.012	1.0	2.0
326	1.0	0.245	2.0	0.012	1.0	2.0
327	1.0	0.243	2.0	0.012	1.0	2.0
328	1.0	0.265	2.0	0.012	1.0	2.0
329	1.0	0.109	2.0	0.012	1.0	1.0
330	1.0	0.245	2.0	0.012	1.0	2.0
332	1.0	0.280	2.0	0.012	1.0	1.0
341	1.0	0.333	2.0	0.012	1.0	0.8
342	1.0	0.356	2.0	0.012	1.0	1.0

343	1.0	0.361	2.0	0.012	1.0	1.0
344	1.0	0.347	2.0	0.012	1.0	1.0
345	1.0	0.319	2.0	0.012	1.0	2.0
346	1.0	0.351	2.0	0.012	1.0	2.0
347	1.0	0.372	2.0	0.012	1.0	2.0
348	1.0	0.388	2.0	0.012	1.0	2.0
349	1.0	0.291	2.0	0.012	1.0	1.0
350	1.0	0.356	2.0	0.012	1.0	2.0
352	1.0	0.356	2.0	0.012	1.0	1.0
361	1.0	0.295	2.0	0.012	1.0	0.8
362	1.0	0.316	2.0	0.012	1.0	1.0
363	1.0	0.319	2.0	0.012	1.0	1.0
364	1.0	0.324	2.0	0.012	1.0	1.0
365	1.0	0.301	2.0	0.012	1.0	2.0
366	1.0	0.312	2.0	0.012	1.0	2.0
367	1.0	0.323	2.0	0.012	1.0	2.0
368	1.0	0.342	2.0	0.012	1.0	2.0
369	1.0	0.181	2.0	0.012	1.0	1.0
370	1.0	0.329	2.0	0.012	1.0	2.0
372	1.0	0.316	2.0	0.012	1.0	1.0
381	1.0	0.328	2.0	0.012	1.0	0.8
382	1.0	0.361	2.0	0.012	1.0	1.0
383	1.0	0.370	2.0	0.012	1.0	1.0
384	1.0	0.373	2.0	0.012	1.0	1.0
385	1.0	0.339	2.0	0.012	1.0	2.0
386	1.0	0.360	2.0	0.012	1.0	2.0
387	1.0	0.375	2.0	0.012	1.0	2.0
388	1.0	0.382	2.0	0.012	1.0	2.0
389	1.0	0.265	2.0	0.012	1.0	1.0
390	1.0	0.354	2.0	0.012	1.0	2.0
392	1.0	0.361	2.0	0.012	1.0	1.0
401	1.0	0.300	2.0	0.012	1.0	0.8
402	1.0	0.316	2.0	0.012	1.0	1.0
403	1.0	0.319	2.0	0.012	1.0	1.0
404	1.0	0.310	2.0	0.012	1.0	1.0
405	1.0	0.275	2.0	0.012	1.0	2.0
406 408	1.0	0.301	2.0	0.012	1.0	2.0
409	1.0	0.182	2.0	0.012	1.0	1.0
410	1.0	0.370	2.0	0.012	1.0	2.0
412	1.0	0.316	2.0	0.012	1.0	1.0
421	1.0	0.279	2.0	0.012	1.0	0.8
422	1.0	0.279	2.0	0.012	1.0	1.0
423	1.0	0.285	2.0	0.012	1.0	1.0
424	1.0	0.278	2.0	0.012	1.0	1.0
425	1.0	0.264	2.0	0.012	1.0	2.0
426	1.0	0.282	2.0	0.012	1.0	2.0
427	1.0	0.305	2.0	0.012	1.0	2.0
428	1.0	0.312	2.0	0.012	1.0	2.0
429	1.0	0.171	2.0	0.012	1.0	1.0
430	1.0	0.271	2.0	0.012	1.0	2.0
432	1.0	0.279	2.0	0.012	1.0	1.0
441	1.0	0.322	2.0	0.012	1.0	0.8
442	1.0	0.339	2.0	0.012	1.0	1.0
443	1.0	0.347	2.0	0.012	1.0	1.0
444	1.0	0.356	2.0	0.012	1.0	1.0
445	1.0	0.322	2.0	0.012	1.0	2.0

446	1.0	0.331	2.0	0.012	1.0	2.0
447	1.0	0.367	2.0	0.012	1.0	2.0
448	1.0	0.388	2.0	0.012	1.0	2.0
449	1.0	0.246	2.0	0.012	1.0	1.0
450	1.0	0.375	2.0	0.012	1.0	2.0
452	1.0	0.339	2.0	0.012	1.0	1.0
461	1.0	0.336	2.0	0.012	1.0	0.8
462	1.0	0.365	2.0	0.012	1.0	1.0
463	1.0	0.370	2.0	0.012	1.0	1.0
464	1.0	0.375	2.0	0.012	1.0	1.0
465	1.0	0.355	2.0	0.012	1.0	2.0
466	1.0	0.366	2.0	0.012	1.0	2.0
467	1.0	0.382	2.0	0.012	1.0	2.0
468	1.0	0.386	2.0	0.012	1.0	2.0
469	1.0	0.294	2.0	0.012	1.0	1.0
470	1.0	0.398	2.0	0.012	1.0	2.0
472	1.0	0.365	2.0	0.012	1.0	1.0
481	1.0	0.338	2.0	0.012	1.0	0.8
482	1.0	0.363	2.0	0.012	1.0	1.0
483	1.0	0.371	2.0	0.012	1.0	1.0
484	1.0	0.379	2.0	0.012	1.0	1.0
485	1.0	0.352	2.0	0.012	1.0	2.0
486	1.0	0.365	2.0	0.012	1.0	2.0
487	1.0	0.395	2.0	0.012	1.0	2.0
488	1.0	0.397	2.0	0.012	1.0	2.0
489	1.0	0.286	2.0	0.012	1.0	1.0
490	1.0	0.387	2.0	0.012	1.0	2.0
492	1.0	0.363	2.0	0.012	1.0	1.0
501	1.0	0.326	2.0	0.012	1.0	0.8
502	1.0	0.354	2.0	0.012	1.0	1.0
503	1.0	0.365	2.0	0.012	1.0	1.0
504	1.0	0.378	2.0	0.012	1.0	1.0
505	1.0	0.339	2.0	0.012	1.0	2.0
506	1.0	0.358	2.0	0.012	1.0	2.0
507	1.0	0.385	2.0	0.012	1.0	2.0
508	1.0	0.391	2.0	0.012	1.0	2.0
509	1.0	0.223	2.0	0.012	1.0	1.0
510	1.0	0.323	2.0	0.012	1.0	2.0
512	1.0	0.354	2.0	0.012	1.0	1.0
521	1.0	0.341	2.0	0.012	1.0	0.8
522	1.0	0.373	2.0	0.012	1.0	1.0
523	1.0	0.382	2.0	0.012	1.0	1.0
524	1.0	0.385	2.0	0.012	1.0	1.0
525	1.0	0.307	2.0	0.012	1.0	2.0
526	1.0	0.372	2.0	0.012	1.0	2.0
527	1.0	0.395	2.0	0.012	1.0	2.0
528	1.0	0.394	2.0	0.012	1.0	2.0
529	1.0	0.262	2.0	0.012	1.0	1.0
530	1.0	0.430	2.0	0.012	1.0	2.0
532	1.0	0.373	2.0	0.012	1.0	1.0
541	1.0	0.314	2.0	0.012	1.0	0.8
542	1.0	0.338	2.0	0.012	1.0	1.0
543	1.0	0.356	2.0	0.012	1.0	1.0
544	1.0	0.362	2.0	0.012	1.0	1.0
545 546	1.0	0.311	2.0	0.012	1.0	2.0
547	1.0	0.313	2.0	0.012	1.0	2.0

548		1.0	0.304	2.0	0.012	1.0	2.0
549		1.0	0.264	2.0	0.012	1.0	1.0
550		1.0	0.365	2.0	0.012	1.0	2.0
552		1.0	0.338	2.0	0.012	1.0	1.0
561		1.0	0.296	2.0	0.012	1.0	0.8
562		1.0	0.310	2.0	0.012	1.0	1.0
563		1.0	0.321	2.0	0.012	1.0	1.0
564		1.0	0.316	2.0	0.012	1.0	1.0
565		1.0	0.288	2.0	0.012	1.0	2.0
566		1.0	0.298	2.0	0.012	1.0	2.0
567		1.0	0.324	2.0	0.012	1.0	2.0
568		1.0	0.312	2.0	0.012	1.0	2.0
569		1.0	0.182	2.0	0.012	1.0	1.0
570		1.0	0.321	2.0	0.012	1.0	2.0
572		1.0	0.310	2.0	0.012	1.0	1.0
581		1.0	0.313	2.0	0.012	1.0	0.8
582		1.0	0.338	2.0	0.012	1.0	1.0
583		1.0	0.347	2.0	0.012	1.0	1.0
584		1.0	0.354	2.0	0.012	1.0	1.0
585		1.0	0.310	2.0	0.012	1.0	2.0
586		1.0	0.319	2.0	0.012	1.0	2.0
587		1.0	0.323	2.0	0.012	1.0	2.0
588		1.0	0.314	2.0	0.012	1.0	2.0
589		1.0	0.260	2.0	0.012	1.0	1.0
590		1.0	0.375	2.0	0.012	1.0	2.0
592		1.0	0.338	2.0	0.012	1.0	1.0
601		1.0	0.338	2.0	0.012	1.0	0.8
602		1.0	0.359	2.0	0.012	1.0	1.0
603		1.0	0.370	2.0	0.012	1.0	1.0
604		1.0	0.377	2.0	0.012	1.0	1.0
605		1.0	0.316	2.0	0.012	1.0	2.0
606		1.0	0.350	2.0	0.012	1.0	2.0
607		1.0	0.378	2.0	0.012	1.0	2.0
608		1.0	0.355	2.0	0.012	1.0	2.0
609		1.0	0.235	2.0	0.012	1.0	1.0
610		1.0	0.366	2.0	0.012	1.0	2.0
612		1.0	0.359	2.0	0.012	1.0	1.0
621		1.0	0.305	2.0	0.012	1.0	0.8
622		1.0	0.312	2.0	0.012	1.0	1.0
623		1.0	0.315	2.0	0.012	1.0	1.0
624		1.0	0.308	2.0	0.012	1.0	1.0
625		1.0	0.294	2.0	0.012	1.0	2.0
626		1.0	0.307	2.0	0.012	1.0	2.0
627	628	1.0	0.324	2.0	0.012	1.0	2.0
629		1.0	0.186	2.0	0.012	1.0	1.0
630		1.0	0.341	2.0	0.012	1.0	2.0
632		1.0	0.359	2.0	0.012	1.0	1.0
641		1.0	0.306	2.0	0.012	1.0	0.8
642	643	1.0	0.309	2.0	0.012	1.0	1.0
644		1.0	0.324	2.0	0.012	1.0	1.0
645		1.0	0.224	2.0	0.012	1.0	2.0
646		1.0	0.289	2.0	0.012	1.0	2.0
647		1.0	0.318	2.0	0.012	1.0	2.0
648		1.0	0.320	2.0	0.012	1.0	2.0
649		1.0	0.244	2.0	0.012	1.0	1.0
650		1.0	0.354	2.0	0.012	1.0	2.0

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 652          1.0    0.312     2.0    0.012     1.0     1.0
 661          1.0    0.279     2.0    0.012     1.0     0.8
 662          1.0    0.290     2.0    0.012     1.0     1.0
 663          1.0    0.294     2.0    0.012     1.0     1.0
 664          1.0    0.282     2.0    0.012     1.0     1.0
 665          1.0    0.246     2.0    0.012     1.0     2.0
 666          1.0    0.274     2.0    0.012     1.0     2.0
 667          1.0    0.308     2.0    0.012     1.0     2.0
 668          1.0    0.240     2.0    0.012     1.0     2.0
 669          1.0    0.200     2.0    0.012     1.0     1.0
 670          1.0    0.297     2.0    0.012     1.0     2.0
 672          1.0    0.309     2.0    0.012     1.0     1.0
 END SED-PARM2

 SED-PARM3
*** <PLS >  Sediment parameter 3
*** x -  x     KSER     JSER     KGER     JGER
***Forest
  21          0.04     2.00     0.0      1.0
***Pasture1 (Slope < 2.5%)
  22          0.10     2.00     0.0      1.0
***Pasture2 (2.5% < Slope < 4.0%)
  23          0.18     2.00     0.0      1.0
***Pasture3 (Slope >= 4.0%)
  24          0.25     2.00     0.0      1.0
***Grass/Shrub/Barren
  25          0.18     2.00     0.0      1.0
***Developed, Open
  26          0.06     2.00     0.0      1.0
***Developed, Low
  27          0.07     2.00     0.0      1.0
***Developed, Med/High
  28          0.10     2.00     0.0      1.0
***Wetlands
  29          0.10     2.00     0.0      1.0
***Cropland
  30          0.80     2.00     0.0      1.0
***Pasture with Litter Applied
  32          0.10     2.00     0.0      1.0
  41          0.18     2.00     0.0      1.0
  42          0.25     2.00     0.0      1.0
  43   44     0.35     2.00     0.0      1.0
  45          0.30     2.00     0.0      1.0
  46          0.06     2.00     0.0      1.0
  47          0.07     2.00     0.0      1.0
  48          0.10     2.00     0.0      1.0
  49          0.10     2.00     0.0      1.0
  50          1.00     2.00     0.0      1.0
  52          0.25     2.00     0.0      1.0
  61          0.10     2.00     0.0      1.0
  62          0.25     2.00     0.0      1.0
  63          0.30     2.00     0.0      1.0
  64          0.35     2.00     0.0      1.0
  65          0.30     2.00     0.0      1.0
  66          0.06     2.00     0.0      1.0
  67          0.07     2.00     0.0      1.0
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68		0.10	2.00	0.0	1.0
69		0.10	2.00	0.0	1.0
70		0.95	2.00	0.0	1.0
72	81	0.25	2.00	0.0	1.0
82		0.50	2.00	0.0	1.0
83		0.55	2.00	0.0	1.0
84		0.45	2.00	0.0	1.0
85		0.30	2.00	0.0	1.0
86		0.10	2.00	0.0	1.0
87		0.12	2.00	0.0	1.0
88		0.15	2.00	0.0	1.0
89		0.10	2.00	0.0	1.0
90		1.00	2.00	0.0	1.0
92		0.50	2.00	0.0	1.0
101		0.18	2.00	0.0	1.0
102	103	0.30	2.00	0.0	1.0
104		0.35	2.00	0.0	1.0
105		0.30	2.00	0.0	1.0
106		0.06	2.00	0.0	1.0
107		0.07	2.00	0.0	1.0
108		0.10	2.00	0.0	1.0
109		0.10	2.00	0.0	1.0
110		1.00	2.00	0.0	1.0
112		0.30	2.00	0.0	1.0
121		0.18	2.00	0.0	1.0
122		0.30	2.00	0.0	1.0
123		0.30	2.00	0.0	1.0
124		0.35	2.00	0.0	1.0
125		0.30	2.00	0.0	1.0
126		0.06	2.00	0.0	1.0
127		0.07	2.00	0.0	1.0
128		0.10	2.00	0.0	1.0
129		0.10	2.00	0.0	1.0
130		1.00	2.00	0.0	1.0
132		0.30	2.00	0.0	1.0
141		0.18	2.00	0.0	1.0
142		0.30	2.00	0.0	1.0
143		0.30	2.00	0.0	1.0
144		0.35	2.00	0.0	1.0
145		0.30	2.00	0.0	1.0
146		0.06	2.00	0.0	1.0
147		0.07	2.00	0.0	1.0
148		0.10	2.00	0.0	1.0
149		0.10	2.00	0.0	1.0
150		1.00	2.00	0.0	1.0
152		0.30	2.00	0.0	1.0
161		0.18	2.00	0.0	1.0
162		0.30	2.00	0.0	1.0
163		0.30	2.00	0.0	1.0
164		0.35	2.00	0.0	1.0
165		0.30	2.00	0.0	1.0
166		0.06	2.00	0.0	1.0
167		0.07	2.00	0.0	1.0
168		0.10	2.00	0.0	1.0
169		0.10	2.00	0.0	1.0
170		1.00	2.00	0.0	1.0

172		0.30	2.00	0.0	1.0
181		0.18	2.00	0.0	1.0
182		0.30	2.00	0.0	1.0
183		0.30	2.00	0.0	1.0
184		0.35	2.00	0.0	1.0
185		0.30	2.00	0.0	1.0
186		0.06	2.00	0.0	1.0
187		0.07	2.00	0.0	1.0
188		0.10	2.00	0.0	1.0
189		0.10	2.00	0.0	1.0
190		1.00	2.00	0.0	1.0
192		0.30	2.00	0.0	1.0
201		0.18	2.00	0.0	1.0
202		0.30	2.00	0.0	1.0
203		0.30	2.00	0.0	1.0
204		0.35	2.00	0.0	1.0
205		0.30	2.00	0.0	1.0
206		0.06	2.00	0.0	1.0
207		0.07	2.00	0.0	1.0
208		0.10	2.00	0.0	1.0
209		0.10	2.00	0.0	1.0
210		1.00	2.00	0.0	1.0
212		0.30	2.00	0.0	1.0
221		0.18	2.00	0.0	1.0
222		0.30	2.00	0.0	1.0
223		0.30	2.00	0.0	1.0
224		0.35	2.00	0.0	1.0
225		0.30	2.00	0.0	1.0
226		0.06	2.00	0.0	1.0
227		0.07	2.00	0.0	1.0
228		0.10	2.00	0.0	1.0
229		0.10	2.00	0.0	1.0
230		1.00	2.00	0.0	1.0
232		0.30	2.00	0.0	1.0
241		0.18	2.00	0.0	1.0
242		0.30	2.00	0.0	1.0
243		0.30	2.00	0.0	1.0
244		0.35	2.00	0.0	1.0
245		0.30	2.00	0.0	1.0
246		0.06	2.00	0.0	1.0
247		0.07	2.00	0.0	1.0
248		0.10	2.00	0.0	1.0
249		0.10	2.00	0.0	1.0
250		1.00	2.00	0.0	1.0
252		0.30	2.00	0.0	1.0
261		0.20	2.00	0.0	1.0
262	263	0.35	2.00	0.0	1.0
264		0.45	2.00	0.0	1.0
265		0.30	2.00	0.0	1.0
266		0.06	2.00	0.0	1.0
267		0.07	2.00	0.0	1.0
268		0.10	2.00	0.0	1.0
269		0.10	2.00	0.0	1.0
270		1.00	2.00	0.0	1.0
272		0.35	2.00	0.0	1.0
281		0.18	2.00	0.0	1.0

282		0.35	2.00	0.0	1.0
283		0.40	2.00	0.0	1.0
284		0.45	2.00	0.0	1.0
285		0.30	2.00	0.0	1.0
286		0.06	2.00	0.0	1.0
287		0.07	2.00	0.0	1.0
288		0.10	2.00	0.0	1.0
289		0.10	2.00	0.0	1.0
290		1.00	2.00	0.0	1.0
292		0.35	2.00	0.0	1.0
301		0.18	2.00	0.0	1.0
302	303	0.30	2.00	0.0	1.0
304		0.35	2.00	0.0	1.0
305		0.30	2.00	0.0	1.0
306		0.06	2.00	0.0	1.0
307		0.07	2.00	0.0	1.0
308		0.10	2.00	0.0	1.0
309		0.10	2.00	0.0	1.0
310		1.00	2.00	0.0	1.0
312		0.30	2.00	0.0	1.0
321		0.18	2.00	0.0	1.0
322		0.45	2.00	0.0	1.0
323		0.50	2.00	0.0	1.0
324		0.40	2.00	0.0	1.0
325		0.30	2.00	0.0	1.0
326		0.10	2.00	0.0	1.0
327		0.12	2.00	0.0	1.0
328		0.15	2.00	0.0	1.0
329		0.10	2.00	0.0	1.0
330		1.00	2.00	0.0	1.0
332		0.45	2.00	0.0	1.0
341		0.18	2.00	0.0	1.0
342	343	0.30	2.00	0.0	1.0
344		0.35	2.00	0.0	1.0
345		0.30	2.00	0.0	1.0
346		0.06	2.00	0.0	1.0
347		0.07	2.00	0.0	1.0
348		0.10	2.00	0.0	1.0
349		0.10	2.00	0.0	1.0
350		1.00	2.00	0.0	1.0
352		0.30	2.00	0.0	1.0
361		0.18	2.00	0.0	1.0
362		0.30	2.00	0.0	1.0
363		0.30	2.00	0.0	1.0
364		0.35	2.00	0.0	1.0
365		0.30	2.00	0.0	1.0
366		0.06	2.00	0.0	1.0
367		0.07	2.00	0.0	1.0
368		0.10	2.00	0.0	1.0
369		0.10	2.00	0.0	1.0
370		1.00	2.00	0.0	1.0
372		0.30	2.00	0.0	1.0
381		0.20	1.50	0.0	1.0
382		0.30	1.50	0.0	1.0
383		0.40	1.50	0.0	1.0
384		0.35	1.50	0.0	1.0

385	0.40	1.50	0.0	1.0
386	0.06	1.50	0.0	1.0
387	0.09	1.50	0.0	1.0
388	0.10	1.50	0.0	1.0
389	0.10	2.00	0.0	1.0
390	0.90	2.00	0.0	1.0
392	0.30	1.50	0.0	1.0
401	0.18	2.00	0.0	1.0
402	0.25	2.00	0.0	1.0
403	0.30	2.00	0.0	1.0
404	0.35	2.00	0.0	1.0
405	0.30	2.00	0.0	1.0
406	0.06	2.00	0.0	1.0
407	0.07	2.00	0.0	1.0
408	0.10	2.00	0.0	1.0
409	0.10	2.00	0.0	1.0
410	1.00	2.00	0.0	1.0
412	0.25	2.00	0.0	1.0
421	0.18	2.00	0.0	1.0
422	0.30	2.00	0.0	1.0
423	0.35	2.00	0.0	1.0
424	0.35	2.00	0.0	1.0
425	0.30	2.00	0.0	1.0
426	0.06	2.00	0.0	1.0
427	0.07	2.00	0.0	1.0
428	0.10	2.00	0.0	1.0
429	0.10	2.00	0.0	1.0
430	1.00	2.00	0.0	1.0
432	0.30	2.00	0.0	1.0
441	0.20	2.00	0.0	1.0
442	0.30	2.00	0.0	1.0
443	0.40	2.00	0.0	1.0
444	0.35	2.00	0.0	1.0
445	0.30	2.00	0.0	1.0
446	0.06	2.00	0.0	1.0
447	0.07	2.00	0.0	1.0
448	0.10	2.00	0.0	1.0
449	0.10	2.00	0.0	1.0
450	0.90	2.00	0.0	1.0
452	0.30	2.00	0.0	1.0
461	0.20	1.50	0.0	1.0
462	0.30	1.50	0.0	1.0
463	0.40	1.50	0.0	1.0
464	0.35	1.50	0.0	1.0
465	0.40	1.50	0.0	1.0
466	0.06	1.50	0.0	1.0
467	0.09	1.50	0.0	1.0
468	0.10	1.50	0.0	1.0
469	0.10	2.00	0.0	1.0
470	0.90	2.00	0.0	1.0
472	0.30	1.50	0.0	1.0
481	0.20	1.50	0.0	1.0
482	0.30	1.50	0.0	1.0
483	0.40	1.50	0.0	1.0
484	0.35	1.50	0.0	1.0
485	0.40	1.50	0.0	1.0

486		0.06	1.50	0.0	1.0
487		0.09	1.50	0.0	1.0
488		0.10	1.50	0.0	1.0
489		0.10	2.00	0.0	1.0
490		0.90	2.00	0.0	1.0
492		0.30	1.50	0.0	1.0
501		0.18	2.00	0.0	1.0
502		0.30	2.00	0.0	1.0
503	504	0.35	2.00	0.0	1.0
505		0.30	2.00	0.0	1.0
506		0.06	2.00	0.0	1.0
507		0.07	2.00	0.0	1.0
508		0.10	2.00	0.0	1.0
509		0.10	2.00	0.0	1.0
510		1.00	2.00	0.0	1.0
512		0.30	2.00	0.0	1.0
521		0.18	2.00	0.0	1.0
522		0.25	2.00	0.0	1.0
523		0.30	2.00	0.0	1.0
524		0.35	2.00	0.0	1.0
525		0.30	2.00	0.0	1.0
526		0.06	2.00	0.0	1.0
527		0.07	2.00	0.0	1.0
528		0.10	2.00	0.0	1.0
529		0.10	2.00	0.0	1.0
530		1.00	2.00	0.0	1.0
532		0.25	2.00	0.0	1.0
541		0.18	2.00	0.0	1.0
542		0.30	2.00	0.0	1.0
543		0.35	2.00	0.0	1.0
544		0.35	2.00	0.0	1.0
545		0.30	2.00	0.0	1.0
546		0.06	2.00	0.0	1.0
547		0.07	2.00	0.0	1.0
548		0.10	2.00	0.0	1.0
549		0.10	2.00	0.0	1.0
550		1.00	2.00	0.0	1.0
552		0.30	2.00	0.0	1.0
561		0.18	2.00	0.0	1.0
562		0.30	2.00	0.0	1.0
563		0.35	2.00	0.0	1.0
564		0.35	2.00	0.0	1.0
565		0.30	2.00	0.0	1.0
566		0.06	2.00	0.0	1.0
567		0.07	2.00	0.0	1.0
568		0.10	2.00	0.0	1.0
569		0.10	2.00	0.0	1.0
570		1.00	2.00	0.0	1.0
572		0.30	2.00	0.0	1.0
581		0.18	2.00	0.0	1.0
582		0.30	2.00	0.0	1.0
583		0.35	2.00	0.0	1.0
584		0.35	2.00	0.0	1.0
585		0.30	2.00	0.0	1.0
586		0.06	2.00	0.0	1.0
587		0.07	2.00	0.0	1.0

```
588        0.10    2.00    0.0    1.0
589        0.10    2.00    0.0    1.0
590        1.00    2.00    0.0    1.0
592        0.30    2.00    0.0    1.0
601        0.18    2.00    0.0    1.0
602        0.30    2.00    0.0    1.0
603        0.35    2.00    0.0    1.0
604        0.35    2.00    0.0    1.0
605        0.30    2.00    0.0    1.0
606        0.06    2.00    0.0    1.0
607        0.07    2.00    0.0    1.0
608        0.10    2.00    0.0    1.0
609        0.10    2.00    0.0    1.0
610        1.00    2.00    0.0    1.0
612        0.30    2.00    0.0    1.0
621        0.18    2.00    0.0    1.0
622        0.30    2.00    0.0    1.0
623        0.35    2.00    0.0    1.0
624        0.35    2.00    0.0    1.0
625        0.30    2.00    0.0    1.0
626        0.06    2.00    0.0    1.0
627        0.07    2.00    0.0    1.0
628        0.10    2.00    0.0    1.0
629        0.10    2.00    0.0    1.0
630        1.00    2.00    0.0    1.0
632        0.30    2.00    0.0    1.0
641        0.18    2.00    0.0    1.0
642        0.30    2.00    0.0    1.0
643        0.35    2.00    0.0    1.0
644        0.35    2.00    0.0    1.0
645        0.30    2.00    0.0    1.0
646        0.06    2.00    0.0    1.0
647        0.07    2.00    0.0    1.0
648        0.10    2.00    0.0    1.0
649        0.10    2.00    0.0    1.0
650        1.00    2.00    0.0    1.0
652        0.30    2.00    0.0    1.0
661        0.18    2.00    0.0    1.0
662  663     0.30    2.00    0.0    1.0
664        0.35    2.00    0.0    1.0
665        0.30    2.00    0.0    1.0
666        0.06    2.00    0.0    1.0
667        0.07    2.00    0.0    1.0
668        0.10    2.00    0.0    1.0
669        0.10    2.00    0.0    1.0
670        1.00    2.00    0.0    1.0
672        0.30    2.00    0.0    1.0
END SED-PARM3

MON-COVER
*** <PLS >  Monthly values for erosion related cover
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
***Forest
  21      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
***Pasture1 (Slope < 2.5%)
  22      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
```

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***Pasture2 (2.5% < Slope < 4.0%)
  23      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
***Pasture3 (Slope >= 4.0%)
  24      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
***Grass/Shrub/Barren
  25      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
***Developed, Open
  26      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
***Developed, Low
  27      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
***Developed, Med/High
  28      0.85 0.85 0.85 0.87 0.90 0.90 0.90 0.90 0.90 0.90 0.87 0.85
***Wetlands
  29      0.92 0.92 0.95 0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.92 0.92
***Cropland
  30      0.25 0.25 0.25 0.35 0.65 0.82 0.85 0.85 0.85 0.50 0.30 0.30
***Pasture with Litter Applied
  32      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  41      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
  42      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  43      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  44      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  45      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
  46      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  47      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  48      0.85 0.85 0.85 0.87 0.90 0.90 0.90 0.90 0.90 0.90 0.87 0.85
  49      0.92 0.92 0.95 0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.92 0.92
  50      0.25 0.25 0.25 0.35 0.65 0.82 0.85 0.85 0.85 0.50 0.30 0.30
  52      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  61      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
  62      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  63      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  64      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  65      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
  66      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  67      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  68      0.85 0.85 0.85 0.87 0.90 0.90 0.90 0.90 0.90 0.90 0.87 0.85
  69      0.92 0.92 0.95 0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.92 0.92
  70      0.25 0.25 0.25 0.35 0.65 0.82 0.85 0.85 0.85 0.50 0.30 0.30
  72      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  81      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
  82      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  83      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  84      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  85      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
  86      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  87      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  88      0.85 0.85 0.85 0.87 0.90 0.90 0.90 0.90 0.90 0.90 0.87 0.85
  89      0.92 0.92 0.95 0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.92 0.92
  90      0.25 0.25 0.25 0.35 0.65 0.82 0.85 0.85 0.85 0.50 0.30 0.30
  92      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
 101      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
 102      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
 103      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
 104      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
 105      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
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106	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
107	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
108	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
109	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
110	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
112	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
121	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
122	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
123	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
124	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
125	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
126	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
127	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
128	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
129	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
130	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
132	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
141	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
142	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
143	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
144	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
145	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
146	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
147	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
148	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
149	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
150	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
152	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
161	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
162	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
163	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
164	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
165	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
166	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
167	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
168	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
169	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
170	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
172	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
181	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
182	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
183	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
184	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
185	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
186	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
187	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
188	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
189	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
190	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
192	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
201	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
202	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
203	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
204	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
205	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
206	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90

207	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
208	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
209	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
210	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
212	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
221	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
222	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
223	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
224	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
225	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
226	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
227	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
228	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
229	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
230	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
232	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
241	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
242	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
243	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
244	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
245	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
246	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
247	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
248	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
249	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
250	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
252	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
261	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
262	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
263	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
264	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
265	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
266	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
267	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
268	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
269	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
270	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
272	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
281	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
282	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
283	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
284	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
285	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
286	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
287	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
288	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
289	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
290	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
292	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
301	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
302	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
303	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
304	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
305	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
306	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
307	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90

308	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
309	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
310	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
312	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
321	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
322	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
323	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
324	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
325	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
326	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
327	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
328	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
329	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
330	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
332	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
341	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
342	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
343	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
344	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
345	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
346	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
347	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
348	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
349	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
350	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
352	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
361	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
362	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
363	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
364	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
365	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
366	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
367	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
368	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
369	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
370	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
372	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
381	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
382	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
383	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
384	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
385	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
386	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
387	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
388	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
389	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
390	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
392	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
401	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
402	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
403	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
404	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
405	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
406	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
407	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
408	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85

409	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
410	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
412	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
421	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
422	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
423	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
424	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
425	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
426	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
427	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
428	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
429	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
430	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
432	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
441	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
442	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
443	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
444	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
445	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
446	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
447	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
448	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
449	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
450	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
452	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
461	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
462	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
463	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
464	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
465	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
466	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
467	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
468	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
469	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
470	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
472	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
481	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
482	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
483	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
484	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
485	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
486	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
487	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
488	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
489	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
490	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
492	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
501	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
502	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
503	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
504	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
505	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
506	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
507	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
508	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
509	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92

510	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
512	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
521	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
522	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
523	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
524	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
525	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
526	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
527	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
528	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
529	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
530	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
532	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
541	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
542	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
543	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
544	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
545	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
546	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
547	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
548	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
549	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
550	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
552	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
561	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
562	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
563	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
564	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
565	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
566	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
567	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
568	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
569	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
570	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
572	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
581	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
582	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
583	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
584	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
585	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
586	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
587	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
588	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
589	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
590	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30
592	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
601	0.87	0.87	0.87	0.92	0.97	0.97	0.97	0.97	0.97	0.92	0.87	0.87
602	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
603	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
604	0.60	0.60	0.60	0.65	0.75	0.80	0.80	0.80	0.80	0.75	0.65	0.60
605	0.80	0.80	0.80	0.85	0.90	0.90	0.90	0.90	0.90	0.85	0.80	0.80
606	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
607	0.90	0.90	0.90	0.91	0.93	0.93	0.93	0.93	0.93	0.91	0.90	0.90
608	0.85	0.85	0.85	0.87	0.90	0.90	0.90	0.90	0.90	0.90	0.87	0.85
609	0.92	0.92	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.92	0.92
610	0.25	0.25	0.25	0.35	0.65	0.82	0.85	0.85	0.85	0.50	0.30	0.30

```
  612      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  621      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
  622      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  623      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  624      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  625      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
  626      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  627      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  628      0.85 0.85 0.85 0.87 0.90 0.90 0.90 0.90 0.90 0.90 0.87 0.85
  629      0.92 0.92 0.95 0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.92 0.92
  630      0.25 0.25 0.25 0.35 0.65 0.82 0.85 0.85 0.85 0.50 0.30 0.30
  632      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  641      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
  642      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  643      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  644      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  645      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
  646      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  647      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  648      0.85 0.85 0.85 0.87 0.90 0.90 0.90 0.90 0.90 0.90 0.87 0.85
  649      0.92 0.92 0.95 0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.92 0.92
  650      0.25 0.25 0.25 0.35 0.65 0.82 0.85 0.85 0.85 0.50 0.30 0.30
  652      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  661      0.87 0.87 0.87 0.92 0.97 0.97 0.97 0.97 0.97 0.92 0.87 0.87
  662      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  663      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  664      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  665      0.80 0.80 0.80 0.85 0.90 0.90 0.90 0.90 0.90 0.85 0.80 0.80
  666      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  667      0.90 0.90 0.90 0.91 0.93 0.93 0.93 0.93 0.93 0.91 0.90 0.90
  668      0.85 0.85 0.85 0.87 0.90 0.90 0.90 0.90 0.90 0.90 0.87 0.85
  669      0.92 0.92 0.95 0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.92 0.92
  670      0.25 0.25 0.25 0.35 0.65 0.82 0.85 0.85 0.85 0.50 0.30 0.30
  672      0.60 0.60 0.60 0.65 0.75 0.80 0.80 0.80 0.80 0.75 0.65 0.60
  END MON-COVER

  SED-STOR
*** <PLS >  Detached sediment storage (tons/acre)
*** x -  x      DETS
***Forest
   21           0.1
***Pasture1 (Slope < 2.5%)
   22           0.5
***Pasture2 (2.5% < Slope < 4.0%)
   23           0.5
***Pasture3 (Slope >= 4.0%)
   24           0.5
***Grass/Shrub/Barren
   25           0.3
***Developed, open
   26           0.2
***Developed, low
   27           0.2
***Developed, med/high
   28           0.5
***Wetlands
```

29	0.05
***Cropland	
30	1.0
***Pasture with Litter Applied	
32	0.5
41	0.1
42	0.5
43	0.5
44	0.5
45	0.3
46	0.2
47	0.2
48	0.5
49	0.05
50	1.0
52	0.5
61	0.1
62	0.5
63	0.5
64	0.5
65	0.3
66	0.2
67	0.2
68	0.5
69	0.05
70	1.0
72	0.5
81	0.1
82	0.5
83	0.5
84	0.5
85	0.3
86	0.2
87	0.2
88	0.5
89	0.05
90	1.0
92	0.5
101	0.1
102	0.5
103	0.5
104	0.5
105	0.3
106	0.2
107	0.2
108	0.5
109	0.05
110	1.0
112	0.5
121	0.1
122	0.5
123	0.5
124	0.5
125	0.3
126	0.2
127	0.2

128	0.5
129	0.05
130	1.0
132	0.5
141	0.1
142	0.5
143	0.5
144	0.5
145	0.3
146	0.2
147	0.2
148	0.5
149	0.05
150	1.0
152	0.5
161	0.1
162	0.5
163	0.5
164	0.5
165	0.3
166	0.2
167	0.2
168	0.5
169	0.05
170	1.0
172	0.5
181	0.1
182	0.5
183	0.5
184	0.5
185	0.3
186	0.2
187	0.2
188	0.5
189	0.05
190	1.0
192	0.5
201	0.1
202	0.5
203	0.5
204	0.5
205	0.3
206	0.2
207	0.2
208	0.5
209	0.05
210	1.0
212	0.5
221	0.1
222	0.5
223	0.5
224	0.5
225	0.3
226	0.2
227	0.2
228	0.5

229	0.05
230	1.0
232	0.5
241	0.1
242	0.5
243	0.5
244	0.5
245	0.3
246	0.2
247	0.2
248	0.5
249	0.05
250	1.0
252	0.5
261	0.1
262	0.5
263	0.5
264	0.5
265	0.3
266	0.2
267	0.2
268	0.5
269	0.05
270	1.0
272	0.5
281	0.1
282	0.5
283	0.5
284	0.5
285	0.3
286	0.2
287	0.2
288	0.5
289	0.05
290	1.0
292	0.5
301	0.1
302	0.5
303	0.5
304	0.5
305	0.3
306	0.2
307	0.2
308	0.5
309	0.05
310	1.0
312	0.5
321	0.1
322	0.5
323	0.5
324	0.5
325	0.3
326	0.2
327	0.2
328	0.5
329	0.05

330	1.0
332	0.5
341	0.1
342	0.5
343	0.5
344	0.5
345	0.3
346	0.2
347	0.2
348	0.5
349	0.05
350	1.0
352	0.5
361	0.1
362	0.5
363	0.5
364	0.5
365	0.3
366	0.2
367	0.2
368	0.5
369	0.05
370	1.0
372	0.5
381	0.1
382	0.5
383	0.5
384	0.5
385	0.3
386	0.2
387	0.2
388	0.5
389	0.05
390	1.0
392	0.5
401	0.1
402	0.5
403	0.5
404	0.5
405	0.3
406	0.2
407	0.2
408	0.5
409	0.05
410	1.0
412	0.5
421	0.1
422	0.5
423	0.5
424	0.5
425	0.3
426	0.2
427	0.2
428	0.5
429	0.05
430	1.0

432	0.5
441	0.1
442	0.5
443	0.5
444	0.5
445	0.3
446	0.2
447	0.2
448	0.5
449	0.05
450	1.0
452	0.5
461	0.1
462	0.5
463	0.5
464	0.5
465	0.3
466	0.2
467	0.2
468	0.5
469	0.05
470	1.0
472	0.5
481	0.1
482	0.5
483	0.5
484	0.5
485	0.3
486	0.2
487	0.2
488	0.5
489	0.05
490	1.0
492	0.5
501	0.1
502	0.5
503	0.5
504	0.5
505	0.3
506	0.2
507	0.2
508	0.5
509	0.05
510	1.0
512	0.5
521	0.1
522	0.5
523	0.5
524	0.5
525	0.3
526	0.2
527	0.2
528	0.5
529	0.05
530	1.0
532	0.5

541	0.1
542	0.5
543	0.5
544	0.5
545	0.3
546	0.2
547	0.2
548	0.5
549	0.05
550	1.0
552	0.5
561	0.1
562	0.5
563	0.5
564	0.5
565	0.3
566	0.2
567	0.2
568	0.5
569	0.05
570	1.0
572	0.5
581	0.1
582	0.5
583	0.5
584	0.5
585	0.3
586	0.2
587	0.2
588	0.5
589	0.05
590	1.0
592	0.5
601	0.1
602	0.5
603	0.5
604	0.5
605	0.3
606	0.2
607	0.2
608	0.5
609	0.05
610	1.0
612	0.5
621	0.1
622	0.5
623	0.5
624	0.5
625	0.3
626	0.2
627	0.2
628	0.5
629	0.05
630	1.0
632	0.5
641	0.1

```
  642          0.5
  643          0.5
  644          0.5
  645          0.3
  646          0.2
  647          0.2
  648          0.5
  649         0.05
  650          1.0
  652          0.5
  661          0.1
  662          0.5
  663          0.5
  664          0.5
  665          0.3
  666          0.2
  667          0.2
  668          0.5
  669         0.05
  670          1.0
  672          0.5
  END SED-STOR

  PSTEMP-PARM1
*** <PLS >  Flags for section PSTEMP
*** x -  x SLTV ULTV LGTV TSOP
   21  672    1    1    1    1
  END PSTEMP-PARM1

  PSTEMP-PARM2
*** <PLS >      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2
*** x -  x   (deg F)   (deg F)            (deg F)            (deg F)
   21  672      15.0       0.3      15.0       0.3      47.0       0.0
  END PSTEMP-PARM2

  MON-ASLT
*** <PLS >  Value of ASLT at start of each month (deg F)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
***Forest
   21      40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
***Pasture
   22   24 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
***Grass/Shrub/Barren
   25      40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
***Developed
   26      42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
   27      42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
   28      42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
***Wetlands
   29      42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
***Cropland
   30      40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
   32      40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
   41      40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
   42   44 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
   45      40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
```

46	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
47	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
48	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
49	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
50	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
52	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
61	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
62	64 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
65	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
66	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
67	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
68	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
69	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
70	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
72	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
81	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
82	84 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
85	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
86	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
87	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
88	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
89	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
90	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
92	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
101	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
102	104 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
105	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
106	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
107	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
108	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
109	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
110	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
112	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
121	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
122	124 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
125	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
126	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
127	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
128	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
129	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
130	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
132	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
141	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
142	144 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
145	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
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147	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
148	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
149	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
150	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
152	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
161	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
162	164 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
165	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
166	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
167	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0

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182	184 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
185	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
186	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
187	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
188	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
189	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
190	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
192	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
201	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
202	204 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
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210	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
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222	224 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
225	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
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227	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
228	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
229	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
230	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
232	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
241	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
242	244 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
245	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
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249	42.0	42.0	45.0	52.0	62.0	62.0	62.0	62.0	59.0	52.0	42.0	42.0
250	40.0	40.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	52.0	42.0	40.0
252	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
261	40.0	40.0	39.0	45.0	52.0	57.0	59.0	59.0	59.0	52.0	42.0	40.0
262	264 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
265	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
266	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
267	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
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272	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
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282	284 40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
285	40.0	40.0	42.0	47.0	57.0	65.0	65.0	65.0	65.0	57.0	47.0	42.0
286	42.0	42.0	42.0	52.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
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366 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
367 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
368 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
369 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
370 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
372 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
381 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
382 384 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
385 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
386 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
387 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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389 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
390 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
392 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
401 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
402 404 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
405 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
406 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
407 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
408 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
409 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
410 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
412 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0

421 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
422 424 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
425 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
426 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
427 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
428 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
429 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
430 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
432 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
441 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
442 444 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
445 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
446 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
447 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
448 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
449 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
450 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
452 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
461 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
462 464 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
465 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
466 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
467 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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486 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
487 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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501 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
502 504 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
505 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
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507 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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526 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
527 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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532 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
541 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
542 544 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0

545 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
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547 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
548 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
549 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
550 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
552 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
561 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
562 564 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
565 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
566 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
567 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
568 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
569 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
570 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
572 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
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592 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
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602 604 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
605 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
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610 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
612 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
621 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
622 624 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
625 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
626 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
627 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
628 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
629 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
630 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
632 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
641 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
642 644 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
645 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
646 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
647 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
648 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
649 42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
650 40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
652 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
661 40.0 40.0 39.0 45.0 52.0 57.0 59.0 59.0 59.0 52.0 42.0 40.0
662 664 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
665 40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
666 42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0

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 667      42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
 668      42.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
 669      42.0 42.0 45.0 52.0 62.0 62.0 62.0 62.0 59.0 52.0 42.0 42.0
 670      40.0 40.0 42.0 42.0 52.0 62.0 62.0 62.0 62.0 52.0 42.0 40.0
 672      40.0 40.0 42.0 47.0 57.0 65.0 65.0 65.0 65.0 57.0 47.0 42.0
 END MON-ASLT

 MON-BSLT
*** <PLS >  Value of BSLT at start of each month (deg F/F)
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
***Forest
  21      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
***Pasture
  22   24 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
***Grass/Shrub/Barren
  25      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
***Developed
  26      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  27      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  28      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
***Wetlands
  29      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
***Cropland
  30      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
  32      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  41      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
  42   44 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  45      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  46      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  47      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  48      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  49      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  50      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
  52      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  61      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
  62   64 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  65      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  66      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  67      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  68      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  69      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  70      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
  72      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  81      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
  82   84 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  85      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
  86      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  87      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  88      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  89      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
  90      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
  92      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 101      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
 102  104 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 105      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 106      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
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107		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
108		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
109		0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
110		0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
112		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
121		0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
122	124	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
125		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
126		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
127		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
128		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
129		0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
130		0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
132		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
141		0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
142	144	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
145		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
146		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
147		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
148		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
149		0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
150		0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
152		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
161		0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
162	164	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
165		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
166		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
167		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
168		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
169		0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
170		0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
172		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
181		0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
182	184	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
185		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
186		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
187		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
188		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
189		0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
190		0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
192		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
201		0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
202	204	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
205		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
206		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
207		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
208		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
209		0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
210		0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
212		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
221		0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
222	224	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
225		0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
226		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
227		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
228		0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33

229 0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
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349 0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
350 0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33

352	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
361	0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
362	364 0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
365	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
366	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
367	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
368	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
369	0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
370	0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
372	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
381	0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
382	384 0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
385	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
386	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
387	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
388	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
389	0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
390	0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
392	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
401	0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
402	404 0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
405	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
406	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
407	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
408	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
409	0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
410	0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
412	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
421	0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
422	424 0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
425	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
426	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
427	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
428	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
429	0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
430	0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
432	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
441	0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
442	444 0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
445	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
446	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
447	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
448	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
449	0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
450	0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
452	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
461	0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25
462	464 0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
465	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
466	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
467	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
468	0.33	0.33	0.36	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
469	0.30	0.30	0.33	0.39	0.42	0.42	0.42	0.42	0.42	0.39	0.36	0.33
470	0.31	0.31	0.36	0.41	0.48	0.48	0.48	0.45	0.42	0.39	0.36	0.33
472	0.30	0.30	0.33	0.39	0.45	0.45	0.45	0.45	0.42	0.39	0.36	0.33
481	0.24	0.24	0.25	0.30	0.33	0.36	0.36	0.36	0.36	0.33	0.27	0.25

482 484 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
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528 0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
529 0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
530 0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
532 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
541 0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
542 544 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
545 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
546 0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
547 0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
548 0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
549 0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
550 0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
552 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
561 0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
562 564 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
565 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
566 0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
567 0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
568 0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
569 0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
570 0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
572 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
581 0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
582 584 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
585 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
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592 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
601 0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
602 604 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
605 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33

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 606      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
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 608      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 609      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 610      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
 612      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 621      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
 622  624 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 625      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 626      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 627      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 628      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 629      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 630      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
 632      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 641      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
 642  644 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 645      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 646      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 647      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 648      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 649      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 650      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
 652      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 661      0.24 0.24 0.25 0.30 0.33 0.36 0.36 0.36 0.36 0.33 0.27 0.25
 662  664 0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 665      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 666      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 667      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 668      0.33 0.33 0.36 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 669      0.30 0.30 0.33 0.39 0.42 0.42 0.42 0.42 0.42 0.39 0.36 0.33
 670      0.31 0.31 0.36 0.41 0.48 0.48 0.48 0.45 0.42 0.39 0.36 0.33
 672      0.30 0.30 0.33 0.39 0.45 0.45 0.45 0.45 0.42 0.39 0.36 0.33
 END MON-BSLT

 MON-ULTP1
*** <PLS >  Value of ULTP1 at start of each month in deg F (TSOPFG=1)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
***Forest
  21      42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
***Pasture
  22   24 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
***Grass/Shrub/Barren
  25      40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
***Developed
  26      42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
  27      42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
  28      42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
***Wetlands
  29      42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
***Cropland
  30      37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
  32      40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
  41      42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
  42   44 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
  45      40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
```

46	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
47	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
48	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
49	42.0	42.0	50.0	57.0	62.0	62.0	62.0	62.0	59.0	52.0	47.0	42.0
50	37.0	37.0	40.0	47.0	52.0	62.0	62.0	62.0	62.0	52.0	47.0	37.0
52	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
61	42.0	42.0	44.0	50.0	52.0	57.0	59.0	59.0	59.0	52.0	47.0	42.0
62	64 40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
65	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
66	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
67	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
68	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
69	42.0	42.0	50.0	57.0	62.0	62.0	62.0	62.0	59.0	52.0	47.0	42.0
70	37.0	37.0	40.0	47.0	52.0	62.0	62.0	62.0	62.0	52.0	47.0	37.0
72	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
81	42.0	42.0	44.0	50.0	52.0	57.0	59.0	59.0	59.0	52.0	47.0	42.0
82	84 40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
85	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
86	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
87	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
88	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
89	42.0	42.0	50.0	57.0	62.0	62.0	62.0	62.0	59.0	52.0	47.0	42.0
90	37.0	37.0	40.0	47.0	52.0	62.0	62.0	62.0	62.0	52.0	47.0	37.0
92	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
101	42.0	42.0	44.0	50.0	52.0	57.0	59.0	59.0	59.0	52.0	47.0	42.0
102	104 40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
105	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
106	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
107	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
108	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
109	42.0	42.0	50.0	57.0	62.0	62.0	62.0	62.0	59.0	52.0	47.0	42.0
110	37.0	37.0	40.0	47.0	52.0	62.0	62.0	62.0	62.0	52.0	47.0	37.0
112	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
121	42.0	42.0	44.0	50.0	52.0	57.0	59.0	59.0	59.0	52.0	47.0	42.0
122	124 40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
125	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
126	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
127	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
128	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
129	42.0	42.0	50.0	57.0	62.0	62.0	62.0	62.0	59.0	52.0	47.0	42.0
130	37.0	37.0	40.0	47.0	52.0	62.0	62.0	62.0	62.0	52.0	47.0	37.0
132	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
141	42.0	42.0	44.0	50.0	52.0	57.0	59.0	59.0	59.0	52.0	47.0	42.0
142	144 40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
145	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
146	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
147	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
148	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
149	42.0	42.0	50.0	57.0	62.0	62.0	62.0	62.0	59.0	52.0	47.0	42.0
150	37.0	37.0	40.0	47.0	52.0	62.0	62.0	62.0	62.0	52.0	47.0	37.0
152	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
161	42.0	42.0	44.0	50.0	52.0	57.0	59.0	59.0	59.0	52.0	47.0	42.0
162	164 40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
165	40.0	40.0	42.0	52.0	57.0	65.0	65.0	65.0	65.0	57.0	52.0	42.0
166	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0
167	42.0	42.0	47.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0	42.0

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265 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
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270 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
272 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
281 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
282 284 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
285 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
286 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
287 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
288 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
289 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0

290 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
292 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
301 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
302 304 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
305 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
306 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
307 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
308 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
309 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
310 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
312 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
321 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
322 324 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
325 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
326 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
327 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
328 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
329 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
330 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
332 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
341 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
342 344 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
345 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
346 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
347 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
348 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
349 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
350 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
352 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
361 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
362 364 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
365 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
366 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
367 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
368 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
369 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
370 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
372 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
381 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
382 384 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
385 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
386 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
387 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
388 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
389 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
390 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
392 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
401 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
402 404 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
405 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
406 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
407 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
408 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
409 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
410 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
412 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0

421 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
422 424 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
425 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
426 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
427 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
428 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
429 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
430 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
432 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
441 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
442 444 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
445 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
446 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
447 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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449 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
450 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
452 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
461 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
462 464 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
465 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
466 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
467 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
468 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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470 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
472 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
481 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
482 484 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
485 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
486 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
487 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
488 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
489 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
490 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
492 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
501 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
502 504 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
505 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
506 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
507 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
508 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
509 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
510 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
512 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
521 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
522 524 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
525 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
526 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
527 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
528 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
529 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
530 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
532 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
541 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
542 544 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0

545 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
546 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
547 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
548 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
549 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
550 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
552 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
561 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
562 564 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
565 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
566 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
567 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
568 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
569 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
570 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
572 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
581 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
582 584 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
585 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
586 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
587 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
588 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
589 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
590 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
592 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
601 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
602 604 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
605 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
606 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
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608 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
609 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
610 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
612 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
621 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
622 624 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
625 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
626 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
627 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
628 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
629 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
630 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
632 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
641 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
642 644 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
645 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
646 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
647 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
648 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
649 42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
650 37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
652 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
661 42.0 42.0 44.0 50.0 52.0 57.0 59.0 59.0 59.0 52.0 47.0 42.0
662 664 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
665 40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
666 42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0

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 667      42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
 668      42.0 42.0 47.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0 42.0
 669      42.0 42.0 50.0 57.0 62.0 62.0 62.0 62.0 59.0 52.0 47.0 42.0
 670      37.0 37.0 40.0 47.0 52.0 62.0 62.0 62.0 62.0 52.0 47.0 37.0
 672      40.0 40.0 42.0 52.0 57.0 65.0 65.0 65.0 65.0 57.0 52.0 42.0
 END MON-ULTP1

 MON-ULTP2
*** <PLS >  Value of ULTP2 at start of each month in Deg F/F (TSOPFG=1)
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
***Forest
  21      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
***Pasture
  22   24 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
***Grass/Shrub/Barren
  25      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
***Developed
  26      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  27      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  28      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
***Wetlands
  29      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
***Cropland
  30      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
  32      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  41      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
  42   44 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  45      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  46      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  47      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  48      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  49      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
  50      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
  52      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  61      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
  62   64 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  65      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  66      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  67      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  68      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  69      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
  70      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
  72      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  81      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
  82   84 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  85      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
  86      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  87      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  88      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
  89      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
  90      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
  92      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
 101      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
 102  104 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
 105      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
 106      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
```

107	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
108	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
109	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
110	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
112	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
121	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
122	124	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
125	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
126	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
127	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
128	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
129	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
130	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
132	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
141	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
142	144	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
145	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
146	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
147	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
148	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
149	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
150	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
152	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
161	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
162	164	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
165	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
166	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
167	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
168	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
169	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
170	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
172	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
181	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
182	184	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
185	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
186	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
187	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
188	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
189	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
190	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
192	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
201	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
202	204	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
205	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
206	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
207	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
208	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
209	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
210	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
212	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
221	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
222	224	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
225	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
226	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
227	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
228	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15

229 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
230 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
232 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
241 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
242 244 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
245 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
246 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
247 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
248 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
249 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
250 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
252 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
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262 264 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
265 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
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282 284 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
285 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
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302 304 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
305 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
306 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
307 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
308 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
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310 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
312 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
321 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
322 324 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
325 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
326 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
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332 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
341 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
342 344 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
345 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
346 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
347 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
348 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
349 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
350 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20

352	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
361	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
362	364 0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
365	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
366	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
367	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
368	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
369	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
370	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
372	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
381	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
382	384 0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
385	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
386	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
387	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
388	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
389	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
390	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
392	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
401	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
402	404 0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
405	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
406	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
407	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
408	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
409	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
410	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
412	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
421	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
422	424 0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
425	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
426	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
427	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
428	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
429	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
430	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
432	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
441	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
442	444 0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
445	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
446	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
447	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
448	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
449	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
450	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
452	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
461	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13
462	464 0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
465	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
466	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
467	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
468	0.13	0.13	0.15	0.20	0.25	0.30	0.33	0.33	0.33	0.28	0.23	0.15
469	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
470	0.20	0.20	0.20	0.23	0.28	0.33	0.34	0.34	0.34	0.33	0.28	0.20
472	0.15	0.15	0.18	0.23	0.28	0.33	0.35	0.35	0.35	0.33	0.28	0.18
481	0.11	0.11	0.13	0.20	0.25	0.28	0.28	0.28	0.28	0.25	0.23	0.13

482 484 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
485 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
486 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
487 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
488 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
489 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
490 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
492 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
501 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
502 504 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
505 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
506 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
507 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
508 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
509 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
510 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
512 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
521 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
522 524 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
525 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
526 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
527 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
528 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
529 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
530 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
532 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
541 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
542 544 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
545 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
546 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
547 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
548 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
549 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
550 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
552 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
561 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
562 564 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
565 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
566 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
567 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
568 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
569 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
570 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
572 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
581 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
582 584 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
585 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
586 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
587 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
588 0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
589 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
590 0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
592 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
601 0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
602 604 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
605 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18

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606      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
607      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
608      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
609      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
610      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
612      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
621      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
622  624 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
625      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
626      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
627      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
628      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
629      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
630      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
632      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
641      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
642  644 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
645      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
646      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
647      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
648      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
649      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
650      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
652      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
661      0.11 0.11 0.13 0.20 0.25 0.28 0.28 0.28 0.28 0.25 0.23 0.13
662  664 0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
665      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
666      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
667      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
668      0.13 0.13 0.15 0.20 0.25 0.30 0.33 0.33 0.33 0.28 0.23 0.15
669      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
670      0.20 0.20 0.20 0.23 0.28 0.33 0.34 0.34 0.34 0.33 0.28 0.20
672      0.15 0.15 0.18 0.23 0.28 0.33 0.35 0.35 0.35 0.33 0.28 0.18
END MON-ULTP2

MON-LGTP1
*** <PLS >  Value of LGTP1 at start of each month in Deg F (TSOPFG=1)
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
***Forest
  21      47.0 47.0 52.0 54.0 57.0 59.0 59.0 59.0 57.0 52.0 52.0 47.0
***Pasture
  22   24 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
***Grass/Shrub/Barren
  25      45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
***Developed
  26      42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
  27      42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
  28      42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
***Wetlands
  29      39.0 39.0 42.0 52.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0
***Cropland
  30      42.0 40.0 40.0 47.0 57.0 62.0 64.0 65.0 59.0 52.0 47.0 42.0
  32      45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
  41      47.0 47.0 52.0 54.0 57.0 59.0 59.0 59.0 57.0 52.0 52.0 47.0
  42   44 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
  45      45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
```

46	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
47	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
48	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
49	39.0	39.0	42.0	52.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0
50	42.0	40.0	40.0	47.0	57.0	62.0	64.0	65.0	59.0	52.0	47.0	42.0
52	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
61	47.0	47.0	52.0	54.0	57.0	59.0	59.0	59.0	57.0	52.0	52.0	47.0
62	64 45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
65	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
66	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
67	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
68	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
69	39.0	39.0	42.0	52.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0
70	42.0	40.0	40.0	47.0	57.0	62.0	64.0	65.0	59.0	52.0	47.0	42.0
72	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
81	47.0	47.0	52.0	54.0	57.0	59.0	59.0	59.0	57.0	52.0	52.0	47.0
82	84 45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
85	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
86	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
87	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
88	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
89	39.0	39.0	42.0	52.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0
90	42.0	40.0	40.0	47.0	57.0	62.0	64.0	65.0	59.0	52.0	47.0	42.0
92	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
101	47.0	47.0	52.0	54.0	57.0	59.0	59.0	59.0	57.0	52.0	52.0	47.0
102	104 45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
105	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
106	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
107	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
108	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
109	39.0	39.0	42.0	52.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0
110	42.0	40.0	40.0	47.0	57.0	62.0	64.0	65.0	59.0	52.0	47.0	42.0
112	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
121	47.0	47.0	52.0	54.0	57.0	59.0	59.0	59.0	57.0	52.0	52.0	47.0
122	124 45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
125	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
126	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
127	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
128	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
129	39.0	39.0	42.0	52.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0
130	42.0	40.0	40.0	47.0	57.0	62.0	64.0	65.0	59.0	52.0	47.0	42.0
132	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
141	47.0	47.0	52.0	54.0	57.0	59.0	59.0	59.0	57.0	52.0	52.0	47.0
142	144 45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
145	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
146	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
147	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
148	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
149	39.0	39.0	42.0	52.0	57.0	62.0	62.0	62.0	62.0	57.0	47.0	42.0
150	42.0	40.0	40.0	47.0	57.0	62.0	64.0	65.0	59.0	52.0	47.0	42.0
152	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
161	47.0	47.0	52.0	54.0	57.0	59.0	59.0	59.0	57.0	52.0	52.0	47.0
162	164 45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
165	45.0	45.0	47.0	54.0	59.0	62.0	62.0	62.0	57.0	52.0	47.0	45.0
166	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0
167	42.0	42.0	45.0	49.0	57.0	62.0	62.0	62.0	55.0	52.0	42.0	42.0

168 42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
169 39.0 39.0 42.0 52.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0
170 42.0 40.0 40.0 47.0 57.0 62.0 64.0 65.0 59.0 52.0 47.0 42.0
172 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
181 47.0 47.0 52.0 54.0 57.0 59.0 59.0 59.0 57.0 52.0 52.0 47.0
182 184 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
185 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
186 42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
187 42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
188 42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
189 39.0 39.0 42.0 52.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0
190 42.0 40.0 40.0 47.0 57.0 62.0 64.0 65.0 59.0 52.0 47.0 42.0
192 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
201 47.0 47.0 52.0 54.0 57.0 59.0 59.0 59.0 57.0 52.0 52.0 47.0
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222 224 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
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652 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
661 47.0 47.0 52.0 54.0 57.0 59.0 59.0 59.0 57.0 52.0 52.0 47.0
662 664 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
665 45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
666 42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0

```
 667      42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
 668      42.0 42.0 45.0 49.0 57.0 62.0 62.0 62.0 55.0 52.0 42.0 42.0
 669      39.0 39.0 42.0 52.0 57.0 62.0 62.0 62.0 62.0 57.0 47.0 42.0
 670      42.0 40.0 40.0 47.0 57.0 62.0 64.0 65.0 59.0 52.0 47.0 42.0
 672      45.0 45.0 47.0 54.0 59.0 62.0 62.0 62.0 57.0 52.0 47.0 45.0
 END MON-LGTP1

 PSTEMP-TEMPS
*** <PLS >  Initial temperatures (deg F)
*** x -  x     AIRTC     SLTMP     ULTMP     LGTMP
  21  672      40.0      45.0      50.0      55.0
 END PSTEMP-TEMPS

 PWT-PARM1
*** <PLS >  Flags for section PWTGAS
*** x -  x  IDV  ICV  GDV  GVC
  21  672    1    0    1    0
 END PWT-PARM1

 PWT-PARM2
***         Second group of PWTGAS parms
*** <PLS >      ELEV     IDOXP     ICO2P     ADOXP     ACO2P
*** x -  x      (ft)    (mg/l)  (mg C/l)    (mg/l)  (mg C/l)
  21  672      500.      10.0       0.2       9.5       0.3
 END PWT-PARM2

 MON-IFWDOX
*** <PLS > Value at start of each month for interflow DO concentration (mg/l)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
  21  672 12.7 12.7 11.2 9.70 7.40 6.60 6.20 6.20 7.00 8.40 9.40 11.6
 END MON-IFWDOX

 MON-GRNDDOX
*** <PLS >Value at start of each month for groundwater DO concentration (mg/l)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
  21  672 10.0 10.0 10.0 10.0 7.50 5.50 5.00 5.00 5.50 7.50  9.0 10.0
 END MON-GRNDDOX

 PWT-GASES
***                 Initial DO and CO2 concentrations
*** <PLS >     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2
*** x -  x    (mg/l)  (mg C/l)    (mg/l)   (mg C/l)   (mg/l)  (mg C/l)
  52  563      14.5       0.0      12.7       0.0      10.0       0.0
 END PWT-GASES

 NQUALS
*** <PLS >
*** x -  xNQUAL
  21  672    4
 END NQUALS

 PQL-AD-FLAGS
          Atmospheric Deposition Flags ***
   <PLS >  QUAL1  QUAL2  QUAL3  QUAL4  QUAL5   ***
   # -  #   F  C   F  C   F  C   F  C   F  C   ***
  21       -1 -1  -1 -1   0  0   0  0   0  0
```

25 30 -1 -1 -1 -1 -1 0 0 0 0 0 0
41 -1 -1 -1 -1 -1 0 0 0 0 0 0
45 50 -1 -1 -1 -1 -1 0 0 0 0 0 0
61 -1 -1 -1 -1 -1 0 0 0 0 0 0
65 70 -1 -1 -1 -1 -1 0 0 0 0 0 0
81 -1 -1 -1 -1 -1 0 0 0 0 0 0
85 90 -1 -1 -1 -1 -1 0 0 0 0 0 0
101 -1 -1 -1 -1 -1 0 0 0 0 0 0
105 110 -1 -1 -1 -1 -1 0 0 0 0 0 0
121 -1 -1 -1 -1 -1 0 0 0 0 0 0
125 130 -1 -1 -1 -1 -1 0 0 0 0 0 0
141 -1 -1 -1 -1 -1 0 0 0 0 0 0
145 150 -1 -1 -1 -1 -1 0 0 0 0 0 0
161 -1 -1 -1 -1 -1 0 0 0 0 0 0
165 170 -1 -1 -1 -1 -1 0 0 0 0 0 0
181 -1 -1 -1 -1 -1 0 0 0 0 0 0
185 190 -1 -1 -1 -1 -1 0 0 0 0 0 0
201 -1 -1 -1 -1 -1 0 0 0 0 0 0
205 210 -1 -1 -1 -1 -1 0 0 0 0 0 0
221 -1 -1 -1 -1 -1 0 0 0 0 0 0
225 230 -1 -1 -1 -1 -1 0 0 0 0 0 0
241 -1 -1 -1 -1 -1 0 0 0 0 0 0
245 250 -1 -1 -1 -1 -1 0 0 0 0 0 0
261 -1 -1 -1 -1 -1 0 0 0 0 0 0
265 270 -1 -1 -1 -1 -1 0 0 0 0 0 0
281 -1 -1 -1 -1 -1 0 0 0 0 0 0
285 290 -1 -1 -1 -1 -1 0 0 0 0 0 0
301 -1 -1 -1 -1 -1 0 0 0 0 0 0
305 310 -1 -1 -1 -1 -1 0 0 0 0 0 0
321 -1 -1 -1 -1 -1 0 0 0 0 0 0
325 330 -1 -1 -1 -1 -1 0 0 0 0 0 0
341 -1 -1 -1 -1 -1 0 0 0 0 0 0
345 350 -1 -1 -1 -1 -1 0 0 0 0 0 0
361 -1 -1 -1 -1 -1 0 0 0 0 0 0
365 370 -1 -1 -1 -1 -1 0 0 0 0 0 0
381 -1 -1 -1 -1 -1 0 0 0 0 0 0
385 390 -1 -1 -1 -1 -1 0 0 0 0 0 0
401 -1 -1 -1 -1 -1 0 0 0 0 0 0
405 410 -1 -1 -1 -1 -1 0 0 0 0 0 0
421 -1 -1 -1 -1 -1 0 0 0 0 0 0
425 430 -1 -1 -1 -1 -1 0 0 0 0 0 0
441 -1 -1 -1 -1 -1 0 0 0 0 0 0
445 450 -1 -1 -1 -1 -1 0 0 0 0 0 0
461 -1 -1 -1 -1 -1 0 0 0 0 0 0
465 470 -1 -1 -1 -1 -1 0 0 0 0 0 0
481 -1 -1 -1 -1 -1 0 0 0 0 0 0
485 490 -1 -1 -1 -1 -1 0 0 0 0 0 0
501 -1 -1 -1 -1 -1 0 0 0 0 0 0
505 510 -1 -1 -1 -1 -1 0 0 0 0 0 0
521 -1 -1 -1 -1 -1 0 0 0 0 0 0
525 530 -1 -1 -1 -1 -1 0 0 0 0 0 0
541 -1 -1 -1 -1 -1 0 0 0 0 0 0
545 550 -1 -1 -1 -1 -1 0 0 0 0 0 0
561 -1 -1 -1 -1 -1 0 0 0 0 0 0
565 570 -1 -1 -1 -1 -1 0 0 0 0 0 0
581 -1 -1 -1 -1 -1 0 0 0 0 0 0

```
  585  590  -1 -1  -1 -1   0  0   0  0   0  0
  601       -1 -1  -1 -1   0  0   0  0   0  0
  605  610  -1 -1  -1 -1   0  0   0  0   0  0
  621       -1 -1  -1 -1   0  0   0  0   0  0
  625  630  -1 -1  -1 -1   0  0   0  0   0  0
  641       -1 -1  -1 -1   0  0   0  0   0  0
  645  650  -1 -1  -1 -1   0  0   0  0   0  0
  661       -1 -1  -1 -1   0  0   0  0   0  0
  665  670  -1 -1  -1 -1   0  0   0  0   0  0
  END PQL-AD-FLAGS

  QUAL-PROPS
*** <PLS >  Identifiers and Flags
*** x -  x    QUALID      QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC
   21  670NH3+NH4         LBS     0    0    0    1    1    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
*** These values were copied from LPCal03.uci and have not been adjusted for IRW
*** Storage on surface and nonseasonal parameters NH3+NH4 (non-Pasture) or BOD (Pasture)
***           SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC
*** <PLS >  qty/ac qty/ton qty/ton    qty/  qty/ac   in/hr qty/ft3 qty/ft3
*** x -  x                          ac.day
*** Forest
   21        0.003                          1e-6    1.70
   25        0.001                          1e-6    1.60
*** Developed, Open
   26       0.0005                           1e-6    1.50
*** Developed, Low
   27        0.001                          1e-6    1.50
*** Developed, Med/High
   28        0.001                          1e-6    1.50
*** Wetlands
   29        0.007                          1e-6    1.20
*** Cropland
   30        0.020                          1e-6    1.50
   41        0.003                          1e-6    1.70
   45        0.001                          1e-6    1.60
   46       0.0005                           1e-6    1.50
   47        0.001                          1e-6    1.50
   48        0.001                          1e-6    1.50
   49        0.007                          1e-6    1.20
   50        0.020                          1e-6    1.50
   61        0.003                          1e-6    1.70
   65        0.001                          1e-6    1.60
   66       0.0005                           1e-6    1.50
   67        0.001                          1e-6    1.50
   68        0.001                          1e-6    1.50
   69        0.007                          1e-6    1.20
   70        0.020                          1e-6    1.50
   81        0.003                          1e-6    1.70
   85        0.001                          1e-6    1.60
   86       0.0005                           1e-6    1.50
   87        0.001                          1e-6    1.50
   88        0.001                          1e-6    1.50
   89        0.007                          1e-6    1.20
```

90	0.020	1e-6	1.50
101	0.003	1e-6	1.70
105	0.001	1e-6	1.60
106	0.0005	1e-6	1.50
107	0.001	1e-6	1.50
108	0.001	1e-6	1.50
109	0.007	1e-6	1.20
110	0.020	1e-6	1.50
121	0.003	1e-6	1.70
125	0.001	1e-6	1.60
126	0.0005	1e-6	1.50
127	0.001	1e-6	1.50
128	0.001	1e-6	1.50
129	0.007	1e-6	1.20
130	0.020	1e-6	1.50
141	0.003	1e-6	1.70
145	0.001	1e-6	1.60
146	0.0005	1e-6	1.50
147	0.001	1e-6	1.50
148	0.001	1e-6	1.50
149	0.007	1e-6	1.20
150	0.020	1e-6	1.50
161	0.003	1e-6	1.70
165	0.001	1e-6	1.60
166	0.0005	1e-6	1.50
167	0.001	1e-6	1.50
168	0.001	1e-6	1.50
169	0.007	1e-6	1.20
170	0.020	1e-6	1.50
181	0.003	1e-6	1.70
185	0.001	1e-6	1.60
186	0.0005	1e-6	1.50
187	0.001	1e-6	1.50
188	0.001	1e-6	1.50
189	0.007	1e-6	1.20
190	0.020	1e-6	1.50
201	0.003	1e-6	1.70
205	0.001	1e-6	1.60
206	0.0005	1e-6	1.50
207	0.001	1e-6	1.50
208	0.001	1e-6	1.50
209	0.007	1e-6	1.20
210	0.020	1e-6	1.50
221	0.003	1e-6	1.70
225	0.001	1e-6	1.60
226	0.0005	1e-6	1.50
227	0.001	1e-6	1.50
228	0.001	1e-6	1.50
229	0.007	1e-6	1.20
230	0.020	1e-6	1.50
241	0.003	1e-6	1.70
245	0.001	1e-6	1.60
246	0.0005	1e-6	1.50
247	0.001	1e-6	1.50
248	0.001	1e-6	1.50
249	0.007	1e-6	1.20

250	0.020	1e-6	1.50
261	0.003	1e-6	1.70
265	0.001	1e-6	1.60
266	0.0005	1e-6	1.50
267	0.001	1e-6	1.50
268	0.001	1e-6	1.50
269	0.007	1e-6	1.20
270	0.020	1e-6	1.50
281	0.003	1e-6	1.70
285	0.001	1e-6	1.60
286	0.0005	1e-6	1.50
287	0.001	1e-6	1.50
288	0.001	1e-6	1.50
289	0.007	1e-6	1.20
290	0.020	1e-6	1.50
301	0.003	1e-6	1.70
305	0.001	1e-6	1.60
306	0.0005	1e-6	1.50
307	0.001	1e-6	1.50
308	0.001	1e-6	1.50
309	0.007	1e-6	1.20
310	0.020	1e-6	1.50
321	0.003	1e-6	1.70
325	0.001	1e-6	1.60
326	0.0005	1e-6	1.50
327	0.001	1e-6	1.50
328	0.001	1e-6	1.50
329	0.007	1e-6	1.20
330	0.020	1e-6	1.50
341	0.003	1e-6	1.70
345	0.001	1e-6	1.60
346	0.0005	1e-6	1.50
347	0.001	1e-6	1.50
348	0.001	1e-6	1.50
349	0.007	1e-6	1.20
350	0.020	1e-6	1.50
361	0.003	1e-6	1.70
365	0.001	1e-6	1.60
366	0.0005	1e-6	1.50
367	0.001	1e-6	1.50
368	0.001	1e-6	1.50
369	0.007	1e-6	1.20
370	0.020	1e-6	1.50
381	0.003	1e-6	1.70
385	0.001	1e-6	1.60
386	0.0005	1e-6	1.50
387	0.001	1e-6	1.50
388	0.001	1e-6	1.50
389	0.007	1e-6	1.20
390	0.020	1e-6	1.50
401	0.003	1e-6	1.70
405	0.001	1e-6	1.60
406	0.0005	1e-6	1.50
407	0.001	1e-6	1.50
408	0.001	1e-6	1.50
409	0.007	1e-6	1.20

410	0.020	1e-6	1.50
421	0.003	1e-6	1.70
425	0.001	1e-6	1.60
426	0.0005	1e-6	1.50
427	0.001	1e-6	1.50
428	0.001	1e-6	1.50
429	0.007	1e-6	1.20
430	0.020	1e-6	1.50
441	0.003	1e-6	1.70
445	0.001	1e-6	1.60
446	0.0005	1e-6	1.50
447	0.001	1e-6	1.50
448	0.001	1e-6	1.50
449	0.007	1e-6	1.20
450	0.020	1e-6	1.50
461	0.003	1e-6	1.70
465	0.001	1e-6	1.60
466	0.0005	1e-6	1.50
467	0.001	1e-6	1.50
468	0.001	1e-6	1.50
469	0.007	1e-6	1.20
470	0.020	1e-6	1.50
481	0.003	1e-6	1.70
485	0.001	1e-6	1.60
486	0.0005	1e-6	1.50
487	0.001	1e-6	1.50
488	0.001	1e-6	1.50
489	0.007	1e-6	1.20
490	0.020	1e-6	1.50
501	0.003	1e-6	1.70
505	0.001	1e-6	1.60
506	0.0005	1e-6	1.50
507	0.001	1e-6	1.50
508	0.001	1e-6	1.50
509	0.007	1e-6	1.20
510	0.020	1e-6	1.50
521	0.003	1e-6	1.70
525	0.001	1e-6	1.60
526	0.0005	1e-6	1.50
527	0.001	1e-6	1.50
528	0.001	1e-6	1.50
529	0.007	1e-6	1.20
530	0.020	1e-6	1.50
541	0.003	1e-6	1.70
545	0.001	1e-6	1.60
546	0.0005	1e-6	1.50
547	0.001	1e-6	1.50
548	0.001	1e-6	1.50
549	0.007	1e-6	1.20
550	0.020	1e-6	1.50
561	0.003	1e-6	1.70
565	0.001	1e-6	1.60
566	0.0005	1e-6	1.50
567	0.001	1e-6	1.50
568	0.001	1e-6	1.50
569	0.007	1e-6	1.20

```
 570      0.020                    1e-6   1.50
 581      0.003                    1e-6   1.70
 585      0.001                    1e-6   1.60
 586     0.0005                     1e-6   1.50
 587      0.001                    1e-6   1.50
 588      0.001                    1e-6   1.50
 589      0.007                    1e-6   1.20
 590      0.020                    1e-6   1.50
 601      0.003                    1e-6   1.70
 605      0.001                    1e-6   1.60
 606     0.0005                     1e-6   1.50
 607      0.001                    1e-6   1.50
 608      0.001                    1e-6   1.50
 609      0.007                    1e-6   1.20
 610      0.020                    1e-6   1.50
 621      0.003                    1e-6   1.70
 625      0.001                    1e-6   1.60
 626     0.0005                     1e-6   1.50
 627      0.001                    1e-6   1.50
 628      0.001                    1e-6   1.50
 629      0.007                    1e-6   1.20
 630      0.020                    1e-6   1.50
 641      0.003                    1e-6   1.70
 645      0.001                    1e-6   1.60
 646     0.0005                     1e-6   1.50
 647      0.001                    1e-6   1.50
 648      0.001                    1e-6   1.50
 649      0.007                    1e-6   1.20
 650      0.020                    1e-6   1.50
 661      0.003                    1e-6   1.70
 665      0.001                    1e-6   1.60
 666     0.0005                     1e-6   1.50
 667      0.001                    1e-6   1.50
 668      0.001                    1e-6   1.50
 669      0.007                    1e-6   1.20
 670      0.020                    1e-6   1.50
 END QUAL-INPUT

 MON-ACCUM
*** ACCUMULATION RATE OF NH4 (lb NH4-N/AC.DAY) (non-Pasture)
*** <PLS >  Value at start of each month for accum rate of QUALOF (lb/ac.day)
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
*** Forest
  21    .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
  25    .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
*** Developed, Open
  26    .0001.0002.0002.0003.0003.0003.0003.0003.0003.0002.0002.0001
*** Developed, Low
  27    .0002.0002.0003.0004.0004.0004.0004.0004.0004.0003.0002.0002
*** Developed, Med/High
  28    .0003.0003.0004.0005.0005.0005.0005.0005.0005.0003.0003.0003
*** Wetlands
  29    .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
*** Cropland
  30     .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
  41    .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
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45 .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
46 .0001.0002.0002.0003.0003.0003.0003.0003.0003.0002.0002.0003
47 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0003.0002.0002
48 .0003.0003.0004.0005.0005.0005.0005.0005.0005.0003.0003.0003
49 .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
50 .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
61 .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
65 .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
66 .0001.0002.0002.0003.0003.0003.0003.0003.0003.0002.0002.0003
67 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0003.0002.0002
68 .0003.0003.0004.0005.0005.0005.0005.0005.0005.0003.0003.0003
69 .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
70 .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
81 .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
85 .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
86 .0001.0002.0002.0003.0003.0003.0003.0003.0003.0002.0002.0003
87 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0003.0002.0002
88 .0003.0003.0004.0005.0005.0005.0005.0005.0005.0003.0003.0003
89 .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
90 .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
101 .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
105 .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
106 .0001.0002.0002.0003.0003.0003.0003.0003.0003.0002.0002.0003
107 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0003.0002.0002
108 .0003.0003.0004.0005.0005.0005.0005.0005.0005.0003.0003.0003
109 .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
110 .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
121 .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
125 .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
126 .0001.0002.0002.0003.0003.0003.0003.0003.0003.0002.0002.0003
127 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0003.0002.0002
128 .0003.0003.0004.0005.0005.0005.0005.0005.0005.0003.0003.0003
129 .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
130 .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
141 .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
145 .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
146 .0001.0002.0002.0003.0003.0003.0003.0003.0003.0002.0002.0003
147 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0003.0002.0002
148 .0003.0003.0004.0005.0005.0005.0005.0005.0005.0003.0003.0003
149 .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
150 .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
161 .0017 .002 .002 .006 .006 .006 .006 .006 .006 .004 .002.0017
165 .0005 .001 .002 .003 .003 .003 .003 .003 .003 .002 .001.0005
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669 .0035 .004 .005 .012 .012 .012 .012 .012 .012 .008 .004.0035
670 .008 .008 .009 .053 .042 .018 .005 .005 .004 .022 .021 .008
END MON-ACCUM

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 MON-SQOLIM
***        STORAGE LIMIT OF NH4 (lb NH4-N/AC)
*** <PLS >  Value at start of month for limiting storage of QUALOF (lb/ac)
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
*** Forest
  21     .002 .003 .004 .008 .008 .008 .008 .008 .008 .006 .003 .002
  25    .0015 .002 .004 .006 .006 .006 .006 .006 .006 .004 .002.0015
*** Developed, Open
  26    .0008.0009.0011.0013.0013.0013.0013.0013.0013.0011.0009.0008
*** Developed, Low
  27    .0011.0012.0014.0018.0018.0018.0018.0018.0018.0014.0012.0011
*** Developed, Med/High
  28    .0013.0015.0018.0022.0022.0022.0022.0022.0022.0018.0015.0013
*** Wetlands
  29     .008 .010 .012 .029 .029 .029 .029 .029 .029 .021 .010 .008
*** Cropland
  30     .032 .031 .031 .203 .153 .053 .009 .009 .009 .082 .081 .031
  41     .002 .003 .004 .008 .008 .008 .008 .008 .008 .006 .003 .002
  45    .0015 .002 .004 .006 .006 .006 .006 .006 .006 .004 .002.0015
  46    .0008.0009.0011.0013.0013.0013.0013.0013.0013.0011.0009.0008
  47    .0011.0012.0014.0018.0018.0018.0018.0018.0018.0014.0012.0011
  48    .0013.0015.0018.0022.0022.0022.0022.0022.0022.0018.0015.0013
  49     .008 .010 .012 .029 .029 .029 .029 .029 .029 .021 .010 .008
  50     .032 .031 .031 .203 .153 .053 .009 .009 .009 .082 .081 .031
  61     .002 .003 .004 .008 .008 .008 .008 .008 .008 .006 .003 .002
  65    .0015 .002 .004 .006 .006 .006 .006 .006 .006 .004 .002.0015
  66    .0008.0009.0011.0013.0013.0013.0013.0013.0013.0011.0009.0008
  67    .0011.0012.0014.0018.0018.0018.0018.0018.0018.0014.0012.0011
  68    .0013.0015.0018.0022.0022.0022.0022.0022.0022.0018.0015.0013
  69     .008 .010 .012 .029 .029 .029 .029 .029 .029 .021 .010 .008
  70     .032 .031 .031 .203 .153 .053 .009 .009 .009 .082 .081 .031
  81     .002 .003 .004 .008 .008 .008 .008 .008 .008 .006 .003 .002
  85    .0015 .002 .004 .006 .006 .006 .006 .006 .006 .004 .002.0015
  86    .0008.0009.0011.0013.0013.0013.0013.0013.0013.0011.0009.0008
  87    .0011.0012.0014.0018.0018.0018.0018.0018.0018.0014.0012.0011
  88    .0013.0015.0018.0022.0022.0022.0022.0022.0022.0018.0015.0013
  89     .008 .010 .012 .029 .029 .029 .029 .029 .029 .021 .010 .008
  90     .032 .031 .031 .203 .153 .053 .009 .009 .009 .082 .081 .031
 101     .002 .003 .004 .008 .008 .008 .008 .008 .008 .006 .003 .002
 105    .0015 .002 .004 .006 .006 .006 .006 .006 .006 .004 .002.0015
 106    .0008.0009.0011.0013.0013.0013.0013.0013.0013.0011.0009.0008
 107    .0011.0012.0014.0018.0018.0018.0018.0018.0018.0014.0012.0011
 108    .0013.0015.0018.0022.0022.0022.0022.0022.0022.0018.0015.0013
 109     .008 .010 .012 .029 .029 .029 .029 .029 .029 .021 .010 .008
 110     .032 .031 .031 .203 .153 .053 .009 .009 .009 .082 .081 .031
 121     .002 .003 .004 .008 .008 .008 .008 .008 .008 .006 .003 .002
 125    .0015 .002 .004 .006 .006 .006 .006 .006 .006 .004 .002.0015
 126    .0008.0009.0011.0013.0013.0013.0013.0013.0013.0011.0009.0008
 127    .0011.0012.0014.0018.0018.0018.0018.0018.0018.0014.0012.0011
 128    .0013.0015.0018.0022.0022.0022.0022.0022.0022.0018.0015.0013
 129     .008 .010 .012 .029 .029 .029 .029 .029 .029 .021 .010 .008
 130     .032 .031 .031 .203 .153 .053 .009 .009 .009 .082 .081 .031
 141     .002 .003 .004 .008 .008 .008 .008 .008 .008 .006 .003 .002
 145    .0015 .002 .004 .006 .006 .006 .006 .006 .006 .004 .002.0015
 146    .0008.0009.0011.0013.0013.0013.0013.0013.0013.0011.0009.0008
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 670      .032 .031 .031 .203 .153 .053 .009 .009 .009 .082 .081 .031
 END MON-SQOLIM

 MON-IFLW-CONC
*** <PLS >  Conc of QUAL in interflow outflow for each month (mg/l) - NH4 (non-pasture) or BOD
(Pasture)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
   21      .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
   25      .050 .050 .050 .033 .033 .033 .033 .033 .033 .050 .050 .050
*** Developed, Open
   26      .067 .067 .067 .053 .053 .053 .053 .053 .053 .067 .067 .067
*** Developed, Low
   27      .072 .072 .072 .059 .059 .059 .059 .059 .059 .072 .072 .072
*** Developed, Med/High
   28      .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
*** Wetlands
   29      .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
*** Cropland
   30      .117 .117 .117 .073 .073 .073 .073 .073 .073 .117 .117 .117
   41      .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
   45      .050 .050 .050 .033 .033 .033 .033 .033 .033 .050 .050 .050
   46      .067 .067 .067 .053 .053 .053 .053 .053 .053 .067 .067 .067
   47      .072 .072 .072 .059 .059 .059 .059 .059 .059 .072 .072 .072
   48      .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
   49      .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
   50      .117 .117 .117 .073 .073 .073 .073 .073 .073 .117 .117 .117
   61      .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
   65      .050 .050 .050 .033 .033 .033 .033 .033 .033 .050 .050 .050
   66      .067 .067 .067 .053 .053 .053 .053 .053 .053 .067 .067 .067
   67      .072 .072 .072 .059 .059 .059 .059 .059 .059 .072 .072 .072
   68      .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
   69      .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
   70      .117 .117 .117 .073 .073 .073 .073 .073 .073 .117 .117 .117
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   88      .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
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101	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
105	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
106	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
107	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
108	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
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110	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
121	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
125	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
126	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
127	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
128	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
129	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
130	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
141	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
145	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
146	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
147	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
148	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
149	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
150	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
161	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
165	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
166	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
167	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
168	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
169	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
170	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
181	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
185	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
186	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
187	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
188	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
189	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
190	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
201	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
205	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
206	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
207	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
208	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
209	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
210	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
221	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
225	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
226	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
227	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
228	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
229	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
230	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
241	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
245	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
246	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
247	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
248	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080

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261	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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266	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
267	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
268	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
269	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
270	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
281	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
285	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
286	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
287	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
288	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
289	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
290	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
301	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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307	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
308	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
309	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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325	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
326	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
327	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
328	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
329	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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341	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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347	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
348	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
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361	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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366	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
367	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
368	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
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381	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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386	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
387	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
388	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
389	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
390	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
401	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
405	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
406	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
407	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
408	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080

409	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
410	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
421	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
425	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
426	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
427	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
428	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
429	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
430	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
441	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
445	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
446	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
447	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
448	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
449	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
450	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
461	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
465	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
466	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
467	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
468	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
469	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
470	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
481	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
485	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
486	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
487	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
488	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
489	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
490	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
501	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
505	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
506	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
507	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
508	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
509	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
510	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
521	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
525	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
526	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
527	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
528	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
529	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
530	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
541	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
545	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
546	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
547	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
548	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080
549	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
550	.117	.117	.117	.073	.073	.073	.073	.073	.073	.117	.117	.117
561	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
565	.050	.050	.050	.033	.033	.033	.033	.033	.033	.050	.050	.050
566	.067	.067	.067	.053	.053	.053	.053	.053	.053	.067	.067	.067
567	.072	.072	.072	.059	.059	.059	.059	.059	.059	.072	.072	.072
568	.077	.077	.077	.064	.064	.064	.064	.067	.067	.080	.080	.080

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 569     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
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 581     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
 585     .050 .050 .050 .033 .033 .033 .033 .033 .033 .050 .050 .050
 586     .067 .067 .067 .053 .053 .053 .053 .053 .053 .067 .067 .067
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 588     .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
 589     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
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 601     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
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 607     .072 .072 .072 .059 .059 .059 .059 .059 .059 .072 .072 .072
 608     .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
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 610     .117 .117 .117 .073 .073 .073 .073 .073 .073 .117 .117 .117
 621     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
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 628     .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
 629     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
 630     .117 .117 .117 .073 .073 .073 .073 .073 .073 .117 .117 .117
 641     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
 645     .050 .050 .050 .033 .033 .033 .033 .033 .033 .050 .050 .050
 646     .067 .067 .067 .053 .053 .053 .053 .053 .053 .067 .067 .067
 647     .072 .072 .072 .059 .059 .059 .059 .059 .059 .072 .072 .072
 648     .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
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 666     .067 .067 .067 .053 .053 .053 .053 .053 .053 .067 .067 .067
 667     .072 .072 .072 .059 .059 .059 .059 .059 .059 .072 .072 .072
 668     .077 .077 .077 .064 .064 .064 .064 .067 .067 .080 .080 .080
 669     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
 670     .117 .117 .117 .073 .073 .073 .073 .073 .073 .117 .117 .117
 END MON-IFLW-CONC

 MON-GRND-CONC
*** <PLS >  Value at start of month for conc of QUAL in groundwater (qty/ft3)
***         Active Groundwater Concentration of NH4-N (mg/l) for non-Pasture or BOD for Pasture
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
   21     .027 .027 .027 .017 .017 .017 .017 .017 .017 .027 .027 .027
   25     .040 .040 .040 .020 .020 .020 .020 .020 .020 .040 .040 .040
*** Developed, Open
   26     .052 .052 .052 .040 .040 .040 .040 .040 .040 .052 .052 .052
*** Developed, Low
   27     .053 .053 .053 .043 .043 .043 .043 .043 .043 .053 .053 .053
*** Developed, Med/High
   28     .056 .056 .056 .045 .045 .045 .045 .045 .045 .056 .056 .056
*** Wetlands
   29     .027 .027 .027 .017 .017 .017 .017 .017 .017 .027 .027 .027
*** Cropland
   30     .050 .050 .050 .027 .027 .027 .027 .027 .027 .050 .050 .050
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41	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
45	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
46	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
47	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
48	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
49	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
50	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
61	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
65	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
66	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
67	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
68	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
69	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
70	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
81	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
85	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
86	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
87	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
88	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
89	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
90	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
101	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
105	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
106	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
107	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
108	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
109	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
110	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
121	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
125	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
126	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
127	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
128	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
129	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
130	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
141	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
145	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
146	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
147	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
148	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
149	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
150	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
161	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
165	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
166	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
167	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
168	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
169	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
170	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
181	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
185	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
186	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
187	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
188	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
189	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
190	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050

201	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
205	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
206	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
207	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
208	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
209	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
210	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
221	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
225	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
226	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
227	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
228	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
229	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
230	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
241	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
245	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
246	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
247	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
248	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
249	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
250	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
261	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
265	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
266	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
267	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
268	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
269	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
270	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
281	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
285	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
286	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
287	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
288	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
289	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
290	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
301	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
305	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
306	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
307	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
308	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
309	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
310	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
321	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
325	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
326	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
327	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
328	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
329	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
330	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
341	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
345	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
346	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
347	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
348	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
349	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
350	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050

361	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
365	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
366	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
367	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
368	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
369	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
370	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
381	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
385	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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387	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
388	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
389	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
390	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
401	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
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406	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
407	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
408	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
409	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
410	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
421	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
425	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
426	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
427	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
428	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
429	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
430	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
441	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
445	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
446	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
447	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
448	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
449	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
450	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
461	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
465	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
466	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
467	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
468	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
469	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
470	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
481	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
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487	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
488	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
489	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
490	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
501	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
505	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
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508	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
509	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
510	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050

521	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
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526	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
527	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
528	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
529	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
530	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
541	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
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546	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
547	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
548	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
549	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
550	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
561	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
565	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
566	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
567	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
568	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
569	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
570	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
581	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
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589	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
590	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
601	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
605	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
606	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
607	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
608	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
609	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
610	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
621	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
625	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
626	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
627	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
628	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
629	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
630	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
641	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
645	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
646	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
647	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
648	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
649	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
650	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050
661	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
665	.040	.040	.040	.020	.020	.020	.020	.020	.020	.040	.040	.040
666	.052	.052	.052	.040	.040	.040	.040	.040	.040	.052	.052	.052
667	.053	.053	.053	.043	.043	.043	.043	.043	.043	.053	.053	.053
668	.056	.056	.056	.045	.045	.045	.045	.045	.045	.056	.056	.056
669	.027	.027	.027	.017	.017	.017	.017	.017	.017	.027	.027	.027
670	.050	.050	.050	.027	.027	.027	.027	.027	.027	.050	.050	.050

```
  END MON-GRND-CONC

  QUAL-PROPS
*** <PLS >  Identifiers and Flags
*** x -  x    QUALID      QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC
   21  670NO3            LBS     0    0    0    1    1    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
*** These values were copied from LPCal03.uci and have not been adjusted for IRW
***         Storage on surface and nonseasonal parameters - NO3
***           SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC
*** <PLS >  qty/ac qty/ton qty/ton    qty/  qty/ac   in/hr qty/ft3 qty/ft3
*** x -  x                          ac.day
*** Forest
   21        0.07                          1e-6    1.70
   25        0.10                          1e-6    1.60
*** Developed, Open
   26        0.02                          1e-6    0.50
*** Developed, Low
   27        0.03                          1e-6    0.50
*** Developed, Med/High
   28        0.04                          1e-6    0.50
*** Wetlands
   29        0.04                          1e-6    0.20
*** Cropland
   30        0.25                          1e-6    1.50
   41        0.07                          1e-6    1.70
   45        0.10                          1e-6    1.60
   46        0.02                          1e-6    0.50
   47        0.03                          1e-6    0.50
   48        0.04                          1e-6    0.50
   49        0.04                          1e-6    0.20
   50        0.25                          1e-6    1.50
   61        0.07                          1e-6    1.70
   65        0.10                          1e-6    1.60
   66        0.02                          1e-6    0.50
   67        0.03                          1e-6    0.50
   68        0.04                          1e-6    0.50
   69        0.04                          1e-6    0.20
   70        0.25                          1e-6    1.50
   81        0.07                          1e-6    1.70
   85        0.10                          1e-6    1.60
   86        0.02                          1e-6    0.50
   87        0.03                          1e-6    0.50
   88        0.04                          1e-6    0.50
   89        0.04                          1e-6    0.20
   90        0.25                          1e-6    1.50
  101        0.07                          1e-6    1.70
  105        0.10                          1e-6    1.60
  106        0.02                          1e-6    0.50
  107        0.03                          1e-6    0.50
  108        0.04                          1e-6    0.50
  109        0.04                          1e-6    0.20
  110        0.25                          1e-6    1.50
  121        0.07                          1e-6    1.70
```

125	0.10	1e-6	1.60
126	0.02	1e-6	0.50
127	0.03	1e-6	0.50
128	0.04	1e-6	0.50
129	0.04	1e-6	0.20
130	0.25	1e-6	1.50
141	0.07	1e-6	1.70
145	0.10	1e-6	1.60
146	0.02	1e-6	0.50
147	0.03	1e-6	0.50
148	0.04	1e-6	0.50
149	0.04	1e-6	0.20
150	0.25	1e-6	1.50
161	0.07	1e-6	1.70
165	0.10	1e-6	1.60
166	0.02	1e-6	0.50
167	0.03	1e-6	0.50
168	0.04	1e-6	0.50
169	0.04	1e-6	0.20
170	0.25	1e-6	1.50
181	0.07	1e-6	1.70
185	0.10	1e-6	1.60
186	0.02	1e-6	0.50
187	0.03	1e-6	0.50
188	0.04	1e-6	0.50
189	0.04	1e-6	0.20
190	0.25	1e-6	1.50
201	0.07	1e-6	1.70
205	0.10	1e-6	1.60
206	0.02	1e-6	0.50
207	0.03	1e-6	0.50
208	0.04	1e-6	0.50
209	0.04	1e-6	0.20
210	0.25	1e-6	1.50
221	0.07	1e-6	1.70
225	0.10	1e-6	1.60
226	0.02	1e-6	0.50
227	0.03	1e-6	0.50
228	0.04	1e-6	0.50
229	0.04	1e-6	0.20
230	0.25	1e-6	1.50
241	0.07	1e-6	1.70
245	0.10	1e-6	1.60
246	0.02	1e-6	0.50
247	0.03	1e-6	0.50
248	0.04	1e-6	0.50
249	0.04	1e-6	0.20
250	0.25	1e-6	1.50
261	0.07	1e-6	1.70
265	0.10	1e-6	1.60
266	0.02	1e-6	0.50
267	0.03	1e-6	0.50
268	0.04	1e-6	0.50
269	0.04	1e-6	0.20
270	0.25	1e-6	1.50
281	0.07	1e-6	1.70

285	0.10	1e-6	1.60
286	0.02	1e-6	0.50
287	0.03	1e-6	0.50
288	0.04	1e-6	0.50
289	0.04	1e-6	0.20
290	0.25	1e-6	1.50
301	0.07	1e-6	1.70
305	0.10	1e-6	1.60
306	0.02	1e-6	0.50
307	0.03	1e-6	0.50
308	0.04	1e-6	0.50
309	0.04	1e-6	0.20
310	0.25	1e-6	1.50
321	0.07	1e-6	1.70
325	0.10	1e-6	1.60
326	0.02	1e-6	0.50
327	0.03	1e-6	0.50
328	0.04	1e-6	0.50
329	0.04	1e-6	0.20
330	0.25	1e-6	1.50
341	0.07	1e-6	1.70
345	0.10	1e-6	1.60
346	0.02	1e-6	0.50
347	0.03	1e-6	0.50
348	0.04	1e-6	0.50
349	0.04	1e-6	0.20
350	0.25	1e-6	1.50
361	0.07	1e-6	1.70
365	0.10	1e-6	1.60
366	0.02	1e-6	0.50
367	0.03	1e-6	0.50
368	0.04	1e-6	0.50
369	0.04	1e-6	0.20
370	0.25	1e-6	1.50
381	0.07	1e-6	1.70
385	0.10	1e-6	1.60
386	0.02	1e-6	0.50
387	0.03	1e-6	0.50
388	0.04	1e-6	0.50
389	0.04	1e-6	0.20
390	0.25	1e-6	1.50
401	0.07	1e-6	1.70
405	0.10	1e-6	1.60
406	0.02	1e-6	0.50
407	0.03	1e-6	0.50
408	0.04	1e-6	0.50
409	0.04	1e-6	0.20
410	0.25	1e-6	1.50
421	0.07	1e-6	1.70
425	0.10	1e-6	1.60
426	0.02	1e-6	0.50
427	0.03	1e-6	0.50
428	0.04	1e-6	0.50
429	0.04	1e-6	0.20
430	0.25	1e-6	1.50
441	0.07	1e-6	1.70

445	0.10	1e-6	1.60
446	0.02	1e-6	0.50
447	0.03	1e-6	0.50
448	0.04	1e-6	0.50
449	0.04	1e-6	0.20
450	0.25	1e-6	1.50
461	0.07	1e-6	1.70
465	0.10	1e-6	1.60
466	0.02	1e-6	0.50
467	0.03	1e-6	0.50
468	0.04	1e-6	0.50
469	0.04	1e-6	0.20
470	0.25	1e-6	1.50
481	0.07	1e-6	1.70
485	0.10	1e-6	1.60
486	0.02	1e-6	0.50
487	0.03	1e-6	0.50
488	0.04	1e-6	0.50
489	0.04	1e-6	0.20
490	0.25	1e-6	1.50
501	0.07	1e-6	1.70
505	0.10	1e-6	1.60
506	0.02	1e-6	0.50
507	0.03	1e-6	0.50
508	0.04	1e-6	0.50
509	0.04	1e-6	0.20
510	0.25	1e-6	1.50
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528	0.04	1e-6	0.50
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547	0.03	1e-6	0.50
548	0.04	1e-6	0.50
549	0.04	1e-6	0.20
550	0.25	1e-6	1.50
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566	0.02	1e-6	0.50
567	0.03	1e-6	0.50
568	0.04	1e-6	0.50
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570	0.25	1e-6	1.50
581	0.07	1e-6	1.70
585	0.10	1e-6	1.60
586	0.02	1e-6	0.50
587	0.03	1e-6	0.50
588	0.04	1e-6	0.50
589	0.04	1e-6	0.20
590	0.25	1e-6	1.50
601	0.07	1e-6	1.70

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605      0.10                    1e-6   1.60
606      0.02                    1e-6   0.50
607      0.03                    1e-6   0.50
608      0.04                    1e-6   0.50
609      0.04                    1e-6   0.20
610      0.25                    1e-6   1.50
621      0.07                    1e-6   1.70
625      0.10                    1e-6   1.60
626      0.02                    1e-6   0.50
627      0.03                    1e-6   0.50
628      0.04                    1e-6   0.50
629      0.04                    1e-6   0.20
630      0.25                    1e-6   1.50
641      0.07                    1e-6   1.70
645      0.10                    1e-6   1.60
646      0.02                    1e-6   0.50
647      0.03                    1e-6   0.50
648      0.04                    1e-6   0.50
649      0.04                    1e-6   0.20
650      0.25                    1e-6   1.50
661      0.07                    1e-6   1.70
665      0.10                    1e-6   1.60
666      0.02                    1e-6   0.50
667      0.03                    1e-6   0.50
668      0.04                    1e-6   0.50
669      0.04                    1e-6   0.20
670      0.25                    1e-6   1.50
END QUAL-INPUT

MON-ACCUM
*** <PLS >  Value at start of each month for accum rate of QUALOF (lb NO3-N/AC.DAY)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
  21     .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
  25     .023 .023 .023 .030 .030 .030 .030 .030 .030 .023 .023 .023
*** Developed, Open
  26    .0056.0068.0104.0116.0116.0116.0116.0116.0116.0104.0068.0056
*** Developed, Low
  27    .0070.0085.0130.0145.0145.0145.0145.0145.0145.0130.0085.0070
*** Developed, Med/High
  28    .0084.0102.0156.0174.0174.0174.0174.0174.0174.0156.0102.0084
*** Wetlands
  29     .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
*** Cropland
  30     .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
  41     .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
  45     .023 .023 .023 .030 .030 .030 .030 .030 .030 .023 .023 .023
  46    .0056.0068.0104.0116.0116.0116.0116.0116.0116.0104.0068.0056
  47    .0070.0085.0130.0145.0145.0145.0145.0145.0145.0130.0085.0070
  48    .0084.0102.0156.0174.0174.0174.0174.0174.0174.0156.0102.0084
  49     .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
  50     .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
  61     .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
  65     .023 .023 .023 .030 .030 .030 .030 .030 .030 .023 .023 .023
  66    .0056.0068.0104.0116.0116.0116.0116.0116.0116.0104.0068.0056
  67    .0070.0085.0130.0145.0145.0145.0145.0145.0145.0130.0085.0070
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68 .0084.0102.0156.0174.0174.0174.0174.0174.0174.0156.0102.0084
69 .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
70 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
81 .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
85 .023 .023 .023 .030 .030 .030 .030 .030 .030 .023 .023 .023
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87 .0070.0085.0130.0145.0145.0145.0145.0145.0145.0130.0085.0070
88 .0084.0102.0156.0174.0174.0174.0174.0174.0174.0156.0102.0084
89 .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
90 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
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110 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
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185 .023 .023 .023 .030 .030 .030 .030 .030 .030 .023 .023 .023
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187 .0070.0085.0130.0145.0145.0145.0145.0145.0145.0130.0085.0070
188 .0084.0102.0156.0174.0174.0174.0174.0174.0174.0156.0102.0084
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190 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
201 .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
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209 .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
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229 .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
230 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
241 .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
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249 .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
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390 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
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469 .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
470 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
481 .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
485 .023 .023 .023 .030 .030 .030 .030 .030 .030 .023 .023 .023
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488 .0084.0102.0156.0174.0174.0174.0174.0174.0174.0156.0102.0084
489 .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
490 .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
501 .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
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569      .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
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589      .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
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609      .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
610      .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
621      .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
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629      .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
630      .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
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649      .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
650      .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
661      .013 .015 .016 .018 .018 .018 .018 .018 .018 .016 .015 .013
665      .023 .023 .023 .030 .030 .030 .030 .030 .030 .023 .023 .023
666     .0056.0068.0104.0116.0116.0116.0116.0116.0116.0104.0068.0056
667     .0070.0085.0130.0145.0145.0145.0145.0145.0145.0130.0085.0070
668     .0084.0102.0156.0174.0174.0174.0174.0174.0174.0156.0102.0084
669      .010 .012 .013 .014 .014 .014 .014 .014 .014 .013 .012 .010
670      .119 .109 .182 .204 .580 .600 .378 .323 .374 .340 .221 .238
END MON-ACCUM

MON-SQOLIM
*** <PLS >  Value at start of month for limiting storage of QUALOF (lb NO3-N/AC)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
  21      .091 .105 .112 .126 .126 .126 .126 .126 .126 .112 .105 .091
  25      .161 .161 .161 .210 .210 .210 .210 .210 .210 .161 .161 .161
*** Developed, Open
  26      .028 .035 .053 .058 .058 .058 .058 .058 .058 .053 .035 .028
*** Developed, Low
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27	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
*** Developed, Med/High													
28	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
*** Wetlands													
29	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
*** Cropland													
30	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
41	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
45	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
46	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
47	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
48	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
49	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
50	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
61	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
65	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
66	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
67	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
68	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
69	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
70	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
81	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
85	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
86	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
87	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
88	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
89	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
90	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
101	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
105	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
106	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
107	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
108	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
109	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
110	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
121	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
125	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
126	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
127	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
128	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
129	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
130	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
141	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
145	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
146	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
147	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
148	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
149	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
150	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
161	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
165	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
166	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
167	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
168	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
169	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
170	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712

181	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
185	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
186	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
187	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
188	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
189	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
190	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
201	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
205	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
206	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
207	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
208	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
209	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
210	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
221	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
225	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
226	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
227	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
228	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
229	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
230	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
241	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
245	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
246	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
247	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
248	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
249	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
250	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
261	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
265	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
266	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
267	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
268	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
269	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
270	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
281	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
285	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
286	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
287	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
288	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
289	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
290	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
301	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
305	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
306	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
307	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
308	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
309	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
310	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
321	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
325	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
326	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
327	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
328	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
329	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
330	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712

341	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
345	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
346	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
347	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
348	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
349	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
350	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
361	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
365	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
366	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
367	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
368	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
369	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
370	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
381	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
385	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
386	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
387	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
388	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
389	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
390	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
401	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
405	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
406	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
407	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
408	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
409	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
410	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
421	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
425	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
426	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
427	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
428	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
429	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
430	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
441	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
445	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
446	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
447	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
448	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
449	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
450	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
461	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
465	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
466	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
467	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
468	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
469	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
470	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
481	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
485	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
486	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
487	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
488	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
489	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
490	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712

501	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
505	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
506	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
507	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
508	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
509	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
510	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
521	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
525	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
526	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
527	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
528	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
529	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
530	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
541	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
545	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
546	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
547	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
548	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
549	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
550	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
561	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
565	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
566	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
567	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
568	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
569	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
570	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
581	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
585	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
586	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
587	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
588	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
589	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
590	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
601	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
605	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
606	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
607	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
608	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
609	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
610	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
621	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
625	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
626	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
627	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
628	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
629	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
630	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712
641	.091	.105	.112	.126	.126	.126	.126	.126	.126	.112	.105	.091
645	.161	.161	.161	.210	.210	.210	.210	.210	.210	.161	.161	.161
646	.028	.035	.053	.058	.058	.058	.058	.058	.058	.053	.035	.028
647	.036	.044	.066	.072	.072	.072	.072	.072	.072	.066	.044	.036
648	.043	.052	.079	.086	.086	.086	.086	.086	.086	.079	.052	.043
649	.070	.084	.091	.098	.098	.098	.098	.098	.098	.091	.084	.070
650	.357	.326	.544	.612	1.73	1.80	1.14	.968	1.12	1.02	.664	.712

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 661     .091 .105 .112 .126 .126 .126 .126 .126 .126 .112 .105 .091
 665     .161 .161 .161 .210 .210 .210 .210 .210 .210 .161 .161 .161
 666     .028 .035 .053 .058 .058 .058 .058 .058 .058 .053 .035 .028
 667     .036 .044 .066 .072 .072 .072 .072 .072 .072 .066 .044 .036
 668     .043 .052 .079 .086 .086 .086 .086 .086 .086 .079 .052 .043
 669     .070 .084 .091 .098 .098 .098 .098 .098 .098 .091 .084 .070
 670     .357 .326 .544 .612 1.73 1.80 1.14 .968 1.12 1.02 .664 .712
 END MON-SQOLIM

 MON-IFLW-CONC
*** <PLS >  Conc of QUAL in interflow outflow for each month of NO3-N (mg/l)
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
*** Forest
  21      3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
  25       3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
*** Developed, Open
  26       4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
*** Developed, Low
  27       5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
*** Developed, Med/High
  28       6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
*** Wetlands
  29       2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
*** Cropland
  30       7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
  41      3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
  45       3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
  46       4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
  47       5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
  48       6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
  49       2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
  50       7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
  61      3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
  65       3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
  66       4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
  67       5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
  68       6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
  69       2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
  70       7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
  81      3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
  85       3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
  86       4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
  87       5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
  88       6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
  89       2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
  90       7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
 101      3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
 105       3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 106       4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 107       5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 108       6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
 109       2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 110       7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
 121      3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
 125       3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 126       4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
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127	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
128	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
129	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
130	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
141	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
145	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
146	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
147	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
148	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
149	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
150	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
161	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
165	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
166	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
167	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
168	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
169	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
170	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
181	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
185	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
186	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
187	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
188	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
189	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
190	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
201	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
205	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
206	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
207	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
208	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
209	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
210	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
221	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
225	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
226	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
227	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
228	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
229	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
230	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
241	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
245	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
246	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
247	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
248	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
249	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
250	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
261	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
265	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
266	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
267	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
268	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
269	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
270	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
281	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
285	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
286	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5

287	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
288	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
289	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
290	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
301	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
305	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
306	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
307	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
308	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
309	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
310	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
321	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
325	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
326	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
327	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
328	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
329	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
330	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
341	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
345	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
346	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
347	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
348	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
349	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
350	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
361	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
365	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
366	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
367	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
368	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
369	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
370	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
381	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
385	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
386	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
387	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
388	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
389	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
390	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
401	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
405	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
406	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
407	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
408	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
409	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
410	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
421	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
425	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
426	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
427	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
428	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
429	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
430	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
441	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
445	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
446	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5

447	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
448	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
449	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
450	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
461	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
465	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
466	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
467	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
468	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
469	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
470	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
481	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
485	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
486	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
487	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
488	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
489	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
490	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
501	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
505	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
506	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
507	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
508	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
509	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
510	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
521	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
525	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
526	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
527	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
528	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
529	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
530	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
541	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
545	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
546	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
547	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
548	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
549	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
550	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
561	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
565	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
566	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
567	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
568	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
569	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
570	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
581	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
585	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
586	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
587	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
588	6.0	6.0	6.0	3.5	3.5	3.5	3.5	3.5	3.5	6.0	6.0	6.0
589	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
590	7.0	7.0	7.0	8.0	8.0	8.0	6.0	6.0	6.0	7.0	7.0	7.0
601	3.00	3.00	3.00	0.50	0.50	0.50	0.50	0.50	0.50	3.00	3.00	3.00
605	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
606	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5

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 607      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 608      6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
 609      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 610      7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
 621     3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
 625      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 626      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 627      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 628      6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
 629      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 630      7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
 641     3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
 645      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 646      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 647      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 648      6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
 649      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 650      7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
 661     3.00 3.00 3.00 0.50 0.50 0.50 0.50 0.50 0.50 3.00 3.00 3.00
 665      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 666      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 667      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 668      6.0  6.0  6.0  3.5  3.5  3.5  3.5  3.5  3.5  6.0  6.0  6.0
 669      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 670      7.0  7.0  7.0  8.0  8.0  8.0  6.0  6.0  6.0  7.0  7.0  7.0
 END MON-IFLW-CONC

 MON-GRND-CONC
*** <PLS >  Value at start of month for conc of NO3-N in groundwater (mg/l)
*** x -  x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
*** Forest
  21      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
  25      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
*** Developed, Open
  26      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
*** Developed, Low
  27      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
*** Developed, Med/High
  28      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
*** Wetlands
  29      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
*** Cropland
  30      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
  41      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
  45      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
  46      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
  47      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
  48      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
  49      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
  50      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
  61      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
  65      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
  66      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
  67      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
  68      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
  69      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
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70	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
81	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
85	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
86	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
87	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
88	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
89	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
90	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
101	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
105	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
106	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
107	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
108	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
109	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
110	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
121	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
125	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
126	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
127	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
128	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
129	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
130	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
141	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
145	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
146	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
147	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
148	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
149	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
150	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
161	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
165	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
166	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
167	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
168	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
169	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
170	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
181	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
185	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
186	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
187	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
188	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
189	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
190	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
201	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
205	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
206	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
207	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
208	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
209	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
210	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
221	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
225	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
226	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
227	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
228	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
229	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3

230	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
241	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
245	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
246	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
247	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
248	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
249	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
250	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
261	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
265	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
266	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
267	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
268	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
269	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
270	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
281	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
285	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
286	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
287	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
288	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
289	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
290	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
301	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
305	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
306	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
307	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
308	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
309	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
310	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
321	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
325	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
326	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
327	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
328	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
329	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
330	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
341	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
345	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
346	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
347	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
348	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
349	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
350	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
361	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
365	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
366	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
367	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
368	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
369	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
370	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
381	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
385	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
386	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
387	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
388	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
389	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3

390	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
401	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
405	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
406	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
407	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
408	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
409	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
410	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
421	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
425	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
426	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
427	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
428	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
429	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
430	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
441	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
445	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
446	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
447	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
448	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
449	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
450	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
461	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
465	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
466	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
467	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
468	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
469	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
470	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
481	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
485	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
486	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
487	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
488	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
489	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
490	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
501	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
505	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
506	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
507	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
508	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
509	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
510	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
521	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
525	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
526	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
527	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
528	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
529	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3
530	6.5	6.5	6.5	6.0	6.0	6.0	4.0	4.0	4.0	6.5	6.5	6.5
541	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	3.0
545	3.5	3.5	3.5	0.8	0.8	0.8	0.8	0.8	0.8	3.5	3.5	3.5
546	4.5	4.5	4.5	2.5	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5
547	5.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0
548	5.5	5.5	5.5	3.5	3.5	3.5	3.5	3.5	3.5	5.5	5.5	5.5
549	2.3	2.3	2.3	0.5	0.5	0.5	0.5	0.5	0.5	2.3	2.3	2.3

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 550      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
 561      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
 565      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 566      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 567      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 568      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
 569      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 570      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
 581      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
 585      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 586      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 587      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 588      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
 589      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 590      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
 601      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
 605      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 606      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 607      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 608      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
 609      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 610      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
 621      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
 625      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 626      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 627      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 628      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
 629      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 630      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
 641      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
 645      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 646      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 647      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 648      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
 649      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 650      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
 661      3.0  3.0  3.0  0.5  0.5  0.5  0.5  0.5  0.5  3.0  3.0  3.0
 665      3.5  3.5  3.5  0.8  0.8  0.8  0.8  0.8  0.8  3.5  3.5  3.5
 666      4.5  4.5  4.5  2.5  2.5  2.5  2.5  2.5  2.5  4.5  4.5  4.5
 667      5.0  5.0  5.0  3.0  3.0  3.0  3.0  3.0  3.0  5.0  5.0  5.0
 668      5.5  5.5  5.5  3.5  3.5  3.5  3.5  3.5  3.5  5.5  5.5  5.5
 669      2.3  2.3  2.3  0.5  0.5  0.5  0.5  0.5  0.5  2.3  2.3  2.3
 670      6.5  6.5  6.5  6.0  6.0  6.0  4.0  4.0  4.0  6.5  6.5  6.5
 END MON-GRND-CONC

 QUAL-PROPS
*** <PLS >  Identifiers and Flags
*** x -  x    QUALID      QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC
  21  670ORTHO P         LBS    1    1    0    0    0    1    3    1    3
 END QUAL-PROPS

 QUAL-INPUT
 END QUAL-INPUT

 MON-POTFW
*** <PLS >  Value at start of each month for washoff potency factor (lb PO4/ton)
```

*** x - x	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
*** Forest												
21	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
25	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
*** Developed, Open												
26	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
*** Developed, Low												
27	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
*** Developed, Med/High												
28	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
*** Wetlands												
29	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
*** Cropland												
30	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
41	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
45	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
46	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
47	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
48	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
49	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
50	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
61	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
65	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
66	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
67	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
68	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
69	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
70	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
81	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
85	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
86	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
87	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
88	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
89	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
90	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
101	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
105	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
106	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
107	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
108	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
109	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
110	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
121	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
125	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
126	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
127	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
128	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
129	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
130	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
141	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
145	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
146	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
147	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
148	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
149	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
150	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419

161	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
165	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
166	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
167	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
168	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
169	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
170	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
181	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
185	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
186	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
187	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
188	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
189	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
190	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
201	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
205	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
206	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
207	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
208	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
209	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
210	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
221	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
225	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
226	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
227	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
228	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
229	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
230	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
241	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
245	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
246	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
247	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
248	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
249	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
250	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
261	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
265	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
266	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
267	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
268	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
269	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
270	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
281	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
285	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
286	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
287	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
288	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
289	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
290	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
301	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
305	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
306	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
307	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
308	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
309	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
310	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419

321	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
325	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
326	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
327	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
328	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
329	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
330	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
341	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
345	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
346	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
347	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
348	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
349	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
350	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
361	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
365	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
366	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
367	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
368	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
369	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
370	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
381	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
385	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
386	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
387	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
388	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
389	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
390	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
401	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
405	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
406	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
407	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
408	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
409	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
410	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
421	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
425	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
426	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
427	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
428	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
429	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
430	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
441	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
445	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
446	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
447	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
448	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
449	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
450	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
461	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
465	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
466	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
467	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
468	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
469	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
470	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419

481	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
485	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
486	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
487	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
488	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
489	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
490	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
501	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
505	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
506	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
507	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
508	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
509	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
510	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
521	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
525	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
526	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
527	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
528	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
529	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
530	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
541	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
545	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
546	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
547	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
548	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
549	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
550	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
561	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
565	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
566	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
567	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
568	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
569	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
570	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
581	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
585	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
586	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
587	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
588	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
589	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
590	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
601	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
605	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
606	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
607	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
608	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
609	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
610	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419
621	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
625	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
626	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
627	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
628	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837	.837
629	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180	.180
630	.419	.524	.745	.700	.872	.786	.880	.832	.760	.524	.576	.419

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 641     .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180
 645     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 646     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 647     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 648     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 649     .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180
 650     .419 .524 .745 .700 .872 .786 .880 .832 .760 .524 .576 .419
 661     .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180
 665     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 666     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 667     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 668     .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837 .837
 669     .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180 .180
 670     .419 .524 .745 .700 .872 .786 .880 .832 .760 .524 .576 .419
 END MON-POTFW

 MON-IFLW-CONC
*** <PLS >  Conc of PO4-P in interflow outflow for each month (mg/l)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
  21     .007 .007 .007 .018 .018 .018 .018 .018 .018 .007 .007 .007
  25     .018 .018 .018 .025 .025 .025 .025 .025 .025 .018 .018 .018
*** Developed, Open
  26     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
*** Developed, Low
  27     .032 .032 .032 .055 .055 .055 .055 .055 .055 .032 .032 0.32
*** Developed, Med/High
  28     .037 .037 .037 .060 .060 .060 .060 .060 .060 .037 .037 .037
*** Wetlands
  29     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
*** Cropland
  30     .035 .035 .035 .077 .077 .077 .077 .077 .077 .035 .035 .035
  41     .007 .007 .007 .018 .018 .018 .018 .018 .018 .007 .007 .007
  45     .018 .018 .018 .025 .025 .025 .025 .025 .025 .018 .018 .018
  46     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
  47     .032 .032 .032 .055 .055 .055 .055 .055 .055 .032 .032 0.32
  48     .037 .037 .037 .060 .060 .060 .060 .060 .060 .037 .037 .037
  49     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
  50     .035 .035 .035 .077 .077 .077 .077 .077 .077 .035 .035 .035
  61     .007 .007 .007 .018 .018 .018 .018 .018 .018 .007 .007 .007
  65     .018 .018 .018 .025 .025 .025 .025 .025 .025 .018 .018 .018
  66     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
  67     .032 .032 .032 .055 .055 .055 .055 .055 .055 .032 .032 0.32
  68     .037 .037 .037 .060 .060 .060 .060 .060 .060 .037 .037 .037
  69     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
  70     .035 .035 .035 .077 .077 .077 .077 .077 .077 .035 .035 .035
  81     .007 .007 .007 .018 .018 .018 .018 .018 .018 .007 .007 .007
  85     .018 .018 .018 .025 .025 .025 .025 .025 .025 .018 .018 .018
  86     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
  87     .032 .032 .032 .055 .055 .055 .055 .055 .055 .032 .032 0.32
  88     .037 .037 .037 .060 .060 .060 .060 .060 .060 .037 .037 .037
  89     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
  90     .035 .035 .035 .077 .077 .077 .077 .077 .077 .035 .035 .035
 101     .007 .007 .007 .018 .018 .018 .018 .018 .018 .007 .007 .007
 105     .018 .018 .018 .025 .025 .025 .025 .025 .025 .018 .018 .018
 106     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
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107	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
108	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
109	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
110	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
121	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
125	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
126	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
127	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
128	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
129	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
130	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
141	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
145	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
146	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
147	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
148	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
149	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
150	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
161	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
165	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
166	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
167	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
168	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
169	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
170	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
181	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
185	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
186	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
187	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
188	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
189	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
190	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
201	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
205	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
206	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
207	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
208	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
209	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
210	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
221	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
225	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
226	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
227	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
228	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
229	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
230	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
241	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
245	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
246	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
247	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
248	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
249	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
250	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
261	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
265	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
266	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027

267	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
268	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
269	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
270	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
281	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
285	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
286	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
287	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
288	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
289	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
290	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
301	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
305	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
306	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
307	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
308	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
309	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
310	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
321	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
325	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
326	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
327	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
328	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
329	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
330	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
341	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
345	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
346	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
347	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
348	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
349	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
350	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
361	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
365	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
366	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
367	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
368	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
369	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
370	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
381	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
385	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
386	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
387	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
388	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
389	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
390	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
401	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
405	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
406	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
407	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
408	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
409	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
410	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
421	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
425	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
426	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027

427	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
428	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
429	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
430	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
441	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
445	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
446	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
447	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
448	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
449	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
450	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
461	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
465	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
466	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
467	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
468	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
469	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
470	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
481	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
485	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
486	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
487	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
488	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
489	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
490	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
501	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
505	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
506	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
507	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
508	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
509	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
510	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
521	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
525	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
526	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
527	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
528	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
529	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
530	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
541	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
545	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
546	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
547	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
548	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
549	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
550	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
561	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
565	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
566	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027
567	.032	.032	.032	.055	.055	.055	.055	.055	.055	.032	.032	0.32
568	.037	.037	.037	.060	.060	.060	.060	.060	.060	.037	.037	.037
569	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
570	.035	.035	.035	.077	.077	.077	.077	.077	.077	.035	.035	.035
581	.007	.007	.007	.018	.018	.018	.018	.018	.018	.007	.007	.007
585	.018	.018	.018	.025	.025	.025	.025	.025	.025	.018	.018	.018
586	.027	.027	.027	.050	.050	.050	.050	.050	.050	.027	.027	.027

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 587     .032 .032 .032 .055 .055 .055 .055 .055 .055 .032 .032 0.32
 588     .037 .037 .037 .060 .060 .060 .060 .060 .060 .037 .037 .037
 589     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
 590     .035 .035 .035 .077 .077 .077 .077 .077 .077 .035 .035 .035
 601     .007 .007 .007 .018 .018 .018 .018 .018 .018 .007 .007 .007
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 626     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
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 629     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
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 646     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
 647     .032 .032 .032 .055 .055 .055 .055 .055 .055 .032 .032 0.32
 648     .037 .037 .037 .060 .060 .060 .060 .060 .060 .037 .037 .037
 649     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
 650     .035 .035 .035 .077 .077 .077 .077 .077 .077 .035 .035 .035
 661     .007 .007 .007 .018 .018 .018 .018 .018 .018 .007 .007 .007
 665     .018 .018 .018 .025 .025 .025 .025 .025 .025 .018 .018 .018
 666     .027 .027 .027 .050 .050 .050 .050 .050 .050 .027 .027 .027
 667     .032 .032 .032 .055 .055 .055 .055 .055 .055 .032 .032 0.32
 668     .037 .037 .037 .060 .060 .060 .060 .060 .060 .037 .037 .037
 669     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
 670     .035 .035 .035 .077 .077 .077 .077 .077 .077 .035 .035 .035
 END MON-IFLW-CONC

 MON-GRND-CONC
*** <PLS >  Value at start of month for conc of PO4-P in groundwater (mg/l)
*** x -  x JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
  21     .006 .006 .006 .015 .015 .015 .015 .015 .015 .006 .006 .006
  25     .015 .015 .015 .022 .022 .022 .022 .022 .022 .015 .015 .015
*** Developed, Open
  26     .024 .024 .024 .045 .045 .045 .045 .045 .045 .024 .024 .024
*** Developed, Low
  27     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
*** Developed, Med/High
  28     .035 .035 .035 .060 .060 .060 .060 .060 .060 .035 .035 .035
*** Wetlands
  29     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
*** Cropland
  30     .030 .030 .030 .075 .075 .075 .075 .075 .075 .030 .030 .030
  41     .006 .006 .006 .015 .015 .015 .015 .015 .015 .006 .006 .006
  45     .015 .015 .015 .022 .022 .022 .022 .022 .022 .015 .015 .015
  46     .024 .024 .024 .045 .045 .045 .045 .045 .045 .024 .024 .024
  47     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
  48     .035 .035 .035 .060 .060 .060 .060 .060 .060 .035 .035 .035
  49     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
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50	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
61	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
65	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
66	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
67	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
68	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
69	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
70	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
81	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
85	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
86	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
87	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
88	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
89	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
90	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
101	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
105	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
106	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
107	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
108	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
109	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
110	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
121	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
125	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
126	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
127	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
128	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
129	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
130	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
141	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
145	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
146	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
147	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
148	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
149	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
150	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
161	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
165	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
166	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
167	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
168	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
169	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
170	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
181	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
185	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
186	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
187	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
188	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
189	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
190	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
201	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
205	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
206	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
207	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
208	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
209	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005

210	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
221	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
225	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
226	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
227	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
228	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
229	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
230	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
241	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
245	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
246	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
247	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
248	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
249	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
250	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
261	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
265	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
266	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
267	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
268	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
269	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
270	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
281	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
285	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
286	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
287	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
288	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
289	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
290	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
301	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
305	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
306	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
307	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
308	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
309	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
310	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
321	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
325	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
326	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
327	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
328	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
329	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
330	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
341	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
345	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
346	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
347	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
348	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
349	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
350	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
361	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
365	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
366	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
367	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
368	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
369	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005

370	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
381	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
385	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
386	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
387	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
388	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
389	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
390	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
401	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
405	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
406	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
407	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
408	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
409	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
410	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
421	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
425	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
426	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
427	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
428	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
429	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
430	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
441	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
445	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
446	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
447	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
448	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
449	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
450	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
461	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
465	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
466	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
467	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
468	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
469	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
470	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
481	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
485	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
486	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
487	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
488	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
489	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
490	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
501	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
505	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
506	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
507	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
508	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
509	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005
510	.030	.030	.030	.075	.075	.075	.075	.075	.075	.030	.030	.030
521	.006	.006	.006	.015	.015	.015	.015	.015	.015	.006	.006	.006
525	.015	.015	.015	.022	.022	.022	.022	.022	.022	.015	.015	.015
526	.024	.024	.024	.045	.045	.045	.045	.045	.045	.024	.024	.024
527	.030	.030	.030	.050	.050	.050	.050	.050	.050	.030	.030	.030
528	.035	.035	.035	.060	.060	.060	.060	.060	.060	.035	.035	.035
529	.005	.005	.005	.007	.007	.007	.007	.007	.007	.005	.005	.005

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530     .030 .030 .030 .075 .075 .075 .075 .075 .075 .030 .030 .030
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546     .024 .024 .024 .045 .045 .045 .045 .045 .045 .024 .024 .024
547     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
548     .035 .035 .035 .060 .060 .060 .060 .060 .060 .035 .035 .035
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550     .030 .030 .030 .075 .075 .075 .075 .075 .075 .030 .030 .030
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567     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
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587     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
588     .035 .035 .035 .060 .060 .060 .060 .060 .060 .035 .035 .035
589     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
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627     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
628     .035 .035 .035 .060 .060 .060 .060 .060 .060 .035 .035 .035
629     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
630     .030 .030 .030 .075 .075 .075 .075 .075 .075 .030 .030 .030
641     .006 .006 .006 .015 .015 .015 .015 .015 .015 .006 .006 .006
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646     .024 .024 .024 .045 .045 .045 .045 .045 .045 .024 .024 .024
647     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
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661     .006 .006 .006 .015 .015 .015 .015 .015 .015 .006 .006 .006
665     .015 .015 .015 .022 .022 .022 .022 .022 .022 .015 .015 .015
666     .024 .024 .024 .045 .045 .045 .045 .045 .045 .024 .024 .024
667     .030 .030 .030 .050 .050 .050 .050 .050 .050 .030 .030 .030
668     .035 .035 .035 .060 .060 .060 .060 .060 .060 .035 .035 .035
669     .005 .005 .005 .007 .007 .007 .007 .007 .007 .005 .005 .005
670     .030 .030 .030 .075 .075 .075 .075 .075 .075 .030 .030 .030
END MON-GRND-CONC

QUAL-PROPS
*** <PLS >  Identifiers and Flags
*** x -  x    QUALID      QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC
  21  670BOD            LBS    1    0    0    0    0    1    3    1    3
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  END QUAL-PROPS

  QUAL-INPUT
***        Storage on surface and nonseasonal parameters
***          SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC
*** <PLS >  qty/ac qty/ton qty/ton    qty/  qty/ac   in/hr qty/ft3 qty/ft3
*** x -  x                        ac.day
*** Forest
   21        1.00     5.0                 1e-6    1.70
   25        1.75    10.0                 1e-6    1.60
*** Developed, Open
   26        3.00    12.0                 1e-6    0.50
*** Developed, Low
   27        3.00    20.0                 1e-6    0.50
*** Developed, Med/High
   28        3.00    25.0                 1e-6    0.50
*** Wetlands
   29        1.00     3.0                 1e-6    0.20
*** Cropland
   30        5.00    30.0                 1e-6    1.50
   41        1.00     5.0                 1e-6    1.70
   45        1.75    10.0                 1e-6    1.60
   46        3.00    12.0                 1e-6    0.50
   47        3.00    20.0                 1e-6    0.50
   48        3.00    25.0                 1e-6    0.50
   49        1.00     3.0                 1e-6    0.20
   50        5.00    30.0                 1e-6    1.50
   61        1.00     5.0                 1e-6    1.70
   65        1.75    10.0                 1e-6    1.60
   66        3.00    12.0                 1e-6    0.50
   67        3.00    20.0                 1e-6    0.50
   68        3.00    25.0                 1e-6    0.50
   69        1.00     3.0                 1e-6    0.20
   70        5.00    30.0                 1e-6    1.50
   81        1.00     5.0                 1e-6    1.70
   85        1.75    10.0                 1e-6    1.60
   86        3.00    12.0                 1e-6    0.50
   87        3.00    20.0                 1e-6    0.50
   88        3.00    25.0                 1e-6    0.50
   89        1.00     3.0                 1e-6    0.20
   90        5.00    30.0                 1e-6    1.50
  101        1.00     5.0                 1e-6    1.70
  105        1.75    10.0                 1e-6    1.60
  106        3.00    12.0                 1e-6    0.50
  107        3.00    20.0                 1e-6    0.50
  108        3.00    25.0                 1e-6    0.50
  109        1.00     3.0                 1e-6    0.20
  110        5.00    30.0                 1e-6    1.50
  121        1.00    10.0                 1e-6    1.70
  125        1.75    20.0                 1e-6    1.60
  126        3.00    25.0                 1e-6    0.50
  127        3.00    40.0                 1e-6    0.50
  128        3.00    50.0                 1e-6    0.50
  129        1.00     3.0                 1e-6    0.20
  130        5.00    30.0                 1e-6    1.50
  141        1.00     5.0                 1e-6    1.70
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145	1.75	10.0	1e-6	1.60
146	3.00	12.0	1e-6	0.50
147	3.00	20.0	1e-6	0.50
148	3.00	25.0	1e-6	0.50
149	1.00	3.0	1e-6	0.20
150	5.00	30.0	1e-6	1.50
161	1.00	5.0	1e-6	1.70
165	1.75	10.0	1e-6	1.60
166	3.00	12.0	1e-6	0.50
167	3.00	20.0	1e-6	0.50
168	3.00	25.0	1e-6	0.50
169	1.00	3.0	1e-6	0.20
170	5.00	30.0	1e-6	1.50
181	1.00	5.0	1e-6	1.70
185	1.75	10.0	1e-6	1.60
186	3.00	12.0	1e-6	0.50
187	3.00	20.0	1e-6	0.50
188	3.00	25.0	1e-6	0.50
189	1.00	3.0	1e-6	0.20
190	5.00	30.0	1e-6	1.50
201	1.00	5.0	1e-6	1.70
205	1.75	10.0	1e-6	1.60
206	3.00	12.0	1e-6	0.50
207	3.00	20.0	1e-6	0.50
208	3.00	25.0	1e-6	0.50
209	1.00	3.0	1e-6	0.20
210	5.00	30.0	1e-6	1.50
221	1.00	5.0	1e-6	1.70
225	1.75	10.0	1e-6	1.60
226	3.00	12.0	1e-6	0.50
227	3.00	20.0	1e-6	0.50
228	3.00	25.0	1e-6	0.50
229	1.00	3.0	1e-6	0.20
230	5.00	30.0	1e-6	1.50
241	1.00	5.0	1e-6	1.70
245	1.75	10.0	1e-6	1.60
246	3.00	12.0	1e-6	0.50
247	3.00	20.0	1e-6	0.50
248	3.00	25.0	1e-6	0.50
249	1.00	3.0	1e-6	0.20
250	5.00	30.0	1e-6	1.50
261	1.00	5.0	1e-6	1.70
265	1.75	10.0	1e-6	1.60
266	3.00	12.0	1e-6	0.50
267	3.00	20.0	1e-6	0.50
268	3.00	25.0	1e-6	0.50
269	1.00	3.0	1e-6	0.20
270	5.00	30.0	1e-6	1.50
281	1.00	5.0	1e-6	1.70
285	1.75	10.0	1e-6	1.60
286	3.00	12.0	1e-6	0.50
287	3.00	20.0	1e-6	0.50
288	3.00	25.0	1e-6	0.50
289	1.00	3.0	1e-6	0.20
290	5.00	30.0	1e-6	1.50
301	1.00	5.0	1e-6	1.70

305	1.75	10.0	1e-6	1.60
306	3.00	12.0	1e-6	0.50
307	3.00	20.0	1e-6	0.50
308	3.00	25.0	1e-6	0.50
309	1.00	3.0	1e-6	0.20
310	5.00	30.0	1e-6	1.50
321	1.00	5.0	1e-6	1.70
325	1.75	10.0	1e-6	1.60
326	3.00	12.0	1e-6	0.50
327	3.00	20.0	1e-6	0.50
328	3.00	25.0	1e-6	0.50
329	1.00	3.0	1e-6	0.20
330	5.00	30.0	1e-6	1.50
341	1.00	5.0	1e-6	1.70
345	1.75	10.0	1e-6	1.60
346	3.00	12.0	1e-6	0.50
347	3.00	20.0	1e-6	0.50
348	3.00	25.0	1e-6	0.50
349	1.00	3.0	1e-6	0.20
350	5.00	30.0	1e-6	1.50
361	1.00	5.0	1e-6	1.70
365	1.75	10.0	1e-6	1.60
366	3.00	12.0	1e-6	0.50
367	3.00	20.0	1e-6	0.50
368	3.00	25.0	1e-6	0.50
369	1.00	3.0	1e-6	0.20
370	5.00	30.0	1e-6	1.50
381	1.00	5.0	1e-6	1.70
385	1.75	10.0	1e-6	1.60
386	3.00	12.0	1e-6	0.50
387	3.00	20.0	1e-6	0.50
388	3.00	25.0	1e-6	0.50
389	1.00	3.0	1e-6	0.20
390	5.00	30.0	1e-6	1.50
401	1.00	5.0	1e-6	1.70
405	1.75	10.0	1e-6	1.60
406	3.00	12.0	1e-6	0.50
407	3.00	20.0	1e-6	0.50
408	3.00	25.0	1e-6	0.50
409	1.00	3.0	1e-6	0.20
410	5.00	30.0	1e-6	1.50
421	1.00	5.0	1e-6	1.70
425	1.75	10.0	1e-6	1.60
426	3.00	12.0	1e-6	0.50
427	3.00	20.0	1e-6	0.50
428	3.00	25.0	1e-6	0.50
429	1.00	3.0	1e-6	0.20
430	5.00	30.0	1e-6	1.50
441	1.00	5.0	1e-6	1.70
445	1.75	10.0	1e-6	1.60
446	3.00	12.0	1e-6	0.50
447	3.00	20.0	1e-6	0.50
448	3.00	25.0	1e-6	0.50
449	1.00	3.0	1e-6	0.20
450	5.00	30.0	1e-6	1.50
461	1.00	5.0	1e-6	1.70

465	1.75	10.0	1e-6	1.60
466	3.00	12.0	1e-6	0.50
467	3.00	20.0	1e-6	0.50
468	3.00	25.0	1e-6	0.50
469	1.00	3.0	1e-6	0.20
470	5.00	30.0	1e-6	1.50
481	1.00	5.0	1e-6	1.70
485	1.75	10.0	1e-6	1.60
486	3.00	12.0	1e-6	0.50
487	3.00	20.0	1e-6	0.50
488	3.00	25.0	1e-6	0.50
489	1.00	3.0	1e-6	0.20
490	5.00	30.0	1e-6	1.50
501	1.00	5.0	1e-6	1.70
505	1.75	10.0	1e-6	1.60
506	3.00	12.0	1e-6	0.50
507	3.00	20.0	1e-6	0.50
508	3.00	25.0	1e-6	0.50
509	1.00	3.0	1e-6	0.20
510	5.00	30.0	1e-6	1.50
521	1.00	5.0	1e-6	1.70
525	1.75	10.0	1e-6	1.60
526	3.00	12.0	1e-6	0.50
527	3.00	20.0	1e-6	0.50
528	3.00	25.0	1e-6	0.50
529	1.00	3.0	1e-6	0.20
530	5.00	30.0	1e-6	1.50
541	1.00	5.0	1e-6	1.70
545	1.75	10.0	1e-6	1.60
546	3.00	12.0	1e-6	0.50
547	3.00	20.0	1e-6	0.50
548	3.00	25.0	1e-6	0.50
549	1.00	3.0	1e-6	0.20
550	5.00	30.0	1e-6	1.50
561	1.00	5.0	1e-6	1.70
565	1.75	10.0	1e-6	1.60
566	3.00	12.0	1e-6	0.50
567	3.00	20.0	1e-6	0.50
568	3.00	25.0	1e-6	0.50
569	1.00	3.0	1e-6	0.20
570	5.00	30.0	1e-6	1.50
581	1.00	5.0	1e-6	1.70
585	1.75	10.0	1e-6	1.60
586	3.00	12.0	1e-6	0.50
587	3.00	20.0	1e-6	0.50
588	3.00	25.0	1e-6	0.50
589	1.00	3.0	1e-6	0.20
590	5.00	30.0	1e-6	1.50
601	1.00	5.0	1e-6	1.70
605	1.75	10.0	1e-6	1.60
606	3.00	12.0	1e-6	0.50
607	3.00	20.0	1e-6	0.50
608	3.00	25.0	1e-6	0.50
609	1.00	3.0	1e-6	0.20
610	5.00	30.0	1e-6	1.50
621	1.00	5.0	1e-6	1.70

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 625        1.75    10.0                 1e-6    1.60
 626        3.00    12.0                 1e-6    0.50
 627        3.00    20.0                 1e-6    0.50
 628        3.00    25.0                 1e-6    0.50
 629        1.00     3.0                 1e-6    0.20
 630        5.00    30.0                 1e-6    1.50
 641        1.00     5.0                 1e-6    1.70
 645        1.75    10.0                 1e-6    1.60
 646        3.00    12.0                 1e-6    0.50
 647        3.00    20.0                 1e-6    0.50
 648        3.00    25.0                 1e-6    0.50
 649        1.00     3.0                 1e-6    0.20
 650        5.00    30.0                 1e-6    1.50
 661        1.00     5.0                 1e-6    1.70
 665        1.75    10.0                 1e-6    1.60
 666        3.00    12.0                 1e-6    0.50
 667        3.00    20.0                 1e-6    0.50
 668        3.00    25.0                 1e-6    0.50
 669        1.00     3.0                 1e-6    0.20
 670        5.00    30.0                 1e-6    1.50
 END QUAL-INPUT

 MON-IFLW-CONC
*** <PLS >  Conc of BOD in interflow outflow for each month (mg/l)
*** x -  x JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
  21      4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  25     4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
*** Developed, Open
  26      7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
*** Developed, Low
  27      8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
*** Developed, Med/High
  28     10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
*** Wetlands
  29      2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
*** Cropland
  30     12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  41      4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  45     4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  46      7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  47      8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
  48     10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  49      2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  50     12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  61      4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  65     4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  66      7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  67      8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
  68     10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  69      2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  70     12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  81      4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  85     4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  86      7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  87      8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
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88	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
89	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
90	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
101	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
105	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
106	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
107	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
108	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
109	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
110	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
121	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
125	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
126	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
127	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
128	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
129	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
130	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
141	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
145	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
146	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
147	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
148	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
149	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
150	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
161	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
165	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
166	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
167	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
168	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
169	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
170	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
181	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
185	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
186	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
187	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
188	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
189	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
190	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
201	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
205	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
206	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
207	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
208	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
209	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
210	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
221	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
225	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
226	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
227	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
228	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
229	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
230	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
241	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
245	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
246	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
247	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0

248	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
249	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
250	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
261	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
265	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
266	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
267	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
268	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
269	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
270	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
281	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
285	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
286	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
287	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
288	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
289	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
290	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
301	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
305	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
306	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
307	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
308	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
309	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
310	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
321	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
325	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
326	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
327	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
328	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
329	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
330	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
341	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
345	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
346	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
347	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
348	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
349	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
350	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
361	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
365	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
366	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
367	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
368	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
369	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
370	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
381	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
385	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
386	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
387	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
388	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
389	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
390	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
401	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
405	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
406	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
407	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0

408	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
409	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
410	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
421	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
425	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
426	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
427	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
428	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
429	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
430	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
441	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
445	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
446	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
447	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
448	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
449	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
450	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
461	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
465	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
466	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
467	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
468	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
469	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
470	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
481	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
485	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
486	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
487	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
488	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
489	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
490	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
501	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
505	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
506	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
507	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
508	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
509	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
510	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
521	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
525	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
526	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
527	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
528	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
529	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
530	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
541	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
545	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
546	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
547	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
548	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
549	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
550	12.0	12.0	15.0	15.0	15.0	18.0	18.0	18.0	25.0	25.0	25.0	12.0
561	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	4.0
565	4.50	4.50	4.50	7.50	7.50	7.50	7.50	7.50	7.50	4.50	4.50	4.50
566	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
567	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0

```
  568      10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  569       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  570      12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  581       4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  585      4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  586       7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  587       8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
  588      10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  589       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  590      12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  601       4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  605      4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  606       7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  607       8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
  608      10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  609       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  610      12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  621       4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  625      4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  626       7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  627       8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
  628      10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  629       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  630      12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  641       4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  645      4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  646       7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  647       8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
  648      10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  649       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  650      12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  661       4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  5.0  7.0  5.0  4.0
  665      4.50 4.50 4.50 7.50 7.50 7.50 7.50 7.50 7.50 4.50 4.50 4.50
  666       7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
  667       8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
  668      10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
  669       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
  670      12.0 12.0 15.0 15.0 15.0 18.0 18.0 18.0 25.0 25.0 25.0 12.0
  END MON-IFLW-CONC

  MON-GRND-CONC
*** <PLS >  Value at start of month for conc of BOD in groundwater (mg/l)
*** These values were copied from LPCal03.uci and have not been adjusted for IRW
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** Forest
   21       2.0  2.0  2.0  2.0  2.0  2.0  2.0  2.0  2.0  3.0  2.0  2.0
   25      3.00 3.00 3.00 6.00 6.00 6.00 6.00 6.00 6.00 3.00 3.00
*** Developed, Open
   26       7.0  7.0  7.0 10.0 10.0 10.0 10.0 10.0 10.0  7.0  7.0  7.0
*** Developed, Low
   27       8.0  8.0  8.0 12.0 12.0 12.0 12.0 12.0 12.0  8.0  8.0  8.0
*** Developed, Med/High
   28      10.0 10.0 10.0 15.0 15.0 15.0 15.0 15.0 15.0 10.0 10.0 10.0
*** Wetlands
   29       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  3.0  4.0  3.0  2.0
*** Cropland
```

30	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
41	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
45	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
46	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
47	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
48	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
49	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
50	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
61	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
65	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
66	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
67	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
68	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
69	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
70	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
81	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
85	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
86	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
87	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
88	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
89	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
90	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
101	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
105	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
106	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
107	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
108	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
109	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
110	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
121	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
125	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
126	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
127	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
128	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
129	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
130	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
141	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
145	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
146	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
147	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
148	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
149	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
150	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
161	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
165	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
166	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
167	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
168	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
169	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
170	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
181	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
185	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
186	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
187	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
188	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
189	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0

190	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
201	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
205	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
206	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
207	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
208	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
209	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
210	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
221	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
225	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
226	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
227	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
228	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
229	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
230	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
241	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
245	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
246	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
247	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
248	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
249	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
250	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
261	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
265	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
266	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
267	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
268	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
269	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
270	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
281	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
285	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
286	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
287	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
288	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
289	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
290	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
301	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
305	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
306	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
307	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
308	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
309	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
310	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
321	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
325	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
326	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
327	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
328	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
329	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
330	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
341	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
345	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
346	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
347	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
348	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
349	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0

350	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
361	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
365	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
366	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
367	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
368	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
369	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
370	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
381	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
385	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
386	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
387	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
388	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
389	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
390	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
401	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
405	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
406	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
407	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
408	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
409	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
410	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
421	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
425	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
426	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
427	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
428	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
429	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
430	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
441	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
445	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
446	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
447	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
448	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
449	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
450	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
461	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
465	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
466	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
467	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
468	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
469	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
470	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
481	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
485	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
486	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
487	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
488	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
489	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
490	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
501	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
505	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
506	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
507	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
508	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
509	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0

510	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
521	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
525	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
526	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
527	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
528	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
529	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
530	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
541	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
545	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
546	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
547	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
548	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
549	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
550	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
561	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
565	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
566	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
567	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
568	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
569	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
570	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
581	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
585	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
586	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
587	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
588	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
589	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
590	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
601	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
605	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
606	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
607	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
608	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
609	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
610	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
621	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
625	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
626	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
627	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
628	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
629	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
630	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
641	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
645	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
646	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
647	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
648	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
649	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0
650	10.0	10.0	18.0	18.0	18.0	35.0	35.0	35.0	35.0	25.0	18.0	10.0
661	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
665	3.00	3.00	3.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	3.00	3.00
666	7.0	7.0	7.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
667	8.0	8.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	8.0	8.0	8.0
668	10.0	10.0	10.0	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.0	10.0
669	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0

```
670      10.0 10.0 18.0 18.0 18.0 35.0 35.0 35.0 35.0 25.0 18.0 10.0
END MON-GRND-CONC

*************************************************************************
*************************************************************************
                        *** SECTION MSTLAY ***
MST-PARM
  FACTORS USED TO ADJUST SOLUTE LEACHING RATES ***
  <PLS >     SLMPF      ULPF      LLPF   ***
  #   #                          ***
  22  24      0.3       3.0       1.5
  32          0.3       3.0       1.5
  42  44      0.3       3.0       1.5
  52          0.3       3.0       1.5
  62  64      0.3       3.0       1.5
  72          0.3       3.0       1.5
  82  84      0.3       3.0       1.5
  92          0.3       3.0       1.5
 102 104      0.3       3.0       1.5
 112          0.3       3.0       1.5
 122 124      0.3       3.0       1.5
 132          0.3       3.0       1.5
 142 144      0.3       3.0       1.5
 152          0.3       3.0       1.5
 162 164      0.3       3.0       1.5
 172          0.3       3.0       1.5
 182 184      0.3       3.0       1.5
 192          0.3       3.0       1.5
 202 204      0.3       3.0       1.5
 212          0.3       3.0       1.5
 222 224      0.3       3.0       1.5
 232          0.3       3.0       1.5
 242 244      0.3       3.0       1.5
 252          0.3       3.0       1.5
 262 264      0.3       3.0       1.5
 272          0.3       3.0       1.5
 282 284      0.3       3.0       1.5
 292          0.3       3.0       1.5
 302 304      0.3       3.0       1.5
 312          0.3       3.0       1.5
 322 324      0.3       3.0       1.5
 332          0.3       3.0       1.5
 342 344      0.3       3.0       1.5
 352          0.3       3.0       1.5
 362 364      0.3       3.0       1.5
 372          0.3       3.0       1.5
 382 384      0.3       3.0       1.5
 392          0.3       3.0       1.5
 402 404      0.3       3.0       1.5
 412          0.3       3.0       1.5
 422 424      0.3       3.0       1.5
 432          0.3       3.0       1.5
 442 444      0.3       3.0       1.5
 452          0.3       3.0       1.5
 462 464      0.3       3.0       1.5
 472          0.3       3.0       1.5
```

```
482  484      0.3      3.0      1.5
492          0.3      3.0      1.5
502  504      0.3      3.0      1.5
512          0.3      3.0      1.5
522  524      0.3      3.0      1.5
532          0.3      3.0      1.5
542  544      0.3      3.0      1.5
552          0.3      3.0      1.5
562  564      0.3      3.0      1.5
572          0.3      3.0      1.5
582  584      0.3      3.0      1.5
592          0.3      3.0      1.5
602  604      0.3      3.0      1.5
612          0.3      3.0      1.5
622  624      0.3      3.0      1.5
632          0.3      3.0      1.5
642  644      0.3      3.0      1.5
652          0.3      3.0      1.5
662  664      0.3      3.0      1.5
672          0.3      3.0      1.5
END MST-PARM

MST-TOPSTOR
 INITIAL STORAGES OF MOISTURE IN TOPSOIL***
 <PLS >     SMSTM     UMSTM     IMSTM   ***
 #   #                          ***
 22  24      0.0       0.0       0.0
 32          0.0       0.0       0.0
 42  44      0.0       0.0       0.0
 52          0.0       0.0       0.0
 62  64      0.0       0.0       0.0
 72          0.0       0.0       0.0
 82  84      0.0       0.0       0.0
 92          0.0       0.0       0.0
102  104     0.0       0.0       0.0
112          0.0       0.0       0.0
122  124     0.0       0.0       0.0
132          0.0       0.0       0.0
142  144     0.0       0.0       0.0
152          0.0       0.0       0.0
162  164     0.0       0.0       0.0
172          0.0       0.0       0.0
182  184     0.0       0.0       0.0
192          0.0       0.0       0.0
202  204     0.0       0.0       0.0
212          0.0       0.0       0.0
222  224     0.0       0.0       0.0
232          0.0       0.0       0.0
242  244     0.0       0.0       0.0
252          0.0       0.0       0.0
262  264     0.0       0.0       0.0
272          0.0       0.0       0.0
282  284     0.0       0.0       0.0
292          0.0       0.0       0.0
302  304     0.0       0.0       0.0
312          0.0       0.0       0.0
```

```
322  324      0.0      0.0      0.0
332          0.0      0.0      0.0
342  344      0.0      0.0      0.0
352          0.0      0.0      0.0
362  364      0.0      0.0      0.0
372          0.0      0.0      0.0
382  384      0.0      0.0      0.0
392          0.0      0.0      0.0
402  404      0.0      0.0      0.0
412          0.0      0.0      0.0
422  424      0.0      0.0      0.0
432          0.0      0.0      0.0
442  444      0.0      0.0      0.0
452          0.0      0.0      0.0
462  464      0.0      0.0      0.0
472          0.0      0.0      0.0
482  484      0.0      0.0      0.0
492          0.0      0.0      0.0
502  504      0.0      0.0      0.0
512          0.0      0.0      0.0
522  524      0.0      0.0      0.0
532          0.0      0.0      0.0
542  544      0.0      0.0      0.0
552          0.0      0.0      0.0
562  564      0.0      0.0      0.0
572          0.0      0.0      0.0
582  584      0.0      0.0      0.0
592          0.0      0.0      0.0
602  604      0.0      0.0      0.0
612          0.0      0.0      0.0
622  624      0.0      0.0      0.0
632          0.0      0.0      0.0
642  644      0.0      0.0      0.0
652          0.0      0.0      0.0
662  664      0.0      0.0      0.0
672          0.0      0.0      0.0
END MST-TOPSTOR

MST-TOPFLX
  INITIAL FRACTIONAL FLUXES IN TOPSOIL                    ***
  <PLS >      FSO      FSP      FII      FUP      FIO ***
  #   #                                    ***
 22   24      0.0      0.0      0.0      0.0      0.0
 32          0.0      0.0      0.0      0.0      0.0
 42   44      0.0      0.0      0.0      0.0      0.0
 52          0.0      0.0      0.0      0.0      0.0
 62   64      0.0      0.0      0.0      0.0      0.0
 72          0.0      0.0      0.0      0.0      0.0
 82   84      0.0      0.0      0.0      0.0      0.0
 92          0.0      0.0      0.0      0.0      0.0
102  104      0.0      0.0      0.0      0.0      0.0
112          0.0      0.0      0.0      0.0      0.0
122  124      0.0      0.0      0.0      0.0      0.0
132          0.0      0.0      0.0      0.0      0.0
142  144      0.0      0.0      0.0      0.0      0.0
152          0.0      0.0      0.0      0.0      0.0
```

```
162  164     0.0     0.0     0.0     0.0     0.0
172         0.0     0.0     0.0     0.0     0.0
182  184     0.0     0.0     0.0     0.0     0.0
192         0.0     0.0     0.0     0.0     0.0
202  204     0.0     0.0     0.0     0.0     0.0
212         0.0     0.0     0.0     0.0     0.0
222  224     0.0     0.0     0.0     0.0     0.0
232         0.0     0.0     0.0     0.0     0.0
242  244     0.0     0.0     0.0     0.0     0.0
252         0.0     0.0     0.0     0.0     0.0
262  264     0.0     0.0     0.0     0.0     0.0
272         0.0     0.0     0.0     0.0     0.0
282  284     0.0     0.0     0.0     0.0     0.0
292         0.0     0.0     0.0     0.0     0.0
302  304     0.0     0.0     0.0     0.0     0.0
312         0.0     0.0     0.0     0.0     0.0
322  324     0.0     0.0     0.0     0.0     0.0
332         0.0     0.0     0.0     0.0     0.0
342  344     0.0     0.0     0.0     0.0     0.0
352         0.0     0.0     0.0     0.0     0.0
362  364     0.0     0.0     0.0     0.0     0.0
372         0.0     0.0     0.0     0.0     0.0
382  384     0.0     0.0     0.0     0.0     0.0
392         0.0     0.0     0.0     0.0     0.0
402  404     0.0     0.0     0.0     0.0     0.0
412         0.0     0.0     0.0     0.0     0.0
422  424     0.0     0.0     0.0     0.0     0.0
432         0.0     0.0     0.0     0.0     0.0
442  444     0.0     0.0     0.0     0.0     0.0
452         0.0     0.0     0.0     0.0     0.0
462  464     0.0     0.0     0.0     0.0     0.0
472         0.0     0.0     0.0     0.0     0.0
482  484     0.0     0.0     0.0     0.0     0.0
492         0.0     0.0     0.0     0.0     0.0
502  504     0.0     0.0     0.0     0.0     0.0
512         0.0     0.0     0.0     0.0     0.0
522  524     0.0     0.0     0.0     0.0     0.0
532         0.0     0.0     0.0     0.0     0.0
542  544     0.0     0.0     0.0     0.0     0.0
552         0.0     0.0     0.0     0.0     0.0
562  564     0.0     0.0     0.0     0.0     0.0
572         0.0     0.0     0.0     0.0     0.0
582  584     0.0     0.0     0.0     0.0     0.0
592         0.0     0.0     0.0     0.0     0.0
602  604     0.0     0.0     0.0     0.0     0.0
612         0.0     0.0     0.0     0.0     0.0
622  624     0.0     0.0     0.0     0.0     0.0
632         0.0     0.0     0.0     0.0     0.0
642  644     0.0     0.0     0.0     0.0     0.0
652         0.0     0.0     0.0     0.0     0.0
662  664     0.0     0.0     0.0     0.0     0.0
672         0.0     0.0     0.0     0.0     0.0
END MST-TOPFLX

MST-SUBSTOR
  INITIAL STORAGES OF MOISTURE IN LOWER AND GROUNDWATER LAYERS ***
```

<PLS >		LMSTM	AMSTM ***
#	#		***
22	24	0.0	0.0
32		0.0	0.0
42	44	0.0	0.0
52		0.0	0.0
62	64	0.0	0.0
72		0.0	0.0
82	84	0.0	0.0
92		0.0	0.0
102	104	0.0	0.0
112		0.0	0.0
122	124	0.0	0.0
132		0.0	0.0
142	144	0.0	0.0
152		0.0	0.0
162	164	0.0	0.0
172		0.0	0.0
182	184	0.0	0.0
192		0.0	0.0
202	204	0.0	0.0
212		0.0	0.0
222	224	0.0	0.0
232		0.0	0.0
242	244	0.0	0.0
252		0.0	0.0
262	264	0.0	0.0
272		0.0	0.0
282	284	0.0	0.0
292		0.0	0.0
302	304	0.0	0.0
312		0.0	0.0
322	324	0.0	0.0
332		0.0	0.0
342	344	0.0	0.0
352		0.0	0.0
362	364	0.0	0.0
372		0.0	0.0
382	384	0.0	0.0
392		0.0	0.0
402	404	0.0	0.0
412		0.0	0.0
422	424	0.0	0.0
432		0.0	0.0
442	444	0.0	0.0
452		0.0	0.0
462	464	0.0	0.0
472		0.0	0.0
482	484	0.0	0.0
492		0.0	0.0
502	504	0.0	0.0
512		0.0	0.0
522	524	0.0	0.0
532		0.0	0.0
542	544	0.0	0.0
552		0.0	0.0

```
562  564      0.0      0.0
572          0.0      0.0
582  584      0.0      0.0
592          0.0      0.0
602  604      0.0      0.0
612          0.0      0.0
622  624      0.0      0.0
632          0.0      0.0
642  644      0.0      0.0
652          0.0      0.0
662  664      0.0      0.0
672          0.0      0.0
END MST-SUBSTOR

MST-SUBFLX
  INITIAL FRACTIONAL FLUXES IN SUBSOIL   ***
  <PLS >      FLP     FLDPF       FAO   ***
  #   #                           ***
 22   24      0.0      0.0      0.0
 32          0.0      0.0      0.0
 42   44      0.0      0.0      0.0
 52          0.0      0.0      0.0
 62   64      0.0      0.0      0.0
 72          0.0      0.0      0.0
 82   84      0.0      0.0      0.0
 92          0.0      0.0      0.0
102  104      0.0      0.0      0.0
112          0.0      0.0      0.0
122  124      0.0      0.0      0.0
132          0.0      0.0      0.0
142  144      0.0      0.0      0.0
152          0.0      0.0      0.0
162  164      0.0      0.0      0.0
172          0.0      0.0      0.0
182  184      0.0      0.0      0.0
192          0.0      0.0      0.0
202  204      0.0      0.0      0.0
212          0.0      0.0      0.0
222  224      0.0      0.0      0.0
232          0.0      0.0      0.0
242  244      0.0      0.0      0.0
252          0.0      0.0      0.0
262  264      0.0      0.0      0.0
272          0.0      0.0      0.0
282  284      0.0      0.0      0.0
292          0.0      0.0      0.0
302  304      0.0      0.0      0.0
312          0.0      0.0      0.0
322  324      0.0      0.0      0.0
332          0.0      0.0      0.0
342  344      0.0      0.0      0.0
352          0.0      0.0      0.0
362  364      0.0      0.0      0.0
372          0.0      0.0      0.0
382  384      0.0      0.0      0.0
392          0.0      0.0      0.0
```

```
 402  404      0.0      0.0      0.0
 412          0.0      0.0      0.0
 422  424      0.0      0.0      0.0
 432          0.0      0.0      0.0
 442  444      0.0      0.0      0.0
 452          0.0      0.0      0.0
 462  464      0.0      0.0      0.0
 472          0.0      0.0      0.0
 482  484      0.0      0.0      0.0
 492          0.0      0.0      0.0
 502  504      0.0      0.0      0.0
 512          0.0      0.0      0.0
 522  524      0.0      0.0      0.0
 532          0.0      0.0      0.0
 542  544      0.0      0.0      0.0
 552          0.0      0.0      0.0
 562  564      0.0      0.0      0.0
 572          0.0      0.0      0.0
 582  584      0.0      0.0      0.0
 592          0.0      0.0      0.0
 602  604      0.0      0.0      0.0
 612          0.0      0.0      0.0
 622  624      0.0      0.0      0.0
 632          0.0      0.0      0.0
 642  644      0.0      0.0      0.0
 652          0.0      0.0      0.0
 662  664      0.0      0.0      0.0
 672          0.0      0.0      0.0
 END MST-SUBFLX

*** Nitrogen flags
*** Ammonium adsorption by Fruendlich isotherm method
*** Nitrogen plant uptake by yield-based method
*** Nitrogen fixation is not simulated
*** Ammonia volatilization is simulated
*** Above ground plant N and litter plant N are not simulated; this is consistent with PHOS method
*** below ground plant N is an index of the amount of N taken up by plants during year
 NIT-FLAGS
  <PLS > NITROGEN FLAGS   ***
  # -  # VNUT FORA ITMX BNUM CNUM NUPT FIXN AMVO ALPN VNPR ***
 22   24       1  100   3   1   1   0   1   0   1
 32           1  100   3   1   1   0   1   0   1
 42   44       1  100   3   1   1   0   1   0   1
 52           1  100   3   1   1   0   1   0   1
 62   64       1  100   3   1   1   0   1   0   1
 72           1  100   3   1   1   0   1   0   1
 82   84       1  100   3   1   1   0   1   0   1
 92           1  100   3   1   1   0   1   0   1
102  104       1  100   3   1   1   0   1   0   1
112           1  100   3   1   1   0   1   0   1
122  124       1  100   3   1   1   0   1   0   1
132           1  100   3   1   1   0   1   0   1
142  144       1  100   3   1   1   0   1   0   1
152           1  100   3   1   1   0   1   0   1
162  164       1  100   3   1   1   0   1   0   1
172           1  100   3   1   1   0   1   0   1
```

```
182  184      1  100   3   1   1   0   1   0   1
192          1  100   3   1   1   0   1   0   1
202  204      1  100   3   1   1   0   1   0   1
212          1  100   3   1   1   0   1   0   1
222  224      1  100   3   1   1   0   1   0   1
232          1  100   3   1   1   0   1   0   1
242  244      1  100   3   1   1   0   1   0   1
252          1  100   3   1   1   0   1   0   1
262  264      1  100   3   1   1   0   1   0   1
272          1  100   3   1   1   0   1   0   1
282  284      1  100   3   1   1   0   1   0   1
292          1  100   3   1   1   0   1   0   1
302  304      1  100   3   1   1   0   1   0   1
312          1  100   3   1   1   0   1   0   1
322  324      1  100   3   1   1   0   1   0   1
332          1  100   3   1   1   0   1   0   1
342  344      1  100   3   1   1   0   1   0   1
352          1  100   3   1   1   0   1   0   1
362  364      1  100   3   1   1   0   1   0   1
372          1  100   3   1   1   0   1   0   1
382  384      1  100   3   1   1   0   1   0   1
392          1  100   3   1   1   0   1   0   1
402  404      1  100   3   1   1   0   1   0   1
412          1  100   3   1   1   0   1   0   1
422  424      1  100   3   1   1   0   1   0   1
432          1  100   3   1   1   0   1   0   1
442  444      1  100   3   1   1   0   1   0   1
452          1  100   3   1   1   0   1   0   1
462  464      1  100   3   1   1   0   1   0   1
472          1  100   3   1   1   0   1   0   1
482  484      1  100   3   1   1   0   1   0   1
492          1  100   3   1   1   0   1   0   1
502  504      1  100   3   1   1   0   1   0   1
512          1  100   3   1   1   0   1   0   1
522  524      1  100   3   1   1   0   1   0   1
532          1  100   3   1   1   0   1   0   1
542  544      1  100   3   1   1   0   1   0   1
552          1  100   3   1   1   0   1   0   1
562  564      1  100   3   1   1   0   1   0   1
572          1  100   3   1   1   0   1   0   1
582  584      1  100   3   1   1   0   1   0   1
592          1  100   3   1   1   0   1   0   1
602  604      1  100   3   1   1   0   1   0   1
612          1  100   3   1   1   0   1   0   1
622  624      1  100   3   1   1   0   1   0   1
632          1  100   3   1   1   0   1   0   1
642  644      1  100   3   1   1   0   1   0   1
652          1  100   3   1   1   0   1   0   1
662  664      1  100   3   1   1   0   1   0   1
672          1  100   3   1   1   0   1   0   1
END NIT-FLAGS
```

*** the N atmospheric deposition function is used for
*** atmospheric deposition of NO3 and NH3 (both dry and wet)
*** it is also used for adding manure to pasture (dry dep only)
*** NO3, NH3, and ORG-N values are entered as separate timeseries

```
*** the atmospheric deposition and manure timeseries should be summed by HSPF
 NIT-AD-FLAGS
          Atmospheric Deposition Flags ***
            NO3          NH3          ORGN    ***
  <PLS >   sur   upp    sur   upp    sur   upp ***
  # -  #   F  C   F  C    F  C   F  C    F  C   F  C ***
  22  24  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
  32      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
  42  44  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
  52      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
  62  64  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
  72      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
  82  84  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
  92      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 102 104  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 112      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 122 124  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 132      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 142 144  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 152      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 162 164  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 172      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 182 184  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 192      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 202 204  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 212      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 222 224  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 232      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 242 244  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 252      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 262 264  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 272      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 282 284  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 292      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 302 304  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 312      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 322 324  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 332      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 342 344  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 352      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 362 364  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 372      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 382 384  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 392      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 402 404  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 412      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 422 424  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 432      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 442 444  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 452      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 462 464  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 472      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 482 484  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 492      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 502 504  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 512      -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
```

```
 522  524  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 532       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 542  544  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 552       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 562  564  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 572       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 582  584  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 592       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 602  604  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 612       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 622  624  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 632       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 642  644  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 652       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 662  664  -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 672       -1 -1  -1  0   -1 -1  -1  0   -1  0  -1  0
 END NIT-AD-FLAGS

*** First order rates for N reactions (NO3 immobilization, ammonification of org N,
*** NO3 denitrification, nitrification, and NH4 immobilization)
*** note: in the following 5 tables, there are blank fields for the parameters that are
*** relevant to the first-order ammonium asorption kinetics and the first-order
*** plant uptake kinetics, both of which are not being used
 NIT-FSTGEN
   <PLS > UPT-FRAC.<----  TEMP-PARMS(THETA)              >***
   #    #  NO3  NH4  PLN KDSA KADA KIMN  KAM KDNI  KNI KIMA***
  22   24   .8   .2              1.07 1.07 1.07 1.05 1.07
  32        .8   .2             1.07 1.07 1.07 1.05 1.07
  42   44   .8   .2              1.07 1.07 1.07 1.05 1.07
  52        .8   .2             1.07 1.07 1.07 1.05 1.07
  62   64   .8   .2              1.07 1.07 1.07 1.05 1.07
  72        .8   .2             1.07 1.07 1.07 1.05 1.07
  82   84   .8   .2              1.07 1.07 1.07 1.05 1.07
  92        .8   .2             1.07 1.07 1.07 1.05 1.07
 102  104   .8   .2              1.07 1.07 1.07 1.05 1.07
 112        .8   .2             1.07 1.07 1.07 1.05 1.07
 122  124   .8   .2              1.07 1.07 1.07 1.05 1.07
 132        .8   .2             1.07 1.07 1.07 1.05 1.07
 142  144   .8   .2              1.07 1.07 1.07 1.05 1.07
 152        .8   .2             1.07 1.07 1.07 1.05 1.07
 162  164   .8   .2              1.07 1.07 1.07 1.05 1.07
 172        .8   .2             1.07 1.07 1.07 1.05 1.07
 182  184   .8   .2              1.07 1.07 1.07 1.05 1.07
 192        .8   .2             1.07 1.07 1.07 1.05 1.07
 202  204   .8   .2              1.07 1.07 1.07 1.05 1.07
 212        .8   .2             1.07 1.07 1.07 1.05 1.07
 222  224   .8   .2              1.07 1.07 1.07 1.05 1.07
 232        .8   .2             1.07 1.07 1.07 1.05 1.07
 242  244   .8   .2              1.07 1.07 1.07 1.05 1.07
 252        .8   .2             1.07 1.07 1.07 1.05 1.07
 262  264   .8   .2              1.07 1.07 1.07 1.05 1.07
 272        .8   .2             1.07 1.07 1.07 1.05 1.07
 282  284   .8   .2              1.07 1.07 1.07 1.05 1.07
 292        .8   .2             1.07 1.07 1.07 1.05 1.07
 302  304   .8   .2              1.07 1.07 1.07 1.05 1.07
 312        .8   .2             1.07 1.07 1.07 1.05 1.07
```

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322  324   .8   .2            1.07 1.07 1.07 1.05 1.07
332        .8   .2           1.07 1.07 1.07 1.05 1.07
342  344   .8   .2            1.07 1.07 1.07 1.05 1.07
352        .8   .2           1.07 1.07 1.07 1.05 1.07
362  364   .8   .2            1.07 1.07 1.07 1.05 1.07
372        .8   .2           1.07 1.07 1.07 1.05 1.07
382  384   .8   .2            1.07 1.07 1.07 1.05 1.07
392        .8   .2           1.07 1.07 1.07 1.05 1.07
402  404   .8   .2            1.07 1.07 1.07 1.05 1.07
412        .8   .2           1.07 1.07 1.07 1.05 1.07
422  424   .8   .2            1.07 1.07 1.07 1.05 1.07
432        .8   .2           1.07 1.07 1.07 1.05 1.07
442  444   .8   .2            1.07 1.07 1.07 1.05 1.07
452        .8   .2           1.07 1.07 1.07 1.05 1.07
462  464   .8   .2            1.07 1.07 1.07 1.05 1.07
472        .8   .2           1.07 1.07 1.07 1.05 1.07
482  484   .8   .2            1.07 1.07 1.07 1.05 1.07
492        .8   .2           1.07 1.07 1.07 1.05 1.07
502  504   .8   .2            1.07 1.07 1.07 1.05 1.07
512        .8   .2           1.07 1.07 1.07 1.05 1.07
522  524   .8   .2            1.07 1.07 1.07 1.05 1.07
532        .8   .2           1.07 1.07 1.07 1.05 1.07
542  544   .8   .2            1.07 1.07 1.07 1.05 1.07
552        .8   .2           1.07 1.07 1.07 1.05 1.07
562  564   .8   .2            1.07 1.07 1.07 1.05 1.07
572        .8   .2           1.07 1.07 1.07 1.05 1.07
582  584   .8   .2            1.07 1.07 1.07 1.05 1.07
592        .8   .2           1.07 1.07 1.07 1.05 1.07
602  604   .8   .2            1.07 1.07 1.07 1.05 1.07
612        .8   .2           1.07 1.07 1.07 1.05 1.07
622  624   .8   .2            1.07 1.07 1.07 1.05 1.07
632        .8   .2           1.07 1.07 1.07 1.05 1.07
642  644   .8   .2            1.07 1.07 1.07 1.05 1.07
652        .8   .2           1.07 1.07 1.07 1.05 1.07
662  664   .8   .2            1.07 1.07 1.07 1.05 1.07
672        .8   .2           1.07 1.07 1.07 1.05 1.07
END NIT-FSTGEN

NIT-FSTPM
  <PLS >*** Nitrogen first-order rates for surface layer (/DAY)
  #    #***  KDSAM     KADAM     KIMNI      KAM      KDNI      KNI     KIMAM
 22   24                    2.0     .0001       .0       6.       5.0
 32                        2.0     .0001       .0       6.       5.0
 42   44                    2.0     .0001       .0       6.       5.0
 52                        2.0     .0001       .0       6.       5.0
 62   64                    2.0     .0001       .0       6.       5.0
 72                        2.0     .0001       .0       6.       5.0
 82   84                    2.0     .0001       .0       6.       5.0
 92                        2.0     .0001       .0       6.       5.0
102  104                    2.0     .0001       .0       6.       5.0
112                        2.0     .0001       .0       6.       5.0
122  124                    1.8     .0001       .0       5.       5.0
132                        1.8     .0001       .0       5.       5.0
142  144                    2.0     .0001       .0       6.       5.0
152                        2.0     .0001       .0       6.       5.0
162  164                    2.0     .0001       .0       6.       5.0
```

```
172                     2.0    .0001      .0      6.      5.0
182  184                  2.0    .0001      .0      6.      5.0
192                     2.0    .0001      .0      6.      5.0
202  204                  2.0    .0001      .0      6.      5.0
212                     2.0    .0001      .0      6.      5.0
222  224                  2.0    .0001      .0      6.      5.0
232                     2.0    .0001      .0      6.      5.0
242  244                  2.0    .0001      .0      6.      5.0
252                     2.0    .0001      .0      6.      5.0
262  264                  2.0    .0001      .0      6.      5.0
272                     2.0    .0001      .0      6.      5.0
282  284                  2.0    .0001      .0      6.      5.0
292                     2.0    .0001      .0      6.      5.0
302  304                  2.0    .0001      .0      6.      5.0
312                     2.0    .0001      .0      6.      5.0
322  324                  2.0    .0001      .0      6.      5.0
332                     2.0    .0001      .0      6.      5.0
342  344                  2.0    .0001      .0      6.      5.0
352                     2.0    .0001      .0      6.      5.0
362  364                  2.0    .0001      .0      6.      5.0
372                     2.0    .0001      .0      6.      5.0
382  384                  2.0    .0001      .0      6.      5.0
392                     2.0    .0001      .0      6.      5.0
402  404                  2.0    .0001      .0      6.      5.0
412                     2.0    .0001      .0      6.      5.0
422  424                  2.0    .0001      .0      6.      5.0
432                     2.0    .0001      .0      6.      5.0
442  444                  2.0    .0001      .0      6.      5.0
452                     2.0    .0001      .0      6.      5.0
462  464                  2.0    .0001      .0      6.      5.0
472                     2.0    .0001      .0      6.      5.0
482  484                  2.0    .0001      .0      6.      5.0
492                     2.0    .0001      .0      6.      5.0
502  504                  2.0    .0001      .0      6.      5.0
512                     2.0    .0001      .0      6.      5.0
522  524                  2.0    .0001      .0      6.      5.0
532                     2.0    .0001      .0      6.      5.0
542  544                  2.0    .0001      .0      6.      5.0
552                     2.0    .0001      .0      6.      5.0
562  564                  2.0    .0001      .0      6.      5.0
572                     2.0    .0001      .0      6.      5.0
582  584                  2.0    .0001      .0      6.      5.0
592                     2.0    .0001      .0      6.      5.0
602  604                  2.0    .0001      .0      6.      5.0
612                     2.0    .0001      .0      6.      5.0
622  624                  2.0    .0001      .0      6.      5.0
632                     2.0    .0001      .0      6.      5.0
642  644                  2.0    .0001      .0      6.      5.0
652                     2.0    .0001      .0      6.      5.0
662  664                  2.0    .0001      .0      6.      5.0
672                     2.0    .0001      .0      6.      5.0
END NIT-FSTPM

NIT-FSTPM
 <PLS >*** Nitrogen first-order rates for upper layer (/DAY)
 #   #***  KDSAM     KADAM     KIMNI      KAM      KDNI      KNI     KIMAM
```

22	24	0.060	.0004	.0	6.	2.0
32		0.060	.0008	.0	6.	2.0
42	44	0.060	.0004	.0	6.	2.0
52		0.060	.0008	.0	6.	2.0
62	64	0.060	.0004	.0	6.	2.0
72		0.060	.0008	.0	6.	2.0
82	84	0.060	.0004	.0	6.	2.0
92		0.060	.0008	.0	6.	2.0
102	104	0.060	.0004	.0	6.	2.0
112		0.060	.0008	.0	6.	2.0
122	124	0.060	.0004	.0	6.	2.0
132		0.060	.0008	.0	6.	2.0
142	144	0.060	.0004	.0	6.	2.0
152		0.060	.0008	.0	6.	2.0
162	164	0.060	.0004	.0	6.	2.0
172		0.060	.0008	.0	6.	2.0
182	184	0.060	.0004	.0	6.	2.0
192		0.060	.0008	.0	6.	2.0
202	204	0.060	.0004	.0	6.	2.0
212		0.060	.0008	.0	6.	2.0
222	224	0.060	.0004	.0	6.	2.0
232		0.060	.0008	.0	6.	2.0
242	244	0.060	.0004	.0	6.	2.0
252		0.060	.0008	.0	6.	2.0
262	264	0.060	.0004	.0	6.	2.0
272		0.060	.0008	.0	6.	2.0
282	284	0.060	.0004	.0	6.	2.0
292		0.060	.0008	.0	6.	2.0
302	304	0.060	.0004	.0	6.	2.0
312		0.060	.0008	.0	6.	2.0
322	324	0.060	.0004	.0	6.	2.0
332		0.060	.0008	.0	6.	2.0
342	344	0.060	.0004	.0	6.	2.0
352		0.060	.0008	.0	6.	2.0
362	364	0.060	.0004	.0	6.	2.0
372		0.060	.0008	.0	6.	2.0
382	384	0.030	.0004	.0	6.	2.0
392		0.030	.0008	.0	6.	2.0
402	404	0.060	.0004	.0	6.	2.0
412		0.060	.0008	.0	6.	2.0
422	424	0.060	.0004	.0	6.	2.0
432		0.060	.0008	.0	6.	2.0
442	444	0.030	.0004	.0	6.	2.0
452		0.030	.0008	.0	6.	2.0
462	464	0.030	.0004	.0	6.	2.0
472		0.030	.0008	.0	6.	2.0
482	484	0.030	.0004	.0	6.	2.0
492		0.030	.0008	.0	6.	2.0
502	504	0.060	.0004	.0	6.	2.0
512		0.060	.0008	.0	6.	2.0
522	524	0.030	.0004	.0	6.	2.0
532		0.030	.0008	.0	6.	2.0
542	544	0.060	.0004	.0	6.	2.0
552		0.060	.0008	.0	6.	2.0
562	564	0.030	.0004	.0	6.	2.0
572		0.030	.0008	.0	6.	2.0

```
582  584                 0.060    .0004      .0      6.      2.0
592                     0.060    .0008      .0      6.      2.0
602  604                 0.030    .0004      .0      6.      2.0
612                     0.030    .0008      .0      6.      2.0
622  624                 0.060    .0004      .0      6.      2.0
632                     0.060    .0008      .0      6.      2.0
642  644                 0.060    .0004      .0      6.      2.0
652                     0.060    .0008      .0      6.      2.0
662  664                 0.060    .0004      .0      6.      2.0
672                     0.060    .0008      .0      6.      2.0
END NIT-FSTPM

NIT-FSTPM
  <PLS >*** Nitrogen first-order rates for lower layer (/DAY)
  #   #***  KDSAM    KADAM    KIMNI     KAM     KDNI     KNI     KIMAM
 22   24                 0.12    .0006      .0      4.      .2
 32                     0.12    .0004      .0      4.      .2
 42   44                 0.12    .0006      .0      4.      .2
 52                     0.12    .0004      .0      4.      .2
 62   64                 0.12    .0006      .0      4.      .2
 72                     0.12    .0004      .0      4.      .2
 82   84                 0.12    .0006      .0      4.      .2
 92                     0.12    .0004      .0      4.      .2
102  104                 0.12    .0006      .0      4.      .2
112                     0.12    .0004      .0      4.      .2
122  124                 0.12    .0006      .0      4.      .2
132                     0.12    .0004      .0      4.      .2
142  144                 0.12    .0006      .0      4.      .2
152                     0.12    .0004      .0      4.      .2
162  164                 0.12    .0006      .0      4.      .2
172                     0.12    .0004      .0      4.      .2
182  184                 0.12    .0006      .0      4.      .2
192                     0.12    .0004      .0      4.      .2
202  204                 0.12    .0006      .0      4.      .2
212                     0.12    .0004      .0      4.      .2
222  224                 0.12    .0006      .0      4.      .2
232                     0.12    .0004      .0      4.      .2
242  244                 0.12    .0006      .0      4.      .2
252                     0.12    .0004      .0      4.      .2
262  264                 0.12    .0006      .0      4.      .2
272                     0.12    .0004      .0      4.      .2
282  284                 0.12    .0006      .0      4.      .2
292                     0.12    .0004      .0      4.      .2
302  304                 0.12    .0006      .0      4.      .2
312                     0.12    .0004      .0      4.      .2
322  324                 0.12    .0006      .0      4.      .2
332                     0.12    .0004      .0      4.      .2
342  344                 0.12    .0006      .0      4.      .2
352                     0.12    .0004      .0      4.      .2
362  364                 0.12    .0006      .0      4.      .2
372                     0.12    .0004      .0      4.      .2
382  384                 0.09    .0006      .0      4.      .2
392                     0.09    .0004      .0      4.      .2
402  404                 0.12    .0006      .0      4.      .2
412                     0.12    .0004      .0      4.      .2
422  424                 0.12    .0006      .0      4.      .2
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432                     0.12    .0004     .0     4.     .2
442  444                 0.09    .0006     .0     4.     .2
452                     0.09    .0004     .0     4.     .2
462  464                 0.09    .0006     .0     4.     .2
472                     0.09    .0004     .0     4.     .2
482  484                 0.09    .0006     .0     4.     .2
492                     0.09    .0004     .0     4.     .2
502  504                 0.12    .0006     .0     4.     .2
512                     0.12    .0004     .0     4.     .2
522  524                 0.09    .0006     .0     4.     .2
532                     0.09    .0004     .0     4.     .2
542  544                 0.12    .0006     .0     4.     .2
552                     0.12    .0004     .0     4.     .2
562  564                 0.09    .0006     .0     4.     .2
572                     0.09    .0004     .0     4.     .2
582  584                 0.12    .0006     .0     4.     .2
592                     0.12    .0004     .0     4.     .2
602  604                 0.09    .0006     .0     4.     .2
612                     0.09    .0004     .0     4.     .2
622  624                 0.12    .0006     .0     4.     .2
632                     0.12    .0004     .0     4.     .2
642  644                 0.12    .0006     .0     4.     .2
652                     0.12    .0004     .0     4.     .2
662  664                 0.12    .0006     .0     4.     .2
672                     0.12    .0004     .0     4.     .2
END NIT-FSTPM

NIT-FSTPM
 <PLS >*** Nitrogen first-order rates for groundwater layer (/DAY)
 #   #***  KDSAM    KADAM    KIMNI     KAM     KDNI     KNI     KIMAM
 22  24                .0   .00000     .0     0.7     .0
 32                   .0   .00000     .0     0.7     .0
 42  44                .0   .00000     .0     0.7     .0
 52                   .0   .00000     .0     0.7     .0
 62  64                .0   .00000     .0     0.7     .0
 72                   .0   .00000     .0     0.7     .0
 82  84                .0   .00000     .0     0.7     .0
 92                   .0   .00000     .0     0.7     .0
102  104                .0   .00000     .0     0.7     .0
112                   .0   .00000     .0     0.7     .0
122  124                .0   .00000     .0     0.7     .0
132                   .0   .00000     .0     0.7     .0
142  144                .0   .00000     .0     0.7     .0
152                   .0   .00000     .0     0.7     .0
162  164                .0   .00000     .0     0.7     .0
172                   .0   .00000     .0     0.7     .0
182  184                .0   .00000     .0     0.7     .0
192                   .0   .00000     .0     0.7     .0
202  204                .0   .00000     .0     0.7     .0
212                   .0   .00000     .0     0.7     .0
222  224                .0   .00000     .0     0.7     .0
232                   .0   .00000     .0     0.7     .0
242  244                .0   .00000     .0     0.7     .0
252                   .0   .00000     .0     0.7     .0
262  264                .0   .00000     .0     0.7     .0
272                   .0   .00000     .0     0.7     .0
```

```
 282  284                    .0   .00000      .0     0.7      .0
 292                        .0   .00000      .0     0.7      .0
 302  304                    .0   .00000      .0     0.7      .0
 312                        .0   .00000      .0     0.7      .0
 322  324                    .0   .00000      .0     0.7      .0
 332                        .0   .00000      .0     0.7      .0
 342  344                    .0   .00000      .0     0.7      .0
 352                        .0   .00000      .0     0.7      .0
 362  364                    .0   .00000      .0     0.7      .0
 372                        .0   .00000      .0     0.7      .0
 382  384                    .0   .00000      .0     0.7      .0
 392                        .0   .00000      .0     0.7      .0
 402  404                    .0   .00000      .0     0.7      .0
 412                        .0   .00000      .0     0.7      .0
 422  424                    .0   .00000      .0     0.7      .0
 432                        .0   .00000      .0     0.7      .0
 442  444                    .0   .00000      .0     0.7      .0
 452                        .0   .00000      .0     0.7      .0
 462  464                    .0   .00000      .0     0.7      .0
 472                        .0   .00000      .0     0.7      .0
 482  484                    .0   .00000      .0     0.7      .0
 492                        .0   .00000      .0     0.7      .0
 502  504                    .0   .00000      .0     0.7      .0
 512                        .0   .00000      .0     0.7      .0
 522  524                    .0   .00000      .0     0.7      .0
 532                        .0   .00000      .0     0.7      .0
 542  544                    .0   .00000      .0     0.7      .0
 552                        .0   .00000      .0     0.7      .0
 562  564                    .0   .00000      .0     0.7      .0
 572                        .0   .00000      .0     0.7      .0
 582  584                    .0   .00000      .0     0.7      .0
 592                        .0   .00000      .0     0.7      .0
 602  604                    .0   .00000      .0     0.7      .0
 612                        .0   .00000      .0     0.7      .0
 622  624                    .0   .00000      .0     0.7      .0
 632                        .0   .00000      .0     0.7      .0
 642  644                    .0   .00000      .0     0.7      .0
 652                        .0   .00000      .0     0.7      .0
 662  664                    .0   .00000      .0     0.7      .0
 672                        .0   .00000      .0     0.7      .0
 END NIT-FSTPM

*** Single-valued Freundlich adsorption of ammonium
 NIT-CMAX
  <PLS >     Maximum solubility of ammonium      ***
  #   #    CMAX                                  ***
          (PPM)                                  ***
  22   24     5000.
  32          5000.
  42   44     5000.
  52          5000.
  62   64     5000.
  72          5000.
  82   84     5000.
  92          5000.
 102  104     5000.
```

112		5000.
122	124	5000.
132		5000.
142	144	5000.
152		5000.
162	164	5000.
172		5000.
182	184	5000.
192		5000.
202	204	5000.
212		5000.
222	224	5000.
232		5000.
242	244	5000.
252		5000.
262	264	5000.
272		5000.
282	284	5000.
292		5000.
302	304	5000.
312		5000.
322	324	5000.
332		5000.
342	344	5000.
352		5000.
362	364	5000.
372		5000.
382	384	5000.
392		5000.
402	404	5000.
412		5000.
422	424	5000.
432		5000.
442	444	5000.
452		5000.
462	464	5000.
472		5000.
482	484	5000.
492		5000.
502	504	5000.
512		5000.
522	524	5000.
532		5000.
542	544	5000.
552		5000.
562	564	5000.
572		5000.
582	584	5000.
592		5000.
602	604	5000.
612		5000.
622	624	5000.
632		5000.
642	644	5000.
652		5000.
662	664	5000.

```
 672          5000.
 END NIT-CMAX

 NIT-SVALPM
***        Freundlich parameters for surface layer
*** <PLS >      XFIX        K1        N1
*** #    #     (PPM)
  22   24       10.       1.0       1.50
  32            10.       1.0       1.50
  42   44       10.       1.0       1.50
  52            10.       1.0       1.50
  62   64       10.       1.0       1.50
  72            10.       1.0       1.50
  82   84       10.       1.0       1.50
  92            10.       1.0       1.50
 102  104       10.       1.0       1.50
 112            10.       1.0       1.50
 122  124       10.       1.0       1.50
 132            10.       1.0       1.50
 142  144       10.       1.0       1.50
 152            10.       1.0       1.50
 162  164       10.       1.0       1.50
 172            10.       1.0       1.50
 182  184       10.       1.0       1.50
 192            10.       1.0       1.50
 202  204       10.       1.0       1.50
 212            10.       1.0       1.50
 222  224       10.       1.0       1.50
 232            10.       1.0       1.50
 242  244       10.       1.0       1.50
 252            10.       1.0       1.50
 262  264       10.       1.0       1.50
 272            10.       1.0       1.50
 282  284       10.       1.0       1.50
 292            10.       1.0       1.50
 302  304       10.       1.0       1.50
 312            10.       1.0       1.50
 322  324       10.       1.0       1.50
 332            10.       1.0       1.50
 342  344       10.       1.0       1.50
 352            10.       1.0       1.50
 362  364       10.       1.0       1.50
 372            10.       1.0       1.50
 382  384       10.       1.0       1.50
 392            10.       1.0       1.50
 402  404       10.       1.0       1.50
 412            10.       1.0       1.50
 422  424       10.       1.0       1.50
 432            10.       1.0       1.50
 442  444       10.       1.0       1.50
 452            10.       1.0       1.50
 462  464       10.       1.0       1.50
 472            10.       1.0       1.50
 482  484       10.       1.0       1.50
 492            10.       1.0       1.50
 502  504       10.       1.0       1.50
```

```
 512          10.      1.0      1.50
 522  524      10.      1.0      1.50
 532          10.      1.0      1.50
 542  544      10.      1.0      1.50
 552          10.      1.0      1.50
 562  564      10.      1.0      1.50
 572          10.      1.0      1.50
 582  584      10.      1.0      1.50
 592          10.      1.0      1.50
 602  604      10.      1.0      1.50
 612          10.      1.0      1.50
 622  624      10.      1.0      1.50
 632          10.      1.0      1.50
 642  644      10.      1.0      1.50
 652          10.      1.0      1.50
 662  664      10.      1.0      1.50
 672          10.      1.0      1.50
 END NIT-SVALPM

 NIT-SVALPM
***        Freundlich parameters for upper layer
*** <PLS >      XFIX        K1        N1
*** #    #     (PPM)
  22   24      10.      1.0      1.20
  32          10.      1.0      1.20
  42   44      10.      1.0      1.20
  52          10.      1.0      1.20
  62   64      10.      1.0      1.20
  72          10.      1.0      1.20
  82   84      10.      1.0      1.20
  92          10.      1.0      1.20
 102  104      10.      1.0      1.20
 112          10.      1.0      1.20
 122  124      10.      1.0      1.20
 132          10.      1.0      1.20
 142  144      10.      1.0      1.20
 152          10.      1.0      1.20
 162  164      10.      1.0      1.20
 172          10.      1.0      1.20
 182  184      10.      1.0      1.20
 192          10.      1.0      1.20
 202  204      10.      1.0      1.20
 212          10.      1.0      1.20
 222  224      10.      1.0      1.20
 232          10.      1.0      1.20
 242  244      10.      1.0      1.20
 252          10.      1.0      1.20
 262  264      10.      1.0      1.20
 272          10.      1.0      1.20
 282  284      10.      1.0      1.20
 292          10.      1.0      1.20
 302  304      10.      1.0      1.20
 312          10.      1.0      1.20
 322  324      10.      1.0      1.20
 332          10.      1.0      1.20
 342  344      10.      1.0      1.20
```

```
 352          10.      1.0      1.20
 362  364      10.      1.0      1.20
 372          10.      1.0      1.20
 382  384      10.      1.0      1.20
 392          10.      1.0      1.20
 402  404      10.      1.0      1.20
 412          10.      1.0      1.20
 422  424      10.      1.0      1.20
 432          10.      1.0      1.20
 442  444      10.      1.0      1.20
 452          10.      1.0      1.20
 462  464      10.      1.0      1.20
 472          10.      1.0      1.20
 482  484      10.      1.0      1.20
 492          10.      1.0      1.20
 502  504      10.      1.0      1.20
 512          10.      1.0      1.20
 522  524      10.      1.0      1.20
 532          10.      1.0      1.20
 542  544      10.      1.0      1.20
 552          10.      1.0      1.20
 562  564      10.      1.0      1.20
 572          10.      1.0      1.20
 582  584      10.      1.0      1.20
 592          10.      1.0      1.20
 602  604      10.      1.0      1.20
 612          10.      1.0      1.20
 622  624      10.      1.0      1.20
 632          10.      1.0      1.20
 642  644      10.      1.0      1.20
 652          10.      1.0      1.20
 662  664      10.      1.0      1.20
 672          10.      1.0      1.20
 END NIT-SVALPM

 NIT-SVALPM
***        Freundlich parameters for lower layer
*** <PLS >      XFIX        K1        N1
*** #    #     (PPM)
  22   24       .7       0.5      1.20
  32           .7       0.5      1.20
  42   44       .7       0.5      1.20
  52           .7       0.5      1.20
  62   64       .7       0.5      1.20
  72           .7       0.5      1.20
  82   84       .7       0.5      1.20
  92           .7       0.5      1.20
 102  104       .7       0.5      1.20
 112           .7       0.5      1.20
 122  124       .7       0.5      1.20
 132           .7       0.5      1.20
 142  144       .7       0.5      1.20
 152           .7       0.5      1.20
 162  164       .7       0.5      1.20
 172           .7       0.5      1.20
 182  184       .7       0.5      1.20
```

```
192          .7      0.5     1.20
202  204      .7      0.5     1.20
212          .7      0.5     1.20
222  224      .7      0.5     1.20
232          .7      0.5     1.20
242  244      .7      0.5     1.20
252          .7      0.5     1.20
262  264      .7      0.5     1.20
272          .7      0.5     1.20
282  284      .7      0.5     1.20
292          .7      0.5     1.20
302  304      .7      0.5     1.20
312          .7      0.5     1.20
322  324      .7      0.5     1.20
332          .7      0.5     1.20
342  344      .7      0.5     1.20
352          .7      0.5     1.20
362  364      .7      0.5     1.20
372          .7      0.5     1.20
382  384      .7      0.5     1.20
392          .7      0.5     1.20
402  404      .7      0.5     1.20
412          .7      0.5     1.20
422  424      .7      0.5     1.20
432          .7      0.5     1.20
442  444      .7      0.5     1.20
452          .7      0.5     1.20
462  464      .7      0.5     1.20
472          .7      0.5     1.20
482  484      .7      0.5     1.20
492          .7      0.5     1.20
502  504      .7      0.5     1.20
512          .7      0.5     1.20
522  524      .7      0.5     1.20
532          .7      0.5     1.20
542  544      .7      0.5     1.20
552          .7      0.5     1.20
562  564      .7      0.5     1.20
572          .7      0.5     1.20
582  584      .7      0.5     1.20
592          .7      0.5     1.20
602  604      .7      0.5     1.20
612          .7      0.5     1.20
622  624      .7      0.5     1.20
632          .7      0.5     1.20
642  644      .7      0.5     1.20
652          .7      0.5     1.20
662  664      .7      0.5     1.20
672          .7      0.5     1.20
END NIT-SVALPM

NIT-SVALPM
***        Freundlich parameters for groundwater layer
*** <PLS >      XFIX        K1        N1
*** #    #     (PPM)
 22   24        .3       0.5      1.10
```

32		.3	0.5	1.10
42	44	.3	0.5	1.10
52		.3	0.5	1.10
62	64	.3	0.5	1.10
72		.3	0.5	1.10
82	84	.3	0.5	1.10
92		.3	0.5	1.10
102	104	.3	0.5	1.10
112		.3	0.5	1.10
122	124	.3	0.5	1.10
132		.3	0.5	1.10
142	144	.3	0.5	1.10
152		.3	0.5	1.10
162	164	.3	0.5	1.10
172		.3	0.5	1.10
182	184	.3	0.5	1.10
192		.3	0.5	1.10
202	204	.3	0.5	1.10
212		.3	0.5	1.10
222	224	.3	0.5	1.10
232		.3	0.5	1.10
242	244	.3	0.5	1.10
252		.3	0.5	1.10
262	264	.3	0.5	1.10
272		.3	0.5	1.10
282	284	.3	0.5	1.10
292		.3	0.5	1.10
302	304	.3	0.5	1.10
312		.3	0.5	1.10
322	324	.3	0.5	1.10
332		.3	0.5	1.10
342	344	.3	0.5	1.10
352		.3	0.5	1.10
362	364	.3	0.5	1.10
372		.3	0.5	1.10
382	384	.3	0.5	1.10
392		.3	0.5	1.10
402	404	.3	0.5	1.10
412		.3	0.5	1.10
422	424	.3	0.5	1.10
432		.3	0.5	1.10
442	444	.3	0.5	1.10
452		.3	0.5	1.10
462	464	.3	0.5	1.10
472		.3	0.5	1.10
482	484	.3	0.5	1.10
492		.3	0.5	1.10
502	504	.3	0.5	1.10
512		.3	0.5	1.10
522	524	.3	0.5	1.10
532		.3	0.5	1.10
542	544	.3	0.5	1.10
552		.3	0.5	1.10
562	564	.3	0.5	1.10
572		.3	0.5	1.10
582	584	.3	0.5	1.10

```
 592          .3      0.5     1.10
 602  604       .3      0.5     1.10
 612          .3      0.5     1.10
 622  624       .3      0.5     1.10
 632          .3      0.5     1.10
 642  644       .3      0.5     1.10
 652          .3      0.5     1.10
 662  664       .3      0.5     1.10
 672          .3      0.5     1.10
 END NIT-SVALPM

*** Ammonia volatilization
 NIT-AMVOLAT
     AMMONIA VOLATILIZATION FIRST-ORDER RATES ***
  <PLS >     SKVOL     UKVOL     LKVOL     AKVOL     THVOL    TRFVOL ***
  #   #    (/DAY)    (/DAY)    (/DAY)    (/DAY)       (-)   (DEG C) ***
 22  24     15.00      0.05       0.       0.     1.045       20.
 32         15.00      0.05       0.       0.     1.045       20.
 42  44     15.00      0.05       0.       0.     1.045       20.
 52         15.00      0.05       0.       0.     1.045       20.
 62  64     15.00      0.05       0.       0.     1.045       20.
 72         15.00      0.05       0.       0.     1.045       20.
 82  84     15.00      0.05       0.       0.     1.045       20.
 92         15.00      0.05       0.       0.     1.045       20.
102  104    15.00      0.05       0.       0.     1.045       20.
112         15.00      0.05       0.       0.     1.045       20.
122  124    15.00      0.05       0.       0.     1.045       20.
132         15.00      0.05       0.       0.     1.045       20.
142  144    15.00      0.05       0.       0.     1.045       20.
152         15.00      0.05       0.       0.     1.045       20.
162  164    15.00      0.05       0.       0.     1.045       20.
172         15.00      0.05       0.       0.     1.045       20.
182  184    15.00      0.05       0.       0.     1.045       20.
192         15.00      0.05       0.       0.     1.045       20.
202  204    15.00      0.05       0.       0.     1.045       20.
212         15.00      0.05       0.       0.     1.045       20.
222  224    15.00      0.05       0.       0.     1.045       20.
232         15.00      0.05       0.       0.     1.045       20.
242  244    15.00      0.05       0.       0.     1.045       20.
252         15.00      0.05       0.       0.     1.045       20.
262  264    15.00      0.05       0.       0.     1.045       20.
272         15.00      0.05       0.       0.     1.045       20.
282  284    15.00      0.05       0.       0.     1.045       20.
292         15.00      0.05       0.       0.     1.045       20.
302  304    15.00      0.05       0.       0.     1.045       20.
312         15.00      0.05       0.       0.     1.045       20.
322  324    15.00      0.05       0.       0.     1.045       20.
332         15.00      0.05       0.       0.     1.045       20.
342  344    15.00      0.05       0.       0.     1.045       20.
352         15.00      0.05       0.       0.     1.045       20.
362  364    15.00      0.05       0.       0.     1.045       20.
372         15.00      0.05       0.       0.     1.045       20.
382  384    15.00      0.05       0.       0.     1.045       20.
392         15.00      0.05       0.       0.     1.045       20.
402  404    15.00      0.05       0.       0.     1.045       20.
412         15.00      0.05       0.       0.     1.045       20.
```

```
422  424    15.00    0.05    0.    0.    1.045    20.
432         15.00    0.05    0.    0.    1.045    20.
442  444    15.00    0.05    0.    0.    1.045    20.
452         15.00    0.05    0.    0.    1.045    20.
462  464    15.00    0.05    0.    0.    1.045    20.
472         15.00    0.05    0.    0.    1.045    20.
482  484    15.00    0.05    0.    0.    1.045    20.
492         15.00    0.05    0.    0.    1.045    20.
502  504    15.00    0.05    0.    0.    1.045    20.
512         15.00    0.05    0.    0.    1.045    20.
522  524    15.00    0.05    0.    0.    1.045    20.
532         15.00    0.05    0.    0.    1.045    20.
542  544    15.00    0.05    0.    0.    1.045    20.
552         15.00    0.05    0.    0.    1.045    20.
562  564    15.00    0.05    0.    0.    1.045    20.
572         15.00    0.05    0.    0.    1.045    20.
582  584    15.00    0.05    0.    0.    1.045    20.
592         15.00    0.05    0.    0.    1.045    20.
602  604    15.00    0.05    0.    0.    1.045    20.
612         15.00    0.05    0.    0.    1.045    20.
622  624    15.00    0.05    0.    0.    1.045    20.
632         15.00    0.05    0.    0.    1.045    20.
642  644    15.00    0.05    0.    0.    1.045    20.
652         15.00    0.05    0.    0.    1.045    20.
662  664    15.00    0.05    0.    0.    1.045    20.
672         15.00    0.05    0.    0.    1.045    20.
END NIT-AMVOLAT

NIT-YIELD
 <PLS >    NUPTGT    NMXRAT ***
 # -  #   (LB/AC)          ***
 22   24    85.00      2.0
 32         85.00      2.0
 42   44    85.00      2.0
 52         85.00      2.0
 62   64    85.00      2.0
 72         85.00      2.0
 82   84    85.00      2.0
 92         85.00      2.0
102  104    85.00      2.0
112         85.00      2.0
122  124    85.00      2.0
132         85.00      2.0
142  144    85.00      2.0
152         85.00      2.0
162  164    85.00      2.0
172         85.00      2.0
182  184    85.00      2.0
192         85.00      2.0
202  204    85.00      2.0
212         85.00      2.0
222  224    85.00      2.0
232         85.00      2.0
242  244    85.00      2.0
252         85.00      2.0
262  264    85.00      2.0
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272        85.00      2.0
282  284    85.00      2.0
292        85.00      2.0
302  304    85.00      2.0
312        85.00      2.0
322  324    85.00      2.0
332        85.00      2.0
342  344    85.00      2.0
352        85.00      2.0
362  364    85.00      2.0
372        85.00      2.0
382  384    85.00      2.0
392        85.00      2.0
402  404    85.00      2.0
412        85.00      2.0
422  424    85.00      2.0
432        85.00      2.0
442  444    85.00      2.0
452        85.00      2.0
462  464    85.00      2.0
472        85.00      2.0
482  484    85.00      2.0
492        85.00      2.0
502  504    85.00      2.0
512        85.00      2.0
522  524    85.00      2.0
532        85.00      2.0
542  544    85.00      2.0
552        85.00      2.0
562  564    85.00      2.0
572        85.00      2.0
582  584    85.00      2.0
592        85.00      2.0
602  604    85.00      2.0
612        85.00      2.0
622  624    85.00      2.0
632        85.00      2.0
642  644    85.00      2.0
652        85.00      2.0
662  664    85.00      2.0
672        85.00      2.0
END NIT-YIELD

MON-NUPT-FR1
 <PLS >  Monthly fractions for plant uptake target                ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
 22   24  .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
 32       .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
 42   44  .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
 52       .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
 62   64  .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
 72       .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
 82   84  .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
 92       .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
102  104  .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
112       .00  .01  .03 .125 .165 .185  .18  .16 .105  .03 .010 .000
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122	124	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
132		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
142	144	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
152		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
162	164	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
172		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
182	184	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
192		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
202	204	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
212		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
222	224	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
232		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
242	244	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
252		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
262	264	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
272		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
282	284	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
292		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
302	304	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
312		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
322	324	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
332		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
342	344	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
352		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
362	364	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
372		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
382	384	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
392		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
402	404	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
412		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
422	424	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
432		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
442	444	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
452		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
462	464	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
472		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
482	484	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
492		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
502	504	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
512		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
522	524	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
532		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
542	544	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
552		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
562	564	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
572		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
582	584	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
592		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
602	604	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
612		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
622	624	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
632		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
642	644	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
652		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
662	664	.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000
672		.00	.01	.03	.125	.165	.185	.18	.16	.105	.03	.010	.000

END MON-NUPT-FR1

MON-NUPT-FR2
<PLS > Monthly fractions for plant uptake target from surface ***

# -	#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC ***
22	24	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
32		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
42	44	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
52		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
62	64	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
72		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
82	84	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
92		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
102	104	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
112		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
122	124	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
132		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
142	144	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
152		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
162	164	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
172		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
182	184	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
192		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
202	204	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
212		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
222	224	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
232		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
242	244	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
252		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
262	264	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
272		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
282	284	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
292		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
302	304	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
312		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
322	324	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
332		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
342	344	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
352		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
362	364	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
372		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
382	384	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
392		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
402	404	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
412		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
422	424	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
432		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
442	444	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
452		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
462	464	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
472		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
482	484	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
492		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
502	504	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
512		.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
522	524	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01

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532      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
542  544 .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
552      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
562  564 .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
572      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
582  584 .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
592      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
602  604 .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
612      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
622  624 .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
632      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
642  644 .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
652      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
662  664 .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
672      .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
END MON-NUPT-FR2

MON-NUPT-FR2
 <PLS >  Monthly fractions for plant uptake target from upper       ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
 22   24 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
 32      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
 42   44 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
 52      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
 62   64 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
 72      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
 82   84 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
 92      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
102  104 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
112      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
122  124 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
132      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
142  144 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
152      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
162  164 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
172      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
182  184 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
192      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
202  204 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
212      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
222  224 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
232      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
242  244 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
252      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
262  264 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
272      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
282  284 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
292      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
302  304 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
312      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
322  324 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
332      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
342  344 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
352      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
362  364 .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
372      .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
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382  384  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
392       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
402  404  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
412       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
422  424  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
432       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
442  444  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
452       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
462  464  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
472       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
482  484  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
492       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
502  504  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
512       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
522  524  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
532       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
542  544  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
552       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
562  564  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
572       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
582  584  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
592       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
602  604  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
612       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
622  624  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
632       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
642  644  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
652       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
662  664  .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
672       .56  .56  .65  .65  .65  .65  .60  .55  .50  .45  .56  .56
END MON-NUPT-FR2

MON-NUPT-FR2
 <PLS >  Monthly fractions for plant uptake target from lower       ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
 22   24  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
 32       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
 42   44  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
 52       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
 62   64  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
 72       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
 82   84  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
 92       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
102  104  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
112       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
122  124  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
132       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
142  144  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
152       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
162  164  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
172       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
182  184  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
192       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
202  204  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
212       .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
222  224  .43  .43  .34  .34  .34  .34  .39  .44  .49  .54  .43  .43
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232      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
242 244 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
252      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
262 264 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
272      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
282 284 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
292      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
302 304 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
312      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
322 324 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
332      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
342 344 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
352      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
362 364 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
372      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
382 384 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
392      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
402 404 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
412      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
422 424 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
432      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
442 444 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
452      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
462 464 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
472      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
482 484 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
492      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
502 504 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
512      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
522 524 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
532      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
542 544 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
552      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
562 564 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
572      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
582 584 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
592      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
602 604 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
612      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
622 624 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
632      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
642 644 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
652      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
662 664 .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
672      .43 .43 .34 .34 .34 .34 .39 .44 .49 .54 .43 .43
END MON-NUPT-FR2

MON-NUPT-FR2
 <PLS >  Monthly fractions for plant uptake target from active gw   ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
 22  24  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 32      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 42  44  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 52      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 62  64  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 72      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
```

82	84	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
92		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
102	104	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
112		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
122	124	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
132		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
142	144	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
152		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
162	164	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
172		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
182	184	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
192		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
202	204	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
212		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
222	224	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
232		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
242	244	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
252		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
262	264	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
272		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
282	284	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
292		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
302	304	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
312		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
322	324	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
332		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
342	344	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
352		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
362	364	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
372		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
382	384	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
392		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
402	404	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
412		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
422	424	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
432		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
442	444	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
452		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
462	464	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
472		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
482	484	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
492		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
502	504	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
512		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
522	524	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
532		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
542	544	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
552		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
562	564	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
572		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
582	584	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
592		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
602	604	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
612		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
622	624	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
632		.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

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 642  644   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 652        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 662  664   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 672        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 END MON-NUPT-FR2

*** Detailed organic nitrogen partition coefficients and transformation rate
*** the defaults set all organic N to labile particulate (dissolved=0; refractory=0)
*** defaults:
 NIT-ORGPM
  <PLS >    Organic N transformation parameters for surface layer   ***
  x -  x     KLON      KRON      KONLR     THNLR  ***
  22   24    1.E20     1.E20      0.0      1.07
  32         1.E20     1.E20      0.0      1.07
  42   44    1.E20     1.E20      0.0      1.07
  52         1.E20     1.E20      0.0      1.07
  62   64    1.E20     1.E20      0.0      1.07
  72         1.E20     1.E20      0.0      1.07
  82   84    1.E20     1.E20      0.0      1.07
  92         1.E20     1.E20      0.0      1.07
 102  104    1.E20     1.E20      0.0      1.07
 112         1.E20     1.E20      0.0      1.07
 122  124    1.E20     1.E20      0.0      1.07
 132         1.E20     1.E20      0.0      1.07
 142  144    1.E20     1.E20      0.0      1.07
 152         1.E20     1.E20      0.0      1.07
 162  164    1.E20     1.E20      0.0      1.07
 172         1.E20     1.E20      0.0      1.07
 182  184    1.E20     1.E20      0.0      1.07
 192         1.E20     1.E20      0.0      1.07
 202  204    1.E20     1.E20      0.0      1.07
 212         1.E20     1.E20      0.0      1.07
 222  224    1.E20     1.E20      0.0      1.07
 232         1.E20     1.E20      0.0      1.07
 242  244    1.E20     1.E20      0.0      1.07
 252         1.E20     1.E20      0.0      1.07
 262  264    1.E20     1.E20      0.0      1.07
 272         1.E20     1.E20      0.0      1.07
 282  284    1.E20     1.E20      0.0      1.07
 292         1.E20     1.E20      0.0      1.07
 302  304    1.E20     1.E20      0.0      1.07
 312         1.E20     1.E20      0.0      1.07
 322  324    1.E20     1.E20      0.0      1.07
 332         1.E20     1.E20      0.0      1.07
 342  344    1.E20     1.E20      0.0      1.07
 352         1.E20     1.E20      0.0      1.07
 362  364    1.E20     1.E20      0.0      1.07
 372         1.E20     1.E20      0.0      1.07
 382  384    1.E20     1.E20      0.0      1.07
 392         1.E20     1.E20      0.0      1.07
 402  404    1.E20     1.E20      0.0      1.07
 412         1.E20     1.E20      0.0      1.07
 422  424    1.E20     1.E20      0.0      1.07
 432         1.E20     1.E20      0.0      1.07
 442  444    1.E20     1.E20      0.0      1.07
 452         1.E20     1.E20      0.0      1.07
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462  464    1.E20    1.E20     0.0     1.07
472        1.E20    1.E20     0.0     1.07
482  484    1.E20    1.E20     0.0     1.07
492        1.E20    1.E20     0.0     1.07
502  504    1.E20    1.E20     0.0     1.07
512        1.E20    1.E20     0.0     1.07
522  524    1.E20    1.E20     0.0     1.07
532        1.E20    1.E20     0.0     1.07
542  544    1.E20    1.E20     0.0     1.07
552        1.E20    1.E20     0.0     1.07
562  564    1.E20    1.E20     0.0     1.07
572        1.E20    1.E20     0.0     1.07
582  584    1.E20    1.E20     0.0     1.07
592        1.E20    1.E20     0.0     1.07
602  604    1.E20    1.E20     0.0     1.07
612        1.E20    1.E20     0.0     1.07
622  624    1.E20    1.E20     0.0     1.07
632        1.E20    1.E20     0.0     1.07
642  644    1.E20    1.E20     0.0     1.07
652        1.E20    1.E20     0.0     1.07
662  664    1.E20    1.E20     0.0     1.07
672        1.E20    1.E20     0.0     1.07
END NIT-ORGPM

NIT-ORGPM
 <PLS >    Organic N transformation parameters for upper layer     ***
 x -  x     KLON      KRON     KONLR     THNLR  ***
 22   24    1.E20     1.E20     0.0     1.07
 32        1.E20     1.E20     0.0     1.07
 42   44    1.E20     1.E20     0.0     1.07
 52        1.E20     1.E20     0.0     1.07
 62   64    1.E20     1.E20     0.0     1.07
 72        1.E20     1.E20     0.0     1.07
 82   84    1.E20     1.E20     0.0     1.07
 92        1.E20     1.E20     0.0     1.07
102  104    1.E20     1.E20     0.0     1.07
112        1.E20     1.E20     0.0     1.07
122  124    1.E20     1.E20     0.0     1.07
132        1.E20     1.E20     0.0     1.07
142  144    1.E20     1.E20     0.0     1.07
152        1.E20     1.E20     0.0     1.07
162  164    1.E20     1.E20     0.0     1.07
172        1.E20     1.E20     0.0     1.07
182  184    1.E20     1.E20     0.0     1.07
192        1.E20     1.E20     0.0     1.07
202  204    1.E20     1.E20     0.0     1.07
212        1.E20     1.E20     0.0     1.07
222  224    1.E20     1.E20     0.0     1.07
232        1.E20     1.E20     0.0     1.07
242  244    1.E20     1.E20     0.0     1.07
252        1.E20     1.E20     0.0     1.07
262  264    1.E20     1.E20     0.0     1.07
272        1.E20     1.E20     0.0     1.07
282  284    1.E20     1.E20     0.0     1.07
292        1.E20     1.E20     0.0     1.07
302  304    1.E20     1.E20     0.0     1.07
```

```
312        1.E20    1.E20      0.0     1.07
322  324    1.E20    1.E20      0.0     1.07
332        1.E20    1.E20      0.0     1.07
342  344    1.E20    1.E20      0.0     1.07
352        1.E20    1.E20      0.0     1.07
362  364    1.E20    1.E20      0.0     1.07
372        1.E20    1.E20      0.0     1.07
382  384    1.E20    1.E20      0.0     1.07
392        1.E20    1.E20      0.0     1.07
402  404    1.E20    1.E20      0.0     1.07
412        1.E20    1.E20      0.0     1.07
422  424    1.E20    1.E20      0.0     1.07
432        1.E20    1.E20      0.0     1.07
442  444    1.E20    1.E20      0.0     1.07
452        1.E20    1.E20      0.0     1.07
462  464    1.E20    1.E20      0.0     1.07
472        1.E20    1.E20      0.0     1.07
482  484    1.E20    1.E20      0.0     1.07
492        1.E20    1.E20      0.0     1.07
502  504    1.E20    1.E20      0.0     1.07
512        1.E20    1.E20      0.0     1.07
522  524    1.E20    1.E20      0.0     1.07
532        1.E20    1.E20      0.0     1.07
542  544    1.E20    1.E20      0.0     1.07
552        1.E20    1.E20      0.0     1.07
562  564    1.E20    1.E20      0.0     1.07
572        1.E20    1.E20      0.0     1.07
582  584    1.E20    1.E20      0.0     1.07
592        1.E20    1.E20      0.0     1.07
602  604    1.E20    1.E20      0.0     1.07
612        1.E20    1.E20      0.0     1.07
622  624    1.E20    1.E20      0.0     1.07
632        1.E20    1.E20      0.0     1.07
642  644    1.E20    1.E20      0.0     1.07
652        1.E20    1.E20      0.0     1.07
662  664    1.E20    1.E20      0.0     1.07
672        1.E20    1.E20      0.0     1.07
END NIT-ORGPM

NIT-ORGPM
 <PLS >    Organic N transformation parameters for lower layer      ***
 x -  x     KLON      KRON      KONLR     THNLR  ***
 22   24    1.E20     1.E20      0.0      1.07
 32        1.E20     1.E20      0.0      1.07
 42   44    1.E20     1.E20      0.0      1.07
 52        1.E20     1.E20      0.0      1.07
 62   64    1.E20     1.E20      0.0      1.07
 72        1.E20     1.E20      0.0      1.07
 82   84    1.E20     1.E20      0.0      1.07
 92        1.E20     1.E20      0.0      1.07
102  104    1.E20     1.E20      0.0      1.07
112        1.E20     1.E20      0.0      1.07
122  124    1.E20     1.E20      0.0      1.07
132        1.E20     1.E20      0.0      1.07
142  144    1.E20     1.E20      0.0      1.07
152        1.E20     1.E20      0.0      1.07
```

```
162  164    1.E20    1.E20     0.0     1.07
172         1.E20    1.E20     0.0     1.07
182  184    1.E20    1.E20     0.0     1.07
192         1.E20    1.E20     0.0     1.07
202  204    1.E20    1.E20     0.0     1.07
212         1.E20    1.E20     0.0     1.07
222  224    1.E20    1.E20     0.0     1.07
232         1.E20    1.E20     0.0     1.07
242  244    1.E20    1.E20     0.0     1.07
252         1.E20    1.E20     0.0     1.07
262  264    1.E20    1.E20     0.0     1.07
272         1.E20    1.E20     0.0     1.07
282  284    1.E20    1.E20     0.0     1.07
292         1.E20    1.E20     0.0     1.07
302  304    1.E20    1.E20     0.0     1.07
312         1.E20    1.E20     0.0     1.07
322  324    1.E20    1.E20     0.0     1.07
332         1.E20    1.E20     0.0     1.07
342  344    1.E20    1.E20     0.0     1.07
352         1.E20    1.E20     0.0     1.07
362  364    1.E20    1.E20     0.0     1.07
372         1.E20    1.E20     0.0     1.07
382  384    1.E20    1.E20     0.0     1.07
392         1.E20    1.E20     0.0     1.07
402  404    1.E20    1.E20     0.0     1.07
412         1.E20    1.E20     0.0     1.07
422  424    1.E20    1.E20     0.0     1.07
432         1.E20    1.E20     0.0     1.07
442  444    1.E20    1.E20     0.0     1.07
452         1.E20    1.E20     0.0     1.07
462  464    1.E20    1.E20     0.0     1.07
472         1.E20    1.E20     0.0     1.07
482  484    1.E20    1.E20     0.0     1.07
492         1.E20    1.E20     0.0     1.07
502  504    1.E20    1.E20     0.0     1.07
512         1.E20    1.E20     0.0     1.07
522  524    1.E20    1.E20     0.0     1.07
532         1.E20    1.E20     0.0     1.07
542  544    1.E20    1.E20     0.0     1.07
552         1.E20    1.E20     0.0     1.07
562  564    1.E20    1.E20     0.0     1.07
572         1.E20    1.E20     0.0     1.07
582  584    1.E20    1.E20     0.0     1.07
592         1.E20    1.E20     0.0     1.07
602  604    1.E20    1.E20     0.0     1.07
612         1.E20    1.E20     0.0     1.07
622  624    1.E20    1.E20     0.0     1.07
632         1.E20    1.E20     0.0     1.07
642  644    1.E20    1.E20     0.0     1.07
652         1.E20    1.E20     0.0     1.07
662  664    1.E20    1.E20     0.0     1.07
672         1.E20    1.E20     0.0     1.07
END NIT-ORGPM

NIT-ORGPM
 <PLS >    Organic N transformation parameters for active gw layer ***
```

x -	x	KLON	KRON	KONLR	THNLR	***
22	24	1.E20	1.E20	0.0	1.07	
32		1.E20	1.E20	0.0	1.07	
42	44	1.E20	1.E20	0.0	1.07	
52		1.E20	1.E20	0.0	1.07	
62	64	1.E20	1.E20	0.0	1.07	
72		1.E20	1.E20	0.0	1.07	
82	84	1.E20	1.E20	0.0	1.07	
92		1.E20	1.E20	0.0	1.07	
102	104	1.E20	1.E20	0.0	1.07	
112		1.E20	1.E20	0.0	1.07	
122	124	1.E20	1.E20	0.0	1.07	
132		1.E20	1.E20	0.0	1.07	
142	144	1.E20	1.E20	0.0	1.07	
152		1.E20	1.E20	0.0	1.07	
162	164	1.E20	1.E20	0.0	1.07	
172		1.E20	1.E20	0.0	1.07	
182	184	1.E20	1.E20	0.0	1.07	
192		1.E20	1.E20	0.0	1.07	
202	204	1.E20	1.E20	0.0	1.07	
212		1.E20	1.E20	0.0	1.07	
222	224	1.E20	1.E20	0.0	1.07	
232		1.E20	1.E20	0.0	1.07	
242	244	1.E20	1.E20	0.0	1.07	
252		1.E20	1.E20	0.0	1.07	
262	264	1.E20	1.E20	0.0	1.07	
272		1.E20	1.E20	0.0	1.07	
282	284	1.E20	1.E20	0.0	1.07	
292		1.E20	1.E20	0.0	1.07	
302	304	1.E20	1.E20	0.0	1.07	
312		1.E20	1.E20	0.0	1.07	
322	324	1.E20	1.E20	0.0	1.07	
332		1.E20	1.E20	0.0	1.07	
342	344	1.E20	1.E20	0.0	1.07	
352		1.E20	1.E20	0.0	1.07	
362	364	1.E20	1.E20	0.0	1.07	
372		1.E20	1.E20	0.0	1.07	
382	384	1.E20	1.E20	0.0	1.07	
392		1.E20	1.E20	0.0	1.07	
402	404	1.E20	1.E20	0.0	1.07	
412		1.E20	1.E20	0.0	1.07	
422	424	1.E20	1.E20	0.0	1.07	
432		1.E20	1.E20	0.0	1.07	
442	444	1.E20	1.E20	0.0	1.07	
452		1.E20	1.E20	0.0	1.07	
462	464	1.E20	1.E20	0.0	1.07	
472		1.E20	1.E20	0.0	1.07	
482	484	1.E20	1.E20	0.0	1.07	
492		1.E20	1.E20	0.0	1.07	
502	504	1.E20	1.E20	0.0	1.07	
512		1.E20	1.E20	0.0	1.07	
522	524	1.E20	1.E20	0.0	1.07	
532		1.E20	1.E20	0.0	1.07	
542	544	1.E20	1.E20	0.0	1.07	
552		1.E20	1.E20	0.0	1.07	
562	564	1.E20	1.E20	0.0	1.07	

```
 572        1.E20    1.E20      0.0     1.07
 582  584    1.E20    1.E20      0.0     1.07
 592        1.E20    1.E20      0.0     1.07
 602  604    1.E20    1.E20      0.0     1.07
 612        1.E20    1.E20      0.0     1.07
 622  624    1.E20    1.E20      0.0     1.07
 632        1.E20    1.E20      0.0     1.07
 642  644    1.E20    1.E20      0.0     1.07
 652        1.E20    1.E20      0.0     1.07
 662  664    1.E20    1.E20      0.0     1.07
 672        1.E20    1.E20      0.0     1.07
 END NIT-ORGPM

*** Plant N return rates
 MON-NPRETBG
  <PLS >  Return rates for below-ground plant N in surface layer (/day) ***
  #   # JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC    ***
 22  24  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 32      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 42  44  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 52      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 62  64  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 72      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 82  84  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 92      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
102 104  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
112      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
122 124  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
132      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
142 144  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
152      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
162 164  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
172      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
182 184  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
192      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
202 204  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
212      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
222 224  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
232      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
242 244  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
252      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
262 264  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
272      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
282 284  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
292      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
302 304  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
312      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
322 324  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
332      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
342 344  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
352      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
362 364  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
372      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
382 384  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
392      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
402 404  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
```

```
412      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
422  424  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
432      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
442  444  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
452      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
462  464  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
472      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
482  484  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
492      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
502  504  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
512      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
522  524  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
532      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
542  544  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
552      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
562  564  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
572      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
582  584  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
592      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
602  604  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
612      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
622  624  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
632      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
642  644  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
652      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
662  664  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
672      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
END MON-NPRETBG

MON-NPRETBG
 <PLS >  Return rates for below-ground plant N in upper layer (/day)   ***
 #   # JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC    ***
 22  24  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 32      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 42  44  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 52      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 62  64  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 72      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 82  84  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 92      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
102  104  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
112      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
122  124  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
132      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
142  144  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
152      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
162  164  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
172      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
182  184  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
192      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
202  204  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
212      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
222  224  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
232      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
242  244  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
252      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
```

```
262  264  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
272       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
282  284  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
292       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
302  304  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
312       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
322  324  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
332       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
342  344  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
352       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
362  364  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
372       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
382  384  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
392       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
402  404  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
412       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
422  424  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
432       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
442  444  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
452       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
462  464  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
472       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
482  484  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
492       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
502  504  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
512       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
522  524  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
532       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
542  544  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
552       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
562  564  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
572       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
582  584  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
592       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
602  604  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
612       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
622  624  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
632       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
642  644  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
652       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
662  664  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
672       0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
END MON-NPRETBG

MON-NPRETBG
 <PLS >  Return rates for below-ground plant N in lower layer (/day)   ***
 #   # JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC    ***
 22  24  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 32      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 42  44  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 52      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 62  64  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 72      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 82  84  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
 92      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
102  104  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
```

112		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122	124	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142	144	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162	164	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
182	184	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
192		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
202	204	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
212		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
222	224	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
232		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
242	244	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
252		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
262	264	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
272		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
282	284	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
292		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
302	304	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
312		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
322	324	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
332		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
342	344	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
352		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
362	364	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
372		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
382	384	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
392		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
402	404	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
412		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
422	424	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
432		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
442	444	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
452		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
462	464	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
472		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
482	484	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
492		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
502	504	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
512		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
522	524	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
532		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
542	544	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
552		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
562	564	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
572		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
582	584	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
592		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
602	604	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
612		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
622	624	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
632		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
642	644	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
652		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
662	664	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

```
672      0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
END MON-NPRETBG

MON-NPRETBG
 <PLS >  Return rates for below-ground plant N in active GW layer (/day)***
 #   # JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC     ***
 22  24  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 32      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 42  44  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 52      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 62  64  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 72      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 82  84  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
 92      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
102 104  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
112      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
122 124  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
132      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
142 144  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
152      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
162 164  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
172      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
182 184  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
192      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
202 204  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
212      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
222 224  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
232      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
242 244  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
252      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
262 264  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
272      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
282 284  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
292      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
302 304  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
312      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
322 324  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
332      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
342 344  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
352      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
362 364  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
372      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
382 384  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
392      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
402 404  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
412      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
422 424  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
432      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
442 444  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
452      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
462 464  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
472      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
482 484  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
492      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
502 504  0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
512      0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.   0.
```

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522 524  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
532      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
542 544  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
552      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
562 564  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
572      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
582 584  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
592      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
602 604  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
612      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
622 624  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
632      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
642 644  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
652      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
662 664  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
672      0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.  0.
END MON-NPRETBG

*** set these values to 0.0 since we assume all organic N is labile
MON-NPRETFBG
 <PLS >  Monthly refractory fractions for below-ground plant N return ***
 #   # JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 22  24  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 32      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 42  44  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 52      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 62  64  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 72      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 82  84  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
 92      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
102 104  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
112      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
122 124  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
132      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
142 144  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
152      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
162 164  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
172      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
182 184  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
192      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
202 204  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
212      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
222 224  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
232      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
242 244  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
252      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
262 264  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
272      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
282 284  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
292      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
302 304  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
312      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
322 324  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
332      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
342 344  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
352      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
```

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 362  364   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 372        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 382  384   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 392        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 402  404   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 412        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 422  424   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 432        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 442  444   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 452        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 462  464   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 472        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 482  484   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 492        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 502  504   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 512        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 522  524   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 532        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 542  544   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 552        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 562  564   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 572        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 582  584   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 592        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 602  604   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 612        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 622  624   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 632        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 642  644   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 652        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 662  664   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 672        .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 END MON-NPRETFBG

*** Initial storages of nitrogen species in the soil
 NIT-STOR1
  <PLS > Initial storage of N forms in surface layer (LB/AC)        ***
  #   #    LORGN     AMAD     AMSU     NO3     PLTN    RORGN ***
  22  24    150.     1.00     0.03     0.3     0.0     0.0
  32        150.     1.00     0.03     0.3     0.0     0.0
  42  44    150.     1.00     0.03     0.3     0.0     0.0
  52        150.     1.00     0.03     0.3     0.0     0.0
  62  64    150.     1.00     0.03     0.3     0.0     0.0
  72        150.     1.00     0.03     0.3     0.0     0.0
  82  84    150.     1.00     0.03     0.3     0.0     0.0
  92        150.     1.00     0.03     0.3     0.0     0.0
 102  104   150.     1.00     0.03     0.3     0.0     0.0
 112        150.     1.00     0.03     0.3     0.0     0.0
 122  124   150.     1.00     0.03     0.3     0.0     0.0
 132        150.     1.00     0.03     0.3     0.0     0.0
 142  144   150.     1.00     0.03     0.3     0.0     0.0
 152        150.     1.00     0.03     0.3     0.0     0.0
 162  164   150.     1.00     0.03     0.3     0.0     0.0
 172        150.     1.00     0.03     0.3     0.0     0.0
 182  184   150.     1.00     0.03     0.3     0.0     0.0
 192        150.     1.00     0.03     0.3     0.0     0.0
```

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202  204     150.     1.00     0.03     0.3     0.0     0.0
212          150.     1.00     0.03     0.3     0.0     0.0
222  224     150.     1.00     0.03     0.3     0.0     0.0
232          150.     1.00     0.03     0.3     0.0     0.0
242  244     150.     1.00     0.03     0.3     0.0     0.0
252          150.     1.00     0.03     0.3     0.0     0.0
262  264     150.     1.00     0.03     0.3     0.0     0.0
272          150.     1.00     0.03     0.3     0.0     0.0
282  284     150.     1.00     0.03     0.3     0.0     0.0
292          150.     1.00     0.03     0.3     0.0     0.0
302  304     150.     1.00     0.03     0.3     0.0     0.0
312          150.     1.00     0.03     0.3     0.0     0.0
322  324     150.     1.00     0.03     0.3     0.0     0.0
332          150.     1.00     0.03     0.3     0.0     0.0
342  344     150.     1.00     0.03     0.3     0.0     0.0
352          150.     1.00     0.03     0.3     0.0     0.0
362  364     150.     1.00     0.03     0.3     0.0     0.0
372          150.     1.00     0.03     0.3     0.0     0.0
382  384     150.     1.00     0.03     0.3     0.0     0.0
392          150.     1.00     0.03     0.3     0.0     0.0
402  404     150.     1.00     0.03     0.3     0.0     0.0
412          150.     1.00     0.03     0.3     0.0     0.0
422  424     150.     1.00     0.03     0.3     0.0     0.0
432          150.     1.00     0.03     0.3     0.0     0.0
442  444     150.     1.00     0.03     0.3     0.0     0.0
452          150.     1.00     0.03     0.3     0.0     0.0
462  464     150.     1.00     0.03     0.3     0.0     0.0
472          150.     1.00     0.03     0.3     0.0     0.0
482  484     150.     1.00     0.03     0.3     0.0     0.0
492          150.     1.00     0.03     0.3     0.0     0.0
502  504     150.     1.00     0.03     0.3     0.0     0.0
512          150.     1.00     0.03     0.3     0.0     0.0
522  524     150.     1.00     0.03     0.3     0.0     0.0
532          150.     1.00     0.03     0.3     0.0     0.0
542  544     150.     1.00     0.03     0.3     0.0     0.0
552          150.     1.00     0.03     0.3     0.0     0.0
562  564     150.     1.00     0.03     0.3     0.0     0.0
572          150.     1.00     0.03     0.3     0.0     0.0
582  584     150.     1.00     0.03     0.3     0.0     0.0
592          150.     1.00     0.03     0.3     0.0     0.0
602  604     150.     1.00     0.03     0.3     0.0     0.0
612          150.     1.00     0.03     0.3     0.0     0.0
622  624     150.     1.00     0.03     0.3     0.0     0.0
632          150.     1.00     0.03     0.3     0.0     0.0
642  644     150.     1.00     0.03     0.3     0.0     0.0
652          150.     1.00     0.03     0.3     0.0     0.0
662  664     150.     1.00     0.03     0.3     0.0     0.0
672          150.     1.00     0.03     0.3     0.0     0.0
END NIT-STOR1

NIT-STOR1
 <PLS > Initial storage of N forms in upper layer (LB/AC)          ***
 #   #    LORGN     AMAD     AMSU     NO3     PLTN     RORGN ***
 22  24    500.      5.0     0.50     2.0      0.      0.0
 32        500.      5.0     0.50     2.0      0.      0.0
 42  44    500.      5.0     0.50     2.0      0.      0.0
```

52		500.	5.0	0.50	2.0	0.	0.0
62	64	500.	5.0	0.50	2.0	0.	0.0
72		500.	5.0	0.50	2.0	0.	0.0
82	84	500.	5.0	0.50	2.0	0.	0.0
92		500.	5.0	0.50	2.0	0.	0.0
102	104	500.	5.0	0.50	2.0	0.	0.0
112		500.	5.0	0.50	2.0	0.	0.0
122	124	500.	5.0	0.50	2.0	0.	0.0
132		500.	5.0	0.50	2.0	0.	0.0
142	144	500.	5.0	0.50	2.0	0.	0.0
152		500.	5.0	0.50	2.0	0.	0.0
162	164	500.	5.0	0.50	2.0	0.	0.0
172		500.	5.0	0.50	2.0	0.	0.0
182	184	500.	5.0	0.50	2.0	0.	0.0
192		500.	5.0	0.50	2.0	0.	0.0
202	204	500.	5.0	0.50	2.0	0.	0.0
212		500.	5.0	0.50	2.0	0.	0.0
222	224	500.	5.0	0.50	2.0	0.	0.0
232		500.	5.0	0.50	2.0	0.	0.0
242	244	500.	5.0	0.50	2.0	0.	0.0
252		500.	5.0	0.50	2.0	0.	0.0
262	264	500.	5.0	0.50	2.0	0.	0.0
272		500.	5.0	0.50	2.0	0.	0.0
282	284	500.	5.0	0.50	2.0	0.	0.0
292		500.	5.0	0.50	2.0	0.	0.0
302	304	500.	5.0	0.50	2.0	0.	0.0
312		500.	5.0	0.50	2.0	0.	0.0
322	324	500.	5.0	0.50	2.0	0.	0.0
332		500.	5.0	0.50	2.0	0.	0.0
342	344	500.	5.0	0.50	2.0	0.	0.0
352		500.	5.0	0.50	2.0	0.	0.0
362	364	500.	5.0	0.50	2.0	0.	0.0
372		500.	5.0	0.50	2.0	0.	0.0
382	384	500.	5.0	0.50	2.0	0.	0.0
392		500.	5.0	0.50	2.0	0.	0.0
402	404	500.	5.0	0.50	2.0	0.	0.0
412		500.	5.0	0.50	2.0	0.	0.0
422	424	500.	5.0	0.50	2.0	0.	0.0
432		500.	5.0	0.50	2.0	0.	0.0
442	444	500.	5.0	0.50	2.0	0.	0.0
452		500.	5.0	0.50	2.0	0.	0.0
462	464	500.	5.0	0.50	2.0	0.	0.0
472		500.	5.0	0.50	2.0	0.	0.0
482	484	500.	5.0	0.50	2.0	0.	0.0
492		500.	5.0	0.50	2.0	0.	0.0
502	504	500.	5.0	0.50	2.0	0.	0.0
512		500.	5.0	0.50	2.0	0.	0.0
522	524	500.	5.0	0.50	2.0	0.	0.0
532		500.	5.0	0.50	2.0	0.	0.0
542	544	500.	5.0	0.50	2.0	0.	0.0
552		500.	5.0	0.50	2.0	0.	0.0
562	564	500.	5.0	0.50	2.0	0.	0.0
572		500.	5.0	0.50	2.0	0.	0.0
582	584	500.	5.0	0.50	2.0	0.	0.0
592		500.	5.0	0.50	2.0	0.	0.0
602	604	500.	5.0	0.50	2.0	0.	0.0

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612          500.     5.0     0.50     2.0      0.     0.0
622  624     500.     5.0     0.50     2.0      0.     0.0
632          500.     5.0     0.50     2.0      0.     0.0
642  644     500.     5.0     0.50     2.0      0.     0.0
652          500.     5.0     0.50     2.0      0.     0.0
662  664     500.     5.0     0.50     2.0      0.     0.0
672          500.     5.0     0.50     2.0      0.     0.0
END NIT-STOR1

NIT-STOR1
 <PLS > Initial storage of N forms in lower layer (LB/AC)          ***
 #   #    LORGN     AMAD     AMSU      NO3     PLTN     RORGN ***
 22  24    1200.     5.0      1.0      8.      0.0      0.0
 32        1200.     5.0      1.0      8.      0.0      0.0
 42  44    1200.     5.0      1.0      8.      0.0      0.0
 52        1200.     5.0      1.0      8.      0.0      0.0
 62  64    1200.     5.0      1.0      8.      0.0      0.0
 72        1200.     5.0      1.0      8.      0.0      0.0
 82  84    1200.     5.0      1.0      8.      0.0      0.0
 92        1200.     5.0      1.0      8.      0.0      0.0
102  104   1200.     5.0      1.0      8.      0.0      0.0
112        1200.     5.0      1.0      8.      0.0      0.0
122  124   1200.     5.0      1.0      8.      0.0      0.0
132        1200.     5.0      1.0      8.      0.0      0.0
142  144   1200.     5.0      1.0      8.      0.0      0.0
152        1200.     5.0      1.0      8.      0.0      0.0
162  164   1200.     5.0      1.0      8.      0.0      0.0
172        1200.     5.0      1.0      8.      0.0      0.0
182  184   1200.     5.0      1.0      8.      0.0      0.0
192        1200.     5.0      1.0      8.      0.0      0.0
202  204   1200.     5.0      1.0      8.      0.0      0.0
212        1200.     5.0      1.0      8.      0.0      0.0
222  224   1200.     5.0      1.0      8.      0.0      0.0
232        1200.     5.0      1.0      8.      0.0      0.0
242  244   1200.     5.0      1.0      8.      0.0      0.0
252        1200.     5.0      1.0      8.      0.0      0.0
262  264   1200.     5.0      1.0      8.      0.0      0.0
272        1200.     5.0      1.0      8.      0.0      0.0
282  284   1200.     5.0      1.0      8.      0.0      0.0
292        1200.     5.0      1.0      8.      0.0      0.0
302  304   1200.     5.0      1.0      8.      0.0      0.0
312        1200.     5.0      1.0      8.      0.0      0.0
322  324   1200.     5.0      1.0      8.      0.0      0.0
332        1200.     5.0      1.0      8.      0.0      0.0
342  344   1200.     5.0      1.0      8.      0.0      0.0
352        1200.     5.0      1.0      8.      0.0      0.0
362  364   1200.     5.0      1.0      8.      0.0      0.0
372        1200.     5.0      1.0      8.      0.0      0.0
382  384   1200.     5.0      1.0      8.      0.0      0.0
392        1200.     5.0      1.0      8.      0.0      0.0
402  404   1200.     5.0      1.0      8.      0.0      0.0
412        1200.     5.0      1.0      8.      0.0      0.0
422  424   1200.     5.0      1.0      8.      0.0      0.0
432        1200.     5.0      1.0      8.      0.0      0.0
442  444   1200.     5.0      1.0      8.      0.0      0.0
452        1200.     5.0      1.0      8.      0.0      0.0
```

```
462  464    1200.     5.0     1.0     8.     0.0     0.0
472         1200.     5.0     1.0     8.     0.0     0.0
482  484    1200.     5.0     1.0     8.     0.0     0.0
492         1200.     5.0     1.0     8.     0.0     0.0
502  504    1200.     5.0     1.0     8.     0.0     0.0
512         1200.     5.0     1.0     8.     0.0     0.0
522  524    1200.     5.0     1.0     8.     0.0     0.0
532         1200.     5.0     1.0     8.     0.0     0.0
542  544    1200.     5.0     1.0     8.     0.0     0.0
552         1200.     5.0     1.0     8.     0.0     0.0
562  564    1200.     5.0     1.0     8.     0.0     0.0
572         1200.     5.0     1.0     8.     0.0     0.0
582  584    1200.     5.0     1.0     8.     0.0     0.0
592         1200.     5.0     1.0     8.     0.0     0.0
602  604    1200.     5.0     1.0     8.     0.0     0.0
612         1200.     5.0     1.0     8.     0.0     0.0
622  624    1200.     5.0     1.0     8.     0.0     0.0
632         1200.     5.0     1.0     8.     0.0     0.0
642  644    1200.     5.0     1.0     8.     0.0     0.0
652         1200.     5.0     1.0     8.     0.0     0.0
662  664    1200.     5.0     1.0     8.     0.0     0.0
672         1200.     5.0     1.0     8.     0.0     0.0
END NIT-STOR1

NIT-STOR1
 <PLS > Initial storage of N forms in groundwater layer (LB/AC)     ***
 #   #    LORGN     AMAD     AMSU     NO3     PLTN     RORGN ***
 22  24    800.     6.0     0.50     1.0      .0      0.0
 32        800.     6.0     0.50     1.0      .0      0.0
 42  44    800.     6.0     0.50     1.0      .0      0.0
 52        800.     6.0     0.50     1.0      .0      0.0
 62  64    800.     6.0     0.50     1.0      .0      0.0
 72        800.     6.0     0.50     1.0      .0      0.0
 82  84    800.     6.0     0.50     1.0      .0      0.0
 92        800.     6.0     0.50     1.0      .0      0.0
102  104   800.     6.0     0.50     1.0      .0      0.0
112        800.     6.0     0.50     1.0      .0      0.0
122  124   800.     6.0     0.50     1.0      .0      0.0
132        800.     6.0     0.50     1.0      .0      0.0
142  144   800.     6.0     0.50     1.0      .0      0.0
152        800.     6.0     0.50     1.0      .0      0.0
162  164   800.     6.0     0.50     1.0      .0      0.0
172        800.     6.0     0.50     1.0      .0      0.0
182  184   800.     6.0     0.50     1.0      .0      0.0
192        800.     6.0     0.50     1.0      .0      0.0
202  204   800.     6.0     0.50     1.0      .0      0.0
212        800.     6.0     0.50     1.0      .0      0.0
222  224   800.     6.0     0.50     1.0      .0      0.0
232        800.     6.0     0.50     1.0      .0      0.0
242  244   800.     6.0     0.50     1.0      .0      0.0
252        800.     6.0     0.50     1.0      .0      0.0
262  264   800.     6.0     0.50     1.0      .0      0.0
272        800.     6.0     0.50     1.0      .0      0.0
282  284   800.     6.0     0.50     1.0      .0      0.0
292        800.     6.0     0.50     1.0      .0      0.0
302  304   800.     6.0     0.50     1.0      .0      0.0
```

```
312          800.     6.0     0.50     1.0      .0     0.0
322  324     800.     6.0     0.50     1.0      .0     0.0
332          800.     6.0     0.50     1.0      .0     0.0
342  344     800.     6.0     0.50     1.0      .0     0.0
352          800.     6.0     0.50     1.0      .0     0.0
362  364     800.     6.0     0.50     1.0      .0     0.0
372          800.     6.0     0.50     1.0      .0     0.0
382  384     800.     6.0     0.50     1.0      .0     0.0
392          800.     6.0     0.50     1.0      .0     0.0
402  404     800.     6.0     0.50     1.0      .0     0.0
412          800.     6.0     0.50     1.0      .0     0.0
422  424     800.     6.0     0.50     1.0      .0     0.0
432          800.     6.0     0.50     1.0      .0     0.0
442  444     800.     6.0     0.50     1.0      .0     0.0
452          800.     6.0     0.50     1.0      .0     0.0
462  464     800.     6.0     0.50     1.0      .0     0.0
472          800.     6.0     0.50     1.0      .0     0.0
482  484     800.     6.0     0.50     1.0      .0     0.0
492          800.     6.0     0.50     1.0      .0     0.0
502  504     800.     6.0     0.50     1.0      .0     0.0
512          800.     6.0     0.50     1.0      .0     0.0
522  524     800.     6.0     0.50     1.0      .0     0.0
532          800.     6.0     0.50     1.0      .0     0.0
542  544     800.     6.0     0.50     1.0      .0     0.0
552          800.     6.0     0.50     1.0      .0     0.0
562  564     800.     6.0     0.50     1.0      .0     0.0
572          800.     6.0     0.50     1.0      .0     0.0
582  584     800.     6.0     0.50     1.0      .0     0.0
592          800.     6.0     0.50     1.0      .0     0.0
602  604     800.     6.0     0.50     1.0      .0     0.0
612          800.     6.0     0.50     1.0      .0     0.0
622  624     800.     6.0     0.50     1.0      .0     0.0
632          800.     6.0     0.50     1.0      .0     0.0
642  644     800.     6.0     0.50     1.0      .0     0.0
652          800.     6.0     0.50     1.0      .0     0.0
662  664     800.     6.0     0.50     1.0      .0     0.0
672          800.     6.0     0.50     1.0      .0     0.0
END NIT-STOR1

NIT-STOR2
  <PLS > Initial N in interflow, above ground and litter (LB/AC)      ***
  #   #    IAMSU     INO3     ISLON     ISRON    AGPLTN    LITTRN ***
 22  24      0.       0.       0.       0.
 32          0.       0.       0.       0.
 42  44      0.       0.       0.       0.
 52          0.       0.       0.       0.
 62  64      0.       0.       0.       0.
 72          0.       0.       0.       0.
 82  84      0.       0.       0.       0.
 92          0.       0.       0.       0.
102  104     0.       0.       0.       0.
112          0.       0.       0.       0.
122  124     0.       0.       0.       0.
132          0.       0.       0.       0.
142  144     0.       0.       0.       0.
152          0.       0.       0.       0.
```

```
162  164      0.      0.      0.      0.
172           0.      0.      0.      0.
182  184      0.      0.      0.      0.
192           0.      0.      0.      0.
202  204      0.      0.      0.      0.
212           0.      0.      0.      0.
222  224      0.      0.      0.      0.
232           0.      0.      0.      0.
242  244      0.      0.      0.      0.
252           0.      0.      0.      0.
262  264      0.      0.      0.      0.
272           0.      0.      0.      0.
282  284      0.      0.      0.      0.
292           0.      0.      0.      0.
302  304      0.      0.      0.      0.
312           0.      0.      0.      0.
322  324      0.      0.      0.      0.
332           0.      0.      0.      0.
342  344      0.      0.      0.      0.
352           0.      0.      0.      0.
362  364      0.      0.      0.      0.
372           0.      0.      0.      0.
382  384      0.      0.      0.      0.
392           0.      0.      0.      0.
402  404      0.      0.      0.      0.
412           0.      0.      0.      0.
422  424      0.      0.      0.      0.
432           0.      0.      0.      0.
442  444      0.      0.      0.      0.
452           0.      0.      0.      0.
462  464      0.      0.      0.      0.
472           0.      0.      0.      0.
482  484      0.      0.      0.      0.
492           0.      0.      0.      0.
502  504      0.      0.      0.      0.
512           0.      0.      0.      0.
522  524      0.      0.      0.      0.
532           0.      0.      0.      0.
542  544      0.      0.      0.      0.
552           0.      0.      0.      0.
562  564      0.      0.      0.      0.
572           0.      0.      0.      0.
582  584      0.      0.      0.      0.
592           0.      0.      0.      0.
602  604      0.      0.      0.      0.
612           0.      0.      0.      0.
622  624      0.      0.      0.      0.
632           0.      0.      0.      0.
642  644      0.      0.      0.      0.
652           0.      0.      0.      0.
662  664      0.      0.      0.      0.
672           0.      0.      0.      0.
END NIT-STOR2

*** SECTION PHOS
*** Phosphorus flags
```

```
*** P adsorption by Fruendlich isotherm method
*** P uptake by yield-based method
 PHOS-FLAGS
  <PLS > VPUT FORP ITMX BMUM CNUM PUPT ***
  # -  #                          ***
  22   24       1  100    3    1    1
  32           1  100    3    1    1
  42   44       1  100    3    1    1
  52           1  100    3    1    1
  62   64       1  100    3    1    1
  72           1  100    3    1    1
  82   84       1  100    3    1    1
  92           1  100    3    1    1
 102  104       1  100    3    1    1
 112           1  100    3    1    1
 122  124       1  100    3    1    1
 132           1  100    3    1    1
 142  144       1  100    3    1    1
 152           1  100    3    1    1
 162  164       1  100    3    1    1
 172           1  100    3    1    1
 182  184       1  100    3    1    1
 192           1  100    3    1    1
 202  204       1  100    3    1    1
 212           1  100    3    1    1
 222  224       1  100    3    1    1
 232           1  100    3    1    1
 242  244       1  100    3    1    1
 252           1  100    3    1    1
 262  264       1  100    3    1    1
 272           1  100    3    1    1
 282  284       1  100    3    1    1
 292           1  100    3    1    1
 302  304       1  100    3    1    1
 312           1  100    3    1    1
 322  324       1  100    3    1    1
 332           1  100    3    1    1
 342  344       1  100    3    1    1
 352           1  100    3    1    1
 362  364       1  100    3    1    1
 372           1  100    3    1    1
 382  384       1  100    3    1    1
 392           1  100    3    1    1
 402  404       1  100    3    1    1
 412           1  100    3    1    1
 422  424       1  100    3    1    1
 432           1  100    3    1    1
 442  444       1  100    3    1    1
 452           1  100    3    1    1
 462  464       1  100    3    1    1
 472           1  100    3    1    1
 482  484       1  100    3    1    1
 492           1  100    3    1    1
 502  504       1  100    3    1    1
 512           1  100    3    1    1
 522  524       1  100    3    1    1
```

```
532          1  100    3    1    1
542  544       1  100    3    1    1
552          1  100    3    1    1
562  564       1  100    3    1    1
572          1  100    3    1    1
582  584       1  100    3    1    1
592          1  100    3    1    1
602  604       1  100    3    1    1
612          1  100    3    1    1
622  624       1  100    3    1    1
632          1  100    3    1    1
642  644       1  100    3    1    1
652          1  100    3    1    1
662  664       1  100    3    1    1
672          1  100    3    1    1
END PHOS-FLAGS

*** the P atmospheric deposition function is used to add
*** manure to pasture
*** values are entered in timeseries format
PHOS-AD-FLAGS
          Atmospheric Deposition Flags ***
             PO4            ORGP        ***
  <PLS >    sur    upp     sur    upp     ***
  # -  #   F  C   F  C    F  C   F  C     ***
  22   24  -1  0  -1  0   -1  0  -1  0
  32       -1  0  -1  0   -1  0  -1  0
  42   44  -1  0  -1  0   -1  0  -1  0
  52       -1  0  -1  0   -1  0  -1  0
  62   64  -1  0  -1  0   -1  0  -1  0
  72       -1  0  -1  0   -1  0  -1  0
  82   84  -1  0  -1  0   -1  0  -1  0
  92       -1  0  -1  0   -1  0  -1  0
 102  104  -1  0  -1  0   -1  0  -1  0
 112       -1  0  -1  0   -1  0  -1  0
 122  124  -1  0  -1  0   -1  0  -1  0
 132       -1  0  -1  0   -1  0  -1  0
 142  144  -1  0  -1  0   -1  0  -1  0
 152       -1  0  -1  0   -1  0  -1  0
 162  164  -1  0  -1  0   -1  0  -1  0
 172       -1  0  -1  0   -1  0  -1  0
 182  184  -1  0  -1  0   -1  0  -1  0
 192       -1  0  -1  0   -1  0  -1  0
 202  204  -1  0  -1  0   -1  0  -1  0
 212       -1  0  -1  0   -1  0  -1  0
 222  224  -1  0  -1  0   -1  0  -1  0
 232       -1  0  -1  0   -1  0  -1  0
 242  244  -1  0  -1  0   -1  0  -1  0
 252       -1  0  -1  0   -1  0  -1  0
 262  264  -1  0  -1  0   -1  0  -1  0
 272       -1  0  -1  0   -1  0  -1  0
 282  284  -1  0  -1  0   -1  0  -1  0
 292       -1  0  -1  0   -1  0  -1  0
 302  304  -1  0  -1  0   -1  0  -1  0
 312       -1  0  -1  0   -1  0  -1  0
 322  324  -1  0  -1  0   -1  0  -1  0
```

```
 332      -1  0  -1  0   -1  0  -1  0
 342  344  -1  0  -1  0   -1  0  -1  0
 352      -1  0  -1  0   -1  0  -1  0
 362  364  -1  0  -1  0   -1  0  -1  0
 372      -1  0  -1  0   -1  0  -1  0
 382  384  -1  0  -1  0   -1  0  -1  0
 392      -1  0  -1  0   -1  0  -1  0
 402  404  -1  0  -1  0   -1  0  -1  0
 412      -1  0  -1  0   -1  0  -1  0
 422  424  -1  0  -1  0   -1  0  -1  0
 432      -1  0  -1  0   -1  0  -1  0
 442  444  -1  0  -1  0   -1  0  -1  0
 452      -1  0  -1  0   -1  0  -1  0
 462  464  -1  0  -1  0   -1  0  -1  0
 472      -1  0  -1  0   -1  0  -1  0
 482  484  -1  0  -1  0   -1  0  -1  0
 492      -1  0  -1  0   -1  0  -1  0
 502  504  -1  0  -1  0   -1  0  -1  0
 512      -1  0  -1  0   -1  0  -1  0
 522  524  -1  0  -1  0   -1  0  -1  0
 532      -1  0  -1  0   -1  0  -1  0
 542  544  -1  0  -1  0   -1  0  -1  0
 552      -1  0  -1  0   -1  0  -1  0
 562  564  -1  0  -1  0   -1  0  -1  0
 572      -1  0  -1  0   -1  0  -1  0
 582  584  -1  0  -1  0   -1  0  -1  0
 592      -1  0  -1  0   -1  0  -1  0
 602  604  -1  0  -1  0   -1  0  -1  0
 612      -1  0  -1  0   -1  0  -1  0
 622  624  -1  0  -1  0   -1  0  -1  0
 632      -1  0  -1  0   -1  0  -1  0
 642  644  -1  0  -1  0   -1  0  -1  0
 652      -1  0  -1  0   -1  0  -1  0
 662  664  -1  0  -1  0   -1  0  -1  0
 672      -1  0  -1  0   -1  0  -1  0
 END PHOS-AD-FLAGS

*** First order rates for P reactions (immobilization and mineralization)
*** note: in the following 5 tables, there are blank fields for the parameters that are
*** relevant to the first-order phosphate asorption kinetics and the first-order
*** plant uptake kinetics, both of which are not being used
 PHOS-FSTGEN
  <PLS > Temperature correction parameters for phosphorus reactions***
  #   #    THPLP    THKDSP    THKADP    THKIMP     THKMP        ***
  22  24                          1.07      1.05
  32                             1.07      1.05
  42  44                          1.07      1.05
  52                             1.07      1.05
  62  64                          1.07      1.05
  72                             1.07      1.05
  82  84                          1.07      1.05
  92                             1.07      1.05
 102  104                          1.07      1.05
 112                             1.07      1.05
 122  124                          1.07      1.05
 132                             1.07      1.05
```

```
142  144                    1.07    1.05
152                       1.07    1.05
162  164                    1.07    1.05
172                       1.07    1.05
182  184                    1.07    1.05
192                       1.07    1.05
202  204                    1.07    1.05
212                       1.07    1.05
222  224                    1.07    1.05
232                       1.07    1.05
242  244                    1.07    1.05
252                       1.07    1.05
262  264                    1.07    1.05
272                       1.07    1.05
282  284                    1.07    1.05
292                       1.07    1.05
302  304                    1.07    1.05
312                       1.07    1.05
322  324                    1.07    1.05
332                       1.07    1.05
342  344                    1.07    1.05
352                       1.07    1.05
362  364                    1.07    1.05
372                       1.07    1.05
382  384                    1.07    1.05
392                       1.07    1.05
402  404                    1.07    1.05
412                       1.07    1.05
422  424                    1.07    1.05
432                       1.07    1.05
442  444                    1.07    1.05
452                       1.07    1.05
462  464                    1.07    1.05
472                       1.07    1.05
482  484                    1.07    1.05
492                       1.07    1.05
502  504                    1.07    1.05
512                       1.07    1.05
522  524                    1.07    1.05
532                       1.07    1.05
542  544                    1.07    1.05
552                       1.07    1.05
562  564                    1.07    1.05
572                       1.07    1.05
582  584                    1.07    1.05
592                       1.07    1.05
602  604                    1.07    1.05
612                       1.07    1.05
622  624                    1.07    1.05
632                       1.07    1.05
642  644                    1.07    1.05
652                       1.07    1.05
662  664                    1.07    1.05
672                       1.07    1.05
END PHOS-FSTGEN
```

PHOS-FSTPM
*** high stp

22	24	14.0	.0100
32		7.0	.0100
42	44	14.0	.0100
52		7.0	.0100
62	64	20.	.0050
72		10.	.0050
82	84	10.0	.0100
92		5.0	.0100
102	104	20.	.0050
112		10.	.0050
122	124	20.	.0050
132		10.	.0050
142	144	10.0	.0100
152		5.0	.0100
162	164	20.	.0050
172		10.	.0050
182	184	14.0	.0100
192		7.0	.0100
202	204	14.0	.0100
212		7.0	.0100
222	224	14.0	.0100
232		7.0	.0100
242	244	14.0	.0100
252		7.0	.0100
262	264	14.0	.0100
272		7.0	.0100
282	284	14.0	.0100
292		7.0	.0100
302	304	14.0	.0100
312		7.0	.0100
322	324	10.0	.0100
332		5.0	.0100
342	344	20.	.0050
352		10.	.0050
362	364	10.0	.0100
372		5.0	.0100
382	384	10.0	.0100
392		5.0	.0100
402	404	20.	.0050
412		10.	.0050
422	424	14.0	.0100
432		7.0	.0100
442	444	20.	.0050
452		10.	.0050
462	464	10.0	.0100
472		5.0	.0100
482	484	14.0	.0100
492		7.0	.0100
502	504	20.	.0050
512		10.	.0050
522	524	20.	.0050
532		10.	.0050
542	544	14.0	.0100
552		7.0	.0100

```
562  564                    10.0     .0100
572                        5.0     .0100
582  584                    20.     .0050
592                        10.     .0050
602  604                    20.     .0050
612                        10.     .0050
622  624                    10.0     .0100
632                        5.0     .0100
642  644                    10.0     .0100
652                        5.0     .0100
662  664                    10.0     .0100
672                        5.0     .0100
END PHOS-FSTPM

PHOS-FSTPM
*** high stp
 22   24                    2.0   .001000
 32                        1.0   .001000
 42   44                    2.0   .001000
 52                        1.0   .001000
 62   64                    2.0   .000200
 72                        1.0   .000200
 82   84                    2.0   .001000
 92                        1.0   .001000
102  104                    2.0   .000200
112                        1.0   .000200
122  124                    2.0   .000200
132                        1.0   .000200
142  144                    2.0   .001000
152                        1.0   .001000
162  164                    2.0   .000200
172                        1.0   .000200
182  184                    2.0   .001000
192                        1.0   .001000
202  204                    2.0   .001000
212                        1.0   .001000
222  224                    2.0   .001000
232                        1.0   .001000
242  244                    2.0   .001000
252                        1.0   .001000
262  264                    2.0   .001000
272                        1.0   .001000
282  284                    2.0   .001000
292                        1.0   .001000
302  304                    2.0   .001000
312                        1.0   .001000
322  324                    2.0   .001000
332                        1.0   .001000
342  344                    2.0   .000200
352                        1.0   .000200
362  364                    2.0   .001000
372                        1.0   .001000
382  384                    2.0   .001000
392                        1.0   .001000
402  404                    2.0   .000200
412                        1.0   .000200
```

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 422  424                    2.0   .001000
 432                       1.0   .001000
 442  444                    2.0   .000200
 452                       1.0   .000200
 462  464                    2.0   .001000
 472                       1.0   .001000
 482  484                    2.0   .001000
 492                       1.0   .001000
 502  504                    2.0   .000200
 512                       1.0   .000200
 522  524                    2.0   .000200
 532                       1.0   .000200
 542  544                    2.0   .001000
 552                       1.0   .001000
 562  564                    2.0   .001000
 572                       1.0   .001000
 582  584                    2.0   .000200
 592                       1.0   .000200
 602  604                    2.0   .000200
 612                       1.0   .000200
 622  624                    2.0   .001000
 632                       1.0   .001000
 642  644                    2.0   .001000
 652                       1.0   .001000
 662  664                    2.0   .001000
 672                       1.0   .000500
 END PHOS-FSTPM

 PHOS-FSTPM
*** high stp
  22   24                   .100   .000200
  32                       .100   .000200
  42   44                   .100   .000200
  52                       .100   .000200
  62   64                   .150   .000200
  72                       .150   .000200
  82   84                   .070   .000200
  92                       .070   .000200
 102  104                    .150   .000200
 112                       .150   .000200
 122  124                    .150   .000200
 132                       .150   .000200
 142  144                    .070   .000200
 152                       .070   .000200
 162  164                    .150   .000200
 172                       .150   .000200
 182  184                    .100   .000200
 192                       .100   .000200
 202  204                    .100   .000200
 212                       .100   .000200
 222  224                    .100   .000200
 232                       .100   .000200
 242  244                    .100   .000200
 252                       .100   .000200
 262  264                    .100   .000200
 272                       .100   .000200
```

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282  284                    .100   .000200
292                        .100   .000200
302  304                    .100   .000200
312                        .100   .000200
322  324                    .050   .000200
332                        .050   .000200
342  344                    .150   .000200
352                        .150   .000200
362  364                    .070   .000200
372                        .070   .000200
382  384                    .070   .000200
392                        .070   .000200
402  404                    .150   .000200
412                        .150   .000200
422  424                    .100   .000200
432                        .100   .000200
442  444                    .150   .000200
452                        .150   .000200
462  464                    .070   .000200
472                        .070   .000200
482  484                    .100   .000200
492                        .100   .000200
502  504                    .150   .000200
512                        .150   .000200
522  524                    .150   .000200
532                        .150   .000200
542  544                    .100   .000200
552                        .100   .000200
562  564                    .050   .000200
572                        .050   .000200
582  584                    .150   .000200
592                        .150   .000200
602  604                    .150   .000200
612                        .150   .000200
622  624                    .050   .000200
632                        .050   .000200
642  644                    .050   .000200
652                        .050   .000200
662  664                    .070   .000200
672                        .070   .000200
END PHOS-FSTPM

PHOS-FSTPM
  <PLS > Phosphorus first-order rates for groundwater layer (/DAY) ***
  #   #     KDSP      KADP      KIMP      KMP                    ***
 22   24                    0.      0.00
 32                        0.      0.00
 42   44                    0.      0.00
 52                        0.      0.00
 62   64                    0.      0.00
 72                        0.      0.00
 82   84                    0.      0.00
 92                        0.      0.00
102  104                    0.      0.00
112                        0.      0.00
122  124                    0.      0.00
```

```
132                     0.     0.00
142  144                  0.     0.00
152                     0.     0.00
162  164                  0.     0.00
172                     0.     0.00
182  184                  0.     0.00
192                     0.     0.00
202  204                  0.     0.00
212                     0.     0.00
222  224                  0.     0.00
232                     0.     0.00
242  244                  0.     0.00
252                     0.     0.00
262  264                  0.     0.00
272                     0.     0.00
282  284                  0.     0.00
292                     0.     0.00
302  304                  0.     0.00
312                     0.     0.00
322  324                  0.     0.00
332                     0.     0.00
342  344                  0.     0.00
352                     0.     0.00
362  364                  0.     0.00
372                     0.     0.00
382  384                  0.     0.00
392                     0.     0.00
402  404                  0.     0.00
412                     0.     0.00
422  424                  0.     0.00
432                     0.     0.00
442  444                  0.     0.00
452                     0.     0.00
462  464                  0.     0.00
472                     0.     0.00
482  484                  0.     0.00
492                     0.     0.00
502  504                  0.     0.00
512                     0.     0.00
522  524                  0.     0.00
532                     0.     0.00
542  544                  0.     0.00
552                     0.     0.00
562  564                  0.     0.00
572                     0.     0.00
582  584                  0.     0.00
592                     0.     0.00
602  604                  0.     0.00
612                     0.     0.00
622  624                  0.     0.00
632                     0.     0.00
642  644                  0.     0.00
652                     0.     0.00
662  664                  0.     0.00
672                     0.     0.00
END PHOS-FSTPM
```

*** Single-valued Freundlich adsorption
PHOS-CMAX
*** <PLS > Maximum solubility of phosphate

*** #	#	CMAX (PPM)
22	24	50.0
32		50.0
42	44	50.0
52		50.0
62	64	30.0
72		30.0
82	84	50.0
92		50.0
102	104	50.0
112		50.0
122	124	50.0
132		50.0
142	144	50.0
152		50.0
162	164	50.0
172		50.0
182	184	50.0
192		50.0
202	204	50.0
212		50.0
222	224	50.0
232		50.0
242	244	50.0
252		50.0
262	264	50.0
272		50.0
282	284	50.0
292		50.0
302	304	50.0
312		50.0
322	324	50.0
332		50.0
342	344	50.0
352		50.0
362	364	50.0
372		50.0
382	384	50.0
392		50.0
402	404	50.0
412		50.0
422	424	50.0
432		50.0
442	444	50.0
452		50.0
462	464	50.0
472		50.0
482	484	50.0
492		50.0
502	504	50.0
512		50.0

```
 522  524      50.0
 532          50.0
 542  544      50.0
 552          50.0
 562  564      50.0
 572          50.0
 582  584      50.0
 592          50.0
 602  604      50.0
 612          50.0
 622  624      50.0
 632          50.0
 642  644      50.0
 652          50.0
 662  664      50.0
 672          50.0
 END PHOS-CMAX

 PHOS-SVALPM
*** high stp
  22   24       60.        5.      1.50
  32          230.        5.      1.50
  42   44       60.        5.      1.50
  52          230.        5.      1.50
  62   64       60.        5.      1.50
  72          280.        5.      1.50
  82   84       60.        5.      1.50
  92          200.        5.      1.50
 102  104       60.        5.      1.50
 112          280.        5.      1.50
 122  124       60.        5.      1.50
 132          280.        5.      1.50
 142  144       60.        5.      1.50
 152          200.        5.      1.50
 162  164       60.        5.      1.50
 172          280.        5.      1.50
 182  184       60.        5.      1.50
 192          230.        5.      1.50
 202  204       60.        5.      1.50
 212          230.        5.      1.50
 222  224       60.        5.      1.50
 232          230.        5.      1.50
 242  244       60.        5.      1.50
 252          230.        5.      1.50
 262  264       60.        5.      1.50
 272          230.        5.      1.50
 282  284       60.        5.      1.50
 292          230.        5.      1.50
 302  304       60.        5.      1.50
 312          230.        5.      1.50
 322  324       60.        5.      1.50
 332           70.        5.      1.50
 342  344       60.        5.      1.50
 352          280.        5.      1.50
 362  364       60.        5.      1.50
 372          200.        5.      1.50
```

```
382  384      60.       5.     1.50
392          200.       5.     1.50
402  404      60.       5.     1.50
412          280.       5.     1.50
422  424      60.       5.     1.50
432          230.       5.     1.50
442  444      60.       5.     1.50
452          280.       5.     1.50
462  464      60.       5.     1.50
472          200.       5.     1.50
482  484      60.       5.     1.50
492          230.       5.     1.50
502  504      60.       5.     1.50
512          280.       5.     1.50
522  524      60.       5.     1.50
532          280.       5.     1.50
542  544      60.       5.     1.50
552          230.       5.     1.50
562  564      60.       5.     1.50
572           70.       5.     1.50
582  584      60.       5.     1.50
592          280.       5.     1.50
602  604      60.       5.     1.50
612          280.       5.     1.50
622  624      60.       5.     1.50
632           70.       5.     1.50
642  644      60.       5.     1.50
652           70.       5.     1.50
662  664      60.       5.     1.50
672          200.       5.     1.50
END PHOS-SVALPM

PHOS-SVALPM
*** high stp
 22   24      35.       5.     1.50
 32          120.       5.     1.50
 42   44      35.       5.     1.50
 52          120.       5.     1.50
 62   64      35.       5.     1.50
 72          180.       5.     1.50
 82   84      35.       5.     1.50
 92          100.       5.     1.50
102  104      35.       5.     1.50
112          180.       5.     1.50
122  124      35.       5.     1.20
132          180.       5.     1.20
142  144      35.       5.     1.50
152          100.       5.     1.50
162  164      35.       5.     1.50
172          180.       5.     1.50
182  184      35.       5.     1.50
192          120.       5.     1.50
202  204      35.       5.     1.50
212          110.       5.     1.50
222  224      35.       5.     1.50
232          110.       5.     1.50
```

```
242  244      35.      5.     1.50
252          110.      5.     1.50
262  264      35.      5.     1.50
272          110.      5.     1.50
282  284      35.      5.     1.50
292          110.      5.     1.50
302  304      35.      5.     1.50
312          110.      5.     1.50
322  324      35.      5.     1.50
332           70.      5.     1.50
342  344      35.      5.     1.50
352          180.      5.     1.50
362  364      35.      5.     1.50
372          100.      5.     1.50
382  384      35.      5.     1.20
392          100.      5.     1.20
402  404      35.      5.     1.50
412          180.      5.     1.50
422  424      35.      5.     1.50
432          120.      5.     1.50
442  444      35.      5.     1.50
452          180.      5.     1.50
462  464      35.      5.     1.20
472          100.      5.     1.20
482  484      35.      5.     1.20
492          120.      5.     1.20
502  504      35.      5.     1.50
512          180.      5.     1.50
522  524      35.      5.     1.50
532          180.      5.     1.50
542  544      35.      5.     1.50
552          120.      5.     1.50
562  564      35.      5.     1.50
572           70.      5.     1.50
582  584      35.      5.     1.50
592          180.      5.     1.50
602  604      35.      5.     1.50
612          180.      5.     1.50
622  624      35.      5.     1.50
632           70.      5.     1.50
642  644      35.      5.     1.50
652           70.      5.     1.50
662  664      35.      5.     1.50
672          100.      5.     1.50
END PHOS-SVALPM

PHOS-SVALPM
***   Freundlich parameters for lower layer
*** <PLS >      XFIX        K1        N1
*** #    #     (PPM)
 22   24       10.       3.     1.50
 32           10.       3.     1.50
 42   44       10.       3.     1.50
 52           10.       3.     1.50
 62   64       10.       3.     1.50
 72           10.       3.     1.50
```

82	84	10.	3.	1.50
92		10.	3.	1.50
102	104	10.	3.	1.50
112		10.	3.	1.50
122	124	10.	3.	1.50
132		10.	3.	1.50
142	144	10.	3.	1.50
152		10.	3.	1.50
162	164	10.	3.	1.50
172		10.	3.	1.50
182	184	10.	3.	1.50
192		10.	3.	1.50
202	204	10.	3.	1.50
212		10.	3.	1.50
222	224	10.	3.	1.50
232		10.	3.	1.50
242	244	10.	3.	1.50
252		10.	3.	1.50
262	264	10.	3.	1.50
272		10.	3.	1.50
282	284	10.	3.	1.50
292		10.	3.	1.50
302	304	10.	3.	1.50
312		10.	3.	1.50
322	324	10.	3.	1.50
332		10.	3.	1.50
342	344	10.	3.	1.50
352		10.	3.	1.50
362	364	10.	3.	1.50
372		10.	3.	1.50
382	384	10.	3.	1.50
392		10.	3.	1.50
402	404	10.	3.	1.50
412		10.	3.	1.50
422	424	10.	3.	1.50
432		10.	3.	1.50
442	444	10.	3.	1.50
452		10.	3.	1.50
462	464	10.	3.	1.50
472		10.	3.	1.50
482	484	10.	3.	1.50
492		10.	3.	1.50
502	504	10.	3.	1.50
512		10.	3.	1.50
522	524	10.	3.	1.50
532		10.	3.	1.50
542	544	10.	3.	1.50
552		10.	3.	1.50
562	564	10.	3.	1.50
572		10.	3.	1.50
582	584	10.	3.	1.50
592		10.	3.	1.50
602	604	10.	3.	1.50
612		10.	3.	1.50
622	624	10.	3.	1.50
632		10.	3.	1.50

```
 642  644      10.       3.     1.50
 652          10.       3.     1.50
 662  664      10.       3.     1.50
 672          10.       3.     1.50
 END PHOS-SVALPM

 PHOS-SVALPM
***   Freundlich parameters for groundwater layer
*** <PLS >      XFIX        K1        N1
*** #    #     (PPM)
  22   24      12.       5.     1.50
  32          12.       5.     1.50
  42   44      12.       5.     1.50
  52          12.       5.     1.50
  62   64      12.       5.     1.50
  72          12.       5.     1.50
  82   84      12.       5.     1.50
  92          12.       5.     1.50
 102  104      12.       5.     1.50
 112          12.       5.     1.50
 122  124      12.       5.     1.50
 132          12.       5.     1.50
 142  144      12.       5.     1.50
 152          12.       5.     1.50
 162  164      12.       5.     1.50
 172          12.       5.     1.50
 182  184      12.       5.     1.50
 192          12.       5.     1.50
 202  204      12.       5.     1.50
 212          12.       5.     1.50
 222  224      12.       5.     1.50
 232          12.       5.     1.50
 242  244      12.       5.     1.50
 252          12.       5.     1.50
 262  264      12.       5.     1.50
 272          12.       5.     1.50
 282  284      12.       5.     1.50
 292          12.       5.     1.50
 302  304      12.       5.     1.50
 312          12.       5.     1.50
 322  324      12.       5.     1.50
 332          12.       5.     1.50
 342  344      12.       5.     1.50
 352          12.       5.     1.50
 362  364      12.       5.     1.50
 372          12.       5.     1.50
 382  384      12.       5.     1.50
 392          12.       5.     1.50
 402  404      12.       5.     1.50
 412          12.       5.     1.50
 422  424      12.       5.     1.50
 432          12.       5.     1.50
 442  444      12.       5.     1.50
 452          12.       5.     1.50
 462  464      12.       5.     1.50
 472          12.       5.     1.50
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482  484      12.      5.     1.50
492          12.      5.     1.50
502  504      12.      5.     1.50
512          12.      5.     1.50
522  524      12.      5.     1.50
532          12.      5.     1.50
542  544      12.      5.     1.50
552          12.      5.     1.50
562  564      12.      5.     1.50
572          12.      5.     1.50
582  584      12.      5.     1.50
592          12.      5.     1.50
602  604      12.      5.     1.50
612          12.      5.     1.50
622  624      12.      5.     1.50
632          12.      5.     1.50
642  644      12.      5.     1.50
652          12.      5.     1.50
662  664      12.      5.     1.50
672          12.      5.     1.50
END PHOS-SVALPM

*** Plant uptake of phosphorus - yield-based method
PHOS-YIELD
  <PLS >    PUPTGT    PMXRAT ***
  # -  #   (LB/AC)          ***
22   24      20.0      1.8
32          25.0      1.8
42   44      20.0      1.8
52          25.0      1.8
62   64      20.0      1.8
72          25.0      1.8
82   84      20.0      1.8
92          25.0      1.8
102  104     20.0      1.8
112         25.0      1.8
122  124     20.0      1.8
132         25.0      1.8
142  144     20.0      1.8
152         25.0      1.8
162  164     20.0      1.8
172         25.0      1.8
182  184     20.0      1.8
192         25.0      1.8
202  204     20.0      1.8
212         25.0      1.8
222  224     20.0      1.8
232         25.0      1.8
242  244     20.0      1.8
252         25.0      1.8
262  264     20.0      1.8
272         25.0      1.8
282  284     20.0      1.8
292         25.0      1.8
302  304     20.0      1.8
312         25.0      1.8
```

```
322  324     20.0      1.8
332         25.0      1.8
342  344     20.0      1.8
352         25.0      1.8
362  364     20.0      1.8
372         25.0      1.8
382  384     20.0      1.8
392         25.0      1.8
402  404     20.0      1.8
412         25.0      1.8
422  424     20.0      1.8
432         25.0      1.8
442  444     20.0      1.8
452         25.0      1.8
462  464     20.0      1.8
472         25.0      1.8
482  484     20.0      1.8
492         25.0      1.8
502  504     20.0      1.8
512         25.0      1.8
522  524     20.0      1.8
532         25.0      1.8
542  544     20.0      1.8
552         25.0      1.8
562  564     20.0      1.8
572         25.0      1.8
582  584     20.0      1.8
592         25.0      1.8
602  604     20.0      1.8
612         25.0      1.8
622  624     20.0      1.8
632         25.0      1.8
642  644     20.0      1.8
652         25.0      1.8
662  664     20.0      1.8
672         25.0      1.8
END PHOS-YIELD

MON-PUPT-FR1
 <PLS >  Monthly fractions of plant uptake target                    ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
 22   24  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
 32       .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
 42   44  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
 52       .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
 62   64  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
 72       .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
 82   84  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
 92       .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
102  104  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
112       .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
122  124  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
132       .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
142  144  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
152       .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
162  164  .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
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172      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
182  184 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
192      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
202  204 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
212      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
222  224 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
232      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
242  244 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
252      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
262  264 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
272      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
282  284 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
292      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
302  304 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
312      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
322  324 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
332      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
342  344 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
352      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
362  364 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
372      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
382  384 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
392      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
402  404 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
412      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
422  424 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
432      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
442  444 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
452      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
462  464 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
472      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
482  484 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
492      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
502  504 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
512      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
522  524 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
532      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
542  544 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
552      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
562  564 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
572      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
582  584 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
592      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
602  604 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
612      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
622  624 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
632      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
642  644 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
652      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
662  664 .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
672      .01  .04  .09 .115 .135 .145  .15  .14 .095  .05 .025 .005
END MON-PUPT-FR1

MON-PUPT-FR2
 <PLS >  Monthly fractions for plant uptake target from surface layer ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC   ***
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22	24	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
32		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
42	44	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
52		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
62	64	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
72		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
82	84	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
92		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
102	104	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
112		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
122	124	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
132		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
142	144	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
152		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
162	164	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
172		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
182	184	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
192		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
202	204	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
212		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
222	224	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
232		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
242	244	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
252		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
262	264	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
272		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
282	284	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
292		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
302	304	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
312		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
322	324	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
332		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
342	344	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
352		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
362	364	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
372		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
382	384	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
392		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
402	404	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
412		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
422	424	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
432		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
442	444	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
452		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
462	464	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
472		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
482	484	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
492		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
502	504	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
512		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
522	524	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
532		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
542	544	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
552		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
562	564	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
572		.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05

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582  584  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
592       .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
602  604  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
612       .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
622  624  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
632       .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
642  644  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
652       .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
662  664  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
672       .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05  .05
END MON-PUPT-FR2

MON-PUPT-FR2
 <PLS >  Monthly fractions for plant uptake target from upper layer   ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC   ***
 22   24  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
 32       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
 42   44  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
 52       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
 62   64  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
 72       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
 82   84  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
 92       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
102  104  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
112       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
122  124  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
132       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
142  144  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
152       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
162  164  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
172       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
182  184  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
192       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
202  204  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
212       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
222  224  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
232       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
242  244  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
252       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
262  264  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
272       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
282  284  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
292       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
302  304  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
312       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
322  324  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
332       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
342  344  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
352       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
362  364  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
372       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
382  384  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
392       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
402  404  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
412       .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
422  424  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
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432      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
442  444  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
452      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
462  464  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
472      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
482  484  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
492      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
502  504  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
512      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
522  524  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
532      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
542  544  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
552      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
562  564  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
572      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
582  584  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
592      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
602  604  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
612      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
622  624  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
632      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
642  644  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
652      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
662  664  .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
672      .80  .80  .80  .80  .80  .75  .70  .70  .70  .75  .80  .80
END MON-PUPT-FR2

MON-PUPT-FR2
 <PLS >  Monthly fractions for plant uptake target from lower layer   ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC   ***
 22   24  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
 32       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
 42   44  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
 52       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
 62   64  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
 72       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
 82   84  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
 92       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
102  104  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
112       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
122  124  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
132       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
142  144  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
152       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
162  164  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
172       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
182  184  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
192       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
202  204  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
212       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
222  224  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
232       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
242  244  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
252       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
262  264  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
272       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
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282  284  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
292       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
302  304  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
312       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
322  324  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
332       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
342  344  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
352       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
362  364  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
372       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
382  384  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
392       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
402  404  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
412       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
422  424  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
432       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
442  444  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
452       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
462  464  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
472       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
482  484  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
492       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
502  504  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
512       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
522  524  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
532       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
542  544  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
552       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
562  564  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
572       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
582  584  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
592       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
602  604  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
612       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
622  624  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
632       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
642  644  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
652       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
662  664  .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
672       .15  .15  .15  .15  .15  .20  .25  .25  .25  .20  .15  .15
END MON-PUPT-FR2

MON-PUPT-FR2
 <PLS >  Monthly fractions for plant uptake target from active gw   ***
 # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
 22  24   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 32       .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 42  44   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 52       .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 62  64   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 72       .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 82  84   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
 92       .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
102 104   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
112       .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
122 124   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
```

```
132      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
142  144  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
152      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
162  164  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
172      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
182  184  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
192      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
202  204  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
212      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
222  224  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
232      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
242  244  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
252      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
262  264  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
272      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
282  284  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
292      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
302  304  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
312      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
322  324  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
332      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
342  344  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
352      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
362  364  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
372      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
382  384  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
392      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
402  404  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
412      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
422  424  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
432      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
442  444  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
452      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
462  464  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
472      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
482  484  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
492      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
502  504  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
512      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
522  524  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
532      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
542  544  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
552      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
562  564  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
572      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
582  584  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
592      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
602  604  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
612      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
622  624  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
632      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
642  644  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
652      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
662  664  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
672      .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0  .0
END MON-PUPT-FR2
```

*** Initial storages of Phosphorus
PHOS-STOR1
*** high stp

22	24	15.	5.0	0.00	0.
32		15.	25.0	0.00	0.
42	44	15.	5.0	0.00	0.
52		15.	25.0	0.00	0.
62	64	15.	5.0	0.00	0.
72		15.	35.0	0.00	0.
82	84	15.	5.0	0.00	0.
92		15.	15.0	0.00	0.
102	104	15.	5.0	0.00	0.
112		15.	35.0	0.00	0.
122	124	15.	5.0	0.00	0.
132		15.	35.0	0.00	0.
142	144	15.	5.0	0.00	0.
152		15.	15.0	0.00	0.
162	164	15.	5.0	0.00	0.
172		15.	35.0	0.00	0.
182	184	15.	5.0	0.00	0.
192		15.	25.0	0.00	0.
202	204	15.	5.0	0.00	0.
212		15.	25.0	0.00	0.
222	224	15.	5.0	0.00	0.
232		15.	25.0	0.00	0.
242	244	15.	5.0	0.00	0.
252		15.	25.0	0.00	0.
262	264	15.	5.0	0.00	0.
272		15.	25.0	0.00	0.
282	284	15.	5.0	0.00	0.
292		15.	25.0	0.00	0.
302	304	15.	5.0	0.00	0.
312		15.	25.0	0.00	0.
322	324	15.	5.0	0.00	0.
332		15.	10.0	0.00	0.
342	344	15.	5.0	0.00	0.
352		15.	35.0	0.00	0.
362	364	15.	5.0	0.00	0.
372		15.	15.0	0.00	0.
382	384	15.	5.0	0.00	0.
392		15.	15.0	0.00	0.
402	404	15.	5.0	0.00	0.
412		15.	35.0	0.00	0.
422	424	15.	5.0	0.00	0.
432		15.	25.0	0.00	0.
442	444	15.	5.0	0.00	0.
452		15.	35.0	0.00	0.
462	464	15.	5.0	0.00	0.
472		15.	15.0	0.00	0.
482	484	15.	5.0	0.00	0.
492		15.	25.0	0.00	0.
502	504	15.	5.0	0.00	0.
512		15.	35.0	0.00	0.
522	524	15.	5.0	0.00	0.
532		15.	35.0	0.00	0.

```
 542  544      15.      5.0     0.00       0.
 552           15.     25.0     0.00       0.
 562  564      15.      5.0     0.00       0.
 572           15.     10.0     0.00       0.
 582  584      15.      5.0     0.00       0.
 592           15.     35.0     0.00       0.
 602  604      15.      5.0     0.00       0.
 612           15.     35.0     0.00       0.
 622  624      15.      5.0     0.00       0.
 632           15.     10.0     0.00       0.
 642  644      15.      5.0     0.00       0.
 652           15.     10.0     0.00       0.
 662  664      15.      5.0     0.00       0.
 672           15.     15.0     0.00       0.
 END PHOS-STOR1

 PHOS-STOR1
*** high stp
  22   24      50.     60.0     1.00       0.
  32           50.    260.0     1.00       0.
  42   44      50.     60.0     1.00       0.
  52           50.    260.0     1.00       0.
  62   64      50.     60.0     1.00       0.
  72           50.    430.0     1.00       0.
  82   84      50.     60.0     1.00       0.
  92           50.    150.0     1.00       0.
 102  104      50.     60.0     1.00       0.
 112           50.    430.0     1.00       0.
 122  124      50.     60.0     1.00       0.
 132           50.    430.0     1.00       0.
 142  144      50.     60.0     1.00       0.
 152           50.    150.0     1.00       0.
 162  164      50.     60.0     1.00       0.
 172           50.    430.0     1.00       0.
 182  184      50.     60.0     1.00       0.
 192           50.    260.0     1.00       0.
 202  204      50.     60.0     1.00       0.
 212           50.    260.0     1.00       0.
 222  224      50.     60.0     1.00       0.
 232           50.    260.0     1.00       0.
 242  244      50.     60.0     1.00       0.
 252           50.    260.0     1.00       0.
 262  264      50.     60.0     1.00       0.
 272           50.    260.0     1.00       0.
 282  284      50.     60.0     1.00       0.
 292           50.    260.0     1.00       0.
 302  304      50.     60.0     1.00       0.
 312           50.    260.0     1.00       0.
 322  324      50.     60.0     1.00       0.
 332           50.     80.0     1.00       0.
 342  344      50.     60.0     1.00       0.
 352           50.    430.0     1.00       0.
 362  364      50.     60.0     1.00       0.
 372           50.    150.0     1.00       0.
 382  384      50.     60.0     1.00       0.
 392           50.    150.0     1.00       0.
```

```
402  404      50.     60.0     1.00       0.
412           50.    430.0     1.00       0.
422  424      50.     60.0     1.00       0.
432           50.    260.0     1.00       0.
442  444      50.     60.0     1.00       0.
452           50.    430.0     1.00       0.
462  464      50.     60.0     1.00       0.
472           50.    150.0     1.00       0.
482  484      50.     60.0     1.00       0.
492           50.    260.0     1.00       0.
502  504      50.     60.0     1.00       0.
512           50.    430.0     1.00       0.
522  524      50.     60.0     1.00       0.
532           50.    430.0     1.00       0.
542  544      50.     60.0     1.00       0.
552           50.    260.0     1.00       0.
562  564      50.     60.0     1.00       0.
572           50.     80.0     1.00       0.
582  584      50.     60.0     1.00       0.
592           50.    430.0     1.00       0.
602  604      50.     60.0     1.00       0.
612           50.    430.0     1.00       0.
622  624      50.     60.0     1.00       0.
632           50.     80.0     1.00       0.
642  644      50.     60.0     1.00       0.
652           50.     80.0     1.00       0.
662  664      50.     60.0     1.00       0.
672           50.    150.0     1.00       0.
END PHOS-STOR1

PHOS-STOR1
 <PLS > Initial phosphorus in lower layer (LB/AC)     ***
 #   #     ORGP     P4AD     P4SU     PLTP      ***
 22  24     120.    120.0     1.5       0.
 32          120.    120.0     1.5       0.
 42  44     120.    120.0     1.5       0.
 52          120.    120.0     1.5       0.
 62  64     120.    120.0     1.5       0.
 72          120.    120.0     1.5       0.
 82  84     120.    120.0     1.5       0.
 92          120.    120.0     1.5       0.
102  104     120.    120.0     1.5       0.
112          120.    120.0     1.5       0.
122  124     120.    120.0     1.5       0.
132          120.    120.0     1.5       0.
142  144     120.    120.0     1.5       0.
152          120.    120.0     1.5       0.
162  164     120.    120.0     1.5       0.
172          120.    120.0     1.5       0.
182  184     120.    120.0     1.5       0.
192          120.    120.0     1.5       0.
202  204     120.    120.0     1.5       0.
212          120.    120.0     1.5       0.
222  224     120.    120.0     1.5       0.
232          120.    120.0     1.5       0.
242  244     120.    120.0     1.5       0.
```

```
252          120.    120.0      1.5       0.
262  264      120.    120.0      1.5       0.
272          120.    120.0      1.5       0.
282  284      120.    120.0      1.5       0.
292          120.    120.0      1.5       0.
302  304      120.    120.0      1.5       0.
312          120.    120.0      1.5       0.
322  324      120.    120.0      1.5       0.
332          120.    120.0      1.5       0.
342  344      120.    120.0      1.5       0.
352          120.    120.0      1.5       0.
362  364      120.    120.0      1.5       0.
372          120.    120.0      1.5       0.
382  384      120.    120.0      1.5       0.
392          120.    120.0      1.5       0.
402  404      120.    120.0      1.5       0.
412          120.    120.0      1.5       0.
422  424      120.    120.0      1.5       0.
432          120.    120.0      1.5       0.
442  444      120.    120.0      1.5       0.
452          120.    120.0      1.5       0.
462  464      120.    120.0      1.5       0.
472          120.    120.0      1.5       0.
482  484      120.    120.0      1.5       0.
492          120.    120.0      1.5       0.
502  504      120.    120.0      1.5       0.
512          120.    120.0      1.5       0.
522  524      120.    120.0      1.5       0.
532          120.    120.0      1.5       0.
542  544      120.    120.0      1.5       0.
552          120.    120.0      1.5       0.
562  564      120.    120.0      1.5       0.
572          120.    120.0      1.5       0.
582  584      120.    120.0      1.5       0.
592          120.    120.0      1.5       0.
602  604      120.    120.0      1.5       0.
612          120.    120.0      1.5       0.
622  624      120.    120.0      1.5       0.
632          120.    120.0      1.5       0.
642  644      120.    120.0      1.5       0.
652          120.    120.0      1.5       0.
662  664      120.    120.0      1.5       0.
672          120.    120.0      1.5       0.
END PHOS-STOR1

PHOS-STOR1
 <PLS > Initial phosphorus in groundwater layer(LB/AC)***
 #   #     ORGP     P4AD     P4SU     PLTP      ***
 22  24     80.     220.      1.0      0.
 32         80.     220.      1.0      0.
 42  44     80.     220.      1.0      0.
 52         80.     220.      1.0      0.
 62  64     80.     220.      1.0      0.
 72         80.     220.      1.0      0.
 82  84     80.     220.      1.0      0.
 92         80.     220.      1.0      0.
```

102	104	80.	220.	1.0	0.
112		80.	220.	1.0	0.
122	124	80.	220.	1.0	0.
132		80.	220.	1.0	0.
142	144	80.	220.	1.0	0.
152		80.	220.	1.0	0.
162	164	80.	220.	1.0	0.
172		80.	220.	1.0	0.
182	184	80.	220.	1.0	0.
192		80.	220.	1.0	0.
202	204	80.	220.	1.0	0.
212		80.	220.	1.0	0.
222	224	80.	220.	1.0	0.
232		80.	220.	1.0	0.
242	244	80.	220.	1.0	0.
252		80.	220.	1.0	0.
262	264	80.	220.	1.0	0.
272		80.	220.	1.0	0.
282	284	80.	220.	1.0	0.
292		80.	220.	1.0	0.
302	304	80.	220.	1.0	0.
312		80.	220.	1.0	0.
322	324	80.	220.	1.0	0.
332		80.	220.	1.0	0.
342	344	80.	220.	1.0	0.
352		80.	220.	1.0	0.
362	364	80.	220.	1.0	0.
372		80.	220.	1.0	0.
382	384	80.	220.	1.0	0.
392		80.	220.	1.0	0.
402	404	80.	220.	1.0	0.
412		80.	220.	1.0	0.
422	424	80.	220.	1.0	0.
432		80.	220.	1.0	0.
442	444	80.	220.	1.0	0.
452		80.	220.	1.0	0.
462	464	80.	220.	1.0	0.
472		80.	220.	1.0	0.
482	484	80.	220.	1.0	0.
492		80.	220.	1.0	0.
502	504	80.	220.	1.0	0.
512		80.	220.	1.0	0.
522	524	80.	220.	1.0	0.
532		80.	220.	1.0	0.
542	544	80.	220.	1.0	0.
552		80.	220.	1.0	0.
562	564	80.	220.	1.0	0.
572		80.	220.	1.0	0.
582	584	80.	220.	1.0	0.
592		80.	220.	1.0	0.
602	604	80.	220.	1.0	0.
612		80.	220.	1.0	0.
622	624	80.	220.	1.0	0.
632		80.	220.	1.0	0.
642	644	80.	220.	1.0	0.
652		80.	220.	1.0	0.

```
662  664       80.      220.       1.0        0.
672            80.      220.       1.0        0.
END PHOS-STOR1

PHOS-STOR2
  <PLS > Initial phosphorus in interflow  (LB/AC)       ***
  #   #      ORGP      P4AD      P4SU      PLTP       ***
 22   24        0.
 32            0.
 42   44        0.
 52            0.
 62   64        0.
 72            0.
 82   84        0.
 92            0.
102  104        0.
112            0.
122  124        0.
132            0.
142  144        0.
152            0.
162  164        0.
172            0.
182  184        0.
192            0.
202  204        0.
212            0.
222  224        0.
232            0.
242  244        0.
252            0.
262  264        0.
272            0.
282  284        0.
292            0.
302  304        0.
312            0.
322  324        0.
332            0.
342  344        0.
352            0.
362  364        0.
372            0.
382  384        0.
392            0.
402  404        0.
412            0.
422  424        0.
432            0.
442  444        0.
452            0.
462  464        0.
472            0.
482  484        0.
492            0.
502  504        0.
```

```
  512          0.
  522  524       0.
  532          0.
  542  544       0.
  552          0.
  562  564       0.
  572          0.
  582  584       0.
  592          0.
  602  604       0.
  612          0.
  622  624       0.
  632          0.
  642  644       0.
  652          0.
  662  664       0.
  672          0.
  END PHOS-STOR2

END PERLND

IMPLND
  ACTIVITY
*** <ILS >              Active Sections
*** x -  x ATMP SNOW IWAT  SLD  IWG IQAL
   26  668    1    0    1    1    1    1
  END ACTIVITY

  PRINT-INFO
*** <ILS > ******** Print-flags ******** PIVL  PYR
*** x -  x ATMP SNOW IWAT  SLD  IWG IQAL *********
   26  668    6    6    6    6    6    6    1   12
  END PRINT-INFO

  BINARY-INFO
*** <ILS > **** Binary-Output-flags **** PIVL  PYR
*** x -  x ATMP SNOW IWAT  SLD  IWG IQAL *********
   26  668    6    6    6    6    6    6    1   12
  END BINARY-INFO

  GEN-INFO
***            Name             Unit-systems   Printer BinaryOut
*** <ILS >                        t-series Engl Metr Engl Metr
*** x -  x                        in  out
   26     Developed, Open            1    1    0    0   95    0
   27     Developed, Low             1    1    0    0   95    0
   28     Developed, Med/High        1    1    0    0   95    0
   46     Developed, Open            1    1    0    0   95    0
   47     Developed, Low             1    1    0    0   95    0
   48     Developed, Med/High        1    1    0    0   95    0
   66     Developed, Open            1    1    0    0   95    0
   67     Developed, Low             1    1    0    0   95    0
   68     Developed, Med/High        1    1    0    0   95    0
   86     Developed, Open            1    1    0    0   95    0
   87     Developed, Low             1    1    0    0   95    0
   88     Developed, Med/High        1    1    0    0   95    0
```

106	Developed, Open	1	1	0	0	95	0
107	Developed, Low	1	1	0	0	95	0
108	Developed, Med/High	1	1	0	0	95	0
126	Developed, Open	1	1	0	0	95	0
127	Developed, Low	1	1	0	0	95	0
128	Developed, Med/High	1	1	0	0	95	0
146	Developed, Open	1	1	0	0	95	0
147	Developed, Low	1	1	0	0	95	0
148	Developed, Med/High	1	1	0	0	95	0
166	Developed, Open	1	1	0	0	95	0
167	Developed, Low	1	1	0	0	95	0
168	Developed, Med/High	1	1	0	0	95	0
186	Developed, Open	1	1	0	0	95	0
187	Developed, Low	1	1	0	0	95	0
188	Developed, Med/High	1	1	0	0	95	0
206	Developed, Open	1	1	0	0	95	0
207	Developed, Low	1	1	0	0	95	0
208	Developed, Med/High	1	1	0	0	95	0
226	Developed, Open	1	1	0	0	95	0
227	Developed, Low	1	1	0	0	95	0
228	Developed, Med/High	1	1	0	0	95	0
246	Developed, Open	1	1	0	0	95	0
247	Developed, Low	1	1	0	0	95	0
248	Developed, Med/High	1	1	0	0	95	0
266	Developed, Open	1	1	0	0	95	0
267	Developed, Low	1	1	0	0	95	0
268	Developed, Med/High	1	1	0	0	95	0
286	Developed, Open	1	1	0	0	95	0
287	Developed, Low	1	1	0	0	95	0
288	Developed, Med/High	1	1	0	0	95	0
306	Developed, Open	1	1	0	0	95	0
307	Developed, Low	1	1	0	0	95	0
308	Developed, Med/High	1	1	0	0	95	0
326	Developed, Open	1	1	0	0	95	0
327	Developed, Low	1	1	0	0	95	0
328	Developed, Med/High	1	1	0	0	95	0
346	Developed, Open	1	1	0	0	95	0
347	Developed, Low	1	1	0	0	95	0
348	Developed, Med/High	1	1	0	0	95	0
366	Developed, Open	1	1	0	0	95	0
367	Developed, Low	1	1	0	0	95	0
368	Developed, Med/High	1	1	0	0	95	0
386	Developed, Open	1	1	0	0	95	0
387	Developed, Low	1	1	0	0	95	0
388	Developed, Med/High	1	1	0	0	95	0
406	Developed, Open	1	1	0	0	95	0
407	Developed, Low	1	1	0	0	95	0
408	Developed, Med/High	1	1	0	0	95	0
426	Developed, Open	1	1	0	0	95	0
427	Developed, Low	1	1	0	0	95	0
428	Developed, Med/High	1	1	0	0	95	0
446	Developed, Open	1	1	0	0	95	0
447	Developed, Low	1	1	0	0	95	0
448	Developed, Med/High	1	1	0	0	95	0
466	Developed, Open	1	1	0	0	95	0
467	Developed, Low	1	1	0	0	95	0

```
 468    Developed, Med/High        1    1    0    0   95    0
 486    Developed, Open            1    1    0    0   95    0
 487    Developed, Low             1    1    0    0   95    0
 488    Developed, Med/High        1    1    0    0   95    0
 506    Developed, Open            1    1    0    0   95    0
 507    Developed, Low             1    1    0    0   95    0
 508    Developed, Med/High        1    1    0    0   95    0
 526    Developed, Open            1    1    0    0   95    0
 527    Developed, Low             1    1    0    0   95    0
 528    Developed, Med/High        1    1    0    0   95    0
 546    Developed, Open            1    1    0    0   95    0
 547    Developed, Low             1    1    0    0   95    0
 548    Developed, Med/High        1    1    0    0   95    0
 566    Developed, Open            1    1    0    0   95    0
 567    Developed, Low             1    1    0    0   95    0
 568    Developed, Med/High        1    1    0    0   95    0
 586    Developed, Open            1    1    0    0   95    0
 587    Developed, Low             1    1    0    0   95    0
 588    Developed, Med/High        1    1    0    0   95    0
 606    Developed, Open            1    1    0    0   95    0
 607    Developed, Low             1    1    0    0   95    0
 608    Developed, Med/High        1    1    0    0   95    0
 626    Developed, Open            1    1    0    0   95    0
 627    Developed, Low             1    1    0    0   95    0
 628    Developed, Med/High        1    1    0    0   95    0
 646    Developed, Open            1    1    0    0   95    0
 647    Developed, Low             1    1    0    0   95    0
 648    Developed, Med/High        1    1    0    0   95    0
 666    Developed, Open            1    1    0    0   95    0
 667    Developed, Low             1    1    0    0   95    0
 668    Developed, Med/High        1    1    0    0   95    0
 END GEN-INFO

 IWAT-PARM1
*** <ILS >        Flags
*** x -  x CSNO RTOP  VRS  VNN RTLI
  26  668    0    1    0    0    0
 END IWAT-PARM1

 IWAT-PARM2
*** <ILS >      LSUR     SLSUR      NSUR     RETSC
*** x -  x      (ft)                      (in)
  26   28       150     0.030      0.05       0.1
  46   48       150     0.034      0.05       0.1
  66   68       150     0.023      0.05       0.1
  86   88       150     0.020      0.05       0.1
 106  108       150     0.015      0.05       0.1
 126  128       150     0.016      0.05       0.1
 146  148       150     0.023      0.05       0.1
 166  168       150     0.018      0.05       0.1
 186  188       150     0.014      0.05       0.1
 206  208       150     0.033      0.05       0.1
 226  228       150     0.022      0.05       0.1
 246  248       150     0.019      0.05       0.1
 266  268       150     0.023      0.05       0.1
 286  288       150     0.038      0.05       0.1
```

```
 306  308      150     0.029     0.05      0.1
 326  328      150     0.041     0.05      0.1
 346  348      150     0.019     0.05      0.1
 366  368      150     0.027     0.05      0.1
 386  388      150     0.015     0.05      0.1
 406  408      150     0.030     0.05      0.1
 426  428      150     0.019     0.05      0.1
 446  448      150     0.016     0.05      0.1
 466  468      150     0.014     0.05      0.1
 486  488      200     0.011     0.05      0.1
 506  508      150     0.014     0.05      0.1
 526  528      200     0.013     0.05      0.1
 546  548      150     0.035     0.05      0.1
 566  568      150     0.047     0.05      0.1
 586  588      150     0.031     0.05      0.1
 606  608      150     0.015     0.05      0.1
 626  628      150     0.027     0.05      0.1
 646  648      150     0.025     0.05      0.1
 666  668      150     0.024     0.05      0.1
 END IWAT-PARM2

 IWAT-PARM3
*** <ILS >    PETMAX    PETMIN
*** x -  x   (deg F)   (deg F)
  26  668       40.       35.
 END IWAT-PARM3

 IWAT-STATE1
*** <ILS >  IWATER state variables (inches)
*** x -  x      RETS      SURS
  26  668      0.01      0.01
 END IWAT-STATE1

 SLD-PARM1
*** <ILS >     Flags
*** x -  x VASD VRSD SDOP
  26  668    0    0    1
 END SLD-PARM1

 SLD-PARM2
***           KEIM      JEIM    ACCSDP    REMSDP
*** <ILS >                      tons/      /day
*** x -  x                     ac.day
*** Developed, Open
  26          0.05       2.    0.0006      0.02
*** Developed, Low
  27          0.05       2.    0.0009      0.02
*** Developed, Med/High
  28          0.05       2.    0.0015      0.02
  46          0.05       2.    0.0006      0.02
  47          0.05       2.    0.0009      0.02
  48          0.05       2.    0.0015      0.02
  66          0.05       2.    0.0006      0.02
  67          0.05       2.    0.0009      0.02
  68          0.05       2.    0.0015      0.02
  86          0.05       2.    0.0006      0.02
```

87	0.05	2.	0.0009	0.02
88	0.05	2.	0.0015	0.02
106	0.05	2.	0.0006	0.02
107	0.05	2.	0.0009	0.02
108	0.05	2.	0.0015	0.02
126	0.05	2.	0.0006	0.02
127	0.05	2.	0.0009	0.02
128	0.05	2.	0.0015	0.02
146	0.05	2.	0.0006	0.02
147	0.05	2.	0.0009	0.02
148	0.05	2.	0.0015	0.02
166	0.05	2.	0.0006	0.02
167	0.05	2.	0.0009	0.02
168	0.05	2.	0.0015	0.02
186	0.05	2.	0.0006	0.02
187	0.05	2.	0.0009	0.02
188	0.05	2.	0.0015	0.02
206	0.05	2.	0.0006	0.02
207	0.05	2.	0.0009	0.02
208	0.05	2.	0.0015	0.02
226	0.05	2.	0.0006	0.02
227	0.05	2.	0.0009	0.02
228	0.05	2.	0.0015	0.02
246	0.05	2.	0.0006	0.02
247	0.05	2.	0.0009	0.02
248	0.05	2.	0.0015	0.02
266	0.05	2.	0.0006	0.02
267	0.05	2.	0.0009	0.02
268	0.05	2.	0.0015	0.02
286	0.05	2.	0.0006	0.02
287	0.05	2.	0.0009	0.02
288	0.05	2.	0.0015	0.02
306	0.05	2.	0.0006	0.02
307	0.05	2.	0.0009	0.02
308	0.05	2.	0.0015	0.02
326	0.05	2.	0.0006	0.02
327	0.05	2.	0.0009	0.02
328	0.05	2.	0.0015	0.02
346	0.05	2.	0.0006	0.02
347	0.05	2.	0.0009	0.02
348	0.05	2.	0.0015	0.02
366	0.05	2.	0.0006	0.02
367	0.05	2.	0.0009	0.02
368	0.05	2.	0.0015	0.02
386	0.05	2.	0.0006	0.02
387	0.05	2.	0.0009	0.02
388	0.05	2.	0.0015	0.02
406	0.05	2.	0.0006	0.02
407	0.05	2.	0.0009	0.02
408	0.05	2.	0.0015	0.02
426	0.05	2.	0.0006	0.02
427	0.05	2.	0.0009	0.02
428	0.05	2.	0.0015	0.02
446	0.05	2.	0.0006	0.02
447	0.05	2.	0.0009	0.02
448	0.05	2.	0.0015	0.02

```
  466          0.05        2.    0.0006      0.02
  467          0.05        2.    0.0009      0.02
  468          0.05        2.    0.0015      0.02
  486          0.05        2.    0.0006      0.02
  487          0.05        2.    0.0009      0.02
  488          0.05        2.    0.0015      0.02
  506          0.05        2.    0.0006      0.02
  507          0.05        2.    0.0009      0.02
  508          0.05        2.    0.0015      0.02
  526          0.05        2.    0.0006      0.02
  527          0.05        2.    0.0009      0.02
  528          0.05        2.    0.0015      0.02
  546          0.05        2.    0.0006      0.02
  547          0.05        2.    0.0009      0.02
  548          0.05        2.    0.0015      0.02
  566          0.05        2.    0.0006      0.02
  567          0.05        2.    0.0009      0.02
  568          0.05        2.    0.0015      0.02
  586          0.05        2.    0.0006      0.02
  587          0.05        2.    0.0009      0.02
  588          0.05        2.    0.0015      0.02
  606          0.05        2.    0.0006      0.02
  607          0.05        2.    0.0009      0.02
  608          0.05        2.    0.0015      0.02
  626          0.05        2.    0.0006      0.02
  627          0.05        2.    0.0009      0.02
  628          0.05        2.    0.0015      0.02
  646          0.05        2.    0.0006      0.02
  647          0.05        2.    0.0009      0.02
  648          0.05        2.    0.0015      0.02
  666          0.05        2.    0.0006      0.02
  667          0.05        2.    0.0009      0.02
  668          0.05        2.    0.0015      0.02
  END SLD-PARM2

  SLD-STOR
*** <ILS >  Solids storage (tons/acre)
*** x -  x
   26  668     0.005
  END SLD-STOR

  IWT-PARM1
*** <ILS >  Flags for section IWTGAS
*** x -  x WTFV CSNO
   26  668    1    0
  END IWT-PARM1

  IWT-PARM2
***         Second group of IWTGAS parms
*** <ILS >      ELEV      AWTF      BWTF
*** x -  x      (ft)   (deg F) (deg F/F)
   26  668     1170.      34.0       0.3
  END IWT-PARM2

  MON-AWTF
*** <ILS >  Value of AWTF at start of each month (deg F)
```

```
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
  26  668  40.  40.  42.  45.  55.  65.  70.  70.  70.  55.  45.  40.
  END MON-AWTF

  MON-BWTF
*** <ILS >  Value of BWTF at start of each month (deg F/F)
*** x -  x  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
  26  668  .15  .15  .20  .25  .30  .32  .35  .35  .32  .30  .20  .15
  END MON-BWTF

*** Water Quality Parameters may need to be varied by impervious category
  NQUALS
*** <ILS >
*** x -  xNQUAL
  26  668    4
  END NQUALS

  QUAL-PROPS
*** <ILS >    Identifiers and Flags
*** x -  x      QUALID    QTID  QSD VPFW  QSO  VQO
  26  668NH3+NH4         LBS     0    0    1    0
  END QUAL-PROPS

  QUAL-INPUT
***         Storage on surface and nonseasonal parameters
***            SQO   POTFW   ACQOP  SQOLIM   WSQOP
*** <ILS >  qty/ac qty/ton    qty/  qty/ac   in/hr
*** x -  x                  ac.day
*** Developed, Open
  26       0.0200      0.  0.0019  0.0378     0.5
*** Developed, Low
  27       0.0200      0.  0.0030  0.0605     0.5
*** Developed, Med/High
  28       0.0200      0.  0.0034  0.0680     0.5
  46       0.0200      0.  0.0019  0.0378     0.5
  47       0.0200      0.  0.0030  0.0605     0.5
  48       0.0200      0.  0.0034  0.0680     0.5
  66       0.0200      0.  0.0019  0.0378     0.5
  67       0.0200      0.  0.0030  0.0605     0.5
  68       0.0200      0.  0.0034  0.0680     0.5
  86       0.0200      0.  0.0019  0.0378     0.5
  87       0.0200      0.  0.0030  0.0605     0.5
  88       0.0200      0.  0.0034  0.0680     0.5
 106       0.0200      0.  0.0019  0.0378     0.5
 107       0.0200      0.  0.0030  0.0605     0.5
 108       0.0200      0.  0.0034  0.0680     0.5
 126       0.0200      0.  0.0019  0.0378     0.5
 127       0.0200      0.  0.0030  0.0605     0.5
 128       0.0200      0.  0.0034  0.0680     0.5
 146       0.0200      0.  0.0019  0.0378     0.5
 147       0.0200      0.  0.0030  0.0605     0.5
 148       0.0200      0.  0.0034  0.0680     0.5
 166       0.0200      0.  0.0019  0.0378     0.5
 167       0.0200      0.  0.0030  0.0605     0.5
 168       0.0200      0.  0.0034  0.0680     0.5
 186       0.0200      0.  0.0019  0.0378     0.5
```

187	0.0200	0.	0.0030	0.0605	0.5
188	0.0200	0.	0.0034	0.0680	0.5
206	0.0200	0.	0.0019	0.0378	0.5
207	0.0200	0.	0.0030	0.0605	0.5
208	0.0200	0.	0.0034	0.0680	0.5
226	0.0200	0.	0.0019	0.0378	0.5
227	0.0200	0.	0.0030	0.0605	0.5
228	0.0200	0.	0.0034	0.0680	0.5
246	0.0200	0.	0.0019	0.0378	0.5
247	0.0200	0.	0.0030	0.0605	0.5
248	0.0200	0.	0.0034	0.0680	0.5
266	0.0200	0.	0.0019	0.0378	0.5
267	0.0200	0.	0.0030	0.0605	0.5
268	0.0200	0.	0.0034	0.0680	0.5
286	0.0200	0.	0.0019	0.0378	0.5
287	0.0200	0.	0.0030	0.0605	0.5
288	0.0200	0.	0.0034	0.0680	0.5
306	0.0200	0.	0.0019	0.0378	0.5
307	0.0200	0.	0.0030	0.0605	0.5
308	0.0200	0.	0.0034	0.0680	0.5
326	0.0200	0.	0.0019	0.0378	0.5
327	0.0200	0.	0.0030	0.0605	0.5
328	0.0200	0.	0.0034	0.0680	0.5
346	0.0200	0.	0.0019	0.0378	0.5
347	0.0200	0.	0.0030	0.0605	0.5
348	0.0200	0.	0.0034	0.0680	0.5
366	0.0200	0.	0.0019	0.0378	0.5
367	0.0200	0.	0.0030	0.0605	0.5
368	0.0200	0.	0.0034	0.0680	0.5
386	0.0200	0.	0.0019	0.0378	0.5
387	0.0200	0.	0.0030	0.0605	0.5
388	0.0200	0.	0.0034	0.0680	0.5
406	0.0200	0.	0.0019	0.0378	0.5
407	0.0200	0.	0.0030	0.0605	0.5
408	0.0200	0.	0.0034	0.0680	0.5
426	0.0200	0.	0.0019	0.0378	0.5
427	0.0200	0.	0.0030	0.0605	0.5
428	0.0200	0.	0.0034	0.0680	0.5
446	0.0200	0.	0.0019	0.0378	0.5
447	0.0200	0.	0.0030	0.0605	0.5
448	0.0200	0.	0.0034	0.0680	0.5
466	0.0200	0.	0.0019	0.0378	0.5
467	0.0200	0.	0.0030	0.0605	0.5
468	0.0200	0.	0.0034	0.0680	0.5
486	0.0200	0.	0.0019	0.0378	0.5
487	0.0200	0.	0.0030	0.0605	0.5
488	0.0200	0.	0.0034	0.0680	0.5
506	0.0200	0.	0.0019	0.0378	0.5
507	0.0200	0.	0.0030	0.0605	0.5
508	0.0200	0.	0.0034	0.0680	0.5
526	0.0200	0.	0.0019	0.0378	0.5
527	0.0200	0.	0.0030	0.0605	0.5
528	0.0200	0.	0.0034	0.0680	0.5
546	0.0200	0.	0.0019	0.0378	0.5
547	0.0200	0.	0.0030	0.0605	0.5
548	0.0200	0.	0.0034	0.0680	0.5

```
  566      0.0200      0.  0.0019  0.0378     0.5
  567      0.0200      0.  0.0030  0.0605     0.5
  568      0.0200      0.  0.0034  0.0680     0.5
  586      0.0200      0.  0.0019  0.0378     0.5
  587      0.0200      0.  0.0030  0.0605     0.5
  588      0.0200      0.  0.0034  0.0680     0.5
  606      0.0200      0.  0.0019  0.0378     0.5
  607      0.0200      0.  0.0030  0.0605     0.5
  608      0.0200      0.  0.0034  0.0680     0.5
  626      0.0200      0.  0.0019  0.0378     0.5
  627      0.0200      0.  0.0030  0.0605     0.5
  628      0.0200      0.  0.0034  0.0680     0.5
  646      0.0200      0.  0.0019  0.0378     0.5
  647      0.0200      0.  0.0030  0.0605     0.5
  648      0.0200      0.  0.0034  0.0680     0.5
  666      0.0200      0.  0.0019  0.0378     0.5
  667      0.0200      0.  0.0030  0.0605     0.5
  668      0.0200      0.  0.0034  0.0680     0.5
  END QUAL-INPUT

  QUAL-PROPS
*** <ILS >    Identifiers and Flags
*** x -  x      QUALID    QTID  QSD VPFW  QSO  VQO
   26  668NO3            LBS     0    0    1    0
  END QUAL-PROPS

  QUAL-INPUT
***         Storage on surface and nonseasonal parameters
***            SQO   POTFW   ACQOP  SQOLIM   WSQOP
*** <ILS >  qty/ac qty/ton    qty/  qty/ac   in/hr
*** x -  x                   ac.day
*** Developed, Open
   26      0.0700      0.  0.0145  0.0934     0.5
*** Developed, Low
   27      0.1000      0.  0.0232  0.1494     0.5
*** Developed, Med/High
   28      0.1500      0.  0.0261  0.1680     0.5
   46      0.0700      0.  0.0145  0.0934     0.5
   47      0.1000      0.  0.0232  0.1494     0.5
   48      0.1500      0.  0.0261  0.1680     0.5
   66      0.0700      0.  0.0145  0.0934     0.5
   67      0.1000      0.  0.0232  0.1494     0.5
   68      0.1500      0.  0.0261  0.1680     0.5
   86      0.0700      0.  0.0145  0.0934     0.5
   87      0.1000      0.  0.0232  0.1494     0.5
   88      0.1500      0.  0.0261  0.1680     0.5
  106      0.0700      0.  0.0145  0.0934     0.5
  107      0.1000      0.  0.0232  0.1494     0.5
  108      0.1500      0.  0.0261  0.1680     0.5
  126      0.0700      0.  0.0145  0.0934     0.5
  127      0.1000      0.  0.0232  0.1494     0.5
  128      0.1500      0.  0.0261  0.1680     0.5
  146      0.0700      0.  0.0145  0.0934     0.5
  147      0.1000      0.  0.0232  0.1494     0.5
  148      0.1500      0.  0.0261  0.1680     0.5
  166      0.0700      0.  0.0145  0.0934     0.5
```

167	0.1000	0.	0.0232	0.1494	0.5
168	0.1500	0.	0.0261	0.1680	0.5
186	0.0700	0.	0.0145	0.0934	0.5
187	0.1000	0.	0.0232	0.1494	0.5
188	0.1500	0.	0.0261	0.1680	0.5
206	0.0700	0.	0.0145	0.0934	0.5
207	0.1000	0.	0.0232	0.1494	0.5
208	0.1500	0.	0.0261	0.1680	0.5
226	0.0700	0.	0.0145	0.0934	0.5
227	0.1000	0.	0.0232	0.1494	0.5
228	0.1500	0.	0.0261	0.1680	0.5
246	0.0700	0.	0.0145	0.0934	0.5
247	0.1000	0.	0.0232	0.1494	0.5
248	0.1500	0.	0.0261	0.1680	0.5
266	0.0700	0.	0.0145	0.0934	0.5
267	0.1000	0.	0.0232	0.1494	0.5
268	0.1500	0.	0.0261	0.1680	0.5
286	0.0700	0.	0.0145	0.0934	0.5
287	0.1000	0.	0.0232	0.1494	0.5
288	0.1500	0.	0.0261	0.1680	0.5
306	0.0700	0.	0.0145	0.0934	0.5
307	0.1000	0.	0.0232	0.1494	0.5
308	0.1500	0.	0.0261	0.1680	0.5
326	0.0700	0.	0.0145	0.0934	0.5
327	0.1000	0.	0.0232	0.1494	0.5
328	0.1500	0.	0.0261	0.1680	0.5
346	0.0700	0.	0.0145	0.0934	0.5
347	0.1000	0.	0.0232	0.1494	0.5
348	0.1500	0.	0.0261	0.1680	0.5
366	0.0700	0.	0.0145	0.0934	0.5
367	0.1000	0.	0.0232	0.1494	0.5
368	0.1500	0.	0.0261	0.1680	0.5
386	0.0700	0.	0.0145	0.0934	0.5
387	0.1000	0.	0.0232	0.1494	0.5
388	0.1500	0.	0.0261	0.1680	0.5
406	0.0700	0.	0.0145	0.0934	0.5
407	0.1000	0.	0.0232	0.1494	0.5
408	0.1500	0.	0.0261	0.1680	0.5
426	0.0700	0.	0.0145	0.0934	0.5
427	0.1000	0.	0.0232	0.1494	0.5
428	0.1500	0.	0.0261	0.1680	0.5
446	0.0700	0.	0.0145	0.0934	0.5
447	0.1000	0.	0.0232	0.1494	0.5
448	0.1500	0.	0.0261	0.1680	0.5
466	0.0700	0.	0.0145	0.0934	0.5
467	0.1000	0.	0.0232	0.1494	0.5
468	0.1500	0.	0.0261	0.1680	0.5
486	0.0700	0.	0.0145	0.0934	0.5
487	0.1000	0.	0.0232	0.1494	0.5
488	0.1500	0.	0.0261	0.1680	0.5
506	0.0700	0.	0.0145	0.0934	0.5
507	0.1000	0.	0.0232	0.1494	0.5
508	0.1500	0.	0.0261	0.1680	0.5
526	0.0700	0.	0.0145	0.0934	0.5
527	0.1000	0.	0.0232	0.1494	0.5
528	0.1500	0.	0.0261	0.1680	0.5

```
  546       0.0700      0.  0.0145  0.0934     0.5
  547       0.1000      0.  0.0232  0.1494     0.5
  548       0.1500      0.  0.0261  0.1680     0.5
  566       0.0700      0.  0.0145  0.0934     0.5
  567       0.1000      0.  0.0232  0.1494     0.5
  568       0.1500      0.  0.0261  0.1680     0.5
  586       0.0700      0.  0.0145  0.0934     0.5
  587       0.1000      0.  0.0232  0.1494     0.5
  588       0.1500      0.  0.0261  0.1680     0.5
  606       0.0700      0.  0.0145  0.0934     0.5
  607       0.1000      0.  0.0232  0.1494     0.5
  608       0.1500      0.  0.0261  0.1680     0.5
  626       0.0700      0.  0.0145  0.0934     0.5
  627       0.1000      0.  0.0232  0.1494     0.5
  628       0.1500      0.  0.0261  0.1680     0.5
  646       0.0700      0.  0.0145  0.0934     0.5
  647       0.1000      0.  0.0232  0.1494     0.5
  648       0.1500      0.  0.0261  0.1680     0.5
  666       0.0700      0.  0.0145  0.0934     0.5
  667       0.1000      0.  0.0232  0.1494     0.5
  668       0.1500      0.  0.0261  0.1680     0.5
  END QUAL-INPUT

  QUAL-PROPS
*** <ILS >    Identifiers and Flags
*** x -  x      QUALID    QTID  QSD VPFW  QSO  VQO
   26  668ORTHO P         LBS     0    0    1    0
  END QUAL-PROPS

  QUAL-INPUT
***         Storage on surface and nonseasonal parameters
***            SQO   POTFW   ACQOP  SQOLIM   WSQOP
*** <ILS >  qty/ac qty/ton    qty/  qty/ac   in/hr
*** x -  x                    ac.day
*** Developed, Open
   26        0.007      0.  0.0020  0.0097     0.5
*** Developed, Low
   27        0.008      0.  0.0029  0.0138     0.5
*** Developed, Med/High
   28         0.01      0.  0.0032  0.0152     0.5
   46        0.007      0.  0.0020  0.0097     0.5
   47        0.008      0.  0.0029  0.0138     0.5
   48         0.01      0.  0.0032  0.0152     0.5
   66        0.007      0.  0.0020  0.0097     0.5
   67        0.008      0.  0.0029  0.0138     0.5
   68         0.01      0.  0.0032  0.0152     0.5
   86        0.007      0.  0.0020  0.0097     0.5
   87        0.008      0.  0.0029  0.0138     0.5
   88         0.01      0.  0.0032  0.0152     0.5
  106        0.007      0.  0.0020  0.0097     0.5
  107        0.008      0.  0.0029  0.0138     0.5
  108         0.01      0.  0.0032  0.0152     0.5
  126        0.007      0.  0.0020  0.0097     0.5
  127        0.008      0.  0.0029  0.0138     0.5
  128         0.01      0.  0.0032  0.0152     0.5
  146        0.007      0.  0.0020  0.0097     0.5
```

147	0.008	0.	0.0029	0.0138	0.5
148	0.01	0.	0.0032	0.0152	0.5
166	0.007	0.	0.0020	0.0097	0.5
167	0.008	0.	0.0029	0.0138	0.5
168	0.01	0.	0.0032	0.0152	0.5
186	0.007	0.	0.0020	0.0097	0.5
187	0.008	0.	0.0029	0.0138	0.5
188	0.01	0.	0.0032	0.0152	0.5
206	0.007	0.	0.0020	0.0097	0.5
207	0.008	0.	0.0029	0.0138	0.5
208	0.01	0.	0.0032	0.0152	0.5
226	0.007	0.	0.0020	0.0097	0.5
227	0.008	0.	0.0029	0.0138	0.5
228	0.01	0.	0.0032	0.0152	0.5
246	0.007	0.	0.0020	0.0097	0.5
247	0.008	0.	0.0029	0.0138	0.5
248	0.01	0.	0.0032	0.0152	0.5
266	0.007	0.	0.0020	0.0097	0.5
267	0.008	0.	0.0029	0.0138	0.5
268	0.01	0.	0.0032	0.0152	0.5
286	0.007	0.	0.0020	0.0097	0.5
287	0.008	0.	0.0029	0.0138	0.5
288	0.01	0.	0.0032	0.0152	0.5
306	0.007	0.	0.0020	0.0097	0.5
307	0.008	0.	0.0029	0.0138	0.5
308	0.01	0.	0.0032	0.0152	0.5
326	0.007	0.	0.0020	0.0097	0.5
327	0.008	0.	0.0029	0.0138	0.5
328	0.01	0.	0.0032	0.0152	0.5
346	0.007	0.	0.0020	0.0097	0.5
347	0.008	0.	0.0029	0.0138	0.5
348	0.01	0.	0.0032	0.0152	0.5
366	0.007	0.	0.0020	0.0097	0.5
367	0.008	0.	0.0029	0.0138	0.5
368	0.01	0.	0.0032	0.0152	0.5
386	0.007	0.	0.0020	0.0097	0.5
387	0.008	0.	0.0029	0.0138	0.5
388	0.01	0.	0.0032	0.0152	0.5
406	0.007	0.	0.0020	0.0097	0.5
407	0.008	0.	0.0029	0.0138	0.5
408	0.01	0.	0.0032	0.0152	0.5
426	0.007	0.	0.0020	0.0097	0.5
427	0.008	0.	0.0029	0.0138	0.5
428	0.01	0.	0.0032	0.0152	0.5
446	0.007	0.	0.0020	0.0097	0.5
447	0.008	0.	0.0029	0.0138	0.5
448	0.01	0.	0.0032	0.0152	0.5
466	0.007	0.	0.0020	0.0097	0.5
467	0.008	0.	0.0029	0.0138	0.5
468	0.01	0.	0.0032	0.0152	0.5
486	0.007	0.	0.0020	0.0097	0.5
487	0.008	0.	0.0029	0.0138	0.5
488	0.01	0.	0.0032	0.0152	0.5
506	0.007	0.	0.0020	0.0097	0.5
507	0.008	0.	0.0029	0.0138	0.5
508	0.01	0.	0.0032	0.0152	0.5

```
 526       0.007      0.  0.0020  0.0097     0.5
 527       0.008      0.  0.0029  0.0138     0.5
 528        0.01      0.  0.0032  0.0152     0.5
 546       0.007      0.  0.0020  0.0097     0.5
 547       0.008      0.  0.0029  0.0138     0.5
 548        0.01      0.  0.0032  0.0152     0.5
 566       0.007      0.  0.0020  0.0097     0.5
 567       0.008      0.  0.0029  0.0138     0.5
 568        0.01      0.  0.0032  0.0152     0.5
 586       0.007      0.  0.0020  0.0097     0.5
 587       0.008      0.  0.0029  0.0138     0.5
 588        0.01      0.  0.0032  0.0152     0.5
 606       0.007      0.  0.0020  0.0097     0.5
 607       0.008      0.  0.0029  0.0138     0.5
 608        0.01      0.  0.0032  0.0152     0.5
 626       0.007      0.  0.0020  0.0097     0.5
 627       0.008      0.  0.0029  0.0138     0.5
 628        0.01      0.  0.0032  0.0152     0.5
 646       0.007      0.  0.0020  0.0097     0.5
 647       0.008      0.  0.0029  0.0138     0.5
 648        0.01      0.  0.0032  0.0152     0.5
 666       0.007      0.  0.0020  0.0097     0.5
 667       0.008      0.  0.0029  0.0138     0.5
 668        0.01      0.  0.0032  0.0152     0.5
 END QUAL-INPUT

 QUAL-PROPS
*** <ILS >    Identifiers and Flags
*** x -  x      QUALID    QTID  QSD VPFW  QSO  VQO
  26  668BOD            LBS     0    0    1    0
 END QUAL-PROPS

 QUAL-INPUT
***         Storage on surface and nonseasonal parameters
***            SQO   POTFW   ACQOP  SQOLIM   WSQOP
*** <ILS >  qty/ac qty/ton    qty/  qty/ac   in/hr
*** x -  x                   ac.day
*** Developed, Open
  26        0.75      0.  0.1128    1.49     0.5
*** Developed, Low
  27        0.80      0.  0.1611    2.13     0.5
*** Developed, Med/High
  28        0.85      0.  0.1853    2.45     0.5
  46        0.75      0.  0.1128    1.49     0.5
  47        0.80      0.  0.1611    2.13     0.5
  48        0.85      0.  0.1853    2.45     0.5
  66        0.75      0.  0.1128    1.49     0.5
  67        0.80      0.  0.1611    2.13     0.5
  68        0.85      0.  0.1853    2.45     0.5
  86        0.75      0.  0.1128    1.49     0.5
  87        0.80      0.  0.1611    2.13     0.5
  88        0.85      0.  0.1853    2.45     0.5
 106        0.75      0.  0.1128    1.49     0.5
 107        0.80      0.  0.1611    2.13     0.5
 108        0.85      0.  0.1853    2.45     0.5
 126        0.75      0.  0.1128    1.49     0.5
```

127	0.80	0.	0.1611	2.13	0.5
128	0.85	0.	0.1853	2.45	0.5
146	0.75	0.	0.1128	1.49	0.5
147	0.80	0.	0.1611	2.13	0.5
148	0.85	0.	0.1853	2.45	0.5
166	0.75	0.	0.1128	1.49	0.5
167	0.80	0.	0.1611	2.13	0.5
168	0.85	0.	0.1853	2.45	0.5
186	0.75	0.	0.1128	1.49	0.5
187	0.80	0.	0.1611	2.13	0.5
188	0.85	0.	0.1853	2.45	0.5
206	0.75	0.	0.1128	1.49	0.5
207	0.80	0.	0.1611	2.13	0.5
208	0.85	0.	0.1853	2.45	0.5
226	0.75	0.	0.1128	1.49	0.5
227	0.80	0.	0.1611	2.13	0.5
228	0.85	0.	0.1853	2.45	0.5
246	0.75	0.	0.1128	1.49	0.5
247	0.80	0.	0.1611	2.13	0.5
248	0.85	0.	0.1853	2.45	0.5
266	0.75	0.	0.1128	1.49	0.5
267	0.80	0.	0.1611	2.13	0.5
268	0.85	0.	0.1853	2.45	0.5
286	0.75	0.	0.1128	1.49	0.5
287	0.80	0.	0.1611	2.13	0.5
288	0.85	0.	0.1853	2.45	0.5
306	0.75	0.	0.1128	1.49	0.5
307	0.80	0.	0.1611	2.13	0.5
308	0.85	0.	0.1853	2.45	0.5
326	0.75	0.	0.1128	1.49	0.5
327	0.80	0.	0.1611	2.13	0.5
328	0.85	0.	0.1853	2.45	0.5
346	0.75	0.	0.1128	1.49	0.5
347	0.80	0.	0.1611	2.13	0.5
348	0.85	0.	0.1853	2.45	0.5
366	0.75	0.	0.1128	1.49	0.5
367	0.80	0.	0.1611	2.13	0.5
368	0.85	0.	0.1853	2.45	0.5
386	0.75	0.	0.1128	1.49	0.5
387	0.80	0.	0.1611	2.13	0.5
388	0.85	0.	0.1853	2.45	0.5
406	0.75	0.	0.1128	1.49	0.5
407	0.80	0.	0.1611	2.13	0.5
408	0.85	0.	0.1853	2.45	0.5
426	0.75	0.	0.1128	1.49	0.5
427	0.80	0.	0.1611	2.13	0.5
428	0.85	0.	0.1853	2.45	0.5
446	0.75	0.	0.1128	1.49	0.5
447	0.80	0.	0.1611	2.13	0.5
448	0.85	0.	0.1853	2.45	0.5
466	0.75	0.	0.1128	1.49	0.5
467	0.80	0.	0.1611	2.13	0.5
468	0.85	0.	0.1853	2.45	0.5
486	0.75	0.	0.1128	1.49	0.5
487	0.80	0.	0.1611	2.13	0.5
488	0.85	0.	0.1853	2.45	0.5

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  506        0.75      0.  0.1128    1.49     0.5
  507        0.80      0.  0.1611    2.13     0.5
  508        0.85      0.  0.1853    2.45     0.5
  526        0.75      0.  0.1128    1.49     0.5
  527        0.80      0.  0.1611    2.13     0.5
  528        0.85      0.  0.1853    2.45     0.5
  546        0.75      0.  0.1128    1.49     0.5
  547        0.80      0.  0.1611    2.13     0.5
  548        0.85      0.  0.1853    2.45     0.5
  566        0.75      0.  0.1128    1.49     0.5
  567        0.80      0.  0.1611    2.13     0.5
  568        0.85      0.  0.1853    2.45     0.5
  586        0.75      0.  0.1128    1.49     0.5
  587        0.80      0.  0.1611    2.13     0.5
  588        0.85      0.  0.1853    2.45     0.5
  606        0.75      0.  0.1128    1.49     0.5
  607        0.80      0.  0.1611    2.13     0.5
  608        0.85      0.  0.1853    2.45     0.5
  626        0.75      0.  0.1128    1.49     0.5
  627        0.80      0.  0.1611    2.13     0.5
  628        0.85      0.  0.1853    2.45     0.5
  646        0.75      0.  0.1128    1.49     0.5
  647        0.80      0.  0.1611    2.13     0.5
  648        0.85      0.  0.1853    2.45     0.5
  666        0.75      0.  0.1128    1.49     0.5
  667        0.80      0.  0.1611    2.13     0.5
  668        0.85      0.  0.1853    2.45     0.5
  END QUAL-INPUT

END IMPLND

RCHRES
  ACTIVITY
*** RCHRES  Active sections
*** x -  x HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG
  100  938    1    2    0    1    1    0    1    1    1    0
  END ACTIVITY

  PRINT-INFO
*** RCHRES  Printout level flags
*** x -  x HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR
  100  938    6    6    6    6    6    6    6    6    6    6    1   12
  END PRINT-INFO

  BINARY-INFO
*** RCHRES  Binary Output level flags
*** x -  x HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR
  100  938    6    6    6    6    6    6    6    6    6    6    1   12
  END BINARY-INFO

  GEN-INFO
***            Name        Nexits   Unit Systems   Printer
*** RCHRES                           t-series  Engl Metr LKFG
*** x -  x                        in  out
  100     Illinois River          1        1    1   91    0    0   94    0
  101     Farmington Creek        1        1    1   91    0    0   94    0
```

102	104	Goose Creek	1	1	1	91	0	0	94	0
108		Hickory Creek	1	1	1	91	0	0	94	0
110	160	Illinois River	1	1	1	91	0	0	94	0
202		Clear Creek	1	1	1	91	0	0	94	0
204		Mud Creek	1	1	1	91	0	0	94	0
206		Clear Creek	1	1	1	91	0	0	94	0
208		Little Wildcat Creek	1	1	1	91	0	0	94	0
212		Clear Creek	1	1	1	91	0	0	94	0
214		Hamestring Creek	1	1	1	91	0	0	94	0
216		Clear Creek	1	1	1	91	0	0	94	0
302	304	Osage Creek	1	1	1	91	0	0	94	0
306	308	Spring Creek	1	1	1	91	0	0	94	0
312	314	Little Osage Creek	1	1	1	91	0	0	94	0
316		Osage Creek	1	1	1	91	0	0	94	0
318	322	Brush Creek	1	1	1	91	0	0	94	0
324	326	Osage Creek	1	1	1	91	0	0	94	0
402		Muddy Fork	1	1	1	91	0	0	94	0
404		Blair Creek	1	1	1	91	0	0	94	0
406	408	Muddy Fork	1	1	1	91	0	0	94	0
412	414	Moores Creek	1	1	1	91	0	0	94	0
416		Muddy Fork	1	1	1	91	0	0	94	0
418		STREAM 418	1	1	1	91	0	0	94	0
420		STREAM 420	1	1	1	91	0	0	94	0
502	504	Flint Creek	1	1	1	91	0	0	94	0
505		Little Flint Creek	1	1	1	91	0	0	94	0
506		SWEPCO Lake	1	1	1	91	0	0	94	0
507		Little Flint Creek	1	1	1	91	0	0	94	0
508	512	Flint Creek	1	1	1	91	0	0	94	0
514		Sager Creek	1	1	1	91	0	0	94	0
515		STREAM 515	1	1	1	91	0	0	94	0
516		Sager Creek	1	1	1	91	0	0	94	0
518	524	Flint Creek	1	1	1	91	0	0	94	0
600		Illinois River	1	1	1	91	0	0	94	0
602		Weddington Creek	1	1	1	91	0	0	94	0
604	606	Cincinnati Creek	1	1	1	91	0	0	94	0
608	609	Ballard Creek	1	1	1	91	0	0	94	0
610		Illinois River	1	1	1	91	0	0	94	0
612	614	Ballard Creek	1	1	1	91	0	0	94	0
620	635	Illinois River	1	1	1	91	0	0	94	0
637		Illinois River	2	1	1	91	0	0	94	0
638		STREAM 638	1	1	1	91	0	0	94	0
639		STREAM 639	1	1	1	91	0	0	94	0
640	670	Illinois River	1	1	1	91	0	0	94	0
702		Jordan Creek	1	1	1	91	0	0	94	0
703		Bush Creek	1	1	1	91	0	0	94	0
704		Jordan Creek	1	1	1	91	0	0	94	0
705		Fly Creek	1	1	1	91	0	0	94	0
706	712	Baron Fork	1	1	1	91	0	0	94	0
714	722	Evansville Creek	1	1	1	91	0	0	94	0
723		Peavine Creek	1	1	1	91	0	0	94	0
724		Baron Fork	1	1	1	91	0	0	94	0
725		Shell Branch	1	1	1	91	0	0	94	0
726		Baron Fork	1	1	1	91	0	0	94	0
728	732	Peacheater Creek	1	1	1	91	0	0	94	0
736		Baron Fork	1	1	1	91	0	0	94	0
738	742	Tyner Creek	1	1	1	91	0	0	94	0

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 746  752Baron Fork            1        1   1   91    0    0   94    0
 800    Illinois River         1        1   1   91    0    0   94    0
 802    Black Fox Springs      1        1   1   91    0    0   94    0
 804  805Dumpling Hollow       1        1   1   91    0    0   94    0
 806    Tahlequah Creek        1        1   1   91    0    0   94    0
 807    Ross Branch            1        1   1   91    0    0   94    0
 808  809Tahlequah Creek       1        1   1   91    0    0   94    0
 810  900Illinois River        1        1   1   91    0    0   94    0
 901  914Caney Creek           1        1   1   91    0    0   94    0
 916    Dry Creek              1        1   1   91    0    0   94    0
 922    Elk Creek              1        1   1   91    0    0   94    0
 924    Test bed               1        1   1   91    0    0   94    0
 936    Terrapin Creek         1        1   1   91    0    0   94    0
 938    Chicken Creek          1        1   1   91    0    0   94    0
 END GEN-INFO

 HYDR-PARM1
***        Flags for HYDR section
***RC HRES  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
*** x  - x  FG FG FG FG  possible   exit *** possible   exit     possible   exit
 100  635   0  1  1  1    4  0  0  0  0       0  0  0  0  0       1  1  1  1  1
 637        0  1  1  1    0  4  0  0  0       1  0  0  0  0       1  1  1  1  1
 638  938   0  1  1  1    4  0  0  0  0       0  0  0  0  0       1  1  1  1  1
 END HYDR-PARM1

 HYDR-PARM2
*** RCHRES FTBW FTBU      LEN     DELTH     STCOR        KS      DB50
*** x -  x           (miles)      (ft)      (ft)              (in)
 100        0  100      6.69       511       3.2       0.3      0.01
 101        0  101      1.35        62       3.2       0.2      0.01
 102        0  102      2.85       172       3.2       0.3      0.01
 104        0  104      3.69       111       3.2       0.3      0.01
 108        0  108      2.63       107       3.2       0.3      0.01
 110        0  110      4.43        95       3.2       0.3      0.01
 120        0  120      4.61        67       3.2       0.3      0.01
 130        0  130      5.02        64       3.2       0.3      0.01
 140        0  140      2.69        32       3.2       0.3      0.01
 150        0  150      2.76        30       3.2       0.3      0.01
 160        0  160      8.91        70       3.2       0.3      0.01
 202        0  202      4.64       118       3.2       0.3      0.01
 204        0  204      4.56       162       3.2       0.3      0.01
 206        0  206      6.89       131       3.2       0.3      0.01
 208        0  208      6.18       262       3.2       0.3      0.01
 212        0  212      3.31        58       3.2       0.3      0.01
 214        0  214      7.31       215       3.2       0.3      0.01
 216        0  216      3.48        66       3.2       0.3      0.01
 302        0  302       8.8       194       3.2       0.3      0.01
 304        0  304      5.71        89       3.2       0.3      0.01
 306        0  306      4.94       148       3.2       0.3      0.01
 308        0  308      6.03       141       3.2       0.3      0.01
 312        0  312      6.38       197       3.2       0.3      0.01
 314        0  314      5.82        89       3.2       0.3      0.01
 316        0  316      3.07        39       3.2       0.3      0.01
 318        0  318      4.68       115       3.2       0.3      0.01
 322        0  322      7.76       213       3.2       0.3      0.01
 324        0  324      3.54        66       3.2       0.3      0.01
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326	0	326	6.09	69	3.2	0.3	0.01
402	0	402	4.69	293	3.2	0.3	0.01
404	0	404	6.54	633	3.2	0.3	0.01
406	0	406	3.24	46	3.2	0.3	0.01
408	0	408	3.98	51	3.2	0.3	0.01
412	0	412	7.01	312	3.2	0.3	0.01
414	0	414	4.59	158	3.2	0.3	0.01
416	0	416	3.96	64	3.2	0.3	0.01
418	0	418	0.78	50	3.2	0.2	0.01
420	0	420	1.46	139	3.2	0.3	0.01
502	0	502	3.67	131	3.2	0.3	0.01
504	0	504	7.46	157	3.2	0.3	0.01
505	0	505	5.11	233	3.2	0.3	0.01
506	0	506	3.14	33	3.2	0.3	0.01
507	0	507	1.85	151	3.2	0.3	0.01
508	0	508	1.47	39	3.2	0.3	0.01
512	0	512	2.59	50	3.2	0.3	0.01
514	0	514	6.8	161	3.2	0.3	0.01
515	0	515	2.73	125	3.2	0.3	0.01
516	0	516	3.42	90	3.2	0.3	0.01
518	0	518	7.84	72	3.2	0.3	0.01
522	0	522	1.94	40	3.2	0.3	0.01
523	0	523	0.76	6	3.2	0.3	0.01
524	0	524	1.58	20	3.2	0.3	0.01
600	0	600	3.12	39	3.2	0.3	0.01
602	0	602	9.1	621	3.2	0.3	0.01
604	0	604	10.91	615	3.2	0.3	0.01
606	0	606	1.29	17	3.2	0.3	0.01
608	0	608	8.62	351	3.2	0.3	0.01
609	0	609	1.55	36	3.2	0.3	0.01
610	0	610	4.98	72	3.2	0.3	0.01
612	0	612	1.7	34	3.2	0.3	0.01
614	0	614	8.93	129	3.2	0.3	0.01
620	0	620	4.47	59	3.2	0.3	0.01
630	0	630	0.54	4	3.2	0.3	0.01
635	0	635	1.07	10	3.2	0.3	0.01
637	0	637	2.89	19	3.2	0.3	0.01
638	0	638	2.4	207	3.2	0.3	0.01
639	0	639	1.43	62	3.2	0.3	0.01
640	0	640	0.48	4	3.2	0.3	0.01
650	0	650	3.33	16	3.2	0.3	0.01
660	0	660	4.9	38	3.2	0.3	0.01
670	0	670	5.17	21	3.2	0.3	0.01
702	0	702	5.98	458	3.2	0.3	0.01
703	0	703	2.31	275	3.2	0.3	0.01
704	0	704	3.18	103	3.2	0.3	0.01
705	0	705	5.11	62	3.2	0.3	0.01
706	0	706	2.17	27	3.2	0.3	0.01
708	0	708	2.94	65	3.2	0.3	0.01
712	0	712	4.19	103	3.2	0.3	0.01
714	0	714	7.36	633	3.2	0.3	0.01
716	0	716	4.47	104	3.2	0.3	0.01
718	0	718	6.04	71	3.2	0.3	0.01
722	0	722	2.98	55	3.2	0.3	0.01
723	0	723	7.22	265	3.2	0.3	0.01
724	0	724	3.15	40	3.2	0.3	0.01

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 725        0  725     4.49      164      3.2      0.3      0.01
 726        0  726      6.6       71      3.2      0.3      0.01
 728        0  728     6.13      240      3.2      0.3      0.01
 732        0  732     4.09      105      3.2      0.3      0.01
 736        0  736     5.96       45      3.2      0.3      0.01
 738        0  738     6.53      264      3.2      0.3      0.01
 742        0  742     7.34      136      3.2      0.3      0.01
 746        0  746     6.33       42      3.2      0.3      0.01
 748        0  748     3.21       40      3.2      0.3      0.01
 751        0  751     3.73       31      3.2      0.3      0.01
 752        0  752     1.84       21      3.2      0.3      0.01
 800        0  800     7.01       34      3.2      0.3      0.01
 802        0  802     6.29      399      3.2      0.3      0.01
 804        0  804     4.19      224      3.2      0.3      0.01
 805        0  805     5.18      173      3.2      0.3      0.01
 806        0  806     6.22      352      3.2      0.3      0.01
 807        0  807     4.56      276      3.2      0.3      0.01
 808        0  808     1.11       26      3.2      0.3      0.01
 809        0  809     0.75       19      3.2      0.3      0.01
 810        0  810     2.85       20      3.2      0.3      0.01
 820        0  820     2.79        7      3.2      0.3      0.01
 830        0  830     3.43       28      3.2      0.3      0.01
 840        0  840     4.89       20      3.2      0.3      0.01
 850        0  850     3.69       23      3.2      0.3      0.01
 860        0  860     6.24       90      3.2      0.3      0.01
 870        0  870     8.83       45      3.2      0.3      0.01
 880        0  880     4.39       20      3.2      0.3      0.01
 890        0  890     3.06       22      3.2      0.3      0.01
 900        0  900     9.46        9      3.2      0.3      0.01
 901        0  901     2.74      155      3.2      0.3      0.01
 902        0  902     3.64      130      3.2      0.3      0.01
 904        0  904     3.42       86      3.2      0.3      0.01
 906        0  906     3.87       94      3.2      0.3      0.01
 908        0  908     4.03       75      3.2      0.3      0.01
 912        0  912     2.68       44      3.2      0.3      0.01
 914        0  914     2.24        7      3.2      0.3      0.01
 916        0  916    10.14      489      3.2      0.3      0.01
 922        0  922     8.33      417      3.2      0.3      0.01
 924        0  924     6.42      574      3.2      0.3      0.01
 936        0  936     6.42      574      3.2      0.3      0.01
 938        0  938     3.59      523      3.2      0.3      0.01
 END HYDR-PARM2

 HYDR-INIT
***        Initial conditions for HYDR section
***RC HRES       VOL  CAT Initial value  of COLIND     initial  value  of OUTDGT
*** x  - x     ac-ft      for each possible   exit  for each possible exit,ft3
 100          6.02       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 101          0.57       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 102          0.59       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 104          4.71       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 108          1.79       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 110          9.69       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 120         17.53       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 130         22.46       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
 140         15.61       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
```

150	32.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	108.54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
202	3.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
204	5.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
206	17.37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
208	3.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
212	10.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
214	7.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
216	12.88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
302	13.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
304	22.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
306	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
308	15.89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
312	11.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
314	15.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
316	26.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
318	3.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
322	12.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
324	28.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
326	69.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
402	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
404	3.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
406	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
408	11.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
412	7.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
414	8.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
416	19.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
418	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
420	0.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
502	1.98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
504	10.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
505	2.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
506	3.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
507	1.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
508	2.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
512	6.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
514	5.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
515	0.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
516	1.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
518	47.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
522	12.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
523	8.48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
524	13.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
600	57.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
602	13.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
604	14.98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
606	5.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
608	19.29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
609	4.43	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
610	80.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
612	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
614	51.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
620	94.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
630	16.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
635	40.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
637	141.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

638	1.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
639	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
640	19.89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
650	67.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
660	91.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
670	125.84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
702	2.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
703	0.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
704	4.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
705	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
706	6.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
708	14.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
712	24.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
714	10.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
716	22.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
718	40.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
722	18.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
723	10.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
724	36.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
725	7.43	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
726	104.43	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
728	12.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
732	11.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
736	120.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
738	11.91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
742	32.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
746	175.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
748	77.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
751	77.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
752	34.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
800	257.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
802	11.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
804	2.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
805	5.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
806	13.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
807	6.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
808	4.46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
809	2.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
810	82.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
820	125.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
830	107.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
840	202.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
850	131.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
860	172.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
870	382.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
880	190.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
890	119.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
900	374.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
901	2.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
902	6.98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
904	11.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
906	17.82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
908	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
912	21.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
914	29.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
916	22.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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  922  924     12.19       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  936          4.43       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  938          0.72       0.0  0.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT

  HT-BED-FLAGS
*** RCHRES
*** x -  x BDFG TGFG TSTP
  100  938    1    3
  END HT-BED-FLAGS

  HEAT-PARM
*** RCHRES      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP
*** x -  x      (ft)      (ft)
  100          1475.     205.     0.25     15.00      6.12      2.24
  101          1163.    -107.     0.35     15.00      6.12      2.24
  102          1214.     -56.     0.40     15.00      6.12      2.24
  104          1115.    -155.     0.35     15.00      6.12      2.24
  108          1188.     -82.     0.50     15.00      6.12      2.24
  110          1180.     -90.     0.55     15.00      6.12      2.24
  120          1122.    -148.     0.65     15.00      6.12      2.24
  130          1084.    -186.     0.65     15.00      6.12      2.24
  140          1048.    -222.     0.70     15.00      6.12      2.24
  150          1036.    -234.     0.75     15.00      6.12      2.24
  160          1006.    -264.     0.75     15.00      6.12      2.24
  202          1293.      23.     0.25     15.00      6.12      2.24
  204          1242.     -28.     0.35     15.00      6.12      2.24
  206          1158.    -112.     0.35     15.00      6.12      2.24
  208          1220.     -50.     0.25     15.00      6.12      2.24
  212          1086.    -184.     0.50     15.00      6.12      2.24
  214          1167.    -103.     0.25     15.00      6.12      2.24
  216          1055.    -215.     0.50     15.00      6.12      2.24
  302          1261.      41.     0.25     15.00      6.12      2.24
  304          1130.     -90.     0.50     15.00      6.12      2.24
  306          1278.      58.     0.25     15.00      6.12      2.24
  308          1156.     -64.     0.35     15.00      6.12      2.24
  312          1237.      17.     0.25     15.00      6.12      2.24
  314          1107.    -113.     0.50     15.00      6.12      2.24
  316          1076.    -144.     0.65     15.00      6.12      2.24
  318          1291.      21.     0.25     15.00      6.12      2.24
  322          1130.    -140.     0.35     15.00      6.12      2.24
  324          1060.    -134.     0.75     15.00      6.12      2.24
  326          1009.    -185.     0.75     15.00      6.12      2.24
  402          1284.      14.     0.25     15.00      6.12      2.24
  404          1450.     180.     0.25     15.00      6.12      2.24
  406          1116.    -154.     0.50     15.00      6.12      2.24
  408          1084.    -110.     0.60     15.00      6.12      2.24
  412          1332.     138.     0.25     15.00      6.12      2.24
  414          1138.     -56.     0.50     15.00      6.12      2.24
  416          1065.    -129.     0.65     15.00      6.12      2.24
  418          1145.     -49.     0.25     15.00      6.12      2.24
  420          1098.     -96.     0.35     15.00      6.12      2.24
  502          1237.      43.     0.35     15.00      6.12      2.24
  504          1119.     -75.     0.50     15.00      6.12      2.24
  505          1261.      67.     0.25     15.00      6.12      2.24
  506          1148.     -46.     0.35     15.00      6.12      2.24
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507	1076.	-118.	0.40	15.00	6.12	2.24
508	1024.	-170.	0.50	15.00	6.12	2.24
512	985.	-209.	0.60	15.00	6.12	2.24
514	1117.	-77.	0.25	15.00	6.12	2.24
515	1079.	-115.	0.25	15.00	6.12	2.24
516	1011.	-183.	0.35	15.00	6.12	2.24
518	930.	-260.	0.65	15.00	6.12	2.24
522	880.	-310.	0.65	15.00	6.12	2.24
523	860.	-330.	0.65	15.00	6.12	2.24
524	851.	-339.	0.70	15.00	6.12	2.24
600	981.	-213.	0.85	15.00	6.12	2.24
602	1257.	63.	0.35	15.00	6.12	2.24
604	1249.	55.	0.35	15.00	6.12	2.24
606	938.	-256.	0.65	15.00	6.12	2.24
608	1279.	137.	0.30	15.00	6.12	2.24
609	1097.	-45.	0.50	15.00	6.12	2.24
610	971.	-223.	0.85	15.00	6.12	2.24
612	1064.	-78.	0.50	15.00	6.12	2.24
614	985.	-157.	0.55	15.00	6.12	2.24
620	942.	-252.	0.85	15.00	6.12	2.24
630	932.	-262.	0.65	15.00	6.12	2.24
635	929.	-265.	0.65	15.00	6.12	2.24
637	915.	-279.	0.65	15.00	6.12	2.24
638	1055.	-139.	0.25	15.00	6.12	2.24
639	930.	-212.	0.35	15.00	6.12	2.24
640	886.	-256.	0.85	15.00	6.12	2.24
650	897.	-245.	0.85	15.00	6.12	2.24
660	875.	-267.	0.85	15.00	6.12	2.24
670	851.	-339.	0.85	15.00	6.12	2.24
702	1333.	191.	0.25	15.00	6.12	2.24
703	1227.	85.	0.25	15.00	6.12	2.24
704	1073.	-69.	0.50	15.00	6.12	2.24
705	1122.	-20.	0.50	15.00	6.12	2.24
706	1003.	-139.	0.65	15.00	6.12	2.24
708	977.	-165.	0.65	15.00	6.12	2.24
712	937.	-205.	0.70	15.00	6.12	2.24
714	1377.	235.	0.25	15.00	6.12	2.24
716	1045.	-97.	0.50	15.00	6.12	2.24
718	969.	-173.	0.50	15.00	6.12	2.24
722	908.	-234.	0.50	15.00	6.12	2.24
723	989.	-153.	0.40	15.00	6.12	2.24
724	875.	-267.	0.65	15.00	6.12	2.24
725	941.	-201.	0.25	15.00	6.12	2.24
726	831.	-311.	0.65	15.00	6.12	2.24
728	1021.	-121.	0.35	15.00	6.12	2.24
732	849.	-293.	0.50	15.00	6.12	2.24
736	781.	-361.	0.65	15.00	6.12	2.24
738	1029.	-113.	0.25	15.00	6.12	2.24
742	828.	-314.	0.50	15.00	6.12	2.24
746	741.	-210.	0.75	15.00	6.12	2.24
748	700.	-251.	0.75	15.00	6.12	2.24
751	674.	-277.	0.80	15.00	6.12	2.24
752	648.	-303.	0.80	15.00	6.12	2.24
800	829.	-361.	0.85	15.00	6.12	2.24
802	1000.	-190.	0.35	15.00	6.12	2.24
804	959.	-183.	0.25	15.00	6.12	2.24

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 805          803.    -148.     0.50    15.00     6.12     2.24
 806          878.     -73.     0.25    15.00     6.12     2.24
 807          836.    -115.     0.25    15.00     6.12     2.24
 808          688.    -263.     0.50    15.00     6.12     2.24
 809          669.    -282.     0.55    15.00     6.12     2.24
 810          811.    -379.     0.85    15.00     6.12     2.24
 820          798.    -392.     0.85    15.00     6.12     2.24
 830          786.    -404.     0.85    15.00     6.12     2.24
 840          766.    -185.     0.90    15.00     6.12     2.24
 850          749.    -202.     0.90    15.00     6.12     2.24
 860          756.    -195.     0.90    15.00     6.12     2.24
 870          698.    -253.     0.95    15.00     6.12     2.24
 880          670.    -281.     0.95    15.00     6.12     2.24
 890          650.    -301.     0.95    15.00     6.12     2.24
 900          636.    -345.     0.95    15.00     6.12     2.24
 901         1101.     -41.     0.25    15.00     6.12     2.24
 902          966.    -176.     0.35    15.00     6.12     2.24
 904          862.    -280.     0.50    15.00     6.12     2.24
 906          797.    -345.     0.65    15.00     6.12     2.24
 908          718.    -263.     0.70    15.00     6.12     2.24
 912          660.    -321.     0.70    15.00     6.12     2.24
 914          636.    -345.     0.80    15.00     6.12     2.24
 916          877.    -104.     0.35    15.00     6.12     2.24
 922  924     841.    -140.     0.35    15.00     6.12     2.24
 936          920.     -61.     0.30    15.00     6.12     2.24
 938          895.     -86.     0.25    15.00     6.12     2.24
 END HEAT-PARM

 HT-BED-PARM
*** RCHRES    MUDDEP     TGRND      KMUD     KGRND
*** x -  x       ft     deg F    (kcal/m2/C/hr)
 100  938      1.0       50.      30.0      1.42
 END HT-BED-PARM

 MON-HT-TGRND
*** RCHRES  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
*** x -  x
 100  938  48.  48.  52.  56.  60.  62.  65.  65.  65.  55.  50.  48.
 END MON-HT-TGRND

 HEAT-INIT
*** RCHRES        TW    AIRTMP
*** x -  x   (deg F)   (deg F)
 100  938      40.       35.
 END HEAT-INIT

 SANDFG
*** RCHRES
*** x -  x SNDFG
 100  938
 END SANDFG

 SED-GENPARM
*** RCHRES    BEDWID    BEDWRN       POR
*** x -  x      (ft)      (ft)
 100          14.8       4.0       0.4
```

101	10.0	4.0	0.4
102	10.0	4.0	0.4
104	15.5	4.0	0.4
108	10.9	6.0	0.4
110	19.5	6.0	0.4
120	26.5	8.0	0.4
130	28.6	8.0	0.4
140	33.2	8.0	0.4
150	30.0	10.0	0.4
160	56.7	10.0	0.4
202	11.3	4.0	0.4
204	15.1	6.0	0.4
206	22.8	6.0	0.4
208	11.0	4.0	0.4
212	26.8	6.0	0.4
214	14.2	4.0	0.4
216	31.4	6.0	0.4
302	26.0	4.0	0.4
304	50.0	6.0	0.4
306	16.0	4.0	0.4
308	20.0	6.0	0.4
312	16.7	6.0	0.4
314	31.0	8.0	0.4
316	82.0	10.0	0.4
318	10.3	4.0	0.4
322	17.8	6.0	0.4
324	42.8	10.0	0.4
326	50.5	10.0	0.4
402	10.0	4.0	0.4
404	11.6	4.0	0.4
406	19.3	6.0	0.4
408	21.4	6.0	0.4
412	13.1	4.0	0.4
414	18.1	6.0	0.4
416	30.7	8.0	0.4
418	10.0	4.0	0.4
420	10.0	4.0	0.4
502	11.0	6.0	0.4
504	19.7	6.0	0.4
505	10.3	4.0	0.4
506	13.9	4.0	0.4
507	15.0	4.0	0.4
508	20.4	6.0	0.4
512	20.0	6.0	0.4
514	13.4	4.0	0.4
515	10.0	4.0	0.4
516	20.0	4.0	0.4
518	35.3	6.0	0.4
522	38.1	6.0	0.4
523	100.0	6.0	0.4
524	39.9	8.0	0.4
600	77.3	10.0	0.4
602	17.7	6.0	0.4
604	16.6	8.0	0.4
606	25.1	8.0	0.4
608	17.1	6.0	0.4

609	17.7	6.0	0.4
610	40.0	10.0	0.4
612	19.2	6.0	0.4
614	24.4	6.0	0.4
620	78.7	10.0	0.4
630	90.0	10.0	0.4
635	82.3	10.0	0.4
637	86.0	10.0	0.4
638	10.0	4.0	0.4
639	10.0	4.0	0.4
640	80.0	10.0	0.4
650	86.7	10.0	0.4
660	88.5	10.0	0.4
670	89.6	10.0	0.4
702	10.0	6.0	0.4
703	10.0	4.0	0.4
704	16.2	6.0	0.4
705	10.0	6.0	0.4
706	20.0	8.0	0.4
708	26.1	8.0	0.4
712	29.9	8.0	0.4
714	18.1	6.0	0.4
716	24.3	6.0	0.4
718	27.5	6.0	0.4
722	29.6	6.0	0.4
723	14.0	6.0	0.4
724	42.5	8.0	0.4
725	14.3	4.0	0.4
726	50.9	8.0	0.4
728	15.0	6.0	0.4
732	10.0	6.0	0.4
736	55.8	8.0	0.4
738	14.5	4.0	0.4
742	23.4	6.0	0.4
746	70.0	10.0	0.4
748	63.6	10.0	0.4
751	64.3	10.0	0.4
752	64.7	10.0	0.4
800	100.0	10.0	0.4
802	14.7	4.0	0.4
804	10.9	4.0	0.4
805	15.1	6.0	0.4
806	10.0	4.0	0.4
807	10.0	4.0	0.4
808	13.9	6.0	0.4
809	14.3	6.0	0.4
810	99.0	10.0	0.4
820	100.0	10.0	0.4
830	100.0	10.0	0.4
840	100.0	10.0	0.4
850	100.0	10.0	0.4
860	100.0	10.0	0.4
870	100.0	10.0	0.4
880	100.0	10.0	0.4
890	100.0	10.0	0.4
900	100.0	10.0	0.4

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 901          10.0      4.0      0.4
 902          13.4      4.0      0.4
 904          19.8      8.0      0.4
 906          27.1      8.0      0.4
 908          30.5      8.0      0.4
 912          30.0      8.0      0.4
 914          34.7      8.0      0.4
 916          19.2      4.0      0.4
 922  924      16.6      4.0      0.4
 936          11.7      4.0      0.4
 938          10.0      4.0      0.4
 END SED-GENPARM

 SAND-PM
*** RCHRES        D        W      RHO     KSAND    EXPSND
*** x -  x      (in)  (in/sec)  (gm/cm3)
 100          0.005     0.02      2.5      0.10      3.0
 101          0.005     0.02      2.5      0.30      3.0
 102          0.005     0.02      2.5      0.95      3.0
 104          0.005     0.02      2.5      0.40      3.0
 108          0.005     0.02      2.5      0.40      3.0
 110          0.005     0.02      2.5      0.30      3.0
 120          0.005     0.02      2.5      0.40      3.0
 130          0.005     0.02      2.5      0.30      3.0
 140          0.005     0.02      2.5      0.60      2.5
 150          0.005     0.02      2.5      0.50      2.5
 160          0.005     0.02      2.5      0.40      2.5
 202          0.005     0.02      2.5      0.55      3.0
 204          0.005     0.02      2.5      0.20      3.0
 206          0.005     0.02      2.5      0.35      3.0
 208          0.005     0.02      2.5      0.90      3.0
 212          0.005     0.02      2.5      0.20      3.0
 214          0.005     0.02      2.5      0.80      3.0
 216          0.005     0.02      2.5      0.30      3.0
 302          0.005     0.02      2.5      0.45      3.0
 304          0.005     0.02      2.5      0.65      3.0
 306          0.005     0.02      2.5      0.45      3.0
 308          0.005     0.02      2.5      0.75      3.0
 312          0.005     0.02      2.5      0.90      3.0
 314          0.005     0.02      2.5      1.30      3.0
 316          0.005     0.02      2.5      0.85      3.0
 318          0.005     0.02      2.5      0.50      3.0
 322          0.005     0.02      2.5      0.55      3.0
 324          0.005     0.02      2.5      0.50      2.5
 326          0.005     0.02      2.5      0.45      2.5
 402          0.005     0.02      2.5      0.65      3.0
 404          0.005     0.02      2.5      0.70      3.0
 406          0.005     0.02      2.5      1.10      3.0
 408          0.005     0.02      2.5      1.10      3.0
 412          0.005     0.02      2.5      0.75      3.0
 414          0.005     0.02      2.5      0.60      3.0
 416          0.005     0.02      2.5      0.80      3.0
 418          0.005     0.02      2.5      0.50      3.0
 420          0.005     0.02      2.5      0.25      3.0
 502          0.005     0.02      2.5      0.60      3.0
 504          0.005     0.02      2.5      1.00      3.0
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505	0.005	0.02	2.5	1.00	3.0
506	0.005	0.02	2.5	0.10	2.0
507	0.005	0.02	2.5	0.09	2.5
508	0.005	0.02	2.5	0.88	2.5
512	0.005	0.02	2.5	0.85	2.5
514	0.005	0.02	2.5	0.80	3.0
515	0.005	0.02	2.5	1.00	3.0
516	0.005	0.02	2.5	0.20	2.5
518	0.005	0.02	2.5	0.80	2.5
522	0.005	0.02	2.5	0.38	2.0
523	0.005	0.02	2.5	0.60	2.5
524	0.005	0.02	2.5	0.30	2.5
600	0.005	0.02	2.5	0.25	2.0
602	0.005	0.02	2.5	0.20	3.0
604	0.005	0.02	2.5	0.30	3.0
606	0.005	0.02	2.5	0.90	3.0
608	0.005	0.02	2.5	1.20	2.5
609	0.005	0.02	2.5	1.50	2.5
610	0.005	0.02	2.5	0.25	2.0
612	0.005	0.02	2.5	1.00	2.5
614	0.005	0.02	2.5	1.25	2.5
620	0.005	0.02	2.5	0.20	2.0
630	0.005	0.02	2.5	0.35	2.0
635	0.005	0.02	2.5	0.12	2.0
637	0.005	0.02	2.5	0.10	2.0
638	0.005	0.02	2.5	0.30	3.0
639	0.005	0.02	2.5	0.50	3.0
640	0.005	0.02	2.5	0.15	2.0
650	0.005	0.02	2.5	0.20	2.0
660	0.005	0.02	2.5	0.50	2.0
670	0.005	0.02	2.5	0.44	2.0
702	0.005	0.02	2.5	0.30	3.0
703	0.005	0.02	2.5	0.30	3.0
704	0.005	0.02	2.5	0.30	3.0
705	0.005	0.02	2.5	0.30	3.0
706	0.005	0.02	2.5	0.25	3.0
708	0.005	0.02	2.5	0.30	3.0
712	0.005	0.02	2.5	0.42	2.5
714	0.005	0.02	2.5	0.35	2.5
716	0.005	0.02	2.5	0.40	3.0
718	0.005	0.02	2.5	0.60	3.0
722	0.005	0.02	2.5	0.55	2.5
723	0.005	0.02	2.5	0.50	3.0
724	0.005	0.02	2.5	0.50	2.5
725	0.005	0.02	2.5	0.40	3.0
726	0.005	0.02	2.5	0.50	2.5
728	0.005	0.02	2.5	0.40	3.0
732	0.005	0.02	2.5	0.50	3.0
736	0.005	0.02	2.5	0.90	2.5
738	0.005	0.02	2.5	0.45	3.0
742	0.005	0.02	2.5	0.50	3.0
746	0.005	0.02	2.5	0.65	3.0
748	0.005	0.02	2.5	0.60	2.5
751	0.005	0.02	2.5	0.37	2.5
752	0.005	0.02	2.5	0.42	2.0
800	0.005	0.02	2.5	0.38	2.0

802	0.005	0.02	2.5	0.15	3.0
804	0.005	0.02	2.5	0.25	3.0
805	0.005	0.02	2.5	0.30	3.0
806	0.005	0.02	2.5	0.30	3.0
807	0.005	0.02	2.5	0.50	3.0
808	0.005	0.02	2.5	0.40	3.0
809	0.005	0.02	2.5	0.50	3.0
810	0.005	0.02	2.5	0.25	2.0
820	0.005	0.02	2.5	0.55	2.0
830	0.005	0.02	2.5	0.50	2.0
840	0.005	0.02	2.5	0.40	2.0
850	0.005	0.02	2.5	0.40	2.0
860	0.005	0.02	2.5	0.50	2.0
870	0.005	0.02	2.5	0.90	2.0
880	0.005	0.02	2.5	0.90	2.0
890	0.005	0.02	2.5	0.50	2.0
900	0.005	0.02	2.5	0.50	2.0
901	0.005	0.02	2.5	0.85	3.0
902	0.005	0.02	2.5	0.95	3.0
904	0.005	0.02	2.5	0.85	3.0
906	0.005	0.02	2.5	0.75	3.0
908	0.005	0.02	2.5	0.80	3.0
912	0.005	0.02	2.5	1.20	2.5
914	0.005	0.02	2.5	1.50	2.5
916 924	0.005	0.02	2.5	0.65	2.5
936	0.005	0.02	2.5	0.65	2.5
938	0.005	0.02	2.5	0.50	2.5

END SAND-PM

SILT-CLAY-PM

*** SILT Parameters

*** RCHRES	D	W	RHO	TAUCD	TAUCS	M
*** x - x	(in)	(in/sec)	gm/cm3	lb/ft2	lb/ft2	lb/ft2.d
100	0.0006	0.0003	2.2	0.615	1.188	0.150
101	0.0006	0.0003	2.2	0.217	0.485	0.150
102	0.0006	0.0003	2.2	0.269	0.477	0.150
104	0.0006	0.0003	2.2	0.186	0.535	0.150
108	0.0006	0.0003	2.2	0.256	0.563	0.150
110	0.0006	0.0003	2.2	0.149	0.540	0.150
120	0.0006	0.0003	2.2	0.125	0.470	0.150
130	0.0006	0.0003	2.2	0.116	0.445	0.150
140	0.0006	0.0003	2.2	0.123	0.452	0.150
150	0.0006	0.0003	2.2	0.196	0.606	0.080
160	0.0006	0.0003	2.2	0.119	0.400	0.080
202	0.0006	0.0003	2.2	0.148	0.362	0.150
204	0.0006	0.0003	2.2	0.266	0.708	0.150
206	0.0006	0.0003	2.2	0.147	0.529	0.150
208	0.0006	0.0003	2.2	0.218	0.454	0.150
212	0.0006	0.0003	2.2	0.146	0.501	0.150
214	0.0006	0.0003	2.2	0.178	0.464	0.150
216	0.0006	0.0003	2.2	0.170	0.563	0.150
302	0.0006	0.0003	2.2	0.380	0.553	0.750
304	0.0006	0.0003	2.2	0.220	0.360	0.750
306	0.0006	0.0003	2.2	0.260	0.390	0.800
308	0.0006	0.0003	2.2	0.340	0.500	0.800
312	0.0006	0.0003	2.2	0.400	0.580	0.850

314	0.0006	0.0003	2.2	0.250	0.380	0.850
316	0.0006	0.0003	2.2	0.280	0.500	0.950
318	0.0006	0.0003	2.2	0.156	0.402	0.250
322	0.0006	0.0003	2.2	0.215	0.533	0.250
324	0.0006	0.0003	2.2	0.224	0.714	0.200
326	0.0006	0.0003	2.2	0.164	0.520	0.200
402	0.0006	0.0003	2.2	0.326	0.625	0.350
404	0.0006	0.0003	2.2	0.507	1.013	0.350
406	0.0006	0.0003	2.2	0.097	0.333	0.350
408	0.0006	0.0003	2.2	0.101	0.343	0.350
412	0.0006	0.0003	2.2	0.304	0.686	0.400
414	0.0006	0.0003	2.2	0.235	0.721	0.400
416	0.0006	0.0003	2.2	0.134	0.471	0.400
418	0.0006	0.0003	2.2	0.359	0.465	0.400
420	0.0006	0.0003	2.2	0.474	0.701	0.150
502	0.0006	0.0003	2.2	0.205	0.483	0.150
504	0.0006	0.0003	2.2	0.150	0.381	0.150
505	0.0006	0.0003	2.2	0.224	0.456	0.150
506	0.0006	0.0003	2.2	0.150	0.190	0.001
507	0.0006	0.0003	2.2	0.369	0.962	0.150
508	0.0006	0.0003	2.2	0.153	0.472	0.150
512	0.0006	0.0003	2.2	0.159	0.515	0.150
514	0.0006	0.0003	2.2	0.143	0.480	0.150
515	0.0006	0.0003	2.2	0.194	0.336	0.150
516	0.0006	0.0003	2.2	0.135	0.652	0.080
518	0.0006	0.0003	2.2	0.098	0.359	0.150
522	0.0006	0.0003	2.2	0.231	0.702	0.008
523	0.0006	0.0003	2.2	0.070	0.239	0.100
524	0.0006	0.0003	2.2	0.129	0.431	0.150
600	0.0006	0.0003	2.2	0.300	0.790	0.050
602	0.0006	0.0003	2.2	0.502	0.943	0.150
604	0.0006	0.0003	2.2	0.341	0.774	0.150
606	0.0006	0.0003	2.2	0.098	0.330	0.150
608	0.0006	0.0003	2.2	0.303	0.625	0.500
609	0.0006	0.0003	2.2	0.172	0.411	0.600
610	0.0006	0.0003	2.2	0.500	0.990	0.200
612	0.0006	0.0003	2.2	0.125	0.389	0.500
614	0.0006	0.0003	2.2	0.121	0.403	0.550
620	0.0006	0.0003	2.2	0.300	0.810	0.200
630	0.0006	0.0003	2.2	0.160	0.480	0.200
635	0.0006	0.0003	2.2	0.220	0.660	0.200
637	0.0006	0.0003	2.2	0.150	0.550	0.200
638	0.0006	0.0003	2.2	0.438	0.591	0.150
639	0.0006	0.0003	2.2	0.196	0.399	0.150
640	0.0006	0.0003	2.2	0.300	0.670	0.150
650	0.0006	0.0003	2.2	0.111	0.350	0.200
660	0.0006	0.0003	2.2	0.160	0.500	0.600
670	0.0006	0.0003	2.2	0.101	0.296	0.400
702	0.0006	0.0003	2.2	0.383	0.879	0.150
703	0.0006	0.0003	2.2	0.521	0.976	0.150
704	0.0006	0.0003	2.2	0.163	0.632	0.150
705	0.0006	0.0003	2.2	0.084	0.228	0.150
706	0.0006	0.0003	2.2	0.106	0.334	0.150
708	0.0006	0.0003	2.2	0.165	0.640	0.150
712	0.0006	0.0003	2.2	0.188	0.768	0.150
714	0.0006	0.0003	2.2	0.571	1.261	0.150

716	0.0006	0.0003	2.2	0.190	0.657	0.150
718	0.0006	0.0003	2.2	0.107	0.400	0.150
722	0.0006	0.0003	2.2	0.161	0.601	0.150
723	0.0006	0.0003	2.2	0.261	0.604	0.150
724	0.0006	0.0003	2.2	0.137	0.555	0.150
725	0.0006	0.0003	2.2	0.208	0.613	0.150
726	0.0006	0.0003	2.2	0.100	0.530	0.300
728	0.0006	0.0003	2.2	0.246	0.688	0.150
732	0.0006	0.0003	2.2	0.180	0.540	0.150
736	0.0006	0.0003	2.2	0.105	0.350	0.300
738	0.0006	0.0003	2.2	0.246	0.679	0.150
742	0.0006	0.0003	2.2	0.168	0.512	0.150
746	0.0006	0.0003	2.2	0.101	0.292	0.200
748	0.0006	0.0003	2.2	0.120	0.600	0.300
751	0.0006	0.0003	2.2	0.128	0.440	0.150
752	0.0006	0.0003	2.2	0.164	0.658	0.150
800	0.0006	0.0003	2.2	0.103	0.400	0.080
802	0.0006	0.0003	2.2	0.386	0.932	0.150
804	0.0006	0.0003	2.2	0.251	0.618	0.150
805	0.0006	0.0003	2.2	0.222	0.526	0.150
806	0.0006	0.0003	2.2	0.261	0.720	0.150
807	0.0006	0.0003	2.2	0.329	0.656	0.150
808	0.0006	0.0003	2.2	0.156	0.439	0.150
809	0.0006	0.0003	2.2	0.162	0.466	0.150
810	0.0006	0.0003	2.2	0.150	0.500	0.250
820	0.0006	0.0003	2.2	0.060	0.200	0.250
830	0.0006	0.0003	2.2	0.130	0.580	0.400
840	0.0006	0.0003	2.2	0.111	0.300	0.150
850	0.0006	0.0003	2.2	0.130	0.400	0.250
860	0.0006	0.0003	2.2	0.260	0.900	0.600
870	0.0006	0.0003	2.2	0.121	0.400	0.600
880	0.0006	0.0003	2.2	0.100	0.280	0.750
890	0.0006	0.0003	2.2	0.168	0.500	0.600
900	0.0006	0.0003	2.2	0.014	0.080	1.000
901	0.0006	0.0003	2.2	0.267	0.610	0.400
902	0.0006	0.0003	2.2	0.183	0.592	0.400
904	0.0006	0.0003	2.2	0.167	0.584	0.500
906	0.0006	0.0003	2.2	0.192	0.679	0.500
908	0.0006	0.0003	2.2	0.164	0.598	0.650
912	0.0006	0.0003	2.2	0.191	0.513	0.650
914	0.0006	0.0003	2.2	0.044	0.160	0.450
916	0.0006	0.0003	2.2	0.300	0.870	0.450
922 924	0.0006	0.0003	2.2	0.300	0.750	0.300
936	0.0006	0.0003	2.2	0.450	0.910	0.300
938	0.0006	0.0003	2.2	0.600	0.880	0.300

END SILT-CLAY-PM

SILT-CLAY-PM
*** CLAY Parameters

*** RCHRES	D	W	RHO	TAUCD	TAUCS	M
*** x - x	(in)	(in/sec)	gm/cm3	lb/ft2	lb/ft2	lb/ft2.d
100	0.00006	0.00001	2.0	0.602	0.938	0.150
101	0.00006	0.00001	2.0	0.213	0.406	0.150
102	0.00006	0.00001	2.0	0.268	0.424	0.150
104	0.00006	0.00001	2.0	0.173	0.449	0.150
108	0.00006	0.00001	2.0	0.248	0.444	0.150

110	0.00006	0.00001	2.0	0.141	0.427	0.150
120	0.00006	0.00001	2.0	0.116	0.371	0.150
130	0.00006	0.00001	2.0	0.098	0.358	0.150
140	0.00006	0.00001	2.0	0.109	0.374	0.150
150	0.00006	0.00001	2.0	0.184	0.493	0.080
160	0.00006	0.00001	2.0	0.104	0.366	0.080
202	0.00006	0.00001	2.0	0.139	0.286	0.150
204	0.00006	0.00001	2.0	0.259	0.536	0.150
206	0.00006	0.00001	2.0	0.135	0.421	0.150
208	0.00006	0.00001	2.0	0.215	0.369	0.150
212	0.00006	0.00001	2.0	0.138	0.400	0.150
214	0.00006	0.00001	2.0	0.178	0.371	0.150
216	0.00006	0.00001	2.0	0.161	0.464	0.150
302	0.00006	0.00001	2.0	0.360	0.460	0.700
304	0.00006	0.00001	2.0	0.200	0.310	0.700
306	0.00006	0.00001	2.0	0.250	0.380	0.750
308	0.00006	0.00001	2.0	0.320	0.460	0.750
312	0.00006	0.00001	2.0	0.380	0.540	0.800
314	0.00006	0.00001	2.0	0.230	0.360	0.800
316	0.00006	0.00001	2.0	0.260	0.445	0.750
318	0.00006	0.00001	2.0	0.155	0.309	0.500
322	0.00006	0.00001	2.0	0.206	0.434	0.500
324	0.00006	0.00001	2.0	0.208	0.578	0.400
326	0.00006	0.00001	2.0	0.149	0.431	0.400
402	0.00006	0.00001	2.0	0.310	0.514	0.450
404	0.00006	0.00001	2.0	0.487	0.825	0.400
406	0.00006	0.00001	2.0	0.086	0.272	0.450
408	0.00006	0.00001	2.0	0.096	0.276	0.500
412	0.00006	0.00001	2.0	0.300	0.573	0.450
414	0.00006	0.00001	2.0	0.216	0.598	0.450
416	0.00006	0.00001	2.0	0.116	0.405	0.450
418	0.00006	0.00001	2.0	0.344	0.419	0.450
420	0.00006	0.00001	2.0	0.463	0.592	0.250
502	0.00006	0.00001	2.0	0.195	0.397	0.150
504	0.00006	0.00001	2.0	0.147	0.306	0.150
505	0.00006	0.00001	2.0	0.214	0.370	0.150
506	0.00006	0.00001	2.0	0.140	0.180	0.001
507	0.00006	0.00001	2.0	0.365	0.768	0.150
508	0.00006	0.00001	2.0	0.142	0.378	0.150
512	0.00006	0.00001	2.0	0.142	0.456	0.150
514	0.00006	0.00001	2.0	0.127	0.368	0.150
515	0.00006	0.00001	2.0	0.191	0.261	0.150
516	0.00006	0.00001	2.0	0.132	0.417	0.080
518	0.00006	0.00001	2.0	0.087	0.285	0.150
522	0.00006	0.00001	2.0	0.221	0.549	0.008
523	0.00006	0.00001	2.0	0.065	0.205	0.100
524	0.00006	0.00001	2.0	0.112	0.365	0.150
600	0.00006	0.00001	2.0	0.250	0.640	0.050
602	0.00006	0.00001	2.0	0.472	0.788	0.150
604	0.00006	0.00001	2.0	0.336	0.640	0.150
606	0.00006	0.00001	2.0	0.086	0.276	0.150
608	0.00006	0.00001	2.0	0.299	0.523	0.650
609	0.00006	0.00001	2.0	0.165	0.344	0.650
610	0.00006	0.00001	2.0	0.450	0.861	0.200
612	0.00006	0.00001	2.0	0.115	0.326	0.500
614	0.00006	0.00001	2.0	0.113	0.337	0.500

620	0.00006	0.00001	2.0	0.180	0.656	0.100
630	0.00006	0.00001	2.0	0.150	0.400	0.100
635	0.00006	0.00001	2.0	0.200	0.530	0.100
637	0.00006	0.00001	2.0	0.140	0.400	0.100
638	0.00006	0.00001	2.0	0.437	0.496	0.150
639	0.00006	0.00001	2.0	0.194	0.334	0.150
640	0.00006	0.00001	2.0	0.280	0.560	0.100
650	0.00006	0.00001	2.0	0.098	0.300	0.150
660	0.00006	0.00001	2.0	0.142	0.400	0.500
670	0.00006	0.00001	2.0	0.089	0.279	0.400
702	0.00006	0.00001	2.0	0.350	0.725	0.150
703	0.00006	0.00001	2.0	0.516	0.817	0.150
704	0.00006	0.00001	2.0	0.157	0.525	0.150
705	0.00006	0.00001	2.0	0.078	0.190	0.150
706	0.00006	0.00001	2.0	0.099	0.276	0.150
708	0.00006	0.00001	2.0	0.150	0.522	0.150
712	0.00006	0.00001	2.0	0.166	0.625	0.150
714	0.00006	0.00001	2.0	0.565	1.064	0.150
716	0.00006	0.00001	2.0	0.186	0.547	0.150
718	0.00006	0.00001	2.0	0.097	0.333	0.150
722	0.00006	0.00001	2.0	0.146	0.502	0.150
723	0.00006	0.00001	2.0	0.253	0.507	0.150
724	0.00006	0.00001	2.0	0.115	0.462	0.150
725	0.00006	0.00001	2.0	0.201	0.509	0.150
726	0.00006	0.00001	2.0	0.090	0.410	0.300
728	0.00006	0.00001	2.0	0.229	0.554	0.150
732	0.00006	0.00001	2.0	0.159	0.439	0.150
736	0.00006	0.00001	2.0	0.090	0.300	0.300
738	0.00006	0.00001	2.0	0.244	0.552	0.150
742	0.00006	0.00001	2.0	0.152	0.423	0.150
746	0.00006	0.00001	2.0	0.089	0.256	0.200
748	0.00006	0.00001	2.0	0.110	0.550	0.300
751	0.00006	0.00001	2.0	0.111	0.400	0.150
752	0.00006	0.00001	2.0	0.140	0.552	0.150
800	0.00006	0.00001	2.0	0.090	0.326	0.080
802	0.00006	0.00001	2.0	0.383	0.758	0.150
804	0.00006	0.00001	2.0	0.246	0.517	0.150
805	0.00006	0.00001	2.0	0.215	0.433	0.150
806	0.00006	0.00001	2.0	0.255	0.557	0.150
807	0.00006	0.00001	2.0	0.328	0.526	0.150
808	0.00006	0.00001	2.0	0.141	0.346	0.150
809	0.00006	0.00001	2.0	0.154	0.379	0.150
810	0.00006	0.00001	2.0	0.130	0.400	0.250
820	0.00006	0.00001	2.0	0.050	0.180	0.250
830	0.00006	0.00001	2.0	0.110	0.480	0.400
840	0.00006	0.00001	2.0	0.098	0.270	0.150
850	0.00006	0.00001	2.0	0.110	0.350	0.250
860	0.00006	0.00001	2.0	0.230	0.800	0.550
870	0.00006	0.00001	2.0	0.107	0.300	0.550
880	0.00006	0.00001	2.0	0.090	0.250	0.700
890	0.00006	0.00001	2.0	0.148	0.450	0.500
900	0.00006	0.00001	2.0	0.012	0.070	0.800
901	0.00006	0.00001	2.0	0.266	0.491	0.400
902	0.00006	0.00001	2.0	0.176	0.489	0.450
904	0.00006	0.00001	2.0	0.156	0.483	0.550
906	0.00006	0.00001	2.0	0.180	0.563	0.550

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  908        0.00006   0.00001       2.0     0.154     0.503     0.650
  912        0.00006   0.00001       2.0     0.173     0.431     0.650
  914        0.00006   0.00001       2.0     0.038     0.134     0.500
  916        0.00006   0.00001       2.0     0.280     0.740     0.450
  922  924   0.00006   0.00001       2.0     0.290     0.620     0.450
  936        0.00006   0.00001       2.0     0.450     0.760     0.450
  938        0.00006   0.00001       2.0     0.650     0.750     0.450
  END SILT-CLAY-PM

  SSED-INIT
*** RCHRES     Suspended sed concs (mg/l)
*** x -  x      Sand      Silt      Clay
  100  938        0.        4.        4.
  END SSED-INIT

  BED-INIT
*** RCHRES    BEDDEP  Initial bed composition
*** x -  x      (ft)      Sand      Silt      Clay
  100            2.      0.95      0.03      0.02
  101            2.      0.88      0.07      0.05
  102            2.      0.94      0.04      0.02
  104            2.      0.82      0.13      0.05
  108            3.      0.85      0.10      0.05
  110            3.      0.70      0.21      0.09
  120            4.      0.64      0.29      0.07
  130            4.      0.62      0.31      0.07
  140            4.      0.61      0.31      0.08
  150            5.      0.59      0.32      0.09
  160            5.      0.56      0.35      0.09
  202            2.      0.74      0.16      0.10
  204            3.      0.95      0.03      0.02
  206            3.      0.68      0.22      0.10
  208            2.      0.92      0.06      0.02
  212            3.      0.66      0.24      0.10
  214            2.      0.90      0.07      0.03
  216            3.      0.68      0.22      0.10
  302            2.      0.43      0.34      0.23
  304            3.      0.27      0.51      0.22
  306            2.      0.10      0.54      0.36
  308            3.      0.45      0.39      0.16
  312            3.      0.78      0.15      0.07
  314            4.      0.90      0.08      0.02
  316            5.      0.10      0.72      0.18
  318            2.      0.73      0.16      0.11
  322            3.      0.76      0.17      0.07
  324            5.      0.68      0.26      0.06
  326            5.      0.60      0.32      0.08
  402            2.      0.95      0.03      0.02
  404            2.      0.93      0.04      0.03
  406            3.      0.63      0.26      0.11
  408            3.      0.62      0.27      0.11
  412            2.      0.87      0.10      0.03
  414            3.      0.91      0.04      0.05
  416            4.      0.65      0.28      0.07
  418            2.      0.95      0.03      0.02
  420            2.      0.94      0.04      0.02
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502	3.	0.82	0.13	0.05
504	3.	0.95	0.04	0.01
505	2.	0.88	0.07	0.05
506	2.	0.59	0.25	0.16
507	2.	0.95	0.03	0.02
508	3.	0.75	0.17	0.08
512	3.	0.75	0.18	0.07
514	2.	0.72	0.17	0.11
515	2.	0.88	0.07	0.05
516	2.	0.76	0.14	0.10
518	3.	0.58	0.30	0.12
522	3.	0.64	0.25	0.11
523	3.	0.57	0.30	0.13
524	4.	0.78	0.18	0.04
600	5.	0.61	0.31	0.08
602	3.	0.96	0.03	0.01
604	4.	0.95	0.04	0.01
606	4.	0.62	0.30	0.08
608	3.	0.85	0.10	0.05
609	3.	0.72	0.19	0.09
610	5.	0.63	0.29	0.08
612	3.	0.69	0.22	0.09
614	3.	0.83	0.12	0.05
620	5.	0.62	0.30	0.08
630	5.	0.55	0.36	0.09
635	5.	0.58	0.34	0.08
637	5.	0.55	0.36	0.09
638	2.	0.95	0.03	0.02
639	2.	0.87	0.08	0.05
640	5.	0.57	0.35	0.08
650	5.	0.53	0.38	0.09
660	5.	0.56	0.35	0.09
670	5.	0.51	0.39	0.10
702	3.	0.95	0.04	0.01
703	2.	0.82	0.11	0.07
704	3.	0.80	0.14	0.06
705	3.	0.85	0.11	0.04
706	4.	0.93	0.06	0.01
708	4.	0.71	0.23	0.06
712	4.	0.73	0.21	0.06
714	3.	0.95	0.04	0.01
716	3.	0.72	0.20	0.08
718	3.	0.61	0.28	0.11
722	3.	0.67	0.23	0.10
723	3.	0.83	0.12	0.05
724	4.	0.62	0.31	0.07
725	2.	0.95	0.03	0.02
726	4.	0.59	0.33	0.08
728	3.	0.90	0.07	0.03
732	3.	0.92	0.06	0.02
736	4.	0.56	0.35	0.09
738	2.	0.90	0.06	0.04
742	3.	0.88	0.08	0.04
746	5.	0.55	0.36	0.09
748	5.	0.61	0.31	0.08
751	5.	0.57	0.35	0.08

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  752          5.    0.60    0.32    0.08
  800          5.    0.53    0.38    0.09
  802          2.    0.95    0.03    0.02
  804          2.    0.92    0.05    0.03
  805          3.    0.80    0.14    0.06
  806          2.    0.95    0.03    0.02
  807          2.    0.80    0.12    0.08
  808          3.    0.72    0.20    0.08
  809          3.    0.74    0.18    0.08
  810          5.    0.55    0.36    0.09
  820          5.    0.49    0.40    0.11
  830          5.    0.56    0.35    0.09
  840          5.    0.52    0.39    0.09
  850          5.    0.54    0.37    0.09
  860          5.    0.63    0.29    0.08
  870          5.    0.53    0.38    0.09
  880          5.    0.52    0.38    0.10
  890          5.    0.55    0.36    0.09
  900          5.    0.48    0.42    0.10
  901          4.    0.93    0.04    0.03
  902          4.    0.82    0.11    0.07
  904          4.    0.74    0.21    0.05
  906          4.    0.73    0.22    0.05
  908          4.    0.68    0.26    0.06
  912          4.    0.65    0.28    0.07
  914          4.    0.50    0.40    0.10
  916          3.    0.89    0.06    0.05
  922  924     3.    0.90    0.06    0.04
  936          4.    0.95    0.03    0.02
  938          3.    0.57    0.26    0.17
  END BED-INIT

  BENTH-FLAG
*** RCHRES  Benthic release flag
*** x -  x BENF
  100  938    1
  END BENTH-FLAG

  OX-FLAGS
*** RCHRES Oxygen flags
*** x -  x REAM
  100  938    3
  END OX-FLAGS

  OX-GENPARM
*** RCHRES    KBOD20     TCBOD    KODSET    SUPSAT
*** x -  x       /hr              ft/hr
  100  938     0.007     1.047     0.010      1.30
  END OX-GENPARM

  OX-BENPARM
*** RCHRES     BENOD     TCBEN     EXPOD  BRBOD(1)  BRBOD(2)    EXPREL
*** x -  x  mg/m2.hr                    mg/m2.hr  mg/m2.hr
  100          50.    1.074     1.22      1.0      20.      2.82
  101          50.    1.074     1.22      1.0      20.      2.82
  102          50.    1.074     1.22      1.0      20.      2.82
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104	50.	1.074	1.22	1.0	20.	2.82
108	50.	1.074	1.22	1.0	20.	2.82
110	50.	1.074	1.22	1.0	20.	2.82
120	70.	1.074	1.22	1.0	20.	2.82
130	70.	1.074	1.22	1.0	20.	2.82
140	70.	1.074	1.22	1.0	20.	2.82
150	70.	1.074	1.22	1.0	20.	2.82
160	70.	1.074	1.22	1.0	20.	2.82
202	50.	1.074	1.22	1.0	20.	2.82
204	50.	1.074	1.22	1.0	20.	2.82
206	50.	1.074	1.22	1.0	20.	2.82
208	50.	1.074	1.22	1.0	20.	2.82
212	50.	1.074	1.22	1.0	20.	2.82
214	50.	1.074	1.22	1.0	20.	2.82
216	50.	1.074	1.22	1.0	20.	2.82
302	50.	1.074	1.22	1.0	20.	2.82
304	70.	1.074	1.22	1.0	20.	2.82
306	50.	1.074	1.22	1.0	20.	2.82
308	70.	1.074	1.22	1.0	20.	2.82
312	50.	1.074	1.22	1.0	20.	2.82
314	50.	1.074	1.22	1.0	20.	2.82
316	70.	1.074	1.22	1.0	20.	2.82
318	50.	1.074	1.22	1.0	20.	2.82
322	50.	1.074	1.22	1.0	20.	2.82
324	50.	1.074	1.22	1.0	20.	2.82
326	50.	1.074	1.22	1.0	20.	2.82
402	50.	1.074	1.22	1.0	20.	2.82
404	50.	1.074	1.22	1.0	20.	2.82
406	50.	1.074	1.22	1.0	20.	2.82
408	50.	1.074	1.22	1.0	20.	2.82
412	50.	1.074	1.22	1.0	20.	2.82
414	50.	1.074	1.22	1.0	20.	2.82
416	50.	1.074	1.22	1.0	20.	2.82
418	50.	1.074	1.22	1.0	20.	2.82
420	70.	1.074	1.22	1.0	20.	2.82
502	50.	1.074	1.22	1.0	20.	2.82
504	50.	1.074	1.22	1.0	20.	2.82
505	50.	1.074	1.22	1.0	20.	2.82
506	50.	1.074	1.22	1.0	20.	2.82
507	50.	1.074	1.22	1.0	20.	2.82
508	50.	1.074	1.22	1.0	20.	2.82
512	50.	1.074	1.22	1.0	20.	2.82
514	50.	1.074	1.22	1.0	20.	2.82
515	50.	1.074	1.22	1.0	20.	2.82
516	50.	1.074	1.22	1.0	20.	2.82
518	50.	1.074	1.22	1.0	20.	2.82
522	50.	1.074	1.22	1.0	20.	2.82
523	50.	1.074	1.22	1.0	20.	2.82
524	50.	1.074	1.22	1.0	20.	2.82
600	70.	1.074	1.22	1.0	20.	2.82
602	50.	1.074	1.22	1.0	20.	2.82
604	50.	1.074	1.22	1.0	20.	2.82
606	50.	1.074	1.22	1.0	20.	2.82
608	50.	1.074	1.22	1.0	20.	2.82
609	50.	1.074	1.22	1.0	20.	2.82
610	70.	1.074	1.22	1.0	20.	2.82

612	50.	1.074	1.22	1.0	20.	2.82
614	50.	1.074	1.22	1.0	20.	2.82
620	70.	1.074	1.22	1.0	20.	2.82
630	70.	1.074	1.22	1.0	20.	2.82
635	50.	1.074	1.22	1.0	20.	2.82
637	50.	1.074	1.22	1.0	20.	2.82
638	50.	1.074	1.22	1.0	20.	2.82
639	50.	1.074	1.22	1.0	20.	2.82
640	70.	1.074	1.22	1.0	20.	2.82
650	70.	1.074	1.22	1.0	20.	2.82
660	70.	1.074	1.22	1.0	20.	2.82
670	70.	1.074	1.22	1.0	20.	2.82
702	50.	1.074	1.22	1.0	20.	2.82
703	50.	1.074	1.22	1.0	20.	2.82
704	50.	1.074	1.22	1.0	20.	2.82
705	50.	1.074	1.22	1.0	20.	2.82
706	70.	1.074	1.22	1.0	20.	2.82
708	70.	1.074	1.22	1.0	20.	2.82
712	70.	1.074	1.22	1.0	20.	2.82
714	50.	1.074	1.22	1.0	20.	2.82
716	50.	1.074	1.22	1.0	20.	2.82
718	50.	1.074	1.22	1.0	20.	2.82
722	50.	1.074	1.22	1.0	20.	2.82
723	50.	1.074	1.22	1.0	20.	2.82
724	70.	1.074	1.22	1.0	20.	2.82
725	50.	1.074	1.22	1.0	20.	2.82
726	70.	1.074	1.22	1.0	20.	2.82
728	50.	1.074	1.22	1.0	20.	2.82
732	50.	1.074	1.22	1.0	20.	2.82
736	70.	1.074	1.22	1.0	20.	2.82
738	50.	1.074	1.22	1.0	20.	2.82
742	50.	1.074	1.22	1.0	20.	2.82
746	70.	1.074	1.22	1.0	20.	2.82
748	70.	1.074	1.22	1.0	20.	2.82
751	70.	1.074	1.22	1.0	20.	2.82
752	70.	1.074	1.22	1.0	20.	2.82
800	70.	1.074	1.22	1.0	20.	2.82
802	50.	1.074	1.22	1.0	20.	2.82
804	50.	1.074	1.22	1.0	20.	2.82
805	50.	1.074	1.22	1.0	20.	2.82
806	50.	1.074	1.22	1.0	20.	2.82
807	50.	1.074	1.22	1.0	20.	2.82
808	50.	1.074	1.22	1.0	20.	2.82
809	50.	1.074	1.22	1.0	20.	2.82
810	70.	1.074	1.22	1.0	20.	2.82
820	70.	1.074	1.22	1.0	20.	2.82
830	70.	1.074	1.22	1.0	20.	2.82
840	70.	1.074	1.22	1.0	20.	2.82
850	70.	1.074	1.22	1.0	20.	2.82
860	70.	1.074	1.22	1.0	20.	2.82
870	70.	1.074	1.22	1.0	20.	2.82
880	70.	1.074	1.22	1.0	20.	2.82
890	70.	1.074	1.22	1.0	20.	2.82
900	70.	1.074	1.22	1.0	20.	2.82
901	50.	1.074	1.22	1.0	20.	2.82
902	70.	1.074	1.22	1.0	20.	2.82

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  904          70.    1.074     1.22      1.0      20.     2.82
  906          70.    1.074     1.22      1.0      20.     2.82
  908          70.    1.074     1.22      1.0      20.     2.82
  912          70.    1.074     1.22      1.0      20.     2.82
  914          70.    1.074     1.22      1.0      20.     2.82
  916  924      50.    1.074     1.22      1.0      20.     2.82
  936          50.    1.074     1.22      1.0      20.     2.82
  938          50.    1.074     1.22      1.0      20.     2.82
  END OX-BENPARM

  OX-REAPARM
*** RCHRES    TCGINV      REAK    EXPRED    EXPREV
*** x -  x                /hr
  100  938     1.024      0.20    -1.673     0.969
  END OX-REAPARM

  OX-INIT
*** RCHRES       DOX       BOD     SATDO
*** x -  x      mg/l      mg/l      mg/l
  100  938      12.8       4.0      13.5
  END OX-INIT

  NUT-FLAGS
*** RCHRES  Nutrient flags
*** x -  x  NH3  NO2  PO4  AMV  DEN ADNH ADPO PHFL
  100  938    1    1    1    0    1    1    1    2
  END NUT-FLAGS

  NUT-AD-FLAGS
***                    Atmospheric Deposition Flags
*** < PLS>  NO3   NH4  QUAL3  QUAL4  QUAL5  QUAL6  QUAL7  QUAL8  QUAL9 QUAL10
*** x  - x <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C>
  100  938  -1 -1  -1 -1   0  0
  END NUT-AD-FLAGS

  CONV-VAL1
*** RCHRES      CVBO     CVBPC     CVBPN    BPCNTC
*** x -  x     mg/mg  mols/mol  mols/mol
  100  938      1.63      106.       16.       49.
  END CONV-VAL1

  NUT-BENPARM
*** RCHRES  BRNIT(1)  BRNIT(2)  BRPO4(1)  BRPO4(2)     ANAER
*** x -  x  mg/m2.hr  mg/m2.hr  mg/m2.hr  mg/m2.hr      mg/l
  100  938      0.00        0.     0.000        0.     0.001
  END NUT-BENPARM

  NUT-NITDENIT
*** TAS EDIT Denitrifaction rates adjusted - 09/12/2016
*** RCHRES    KTAM20    KNO220     TCNIT    KNO320     TCDEN    DENOXT
*** x -  x      /hr       /hr               /hr              mg/l
  100         0.050     0.050      1.07    0.0500      1.04      7.5
  101         0.050     0.050      1.07    0.0500      1.04      7.5
  102         0.050     0.050      1.07    0.0500      1.04      7.5
  104         0.050     0.050      1.07    0.0500      1.04      7.5
  108         0.050     0.050      1.07    0.0500      1.04      7.5
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110	0.050	0.050	1.07	0.0500	1.04	7.5
120	0.050	0.050	1.07	0.0500	1.04	7.5
130	0.050	0.050	1.07	0.0500	1.04	7.5
140	0.050	0.050	1.07	0.0500	1.04	7.5
150	0.050	0.050	1.07	0.0500	1.04	7.5
160	0.050	0.050	1.07	0.0500	1.04	7.5
202	0.050	0.050	1.07	0.0500	1.04	7.5
204	0.050	0.050	1.07	0.0500	1.04	7.5
206	0.050	0.050	1.07	0.0500	1.04	7.5
208	0.050	0.050	1.07	0.0500	1.04	7.5
212	0.050	0.050	1.07	0.0500	1.04	7.5
214	0.050	0.050	1.07	0.0500	1.04	7.5
216	0.050	0.050	1.07	0.0500	1.04	7.5
302	0.050	0.050	1.07	0.0500	1.04	7.5
304	0.050	0.050	1.07	0.0500	1.04	7.5
306	0.050	0.050	1.07	0.0500	1.04	7.5
308	0.050	0.050	1.07	0.0500	1.04	7.5
312	0.050	0.050	1.07	0.0500	1.04	7.5
314	0.050	0.050	1.07	0.0500	1.04	7.5
316	0.050	0.050	1.07	0.0500	1.04	7.5
318	0.050	0.050	1.07	0.0500	1.04	7.5
322	0.050	0.050	1.07	0.0500	1.04	7.5
324	0.050	0.050	1.07	0.0500	1.04	7.5
326	0.050	0.050	1.07	0.0500	1.04	7.5
402	0.050	0.050	1.07	0.0500	1.04	7.5
404	0.050	0.050	1.07	0.0500	1.04	7.5
406	0.050	0.050	1.07	0.0500	1.04	7.5
408	0.050	0.050	1.07	0.0500	1.04	7.5
412	0.050	0.050	1.07	0.0500	1.04	7.5
414	0.050	0.050	1.07	0.0500	1.04	7.5
416	0.050	0.050	1.07	0.0500	1.04	7.5
418	0.050	0.050	1.07	0.0500	1.04	7.5
420	0.050	0.050	1.07	0.0500	1.04	7.5
502	0.050	0.050	1.07	0.0500	1.04	7.5
504	0.050	0.050	1.07	0.0500	1.04	7.5
505	0.050	0.050	1.07	0.0500	1.04	7.5
506	0.050	0.050	1.07	0.0500	1.04	7.5
507	0.050	0.050	1.07	0.0500	1.04	7.5
508	0.050	0.050	1.07	0.0500	1.04	7.5
512	0.050	0.050	1.07	0.0500	1.04	7.5
514	0.050	0.050	1.07	0.0500	1.04	7.5
515	0.050	0.050	1.07	0.0500	1.04	7.5
516	0.050	0.050	1.07	0.0500	1.04	7.5
518	0.050	0.050	1.07	0.0500	1.04	7.5
522	0.050	0.050	1.07	0.0500	1.04	7.5
523	0.050	0.050	1.07	0.0500	1.04	7.5
524	0.050	0.050	1.07	0.0500	1.04	7.5
600	0.050	0.050	1.07	0.0500	1.04	7.5
602	0.050	0.050	1.07	0.0500	1.04	7.5
604	0.050	0.050	1.07	0.0500	1.04	7.5
606	0.050	0.050	1.07	0.0500	1.04	7.5
608	0.050	0.050	1.07	0.0500	1.04	7.5
609	0.050	0.050	1.07	0.0500	1.04	7.5
610	0.050	0.050	1.07	0.0500	1.04	7.5
612	0.050	0.050	1.07	0.0500	1.04	7.5
614	0.050	0.050	1.07	0.0500	1.04	7.5

620	0.050	0.050	1.07	0.0500	1.04	7.5
630	0.050	0.050	1.07	0.0500	1.04	7.5
635	0.050	0.050	1.07	0.0500	1.04	7.5
637	0.050	0.050	1.07	0.0500	1.04	7.5
638	0.050	0.050	1.07	0.0500	1.04	7.5
639	0.050	0.050	1.07	0.0500	1.04	7.5
640	0.050	0.050	1.07	0.0500	1.04	7.5
650	0.050	0.050	1.07	0.0500	1.04	7.5
660	0.050	0.050	1.07	0.0500	1.04	7.5
670	0.050	0.050	1.07	0.0500	1.04	7.5
702	0.050	0.050	1.07	0.0500	1.04	7.5
703	0.050	0.050	1.07	0.0500	1.04	7.5
704	0.050	0.050	1.07	0.0500	1.04	7.5
705	0.050	0.050	1.07	0.0500	1.04	7.5
706	0.050	0.050	1.07	0.0500	1.04	7.5
708	0.050	0.050	1.07	0.0500	1.04	7.5
712	0.050	0.050	1.07	0.0500	1.04	7.5
714	0.050	0.050	1.07	0.0500	1.04	7.5
716	0.050	0.050	1.07	0.0500	1.04	7.5
718	0.050	0.050	1.07	0.0500	1.04	7.5
722	0.050	0.050	1.07	0.0500	1.04	7.5
723	0.050	0.050	1.07	0.0500	1.04	7.5
724	0.050	0.050	1.07	0.0500	1.04	7.5
725	0.050	0.050	1.07	0.0500	1.04	7.5
726	0.050	0.050	1.07	0.0500	1.04	7.5
728	0.050	0.050	1.07	0.0500	1.04	7.5
732	0.050	0.050	1.07	0.0500	1.04	7.5
736	0.050	0.050	1.07	0.0500	1.04	7.5
738	0.050	0.050	1.07	0.0500	1.04	7.5
742	0.050	0.050	1.07	0.0500	1.04	7.5
746	0.050	0.050	1.07	0.0500	1.04	7.5
748	0.050	0.050	1.07	0.0500	1.04	7.5
751	0.050	0.050	1.07	0.0500	1.04	7.5
752	0.050	0.050	1.07	0.0500	1.04	7.5
800	0.050	0.050	1.07	0.0500	1.04	7.5
802	0.050	0.050	1.07	0.0500	1.04	7.5
804	0.050	0.050	1.07	0.0500	1.04	7.5
805	0.050	0.050	1.07	0.0500	1.04	7.5
806	0.050	0.050	1.07	0.0500	1.04	7.5
807	0.050	0.050	1.07	0.0500	1.04	7.5
808	0.050	0.050	1.07	0.0500	1.04	7.5
809	0.050	0.050	1.07	0.0500	1.04	7.5
810	0.050	0.050	1.07	0.0500	1.04	7.5
820	0.050	0.050	1.07	0.0500	1.04	7.5
830	0.050	0.050	1.07	0.0500	1.04	7.5
840	0.050	0.050	1.07	0.0500	1.04	7.5
850	0.050	0.050	1.07	0.0500	1.04	7.5
860	0.050	0.050	1.07	0.0500	1.04	7.5
870	0.050	0.050	1.07	0.0500	1.04	7.5
880	0.050	0.050	1.07	0.0500	1.04	7.5
890	0.050	0.050	1.07	0.0500	1.04	7.5
900	0.050	0.050	1.07	0.0500	1.04	7.5
901	0.050	0.050	1.07	0.0500	1.04	7.5
902	0.050	0.050	1.07	0.0500	1.04	7.5
904	0.050	0.050	1.07	0.0500	1.04	7.5
906	0.050	0.050	1.07	0.0500	1.04	7.5

908	0.050	0.050	1.07	0.0500	1.04	7.5
912	0.050	0.050	1.07	0.0500	1.04	7.5
914 924	0.050	0.050	1.07	0.0500	1.04	7.5
936	0.050	0.050	1.07	0.0500	1.04	7.5
938	0.050	0.050	1.07	0.0500	1.04	7.5

END NUT-NITDENIT

NUT-BEDCONC

RCHRES Bed concentrations of NH4 & PO4 (mg/kg) ***

# - #	NH4-sand	NH4-silt	NH4-clay	PO4-sand	PO4-silt	PO4-clay ***
100	40.	100.	100.	480.	650.	650.
101	40.	100.	100.	330.	440.	440.
102	40.	100.	100.	330.	440.	440.
104	40.	100.	100.	330.	440.	440.
108	40.	100.	100.	230.	310.	310.
110	40.	100.	100.	230.	310.	310.
120	40.	100.	100.	230.	310.	310.
130	40.	100.	100.	230.	310.	310.
140	40.	100.	100.	330.	440.	440.
150	40.	100.	100.	170.	230.	230.
160	40.	100.	100.	170.	230.	230.
202	40.	100.	100.	170.	230.	230.
204	40.	100.	100.	330.	440.	440.
206	40.	100.	100.	170.	230.	230.
208	40.	100.	100.	170.	230.	230.
212	40.	100.	100.	170.	230.	230.
214	40.	100.	100.	170.	230.	230.
216	40.	100.	100.	170.	230.	230.
302	40.	100.	100.	480.	650.	650.
304	40.	100.	100.	480.	650.	650.
306	40.	100.	100.	660.	880.	880.
308	40.	100.	100.	660.	880.	880.
312	40.	100.	100.	330.	440.	440.
314	40.	100.	100.	330.	440.	440.
316	40.	100.	100.	330.	440.	440.
318	40.	100.	100.	330.	440.	440.
322	40.	100.	100.	330.	440.	440.
324	40.	100.	100.	330.	440.	440.
326	40.	100.	100.	330.	440.	440.
402	40.	100.	100.	330.	440.	440.
404	40.	100.	100.	330.	440.	440.
406	40.	100.	100.	330.	440.	440.
408	40.	100.	100.	330.	440.	440.
412	40.	100.	100.	330.	440.	440.
414	40.	100.	100.	330.	440.	440.
416	40.	100.	100.	170.	230.	230.
418	40.	100.	100.	170.	230.	230.
420	40.	100.	100.	170.	230.	230.
502	40.	100.	100.	660.	880.	880.
504	40.	100.	100.	660.	880.	880.
505	40.	100.	100.	480.	650.	650.
506	40.	100.	100.	480.	650.	650.
507	40.	100.	100.	480.	650.	650.
508	40.	100.	100.	480.	650.	650.
512	40.	100.	100.	480.	650.	650.
514	40.	100.	100.	330.	440.	440.

515	40.	100.	100.	330.	440.	440.
516	40.	100.	100.	330.	440.	440.
518	40.	100.	100.	330.	440.	440.
522	40.	100.	100.	330.	440.	440.
523	40.	100.	100.	330.	440.	440.
524	40.	100.	100.	330.	440.	440.
600	40.	100.	100.	330.	440.	440.
602	40.	100.	100.	170.	230.	230.
604	40.	100.	100.	660.	880.	880.
606	40.	100.	100.	170.	230.	230.
608	40.	100.	100.	600.	800.	800.
609	40.	100.	100.	600.	800.	800.
610	40.	100.	100.	330.	440.	440.
612	40.	100.	100.	330.	440.	440.
614	40.	100.	100.	480.	650.	650.
620	40.	100.	100.	330.	440.	440.
630	40.	100.	100.	330.	440.	440.
635	40.	100.	100.	230.	310.	310.
637	40.	100.	100.	230.	310.	310.
638	40.	100.	100.	330.	440.	440.
639	40.	100.	100.	330.	440.	440.
640	40.	100.	100.	330.	440.	440.
650	40.	100.	100.	330.	440.	440.
660	40.	100.	100.	330.	440.	440.
670	40.	100.	100.	480.	650.	650.
702	40.	100.	100.	975.	1300.	1300.
703	40.	100.	100.	975.	1300.	1300.
704	40.	100.	100.	330.	440.	440.
705	40.	100.	100.	480.	650.	650.
706	40.	100.	100.	975.	1300.	1300.
708	40.	100.	100.	480.	650.	650.
712	40.	100.	100.	170.	230.	230.
714	40.	100.	100.	660.	880.	880.
716	40.	100.	100.	330.	440.	440.
718	40.	100.	100.	330.	440.	440.
722	40.	100.	100.	230.	310.	310.
723	40.	100.	100.	825.	1100.	1100.
724	40.	100.	100.	330.	440.	440.
725	40.	100.	100.	330.	440.	440.
726	40.	100.	100.	330.	440.	440.
728	40.	100.	100.	330.	440.	440.
732	40.	100.	100.	330.	440.	440.
736	40.	100.	100.	330.	440.	440.
738	40.	100.	100.	330.	440.	440.
742	40.	100.	100.	75.	100.	100.
746	40.	100.	100.	75.	100.	100.
748	40.	100.	100.	75.	100.	100.
751	40.	100.	100.	75.	100.	100.
752	40.	100.	100.	75.	100.	100.
800	40.	100.	100.	480.	650.	650.
802	40.	100.	100.	480.	650.	650.
804	40.	100.	100.	330.	440.	440.
805	40.	100.	100.	330.	440.	440.
806	40.	100.	100.	825.	1100.	1100.
807	40.	100.	100.	825.	1100.	1100.
808	40.	100.	100.	825.	1100.	1100.

```
 809          40.     100.     100.     825.    1100.    1100.
 810          40.     100.     100.     480.     650.     650.
 820          40.     100.     100.     480.     650.     650.
 830          40.     100.     100.     230.     310.     310.
 840          40.     100.     100.     230.     310.     310.
 850          40.     100.     100.     230.     310.     310.
 860          40.     100.     100.     480.     650.     650.
 870          40.     100.     100.     825.    1100.    1100.
 880          40.     100.     100.     825.    1100.    1100.
 890          40.     100.     100.     825.    1100.    1100.
 900          40.     100.     100.     975.    1300.    1300.
 901          40.     100.     100.     480.     650.     650.
 902          40.     100.     100.     480.     650.     650.
 904          40.     100.     100.     480.     650.     650.
 906          40.     100.     100.     330.     440.     440.
 908          40.     100.     100.     230.     310.     310.
 912          40.     100.     100.     230.     310.     310.
 914  924      40.     100.     100.     230.     310.     310.
 936          40.     100.     100.     975.    1300.    1300.
 938          40.     100.     100.     975.    1300.    1300.
 END NUT-BEDCONC

 NUT-ADSPARM
  RCHRES      Partition coefficients for NH4 AND PO4  (ml/g)        ***
  # -  #  NH4-sand  NH4-silt  NH4-clay  PO4-sand  PO4-silt  PO4-clay ***
 100  938      10.     100.     100.     600.    1000.    1000.
 END NUT-ADSPARM

 NUT-DINIT
*** RCHRES      NO3      TAM      NO2      PO4
*** x -  x     mg/l     mg/l     mg/l     mg/l
 100  938      3.0     0.50       0.    0.100       7.
 END NUT-DINIT

 PLNK-FLAGS
*** RCHRES Plankton flags
*** x -  x PHYF ZOOF BALF SDLT AMRF DECF NSFG ZFOO  BNP
 100  938    1    0    1    0    0    1    1    2
 END PLNK-FLAGS

 PLNK-PARM1
*** RCHRES    RATCLP    NONREF    LITSED     ALNPR      EXTB     MALGR    PARADF
*** x  - x                  l/mg.ft              /ft       /hr
 100  938     0.68       0.5    0.0015      0.25      0.13     0.032
 END PLNK-PARM1

 PLNK-PARM2
*** RCHRES     CMMLT      CMMN     CMMNP      CMMP    TALGRH    TALGRL    TALGRM
*** x  - x    ly/min      mg/l      mg/l      mg/l     deg F     deg F     deg F
 100  938     0.033     0.045     0.010     0.015       92.       40.       80.
 END PLNK-PARM2

 PLNK-PARM3
*** RCHRES     ALR20      ALDH      ALDL     OXALD     NALDH     PALDH
*** x -  x      /hr       /hr       /hr       /hr      mg/l      mg/l
 100  938     0.005      0.02     0.001      0.03      0.01     0.002
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  END PLNK-PARM3

  PHYTO-PARM
*** RCHRES      SEED    MXSTAY      OREF    CLALDH    PHYSET    REFSET
*** x -  x      mg/l      mg/l     ft3/s      ug/l     ft/hr     ft/hr
  100  938        2.       10.       10.       40.     0.006     0.005
  END PHYTO-PARM

  BENAL-PARM
***RC HRES      MBAL    CFBALR    CFBALG    MINBAL     CAMPR     FRAVL    NMAXFX
*** x  - x     mg/m2                    mg/m2      mg/l                mg/l
  100          1500.      0.40       0.9     1.E-4
  101          1500.      0.40       0.9     1.E-4
  102          1500.      0.40       0.9     1.E-4
  104          1500.      0.40       0.9     1.E-4
  108          1500.      0.40       0.9     1.E-4
  110          1500.      0.40       0.9     1.E-4
  120          3000.      0.40       0.9     1.E-4
  130          3000.      0.40       0.9     1.E-4
  140          3000.      0.40       0.9     1.E-4
  150          3000.      0.40       0.9     1.E-4
  160          3000.      0.40       0.9     1.E-4
  202          1500.      0.40       0.9     1.E-4
  204          1500.      0.40       0.9     1.E-4
  206          1500.      0.40       0.9     1.E-4
  208          1500.      0.40       0.9     1.E-4
  212          1500.      0.40       0.9     1.E-4
  214          1500.      0.40       0.9     1.E-4
  216          1500.      0.40       0.9     1.E-4
  302          1500.      0.40       0.9     1.E-4
  304          3000.      0.40       0.9     1.E-4
  306          1500.      0.40       0.9     1.E-4
  308          3000.      0.40       0.9     1.E-4
  312          1500.      0.40       0.9     1.E-4
  314          1500.      0.40       0.9     1.E-4
  316          3000.      0.40       0.9     1.E-4
  318          1500.      0.40       0.9     1.E-4
  322          1500.      0.40       0.9     1.E-4
  324          1500.      0.40       0.9     1.E-4
  326          1500.      0.40       0.9     1.E-4
  402          1500.      0.40       0.9     1.E-4
  404          1500.      0.40       0.9     1.E-4
  406          1500.      0.40       0.9     1.E-4
  408          1500.      0.40       0.9     1.E-4
  412          1500.      0.40       0.9     1.E-4
  414          1500.      0.40       0.9     1.E-4
  416          1500.      0.40       0.9     1.E-4
  418          1500.      0.40       0.9     1.E-4
  420          3000.      0.40       0.9     1.E-4
  502          1500.      0.40       0.9     1.E-4
  504          1500.      0.40       0.9     1.E-4
  505          1500.      0.40       0.9     1.E-4
  506          1500.      0.40       0.9     1.E-4
  507          1500.      0.40       0.9     1.E-4
  508          1500.      0.40       0.9     1.E-4
  512          1500.      0.40       0.9     1.E-4
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514	1500.	0.40	0.9	1.E-4
515	1500.	0.40	0.9	1.E-4
516	1500.	0.40	0.9	1.E-4
518	1500.	0.40	0.9	1.E-4
522	1500.	0.40	0.9	1.E-4
523	1500.	0.40	0.9	1.E-4
524	1500.	0.40	0.9	1.E-4
600	3000.	0.40	0.9	1.E-4
602	1500.	0.40	0.9	1.E-4
604	1500.	0.40	0.9	1.E-4
606	1500.	0.40	0.9	1.E-4
608	1500.	0.40	0.9	1.E-4
609	1500.	0.40	0.9	1.E-4
610	3000.	0.40	0.9	1.E-4
612	1500.	0.40	0.9	1.E-4
614	1500.	0.40	0.9	1.E-4
620	3000.	0.40	0.9	1.E-4
630	3000.	0.40	0.9	1.E-4
635	1500.	0.40	0.9	1.E-4
637	1500.	0.40	0.9	1.E-4
638	1500.	0.40	0.9	1.E-4
639	1500.	0.40	0.9	1.E-4
640	3000.	0.40	0.9	1.E-4
650	4200.	0.40	0.9	1.E-4
660	4200.	0.40	0.9	1.E-4
670	4200.	0.40	0.9	1.E-4
702	1500.	0.40	0.9	1.E-4
703	1500.	0.40	0.9	1.E-4
704	1500.	0.40	0.9	1.E-4
705	1500.	0.40	0.9	1.E-4
706	3000.	0.40	0.9	1.E-4
708	3000.	0.40	0.9	1.E-4
712	3000.	0.40	0.9	1.E-4
714	1500.	0.40	0.9	1.E-4
716	1500.	0.40	0.9	1.E-4
718	1500.	0.40	0.9	1.E-4
722	1500.	0.40	0.9	1.E-4
723	1500.	0.40	0.9	1.E-4
724	3000.	0.40	0.9	1.E-4
725	1500.	0.40	0.9	1.E-4
726	3000.	0.40	0.9	1.E-4
728	1500.	0.40	0.9	1.E-4
732	1500.	0.40	0.9	1.E-4
736	3000.	0.40	0.9	1.E-4
738	1500.	0.40	0.9	1.E-4
742	1500.	0.40	0.9	1.E-4
746	4200.	0.40	0.9	1.E-4
748	4200.	0.40	0.9	1.E-4
751	4200.	0.40	0.9	1.E-4
752	4200.	0.40	0.9	1.E-4
800	4200.	0.40	0.9	1.E-4
802	1500.	0.40	0.9	1.E-4
804	1500.	0.40	0.9	1.E-4
805	1500.	0.40	0.9	1.E-4
806	1500.	0.40	0.9	1.E-4
807	1500.	0.40	0.9	1.E-4

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  808          1500.      0.40       0.9     1.E-4
  809          1500.      0.40       0.9     1.E-4
  810          3000.      0.40       0.9     1.E-4
  820          4200.      0.40       0.9     1.E-4
  830          4200.      0.40       0.9     1.E-4
  840          4200.      0.40       0.9     1.E-4
  850          4200.      0.40       0.9     1.E-4
  860          4200.      0.40       0.9     1.E-4
  870          4200.      0.40       0.9     1.E-4
  880          4200.      0.40       0.9     1.E-4
  890          4200.      0.40       0.9     1.E-4
  900          4200.      0.40       0.9     1.E-4
  901          1500.      0.40       0.9     1.E-4
  902          3000.      0.40       0.9     1.E-4
  904          3000.      0.40       0.9     1.E-4
  906          3000.      0.40       0.9     1.E-4
  908          4200.      0.40       0.9     1.E-4
  912          4200.      0.40       0.9     1.E-4
  914          4200.      0.40       0.9     1.E-4
  916  924     1500.      0.40       0.9     1.E-4
  936          1500.      0.40       0.9     1.E-4
  938          1500.      0.40       0.9     1.E-4
  END BENAL-PARM

  PLNK-INIT
*** RCHRES     PHYTO       ZOO     BENAL       ORN       ORP       ORC
*** x -  x      mg/l     org/l    mg/m2      mg/l      mg/l      mg/l
  100  938       2.0      0.03    1000.       0.5     0.100       0.5
  END PLNK-INIT

END RCHRES

FTABLES

  FTABLE    100
 rows cols                          ***
   18    4
     depth      area    volume  outflow ***
       0.0       0.0       0.0       0.0
      0.17      2.00      1.50       0.0
      0.35      5.00      4.92     11.06
      0.71     14.68      11.2     37.68
      1.06     23.53     18.85     79.57
      1.42     27.39     27.86    137.89
      1.77     31.24     38.24     214.0
      2.12      35.1     49.98    309.36
      2.83     42.81     77.56    563.45
      3.54     50.52     110.6    911.29
      4.25     58.24     149.1   1363.49
      5.66     95.94    258.26   2907.15
      7.08    133.65    420.81   5144.26
       8.5    171.36    636.75   8214.08
      9.91    209.06    906.09  12236.76
     11.33    246.77   1228.82  17323.02
     12.74    284.48   1604.94  23577.07
     14.16    322.18   2034.45   31098.2
```

END FTABLE100

FTABLE 714
rows cols ***
18 4

depth	area	volume	outflow ***
0.0	0.0	0.0	0.0
0.20	5.00	3.17	0.0
0.39	10.84	7.17	16.64
0.78	25.57	16.18	56.3
1.16	30.3	27.02	118.14
1.55	35.03	39.7	203.56
1.94	39.76	54.22	314.36
2.33	44.49	70.57	452.44
3.11	53.95	108.79	818.12
3.88	63.42	154.35	1315.63
4.66	72.88	207.25	1959.42
6.21	134.1	367.94	4172.82
7.76	195.33	623.7	7481.95
9.32	256.56	974.52	12158.19
10.87	317.78	1420.41	18432.68
12.42	379.01	1961.36	26516.31
13.97	440.23	2597.38	36606.32
15.53	501.46	3328.47	48889.61

END FTABLE714

FTABLE 702
rows cols ***
18 4

depth	area	volume	outflow ***
0.0	0.0	0.0	0.0
0.15	3.00	1.00	0.0
0.3	5.00	2.54	5.58
0.59	10.75	5.89	19.3
0.89	15.52	10.07	41.3
1.18	18.29	15.06	72.4
1.48	21.06	20.87	113.49
1.77	23.84	27.5	165.47
2.36	29.38	43.22	305.65
2.95	34.93	62.22	499.73
3.54	40.47	84.49	754.17
4.73	71.31	150.52	1638.12
5.91	102.15	252.99	2951.6
7.09	132.98	391.89	4792.52
8.27	163.82	567.22	7244.84
9.45	194.66	778.99	10385.46
10.63	225.49	1027.18	14286.54
11.81	256.33	1311.82	19016.6

END FTABLE702

FTABLE 716
rows cols ***
17 4

depth	area	volume	outflow ***
0.0	0.0	0.0	0.0
0.44	8.52	6.6	14.49

```
    0.89     19.88     14.69     48.57
    1.33     23.23     24.27    101.04
    1.78     26.59     35.35    172.72
    2.22     29.95     47.92    264.85
    2.67     33.31     61.99    378.77
    3.56     40.02     94.59     677.6
    4.45     46.74    133.17   1080.29
    5.34     53.45    177.72   1597.61
    7.11     90.11    305.39   3342.06
    8.89    126.76    498.25   5870.85
   10.67    163.41     756.3   9351.12
   12.45    200.07   1079.55  13926.23
   14.23    236.72   1467.99   19727.8
   16.01    273.38   1921.63  26879.45
   17.79    310.03   2440.46  35498.72
 END FTABLE716

 FTABLE    412
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.16      3.00      2.50       0.0
    0.33      6.00      4.35      6.84
    0.67     15.67      9.98     23.41
     1.0     22.46     16.86     49.63
    1.34     26.24     25.02     86.29
    1.67     30.02     34.44    134.33
    2.01      33.8     45.13    194.69
    2.68     41.37     70.31    356.15
    3.35     48.93    100.55    577.95
    4.02      56.5    135.87    867.08
    5.36     72.32    222.16   1830.32
     6.7     88.14    329.65   3123.56
    8.04    103.96    458.34   4764.49
    9.38    119.78    608.23   6771.14
   10.72     135.6    779.31   9162.01
   12.06    151.43    971.59  11955.78
    13.4    167.25   1185.07  15171.12
 END FTABLE412

 FTABLE    608
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.38     10.22      7.77     10.41
    0.76      24.6     17.58     35.28
    1.14     33.97     29.42     74.17
    1.51     39.35      43.3    127.99
    1.89     44.73     59.21    197.92
    2.27      50.1     77.16     285.2
    3.03     60.86    119.16    516.74
    3.79     71.61     169.3    832.28
    4.54     82.36    227.58   1241.13
    6.06    226.57    461.45   2760.53
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    7.57    370.77    913.66   5463.53
    9.08    514.98    1584.2   9821.13
    10.6    659.18   2473.08  16226.55
   12.11    803.39   3580.29  25033.01
   13.63    947.59   4905.84  36567.08
   15.14    1091.8   6449.72  51135.61
 END FTABLE608

 FTABLE    728
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.36      8.72      4.62      8.15
    0.71     14.29      10.5     27.73
    1.07     21.86     17.66     58.54
    1.43     25.43      26.1    101.38
    1.78     28.99      35.8    157.28
    2.14     32.56     46.78    227.28
    2.85      39.7     72.55    413.72
    3.57     46.84    103.42    668.82
    4.28     53.97    139.38   1000.33
    5.71     91.15     242.9   2138.62
    7.13    128.33    399.47   3815.83
    8.56    165.51    609.08   6153.07
    9.99    202.68    871.73   9254.14
   11.41    239.86   1187.43  13214.14
   12.84    277.04   1556.18  18122.29
   14.27    314.22   1977.96  24063.34
 END FTABLE728

 FTABLE    402
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      1.50      0.80       0.0
    0.29      3.51      1.87      4.66
    0.58      6.63      4.35     16.14
    0.87     11.75      7.44      34.6
    1.16     13.87     11.15     60.73
    1.45     15.99     15.46     95.31
    1.74      18.1      20.4    139.11
    2.31     22.34      32.1    257.35
    2.89     26.58     46.25    421.27
    3.47     30.81     62.86    636.37
    4.63     56.28    113.26   1390.85
    5.79     81.74    193.13   2537.46
    6.94    107.21    302.47   4176.41
     8.1    132.68    441.29   6393.05
    9.26    158.14    609.58   9265.21
   10.42    183.61    807.34  12865.67
   11.57    209.07   1034.58  17263.35
 END FTABLE402
```

```
 FTABLE    108
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.15      2.30      1.60       0.0
     0.31      4.77      2.28      4.81
     0.62      6.06      3.95     16.56
     0.93      7.35      5.02     35.31
     1.23      8.63      7.48     61.72
     1.54      9.92     10.35     96.51
     1.85     11.21     13.61    140.43
     2.47     13.78     21.32    258.51
     3.09     16.35     30.62    421.57
      3.7     18.92     41.51    634.92
     4.94     37.36     76.26   1393.02
     6.17      55.8    133.78   2590.16
     7.41     74.23    214.06   4357.82
     8.64     92.67     317.1   6807.12
     9.88     111.1    442.91  10038.73
    11.11    129.54    591.48  14146.38
    12.35    147.97    762.82  19218.55
 END FTABLE108

 FTABLE    609
rows cols                          ***
  17    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.38      2.29      1.46      8.36
     0.77      4.28       3.3     28.32
     1.15      6.26      5.52     59.46
     1.54      7.24      8.11    102.51
     1.92      8.22     11.08     158.4
     2.31       9.2     14.43    228.08
     3.07     11.17     22.26    412.75
     3.84     13.13      31.6    664.15
     4.61      15.1     42.45    989.65
     6.15     25.05     73.31   2099.84
     7.69      35.0    119.47   3723.09
     9.22     44.95    180.93   5971.06
    10.76     54.91    257.69   8939.57
     12.3     64.86    349.76  12716.54
    13.84     74.81    457.12   17384.5
    15.37     84.76    579.78  23021.91
 END FTABLE609

 FTABLE    602
rows cols                          ***
  21    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.18      5.00      2.70       0.0
     0.38     12.29      8.61      14.3
     0.77     24.07     19.44     48.41
     1.15     36.85      32.5    101.66
```

```
    1.54     42.63     47.78    175.27
    1.92     48.42     65.29    270.81
    2.31      54.2     85.01    389.94
    3.08     65.77    131.14    705.64
    3.84     77.33    186.16   1135.42
    4.61      88.9    250.08   1691.84
    6.15     132.8    420.56   3567.17
    7.69    176.69    658.55   6221.77
    9.23    220.59    964.05   9786.47
   10.77    264.49   1337.06  14375.51
    12.3    308.39   1777.59  20095.07
   13.84    352.28   2285.63  27045.76
   15.38    396.18   2861.18  35323.88
   16.92    440.08   3504.24  45022.14
   18.46    483.98   4214.81  56230.17
   19.99    527.87   4992.89  69034.98
 END FTABLE602

 FTABLE    604
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      5.00      3.50       0.0
    0.37     16.69      9.47     11.68
    0.75      35.4     21.45     39.63
    1.12     42.11     35.93     83.37
     1.5     48.81     52.93    143.98
    1.87     55.52     72.43    222.81
    2.24     62.23     94.43    321.25
    2.99     75.65    145.97    582.62
    3.74     89.06    207.54    939.13
    4.49    102.48    279.13   1401.36
    5.98    167.43    480.91   2972.65
    7.48    232.38    779.79   5240.83
    8.97    297.33   1175.78    8343.6
   10.47    362.27   1668.89  12399.86
   11.96    427.22    2259.1  17519.19
   13.46    492.17   2946.42  23804.83
   14.95    557.12   3730.86  31355.15
 END FTABLE604

 FTABLE    204
rows cols                          ***
  21    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.50      1.50       0.0
    0.36      5.01      3.46      7.85
    0.72     10.67      7.88     26.71
    1.07     16.33     13.24     56.37
    1.43     18.99     19.56     97.61
    1.79     21.65     26.83     151.4
    2.15     24.31     35.05    218.75
    2.86     29.63     54.36    398.09
    3.58     34.96     77.47    643.42
```

```
    4.29     40.28    104.39     962.2
    5.72      61.7    177.36   2044.23
    7.16     83.12    280.99   3590.56
    8.59    104.54    415.28   5684.65
   10.02    125.95    580.22   8399.03
   11.45    147.37    775.81  11800.91
   12.88    168.79   1002.06  15953.83
   14.31    190.21   1258.97  20918.48
   15.74    211.63   1546.53  26753.21
   17.17    233.05   1864.75  33514.38
   18.61    254.47   2213.62  41256.63
 END FTABLE204

 FTABLE    208
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.31      6.27      3.02      4.96
    0.62      12.3      6.98     17.07
    0.93     17.33     11.87     36.41
    1.24     20.36      17.7     63.62
    1.55     23.39     24.47     99.48
    1.86     26.42     32.18    144.72
    2.48     32.49     50.42    266.36
    3.09     38.55      72.4     434.3
    3.71     44.61     98.14    654.02
    4.95     86.24    179.13    1427.9
    6.19    127.86    311.65   2624.51
    7.43    169.49     495.7   4361.24
    8.67    211.11    731.29   6737.62
     9.9    252.74    1018.4   9844.13
   11.14    294.36   1357.04  13765.12
   12.38    335.99   1747.22  18580.37
 END FTABLE208

 FTABLE    102
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.12      0.60      0.40       0.0
    0.23      1.21      0.55      1.87
    0.46      2.87      1.33      6.61
    0.68      4.83      2.32     14.45
    0.91      5.79      3.53     25.77
    1.14      6.75      4.96     40.99
    1.37      7.71      6.61     60.49
    1.82      9.62     10.56    113.92
    2.28     11.54     15.38    188.97
    2.74     13.46     21.09     288.4
    3.65     29.32      40.6    647.87
    4.56     45.18     74.58   1223.52
    5.47     61.04    123.02   2081.07
    6.39      76.9    185.93   3276.07
```

```
     7.3     92.76    263.31   4858.87
    8.21    108.62    355.16   6876.32
    9.12    124.48    461.47   9372.66
 END FTABLE102

 FTABLE    638
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.14      1.50       0.8       0.0
    0.27      2.50       1.2      4.37
    0.55      4.44      1.87     15.21
    0.82      5.45      3.22     32.74
    1.09      6.46      4.84      57.7
    1.36      7.47      6.74     90.86
    1.64      8.47      8.91    132.99
    2.18     10.49     14.08    247.16
    2.73     12.51     20.35    405.97
    3.27     14.52     27.72    614.91
    4.36     25.07      49.3   1338.58
    5.45     35.61     82.37   2396.53
    6.54     46.15    126.94   3856.31
    7.63     56.69     183.0   5776.28
    8.72     67.23    250.56   8210.24
    9.81     77.78     329.6  11208.89
    10.9     88.32    420.14  14820.49
 END FTABLE638

 FTABLE    318
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      1.50      0.80       0.0
     0.3      3.09       2.1      3.39
     0.6      7.31      4.87     11.71
     0.9     10.53      8.31     25.03
     1.2     14.74     12.41     43.82
    1.51     16.96     17.18     68.61
    1.81     19.18     22.62     99.95
    2.41     23.62      35.5    184.36
    3.01     28.06     51.06    301.09
    3.61     32.49     69.29     454.0
    4.82     60.75    125.42    993.71
    6.02      89.0    215.57   1830.13
    7.22    117.26    339.75    3046.1
    8.43    145.51    497.94   4711.86
    9.63    173.77    690.16   6891.22
   10.84    202.03     916.4   9643.68
   12.04    230.28   1176.66  13025.53
 END FTABLE318

 FTABLE    214
rows cols                          ***
  18    4
```

```
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.50      1.11       0.0
    0.35     12.75      7.11      6.44
     0.7     20.88     11.66     21.95
    1.04     25.01     19.65     46.42
    1.39     29.15     29.07     80.52
    1.74     33.28     39.94    125.08
    2.09     37.41     52.24    180.95
    2.78     45.68     81.17    330.01
    3.48     53.94    115.85    534.28
    4.18     62.21    156.28    800.07
    5.57    108.64    275.24   1714.26
    6.96    155.08    458.84   3063.25
    8.35    201.51    707.11   4945.16
    9.75    247.94   1020.02   7444.03
   11.14    294.37   1397.59  10636.91
   12.53     340.8   1839.82  14596.03
   13.92    387.24    2346.7  19390.03
 END FTABLE214

 FTABLE    202
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.00      1.20       0.0
    0.31      4.67      2.35      4.01
    0.63      7.98      5.43      13.8
    0.94     13.29      9.23     29.41
    1.25      15.6     13.75     51.36
    1.57     17.91      19.0     80.25
    1.88     20.23     24.98    116.68
    2.51     24.85     39.09    214.56
    3.13     29.47     56.11    349.59
    3.76      34.1     76.02    526.15
    5.01     45.78    126.06   1122.78
    6.26     57.47    190.73   1950.44
    7.52     69.16    270.06   3036.87
    8.77     80.85    364.02   4407.11
   10.02     92.53    472.62   6084.96
   11.28    104.22    595.87   8093.33
   12.53    115.91    733.76  10454.37
 END FTABLE202

 FTABLE    306
rows cols                          ***
  19    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.01       0.0      3.00       0.0
    0.15      3.00      5.00       0.0
    0.33      8.53      8.52      9.38
    0.67     15.47     12.68     33.41
     1.0     24.41      17.0     73.38
    1.33     29.35     25.96    131.42
```

```
    1.67     34.29     36.56    209.69
     2.0     39.23     48.82    310.33
    2.67     49.12     78.27    586.73
    3.33      59.0     114.3    976.12
     4.0     68.88    156.93   1493.05
    5.33    105.18    272.97   3267.68
    6.67    141.48    437.42   5747.24
     8.0    177.79    650.26   9013.86
    9.33    214.09    911.51  13142.31
   10.67    250.39   1221.16  18203.98
    12.0    286.69   1579.21  24267.72
   13.33    322.99   1985.66  31400.22
 END FTABLE306

 FTABLE    901
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.16      0.95      0.53       0.0
    0.26      1.70      0.83      3.12
    0.53      4.79      1.94     10.91
    0.79       5.9      3.35     23.55
    1.06      7.01      5.06     41.59
    1.32      8.11      7.05     65.61
    1.58      9.22      9.34     96.17
    2.11     11.43     14.78    179.17
    2.64     13.64      21.4    294.85
    3.17     15.86     29.18    447.24
    4.22     24.36      50.4     974.6
    5.28     32.87     80.59   1741.26
    6.33     41.37    119.76   2793.27
    7.39     49.88     167.9   4170.55
    8.44     58.38    225.01   5910.02
     9.5     66.89     291.1   8046.51
   10.55     75.39    366.16  10613.23
 END FTABLE901

 FTABLE    718
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.47      17.0     10.62     14.39
    0.94     29.84     23.52     48.06
    1.41     34.68      38.7     99.65
    1.88     39.53     56.16     169.8
    2.35     44.37      75.9    259.61
    2.82     49.21     97.91    370.32
    3.76      58.9    148.78    659.53
    4.71     68.58    208.76   1047.65
    5.65     78.27    277.85   1544.67
    7.53    125.29    469.41   3197.15
    9.41    172.31    749.46   5523.76
   11.29    219.34   1118.02   8639.67
   13.17    266.36   1575.08  12645.06
```

```
   15.06    313.38   2120.64  17632.84
   16.94     360.4    2754.7  23690.97
   18.82    407.43   3477.27  30903.57
 END FTABLE718

 FTABLE    703
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.12      0.96      0.45       0.0
    0.26      1.50      0.65      4.13
    0.51      2.90      1.53     14.47
    0.77      4.77      2.64      31.3
    1.03      5.68      3.98     55.37
    1.29      6.58      5.56     87.47
    1.54      7.49      7.37    128.37
    2.06       9.3     11.69     239.6
    2.57      11.1     16.94    394.83
    3.09     12.91     23.12    599.53
    4.12     44.23     52.54   1405.27
    5.15     75.55     114.2   2953.51
    6.18    106.88    208.11   5564.46
    7.21     138.2    334.26   9504.92
    8.24    169.52    492.65  15014.15
    9.27    200.84    683.29  22313.06
   10.29    232.16    906.18  31608.98
 END FTABLE703

 FTABLE    404
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.32      6.52      3.45      8.25
    0.63     10.83      7.95     28.33
    0.95     19.14      13.5      60.3
    1.27     22.44      20.1    105.21
    1.59     25.75     27.75    164.27
     1.9     29.06     36.45     238.7
    2.54     35.67      57.0    438.47
    3.17     42.29     81.75    713.84
    3.81      48.9    110.71   1073.69
    5.08    111.48    212.54   2362.36
    6.35    174.06    393.85   4440.94
    7.62    236.65    654.63   7562.56
    8.89    299.23    994.88  11940.43
   10.16    361.81    1414.6  17767.36
   11.43    424.39   1913.79  25222.45
    12.7    486.97   2492.45  34474.62
 END FTABLE404

 FTABLE    723
rows cols                          ***
  18    4
```

```
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.17      3.00      1.80       0.0
    0.35      7.33      4.95      7.02
    0.69     14.39      11.3     23.96
    1.04     24.44     19.05     50.67
    1.38     28.49      28.2     87.93
    1.73     32.54     38.76    136.65
    2.08     36.59     50.71    197.75
    2.77      44.7     78.82    360.84
    3.46      52.8    112.54    584.42
    4.15      60.9    151.87    875.43
    5.53     89.14    255.65   1857.85
    6.92    117.37    398.49   3234.51
     8.3    145.61     580.4   5062.35
    9.68    173.84    801.36   7391.75
   11.07    202.08   1061.39  10270.02
   12.45    230.31   1360.48  13742.26
   13.83    258.55   1698.62  17851.81
 END FTABLE723

 FTABLE    502
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.22      2.00      0.95       0.0
    0.42      4.16       2.3      8.18
    0.83      7.43      5.14     27.35
    1.25      8.69      8.49     56.82
    1.67      9.95     12.38     97.03
    2.08     11.21     16.78    148.68
     2.5     12.47     21.72    212.53
    3.33      15.0     33.17    379.95
    4.17     17.52     46.72    605.51
     5.0     20.05     62.37    895.25
    6.67     67.02    134.93   1966.46
    8.33     114.0    285.79   3878.85
    10.0    160.98    514.94   6972.46
   11.67    207.95    822.38  11530.93
   13.33    254.93   1208.12  17808.89
    15.0    301.91   1672.15  26041.67
   16.67    348.88   2214.48   36450.3
 END FTABLE502

 FTABLE    302
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.01      0.00      12.0       0.0
    0.32     12.00     18.29     11.03
    0.63     25.13     25.59     35.78
    0.95     37.33      30.9     71.99
    1.27     40.53     43.23    119.15
    1.58     43.73     56.57     177.2
```

```
     1.9     46.93     70.93    246.29
    2.53     53.33    102.67    418.58
    3.17     59.73    138.47     638.5
     3.8     66.13    178.33     908.9
    5.07    128.76    301.76    1770.9
    6.33    191.39    504.52   3020.94
     7.6    254.03    786.62   4758.85
    8.87    316.66   1148.05   7068.94
   10.13    379.29   1588.82  10027.79
    11.4    441.92   2108.92  13706.84
   12.67    504.56   2708.36  18173.67
 END FTABLE302

 FTABLE    312
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.01       0.0      10.0       0.0
    0.37      9.87     14.59      8.72
    0.75     14.81     17.65     29.57
    1.12     24.75     24.18      62.2
     1.5     28.69     31.19    107.41
    1.87     32.62     42.68    166.19
    2.25     36.56     55.64    239.59
     3.0     44.43      86.0    434.43
    3.75     52.31    122.25    700.15
     4.5     60.18    164.41   1044.62
     6.0    102.89    286.63   2243.54
    7.49    145.59    472.86   4083.88
    8.99    188.29     723.1   6743.41
   10.49     231.0   1037.35  10372.72
   11.99     273.7   1415.61  15108.62
   13.49     316.4   1857.89  21078.66
   14.99     359.1   2364.18  28403.46
 END FTABLE312

 FTABLE    322
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.39     10.72      7.42      9.19
    0.77     20.67     16.76     31.11
    1.16     31.62      28.0     65.31
    1.54     36.58     41.16    112.58
    1.93     41.53     56.23    173.91
    2.31     46.48     73.21    250.38
    3.09     56.39     112.9    452.96
    3.86      66.3    160.23    728.68
    4.63      76.2    215.22   1085.59
    6.17    157.34    395.43   2365.63
    7.72    238.47    700.85   4482.05
    9.26     319.6   1131.49   7725.77
    10.8    400.74   1687.34  12340.83
   12.35    481.87    2368.4  18547.27
```

```
   13.89     563.0   3174.68   26549.1
   15.43    644.14   4106.17  36538.41
 END FTABLE322

 FTABLE    514
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.17      4.00      1.90       0.0
    0.34      9.73      4.35      5.18
    0.68     12.44      9.96      17.7
    1.01     22.16     16.83      37.5
    1.35     25.87     24.95     65.17
    1.69     29.58     34.33    101.39
    2.03      33.3     44.97    146.89
    2.71     40.72     70.01    268.49
    3.38     48.15    100.07    435.44
    4.06     55.58    135.16    652.96
    5.41     85.99    230.94   1394.52
    6.77    116.41    367.87    2459.1
    8.12    146.82    545.96   3906.17
    9.47    177.24     765.2   5787.37
   10.82    207.65   1025.59   8150.51
   12.18    238.07   1327.14  11040.72
   13.53    268.48   1669.84  14501.09
 END FTABLE514

 FTABLE    314
rows cols                          ***
  22    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.01       0.0      10.0       0.0
    0.26      9.74     14.02      6.48
    0.52     19.62     17.78     21.14
    0.78      30.5     22.29     42.72
    1.03     33.38     28.54     71.02
    1.29     36.26     37.54    106.08
    1.55     39.14     47.27    148.04
    2.07      44.9     68.98    253.54
    2.58     50.66     93.67    389.41
     3.1     56.42    121.33    557.75
    4.13    100.06    202.17   1096.27
    5.17    143.71    328.12   1863.28
     6.2    187.35    499.17   2910.19
    7.23     231.0    715.31   4280.76
    8.27    274.64    976.56   6014.93
     9.3    318.29    1282.9    8150.1
   10.33    361.93   1634.35  10721.77
   11.37    405.58    2030.9   13763.9
    12.4    449.22   2472.55  17309.17
   13.43    492.87   2959.29  21389.18
   20.00    600.00   6000.00  40000.00
 END FTABLE314
```

```
 FTABLE    916
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.20      6.00      3.50       0.0
      0.4     20.31     10.75     13.84
      0.8     37.04     24.19     46.72
      1.2     43.78     40.32     97.87
      1.6     50.51     59.13    168.36
      2.0     57.24     80.63    259.62
     2.39     63.97    104.82    373.17
     3.19     77.44    161.25    673.31
     3.99      90.9    228.43   1080.87
     4.79    104.36    306.35   1607.51
     6.39    166.73    522.72   3386.11
     7.98    229.09    838.63   5932.01
     9.58    291.45    1254.1   9389.54
    11.17    353.82   1769.12  13883.62
    12.77    416.18   2383.68  19529.65
    14.37    478.55    3097.8  26436.53
    15.96    540.91   3911.46  34708.13
 END FTABLE916

 FTABLE    902
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.16      3.00      1.70       0.0
     0.34      5.92      2.35      6.43
     0.68      9.91      5.37     21.97
     1.02      11.9      9.06     46.54
     1.36     13.89     13.44     80.86
      1.7     15.89     18.49    125.79
     2.03     17.88     24.21    182.22
     2.71     21.86     37.68    333.01
     3.39     25.85     53.86     540.0
     4.07     29.84     72.74    809.67
     5.42     50.42    127.16   1735.13
     6.78     71.01     209.5   3088.17
     8.14      91.6    319.77   4959.24
     9.49    112.18    457.95   7426.17
    10.85    132.77    624.04  10560.48
    12.21    153.36    818.06  14429.41
    13.56    173.95    1040.0  19096.93
 END FTABLE902

 FTABLE    804
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.15      2.00      0.90       0.0
     0.31      4.56      2.01      5.46
     0.62       9.6      4.65     18.79
```

```
    0.92     11.64      7.93     40.09
    1.23     13.69     11.82     70.09
    1.54     15.73     16.35    109.63
    1.85     17.77     21.51    159.53
    2.46     21.85      33.7    293.75
    3.08     25.94     48.41     479.1
    3.69     30.02     65.64    721.67
    4.92     57.39    119.45    1579.6
    6.16     84.77    206.97   2919.02
    7.39    112.14     328.2   4878.49
    8.62    139.52    483.13   7575.29
    9.85    166.89    671.76   11115.9
   11.08    194.27     894.1   15599.5
   12.31    221.64   1150.14  21119.81
 END FTABLE804

 FTABLE    904
rows cols                          ***
 20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.41      7.53       3.8     10.61
    0.81     12.84      8.53     35.78
    1.22     15.15      14.2     74.88
    1.62     17.46      20.8    128.69
    2.03     19.77     28.34    198.29
    2.43     22.08     36.82    284.82
    3.24      26.7     56.58     513.3
    4.05     31.32     80.08    823.22
    4.86     35.94    107.32   1223.38
    6.48     54.82    180.85   2569.11
     8.1     73.69    284.96   4477.32
    9.72     92.57    419.65    7045.7
   11.34    111.44    584.93  10359.28
   12.96    130.32    780.79  14496.95
   14.58    149.19   1007.23  19533.34
    16.2    168.07   1264.25   25539.8
   17.82    186.94   1551.86  32584.98
   19.44    205.82   1870.05  40735.22
   21.06    224.69   2218.83  50054.86
 END FTABLE904

 FTABLE    504
rows cols                          ***
 17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.4     12.88      8.24      9.63
    0.81     24.91      18.5     32.48
    1.21     32.94     30.81     67.97
    1.62     37.96     45.14    116.84
    2.02     42.99     61.51    180.04
    2.43     48.02     79.91    258.63
    3.23     58.08    122.81    466.16
    4.04     68.13    173.84    747.71
    4.85     78.19    233.01   1111.27
```

```
    6.47    108.96    384.35   2318.45
    8.09    139.72    585.46   3968.89
     9.7    170.49    836.33   6109.62
   11.32    201.26   1136.96    8783.5
   12.94    232.02   1487.36  12031.55
   14.56    262.79   1887.52  15893.47
   16.17    293.56   2337.43  20407.82
 END FTABLE504

 FTABLE    308
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.01       0.0      10.0       0.0
    0.38     10.27      15.5     10.39
    0.77      20.9     19.77     35.35
    1.15     28.53     24.82     74.57
    1.53     33.17     36.65    129.09
    1.92      37.8     50.25    200.19
     2.3     42.44     65.63    289.17
    3.07      51.7    101.72    526.05
    3.83     60.97    144.91    849.95
     4.6     70.24     195.2   1270.71
    6.13    252.74    442.82   2870.07
    7.67    435.25    970.28   5829.76
     9.2    617.75   1777.59  10719.72
   10.73    800.26   2864.73  18015.03
   12.27    982.77   4231.72  28141.89
    13.8   1165.27   5878.55  41493.97
   15.33   1347.78   7805.22  58440.87
 END FTABLE308

 FTABLE    738
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.20      4.00      2.50       0.0
    0.35      8.18      4.67      7.79
     0.7     16.91     10.66     26.54
    1.05     22.63     17.95     56.08
     1.4     26.36     26.54     97.22
    1.75     30.08     36.44    150.96
    2.11      33.8     47.66    218.32
    2.81     41.25      74.0    397.91
    3.51      48.7    105.57    643.89
    4.21     56.15    142.37    963.81
    5.62     98.66    251.04   2066.98
    7.02    141.18    419.39   3707.12
    8.42    183.69    647.42   6010.99
    9.83     226.2    935.13   9086.89
   11.23    268.71   1282.52  13033.85
   12.63    311.23   1689.59  17944.66
   14.04    353.74   2156.35  23907.35
 END FTABLE738
```

```
 FTABLE    806
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.15      3.00      1.50       0.0
     0.29      6.16      2.55      4.61
     0.58      9.01      5.94     15.96
     0.88     15.85     10.16     34.18
     1.17      18.7     15.21     59.96
     1.46     21.54     21.09     94.05
     1.75     24.39     27.81     137.2
     2.34     30.08     43.73    253.63
     2.92     35.77     62.98    414.93
     3.51     41.46     85.55    626.49
     4.68    117.36    178.41   1414.82
     5.85    193.26    360.03   2791.18
     7.02    269.17    630.41   4978.71
     8.19    345.07    989.54   8164.15
     9.35    420.97   1437.44  12515.47
    10.52    496.88   1974.09  18188.19
    11.69    572.78    2599.5  25328.52
 END FTABLE806

 FTABLE    732
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.22      3.00      1.50       0.0
     0.44      6.56      2.99      7.36
     0.88     10.16      7.56     27.37
     1.33     15.76     13.73     62.17
     1.77     19.36     21.48    114.31
     2.21     22.95     30.82    186.23
     2.65     26.55     41.76    280.27
     3.53     33.75     68.39    543.48
     4.42     40.94    101.38    920.71
      5.3     48.14    140.72   1427.59
     7.07    114.95    284.79   3301.73
     8.83    181.76    546.88   6380.37
     10.6    248.57    926.99  11046.28
    12.37    315.37   1425.14   17622.7
    14.13    382.18   2041.31  26402.35
     15.9    448.99   2775.52  37657.36
    17.67     515.8   3627.75  51644.45
 END FTABLE732

 FTABLE    515
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.15      0.50      0.30       0.0
     0.22      1.00      0.48      1.44
```

```
    0.44      2.5      1.16      5.1
    0.66     4.38      2.02    11.18
    0.88     5.26      3.09    19.99
     1.1     6.14      4.35    31.85
    1.32     7.02       5.8    47.08
    1.77     8.78      9.29    88.87
    2.21    10.55     13.55   147.67
    2.65    12.31     18.59   225.68
    3.53     17.6     31.79   494.59
    4.41    22.88     49.65   875.03
     5.3    28.17     72.18  1382.68
    6.18    33.46     99.37   2031.5
    7.06    38.74    131.23  2834.66
    7.94    44.03    167.76  3804.74
    8.83    49.32    208.95  4953.86
 END FTABLE515

 FTABLE    742
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.44     16.24     10.29     12.13
    0.87     25.66     22.95     40.71
    1.31     37.07     37.97     84.77
    1.75     42.48     55.36    145.05
    2.19     47.89     75.11     222.6
    2.62      53.3     97.23     318.6
     3.5    64.12    148.56    570.73
    4.37     74.94    209.36    910.89
    5.25     85.76    279.62   1348.29
    6.99    134.12    471.88   2811.67
    8.74    182.48     748.7   4881.95
   10.49    230.83   1110.08   7664.98
   12.24    279.19   1556.03  11252.75
   13.99    327.54   2086.54  15730.55
   15.74     375.9   2701.61  21179.05
   17.49    424.26   3401.25  27675.36
 END FTABLE742

 FTABLE    802
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.35      7.87      4.62     10.06
    0.71     17.49     10.52     34.25
    1.06     22.12     17.71     72.34
    1.42     25.74     26.17    125.35
    1.77     29.37     35.92    194.54
    2.12     32.99     46.96    281.23
    2.83     40.24     72.87    512.25
    3.54     47.49    103.92     828.5
    4.25     54.74    140.09   1239.64
    5.66    118.07    262.39   2691.11
```

```
    7.08     181.4    474.33   4981.68
    8.49    244.73    775.89   8366.15
    9.91    308.06   1167.09  13059.56
   11.32    371.38   1647.92  19256.65
   12.74    434.71   2218.39  27138.58
   14.15    498.04   2878.49  36876.34
 END FTABLE802

 FTABLE    505
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.00      0.95       0.0
     0.3      4.81      2.29       4.6
     0.6      8.24       5.3     15.86
     0.9     13.66      9.04      33.9
     1.2     16.08     13.51     59.36
     1.5      18.5      18.7     92.96
     1.8     20.92     24.63    135.44
     2.4     25.76     38.65    249.84
    3.01      30.6     55.59    408.06
    3.61     35.44     75.44    615.34
    4.81    111.47    163.75   1430.02
    6.01     187.5    343.46   3008.17
    7.21    263.53    614.58    5684.1
    8.42    339.56    977.09   9736.18
    9.62    415.59   1431.01  15413.88
   10.82    491.62   1976.32  22947.49
   12.02    567.65   2613.04  32553.07
 END FTABLE505

 FTABLE    304
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.01       0.0      20.0       0.0
    0.37     20.92     25.66     22.92
    0.73     45.23     34.28      75.1
     1.1     50.54     46.83    152.59
    1.47     55.84     66.34    255.01
    1.83     61.15     87.78    382.83
     2.2     66.46    111.18    536.89
    2.93     77.07    163.81    927.77
    3.67     87.69    224.22   1436.38
     4.4      98.3    292.42   2071.88
    5.87    164.04     484.8   4132.99
    7.33    229.77     773.6   7083.99
     8.8    295.51    1158.8  11123.94
   10.27    361.24   1640.42  16422.44
   11.73    426.98   2218.44  23134.49
    13.2    492.71   2892.88   31405.3
   14.67    558.45   3663.73  41372.71
 END FTABLE304
```

```
 FTABLE    316
rows cols                          ***
  21    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.01       0.0      25.0       0.0
     0.33     20.26     30.04     22.63
     0.65      32.0     35.32     72.11
     0.98     32.75     40.84    142.28
      1.3     33.49      45.6     230.7
     1.63     34.23     52.61    335.98
     1.95     34.98     63.85    457.16
      2.6     36.47     87.07    744.76
     3.25     37.96    111.26   1089.94
      3.9     39.44    136.42   1490.66
      5.2     60.97    201.68   2563.32
      6.5     82.49    294.94   3959.74
      7.8    104.02    416.17   5732.59
      9.1    125.55    565.39   7926.68
     10.4    147.07    742.59  10583.13
     11.7     168.6    947.77  13740.68
     13.0    190.12   1180.94  17436.29
     14.3    211.65   1442.09   21705.5
     15.6    233.17   1731.23  26582.64
     16.9     254.7   2048.35  32101.01
 END FTABLE316

 FTABLE    324
rows cols                          ***
  17    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.58      15.9      11.6     44.58
     1.15     25.43     25.23     147.3
     1.73     28.96     40.89    301.98
      2.3     32.49     58.59    509.12
     2.88     36.02     78.33    770.77
     3.46     39.56     100.1   1089.54
     4.61     46.62    149.73   1909.95
     5.76     53.68    207.51    2994.0
     6.91     60.74    273.42   4365.47
     9.22    133.56    497.26   8948.25
    11.52    206.37    888.87  15744.59
    13.82    279.18   1448.24  25325.92
    16.13     352.0   2175.39  38176.53
    18.43    424.81    3070.3   54737.0
    20.74    497.63   4132.98  75418.62
    23.04    570.44   5363.42 100610.65
 END FTABLE324

 FTABLE    938
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.12      1.50      0.80       0.0
```

```
    0.24      2.50      1.10      3.56
    0.48      5.34      1.95     12.52
    0.72      6.63      3.39     27.24
    0.96      7.93      5.14     48.42
     1.2      9.22      7.21     76.78
    1.44     10.51      9.58    113.04
    1.93     13.09     15.26    212.03
    2.41     15.67     22.18     350.7
    2.89     18.26     30.35    534.05
    3.85     29.43      53.3    1171.7
    4.81     40.61     87.01   2102.96
    5.78     51.78    131.48   3385.24
    6.74     62.96    186.71   5068.37
     7.7     74.13    252.69   7198.32
    8.66     85.31    329.44    9818.5
    9.63     96.48    416.94  12970.25
 END FTABLE938

 FTABLE    805
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.36      6.49      3.92      7.58
    0.71     12.51      8.93     25.79
    1.07     18.53     15.01     54.43
    1.43     21.56     22.18     94.26
    1.79     24.58     30.42    146.22
    2.14      27.6     39.75    211.28
    2.86     33.64     61.64    384.53
    3.57     39.69     87.85    621.54
    4.29     45.73    118.38    929.52
    5.72    115.84    233.88   2050.87
    7.15    185.94    449.62   3951.14
    8.58    256.05    765.58   6913.97
   10.01    326.15   1181.78  11176.93
   11.44    396.26   1698.21  16953.98
   12.87    466.36   2314.88  24443.31
    14.3    536.47   3031.77  33831.37
 END FTABLE805

 FTABLE    414
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.20      4.00      2.50       0.0
    0.39      8.03      4.49     10.61
    0.78     12.99     10.14     35.91
    1.17     18.94     16.93     75.34
    1.56      21.9     24.87    129.79
    1.94     24.85     33.96    200.42
    2.33     27.81     44.21    288.44
    3.11     33.71     68.13    521.49
    3.89     39.62     96.66     838.5
```

```
    4.67     45.53    129.78   1248.69
    6.22     81.57    228.64   2654.27
    7.78    117.61    383.58   4738.15
    9.33    153.64    594.57   7661.15
   10.89    189.68    861.63  11560.53
   12.45    225.72   1184.76  16561.79
    14.0    261.76   1563.95  22782.42
   15.56     297.8    1999.2  30333.89
 END FTABLE414

 FTABLE    606
rows cols                          ***
 21    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.22      2.00      1.00       0.0
    0.45       4.9      1.99     11.69
     0.9      5.88      4.42     39.15
    1.35      6.87       7.3     81.38
    1.81      7.85     10.62    138.99
    2.26      8.84     14.39    212.95
    2.71      9.82      18.6    304.35
    3.61     11.79     28.35    543.82
    4.51     13.75     39.88    866.17
    5.42     15.72     53.18   1279.94
    7.22      36.5    100.32   2723.85
    9.03     57.28    184.97    5011.6
   10.83     78.06    307.14   8410.68
   12.64     98.84    466.83  13146.16
   14.44    119.63    664.03  19421.48
   16.25    140.41    898.74  27425.63
   18.05    161.19   1170.97  37336.84
   19.86    181.97   1480.72  49324.79
   21.66    202.75   1827.98  63552.15
   23.47    223.53   2212.75  80175.63
 END FTABLE606

 FTABLE    326
rows cols                          ***
 17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.62     33.00     25.21      46.4
    1.24     50.44     54.49    152.76
    1.86     57.02     87.86    311.98
    2.48     63.59    125.32    524.05
    3.11     70.16    166.85    790.63
    3.73     76.73    212.47   1113.99
    4.97     89.88    315.96   1941.53
    6.21    103.03    435.77   3028.44
    7.45    116.17    571.92   4396.89
    9.94    154.96    908.73   8753.04
   12.42    193.76   1341.91  14482.42
   14.91    232.55   1871.46  21656.15
   17.39    271.34   2497.39  30345.27
   19.88    310.13   3219.69  40622.32
```

```
   22.36    348.92   4038.36  52560.52
   24.84    387.71   4953.41  66233.11
 END FTABLE326

 FTABLE    206
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.22      5.00      2.50       0.0
    0.43     20.01      9.28     11.71
    0.86     29.01     20.72     39.34
    1.29     34.02     34.33     81.99
    1.73     39.02     50.09     140.4
    2.16     44.03     68.01    215.62
    2.59     49.03     88.09     308.8
    3.45     59.04    134.72    553.72
    4.32     69.04     190.0    884.48
    5.18     79.05    253.91    1310.1
     6.9    128.91    433.41   2743.16
    8.63    178.77    698.98   4802.11
   10.36    228.64   1050.62   7611.02
   12.08     278.5   1488.34  11276.82
   13.81    328.36   2012.12  15897.99
   15.54    378.22   2621.98  21567.28
   17.26    428.08   3317.91  28373.04
 END FTABLE206

 FTABLE    212
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.47       9.4      5.63     16.75
    0.93     16.02     12.47     56.02
     1.4     18.64     20.54    116.21
    1.86     21.26     29.82    198.15
    2.33     23.88     40.33    303.12
    2.79      26.5     52.05     432.6
    3.72     31.75     79.16    771.12
    4.65     36.99    111.14   1225.79
    5.58     42.23     148.0   1808.39
    7.45     54.89    238.39   3712.66
    9.31     67.55    352.35   6259.24
   11.17     80.22    489.88   9491.42
   13.03     92.88    650.98  13451.02
   14.89    105.54    835.65  18179.67
   16.75     118.2   1043.89  23718.76
   18.61    130.87    1275.7  30109.17
 END FTABLE212

 FTABLE    722
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
```

```
    0.49     10.17      5.8     20.43
    0.97     15.65    12.81     68.12
    1.46     18.13    21.03    140.96
    1.95     20.61    30.45    239.76
    2.43     23.09    41.07    365.96
    2.92     25.57     52.9    521.23
    3.89     30.52    80.18    925.87
    4.86     35.48   112.29   1467.57
    5.84     40.44   149.21   2159.94
    7.78     67.93   254.62   4460.67
    9.73     95.41    413.5   7714.47
   11.67     122.9   625.85  12093.23
   13.62    150.38   891.67  17745.84
   15.56    177.86  1210.96  24810.02
   17.51    205.35  1583.71  33415.82
   19.45    232.83  2009.94  43687.43
 END FTABLE722

 FTABLE    807
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.00      1.20       0.0
    0.29      3.18      1.77      4.43
    0.57      7.21      4.12     15.36
    0.86     11.25      7.05     32.95
    1.15     13.29     10.57     57.88
    1.43     15.32     14.67     90.88
    1.72     17.36     19.35     132.7
    2.29     21.43     30.47    245.67
    2.87     25.51     43.93    402.36
    3.44     29.58     59.73    608.06
    4.59     83.57     124.6   1389.71
    5.73    137.55    251.38   2807.03
    6.88    191.53    440.07   5115.89
    8.03    245.52    690.65   8529.94
    9.17     299.5   1003.15  13241.14
   10.32    353.48   1377.55  19426.91
   11.47    407.47   1813.85  27253.95
 END FTABLE807

 FTABLE    906
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.47     10.79      6.66     20.14
    0.94     18.86     14.76     67.33
     1.4     21.94      24.3    139.64
    1.87     25.01     35.27    238.03
    2.34     28.09     47.68    364.05
    2.81     31.16     61.53    519.44
    3.74     37.31     93.55    925.58
    4.68     43.46    131.31   1470.86
    5.61     49.61    174.82    2169.4
```

```
    7.48    100.69    315.36   4551.53
    9.35    151.76    551.41    8136.9
   11.22    202.84    882.98  13244.05
   13.09    253.91   1310.07  20143.06
   14.96    304.99   1832.68  29079.56
   16.83    356.06    2450.8  40282.78
    18.7    407.14   3164.44   53969.6
 END FTABLE906

 FTABLE    704
rows cols                          ***
 21    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.37      7.17      2.66      8.43
    0.74     11.09      6.03     28.63
    1.11     12.02     10.11     60.28
    1.48     13.95      14.9    104.18
    1.85     15.88     20.41    161.32
    2.21      17.8     26.62    232.73
    2.95     21.66     41.19    422.51
    3.69     25.52      58.6    681.57
    4.43     29.37     78.86   1017.67
    5.91     37.64    128.34   2135.72
    7.38     45.91    190.02   3651.15
    8.86     54.19    263.92   5596.41
   10.34     62.46    350.03   8002.13
   11.81     70.73    448.35  10898.35
   13.29      79.0    558.89  14314.56
   14.76     87.27    681.64   18279.7
   16.24     95.54     816.6  22822.16
   17.72    103.82    963.77  27969.78
   19.19    112.09   1123.16  33749.87
 END FTABLE704

 FTABLE    705
rows cols                          ***
 21    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.37      7.09      4.26      8.43
    0.74     12.16      9.66     28.63
    1.11     19.25      16.2     60.28
    1.48     22.35     23.87    104.18
    1.85     25.44     32.69    161.32
    2.21     28.51     42.64    232.73
    2.95      34.7     65.98    422.51
    3.69     40.88     93.87    681.57
    4.43     47.05    126.32   1017.67
    5.91     60.29    205.59   2135.72
    7.38     73.54    304.39   3651.15
    8.86     86.81    422.77   5596.41
   10.34    100.05    560.71   8002.13
   11.81     113.3     718.2  10898.35
```

```
   13.29    126.55    895.28 14314.56
   14.76     139.8   1091.91  18279.7
   16.24    153.04    1308.1 22822.16
   17.72    166.31   1543.84 27969.78
   19.19    179.55   1799.17 33749.87
 END FTABLE705

 FTABLE    908
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.49     12.33       8.2     21.69
    0.99     21.74     18.09     72.28
    1.48     25.14     29.65    149.43
    1.97     28.55      42.9    253.97
    2.47     31.95     57.83    387.38
    2.96     35.36     74.44    551.37
    3.95     42.17     112.7     978.3
    4.93     48.99    157.68   1549.21
    5.92      55.8    209.38    2278.3
     7.9     90.39    353.65    4696.3
    9.87    124.98     566.2   8106.29
   11.84    159.57    847.01  12683.48
   13.82    194.16   1196.09  18579.83
   15.79    228.75   1613.44   25936.0
   17.76    263.33   2099.07  34884.97
   19.74    297.92   2652.96  45553.75
 END FTABLE908

 FTABLE    612
rows cols                          ***
  20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.4      4.08       1.8      8.92
     0.8      6.21      4.06     30.13
     1.2      7.34      6.76     63.12
     1.6      8.47      9.91    108.58
    1.99       9.6     13.52    167.44
    2.39     10.73     17.57    240.68
    3.19     12.98     27.03    434.26
    3.99     15.24     38.29    697.13
    4.79      17.5     51.36   1036.82
    6.38     25.92      86.0   2177.94
    7.98     34.34    134.08   3787.46
    9.58     42.76     195.6   5942.18
   11.17     51.18    270.55   8709.22
   12.77     59.59    358.94  12151.05
   14.36     68.01    460.76  16326.94
   15.96     76.43    576.02   21293.6
   17.55     84.85    704.72  27105.69
   19.15     93.27    846.85  33816.08
   20.75    101.69   1002.42   41476.1
 END FTABLE612
```

```
 FTABLE    516
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.24      2.00      1.00       0.0
     0.58      8.03      5.35     71.67
     1.17     11.76      11.7    104.93
     1.75     13.49     19.06    215.57
     2.33     15.22     27.44    364.28
     2.92     16.95     36.82    368.52
      3.5     18.68     47.21    522.13
     4.67     22.13     71.01    919.21
     5.83     25.59     98.85   1446.36
      7.0     29.05    130.73   2115.83
     9.33     30.35    200.03   4249.42
    11.67     31.65    272.36    6953.8
     14.0     32.95    347.73  10187.48
    16.33     34.25    426.14  13922.77
    18.67     35.55    507.57  18139.91
     21.0     36.85    592.05  22824.19
    23.33     38.15    679.55  27964.33
 END FTABLE516

 FTABLE    706
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.30       4.2      2.14       0.0
     0.63       5.5      4.14      23.2
     1.27     10.32      9.87     81.93
      1.9     12.85     17.21    178.66
     2.53     15.37     26.15    318.13
     3.17      17.9     36.68    505.28
      3.8     20.42     48.81    744.92
     5.07     25.47     77.88   1400.12
     6.33     30.52    113.34   2319.28
      7.6     35.57     155.2   3535.84
    10.13     45.11     257.4   7636.28
    12.67     54.65    383.76  13104.22
     15.2     64.18    534.27  19961.37
    17.73     73.72    708.94  28241.78
    20.27     83.25    907.78  37987.04
     22.8     92.79   1130.77  49243.01
    25.33    102.33   1377.92  62058.02
 END FTABLE706

 FTABLE    725
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.15      3.00      1.50       0.0
     0.35      6.34      3.17      7.29
      0.7     11.89      7.23     24.85
```

```
    1.05     15.44     12.18     52.52
     1.4     17.98     18.01     91.08
    1.75     20.53     24.74    141.45
     2.1     23.07     32.36    204.61
     2.8     28.17     50.26    373.05
    3.49     33.26     71.73    603.83
    4.19     38.35     96.75    904.05
    5.59     74.92     175.9   1955.77
    6.99    111.49    306.16   3582.36
    8.39    148.06    487.53    5946.2
    9.78    184.63    720.01   9184.81
   11.18    221.19    1003.6  13423.04
   12.58    257.76   1338.29  18777.26
   13.98    294.33    1724.1  25357.46
 END FTABLE725

 FTABLE    216
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.5     11.22      7.36     23.08
     1.0      19.2     16.21     76.83
     1.5     22.18     26.56    158.72
     2.0     25.16     38.39    269.56
     2.5     28.13     51.71     410.9
     3.0     31.11     66.52     584.5
     4.0     37.07     100.6   1036.02
     5.0     43.03    140.65   1639.21
     6.0     48.99    186.65   2408.95
     8.0    150.71    386.32   5155.23
    10.0    252.43     789.4   9799.44
    12.0    354.16   1395.88  17050.69
    14.0    455.88   2205.78  27501.77
    16.0     557.6   3219.09  41685.87
    18.0    659.32    4435.8  60096.45
    20.0    761.05   5855.93  83197.57
 END FTABLE216

 FTABLE    418
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.1       0.4       0.3       0.0
    0.26      1.02      0.45      3.16
    0.52      1.32      0.53     11.04
    0.78      1.63      0.91     23.86
    1.04      1.94      1.38     42.18
     1.3      2.25      1.92     66.59
    1.56      2.56      2.55     97.69
    2.08      3.17      4.04     182.2
     2.6      3.79      5.85    300.08
    3.12      4.41      7.98    455.47
    4.16     37.13     29.56   1209.92
     5.2     69.85     85.16   3150.12
```

```
    6.24    102.58    174.77   6901.63
    7.28     135.3    298.39  12982.58
    8.32    168.02    456.02  21855.36
    9.35    200.74    647.66  33945.38
   10.39    233.47    873.32   49650.9
 END FTABLE418

 FTABLE    420
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.1       0.4       0.3       0.0
    0.27       1.1      0.49      4.63
    0.55      2.71      1.15      16.1
    0.82      3.33      1.97     34.67
    1.09      3.94      2.96      61.1
    1.37      4.56      4.12      96.2
    1.64      5.17      5.45     140.8
    2.18      6.41      8.61    261.63
    2.73      7.64     12.45     429.7
    3.28      8.87     16.95    650.79
    4.37      26.6     36.32    1486.4
    5.46     44.33     75.05   2979.78
    6.55     62.06    133.15    5389.3
    7.64     79.79    210.61   8930.93
    8.74     97.53    307.43   13798.8
    9.83    115.26    423.62  20172.48
   10.92    132.99    559.17  28220.75
 END FTABLE420

 FTABLE    614
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.45     22.13     13.26     11.51
    0.89     37.86     29.52     38.59
    1.34     46.58     48.77     80.27
    1.78     53.31     71.02     137.2
    2.23     60.03     96.26    210.36
    2.67     66.76     124.5    300.82
    3.56     80.21    189.96    538.07
    4.45     93.66     267.4    857.73
    5.35    107.11    356.83   1268.36
    7.13    159.15    594.02   2630.66
    8.91    211.18    923.94   4518.73
   10.69    263.22   1346.57   7005.82
   12.47    315.26   1861.91  10156.72
   14.25     367.3   2469.98  14032.26
   16.04    419.34   3170.77  18690.53
   17.82    471.38   3964.27  24187.41
 END FTABLE614

 FTABLE    406
rows cols                          ***
```

```
 21    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.00      0.80       0.0
     0.4      7.72      3.46      7.55
     0.8     10.88      7.77      25.5
     1.2     14.03     12.95     53.41
     1.6     16.19     18.99     91.86
     2.0     18.34      25.9    141.64
     2.4      20.5     33.66    203.57
     3.2     24.81     51.77    367.24
     4.0     29.12     73.33    589.46
     4.8     33.43     98.34    876.59
     6.4     51.67    166.39   1840.46
     8.0     69.91    263.62   3197.71
     9.6     88.15    390.01   5011.77
    11.2    106.39    545.58   7338.14
   12.79    124.64    730.33  10228.53
   14.39    142.88    944.24   13732.0
   15.99    161.12   1187.33  17895.58
   17.59    179.36    1459.6  22764.57
   19.19     197.6   1761.03   28382.8
   20.79    215.84   2091.64  34792.82
 END FTABLE406

 FTABLE    408
rows cols                          ***
 18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.42      7.13      4.93      8.64
    0.84     14.93     11.03     29.09
    1.26     18.73      18.3     60.73
    1.68     21.53     26.75    104.16
     2.1     24.33     36.38    160.19
    2.52     27.13     47.18    229.71
    3.36     32.73     72.31     412.8
     4.2     38.33    102.14    660.55
    5.04     43.93    136.67    979.83
    6.72     68.35    230.94   2054.57
     8.4     92.77    366.21    3591.0
   10.07    117.19    542.49   5676.32
   11.75    141.61    759.77   8385.95
   13.43    166.03   1018.06  11789.55
   15.11    190.45   1317.36   15952.8
   16.79    214.87   1657.66  20938.36
 END FTABLE408

 FTABLE    416
rows cols                          ***
 18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      4.00      1.90       0.0
    0.49      16.1      8.12     20.43
```

```
    0.99     21.45      17.9     68.06
    1.48     24.81     29.34    140.69
    1.98     28.16     42.45    239.09
    2.47     31.52     57.21    364.63
    2.97     34.88     73.63    518.94
    3.96     41.59    111.45    920.58
    4.95      48.3    155.92   1457.57
    5.94     55.01    207.02   2143.25
    7.91    390.26    647.54   5089.49
    9.89    725.51    1751.4  11895.05
   11.87   1060.76    3518.6  24523.62
   13.85   1396.01   5949.15   44602.3
   15.83   1731.26   9043.03  73583.86
   17.81   2066.52  12800.26  112805.5
   19.79   2401.77  17220.84 163519.43
 END FTABLE416

 FTABLE    508
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      1.00      0.40       0.0
    0.41      3.63      1.69     11.47
    0.82      5.64       3.8     38.65
    1.23      6.64      6.32     80.82
    1.64      7.65      9.25    138.79
    2.05      8.65     12.59    213.71
    2.46      9.66     16.35    306.79
    3.28     11.67      25.1    552.34
     4.1     13.68     35.49    885.12
    4.92     15.69     47.54   1314.51
    6.56     24.37     80.41   2757.75
    8.21     33.04    127.51    4805.1
    9.85     41.72    188.86   7562.38
   11.49     50.39    264.43  11121.61
   13.13     59.07    354.25  15568.11
   14.77     67.74     458.3  20982.57
   16.41     76.42    576.59  27442.13
 END FTABLE508

 FTABLE    110
rows cols                          ***
  19    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.00      0.80       0.0
     0.4      8.41      4.79      9.48
     0.8     16.38     10.78     31.98
    1.21     19.34     17.95     66.96
    1.61      22.3     26.32    115.14
    2.01     25.27     35.87     177.5
    2.41     28.23     46.62    255.05
    3.21     34.16     71.68    459.94
    4.02     40.08    101.51    738.03
    4.82     46.01     136.1   1097.25
```

```
    6.43      77.8    235.58   2313.74
    8.04     109.6    386.16   4069.77
    9.64    141.39    587.84   6473.99
   11.25    173.19    840.62   9620.04
   12.86    204.99    1144.5  13594.11
   14.46    236.78   1499.47  18477.34
   16.07    268.58   1905.54  24346.99
   20.00    500.00   3000.00  40000.00
 END FTABLE110

 FTABLE    506
rows cols                          ***
 21    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      2.00      0.80       0.0
    0.34      4.04      2.12      3.68
    0.69      8.79      4.85     12.56
    1.03     10.55      8.18     26.57
    1.38      12.3     12.11     46.12
    1.72     14.05     16.65     71.68
    2.07     15.81     21.79    103.76
    2.75     19.31     33.88     189.4
    3.44     22.82     48.38    306.85
    4.13     26.32      65.3    459.74
    5.51     46.95    115.75    983.84
    6.89     67.58    194.62   1749.22
    8.26     88.21    301.89    2806.7
    9.64    108.84    437.57    4200.0
   11.02    129.47    601.66   5969.34
   12.39     150.1    794.16    8152.5
   13.77    170.73   1015.07  10785.45
   15.15    191.35   1264.38  13902.63
   16.53    211.98   1542.11  17537.26
    17.9    232.61   1848.25  21721.49
 END FTABLE506

 FTABLE    507
rows cols                          ***
 18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      1.50      0.70       0.0
    0.36      3.42      1.38      11.7
    0.71      5.49      3.15     39.84
    1.07      6.57       5.3      84.1
    1.42      7.64      7.83    145.68
    1.78      8.71     10.74    226.02
    2.14      9.78     14.03    326.63
    2.85     11.93     21.77    594.64
    3.56     14.08     31.03    961.36
    4.27     16.22     41.82   1437.98
     5.7     24.26     70.66   3044.27
    7.12     32.31    110.95   5293.16
    8.55     40.35     162.7   8277.48
    9.97     48.39    225.91  12079.34
```

```
    11.4     56.43    300.57   16775.8
   12.82     64.47     386.7  22440.33
   14.25     72.52    484.28  29143.57
 END FTABLE507

 FTABLE    512
rows cols                          ***
  20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.38       5.2      2.58      7.94
    0.77      8.11      5.52     25.91
    1.15      9.03       8.8     52.48
    1.53      9.94     12.44     87.44
    1.92     10.86     16.43    130.91
     2.3     11.78     20.77    183.13
    3.07     13.61      30.5    315.07
    3.83     15.44     41.63    485.99
     4.6     17.27     54.17    698.79
    6.13     49.38    105.27   1455.32
    7.67     81.48    205.59   2803.95
     9.2    113.58    355.14   4993.22
   10.73    145.68    553.91   8229.95
   12.27    177.79     801.9  12699.48
    13.8    209.89   1099.12  18572.94
   15.33    241.99   1445.56  26010.92
   16.87    274.09   1841.23   35165.8
    18.4     306.2   2286.12  46183.23
   19.93     338.3   2780.23   59203.2
 END FTABLE512

 FTABLE    639
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      0.80      0.30       0.0
    0.29      1.24      0.55      3.74
    0.57      2.87      1.28     12.96
    0.86      3.51      2.19     27.81
    1.14      4.14      3.29     48.85
    1.43      4.78      4.56     76.71
    1.72      5.41      6.02    112.02
    2.29      6.68      9.48    207.42
    2.86      7.95     13.67    339.75
    3.43      9.22     18.58    513.48
    4.58     20.19     35.41   1134.05
    5.72     31.15     64.79   2118.94
    6.87     42.12    106.72   3578.15
    8.01     53.08     161.2   5604.62
    9.16     64.04    228.22   8282.56
    10.3     75.01    307.79  11690.37
   11.44     85.97    399.91  15902.01
 END FTABLE639

 FTABLE    120
```

```
rows cols                          ***
  17    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.46     11.45       7.7     15.02
     0.93     22.08     17.07     50.23
     1.39     25.71     28.13    104.23
     1.85     29.33     40.86    177.78
     2.31     32.96     55.27    272.05
     2.78     36.59     71.36    388.36
      3.7     43.84    108.57    692.58
     4.63      51.1    152.49   1101.35
     5.55     58.35    203.13   1625.32
      7.4     129.8    377.23    3425.2
     9.25    201.25    683.55    6179.9
     11.1    272.71   1122.11   10159.8
    12.95    344.16   1692.89  15593.45
     14.8    415.61    2395.9  22688.24
    16.66    487.06   3231.15  31637.34
    18.51    558.52   4198.62   42623.3
 END FTABLE120

 FTABLE    708
rows cols                          ***
  21    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.22      3.00      1.50       0.0
     0.46      8.59       4.8     18.07
     0.92     13.88     10.65     60.45
     1.38     16.17     17.55     125.5
     1.84     18.46     25.51    214.14
      2.3     20.76     34.52    327.81
     2.76     23.05     44.58    468.11
     3.68     27.63     67.86    835.26
     4.59     32.21     95.36   1328.84
     5.51      36.8    127.06   1961.76
     7.35     60.66    216.61   4073.49
     9.19     84.52    350.01   7063.39
    11.03    108.38    527.26  11088.39
    12.86    132.24    748.36  16284.58
     14.7     156.1   1013.32  22777.95
    16.54    179.96   1322.13  30687.52
    18.38    203.83   1674.79  40126.99
    20.22    227.69    2071.3  51205.67
    22.05    251.55   2511.66  64029.15
    23.89    275.41   2995.88   78699.8
 END FTABLE708

 FTABLE    518
rows cols                          ***
  17    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.53     36.71      19.6     19.66
     1.06     47.83     42.96     65.27
```

```
    1.58     54.95     70.08    134.43
    2.11     62.08    100.96    227.66
    2.64      69.2     135.6    346.11
    3.17     76.32     174.0    491.14
    4.22     90.57    262.07    866.86
    5.28    104.82    365.18   1366.72
    6.33    119.06    483.33   2002.54
    8.44    227.41     849.0   4135.18
   10.55    335.76   1443.38   7275.55
   12.66    444.11   2266.47  11669.66
   14.78    552.46   3318.26  17526.73
   16.89     660.8   4598.75  25037.55
    19.0    769.15   6107.94  34380.54
   21.11     877.5   7845.84  45724.78
 END FTABLE518

 FTABLE    522
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.55      9.78      5.39     19.17
    1.09     12.61     11.77     63.51
    1.64     14.43     19.16    261.11
    2.18     16.26     27.54    441.41
    2.73     18.09     36.92    669.95
    3.28     19.92      47.3    949.24
    4.37     23.57     71.05    1670.9
    5.46     27.23      98.8   2628.46
    6.55     30.88    130.53   3843.92
    8.74      46.7    215.28   7799.07
   10.92     62.52    334.58  13190.26
   13.11     78.33    488.43  20191.93
   15.29     94.15    676.84  28959.74
   17.48    109.97    899.81  39640.94
   19.66    125.79   1157.33  52376.89
   21.85     141.6    1449.4  67304.17
 END FTABLE522

 FTABLE    523
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.45      5.00      4.50       0.0
    1.08     19.51     21.01    235.41
    2.17     19.74     42.27    747.24
    3.25     19.97     63.78   2936.89
    4.33      20.2     85.53   4743.04
    5.42     20.43    107.54   6879.25
     6.5     20.66    129.79   9322.01
    8.67     21.12    175.04  15060.37
   10.83     21.57    221.29  21856.02
    13.0     22.03    268.53  29639.86
   17.33     61.82    450.21   50539.8
   21.67     101.6    804.27  80969.77
```

```
    26.0    141.38   1330.73 124182.16
   30.33    181.16   2029.58 182881.28
   34.67    220.95   2900.82 259494.23
    39.0    260.73   3944.45 356265.67
   43.33    300.51   5160.47 475306.13
 END FTABLE523

 FTABLE    712
rows cols                          ***
  22    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.25      7.00      4.50       0.0
    0.49     15.71      8.29      24.0
    0.98     22.21     18.29      80.0
    1.47     25.72      30.0    165.48
    1.96     29.22     43.43    281.39
    2.44     32.73     58.57     429.4
    2.93     36.23     75.42    611.44
    3.91     43.24    114.27   1085.69
    4.89     50.25    159.97   1720.32
    5.87     57.26    212.53   2531.23
    7.82     66.52    333.54   5149.54
    9.78     75.78    472.66   8555.34
   11.73     85.04    629.89  12748.43
   13.69      94.3    805.21  17736.91
   15.64    103.56    998.64  23534.08
    17.6    112.81   1210.17  30156.44
   19.55    122.07   1439.81  37622.48
   21.51    131.33   1687.55  45951.99
   23.46    140.59   1953.39  55165.61
   25.42    149.85   2237.33  65284.52
   28.00    200.00   5000.00 100000.00
 END FTABLE712

 FTABLE    924
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      3.00      1.50       0.0
    0.32      6.41      3.44      8.07
    0.64     12.68      7.92     27.71
    0.96     18.94     13.44     58.95
    1.28     22.21      20.0    102.82
    1.59     25.48     27.61     160.5
    1.91     28.74     36.25    233.16
    2.55     35.28     56.68    428.14
    3.19     41.81     81.26    696.82
    3.83     48.34    110.02   1047.86
     5.1     60.83    179.67   2220.82
    6.38     73.31    265.24   3799.21
    7.66     85.79    366.73    5805.7
    8.93     98.27    484.15   8263.23
   10.21    110.76     617.5  11195.26
   11.48    123.24    766.78  14625.38
```

```
   12.76    135.72    931.98  18577.14
 END FTABLE924

 FTABLE    912
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.66     10.39      7.61     20.78
    1.32     17.05     17.61     71.67
    1.97      20.7     30.02    306.21
    2.63     24.35     44.84    535.95
    3.29     28.01     62.05    839.02
    3.95     31.66     81.66   1221.94
    5.26     38.97     128.1   2252.79
    6.58     46.27    184.14   3677.85
    7.89     53.58     249.8   5544.03
   10.52    150.76     518.5  12288.46
   13.15    247.94    1042.8  23352.74
   15.78    345.13   1822.68  40178.97
   18.41    442.31   2858.16  63979.85
   21.04    539.49   4149.22  95850.67
   23.67    636.67   5695.88 136808.06
    26.3    733.86   7498.12 187810.02
 END FTABLE912

 FTABLE    724
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.25      8.00      4.50       0.0
    0.57     19.34      10.2     36.53
    1.15     22.47     22.19    120.73
    1.72      25.6     35.99    247.55
     2.3     28.73     51.57    417.44
    2.87     31.86     68.96    632.09
    3.44     34.99     88.14    893.66
    4.59     41.25    131.88   1567.04
    5.74     47.51    182.81    2457.1
    6.89     53.77    240.93   3583.41
    9.18     93.13    409.51   7286.85
   11.48    132.49    668.43  12542.15
   13.77    171.85   1017.67  19654.48
   16.07     211.2   1457.25  28886.19
   18.36    250.56   1987.17  40478.69
   20.66    289.92   2607.41  54659.18
   22.95    329.28   3317.99  71644.06
 END FTABLE724

 FTABLE    726
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.62     42.87     27.62     45.81
```

```
    1.25     55.02      59.7    150.76
    1.87     62.16     96.23    307.84
    2.49     69.31    137.21    517.01
    3.12     76.45    182.65    779.87
    3.74      83.6    232.55   1098.66
    4.99     97.89    345.71   1914.23
    6.24    112.18    476.68    2985.1
    7.48    126.47    625.48   4333.01
    9.98    200.37   1033.06   8707.53
   12.47    274.28   1624.96  14804.67
   14.96    348.18   2401.18  22922.71
   17.46    422.09   3361.73  33319.83
   19.95    495.99    4506.6  46234.95
   22.45     569.9    5835.8  61893.9
   24.94     643.8   7349.32  80512.47
 END FTABLE726

 FTABLE    736
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.65      47.1     28.44     45.37
     1.3     53.84     61.26    149.05
    1.95     60.58     98.47    303.74
     2.6     67.32    140.06    509.31
    3.25     74.05    186.03    766.51
     3.9     80.79    236.38   1077.92
     5.2     94.27    350.22    1872.1
     6.5    107.75     481.6    2911.3
     7.8    121.22    630.51   4215.75
   10.41    198.81   1046.76   8422.98
   13.01    276.41   1664.87  14243.39
   15.61     354.0   2484.81  21940.49
   18.21    431.59   3506.59  31743.11
   20.81    509.18   4730.22  43863.59
   23.41    586.77   6155.68  58503.06
   26.01    664.37   7782.99  75853.97
 END FTABLE736

 FTABLE    746
rows cols                          ***
  20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.34     40.15     19.46      8.29
    0.68     66.53      41.1     53.89
    1.03     72.91     64.92    108.61
    1.37     79.29     90.92    180.04
    1.71     85.67     119.1    268.15
    2.05     92.05    149.46    373.17
    2.73    104.82    216.73    635.69
    3.42    117.58    292.71    971.62
     4.1    130.34    377.42   1385.51
    5.47    192.09    597.75   2667.49
    6.83    253.84    902.46   4374.68
```

```
    8.2    315.58   1291.57   6554.99
   9.57    377.33   1765.06   9251.01
  10.93    439.08   2322.93  12503.02
   12.3    500.82    2965.2  16349.76
  13.67    562.57   3691.85  20828.72
  15.03    624.32   4502.89  25976.28
   16.4    686.07   5398.32  31827.89
  17.77    747.81   6378.14  38418.15
END FTABLE746

FTABLE    130
rows cols                          ***
 21    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.24      8.00      3.50       0.0
    0.48     21.48       9.3     16.03
    0.96     25.57     20.57     53.49
    1.44     29.67     33.79    110.78
    1.92     33.77     48.98    188.58
    2.39     37.86     66.13    288.07
    2.87     41.96     85.25    410.58
    3.83     50.16    129.36    730.22
    4.79     58.35    181.32   1158.62
    5.75     66.55    241.13   1706.67
    7.66    101.96    402.51   3513.92
    9.58    137.37    631.71   6007.79
   11.49    172.78    928.73   9281.63
   13.41    208.18   1293.59  13418.07
   15.32    243.59   1726.26  18494.82
   17.24     279.0   2226.76   24586.1
   19.15    314.41   2795.08  31763.37
   21.07    349.82   3431.23  40095.76
   22.99    385.23    4135.2  49650.36
    24.9    420.64    4907.0  60492.45
END FTABLE130

FTABLE    101
rows cols                          ***
 18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.1       1.0       0.5       0.0
    0.28      2.03      0.80       3.5
    0.56      2.62      1.14     12.17
    0.84      3.21      1.95     26.15
    1.12      3.79      2.93      46.0
     1.4      4.38      4.07     72.34
    1.68      4.97      5.38    105.75
    2.24      6.14      8.49    196.14
     2.8      7.31     12.25     321.7
    3.36      8.49     16.67     486.7
    4.47     10.28     27.17   1041.34
    5.59     12.07     39.67   1788.85
    6.71     13.86     54.17   2739.22
    7.83     15.65     70.68   3902.78
```

```
    8.95     17.44     89.19    5290.2
   10.07     19.23     109.7   6912.25
   11.19     21.02    132.21   8779.76
 END FTABLE101

 FTABLE    104
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.17      3.00      1.50       0.0
    0.36      6.12      2.91      7.54
    0.72     10.31       6.6     25.64
    1.09     13.49     11.09     54.06
    1.45     15.68     16.37     93.55
    1.81     17.87     22.44    145.01
    2.17     20.05      29.3    209.41
     2.9     24.43      45.4    380.75
    3.62      28.8     64.66    614.96
    4.34     33.17     87.09    919.11
    5.79     49.53    146.96   1943.02
    7.24     65.89     230.5   3375.31
    8.69     82.25    337.74   5274.67
   10.13     98.61    468.65   7693.05
   11.58    114.97    623.25  10679.21
   13.03    131.33    801.54  14279.65
   14.48    147.69   1003.51  18539.07
 END FTABLE104

 FTABLE    140
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.51     10.21      6.17      20.1
    1.03     15.58     13.55     66.83
    1.54     17.95     22.15    137.87
    2.05     20.32     31.96    233.84
    2.56     22.69      43.0    355.99
    3.08     25.06     55.24     505.8
     4.1     29.81     83.39    894.72
    5.13     34.55     116.4   1413.27
    6.16     39.29    154.28   2073.98
    8.21     84.07    280.83   4311.42
   10.26    128.85    499.28   7671.58
   12.31    173.63     809.6  12454.08
   14.36    218.42   1211.81  18912.71
   16.41     263.2    1705.9  27278.14
   18.47    307.98   2291.88  37765.56
   20.52    352.76   2969.74  50578.53
 END FTABLE140

 FTABLE    150
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
```

```
    0.0      0.0      0.0      0.0
   0.93    13.68    10.98    21.64
   1.85    17.31    25.32    74.33
   2.78    20.95    43.01   316.48
    3.7    24.58    64.07   552.33
   4.63    28.21    88.48   862.58
   5.55    31.84   116.25  1253.67
    7.4     39.1   181.86   2303.7
   9.25    46.36   260.91  3751.58
   11.1    53.62   353.39  5644.09
   14.8   118.26   671.37 12380.91
   18.5   182.89   1228.5 23086.07
   22.2   247.53  2024.79 38975.29
   25.9   312.17  3060.23 61074.54
   29.6   376.81  4334.84 90313.02
   33.3   441.44   5848.6 127554.98
   37.0   506.08  7601.52 173616.07
 END FTABLE150

 FTABLE    160
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
    0.0       0.0       0.0       0.0
   0.66      71.4     43.46     47.26
   1.31     81.54     93.55    155.19
   1.97     91.68    150.29    316.15
   2.62    101.82    213.67    529.74
   3.28    111.96     283.7    797.31
   3.93     122.1    360.36   1120.89
   5.24    142.38    533.62   1945.66
   6.55    162.65    733.44   3024.25
   7.86    182.93    959.83   4377.48
  10.48    423.49   1754.36   8849.99
   13.1    664.06   3179.24  15476.75
  15.72    904.62   5234.48  24828.04
  18.34   1145.18   7920.08  37386.19
  20.96   1385.74  11236.04  53589.37
  23.58    1626.3  15182.35  73846.22
   26.2   1866.86  19759.02  98543.27
 END FTABLE160

 FTABLE    600
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
    0.0       0.0       0.0       0.0
   0.75     33.32      23.6    112.68
   1.51     37.38     50.27    367.82
   2.26     41.45     80.01    744.64
   3.02     45.52    112.82   1240.02
   3.77     49.59     148.7   1855.19
   4.53     53.66    187.65   2593.24
   6.04     61.79    274.76   4454.42
   7.55     69.93    374.14    6860.0
   9.05     78.06     485.8   9849.05
```

```
   12.07     97.81    751.19   19146.4
   15.09    117.56   1076.19   31177.7
   18.11    137.31   1460.79  46022.68
   21.13    157.06    1905.0   63771.0
   24.14    176.81   2408.81   84521.1
   27.16    196.56   2972.22 108376.64
   30.18    216.31   3595.23 135444.27
 END FTABLE600

 FTABLE    610
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.83     29.19     22.23     66.39
    1.67     34.22     48.65    219.98
     2.5     39.25     79.26    452.41
    3.33     44.29    114.07    765.17
    4.17     49.32    153.07   1161.93
     5.0     54.35    196.26   1647.16
    6.67     64.42    295.24   2902.22
    8.33     74.48    410.98   4569.38
    10.0     84.54     543.5   6687.46
   13.33    145.54    926.98  13725.47
   16.67    206.54   1513.79  23848.55
    20.0    267.54   2303.94  37712.94
   23.33    328.54   3297.41  55880.71
   26.67    389.54   4494.21  78867.38
    30.0    450.54   5894.34  107157.0
   33.33    511.54    7497.8 141209.71
 END FTABLE610

 FTABLE    524
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.56      9.19       4.7     32.69
    1.12     10.72     10.25    108.18
    1.67     12.25     16.66    222.14
    2.23     13.77     23.92    375.13
    2.79      15.3     32.03    568.78
    3.35     16.83     40.99    805.13
    4.46     19.88     61.47    1414.9
    5.58     22.94     85.36   2222.65
    6.69     25.99    112.65   3246.62
    8.93    119.41    274.88   7042.98
   11.16    212.83    645.57  14090.43
   13.39    306.24    1224.7  25793.55
   15.62    399.66   2012.29  43320.97
   17.85    493.08   3008.34  67719.74
   20.08    586.49   4212.84  99956.18
   22.31    679.91   5625.79 140937.06
 END FTABLE524

 FTABLE    620
```

```
rows cols                          ***
  17    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.76     48.57     34.72     59.51
     1.52     54.45     73.91    194.19
     2.28     60.32    117.57    785.97
     3.04      66.2     165.7   1308.38
      3.8     72.07     218.3    1956.8
     4.56     77.95    275.37   2734.38
     6.09      89.7    402.92   4694.01
     7.61    101.45    548.35   7225.04
     9.13     113.2    711.67  10368.15
    12.17     181.8   1160.57  20293.56
    15.22     250.4   1818.24  33775.47
    18.26    319.01   2684.69  51320.82
     21.3    387.61   3759.92  73372.85
    24.35    456.21   5043.92 100345.43
    27.39    524.81   6536.69 132632.45
    30.43    593.41   8238.25 170612.21
 END FTABLE620

 FTABLE    630
rows cols                          ***
  21    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.46      5.77       2.9     19.08
     0.92      7.64       6.2     62.45
     1.38      8.51      9.91    253.48
     1.83      9.39     14.01    423.14
     2.29     10.26     18.51    634.54
     2.75     11.13     23.41    888.95
     3.67     12.88     34.42   1533.13
     4.58     14.63     47.03   2369.48
      5.5     16.37     61.23   3412.54
     7.33     19.04      93.7   6664.19
     9.17     21.71    131.05  10842.28
     11.0     24.38     173.3  15949.76
    12.83     27.05    220.43  21997.67
    14.67     29.71    272.46  29002.52
     16.5     32.38    329.38  36984.21
    18.33     35.05    391.19   45964.8
    20.17     37.72     457.9  55967.78
     22.0     40.39    529.49  67017.54
    23.83     43.05    605.98  79139.09
    26.00     60.00    900.00 100000.00
 END FTABLE630

 FTABLE    635
rows cols                          ***
  17    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.78     12.15      8.88    107.97
     1.55     13.59     18.87    352.05
```

```
    2.33     15.02     29.98    711.87
    3.11     16.46      42.2   1184.03
    3.88      17.9     55.54   1769.38
    4.66     19.33     69.99   2470.55
    6.21     22.21    102.24   4234.88
    7.76     25.08    138.96   6509.79
    9.32     27.95    180.13   9330.78
   12.42     39.58    285.01  18126.96
   15.53     51.21     426.0  29701.88
   18.63     62.84    603.12  44265.62
   21.74     74.47    816.35  62013.58
   24.85      86.1    1065.7  83136.99
   27.95     97.73   1351.17 107823.78
   31.06    109.36   1672.76 136258.68
 END FTABLE635

 FTABLE    637
rows cols                          ***
 20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    1.25     54.68     67.05    357.92
     2.5     56.74    136.69   1142.36
    3.75     58.81    208.92   2258.05
     5.0     60.88    283.72   3669.09
    6.25     62.95    361.12   5355.55
     7.5     65.02    441.09   7305.05
    10.0     69.15     608.8  11963.63
    12.5     73.29    786.85  17608.36
    15.0     77.42    975.24  24225.83
    20.0    191.63   1647.86  43219.56
    25.0    305.84   2891.53  70044.02
    30.0    420.04   4706.23 106862.78
    35.0    534.25   7091.96  155488.1
    40.0    648.46  10048.73 217557.05
    45.0    762.66  13576.53 294591.15
    50.0    876.87  17675.37 388026.54
    55.0    991.08  22345.24  499231.9
    60.0   1105.28  27586.15 629520.57
    65.0   1219.49  33398.09 780158.97
 END FTABLE637

 FTABLE    640
rows cols                          ***
 17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    1.39      5.29      6.93    237.08
    2.78      5.87     14.67    770.19
    4.16      6.46     23.23   1551.99
    5.55      7.05      32.6   2572.98
    6.94      7.64     42.79   3833.25
    8.33      8.22     53.79   5337.04
    11.1       9.4     78.24    9101.6
   13.88     10.57    105.95  13928.37
   16.65     11.75    136.92  19886.16
```

```
    22.2     44.35    292.59  40623.87
   27.75     76.95    629.19  76922.39
    33.3    109.55   1146.72 135228.58
   38.85    142.15   1845.18 220906.48
    44.4    174.75   2724.58 338764.12
   49.95    207.35    3784.9 493240.78
    55.5    239.95   5026.16 688503.72
 END FTABLE640

 FTABLE    650
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.8     39.62      29.7     85.59
    1.59     44.18     63.03    278.82
    2.39     48.74     99.98    563.25
    3.18      53.3    140.56    935.93
    3.98     57.85    184.76   1397.29
    4.77     62.41    232.59   1949.19
    6.36     71.53    339.12   3335.43
    7.95     80.64    460.15   5119.19
    9.54     89.76    595.67   7327.34
   12.73    123.17    934.37  14200.07
   15.91    156.58   1379.36   23263.9
   19.09    189.99   1930.64  34701.64
   22.27     223.4    2588.2  48681.12
   25.45     256.8   3352.05  65365.09
   28.63    290.21   4222.19  84912.55
   31.81    323.62   5198.62 107479.12
 END FTABLE650

 FTABLE    922
rows cols                          ***
  18    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.15      4.00      1.90       0.0
    0.37     12.84       7.2     10.94
    0.75     24.95      16.3     37.12
    1.12     32.07     27.32     78.11
    1.49     37.18     40.24    134.91
    1.87     42.29     55.07    208.78
    2.24      47.4      71.8    301.05
    2.99     57.63     111.0    546.06
    3.73     67.85    157.83    880.28
    4.48     78.08     212.3   1313.65
    5.97     97.29     343.2   2745.69
    7.46    116.51    502.78   4651.62
    8.96    135.72    691.05   7050.17
   10.45    154.94     908.0   9961.72
   11.94    174.15   1153.64  13407.99
   13.44    193.37   1427.96   17411.4
   14.93    212.58   1730.97  21994.65
 END FTABLE922
```

```
 FTABLE    936
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.15      3.00      1.50       0.0
     0.32      6.41      3.44      8.07
     0.64     12.68      7.92     27.71
     0.96     18.94     13.44     58.95
     1.28     22.21      20.0    102.82
     1.59     25.48     27.61     160.5
     1.91     28.74     36.25    233.16
     2.55     35.28     56.68    428.14
     3.19     41.81     81.26    696.82
     3.83     48.34    110.02   1047.86
      5.1     60.83    179.67   2220.82
     6.38     73.31    265.24   3799.21
     7.66     85.79    366.73    5805.7
     8.93     98.27    484.15   8263.23
    10.21    110.76     617.5  11195.26
    11.48    123.24    766.78  14625.38
    12.76    135.72    931.98  18577.14
 END FTABLE936

 FTABLE    808
rows cols                          ***
  18    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
     0.15      0.50      0.30       0.0
     0.34      1.48      0.75      5.52
     0.69       2.2      1.71     18.85
     1.03      3.72      2.89     39.88
     1.38      4.33      4.28     69.21
     1.72      4.95      5.88    107.58
     2.07      5.57      7.69     155.7
     2.76       6.8     11.96    284.19
     3.45      8.04     17.07    460.37
     4.14      9.27     23.04    689.71
     5.52     13.87      39.0    1467.8
     6.89     18.47      61.3   2572.85
     8.27     23.07     89.94   4059.64
     9.65     27.67    124.92   5976.07
    11.03     32.26    166.24   8366.68
    12.41     36.86     213.9   11273.7
    13.79     41.46     267.9  14737.57
 END FTABLE808

 FTABLE    660
rows cols                          ***
  17    4
    depth      area    volume  outflow ***
      0.0       0.0       0.0       0.0
      0.8     59.36     44.95    112.76
     1.61     66.12     95.31    367.19
     2.41     72.87     151.1    741.48
```

```
    3.21     79.62    212.32   1231.62
    4.01     86.38    278.95   1838.06
    4.82     93.13    351.01   2563.14
    6.42    106.64    511.39   4383.09
    8.03    120.15    693.47   6723.05
    9.63    133.66    897.23   9617.82
   12.85    176.05   1394.51  18583.42
   16.06    218.44   2027.93  30265.79
   19.27    260.83   2797.48  44813.29
   22.48    303.22   3703.16  62370.51
   25.69    345.62   4744.97  83083.56
    28.9    388.01   5922.92 107099.13
   32.11     430.4    7237.0 134563.46
 END FTABLE660

 FTABLE    670
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.81      63.3     48.22     82.44
    1.61     70.46    102.21     268.4
    2.42     77.62    161.98    541.88
    3.23     84.77    227.53    899.88
    4.04     91.93    298.85   1342.68
    4.84     99.09    375.95   1871.95
    6.46     113.4    547.49   3199.86
    8.07    127.71    742.14    4906.4
    9.69    142.03    959.89   7016.72
   12.92    247.25   1588.41  13654.07
   16.15    352.48   2556.71  22728.64
   19.37    457.71    3864.8  34631.18
    22.6    562.93   5512.67  49700.15
   25.83    668.16   7500.34  68249.42
   29.06    773.38   9827.79  90576.21
   32.29    878.61  12495.02 116964.97
 END FTABLE670

 FTABLE    800
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    1.15    149.49    164.17    273.81
     2.3    162.95    343.83    885.96
    3.45    176.41    538.96   1776.86
     4.6    189.87    749.58   2930.88
    5.75    203.34    975.67   4343.74
     6.9     216.8   1217.25   6016.26
     9.2    243.72   1746.84  10155.88
    11.5    270.64   2338.35  15393.42
    13.8    297.56   2991.79  21783.63
    18.4    362.74    4510.5  40993.35
    23.0    427.92   6329.04   65445.9
    27.6    493.11   8447.41  95208.04
    32.2    558.29  10865.61 130377.46
```

```
    36.8    623.47  13583.64 171075.66
    41.4    688.65   16601.5  217439.3
    46.0    753.83  19919.19 269614.69
 END FTABLE800

 FTABLE    810
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.85     38.34     30.66    129.79
    1.69     42.44      64.8    421.89
    2.54     46.55     102.4    850.25
    3.38     50.66    143.47   1409.47
    4.23     54.76    188.01   2099.31
    5.07     58.87    236.02   2921.84
    6.76     67.08    342.46   4978.43
    8.45     75.29    462.77   7611.16
   10.14      83.5    596.96  10856.06
   13.52    119.46    939.98  20869.96
    16.9    155.41   1404.55  34002.24
   20.28    191.37   1990.65   50491.3
   23.66    227.32   2698.28  70557.82
   27.04    263.28   3527.45  94417.17
   30.42    299.23   4478.16 122280.79
    33.8    335.19    5550.4 154356.34
 END FTABLE810

 FTABLE    820
rows cols                          ***
  20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.85     38.06     30.67     78.22
     1.7      42.1     64.77    254.19
    2.55     46.15    102.32    512.15
     3.4     50.19    143.31    848.77
    4.25     54.23    187.73   1263.85
    5.11     58.27     235.6   1758.59
    6.81     66.36    341.65   2994.96
    8.51     74.44    461.46   4576.76
   10.21     82.53    595.03   6525.39
   13.61    107.56    918.53  12506.34
   17.02     132.6   1327.24  20237.32
   20.42    157.63   1821.17  29788.34
   23.83    182.67    2400.3   41231.5
   27.23     207.7   3064.64  54642.37
   30.63    232.74    3814.2  70098.49
   34.04    257.77   4648.96  87678.37
   37.44    282.81   5568.93  107460.8
   40.84    307.84   6574.11 129524.42
   44.25    332.88   7664.51 153947.48
 END FTABLE820

 FTABLE    830
rows cols                          ***
```

```
 17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.85     47.22     38.22    145.75
    1.71      52.2     80.71    473.56
    2.56     57.19    127.45     954.0
    3.42     62.18    178.46   1580.77
    4.27     67.17    233.74   2353.45
    5.13     72.16    293.27   3274.19
    6.84     82.13    425.14   5574.38
    8.55     92.11    574.06   8516.14
   10.26    102.09    740.03  12138.95
   13.67    153.19   1176.37  23365.12
   17.09    204.29    1787.4  38331.42
   20.51    255.39   2573.13  57469.69
   23.93    306.49   3533.56  81162.82
   27.35     357.6   4668.68  109772.6
   30.77     408.7   5978.49 143646.34
   34.19     459.8    7463.0 183119.83
 END FTABLE830

 FTABLE    748
rows cols                          ***
 17    4
   depth      area    volume  outflow ***
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.69     33.63     21.77     66.87
    1.39     38.13     46.66    219.02
    2.08     42.62     74.68     445.0
    2.78     47.12    105.81     743.7
    3.47     51.62    140.07   1116.56
    4.16     56.12    177.44   1565.99
    5.55     65.11    261.55   2706.57
    6.94     74.11    358.14   4191.12
    8.33      83.1    467.22   6046.49
    11.1    269.76    956.87  12331.78
   13.88    456.41   1964.55   22360.3
   16.65    643.07   3490.26  37415.21
   19.43    829.72   5534.01  58570.82
    22.2   1016.38   8095.79  86795.02
   24.98   1203.03   11175.6 122984.89
   27.75   1389.69  14773.44 167984.99
 END FTABLE748

 FTABLE    751
rows cols                          ***
 20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.69     33.63     21.77     66.87
    1.39     38.13     46.66    219.02
    2.08     42.62     74.68     445.0
    2.78     47.12    105.81     743.7
    3.47     51.62    140.07   1116.56
    4.16     56.12    177.44   1565.99
```

```
    5.55     65.11    261.55   2706.57
    6.94     74.11    358.14   4191.12
    8.33      83.1    467.22   6046.49
    11.1    269.76    956.87  12331.78
   13.88    456.41   1964.55   22360.3
   16.65    643.07   3490.26  37415.21
   19.43    829.72   5534.01  58570.82
    22.2   1016.38   8095.79  86795.02
   24.98   1203.03   11175.6 122984.89
   27.75   1389.69  14773.44 167984.99
   30.53   1576.34  18889.31 222598.48
    33.3    1763.0  23523.22 287594.52
   36.08   1949.65  28675.16 363713.61
 END FTABLE751

 FTABLE    752
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     0.7     16.65     10.81      78.6
    1.39     18.87     23.17    257.43
    2.09     21.09     37.07    522.98
    2.78     23.31     52.51    873.92
    3.48     25.53      69.5    1311.9
    4.18     27.75     88.04   1839.75
    5.57     32.18    129.74   3179.03
    6.96     36.62    177.62    4921.8
    8.35     41.06    231.68   7099.44
   11.13     61.18    373.97  13988.36
   13.92     81.31    572.27  23154.14
    16.7    101.43    826.58  34802.86
   19.48    121.55   1136.89  49122.85
   22.27    141.67   1503.21  66295.83
   25.05    161.79   1925.53  86498.65
   27.83    181.91   2403.86 109903.93
 END FTABLE752

 FTABLE    809
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.35      1.00      0.53      6.13
     0.7      1.94       1.2     20.91
    1.05      2.56      2.02     44.19
     1.4      2.99      2.99     76.64
    1.75      3.41      4.11    119.03
     2.1      3.83      5.37    172.18
    2.79      4.68      8.34    313.93
    3.49      5.52     11.91    508.14
    4.19      6.37     16.06    760.79
    5.59     22.47     36.21   1744.15
    6.99     38.58     78.87   3638.85
    8.38     54.69    144.03   6844.38
    9.78      70.8     231.7  11693.26
```

```
   11.18      86.9    341.87  18483.49
   12.58    103.01    474.55  27490.07
   13.97    119.12    629.73  38971.05
 END FTABLE809

 FTABLE    840
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.86     67.83     55.14    104.86
    1.72     74.96     116.4    340.67
    2.57      82.1    183.77    686.18
    3.43     89.23    257.27   1136.82
    4.29     96.36    336.89   1692.26
    5.15    103.49    422.62   2353.98
    6.86    117.76    612.45   4006.63
    8.58    132.03    826.76   6119.52
    10.3    146.29   1065.55   8720.84
   13.73    202.79   1664.56  16736.48
   17.16    259.29   2457.47  27255.53
   20.59    315.79   3444.28  40477.84
   24.02    372.29   4624.99  56587.28
   27.46    428.79    5999.6  75762.62
   30.89    485.29   7568.11  98178.85
   34.32    541.79   9330.52 124007.53
 END FTABLE840

 FTABLE    850
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.86     51.45     41.94    139.31
    1.72     56.85     88.53    452.54
    2.58     62.24    139.75    911.43
    3.44     67.63    195.61   1509.86
     4.3     73.03    256.11   2247.33
    5.16     78.42    321.25   3125.81
    6.88     89.21    465.45   5319.35
     8.6     99.99    628.21   8123.14
   10.32    110.78    809.52   11574.4
   13.76    196.41   1338.04  22366.91
    17.2    282.04    2161.2  37180.87
   20.65    367.67   3279.03  56713.24
   24.09     453.3    4691.5  81564.22
   27.53    538.93   6398.63 112287.88
   30.97    624.57   8400.42 149407.28
   34.41     710.2  10696.85 193421.86
 END FTABLE850

 FTABLE    914
rows cols                          ***
  20    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
```

```
    0.52      8.47      5.47     10.94
    1.05     13.49      12.0     36.33
    1.57     15.51     19.59     74.85
    2.09     17.53     28.23    126.82
    2.62     19.55     37.94    192.88
    3.14     21.58      48.7    273.81
    4.19     25.62      73.4    483.58
    5.23     29.66    102.33    762.85
    6.28     33.71    135.49   1118.26
    8.37     38.88    211.46   2257.71
   10.47     44.06    298.27   3728.63
   12.56     49.24    395.91   5525.64
   14.65     54.41    504.39   7647.82
   16.75     59.59     623.7  10096.95
   18.84     64.76    753.85  12876.51
   20.93     69.94    894.83  15991.05
   23.02     75.12   1046.64   19445.9
   25.12     80.29   1209.29  23246.86
   27.21     85.47   1382.78  27400.12
 END FTABLE914

 FTABLE    860
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.86     87.58     71.61    214.26
    1.73     96.73    151.11    695.93
    2.59    105.88     238.5   1401.48
    3.45    115.03    333.78   2321.42
    4.31    124.18    436.96   3454.93
    5.18    133.33    548.03   4804.96
     6.9    151.63    793.85   8175.27
    8.63    169.93   1071.24   12482.2
   10.35    188.23   1380.19  17782.63
    13.8    292.94   2210.33  34220.09
   17.25    397.65   3401.77  56256.06
    20.7    502.36   4954.52  84608.34
   24.15    607.07   6868.58 119907.74
    27.6    711.78   9143.94 162746.27
   31.05    816.49  11780.61 213689.54
   34.51     921.2  14778.58 273282.41
 END FTABLE860

 FTABLE    870
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
     1.0    149.45    141.65     98.06
     2.0    165.07     298.9    637.02
     3.0    180.68    471.78   1282.89
     4.0     196.3    660.27   2125.06
     5.0    211.91    864.37   3162.79
     6.0    227.52   1084.09   4398.78
     8.0    258.75   1570.36   7484.53
```

```
    10.0    289.98    2119.1  11427.97
    12.0    321.21   2730.29  16281.21
    16.0    492.52   4357.76  31301.16
    20.0    663.84   6670.48  51316.07
    24.0    835.15   9668.45  76902.55
    28.0   1006.46  13351.67 108571.68
    32.0   1177.77  17720.14 146806.36
    36.0   1349.09  22773.85 192070.14
    40.0    1520.4  28512.82 244811.17
 END FTABLE870

 FTABLE    880
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.87     62.65     51.69    126.07
    1.74     69.13    109.01    409.37
    2.61     75.61    171.97    824.13
    3.48     82.09    240.56   1364.66
    4.35     88.57    314.79   2030.36
    5.22     95.04    394.66   2822.86
    6.96     108.0    571.29   4800.08
     8.7    120.95    770.47   7324.95
   10.44    133.91    992.19  10430.31
   13.92    609.93    2286.4  21064.14
    17.4   1085.96   5237.08  39382.65
   20.88   1561.98   9844.22  68518.14
   24.36    2038.0  16107.82 111077.34
   27.84   2514.03   24027.9 169397.39
   31.32   2990.05  33604.43 245636.68
    34.8   3466.07  44837.44 341821.72
 END FTABLE880

 FTABLE    890
rows cols                          ***
  17    4
   depth      area    volume  outflow ***
     0.0       0.0       0.0       0.0
    0.87     44.07     36.54    160.74
    1.75      48.6     77.04    521.87
    2.62     53.12     121.5   1050.43
     3.5     57.65    169.92   1739.07
    4.37     62.18     222.3   2586.94
    5.25     66.71    278.64   3596.05
    6.99     75.77    403.19   6112.79
    8.74     84.83    543.58   9325.29
   10.49     93.88     699.8  13274.98
   13.99    108.41   1053.48  25270.79
   17.48    122.93   1457.95  40414.76
   20.98    137.46    1913.2  58621.35
   24.48    151.98   2419.24   79848.5
   27.97     166.5   2976.06 104081.53
   31.47    181.03   3583.67 131323.37
   34.97    195.55   4242.07 161588.83
 END FTABLE890
```

```
  FTABLE    900
 rows cols                          ***
   18    4
     depth      area    volume  outflow ***
       0.0       0.0       0.0       0.0
      0.20     10.00      7.50       0.0
      0.98    127.24    119.37    219.56
      1.96    138.51     249.8    710.15
      2.94    149.77    391.29   1423.66
      3.93    161.04    543.84   2347.26
      4.91    172.31    707.45   3477.27
      5.89    183.57    882.12   4814.08
      7.85    206.11   1264.64   8119.75
      9.82    228.64    1691.4  12297.63
     11.78    251.17   2162.39  17390.13
     15.71    399.92   3440.65  32885.27
     19.63    548.68   5302.99  53472.47
     23.56    697.43   7749.41  79777.91
     27.49    846.18   10779.9 112351.78
     31.41    994.93  14394.48 151710.97
     35.34   1143.69  18593.13 198349.86
     39.27   1292.44  23375.85 252745.17
  END FTABLE900
END FTABLES

COPY
  TIMESERIES
  Copy-opn***
*** x -  x  NPT  NMN
***    1        0    9
***    2   11    0    8
  100            6
  800            3
  900           11
  914           11
  918           11
  924           11
  928           11
  932           11
  942           11
  946           11
  948           11
  END TIMESERIES

END COPY

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name>   x <Name> x tem strg<-factor->strg <Name>   x   x        <Name> x x ***
*** Met Seg PCP_18
WDM2   218 PREC     ENGLZERO       1.1SAME PERLND  21  32 EXTNL  PREC
WDM2    41 PEVT     ENGL           1.1SAME PERLND  21  32 EXTNL  PETINP
WDM2    81 ATEM     ENGL             SAME PERLND  21  32 EXTNL  GATMP
WDM2    31 DEWP     ENGL             SAME PERLND  21  32 EXTNL  DTMPG
WDM2     1 WIND     ENGL             SAME PERLND  21  32 EXTNL  WINMOV
```

```
WDM2    21 SOLR     ENGL            SAME PERLND  21  32 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND  21  32 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/9/2012
*** Met Seg PCP_24
WDM2   224 PREC     ENGLZERO         SAME PERLND  41  52 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME PERLND  41  52 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME PERLND  41  52 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND  41  52 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND  41  52 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND  41  52 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND  41  52 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/9/2012
*** Met Seg PCP_26 BF @ Dutch Mills
WDM2   226 PREC     ENGLZERO      1.12SAME PERLND  61  72 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME PERLND  61  72 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME PERLND  61  72 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND  61  72 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND  61  72 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND  61  72 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND  61  72 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK348506 (STILWELL 5 NNW)
WDM2   117 PREC     ENGLZERO         SAME PERLND  81  92 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME PERLND  81  92 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME PERLND  81  92 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND  81  92 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND  81  92 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND  81  92 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND  81  92 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_11 KARST
WDM2   211 PREC     ENGLZERO       1.1SAME PERLND 101 112 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 101 112 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 101 112 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 101 112 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 101 112 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 101 112 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 101 112 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_06
WDM2   206 PREC     ENGLZERO      1.05SAME PERLND 121 132 EXTNL  PREC
WDM2    45 PEVT     ENGL         1.08SAME PERLND 121 132 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME PERLND 121 132 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND 121 132 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND 121 132 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND 121 132 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 121 132 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WESTVILL
WDM2   105 PREC     ENGLZERO         SAME PERLND 141 152 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME PERLND 141 152 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME PERLND 141 152 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND 141 152 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND 141 152 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND 141 152 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 141 152 EXTNL  CLOUD
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*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_12 KARST
WDM2   212 PREC     ENGLZERO      1.05SAME PERLND 161 172 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 161 172 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 161 172 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 161 172 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 161 172 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 161 172 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 161 172 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_17 KARST
WDM2   217 PREC     ENGLZERO       1.1SAME PERLND 181 192 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME PERLND 181 192 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME PERLND 181 192 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME PERLND 181 192 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME PERLND 181 192 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME PERLND 181 192 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND 181 192 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_09
WDM2   209 PREC     ENGLZERO      1.05SAME PERLND 201 212 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 201 212 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 201 212 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 201 212 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 201 212 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 201 212 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 201 212 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_07
WDM2   207 PREC     ENGLZERO      1.05SAME PERLND 221 232 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 221 232 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 221 232 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 221 232 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 221 232 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 221 232 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 221 232 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_21
WDM2   221 PREC     ENGLZERO      1.05SAME PERLND 241 252 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME PERLND 241 252 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME PERLND 241 252 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME PERLND 241 252 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME PERLND 241 252 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME PERLND 241 252 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND 241 252 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_16
WDM2   216 PREC     ENGLZERO      1.05SAME PERLND 261 272 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME PERLND 261 272 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME PERLND 261 272 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME PERLND 261 272 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME PERLND 261 272 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME PERLND 261 272 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND 261 272 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_14
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```
WDM2   214 PREC     ENGLZERO       1.1SAME PERLND 281 292 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 281 292 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 281 292 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 281 292 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 281 292 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 281 292 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 281 292 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg COOKSON
WDM2   107 PREC     ENGLZERO          SAME PERLND 321 332 EXTNL  PREC
WDM2    47 PEVT     ENGL         1.15SAME PERLND 321 332 EXTNL  PETINP
WDM2    87 ATEM     ENGL            SAME PERLND 321 332 EXTNL  GATMP
WDM2    37 DEWP     ENGL            SAME PERLND 321 332 EXTNL  DTMPG
WDM2     7 WIND     ENGL            SAME PERLND 321 332 EXTNL  WINMOV
WDM2    27 SOLR     ENGL            SAME PERLND 321 332 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 321 332 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_20
WDM2   220 PREC     ENGLZERO      1.05SAME PERLND 341 352 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME PERLND 341 352 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME PERLND 341 352 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME PERLND 341 352 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME PERLND 341 352 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME PERLND 341 352 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND 341 352 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_23
WDM2   223 PREC     ENGLZERO      1.05SAME PERLND 361 372 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME PERLND 361 372 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME PERLND 361 372 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME PERLND 361 372 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME PERLND 361 372 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME PERLND 361 372 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND 361 372 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_22
WDM2   222 PREC     ENGLZERO      1.07SAME PERLND 381 392 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME PERLND 381 392 EXTNL  PETINP
WDM2    92 ATEM     ENGL            SAME PERLND 381 392 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME PERLND 381 392 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME PERLND 381 392 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME PERLND 381 392 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME PERLND 381 392 EXTNL  CLOUD
*** Met Seg PCP_08
WDM2   208 PREC     ENGLZERO          SAME PERLND 401 412 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME PERLND 401 412 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME PERLND 401 412 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND 401 412 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND 401 412 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND 401 412 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 401 412 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_15 KARST
WDM2   215 PREC     ENGLZERO      1.05SAME PERLND 421 432 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME PERLND 421 432 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME PERLND 421 432 EXTNL  GATMP
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```
WDM2    31 DEWP     ENGL            SAME PERLND 421 432 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME PERLND 421 432 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME PERLND 421 432 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME PERLND 421 432 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_02
WDM2   202 PREC     ENGLZERO         SAME PERLND 441 452 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 441 452 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 441 452 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 441 452 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 441 452 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 441 452 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 441 452 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_00
WDM2   200 PREC     ENGLZERO      1.07SAME PERLND 461 472 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME PERLND 461 472 EXTNL  PETINP
WDM2    92 ATEM     ENGL            SAME PERLND 461 472 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME PERLND 461 472 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME PERLND 461 472 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME PERLND 461 472 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME PERLND 461 472 EXTNL  CLOUD
*** Met Seg PCP_03
WDM2   203 PREC     ENGLZERO      1.07SAME PERLND 481 492 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME PERLND 481 492 EXTNL  PETINP
WDM2    92 ATEM     ENGL            SAME PERLND 481 492 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME PERLND 481 492 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME PERLND 481 492 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME PERLND 481 492 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME PERLND 481 492 EXTNL  CLOUD
*** Met Seg PCP_19
WDM2   219 PREC     ENGLZERO      1.05SAME PERLND 501 512 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME PERLND 501 512 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME PERLND 501 512 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME PERLND 501 512 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME PERLND 501 512 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME PERLND 501 512 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME PERLND 501 512 EXTNL  CLOUD
*** Met Seg PCP_04
WDM2   204 PREC     ENGLZERO       1.1SAME PERLND 521 532 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 521 532 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 521 532 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 521 532 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 521 532 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 521 532 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 521 532 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_10
WDM2   210 PREC     ENGLZERO      1.05SAME PERLND 541 552 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 541 552 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 541 552 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 541 552 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 541 552 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 541 552 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 541 552 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
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*** Met Seg PCP_05
WDM2   205 PREC     ENGLZERO      1.05SAME PERLND 301 312 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 301 312 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 301 312 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 301 312 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 301 312 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 301 312 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 301 312 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg TAHLEQUA
WDM2   106 PREC     ENGLZERO          SAME PERLND 621 632 EXTNL  PREC
WDM2    46 PEVT     ENGL          1.1SAME PERLND 621 632 EXTNL  PETINP
WDM2    86 ATEM     ENGL            SAME PERLND 621 632 EXTNL  GATMP
WDM2    36 DEWP     ENGL            SAME PERLND 621 632 EXTNL  DTMPG
WDM2     6 WIND     ENGL            SAME PERLND 621 632 EXTNL  WINMOV
WDM2    26 SOLR     ENGL            SAME PERLND 621 632 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 621 632 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK344672 (Kansas 2 NE)
WDM2   113 PREC     ENGLZERO          SAME PERLND 561 572 EXTNL  PREC
WDM2    53 PEVT     ENGL          1.1SAME PERLND 561 572 EXTNL  PETINP
WDM2    93 ATEM     ENGL            SAME PERLND 561 572 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND 561 572 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND 561 572 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND 561 572 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 561 572 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_13
WDM2   213 PREC     ENGLZERO      1.05SAME PERLND 581 592 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 581 592 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 581 592 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 581 592 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 581 592 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 581 592 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 581 592 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WEBBERS
WDM2   108 PREC     ENGLZERO          SAME PERLND 641 652 EXTNL  PREC
WDM2    48 PEVT     ENGL          1.1SAME PERLND 641 652 EXTNL  PETINP
WDM2    88 ATEM     ENGL            SAME PERLND 641 652 EXTNL  GATMP
WDM2    38 DEWP     ENGL            SAME PERLND 641 652 EXTNL  DTMPG
WDM2     8 WIND     ENGL            SAME PERLND 641 652 EXTNL  WINMOV
WDM2    28 SOLR     ENGL            SAME PERLND 641 652 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 641 652 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_01
WDM2   201 PREC     ENGLZERO          SAME PERLND 601 612 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME PERLND 601 612 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME PERLND 601 612 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME PERLND 601 612 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME PERLND 601 612 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME PERLND 601 612 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 601 612 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg AR035354 (ODELL 2 N)
WDM2   112 PREC     ENGLZERO          SAME PERLND 661 672 EXTNL  PREC
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WDM2    45 PEVT     ENGL          1.1SAME PERLND 661 672 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME PERLND 661 672 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME PERLND 661 672 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME PERLND 661 672 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME PERLND 661 672 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME PERLND 661 672 EXTNL  CLOUD
*** Met Seg PCP_18
WDM2   218 PREC     ENGLZERO       1.1SAME IMPLND  26  28 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME IMPLND  26  28 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND  26  28 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME IMPLND  26  28 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME IMPLND  26  28 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME IMPLND  26  28 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND  26  28 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/9/2012
*** Met Seg PCP_24
WDM2   224 PREC     ENGLZERO          SAME IMPLND  46  48 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME IMPLND  46  48 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME IMPLND  46  48 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND  46  48 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME IMPLND  46  48 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND  46  48 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND  46  48 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/9/2012
*** Met Seg PCP_26 BF @ Dutch Mills
WDM2   226 PREC     ENGLZERO      1.12SAME IMPLND  66  68 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME IMPLND  66  68 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME IMPLND  66  68 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND  66  68 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME IMPLND  66  68 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND  66  68 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND  66  68 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK348506 (STILWELL 5 NNW)
WDM2   117 PREC     ENGLZERO          SAME IMPLND  86  88 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME IMPLND  86  88 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME IMPLND  86  88 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND  86  88 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME IMPLND  86  88 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND  86  88 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND  86  88 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_11 KARST
WDM2   211 PREC     ENGLZERO       1.1SAME IMPLND 106 108 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 106 108 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 106 108 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 106 108 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 106 108 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 106 108 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 106 108 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WESTVILL
WDM2   105 PREC     ENGLZERO          SAME IMPLND 146 148 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME IMPLND 146 148 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME IMPLND 146 148 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND 146 148 EXTNL  DTMPG
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WDM2     5 WIND     ENGL            SAME IMPLND 146 148 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND 146 148 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 146 148 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_12 KARST
WDM2   212 PREC     ENGLZERO      1.05SAME IMPLND 166 168 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 166 168 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 166 168 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 166 168 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 166 168 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 166 168 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 166 168 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_17 KARST
WDM2   217 PREC     ENGLZERO       1.1SAME IMPLND 186 188 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME IMPLND 186 188 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND 186 188 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME IMPLND 186 188 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME IMPLND 186 188 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME IMPLND 186 188 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND 186 188 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_09
WDM2   209 PREC     ENGLZERO      1.05SAME IMPLND 206 208 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 206 208 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 206 208 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 206 208 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 206 208 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 206 208 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 206 208 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_07
WDM2   207 PREC     ENGLZERO      1.05SAME IMPLND 226 228 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 226 228 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 226 228 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 226 228 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 226 228 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 226 228 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 226 228 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_21
WDM2   221 PREC     ENGLZERO      1.05SAME IMPLND 246 248 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME IMPLND 246 248 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND 246 248 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME IMPLND 246 248 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME IMPLND 246 248 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME IMPLND 246 248 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND 246 248 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_16
WDM2   216 PREC     ENGLZERO      1.05SAME IMPLND 266 268 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME IMPLND 266 268 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND 266 268 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME IMPLND 266 268 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME IMPLND 266 268 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME IMPLND 266 268 EXTNL  SOLRAD
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WDM2    11 CLOU     ENGL            SAME IMPLND 266 268 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_14
WDM2   214 PREC     ENGLZERO       1.1SAME IMPLND 286 288 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 286 288 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 286 288 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 286 288 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 286 288 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 286 288 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 286 288 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_20
WDM2   220 PREC     ENGLZERO       1.05SAME IMPLND 346 348 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME IMPLND 346 348 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND 346 348 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME IMPLND 346 348 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME IMPLND 346 348 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME IMPLND 346 348 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND 346 348 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_23
WDM2   223 PREC     ENGLZERO       1.05SAME IMPLND 366 368 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME IMPLND 366 368 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND 366 368 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME IMPLND 366 368 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME IMPLND 366 368 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME IMPLND 366 368 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND 366 368 EXTNL  CLOUD
*** Met Seg PCP_08
WDM2   208 PREC     ENGLZERO          SAME IMPLND 406 408 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME IMPLND 406 408 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME IMPLND 406 408 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND 406 408 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME IMPLND 406 408 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND 406 408 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 406 408 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_15 KARST
WDM2   215 PREC     ENGLZERO       1.05SAME IMPLND 426 428 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME IMPLND 426 428 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND 426 428 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME IMPLND 426 428 EXTNL  DTMPG
WDM2     1 WIND     ENGL            SAME IMPLND 426 428 EXTNL  WINMOV
WDM2    21 SOLR     ENGL            SAME IMPLND 426 428 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME IMPLND 426 428 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_02
WDM2   202 PREC     ENGLZERO          SAME IMPLND 446 448 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 446 448 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 446 448 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 446 448 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 446 448 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 446 448 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 446 448 EXTNL  CLOUD
*** Met Seg PCP_19
WDM2   219 PREC     ENGLZERO       1.05SAME IMPLND 506 508 EXTNL  PREC
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WDM2    41 PEVT     ENGL          1.1SAME IMPLND 506 508 EXTNL  PETINP
WDM2    81 ATEM     ENGL            SAME IMPLND 506 508 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME IMPLND 506 508 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME IMPLND 506 508 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME IMPLND 506 508 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME IMPLND 506 508 EXTNL  CLOUD
*** Met Seg PCP_04
WDM2   204 PREC     ENGLZERO       1.1SAME IMPLND 526 528 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 526 528 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 526 528 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 526 528 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 526 528 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 526 528 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 526 528 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_10
WDM2   210 PREC     ENGLZERO       1.05SAME IMPLND 546 548 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 546 548 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 546 548 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 546 548 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 546 548 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 546 548 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 546 548 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_05
WDM2   205 PREC     ENGLZERO       1.05SAME IMPLND 306 308 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 306 308 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 306 308 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 306 308 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 306 308 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 306 308 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 306 308 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg TAHLEQUA
WDM2   106 PREC     ENGLZERO          SAME IMPLND 626 628 EXTNL  PREC
WDM2    46 PEVT     ENGL          1.1SAME IMPLND 626 628 EXTNL  PETINP
WDM2    86 ATEM     ENGL            SAME IMPLND 626 628 EXTNL  GATMP
WDM2    36 DEWP     ENGL            SAME IMPLND 626 628 EXTNL  DTMPG
WDM2     6 WIND     ENGL            SAME IMPLND 626 628 EXTNL  WINMOV
WDM2    26 SOLR     ENGL            SAME IMPLND 626 628 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 626 628 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK344672 (Kansas 2 NE)
WDM2   113 PREC     ENGLZERO          SAME IMPLND 566 568 EXTNL  PREC
WDM2    53 PEVT     ENGL          1.1SAME IMPLND 566 568 EXTNL  PETINP
WDM2    93 ATEM     ENGL            SAME IMPLND 566 568 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND 566 568 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME IMPLND 566 568 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND 566 568 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 566 568 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_13
WDM2   213 PREC     ENGLZERO       1.05SAME IMPLND 586 588 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 586 588 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 586 588 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 586 588 EXTNL  DTMPG
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WDM2     2 WIND     ENGL            SAME IMPLND 586 588 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 586 588 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 586 588 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WEBBERS
WDM2   108 PREC     ENGLZERO        SAME IMPLND 646 648 EXTNL  PREC
WDM2    48 PEVT     ENGL          1.1SAME IMPLND 646 648 EXTNL  PETINP
WDM2    88 ATEM     ENGL            SAME IMPLND 646 648 EXTNL  GATMP
WDM2    38 DEWP     ENGL            SAME IMPLND 646 648 EXTNL  DTMPG
WDM2     8 WIND     ENGL            SAME IMPLND 646 648 EXTNL  WINMOV
WDM2    28 SOLR     ENGL            SAME IMPLND 646 648 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 646 648 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_01
WDM2   201 PREC     ENGLZERO        SAME IMPLND 606 608 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME IMPLND 606 608 EXTNL  PETINP
WDM2    82 ATEM     ENGL            SAME IMPLND 606 608 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME IMPLND 606 608 EXTNL  DTMPG
WDM2     2 WIND     ENGL            SAME IMPLND 606 608 EXTNL  WINMOV
WDM2    22 SOLR     ENGL            SAME IMPLND 606 608 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 606 608 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg AR035354 (ODELL 2 N)
WDM2   112 PREC     ENGLZERO        SAME IMPLND 666 668 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME IMPLND 666 668 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME IMPLND 666 668 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND 666 668 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME IMPLND 666 668 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND 666 668 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 666 668 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_06
WDM2   206 PREC     ENGLZERO      1.05SAME IMPLND 126 128 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME IMPLND 126 128 EXTNL  PETINP
WDM2    85 ATEM     ENGL            SAME IMPLND 126 128 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME IMPLND 126 128 EXTNL  DTMPG
WDM2     5 WIND     ENGL            SAME IMPLND 126 128 EXTNL  WINMOV
WDM2    25 SOLR     ENGL            SAME IMPLND 126 128 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 126 128 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg COOKSON
WDM2   107 PREC     ENGLZERO        SAME IMPLND 326 328 EXTNL  PREC
WDM2    47 PEVT     ENGL          1.1SAME IMPLND 326 328 EXTNL  PETINP
WDM2    87 ATEM     ENGL            SAME IMPLND 326 328 EXTNL  GATMP
WDM2    37 DEWP     ENGL            SAME IMPLND 326 328 EXTNL  DTMPG
WDM2     7 WIND     ENGL            SAME IMPLND 326 328 EXTNL  WINMOV
WDM2    27 SOLR     ENGL            SAME IMPLND 326 328 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME IMPLND 326 328 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_22
WDM2   222 PREC     ENGLZERO      1.05SAME IMPLND 386 388 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME IMPLND 386 388 EXTNL  PETINP
WDM2    92 ATEM     ENGL            SAME IMPLND 386 388 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME IMPLND 386 388 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME IMPLND 386 388 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME IMPLND 386 388 EXTNL  SOLRAD
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WDM2    13 CLOU     ENGL            SAME IMPLND 386 388 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_00
WDM2   200 PREC     ENGLZERO      1.05SAME IMPLND 466 468 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME IMPLND 466 468 EXTNL  PETINP
WDM2    92 ATEM     ENGL            SAME IMPLND 466 468 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME IMPLND 466 468 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME IMPLND 466 468 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME IMPLND 466 468 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME IMPLND 466 468 EXTNL  CLOUD
*** Met Seg PCP_03
WDM2   203 PREC     ENGLZERO      1.05SAME IMPLND 486 488 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME IMPLND 486 488 EXTNL  PETINP
WDM2    92 ATEM     ENGL            SAME IMPLND 486 488 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME IMPLND 486 488 EXTNL  DTMPG
WDM2     3 WIND     ENGL            SAME IMPLND 486 488 EXTNL  WINMOV
WDM2    23 SOLR     ENGL            SAME IMPLND 486 488 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME IMPLND 486 488 EXTNL  CLOUD
*** Met Seg PCP_18
WDM2   218 PREC     ENGLZERO      1.05SAME RCHRES 100     EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 100     EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 100     EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 100     EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 100     EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 100     EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 100     EXTNL  CLOUD
*** Met Seg PCP_18
WDM2   218 PREC     ENGLZERO      1.05SAME RCHRES 108 110 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 108 110 EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 108 110 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 108 110 EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 108 110 EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 108 110 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 108 110 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/9/2012
*** Met Seg PCP_24
WDM2   224 PREC     ENGLZERO          SAME RCHRES 714     EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 714     EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 714     EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 714     EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 714     EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 714     EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 714     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/9/2012
*** Met Seg PCP_26 BF @ Dutch Mills
WDM2   226 PREC     ENGLZERO      1.1SAME RCHRES 702 706 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 702 706 EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 702 706 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 702 706 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 702 706 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 702 706 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 702 706 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK348506 (STILWELL 5 NNW)
WDM2   117 PREC     ENGLZERO          SAME RCHRES 718 726 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 718 726 EXTNL  POTEV
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WDM2    85 ATEM     ENGL            SAME RCHRES 718 726 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 718 726 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 718 726 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 718 726 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 718 726 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK348506 (STILWELL 5 NNW)
WDM2   117 PREC     ENGLZERO        SAME RCHRES 901 906 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 901 906 EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 901 906 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 901 906 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 901 906 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 901 906 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 901 906 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_11 KARST
WDM2   211 PREC     ENGLZERO      1.05SAME RCHRES 412 414 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 412 414 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 412 414 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 412 414 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 412 414 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 412 414 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 412 414 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_06
WDM2   206 PREC     ENGLZERO      1.05SAME RCHRES 608 609 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 608 609 EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 608 609 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 608 609 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 608 609 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 608 609 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 608 609 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_06
WDM2   206 PREC     ENGLZERO      1.05SAME RCHRES 612     EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 612     EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 612     EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 612     EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 612     EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 612     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 612     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WESTVILL
WDM2   105 PREC     ENGLZERO        SAME RCHRES 614     EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 614     EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 614     EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 614     EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 614     EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 614     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 614     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WESTVILL
WDM2   105 PREC     ENGLZERO        SAME RCHRES 639 660 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 639 660 EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 639 660 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 639 660 EXTNL  DEWTMP
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WDM2     5 WIND     ENGL            SAME RCHRES 639 660 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 639 660 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 639 660 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WESTVILL
WDM2   105 PREC     ENGLZERO        SAME RCHRES 728 732 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 728 732 EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 728 732 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 728 732 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 728 732 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 728 732 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 728 732 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WESTVILL
WDM2   105 PREC     ENGLZERO        SAME RCHRES 738 742 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 738 742 EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 738 742 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 738 742 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 738 742 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 738 742 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 738 742 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg WESTVILL
WDM2   105 PREC     ENGLZERO        SAME RCHRES 804     EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 804     EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 804     EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 804     EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 804     EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 804     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 804     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_12 KARST
WDM2   212 PREC     ENGLZERO      1.05SAME RCHRES 408     EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 408     EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 408     EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 408     EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 408     EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 408     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 408     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_12 KARST
WDM2   212 PREC     ENGLZERO      1.05SAME RCHRES 416     EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 416     EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 416     EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 416     EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 416     EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 416     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 416     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_17 KARST
WDM2   217 PREC     ENGLZERO      1.05SAME RCHRES 101 104 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 101 104 EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 101 104 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 101 104 EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 101 104 EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 101 104 EXTNL  SOLRAD
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WDM2    11 CLOU     ENGL            SAME RCHRES 101 104 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_17 KARST
WDM2   217 PREC     ENGLZERO      1.05SAME RCHRES 120 130 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 120 130 EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 120 130 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 120 130 EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 120 130 EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 120 130 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 120 130 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_09
WDM2   209 PREC     ENGLZERO      1.05SAME RCHRES 602     EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 602     EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 602     EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 602     EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 602     EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 602     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 602     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_07
WDM2   207 PREC     ENGLZERO      1.05SAME RCHRES 604 606 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 604 606 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 604 606 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 604 606 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 604 606 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 604 606 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 604 606 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_21
WDM2   221 PREC     ENGLZERO      1.05SAME RCHRES 202     EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 202     EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 202     EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 202     EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 202     EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 202     EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 202     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_21
WDM2   221 PREC     ENGLZERO      1.05SAME RCHRES 206     EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 206     EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 206     EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 206     EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 206     EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 206     EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 206     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_16
WDM2   216 PREC     ENGLZERO      1.05SAME RCHRES 208 212 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 208 212 EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 208 212 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 208 212 EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 208 212 EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 208 212 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 208 212 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
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*** Met Seg PCP_14
WDM2   214 PREC     ENGLZERO         SAME RCHRES 140 160 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 140 160 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 140 160 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 140 160 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 140 160 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 140 160 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 140 160 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_14
WDM2   214 PREC     ENGLZERO         SAME RCHRES 418 420 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 418 420 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 418 420 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 418 420 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 418 420 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 418 420 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 418 420 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg COOKSON
WDM2   107 PREC     ENGLZERO         SAME RCHRES 908 938 EXTNL  PREC
WDM2    47 PEVT     ENGL          1.1SAME RCHRES 908 938 EXTNL  POTEV
WDM2    87 ATEM     ENGL            SAME RCHRES 908 938 EXTNL  GATMP
WDM2    37 DEWP     ENGL            SAME RCHRES 908 938 EXTNL  DEWTMP
WDM2     7 WIND     ENGL            SAME RCHRES 908 938 EXTNL  WIND
WDM2    27 SOLR     ENGL            SAME RCHRES 908 938 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 908 938 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_20
WDM2   220 PREC     ENGLZERO      1.05SAME RCHRES 214     EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 214     EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 214     EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 214     EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 214     EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 214     EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 214     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_23
WDM2   223 PREC     ENGLZERO      1.05SAME RCHRES 204     EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 204     EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 204     EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 204     EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 204     EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 204     EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 204     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_22
WDM2   222 PREC     ENGLZERO         SAME RCHRES 306 308 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME RCHRES 306 308 EXTNL  POTEV
WDM2    92 ATEM     ENGL            SAME RCHRES 306 308 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME RCHRES 306 308 EXTNL  DEWTMP
WDM2     3 WIND     ENGL            SAME RCHRES 306 308 EXTNL  WIND
WDM2    23 SOLR     ENGL            SAME RCHRES 306 308 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME RCHRES 306 308 EXTNL  CLOUD
*** Met Seg PCP_08
WDM2   208 PREC     ENGLZERO         SAME RCHRES 708 712 EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 708 712 EXTNL  POTEV
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WDM2    85 ATEM     ENGL            SAME RCHRES 708 712 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 708 712 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 708 712 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 708 712 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 708 712 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_15 KARST
WDM2   215 PREC     ENGLZERO        SAME RCHRES 402 406 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 402 406 EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 402 406 EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 402 406 EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 402 406 EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 402 406 EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 402 406 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_02
WDM2   202 PREC     ENGLZERO        SAME RCHRES 502 504 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 502 504 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 502 504 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 502 504 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 502 504 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 502 504 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 502 504 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_00
WDM2   200 PREC     ENGLZERO        SAME RCHRES 302 304 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME RCHRES 302 304 EXTNL  POTEV
WDM2    92 ATEM     ENGL            SAME RCHRES 302 304 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME RCHRES 302 304 EXTNL  DEWTMP
WDM2     3 WIND     ENGL            SAME RCHRES 302 304 EXTNL  WIND
WDM2    23 SOLR     ENGL            SAME RCHRES 302 304 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME RCHRES 302 304 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_00
WDM2   200 PREC     ENGLZERO        SAME RCHRES 316     EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME RCHRES 316     EXTNL  POTEV
WDM2    92 ATEM     ENGL            SAME RCHRES 316     EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME RCHRES 316     EXTNL  DEWTMP
WDM2     3 WIND     ENGL            SAME RCHRES 316     EXTNL  WIND
WDM2    23 SOLR     ENGL            SAME RCHRES 316     EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME RCHRES 316     EXTNL  CLOUD
*** Met Seg PCP_03
WDM2   203 PREC     ENGLZERO        SAME RCHRES 312 314 EXTNL  PREC
WDM2    52 PEVT     ENGL          1.1SAME RCHRES 312 314 EXTNL  POTEV
WDM2    92 ATEM     ENGL            SAME RCHRES 312 314 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME RCHRES 312 314 EXTNL  DEWTMP
WDM2     3 WIND     ENGL            SAME RCHRES 312 314 EXTNL  WIND
WDM2    23 SOLR     ENGL            SAME RCHRES 312 314 EXTNL  SOLRAD
WDM2    13 CLOU     ENGL            SAME RCHRES 312 314 EXTNL  CLOUD
*** Met Seg PCP_19
WDM2   219 PREC     ENGLZERO      1.05SAME RCHRES 318 322 EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 318 322 EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 318 322 EXTNL  GATMP
WDM2    33 DEWP     ENGL            SAME RCHRES 318 322 EXTNL  DEWTMP
WDM2     3 WIND     ENGL            SAME RCHRES 318 322 EXTNL  WIND
WDM2    23 SOLR     ENGL            SAME RCHRES 318 322 EXTNL  SOLRAD
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WDM2    13 CLOU     ENGL            SAME RCHRES 318 322 EXTNL  CLOUD
*** Met Seg PCP_04
WDM2   204 PREC     ENGLZERO        SAME RCHRES 514 516 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 514 516 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 514 516 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 514 516 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 514 516 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 514 516 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 514 516 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_10
WDM2   210 PREC     ENGLZERO      1.05SAME RCHRES 600     EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 600     EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 600     EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 600     EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 600     EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 600     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 600     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_05
WDM2   205 PREC     ENGLZERO      1.05SAME RCHRES 610     EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 610     EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 610     EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 610     EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 610     EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 610     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 610     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_05
WDM2   205 PREC     ENGLZERO      1.05SAME RCHRES 620 638 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 620 638 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 620 638 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 620 638 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 620 638 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 620 638 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 620 638 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg TAHLEQUA
WDM2   106 PREC     ENGLZERO        SAME RCHRES 746 752 EXTNL  PREC
WDM2    46 PEVT     ENGL          1.1SAME RCHRES 746 752 EXTNL  POTEV
WDM2    86 ATEM     ENGL            SAME RCHRES 746 752 EXTNL  GATMP
WDM2    36 DEWP     ENGL            SAME RCHRES 746 752 EXTNL  DEWTMP
WDM2     6 WIND     ENGL            SAME RCHRES 746 752 EXTNL  WIND
WDM2    26 SOLR     ENGL            SAME RCHRES 746 752 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 746 752 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg TAHLEQUA
WDM2   106 PREC     ENGLZERO        SAME RCHRES 805 809 EXTNL  PREC
WDM2    46 PEVT     ENGL          1.1SAME RCHRES 805 809 EXTNL  POTEV
WDM2    86 ATEM     ENGL            SAME RCHRES 805 809 EXTNL  GATMP
WDM2    36 DEWP     ENGL            SAME RCHRES 805 809 EXTNL  DEWTMP
WDM2     6 WIND     ENGL            SAME RCHRES 805 809 EXTNL  WIND
WDM2    26 SOLR     ENGL            SAME RCHRES 805 809 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 805 809 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg TAHLEQUA
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WDM2   106 PREC     ENGLZERO         SAME RCHRES 840 890 EXTNL  PREC
WDM2    46 PEVT     ENGL          1.1SAME RCHRES 840 890 EXTNL  POTEV
WDM2    86 ATEM     ENGL            SAME RCHRES 840 890 EXTNL  GATMP
WDM2    36 DEWP     ENGL            SAME RCHRES 840 890 EXTNL  DEWTMP
WDM2     6 WIND     ENGL            SAME RCHRES 840 890 EXTNL  WIND
WDM2    26 SOLR     ENGL            SAME RCHRES 840 890 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 840 890 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK344672 (Kansas 2 NE)
WDM2   113 PREC     ENGLZERO         SAME RCHRES 518 524 EXTNL  PREC
WDM2    53 PEVT     ENGL          1.1SAME RCHRES 518 524 EXTNL  POTEV
WDM2    93 ATEM     ENGL            SAME RCHRES 518 524 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 518 524 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 518 524 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 518 524 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 518 524 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK344672 (Kansas 2 NE)
WDM2   113 PREC     ENGLZERO         SAME RCHRES 670     EXTNL  PREC
WDM2    53 PEVT     ENGL          1.1SAME RCHRES 670     EXTNL  POTEV
WDM2    93 ATEM     ENGL            SAME RCHRES 670     EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 670     EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 670     EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 670     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 670     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK344672 (Kansas 2 NE)
WDM2   113 PREC     ENGLZERO         SAME RCHRES 800 802 EXTNL  PREC
WDM2    53 PEVT     ENGL          1.1SAME RCHRES 800 802 EXTNL  POTEV
WDM2    93 ATEM     ENGL            SAME RCHRES 800 802 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 800 802 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 800 802 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 800 802 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 800 802 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK344672 (Kansas 2 NE)
WDM2   113 PREC     ENGLZERO         SAME RCHRES 810 830 EXTNL  PREC
WDM2    53 PEVT     ENGL          1.1SAME RCHRES 810 830 EXTNL  POTEV
WDM2    93 ATEM     ENGL            SAME RCHRES 810 830 EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 810 830 EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 810 830 EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 810 830 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 810 830 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_13
WDM2   213 PREC     ENGLZERO      1.05SAME RCHRES 324 326 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 324 326 EXTNL  POTEV
WDM2    82 ATEM     ENGL            SAME RCHRES 324 326 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 324 326 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 324 326 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 324 326 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 324 326 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_01
WDM2   201 PREC     ENGLZERO         SAME RCHRES 505 512 EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 505 512 EXTNL  POTEV
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WDM2    82 ATEM     ENGL            SAME RCHRES 505 512 EXTNL  GATMP
WDM2    32 DEWP     ENGL            SAME RCHRES 505 512 EXTNL  DEWTMP
WDM2     2 WIND     ENGL            SAME RCHRES 505 512 EXTNL  WIND
WDM2    22 SOLR     ENGL            SAME RCHRES 505 512 EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 505 512 EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg AR035354 (ODELL 2 N)
WDM2   112 PREC     ENGLZERO        SAME RCHRES 716     EXTNL  PREC
WDM2    45 PEVT     ENGL          1.1SAME RCHRES 716     EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 716     EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 716     EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 716     EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 716     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 716     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg PCP_16
WDM2   216 PREC     ENGLZERO        SAME RCHRES 216     EXTNL  PREC
WDM2    41 PEVT     ENGL          1.1SAME RCHRES 216     EXTNL  POTEV
WDM2    81 ATEM     ENGL            SAME RCHRES 216     EXTNL  GATMP
WDM2    31 DEWP     ENGL            SAME RCHRES 216     EXTNL  DEWTMP
WDM2     1 WIND     ENGL            SAME RCHRES 216     EXTNL  WIND
WDM2    21 SOLR     ENGL            SAME RCHRES 216     EXTNL  SOLRAD
WDM2    11 CLOU     ENGL            SAME RCHRES 216     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg OK348506 (STILWELL 5 NNW)
WDM2   117 PREC     ENGLZERO        SAME RCHRES 736     EXTNL  PREC
WDM2    42 PEVT     ENGL          1.1SAME RCHRES 736     EXTNL  POTEV
WDM2    85 ATEM     ENGL            SAME RCHRES 736     EXTNL  GATMP
WDM2    35 DEWP     ENGL            SAME RCHRES 736     EXTNL  DEWTMP
WDM2     5 WIND     ENGL            SAME RCHRES 736     EXTNL  WIND
WDM2    25 SOLR     ENGL            SAME RCHRES 736     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 736     EXTNL  CLOUD
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Met Seg COOKSON
WDM2   107 PREC     ENGLZERO        SAME RCHRES 900     EXTNL  PREC
WDM2    46 PEVT     ENGL          1.1SAME RCHRES 900     EXTNL  POTEV
WDM2    86 ATEM     ENGL            SAME RCHRES 900     EXTNL  GATMP
WDM2    36 DEWP     ENGL            SAME RCHRES 900     EXTNL  DEWTMP
WDM2     6 WIND     ENGL            SAME RCHRES 900     EXTNL  WIND
WDM2    26 SOLR     ENGL            SAME RCHRES 900     EXTNL  SOLRAD
WDM2    12 CLOU     ENGL            SAME RCHRES 900     EXTNL  CLOUD
*** Fayetteville - Noland WWTP
WDM3  6001 FLOW     ENGL        3.0689DIV  RCHRES 204     INFLOW IVOL
WDM3  6002 HEAT     ENGL            DIV  RCHRES 204     INFLOW IHEAT
WDM3  6004 TSS      ENGL        0.0002DIV  RCHRES 204     INFLOW ISED   2
WDM3  6004 TSS      ENGL        0.0003DIV  RCHRES 204     INFLOW ISED   3
WDM3  6010 DOX      ENGL            DIV  RCHRES 204     INFLOW OXIF   1
WDM3  6008 BODU     ENGL         0.25DIV  RCHRES 204     INFLOW OXIF   2
WDM3  6016 NO3      ENGL         0.25DIV  RCHRES 204     INFLOW NUIF1  1
WDM3  6012 NH3      ENGL         0.25DIV  RCHRES 204     INFLOW NUIF1  2
WDM3  6022 PO4      ENGL         0.25DIV  RCHRES 204     INFLOW NUIF1  4
WDM3  6018 ORGN     ENGL         0.25DIV  RCHRES 204     INFLOW PKIF   3
WDM3  6024 ORGP     ENGL         0.25DIV  RCHRES 204     INFLOW PKIF   4
WDM3  6013 ORGC     ENGL         0.25DIV  RCHRES 204     INFLOW PKIF   5
*** Fayetteville - Westside WWTP
WDM3   701 FLOW     ENGL        3.0689DIV  RCHRES 102     INFLOW IVOL
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WDM3   702 HEAT     ENGL          DIV  RCHRES 102     INFLOW IHEAT
WDM3   704 TSS      ENGL      0.0002DIV  RCHRES 102     INFLOW ISED   2
WDM3   704 TSS      ENGL      0.0003DIV  RCHRES 102     INFLOW ISED   3
WDM3   710 DOX      ENGL          DIV  RCHRES 102     INFLOW OXIF   1
WDM3   708 BODU     ENGL       0.25DIV  RCHRES 102     INFLOW OXIF   2
WDM3   716 NO3      ENGL       0.25DIV  RCHRES 102     INFLOW NUIF1  1
WDM3   712 NH3      ENGL       0.25DIV  RCHRES 102     INFLOW NUIF1  2
WDM3   722 PO4      ENGL       0.25DIV  RCHRES 102     INFLOW NUIF1  4
WDM3   718 ORGN     ENGL       0.25DIV  RCHRES 102     INFLOW PKIF   3
WDM3   724 ORGP     ENGL       0.25DIV  RCHRES 102     INFLOW PKIF   4
WDM3   713 ORGC     ENGL       0.25DIV  RCHRES 102     INFLOW PKIF   5
*** Lincoln WWTP
WDM3  9001 FLOW     ENGL      3.0689DIV  RCHRES 703     INFLOW IVOL
WDM3  9002 HEAT     ENGL          DIV  RCHRES 703     INFLOW IHEAT
WDM3  9004 TSS      ENGL      0.0002DIV  RCHRES 703     INFLOW ISED   2
WDM3  9004 TSS      ENGL      0.0003DIV  RCHRES 703     INFLOW ISED   3
WDM3  9010 DOX      ENGL          DIV  RCHRES 703     INFLOW OXIF   1
WDM3  9008 BODU     ENGL       0.25DIV  RCHRES 703     INFLOW OXIF   2
WDM3  9016 NO3      ENGL       0.25DIV  RCHRES 703     INFLOW NUIF1  1
WDM3  9012 NH3      ENGL       0.25DIV  RCHRES 703     INFLOW NUIF1  2
WDM3  9022 PO4      ENGL       0.25DIV  RCHRES 703     INFLOW NUIF1  4
WDM3  9018 ORGN     ENGL       0.25DIV  RCHRES 703     INFLOW PKIF   3
WDM3  9024 ORGP     ENGL       0.25DIV  RCHRES 703     INFLOW PKIF   4
WDM3  9013 ORGC     ENGL       0.25DIV  RCHRES 703     INFLOW PKIF   5
*** Stilwell WWTP
WDM3  8001 FLOW     ENGL      3.0689DIV  RCHRES 902     INFLOW IVOL
WDM3  8002 HEAT     ENGL          DIV  RCHRES 902     INFLOW IHEAT
WDM3  8004 TSS      ENGL      0.0002DIV  RCHRES 902     INFLOW ISED   2
WDM3  8004 TSS      ENGL      0.0003DIV  RCHRES 902     INFLOW ISED   3
WDM3  8010 DOX      ENGL          DIV  RCHRES 902     INFLOW OXIF   1
WDM3  8008 BODU     ENGL       0.25DIV  RCHRES 902     INFLOW OXIF   2
WDM3  8016 NO3      ENGL       0.25DIV  RCHRES 902     INFLOW NUIF1  1
WDM3  8012 NH3      ENGL       0.25DIV  RCHRES 902     INFLOW NUIF1  2
WDM3  8022 PO4      ENGL       0.25DIV  RCHRES 902     INFLOW NUIF1  4
WDM3  8018 ORGN     ENGL       0.25DIV  RCHRES 902     INFLOW PKIF   3
WDM3  8024 ORGP     ENGL       0.25DIV  RCHRES 902     INFLOW PKIF   4
WDM3  8013 ORGC     ENGL       0.25DIV  RCHRES 902     INFLOW PKIF   5
*** Springdale WWTP
WDM3   901 FLOW     ENGL      3.0689DIV  RCHRES 308     INFLOW IVOL
WDM3   902 HEAT     ENGL          DIV  RCHRES 308     INFLOW IHEAT
WDM3   904 TSS      ENGL      0.0002DIV  RCHRES 308     INFLOW ISED   2
WDM3   904 TSS      ENGL      0.0003DIV  RCHRES 308     INFLOW ISED   3
WDM3   910 DOX      ENGL          DIV  RCHRES 308     INFLOW OXIF   1
WDM3   908 BODU     ENGL       0.25DIV  RCHRES 308     INFLOW OXIF   2
WDM3   916 NO3      ENGL      0.375DIV  RCHRES 308     INFLOW NUIF1  1
WDM3   912 NH3      ENGL       0.25DIV  RCHRES 308     INFLOW NUIF1  2
WDM3   922 PO4      ENGL       0.25DIV  RCHRES 308     INFLOW NUIF1  4
WDM3   918 ORGN     ENGL       0.25DIV  RCHRES 308     INFLOW PKIF   3
WDM3   924 ORGP     ENGL       0.25DIV  RCHRES 308     INFLOW PKIF   4
WDM3   913 ORGC     ENGL       0.25DIV  RCHRES 308     INFLOW PKIF   5
*** Rogers WWTP
WDM3  1001 FLOW     ENGL      3.0689DIV  RCHRES 304     INFLOW IVOL
WDM3  1002 HEAT     ENGL          DIV  RCHRES 304     INFLOW IHEAT
WDM3  1004 TSS      ENGL      0.0002DIV  RCHRES 304     INFLOW ISED   2
WDM3  1004 TSS      ENGL      0.0003DIV  RCHRES 304     INFLOW ISED   3
WDM3  1010 DOX      ENGL          DIV  RCHRES 304     INFLOW OXIF   1
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WDM3  1008 BODU    ENGL       0.25DIV  RCHRES 304    INFLOW OXIF   2
WDM3  1016 NO3     ENGL       0.25DIV  RCHRES 304    INFLOW NUIF1  1
WDM3  1012 NH3     ENGL       0.25DIV  RCHRES 304    INFLOW NUIF1  2
WDM3  1022 PO4     ENGL       0.25DIV  RCHRES 304    INFLOW NUIF1  4
WDM3  1018 ORGN    ENGL       0.25DIV  RCHRES 304    INFLOW PKIF   3
WDM3  1024 ORGP    ENGL       0.25DIV  RCHRES 304    INFLOW PKIF   4
WDM3  1025 ORGC    ENGL       0.25DIV  RCHRES 304    INFLOW PKIF   5
*** NACA
WDM3   601 FLOW    ENGL     3.0689DIV  RCHRES 324    INFLOW IVOL
WDM3   602 HEAT    ENGL          DIV  RCHRES 324    INFLOW IHEAT
WDM3   604 TSS     ENGL     0.0002DIV  RCHRES 324    INFLOW ISED   2
WDM3   604 TSS     ENGL     0.0003DIV  RCHRES 324    INFLOW ISED   3
WDM3   610 DOX     ENGL          DIV  RCHRES 324    INFLOW OXIF   1
WDM3   608 BODU    ENGL       0.25DIV  RCHRES 324    INFLOW OXIF   2
WDM3   616 NO3     ENGL       0.25DIV  RCHRES 324    INFLOW NUIF1  1
WDM3   612 NH3     ENGL       0.25DIV  RCHRES 324    INFLOW NUIF1  2
WDM3   622 PO4     ENGL       0.25DIV  RCHRES 324    INFLOW NUIF1  4
WDM3   618 ORGN    ENGL       0.25DIV  RCHRES 324    INFLOW PKIF   3
WDM3   624 ORGP    ENGL       0.25DIV  RCHRES 324    INFLOW PKIF   4
WDM3   613 ORGC    ENGL       0.25DIV  RCHRES 324    INFLOW PKIF   5
*** Siloam Springs WWTP
WDM3  3001 FLOW    ENGL     3.0689DIV  RCHRES 516    INFLOW IVOL
WDM3  3002 HEAT    ENGL          DIV  RCHRES 516    INFLOW IHEAT
WDM3  3004 TSS     ENGL     0.0002DIV  RCHRES 516    INFLOW ISED   2
WDM3  3004 TSS     ENGL     0.0003DIV  RCHRES 516    INFLOW ISED   3
WDM3  3010 DOX     ENGL          DIV  RCHRES 516    INFLOW OXIF   1
WDM3  3008 BODU    ENGL       0.25DIV  RCHRES 516    INFLOW OXIF   2
WDM3  3016 NO3     ENGL       0.25DIV  RCHRES 516    INFLOW NUIF1  1
WDM3  3012 NH3     ENGL       0.25DIV  RCHRES 516    INFLOW NUIF1  2
WDM3  3022 PO4     ENGL       0.25DIV  RCHRES 516    INFLOW NUIF1  4
WDM3  3018 ORGN    ENGL       0.25DIV  RCHRES 516    INFLOW PKIF   3
WDM3  3024 ORGP    ENGL       0.25DIV  RCHRES 516    INFLOW PKIF   4
WDM3  3013 ORGC    ENGL       0.25DIV  RCHRES 516    INFLOW PKIF   5
*** Westville WWTP
WDM3  7001 FLOW    ENGL     3.0689DIV  RCHRES 725    INFLOW IVOL
WDM3  7002 HEAT    ENGL          DIV  RCHRES 725    INFLOW IHEAT
WDM3  7004 TSS     ENGL     0.0002DIV  RCHRES 725    INFLOW ISED   2
WDM3  7004 TSS     ENGL     0.0003DIV  RCHRES 725    INFLOW ISED   3
WDM3  7010 DOX     ENGL          DIV  RCHRES 725    INFLOW OXIF   1
WDM3  7008 BODU    ENGL       0.25DIV  RCHRES 725    INFLOW OXIF   2
WDM3  7016 NO3     ENGL       0.25DIV  RCHRES 725    INFLOW NUIF1  1
WDM3  7012 NH3     ENGL       0.25DIV  RCHRES 725    INFLOW NUIF1  2
WDM3  7022 PO4     ENGL       0.25DIV  RCHRES 725    INFLOW NUIF1  4
WDM3  7018 ORGN    ENGL       0.25DIV  RCHRES 725    INFLOW PKIF   3
WDM3  7024 ORGP    ENGL       0.25DIV  RCHRES 725    INFLOW PKIF   4
WDM3  7013 ORGC    ENGL       0.25DIV  RCHRES 725    INFLOW PKIF   5
*** Lake Wedington USFS
WDM3  4001 FLOW    ENGL     3.0689DIV  RCHRES 420    INFLOW IVOL
WDM3  4002 HEAT    ENGL          DIV  RCHRES 420    INFLOW IHEAT
WDM3  4004 TSS     ENGL     0.0002DIV  RCHRES 420    INFLOW ISED   2
WDM3  4004 TSS     ENGL     0.0003DIV  RCHRES 420    INFLOW ISED   3
WDM3  4010 DOX     ENGL          DIV  RCHRES 420    INFLOW OXIF   1
WDM3  4008 BODU    ENGL       0.25DIV  RCHRES 420    INFLOW OXIF   2
WDM3  4016 NO3     ENGL       0.25DIV  RCHRES 420    INFLOW NUIF1  1
WDM3  4012 NH3     ENGL       0.25DIV  RCHRES 420    INFLOW NUIF1  2
WDM3  4022 PO4     ENGL       0.25DIV  RCHRES 420    INFLOW NUIF1  4
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WDM3  4018 ORGN     ENGL         0.25DIV  RCHRES 420     INFLOW PKIF   3
WDM3  4024 ORGP     ENGL         0.25DIV  RCHRES 420     INFLOW PKIF   4
WDM3  4013 ORGC     ENGL         0.25DIV  RCHRES 420     INFLOW PKIF   5
*** Prairie Grove WWTP
WDM3  5001 FLOW     ENGL       3.0689DIV  RCHRES 408     INFLOW IVOL
WDM3  5002 HEAT     ENGL            DIV  RCHRES 408     INFLOW IHEAT
WDM3  5004 TSS      ENGL       0.0002DIV  RCHRES 408     INFLOW ISED   2
WDM3  5004 TSS      ENGL       0.0003DIV  RCHRES 408     INFLOW ISED   3
WDM3  5010 DOX      ENGL            DIV  RCHRES 408     INFLOW OXIF   1
WDM3  5008 BODU     ENGL         0.25DIV  RCHRES 408     INFLOW OXIF   2
WDM3  5016 NO3      ENGL         0.25DIV  RCHRES 408     INFLOW NUIF1  1
WDM3  5012 NH3      ENGL         0.25DIV  RCHRES 408     INFLOW NUIF1  2
WDM3  5022 PO4      ENGL         0.25DIV  RCHRES 408     INFLOW NUIF1  4
WDM3  5018 ORGN     ENGL         0.25DIV  RCHRES 408     INFLOW PKIF   3
WDM3  5024 ORGP     ENGL         0.25DIV  RCHRES 408     INFLOW PKIF   4
WDM3  5013 ORGC     ENGL         0.25DIV  RCHRES 408     INFLOW PKIF   5
*** Gentry WWTP - discharges to SWEPCO Lake
WDM3  2001 FLOW     ENGL       3.0689DIV  RCHRES 506     INFLOW IVOL
WDM3  2002 HEAT     ENGL            DIV  RCHRES 506     INFLOW IHEAT
WDM3  2004 TSS      ENGL       0.0002DIV  RCHRES 506     INFLOW ISED   2
WDM3  2004 TSS      ENGL       0.0003DIV  RCHRES 506     INFLOW ISED   3
WDM3  2010 DOX      ENGL            DIV  RCHRES 506     INFLOW OXIF   1
WDM3  2008 BODU     ENGL         0.25DIV  RCHRES 506     INFLOW OXIF   2
WDM3  2016 NO3      ENGL         0.25DIV  RCHRES 506     INFLOW NUIF1  1
WDM3  2012 NH3      ENGL         0.25DIV  RCHRES 506     INFLOW NUIF1  2
WDM3  2022 PO4      ENGL         0.25DIV  RCHRES 506     INFLOW NUIF1  4
WDM3  2018 ORGN     ENGL         0.25DIV  RCHRES 506     INFLOW PKIF   3
WDM3  2024 ORGP     ENGL         0.25DIV  RCHRES 506     INFLOW PKIF   4
WDM3  2013 ORGC     ENGL         0.25DIV  RCHRES 506     INFLOW PKIF   5
*** SWEPCO Power Plant - discharges to SWEPCO Lake (added 1/27/2014)
WDM3  1102 HEAT     ENGL            DIV  RCHRES 506     INFLOW IHEAT
WDM3  1103 HEAT     ENGL            DIV  RCHRES 506     INFLOW IHEAT
WDM3  1104 TSS      ENGL       0.0002DIV  RCHRES 506     INFLOW ISED   2
WDM3  1110 DOX      ENGL            DIV  RCHRES 506     INFLOW OXIF   1
*** POINT SOURCES
*** The factor 3.0689 converts MGD to ac-feet/day for FLOW
*** TSS (lbs/day) is converted to tons/day and allocated 40% to silt, 60% to clay
*** all other constituents are in lbs/day in WDM file
*** Tahlequah WWTP
WDM3   801 FLOW     ENGL       3.0689DIV  RCHRES 809     INFLOW IVOL
WDM3   802 HEAT     ENGL            DIV  RCHRES 809     INFLOW IHEAT
WDM3   804 TSS      ENGL       0.0002DIV  RCHRES 809     INFLOW ISED   2
WDM3   804 TSS      ENGL       0.0003DIV  RCHRES 809     INFLOW ISED   3
WDM3   810 DOX      ENGL            DIV  RCHRES 809     INFLOW OXIF   1
WDM3   808 BODU     ENGL         0.25DIV  RCHRES 809     INFLOW OXIF   2
WDM3   816 NO3      ENGL         0.25DIV  RCHRES 809     INFLOW NUIF1  1
WDM3   812 NH3      ENGL         0.25DIV  RCHRES 809     INFLOW NUIF1  2
WDM3   822 PO4      ENGL         0.25DIV  RCHRES 809     INFLOW NUIF1  4
WDM3   818 ORGN     ENGL         0.25DIV  RCHRES 809     INFLOW PKIF   3
WDM3   824 ORGP     ENGL         0.25DIV  RCHRES 809     INFLOW PKIF   4
WDM3   813 ORGC     ENGL         0.25DIV  RCHRES 809     INFLOW PKIF   5
*** Atmospheric Deposition
*** wet atmospheric deposition at station AR27
*** monthly concentrations are mg/L as NO3 and NH4
*** convert mg/L to lbs/ft3 (factor = 6.2427E-5)
*** convert NO3 to N (factor = 0.22590)
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*** convert NH4 to N (factor = 0.77648)
*** convert mg-NH4/L to lbs-N/ft3 for input to PERLND PQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  21     EXTNL  PQADCN 1 1
*** convert mg-NO3/L to lbs-N/ft3 for input to PERLND PQUAL
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  21     EXTNL  PQADCN 2 1
***Dry atmospheric deposition at station CAD150
***Quarterly data disaggregated to monthly with units of kg/ha as NO3 and NH4
*** convert kg/ha to lbs/ac (factor = 0.89215)
*** convert NO3 to N (factor = 0.22590)
*** convert NH4 to N (factor = 0.77648)
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  21     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  21     EXTNL  PQADFX 2 1
*** convert mg-NH4/L to mg-N/L for input to PERLND NITR
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  22     EXTNL  NIADCN 2 1
*** convert mg-NO3/L to mg-N/L for input to PERLND NITR
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  22     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  22     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  22     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  22     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  22     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  22     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  22     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  22     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  22     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  22     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  22     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  22     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  22     EXTNL  PHADFX 2 2
*** convert mg-NH4/L to mg-N/L for input to PERLND NITR
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  23     EXTNL  NIADCN 2 1
*** convert mg-NO3/L to mg-N/L for input to PERLND NITR
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  23     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  23     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  23     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  23     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  23     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  23     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  23     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  23     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  23     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  23     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  23     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  23     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  23     EXTNL  PHADFX 2 2
*** convert mg-NH4/L to mg-N/L for input to PERLND NITR
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  24     EXTNL  NIADCN 2 1
*** convert mg-NO3/L to mg-N/L for input to PERLND NITR
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  24     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  24     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  24     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  24     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  24     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  24     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  24     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  24     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  24     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  24     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  24     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  24     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  24     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  25     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  25     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  25     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  25     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  25     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  25     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  25     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  25     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  25     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  25     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  25     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  25     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  25     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  25     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  26     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  26     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  26     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  26     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  26     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  26     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  26     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  26     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  26     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  26     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  26     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  26     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  26     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  26     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  27     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  27     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  27     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  27     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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```
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  27     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  27     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  27     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  27     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  27     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  27     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  27     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  27     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  27     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  27     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  28     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  28     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  28     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  28     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  28     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  28     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  28     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  28     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  28     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  28     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  28     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  28     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  28     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  28     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  29     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  29     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  29     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  29     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  29     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  29     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  29     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  29     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  29     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  29     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  29     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  29     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  29     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  29     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  30     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  30     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  30     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  30     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  30     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  30     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  30     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  30     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  30     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  30     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  30     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  30     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  30     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  30     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  32     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  32     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  32     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  32     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  32     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  32     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  32     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  32     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  32     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  32     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  32     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  32     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  32     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  32     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  26     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  26     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  26     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  26     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  27     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  27     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  27     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  27     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  28     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  28     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  28     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  28     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  41     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  41     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  41     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  41     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  41     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  41     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  41     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  41     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  41     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  41     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  41     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  41     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  41     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  41     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  42     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  42     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  42     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  42     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  42     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  42     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  42     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  42     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  42     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  42     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  42     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  42     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  42     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  42     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  43     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  43     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  43     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  43     EXTNL  NIADFX 1 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  43     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  43     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  43     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  43     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  43     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  43     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  43     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  43     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  43     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  44     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  44     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  44     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  44     EXTNL  NIADFX 1 1
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  44     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  44     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  44     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  44     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  44     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  44     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  44     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  44     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  44     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  44     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  45     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  45     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  45     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  45     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  45     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  45     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  45     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  45     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  45     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  45     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  45     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  45     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  45     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  45     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  46     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  46     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  46     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  46     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  46     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  46     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  46     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  46     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  46     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  46     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  46     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  46     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  46     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  46     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  47     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  47     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  47     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  47     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** run 32 - change 50-50 to 70-30
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  47     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  47     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  47     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  47     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  47     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  47     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  47     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  47     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  47     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  48     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  48     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  48     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  48     EXTNL  PQADFX 2 1
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  48     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  48     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  48     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  48     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  48     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  48     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  48     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  48     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  48     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  49     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  49     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  49     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  49     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  49     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  49     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  49     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  49     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  49     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  49     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  49     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  49     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  49     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  49     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  50     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  50     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  50     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  50     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  50     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  50     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  50     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  50     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  50     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  50     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  50     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  50     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  50     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  50     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  52     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  52     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  52     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  52     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  52     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  52     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  52     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  52     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  52     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  52     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  52     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  52     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  52     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  46     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  46     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  46     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  46     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  47     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  47     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  47     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  47     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  48     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  48     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  48     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  48     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  61     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  61     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  61     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  61     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  61     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  61     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  61     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  61     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  61     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  61     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  61     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  61     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  61     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  61     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  62     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  62     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  62     EXTNL  NIADFX 2 1
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*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  63     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  63     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  63     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  63     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  63     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  63     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  63     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  63     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  63     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  64     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  64     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  64     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  64     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  64     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  64     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  64     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  64     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  64     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  64     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  64     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  64     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  64     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  64     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  65     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  65     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  65     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  65     EXTNL  PQADFX 2 1
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WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  72     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  72     EXTNL  NIADCN 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  82     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  82     EXTNL  NIADFX 2 1
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WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND  82    EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND  82    EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND  82    EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND  82    EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND  82    EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND  82    EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND  82    EXTNL  PHADFX 2 2
WDM1  3001 NH4W    ENGL     0.77648 SAME PERLND  83    EXTNL  NIADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME PERLND  83    EXTNL  NIADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND  83    EXTNL  NIADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND  83    EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU    ENGL    0.000318  DIV  PERLND  83    EXTNL  NIADFX 1 1
WDM1  3010 MANU    ENGL    0.000136  DIV  PERLND  83    EXTNL  NIADFX 1 2
WDM1  3010 MANU    ENGL     0.0315  DIV  PERLND  83    EXTNL  NIADFX 2 1
WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND  83    EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND  83    EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND  83    EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND  83    EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND  83    EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND  83    EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND  83    EXTNL  PHADFX 2 2
WDM1  3001 NH4W    ENGL     0.77648 SAME PERLND  84    EXTNL  NIADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME PERLND  84    EXTNL  NIADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND  84    EXTNL  NIADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND  84    EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU    ENGL    0.000318  DIV  PERLND  84    EXTNL  NIADFX 1 1
WDM1  3010 MANU    ENGL    0.000136  DIV  PERLND  84    EXTNL  NIADFX 1 2
WDM1  3010 MANU    ENGL     0.0315  DIV  PERLND  84    EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  84     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  84     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  84     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  84     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  84     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  84     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  84     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  85     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  85     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  85     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  85     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  85     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  85     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  85     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  85     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  85     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  85     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  85     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  85     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  85     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  85     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  86     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  86     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  86     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  86     EXTNL  PQADFX 2 1
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  86     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  86     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  86     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  86     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  86     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  86     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  86     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  86     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  86     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  86     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  87     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  87     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  87     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  87     EXTNL  PQADFX 2 1
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** run 32 - change 50-50 to 70-30
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  87     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  87     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  87     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  87     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  87     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  87     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  87     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  87     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  87     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  88     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  88     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  88     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  88     EXTNL  PQADFX 2 1
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*** run 32 - change 50-50 to 70-30
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  88     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  88     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  88     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  88     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  88     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  88     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  88     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  88     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  88     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  89     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  89     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  89     EXTNL  PQADFX 1 1
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  89     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  89     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  89     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  89     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  89     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  89     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  89     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  89     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND  90     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND  90     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  90     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  90     EXTNL  PQADFX 2 1
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND  90     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  90     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  90     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  90     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  90     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  90     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  90     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  90     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  90     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  90     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND  92     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND  92     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND  92     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND  92     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND  92     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND  92     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND  92     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND  92     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND  92     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND  92     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND  92     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND  92     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND  92     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  86     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  86     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  86     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  86     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  87     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  87     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  87     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  87     EXTNL  IQADFX 2 1
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WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND  88     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND  88     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND  88     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND  88     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 101     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 101     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 101     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 101     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 101     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 101     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 101     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 101     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 101     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 101     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 101     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 101     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 101     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 101     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 102     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 102     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 102     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 102     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 102     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 102     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 102     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 102     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 102     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 102     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 102     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 102     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 102     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 102     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 103     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 103     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 103     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 103     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 103     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 103     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 103     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 103     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 103     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 103     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 103     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 103     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 103     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 103     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 104     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 104     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 104     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 104     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 104     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 104     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 104     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 104     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 104     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 104     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 104     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 104     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 104     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 104     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 105     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 105     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 105     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 105     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 105     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 105     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 105     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 105     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 105     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 105     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 105     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 105     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 105     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 105     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 106     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 106     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 106     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 106     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 106     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 106     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 106     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 106     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 106     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 106     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 106     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 106     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 106     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 106     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 107     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 107     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 107     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 107     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 107     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 107     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 107     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 107     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 107     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 107     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 107     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 107     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 107     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 107     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 108     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 108     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 108     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 108     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 108     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 108     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 108     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 108     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 108     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 108     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 108     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 108     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 108     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 108     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 109     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 109     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 109     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 109     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 109     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 109     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 109     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 109     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 109     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 109     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 109     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 109     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 109     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 109     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 110     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 110     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 110     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 110     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 110     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 110     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 110     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 110     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 110     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 110     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 110     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 110     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 110     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 110     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL     0.77648 SAME PERLND 112     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL     0.22590 SAME PERLND 112     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 112     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 112     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 112     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 112     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 112     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 112     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 112     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 112     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 112     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 112     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 112     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 112     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 106     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 106     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 106     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 106     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 107     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 107     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 107     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 107     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 108     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 108     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 108     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 108     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 121     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 121     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 121     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 121     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 121     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 121     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 121     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 121     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 121     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 121     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 121     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 121     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 121     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 121     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 122     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 122     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 122     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 122     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 122     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 122     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 122     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 122     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 122     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 122     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 122     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 122     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 122     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 122     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 123     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 123     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 123     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 123     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 123     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 123     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 123     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 123     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 123     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 123     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 123     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 123     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 123     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 123     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 124     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 124     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 124     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 124     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 124     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 124     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 124     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 124     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 124     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 124     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 124     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 124     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 124     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 124     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 125     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 125     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 125     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 125     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 125     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 125     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 125     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 125     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 125     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 125     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 125     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 125     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 125     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 125     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 126     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 126     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 126     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 126     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 126     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 126     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 126     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 126     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 126     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 126     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 126     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 126     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 126     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 126     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 127     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 127     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 127     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 127     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 127     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 127     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 127     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 127     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 127     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 127     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 127     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 127     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 127     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 127     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 128     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 128     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 128     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 128     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 128     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 128     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 128     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 128     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 128     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 128     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 128     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 128     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 128     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 128     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 129     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 129     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 129     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 129     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 129     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 129     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 129     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 129     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 129     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 129     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 129     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 129     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 129     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 129     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 130     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 130     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 130     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 130     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 130     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 130     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 130     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 130     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 130     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 130     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 130     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 130     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 130     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 130     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 132     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 132     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 132     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 132     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 132     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 132     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 132     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 132     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 132     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 132     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 132     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 132     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 132     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 132     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 126     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 126     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 126     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 126     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 127     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 127     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 127     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 127     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 128     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 128     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 128     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 128     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 141     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 141     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 141     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 141     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 141     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 141     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 141     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 141     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 141     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 141     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 141     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 141     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 141     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 141     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 142     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 142     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 142     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 142     EXTNL  NIADFX 1 1
```

```
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 142     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 142     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 142     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 142     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 142     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 142     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 142     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 142     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 142     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 142     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 143     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 143     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 143     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 143     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 143     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 143     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 143     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 143     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 143     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 143     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 143     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 143     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 143     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 143     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 144     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 144     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 144     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 144     EXTNL  NIADFX 1 1
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*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 144     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 144     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 144     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 144     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 144     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 144     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 144     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 144     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 144     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 144     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 145     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 145     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 145     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 145     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 145     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 145     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 145     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 145     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 145     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 145     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 145     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 145     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 145     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 145     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 146     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 146     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 146     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 146     EXTNL  PQADFX 2 1
```

```
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 146     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 146     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 146     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 146     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 146     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 146     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 146     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 146     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 146     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 146     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 147     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 147     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 147     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 147     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 147     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 147     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 147     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 147     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 147     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 147     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 147     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 147     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 147     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 147     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 148     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 148     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 148     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 148     EXTNL  PQADFX 2 1
```

```
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 148     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 148     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 148     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 148     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 148     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 148     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 148     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 148     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 148     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 148     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 149     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 149     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 149     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 149     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 149     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 149     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 149     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 149     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 149     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 149     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 149     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 149     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 149     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 149     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 150     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 150     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 150     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 150     EXTNL  PQADFX 2 1
```

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*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 150     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 150     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 150     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 150     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 150     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 150     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 150     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 150     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 150     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 150     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 152     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 152     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 152     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 152     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 152     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 152     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 152     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 152     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 152     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 152     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 152     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 152     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 152     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 152     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 146     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 146     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 146     EXTNL  IQADFX 1 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 146     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 147     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 147     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 147     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 147     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 148     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 148     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 148     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 148     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 161     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 161     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 161     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 161     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 161     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 161     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 161     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 161     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 161     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 161     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 161     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 161     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 161     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 161     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 162     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 162     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 162     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 162     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
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```
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 162     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 162     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 162     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 162     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 162     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 162     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 162     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 162     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 162     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 162     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 163     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 163     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 163     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 163     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 163     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 163     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 163     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 163     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 163     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 163     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 163     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 163     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 163     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 163     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 164     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 164     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 164     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 164     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
```

```
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 164     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 164     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 164     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 164     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 164     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 164     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 164     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 164     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 164     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 164     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 165     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 165     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 165     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 165     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 165     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 165     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 165     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 165     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 165     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 165     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 165     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 165     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 165     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 165     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 166     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 166     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 166     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 166     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
```

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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 166     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 166     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 166     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 166     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 166     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 166     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 166     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 166     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 166     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 166     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 167     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 167     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 167     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 167     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 167     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 167     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 167     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 167     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 167     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 167     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 167     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 167     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 167     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 167     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 168     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 168     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 168     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 168     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
```

```
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 168     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 168     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 168     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 168     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 168     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 168     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 168     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 168     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 168     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 168     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 169     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 169     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 169     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 169     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 169     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 169     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 169     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 169     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 169     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 169     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 169     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 169     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 169     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 169     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 170     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 170     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 170     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 170     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
```

```
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 170     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 170     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 170     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 170     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 170     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 170     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 170     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 170     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 170     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 170     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 172     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 172     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 172     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 172     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 172     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 172     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 172     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 172     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 172     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 172     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 172     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 172     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 172     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 172     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 166     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 166     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 166     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 166     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 167     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 167     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 167     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 167     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 168     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 168     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 168     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 168     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 181     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 181     EXTNL  PQADCN 2 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 181     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 181     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 181     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 181     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 181     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 181     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 181     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 181     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 181     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 181     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 181     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 181     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 182     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 182     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 182     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 182     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 182     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 182     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 182     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 182     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 182     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 182     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 182     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 182     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 182     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 182     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 183     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 183     EXTNL  NIADCN 1 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 183     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 183     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 183     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 183     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 183     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 183     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 183     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 183     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 183     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 183     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 183     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 183     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 184     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 184     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 184     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 184     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 184     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 184     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 184     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 184     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 184     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 184     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 184     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 184     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 184     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 184     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 185     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 185     EXTNL  PQADCN 2 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 185     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 185     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 185     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 185     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 185     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 185     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 185     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 185     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 185     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 185     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 185     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 185     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 186     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 186     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 186     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 186     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 186     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 186     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 186     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 186     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 186     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 186     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 186     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 186     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 186     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 186     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 187     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 187     EXTNL  PQADCN 2 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 187     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 187     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 187     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 187     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 187     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 187     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 187     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 187     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 187     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 187     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 187     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 187     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 188     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 188     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 188     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 188     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 188     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 188     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 188     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 188     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 188     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 188     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 188     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 188     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 188     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 188     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 189     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 189     EXTNL  PQADCN 2 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 189     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 189     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 189     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 189     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 189     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 189     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 189     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 189     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 189     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 189     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 189     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 189     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 190     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 190     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 190     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 190     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 190     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 190     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 190     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 190     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 190     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 190     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 190     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 190     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 190     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 190     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 192     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 192     EXTNL  NIADCN 1 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 192     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 192     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 192     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 192     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 192     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 192     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 192     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 192     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 192     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 192     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 192     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 192     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 186     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 186     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 186     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 186     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 187     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 187     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 187     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 187     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 188     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 188     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 188     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 188     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 201     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 201     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 201     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 201     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 201     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 201     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 201     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 201     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 201     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 201     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 201     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 201     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 201     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 201     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 202     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 202     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 202     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 202     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 202     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 202     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 202     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 202     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 202     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 202     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 202     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 202     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 202     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 202     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 203     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 203     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 203     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 203     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 203     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 203     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 203     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 203     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 203     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 203     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 203     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 203     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 203     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 203     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 204     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 204     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 204     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 204     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 204     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 204     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 204     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 204     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 204     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 204     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 204     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 204     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 204     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 204     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 205     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 205     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 205     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 205     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
```

```
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 205     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 205     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 205     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 205     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 205     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 205     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 205     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 205     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 205     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 205     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 206     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 206     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 206     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 206     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 206     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 206     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 206     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 206     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 206     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 206     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 206     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 206     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 206     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 206     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 207     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 207     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 207     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 207     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 207     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 207     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 207     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 207     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 207     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 207     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 207     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 207     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 207     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 207     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 208     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 208     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 208     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 208     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 208     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 208     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 208     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 208     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 208     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 208     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 208     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 208     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 208     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 208     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 209     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 209     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 209     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 209     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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```
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 209     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 209     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 209     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 209     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 209     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 209     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 209     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 209     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 209     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 209     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 210     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 210     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 210     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 210     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 210     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 210     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 210     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 210     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 210     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 210     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 210     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 210     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 210     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 210     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL     0.77648 SAME PERLND 212     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL     0.22590 SAME PERLND 212     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 212     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 212     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
```

```
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 212     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 212     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 212     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 212     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 212     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 212     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 212     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 212     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 212     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 212     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 206     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 206     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 206     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 206     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 207     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 207     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 207     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 207     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 208     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 208     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 208     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 208     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 221     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 221     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 221     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 221     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 221     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 221     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 221     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 221     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 221     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 221     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 221     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 221     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 221     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 221     EXTNL  PHADFX 2 2
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WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 222     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 222     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 222     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 222     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 222     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 222     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 222     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 222     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 222     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 222     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 222     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 222     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 222     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 222     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 223     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 223     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 223     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 223     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 223     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 223     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 223     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 223     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 223     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 223     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 223     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 223     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 223     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 223     EXTNL  PHADFX 2 2
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WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 224     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 224     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 224     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 224     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 224     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 224     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 224     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 224     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 224     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 224     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 224     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 224     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 224     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 224     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 225     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 225     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 225     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 225     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 225     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 225     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 225     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 225     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 225     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 225     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 225     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 225     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 225     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 225     EXTNL  PHADFX 2 2
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WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 226     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 226     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 226     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 226     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 226     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 226     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 226     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 226     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 226     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 226     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 226     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 226     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 226     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 226     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 227     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 227     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 227     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 227     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 227     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 227     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 227     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 227     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 227     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 227     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 227     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 227     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 227     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 227     EXTNL  PHADFX 2 2
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WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 228     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 228     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 228     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 228     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 228     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 228     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 228     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 228     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 228     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 228     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 228     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 228     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 228     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 228     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 229     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 229     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 229     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 229     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 229     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 229     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 229     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 229     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 229     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 229     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 229     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 229     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 229     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 229     EXTNL  PHADFX 2 2
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WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 230     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 230     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 230     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 230     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 230     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 230     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 230     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 230     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 230     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 230     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 230     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 230     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 230     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 230     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 232     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 232     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 232     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 232     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 232     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 232     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 232     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 232     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 232     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 232     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 232     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 232     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 232     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 232     EXTNL  PHADFX 2 2
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*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 226     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 226     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 226     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 226     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 227     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 227     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 227     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 227     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 228     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 228     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 228     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 228     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 241     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 241     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 241     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 241     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 241     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 241     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 241     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 241     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 241     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 241     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 241     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 241     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 241     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 241     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 242     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 242     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 242     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 242     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
```

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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 242     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 242     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 242     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 242     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 242     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 242     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 242     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 242     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 242     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 242     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 243     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 243     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 243     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 243     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 243     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 243     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 243     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 243     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 243     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 243     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 243     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 243     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 243     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 243     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 244     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 244     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 244     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 244     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 244     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 244     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 244     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 244     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 244     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 244     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 244     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 244     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 244     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 244     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 245     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 245     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 245     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 245     EXTNL  PQADFX 2 1
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 245     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 245     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 245     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 245     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 245     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 245     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 245     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 245     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 245     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 245     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 246     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 246     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 246     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 246     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
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```

```
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 246     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 246     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 246     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 246     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 246     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 246     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 246     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 246     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 246     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 246     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 247     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 247     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 247     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 247     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** Convert to lb/ac/day nutrients:
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 247     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 247     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 247     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 247     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 247     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 247     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 247     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 247     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 247     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 247     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 248     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 248     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 248     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 248     EXTNL  PQADFX 2 1
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*** NH3 = 0.00842, NO3 = 0.000085,
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```

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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 248     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 248     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 248     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 248     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 248     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 248     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 248     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 248     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 248     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 248     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 249     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 249     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 249     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 249     EXTNL  PQADFX 2 1
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 249     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 249     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 249     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 249     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 249     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 249     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 249     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 249     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 249     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 249     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 250     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 250     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 250     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 250     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 250     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 250     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 250     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 250     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 250     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 250     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 250     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 250     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 250     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 250     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 252     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 252     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 252     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 252     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 252     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 252     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 252     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 252     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 252     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 252     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 252     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 252     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 252     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 252     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 246     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 246     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 246     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 246     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 247     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 247     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 247     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 247     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 248     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 248     EXTNL  IQADCN 2 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 248     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 248     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 261     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 261     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 261     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 261     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 261     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 261     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 261     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 261     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 261     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 261     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 261     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 261     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 261     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 261     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 262     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 262     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 262     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 262     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 262     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 262     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 262     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 262     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 262     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 262     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 262     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 262     EXTNL  PHADFX 1 2
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WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 262     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 262     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 263     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 263     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 263     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 263     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 263     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 263     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 263     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 263     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 263     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 263     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 263     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 263     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 263     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 263     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 264     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 264     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 264     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 264     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 264     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 264     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 264     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 264     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 264     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 264     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 264     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 264     EXTNL  PHADFX 1 2
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WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 264     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 264     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 265     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 265     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 265     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 265     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 265     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 265     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 265     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 265     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 265     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 265     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 265     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 265     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 265     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 265     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 266     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 266     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 266     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 266     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 266     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 266     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 266     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 266     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 266     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 266     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 266     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 266     EXTNL  PHADFX 1 2
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WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 266     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 266     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 267     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 267     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 267     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 267     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 267     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 267     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 267     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 267     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 267     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 267     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 267     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 267     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 267     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 267     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 268     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 268     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 268     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 268     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 268     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 268     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 268     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 268     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 268     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 268     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 268     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 268     EXTNL  PHADFX 1 2
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WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 268     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 268     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 269     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 269     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 269     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 269     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 269     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 269     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 269     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 269     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 269     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 269     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 269     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 269     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 269     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 269     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 270     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 270     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 270     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 270     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 270     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 270     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 270     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 270     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 270     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 270     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 270     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 270     EXTNL  PHADFX 1 2
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WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 270     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 270     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 272     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 272     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 272     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 272     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 272     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 272     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 272     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 272     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 272     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 272     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 272     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 272     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 272     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 272     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 266     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 266     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 266     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 266     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 267     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 267     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 267     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 267     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 268     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 268     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 268     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 268     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 281     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 281     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 281     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 281     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 281     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 281     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 281     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 281     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 281     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 281     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 281     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 281     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 281     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 281     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 282     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 282     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 282     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 282     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 282     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 282     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 282     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 282     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 282     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 282     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 282     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 282     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 282     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 282     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 283     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 283     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 283     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 283     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 283     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 283     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 283     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 283     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 283     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 283     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 283     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 283     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 283     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 283     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 284     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 284     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 284     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 284     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 284     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 284     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 284     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 284     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 284     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 284     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 284     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 284     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 284     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 284     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 285     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 285     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 285     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 285     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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```
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 285     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 285     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 285     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 285     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 285     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 285     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 285     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 285     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 285     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 285     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 286     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 286     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 286     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 286     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 286     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 286     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 286     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 286     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 286     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 286     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 286     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 286     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 286     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 286     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 287     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 287     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 287     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 287     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 287     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 287     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 287     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 287     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 287     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 287     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 287     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 287     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 287     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 287     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 288     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 288     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 288     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 288     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 288     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 288     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 288     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 288     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 288     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 288     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 288     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 288     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 288     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 288     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 289     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 289     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 289     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 289     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
```

```
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 289     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 289     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 289     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 289     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 289     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 289     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 289     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 289     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 289     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 289     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 290     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 290     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 290     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 290     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 290     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 290     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 290     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 290     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 290     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 290     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 290     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 290     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 290     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 290     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 292     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 292     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 292     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 292     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
```

```
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 292     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 292     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 292     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 292     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 292     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 292     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 292     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 292     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 292     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 292     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 286     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 286     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 286     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 286     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 287     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 287     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 287     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 287     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 288     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 288     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 288     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 288     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 321     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 321     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 321     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 321     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 321     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 321     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 321     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 321     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 321     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 321     EXTNL  NIADFX 3 2
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WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 321     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 321     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 321     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 321     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 322     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 322     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 322     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 322     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 322     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 322     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 322     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 322     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 322     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 322     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 322     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 322     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 322     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 322     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 323     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 323     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 323     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 323     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 323     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 323     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 323     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 323     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 323     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 323     EXTNL  NIADFX 3 2
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WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 323     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 323     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 323     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 323     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 324     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 324     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 324     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 324     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 324     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 324     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 324     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 324     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 324     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 324     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 324     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 324     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 324     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 324     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 325     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 325     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 325     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 325     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 325     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 325     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 325     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 325     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 325     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 325     EXTNL  NIADFX 3 2
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WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 325     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 325     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 325     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 325     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 326     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 326     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 326     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 326     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 326     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 326     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 326     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 326     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 326     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 326     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 326     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 326     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 326     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 326     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 327     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 327     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 327     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 327     EXTNL  PQADFX 2 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 327     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 327     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 327     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 327     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 327     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 327     EXTNL  NIADFX 3 2
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WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 327     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 327     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 327     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 327     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 328     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 328     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 328     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 328     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 328     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 328     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 328     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 328     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 328     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 328     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 328     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 328     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 328     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 328     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 329     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 329     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 329     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 329     EXTNL  PQADFX 2 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 329     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 329     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 329     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 329     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 329     EXTNL  NIADFX 3 2
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WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 329     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 329     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 329     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 329     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 330     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 330     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 330     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 330     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 330     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 330     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 330     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 330     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 330     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 330     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 330     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 330     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 330     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 330     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 332     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 332     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 332     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 332     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 332     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 332     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 332     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 332     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 332     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 332     EXTNL  NIADFX 3 2
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WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 332     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 332     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 332     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 332     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 326     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 326     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 326     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 326     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 327     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 327     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 327     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 327     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 328     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 328     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 328     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 328     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 341     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 341     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 341     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 341     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 341     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 341     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 341     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 341     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 341     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 341     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 341     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 341     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 341     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 341     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 342     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 342     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 342     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 342     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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```

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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 342     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 342     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 342     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 342     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 342     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 342     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 342     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 342     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 342     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 343     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 343     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 343     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 343     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** run 32 - change 50-50 to 70-30
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 343     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 343     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 343     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 343     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 343     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 343     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 343     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 343     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 343     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 344     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 344     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 344     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 344     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
```

```
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 344     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 344     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 344     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 344     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 344     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 344     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 344     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 344     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 344     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 344     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 345     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 345     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 345     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 345     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** Convert to lb/ac/day nutrients:
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 345     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 345     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 345     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 345     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 345     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 345     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 345     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 345     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 345     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 345     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 346     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 346     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 346     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 346     EXTNL  PQADFX 2 1
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 346     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 346     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 346     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 346     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 346     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 346     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 346     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 346     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 346     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 346     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 347     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 347     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 347     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 347     EXTNL  PQADFX 2 1
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 347     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 347     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 347     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 347     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 347     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 347     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 347     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 347     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 347     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 347     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 348     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 348     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 348     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 348     EXTNL  PQADFX 2 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 348     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 348     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 348     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 348     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 348     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 348     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 348     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 348     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 348     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 349     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 349     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 349     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 349     EXTNL  PQADFX 2 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 349     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 349     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 349     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 349     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 349     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 349     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 349     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 349     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 349     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 350     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 350     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 350     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 350     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 350     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 350     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 350     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 350     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 350     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 350     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 350     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 350     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 350     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 350     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 352     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 352     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 352     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 352     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 352     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 352     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 352     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 352     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 352     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 352     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 352     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 352     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 352     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 352     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 346     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 346     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 346     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 346     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 347     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 347     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 347     EXTNL  IQADFX 1 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 347     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 348     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 348     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 348     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 348     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 361     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 361     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 361     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 361     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 361     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 361     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 361     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 361     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 361     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 361     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 361     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 361     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 361     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 361     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 362     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 362     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 362     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 362     EXTNL  NIADFX 1 1
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 362     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 362     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 362     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 362     EXTNL  NIADFX 2 2
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WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 362     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 362     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 362     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 362     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 362     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 362     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 363     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 363     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 363     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 363     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 363     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 363     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 363     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 363     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 363     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 363     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 363     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 363     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 363     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 363     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 364     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 364     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 364     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 364     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 364     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 364     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 364     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 364     EXTNL  NIADFX 2 2
```

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WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 364     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 364     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 364     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 364     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 364     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 364     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 365     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 365     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 365     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 365     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 365     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 365     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 365     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 365     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 365     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 365     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 365     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 365     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 365     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 365     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 366     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 366     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 366     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 366     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 366     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 366     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 366     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 366     EXTNL  NIADFX 2 2
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WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 366     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 366     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 366     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 366     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 366     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 366     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 367     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 367     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 367     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 367     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 367     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 367     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 367     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 367     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 367     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 367     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 367     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 367     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 367     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 367     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 368     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 368     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 368     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 368     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 368     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 368     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 368     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 368     EXTNL  NIADFX 2 2
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WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 368     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 368     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 368     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 368     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 368     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 368     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 369     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 369     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 369     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 369     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 369     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 369     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 369     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 369     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 369     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 369     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 369     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 369     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 369     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 369     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 370     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 370     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 370     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 370     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 370     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 370     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 370     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 370     EXTNL  NIADFX 2 2
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WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 370     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 370     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 370     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 370     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 370     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 370     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 372     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 372     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 372     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 372     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 372     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 372     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 372     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 372     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 372     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 372     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 372     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 372     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 372     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 372     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 366     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 366     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 366     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 366     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 367     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 367     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 367     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 367     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 368     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 368     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 368     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 368     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 381     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 381     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 381     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 381     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
```

```
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 381     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 381     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 381     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 381     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 381     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 381     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 381     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 381     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 381     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 381     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 382     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 382     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 382     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 382     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 382     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 382     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 382     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 382     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 382     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 382     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 382     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 382     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 382     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 382     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 383     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 383     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 383     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 383     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
```

```
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 383     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 383     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 383     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 383     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 383     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 383     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 383     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 383     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 383     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 383     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 384     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 384     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 384     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 384     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 384     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 384     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 384     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 384     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 384     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 384     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 384     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 384     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 384     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 384     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 385     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 385     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 385     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 385     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 385     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 385     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 385     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 385     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 385     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 385     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 385     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 385     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 385     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 385     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 386     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 386     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 386     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 386     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 386     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 386     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 386     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 386     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 386     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 386     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 386     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 386     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 386     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 386     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 387     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 387     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 387     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 387     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
```

```
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 387     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 387     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 387     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 387     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 387     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 387     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 387     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 387     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 387     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 387     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 388     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 388     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 388     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 388     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 388     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 388     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 388     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 388     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 388     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 388     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 388     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 388     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 388     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 388     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 389     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 389     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 389     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 389     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
```

```
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 389     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 389     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 389     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 389     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 389     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 389     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 389     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 389     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 389     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 389     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 390     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 390     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 390     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 390     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 390     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 390     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 390     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 390     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 390     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 390     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 390     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 390     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 390     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 390     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 392     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 392     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 392     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 392     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 392     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 392     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 392     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 392     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 392     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 392     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 392     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 392     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 392     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 392     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 386     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 386     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 386     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 386     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 387     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 387     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 387     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 387     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 388     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 388     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 388     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 388     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 401     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 401     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 401     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 401     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 401     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 401     EXTNL  NIADFX 1 2
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WDM1  3010 MANU    ENGL     0.0315  DIV  PERLND 401     EXTNL  NIADFX 2 1
WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND 401     EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND 401     EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND 401     EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND 401     EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND 401     EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND 401     EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND 401     EXTNL  PHADFX 2 2
WDM1  3001 NH4W    ENGL     0.77648 SAME PERLND 402     EXTNL  NIADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME PERLND 402     EXTNL  NIADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND 402     EXTNL  NIADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND 402     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU    ENGL    0.000318  DIV  PERLND 402     EXTNL  NIADFX 1 1
WDM1  3010 MANU    ENGL    0.000136  DIV  PERLND 402     EXTNL  NIADFX 1 2
WDM1  3010 MANU    ENGL     0.0315  DIV  PERLND 402     EXTNL  NIADFX 2 1
WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND 402     EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND 402     EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND 402     EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND 402     EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND 402     EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND 402     EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND 402     EXTNL  PHADFX 2 2
WDM1  3001 NH4W    ENGL     0.77648 SAME PERLND 403     EXTNL  NIADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME PERLND 403     EXTNL  NIADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND 403     EXTNL  NIADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND 403     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU    ENGL    0.000318  DIV  PERLND 403     EXTNL  NIADFX 1 1
WDM1  3010 MANU    ENGL    0.000136  DIV  PERLND 403     EXTNL  NIADFX 1 2
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 403     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 403     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 403     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 403     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 403     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 403     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 403     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 403     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 404     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 404     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 404     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 404     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 404     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 404     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 404     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 404     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 404     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 404     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 404     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 404     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 404     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 404     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 405     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 405     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 405     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 405     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 405     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 405     EXTNL  NIADFX 1 2
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 405     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 405     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 405     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 405     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 405     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 405     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 405     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 405     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 406     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 406     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 406     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 406     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 406     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 406     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 406     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 406     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 406     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 406     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 406     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 406     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 406     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 406     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 407     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 407     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 407     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 407     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 407     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 407     EXTNL  NIADFX 1 2
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 407     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 407     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 407     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 407     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 407     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 407     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 407     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 407     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 408     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 408     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 408     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 408     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 408     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 408     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 408     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 408     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 408     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 408     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 408     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 408     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 408     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 408     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 409     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 409     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 409     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 409     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 409     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 409     EXTNL  NIADFX 1 2
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 409     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 409     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 409     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 409     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 409     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 409     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 409     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 409     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 410     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 410     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 410     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 410     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 410     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 410     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 410     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 410     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 410     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 410     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 410     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 410     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 410     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 410     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 412     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 412     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 412     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 412     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 412     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 412     EXTNL  NIADFX 1 2
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 412     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 412     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 412     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 412     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 412     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 412     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 412     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 412     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 406     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 406     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 406     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 406     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 407     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 407     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 407     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 407     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 408     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 408     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 408     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 408     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 421     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 421     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 421     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 421     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 421     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 421     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 421     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 421     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 421     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 421     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 421     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 421     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 421     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 421     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 422     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 422     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 422     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 422     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 422     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 422     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 422     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 422     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 422     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 422     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 422     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 422     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 422     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 422     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 423     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 423     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 423     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 423     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 423     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 423     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 423     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 423     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 423     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 423     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 423     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 423     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 423     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 423     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 424     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 424     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 424     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 424     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 424     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 424     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 424     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 424     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 424     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 424     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 424     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 424     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 424     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 424     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 425     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 425     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 425     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 425     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 425     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 425     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 425     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 425     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 425     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 425     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 425     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 425     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 425     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 425     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 426     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 426     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 426     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 426     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 426     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 426     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 426     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 426     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 426     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 426     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 426     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 426     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 426     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 426     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 427     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 427     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 427     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 427     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 427     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 427     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 427     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 427     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 427     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 427     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 427     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 427     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 427     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 427     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 428     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 428     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 428     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 428     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
```

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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 428     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 428     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 428     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 428     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 428     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 428     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 428     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 428     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 428     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 428     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 429     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 429     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 429     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 429     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 429     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 429     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 429     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 429     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 429     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 429     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 429     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 429     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 429     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 429     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 430     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 430     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 430     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 430     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 430     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 430     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 430     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 430     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 430     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 430     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 430     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 430     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 430     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 430     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 432     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 432     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 432     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 432     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 432     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 432     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 432     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 432     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 432     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 432     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 432     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 432     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 432     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 432     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 426     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 426     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 426     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 426     EXTNL  IQADFX 2 1
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*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 427     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 427     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 427     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 427     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 428     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 428     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 428     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 428     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 441     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 441     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 441     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 441     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 441     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 441     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 441     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 441     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 441     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 441     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 441     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 441     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 441     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 441     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 442     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 442     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 442     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 442     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
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WDM1  3010 MANU    ENGL   0.000318  DIV  PERLND 442    EXTNL  NIADFX 1 1
WDM1  3010 MANU    ENGL   0.000136  DIV  PERLND 442    EXTNL  NIADFX 1 2
WDM1  3010 MANU    ENGL     0.0315  DIV  PERLND 442    EXTNL  NIADFX 2 1
WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND 442    EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND 442    EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND 442    EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND 442    EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND 442    EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND 442    EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND 442    EXTNL  PHADFX 2 2
WDM1  3001 NH4W    ENGL     0.77648 SAME PERLND 443    EXTNL  NIADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME PERLND 443    EXTNL  NIADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND 443    EXTNL  NIADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND 443    EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU    ENGL   0.000318  DIV  PERLND 443    EXTNL  NIADFX 1 1
WDM1  3010 MANU    ENGL   0.000136  DIV  PERLND 443    EXTNL  NIADFX 1 2
WDM1  3010 MANU    ENGL     0.0315  DIV  PERLND 443    EXTNL  NIADFX 2 1
WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND 443    EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND 443    EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND 443    EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND 443    EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND 443    EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND 443    EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND 443    EXTNL  PHADFX 2 2
WDM1  3001 NH4W    ENGL     0.77648 SAME PERLND 444    EXTNL  NIADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME PERLND 444    EXTNL  NIADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND 444    EXTNL  NIADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND 444    EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
```

```
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 444     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 444     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 444     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 444     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 444     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 444     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 444     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 444     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 444     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 444     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 445     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 445     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 445     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 445     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 445     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 445     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 445     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 445     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 445     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 445     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 445     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 445     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 445     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 445     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 446     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 446     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 446     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 446     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
```

```
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 446     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 446     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 446     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 446     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 446     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 446     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 446     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 446     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 446     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 446     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 447     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 447     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 447     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 447     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 447     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 447     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 447     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 447     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 447     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 447     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 447     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 447     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 447     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 447     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 448     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 448     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 448     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 448     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
```

```
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 448     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 448     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 448     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 448     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 448     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 448     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 448     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 448     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 448     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 448     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 449     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 449     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 449     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 449     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 449     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 449     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 449     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 449     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 449     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 449     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 449     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 449     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 449     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 449     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 450     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 450     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 450     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 450     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
```

```
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 450     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 450     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 450     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 450     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 450     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 450     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 450     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 450     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 450     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 450     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 452     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 452     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 452     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 452     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 452     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 452     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 452     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 452     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 452     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 452     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 452     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 452     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 452     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 452     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 446     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 446     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 446     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 446     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 447     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 447     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 447     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 447     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 448     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 448     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 448     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 448     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 461     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 461     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 461     EXTNL  PQADFX 1 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 461     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 461     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 461     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 461     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 461     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 461     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 461     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 461     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 461     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 461     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 461     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 462     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 462     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 462     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 462     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 462     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 462     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 462     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 462     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 462     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 462     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 462     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 462     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 462     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 462     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 463     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 463     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 463     EXTNL  NIADFX 2 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 463     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 463     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 463     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 463     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 463     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 463     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 463     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 463     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 463     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 463     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 463     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 464     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 464     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 464     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 464     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 464     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 464     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 464     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 464     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 464     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 464     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 464     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 464     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 464     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 464     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 465     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 465     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 465     EXTNL  PQADFX 1 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 465     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 465     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 465     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 465     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 465     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 465     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 465     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 465     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 465     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 465     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 465     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 466     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 466     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 466     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 466     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 466     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 466     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 466     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 466     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 466     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 466     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 466     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 466     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 466     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 466     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 467     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 467     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 467     EXTNL  PQADFX 1 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 467     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 467     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 467     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 467     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 467     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 467     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 467     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 467     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 467     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 467     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 467     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 468     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 468     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 468     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 468     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 468     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 468     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 468     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 468     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 468     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 468     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 468     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 468     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 468     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 468     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 469     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 469     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 469     EXTNL  PQADFX 1 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 469     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 469     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 469     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 469     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 469     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 469     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 469     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 469     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 469     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 469     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 469     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 470     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 470     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 470     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 470     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 470     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 470     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 470     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 470     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 470     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 470     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 470     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 470     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 470     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 470     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 472     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 472     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 472     EXTNL  NIADFX 2 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 472     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 472     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 472     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 472     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 472     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 472     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 472     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 472     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 472     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 472     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 472     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 466     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 466     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 466     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 466     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 467     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 467     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 467     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 467     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 468     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 468     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 468     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 468     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 481     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 481     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 481     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 481     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 481     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 481     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 481     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 481     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 481     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 481     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 481     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 481     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 481     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 481     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 482     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 482     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 482     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 482     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 482     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 482     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 482     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 482     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 482     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 482     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 482     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 482     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 482     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 482     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 483     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 483     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 483     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 483     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 483     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 483     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 483     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 483     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 483     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 483     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 483     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 483     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 483     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 483     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 484     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 484     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 484     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 484     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 484     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 484     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 484     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 484     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 484     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 484     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 484     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 484     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 484     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 484     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 485     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 485     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 485     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 485     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 485     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 485     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 485     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 485     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 485     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 485     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 485     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 485     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 485     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 485     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 486     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 486     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 486     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 486     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 486     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 486     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 486     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 486     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 486     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 486     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 486     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 486     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 486     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 486     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 487     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 487     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 487     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 487     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
```

```
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 487     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 487     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 487     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 487     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 487     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 487     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 487     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 487     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 487     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 487     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 488     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 488     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 488     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 488     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 488     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 488     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 488     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 488     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 488     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 488     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 488     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 488     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 488     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 488     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 489     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 489     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 489     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 489     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
```

```
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 489     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 489     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 489     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 489     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 489     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 489     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 489     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 489     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 489     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 489     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 490     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 490     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 490     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 490     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 490     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 490     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 490     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 490     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 490     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 490     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 490     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 490     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 490     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 490     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 492     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 492     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 492     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 492     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
```

```
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 492     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 492     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 492     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 492     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 492     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 492     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 492     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 492     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 492     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 492     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 486     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 486     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 486     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 486     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 487     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 487     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 487     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 487     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 488     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 488     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 488     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 488     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 501     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 501     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 501     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 501     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 501     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 501     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 501     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 501     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 501     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 501     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 501     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 501     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 501     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 501     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 502     EXTNL  NIADCN 2 1
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WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 502     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 502     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 502     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 502     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 502     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 502     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 502     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 502     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 502     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 502     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 502     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 502     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 502     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 503     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 503     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 503     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 503     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 503     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 503     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 503     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 503     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 503     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 503     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 503     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 503     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 503     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 503     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 504     EXTNL  NIADCN 2 1
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WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 504     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 504     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 504     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 504     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 504     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 504     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 504     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 504     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 504     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 504     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 504     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 504     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 504     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 505     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 505     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 505     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 505     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 505     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 505     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 505     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 505     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 505     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 505     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 505     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 505     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 505     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 505     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 506     EXTNL  PQADCN 1 1
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WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 506     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 506     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 506     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 506     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 506     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 506     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 506     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 506     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 506     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 506     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 506     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 506     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 506     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 507     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 507     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 507     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 507     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 507     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 507     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 507     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 507     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 507     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 507     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 507     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 507     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 507     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 507     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 508     EXTNL  PQADCN 1 1
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WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 508     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 508     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 508     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 508     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 508     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 508     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 508     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 508     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 508     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 508     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 508     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 508     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 508     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 509     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 509     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 509     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 509     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 509     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 509     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 509     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 509     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 509     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 509     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 509     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 509     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 509     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 509     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 510     EXTNL  PQADCN 1 1
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WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 510     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 510     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 510     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 510     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 510     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 510     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 510     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 510     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 510     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 510     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 510     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 510     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 510     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 512     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 512     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 512     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 512     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 512     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 512     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 512     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 512     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 512     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 512     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 512     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 512     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 512     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 512     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
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WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 506     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 506     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 506     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 506     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 507     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 507     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 507     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 507     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 508     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 508     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 508     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 508     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 521     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 521     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 521     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 521     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 521     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 521     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 521     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 521     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 521     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 521     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 521     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 521     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 521     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 521     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 522     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 522     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 522     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 522     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
```

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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 522     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 522     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 522     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 522     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 522     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 522     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 522     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 522     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 522     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 522     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 523     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 523     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 523     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 523     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 523     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 523     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 523     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 523     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 523     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 523     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 523     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 523     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 523     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 523     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 524     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 524     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 524     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 524     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
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```
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 524     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 524     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 524     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 524     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 524     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 524     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 524     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 524     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 524     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 524     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 525     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 525     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 525     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 525     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 525     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 525     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 525     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 525     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 525     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 525     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 525     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 525     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 525     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 525     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 526     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 526     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 526     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 526     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 526     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 526     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 526     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 526     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 526     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 526     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 526     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 526     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 526     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 526     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 527     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 527     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 527     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 527     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 527     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 527     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 527     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 527     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 527     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 527     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 527     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 527     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 527     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 527     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 528     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 528     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 528     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 528     EXTNL  PQADFX 2 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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```
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 528     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 528     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 528     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 528     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 528     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 528     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 528     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 528     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 528     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 528     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 529     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 529     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 529     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 529     EXTNL  PQADFX 2 1
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 529     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 529     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 529     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 529     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 529     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 529     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 529     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 529     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 529     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 529     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 530     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 530     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 530     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 530     EXTNL  PQADFX 2 1
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 530     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 530     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 530     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 530     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 530     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 530     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 530     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 530     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 530     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 530     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 532     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 532     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 532     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 532     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 532     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 532     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 532     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 532     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 532     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 532     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 532     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 532     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 532     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 532     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 526     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 526     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 526     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 526     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 527     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 527     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 527     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 527     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 528     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 528     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 528     EXTNL  IQADFX 1 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 528     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 541     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 541     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 541     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 541     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 541     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 541     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 541     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 541     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 541     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 541     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 541     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 541     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 541     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 541     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 542     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 542     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 542     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 542     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 542     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 542     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 542     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 542     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 542     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 542     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 542     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 542     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 542     EXTNL  PHADFX 2 1
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WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 542     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 543     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 543     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 543     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 543     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 543     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 543     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 543     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 543     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 543     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 543     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 543     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 543     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 543     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 543     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 544     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 544     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 544     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 544     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 544     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 544     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 544     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 544     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 544     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 544     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 544     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 544     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 544     EXTNL  PHADFX 2 1
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WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 544     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 545     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 545     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 545     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 545     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 545     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 545     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 545     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 545     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 545     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 545     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 545     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 545     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 545     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 545     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 546     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 546     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 546     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 546     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** Convert to lb/ac/day nutrients:
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 546     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 546     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 546     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 546     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 546     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 546     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 546     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 546     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 546     EXTNL  PHADFX 2 1
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WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 546     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 547     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 547     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 547     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 547     EXTNL  PQADFX 2 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 547     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 547     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 547     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 547     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 547     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 547     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 547     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 547     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 547     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 548     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 548     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 548     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 548     EXTNL  PQADFX 2 1
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 548     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 548     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 548     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 548     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 548     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 548     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 548     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 548     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 548     EXTNL  PHADFX 2 1
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WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 548     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 549     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 549     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 549     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 549     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 549     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 549     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 549     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 549     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 549     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 549     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 549     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 549     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 549     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 549     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 550     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 550     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 550     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 550     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 550     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 550     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 550     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 550     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 550     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 550     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 550     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 550     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 550     EXTNL  PHADFX 2 1
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WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 550     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 552     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 552     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 552     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 552     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 552     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 552     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 552     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 552     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 552     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 552     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 552     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 552     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 552     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 552     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 546     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 546     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 546     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 546     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 547     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 547     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 547     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 547     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 548     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 548     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 548     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 548     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 301     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 301     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 301     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 301     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 301     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 301     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 301     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 301     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 301     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 301     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 301     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 301     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 301     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 301     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 302     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 302     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 302     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 302     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 302     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 302     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 302     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 302     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 302     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 302     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 302     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 302     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 302     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 302     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 303     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 303     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 303     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 303     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 303     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 303     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 303     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 303     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 303     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 303     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 303     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 303     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 303     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 303     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 304     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 304     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 304     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 304     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 304     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 304     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 304     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 304     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 304     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 304     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 304     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 304     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 304     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 304     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 305     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 305     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 305     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 305     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
```

```
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 305     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 305     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 305     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 305     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 305     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 305     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 305     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 305     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 305     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 305     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 306     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 306     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 306     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 306     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 306     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 306     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 306     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 306     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 306     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 306     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 306     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 306     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 306     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 306     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 307     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 307     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 307     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 307     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 307     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 307     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 307     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 307     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 307     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 307     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 307     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 307     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 307     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 307     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 308     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 308     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 308     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 308     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 308     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 308     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 308     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 308     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 308     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 308     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 308     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 308     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 308     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 308     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 309     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 309     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 309     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 309     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
```

```
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 309     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 309     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 309     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 309     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 309     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 309     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 309     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 309     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 309     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 309     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 310     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 310     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 310     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 310     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 310     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 310     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 310     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 310     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 310     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 310     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 310     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 310     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 310     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 310     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 312     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 312     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 312     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 312     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
```

```
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 312     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 312     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 312     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 312     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 312     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 312     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 312     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 312     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 312     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 312     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 306     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 306     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 306     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 306     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 307     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 307     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 307     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 307     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 308     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 308     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 308     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 308     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 621     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 621     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 621     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 621     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 621     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 621     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 621     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 621     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 621     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 621     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 621     EXTNL  PHADFX 1 1
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WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 621     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 621     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 621     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 622     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 622     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 622     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 622     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 622     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 622     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 622     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 622     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 622     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 622     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 622     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 622     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 622     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 622     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 623     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 623     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 623     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 623     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 623     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 623     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 623     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 623     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 623     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 623     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 623     EXTNL  PHADFX 1 1
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WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 623     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 623     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 623     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 624     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 624     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 624     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 624     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** Use average of Dairy and Beef manure fractions from SWAT:
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 624     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 624     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 624     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 624     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 624     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 624     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 624     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 624     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 624     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 624     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 625     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 625     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 625     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 625     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 625     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 625     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 625     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 625     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 625     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 625     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 625     EXTNL  PHADFX 1 1
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WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 625     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 625     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 625     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 626     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 626     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 626     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 626     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 626     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 626     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 626     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 626     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 626     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 626     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 626     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 626     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 626     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 626     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 627     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 627     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 627     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 627     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 627     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 627     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 627     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 627     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 627     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 627     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 627     EXTNL  PHADFX 1 1
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WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 627     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 627     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 627     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 628     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 628     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 628     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 628     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 628     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 628     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 628     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 628     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 628     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 628     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 628     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 628     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 628     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 628     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 629     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 629     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 629     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 629     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 629     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 629     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 629     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 629     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 629     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 629     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 629     EXTNL  PHADFX 1 1
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WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 629     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 629     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 629     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 630     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 630     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 630     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 630     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 630     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 630     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 630     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 630     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 630     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 630     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 630     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 630     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 630     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 630     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 632     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 632     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 632     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 632     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 632     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 632     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 632     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 632     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 632     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 632     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 632     EXTNL  PHADFX 1 1
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WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 632     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 632     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 632     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 626     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 626     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 626     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 626     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 627     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 627     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 627     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 627     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 628     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 628     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 628     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 628     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 561     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 561     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 561     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 561     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 561     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 561     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 561     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 561     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 561     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 561     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 561     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 561     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 561     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 561     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 562     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 562     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 562     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 562     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 562     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 562     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 562     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 562     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 562     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 562     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 562     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 562     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 562     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 562     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 563     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 563     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 563     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 563     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 563     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 563     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 563     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 563     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 563     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 563     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 563     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 563     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 563     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 563     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 564     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 564     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 564     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 564     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
```

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*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 564     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 564     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 564     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 564     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 564     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 564     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 564     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 564     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 564     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 564     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 565     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 565     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 565     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 565     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 565     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 565     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 565     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 565     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 565     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 565     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 565     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 565     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 565     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 565     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 566     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 566     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 566     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 566     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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```
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 566     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 566     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 566     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 566     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 566     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 566     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 566     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 566     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 566     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 566     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 567     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 567     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 567     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 567     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 567     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 567     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 567     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 567     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 567     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 567     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 567     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 567     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 567     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 567     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 568     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 568     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 568     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 568     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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```
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 568     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 568     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 568     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 568     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 568     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 568     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 568     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 568     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 568     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 568     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 569     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 569     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 569     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 569     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 569     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 569     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 569     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 569     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 569     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 569     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 569     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 569     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 569     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 569     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 570     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 570     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 570     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 570     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
```

```
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 570     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 570     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 570     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 570     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 570     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 570     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 570     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 570     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 570     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 570     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 572     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 572     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 572     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 572     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 572     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 572     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 572     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 572     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 572     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 572     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 572     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 572     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 572     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 572     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 566     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 566     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 566     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 566     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 567     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 567     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 567     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 567     EXTNL  IQADFX 2 1
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```
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 568     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 568     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 568     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 568     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 581     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 581     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 581     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 581     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 581     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 581     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 581     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 581     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 581     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 581     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 581     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 581     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 581     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 581     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 582     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 582     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 582     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 582     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 582     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 582     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 582     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 582     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 582     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 582     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 582     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 582     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 582     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 582     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 583     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 583     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 583     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 583     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 583     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 583     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 583     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 583     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 583     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 583     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 583     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 583     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 583     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 583     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 584     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 584     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 584     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 584     EXTNL  NIADFX 1 1
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*** run 32 - change 50-50 to 70-30
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 584     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 584     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 584     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 584     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 584     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 584     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 584     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 584     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 584     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 585     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 585     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 585     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 585     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 585     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 585     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 585     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 585     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 585     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 585     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 585     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 585     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 585     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 585     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 586     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 586     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 586     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 586     EXTNL  PQADFX 2 1
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 586     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 586     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 586     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 586     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 586     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 586     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 586     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 586     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 586     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 586     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 587     EXTNL  PQADCN 1 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 587     EXTNL  PQADFX 1 1
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 587     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 587     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 587     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 587     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 587     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 587     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 587     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 587     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 587     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 587     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 588     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 588     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 588     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 588     EXTNL  PQADFX 2 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 588     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 588     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 588     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 588     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 588     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 588     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 588     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 588     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 588     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 589     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 589     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 589     EXTNL  PQADFX 1 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 589     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 589     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 589     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 589     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 589     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 589     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 589     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 590     EXTNL  PQADCN 1 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 590     EXTNL  PQADFX 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 590     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 590     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 590     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 590     EXTNL  NIADFX 3 1
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WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 590     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 590     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 590     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 590     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 590     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 592     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 592     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 592     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 592     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 592     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 592     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 592     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 592     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 592     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 592     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 592     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 592     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 586     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 586     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 586     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 586     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 587     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 587     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 587     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 587     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 588     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 588     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 588     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 588     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 641     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 641     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 641     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 641     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
```

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*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 641     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 641     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 641     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 641     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 641     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 641     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 641     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 641     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 641     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 641     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 642     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 642     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 642     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 642     EXTNL  NIADFX 1 1
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 642     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 642     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 642     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 642     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 642     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 642     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 642     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 642     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 642     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 642     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 643     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 643     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 643     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 643     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 643     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 643     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 643     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 643     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 643     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 643     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 643     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 643     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 643     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 643     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 644     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 644     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 644     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 644     EXTNL  NIADFX 1 1
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WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 644     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 644     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 644     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 644     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 644     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 644     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 644     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 644     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 645     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 645     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 645     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 645     EXTNL  PQADFX 2 1
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 645     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 645     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 645     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 645     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 645     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 645     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 645     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 645     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 645     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 645     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 646     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 646     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 646     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 646     EXTNL  PQADFX 2 1
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 646     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 646     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 646     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 646     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 646     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 646     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 646     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 646     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 646     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 646     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 647     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 647     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 647     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 647     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 647     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 647     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 647     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 647     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 647     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 647     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 647     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 647     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 647     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 647     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 648     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 648     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 648     EXTNL  PQADFX 1 1
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 648     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 648     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 648     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 648     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 648     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 648     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 648     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 648     EXTNL  PHADFX 1 2
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WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 648     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 649     EXTNL  PQADCN 1 1
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 649     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 649     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 649     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 649     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 649     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 649     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 649     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 649     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 649     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 650     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 650     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 650     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 650     EXTNL  PQADFX 2 1
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 650     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 650     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 650     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 650     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 650     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 650     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 650     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 650     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 650     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 650     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 652     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 652     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 652     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 652     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 652     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 652     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 652     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 652     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 652     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 652     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 652     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 652     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 652     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 652     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 646     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 646     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 646     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 646     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 647     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 647     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 647     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 647     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 648     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 648     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 648     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 648     EXTNL  IQADFX 2 1
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 601     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 601     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 601     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 601     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 601     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 601     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 601     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 601     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 601     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 601     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 601     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 601     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 601     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 601     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 602     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 602     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 602     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 602     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 602     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 602     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 602     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 602     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 602     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 602     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 602     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 602     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 602     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 602     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 603     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 603     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 603     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 603     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 603     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 603     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 603     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 603     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 603     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 603     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 603     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 603     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 603     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 603     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 604     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 604     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 604     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 604     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
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*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 604     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 604     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 604     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 604     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 604     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 604     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 604     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 604     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 604     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 604     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 605     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 605     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 605     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 605     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 605     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 605     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 605     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 605     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 605     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 605     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 605     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 605     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 605     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 605     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 606     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 606     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 606     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 606     EXTNL  PQADFX 2 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 606     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 606     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 606     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 606     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 606     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 606     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 606     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 606     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 606     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 606     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 607     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 607     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 607     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 607     EXTNL  PQADFX 2 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 607     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 607     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 607     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 607     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 607     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 607     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 607     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 607     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 607     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 607     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 608     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 608     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 608     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 608     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 608     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 608     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 608     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 608     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 608     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 608     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 608     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 608     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 608     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 608     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 609     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 609     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 609     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 609     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 609     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 609     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 609     EXTNL  NIADFX 2 1
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WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 609     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 609     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 609     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 609     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 609     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 609     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 609     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 610     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 610     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 610     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 610     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 610     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 610     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 610     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 610     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 610     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 610     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 610     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 610     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 610     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 610     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 612     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 612     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 612     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 612     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
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*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 612     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 612     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 612     EXTNL  NIADFX 2 1
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WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND 612    EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND 612    EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND 612    EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND 612    EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND 612    EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND 612    EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND 612    EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W    ENGL   0.00004855SAME IMPLND 606    EXTNL  IQADCN 1 1
WDM1  3002 NO3W    ENGL   0.00001410SAME IMPLND 606    EXTNL  IQADCN 2 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  IMPLND 606    EXTNL  IQADFX 1 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  IMPLND 606    EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W    ENGL   0.00004855SAME IMPLND 607    EXTNL  IQADCN 1 1
WDM1  3002 NO3W    ENGL   0.00001410SAME IMPLND 607    EXTNL  IQADCN 2 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  IMPLND 607    EXTNL  IQADFX 1 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  IMPLND 607    EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W    ENGL   0.00004855SAME IMPLND 608    EXTNL  IQADCN 1 1
WDM1  3002 NO3W    ENGL   0.00001410SAME IMPLND 608    EXTNL  IQADCN 2 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  IMPLND 608    EXTNL  IQADFX 1 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  IMPLND 608    EXTNL  IQADFX 2 1
WDM1  3001 NH4W    ENGL   0.00004855SAME PERLND 661    EXTNL  PQADCN 1 1
WDM1  3002 NO3W    ENGL   0.00001410SAME PERLND 661    EXTNL  PQADCN 2 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND 661    EXTNL  PQADFX 1 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND 661    EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU    ENGL    0.000318  DIV  PERLND 661    EXTNL  NIADFX 1 1
WDM1  3010 MANU    ENGL    0.000136  DIV  PERLND 661    EXTNL  NIADFX 1 2
WDM1  3010 MANU    ENGL     0.0315  DIV  PERLND 661    EXTNL  NIADFX 2 1
WDM1  3010 MANU    ENGL     0.0135  DIV  PERLND 661    EXTNL  NIADFX 2 2
WDM1  3010 MANU    ENGL     0.1141  DIV  PERLND 661    EXTNL  NIADFX 3 1
WDM1  3010 MANU    ENGL     0.0489  DIV  PERLND 661    EXTNL  NIADFX 3 2
WDM1  3010 MANU    ENGL     0.0168  DIV  PERLND 661    EXTNL  PHADFX 1 1
WDM1  3010 MANU    ENGL     0.0072  DIV  PERLND 661    EXTNL  PHADFX 1 2
WDM1  3010 MANU    ENGL     0.0187  DIV  PERLND 661    EXTNL  PHADFX 2 1
WDM1  3010 MANU    ENGL     0.0080  DIV  PERLND 661    EXTNL  PHADFX 2 2
WDM1  3001 NH4W    ENGL     0.77648 SAME PERLND 662    EXTNL  NIADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME PERLND 662    EXTNL  NIADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  PERLND 662    EXTNL  NIADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  PERLND 662    EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 662     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 662     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 662     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 662     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 662     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 662     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 662     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 662     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 662     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 662     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 663     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 663     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 663     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 663     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
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*** NH3 = 0.00842, NO3 = 0.000085,
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*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
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*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 663     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 663     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 663     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 663     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 663     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 663     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 663     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 663     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 663     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 663     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 664     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 664     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 664     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 664     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 664     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 664     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 664     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 664     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 664     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 664     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 664     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 664     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 664     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 665     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 665     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 665     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 665     EXTNL  PQADFX 2 1
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*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
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WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 665     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 665     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 665     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 665     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 665     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 665     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 665     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 665     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 665     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 666     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 666     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 666     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 666     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 666     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 666     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 666     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 666     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 666     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 666     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 666     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 666     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 666     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 666     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 667     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 667     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 667     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 667     EXTNL  PQADFX 2 1
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*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 667     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 667     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 667     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 667     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 667     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 667     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 667     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 667     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 667     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 667     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 668     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 668     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 668     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 668     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 668     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 668     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 668     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 668     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 668     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 668     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 668     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 668     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 668     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 668     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 669     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 669     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 669     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 669     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 669     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 669     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 669     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 669     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 669     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 669     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 669     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 669     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 669     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 669     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL    0.00004855SAME PERLND 670     EXTNL  PQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME PERLND 670     EXTNL  PQADCN 2 1
WDM1  3005 NH4D     ENGL     0.69274 DIV  PERLND 670     EXTNL  PQADFX 1 1
WDM1  3006 NO3D     ENGL     0.20154 DIV  PERLND 670     EXTNL  PQADFX 2 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
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*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 670     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 670     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 670     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 670     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 670     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 670     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 670     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 670     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 670     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 670     EXTNL  PHADFX 2 2
WDM1  3001 NH4W     ENGL      0.77648 SAME PERLND 672     EXTNL  NIADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME PERLND 672     EXTNL  NIADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  PERLND 672     EXTNL  NIADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  PERLND 672     EXTNL  NIADFX 1 1
*** Manure addition to pasture every timestep from March 1 to Nov 30.
*** Use daily time series of value 1.0 (3/1-11/30) and 0.0 (12/1-2/28) and
*** atmospheric deposition method to add nutrients to surface and upper layers.
*** Use average of Dairy and Beef manure fractions from SWAT:
*** MinN = 0.0085, MinP = 0.0045, OrgN = 0.0305, OrgP = 0.005, NH3/MinN = 0.99
*** NH3 = 0.00842, NO3 = 0.000085,
*** 5.99 kg/ha/day of manure from Saraswat IRW model - based on cattle populations.
*** Convert to lb/ac/day nutrients:
*** NO3 =  0.000454 lb/ac/day (divided between surface & upper)
*** NH3 =  0.0450   lb/ac/day (divided between surface & upper)
*** OrgN = 0.163    lb/ac/day (divided between surface & upper)
*** PO4 =  0.0240   lb/ac/day (divided between surface & upper)
*** OrgP = 0.0267   lb/ac/day (divided between surface & upper)
*** run 32 - change 50-50 to 70-30
WDM1  3010 MANU     ENGL    0.000318  DIV  PERLND 672     EXTNL  NIADFX 1 1
WDM1  3010 MANU     ENGL    0.000136  DIV  PERLND 672     EXTNL  NIADFX 1 2
WDM1  3010 MANU     ENGL      0.0315  DIV  PERLND 672     EXTNL  NIADFX 2 1
WDM1  3010 MANU     ENGL      0.0135  DIV  PERLND 672     EXTNL  NIADFX 2 2
WDM1  3010 MANU     ENGL      0.1141  DIV  PERLND 672     EXTNL  NIADFX 3 1
WDM1  3010 MANU     ENGL      0.0489  DIV  PERLND 672     EXTNL  NIADFX 3 2
WDM1  3010 MANU     ENGL      0.0168  DIV  PERLND 672     EXTNL  PHADFX 1 1
WDM1  3010 MANU     ENGL      0.0072  DIV  PERLND 672     EXTNL  PHADFX 1 2
WDM1  3010 MANU     ENGL      0.0187  DIV  PERLND 672     EXTNL  PHADFX 2 1
WDM1  3010 MANU     ENGL      0.0080  DIV  PERLND 672     EXTNL  PHADFX 2 2
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 666     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 666     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 666     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 666     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
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WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 667     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 667     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 667     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 667     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to lbs-N/ft3 for input to IMPLND IQUAL
WDM1  3001 NH4W     ENGL    0.00004855SAME IMPLND 668     EXTNL  IQADCN 1 1
WDM1  3002 NO3W     ENGL    0.00001410SAME IMPLND 668     EXTNL  IQADCN 2 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  IMPLND 668     EXTNL  IQADFX 1 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  IMPLND 668     EXTNL  IQADFX 2 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 100     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 100     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 100     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 100     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 714     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 714     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 714     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 714     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 702     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 702     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 702     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 702     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 716     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 716     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 716     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 716     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 412     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 412     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 412     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 412     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 608     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 608     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 608     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 608     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 728     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 728     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 728     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 728     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 402     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 402     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 402     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 402     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 108     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 108     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 108     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 108     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 609     EXTNL  NUADCN 2 1
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WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 609     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 609     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 609     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 602     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 602     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 602     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 602     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 604     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 604     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 604     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 604     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 204     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 204     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 204     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 204     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 208     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 208     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 208     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 208     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 102     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 102     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 102     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 102     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 638     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 638     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 638     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 638     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 318     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 318     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 318     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 318     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 214     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 214     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 214     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 214     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 202     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 202     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 202     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 202     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 306     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 306     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 306     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 306     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 901     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 901     EXTNL  NUADCN 1 1
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WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 901     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 901     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 718     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 718     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 718     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 718     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 703     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 703     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 703     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 703     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 404     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 404     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 404     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 404     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 723     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 723     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 723     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 723     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 502     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 502     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 502     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 502     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 302     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 302     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 302     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 302     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 312     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 312     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 312     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 312     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 322     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 322     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 322     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 322     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 514     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 514     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 514     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 514     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 314     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 314     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 314     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 314     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 916     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 916     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 916     EXTNL  NUADFX 2 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 916     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 902     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 902     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 902     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 902     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 804     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 804     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 804     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 804     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 904     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 904     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 904     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 904     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 504     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 504     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 504     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 504     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 308     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 308     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 308     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 308     EXTNL  NUADFX 1 1
WDM1  3012 ONE      ENGL      2.0661  SAME RCHRES 308     EXTNL  IVOL
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 738     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 738     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 738     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 738     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 806     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 806     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 806     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 806     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 732     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 732     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 732     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 732     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 515     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 515     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 515     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 515     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 742     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 742     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 742     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 742     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 802     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 802     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 802     EXTNL  NUADFX 2 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 802     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 505     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 505     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 505     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 505     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 304     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 304     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 304     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 304     EXTNL  NUADFX 1 1
*** add 25 cfs to rch 304 and 308 to make up 50 cfs at 316
*** add 10 cfs to rch 150
*** 1 ac-ft/hr = 12.1 cfs; 1 cfs = 0.082644 ac-ft/hr
*** deleted these "baseflow" additions starting in run #31
*** EDIT TAS 07/06/2016 Additions to rch 304, 308, and 150 are added back in.
WDM1  3012 ONE      ENGL      2.0661  SAME RCHRES 304     EXTNL  IVOL
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 316     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 316     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 316     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 316     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 324     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 324     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 324     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 324     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 938     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 938     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 938     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 938     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 805     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 805     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 805     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 805     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 414     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 414     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 414     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 414     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 606     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 606     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 606     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 606     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 326     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 326     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 326     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 326     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 206     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 206     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 206     EXTNL  NUADFX 2 1
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WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 206     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 212     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 212     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 212     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 212     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 722     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 722     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 722     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 722     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 807     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 807     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 807     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 807     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 906     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 906     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 906     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 906     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 704     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 704     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 704     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 704     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 705     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 705     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 705     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 705     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 908     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 908     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 908     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 908     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 612     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 612     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 612     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 612     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 516     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 516     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 516     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 516     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 706     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 706     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 706     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 706     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 725     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 725     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 725     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 725     EXTNL  NUADFX 1 1
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*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 216    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 216    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 216    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 216    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 418    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 418    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 418    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 418    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 420    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 420    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 420    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 420    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 614    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 614    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 614    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 614    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 406    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 406    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 406    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 406    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 408    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 408    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 408    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 408    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 416    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 416    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 416    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 416    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 508    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 508    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 508    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 508    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 110    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 110    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 110    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 110    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 506    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 506    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 506    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 506    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 507    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 507    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 507    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 507    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
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WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 512    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 512    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 512    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 512    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 639    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 639    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 639    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 639    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 120    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 120    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 120    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 120    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 708    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 708    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 708    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 708    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 518    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 518    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 518    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 518    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 522    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 522    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 522    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 522    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 523    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 523    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 523    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 523    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 712    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 712    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 712    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 712    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 924    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 924    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 924    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 924    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 912    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 912    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 912    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 912    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 724    EXTNL  NUADCN 2 1
WDM1  3002 NO3W    ENGL     0.22590 SAME RCHRES 724    EXTNL  NUADCN 1 1
WDM1  3005 NH4D    ENGL     0.69274 DIV  RCHRES 724    EXTNL  NUADFX 2 1
WDM1  3006 NO3D    ENGL     0.20154 DIV  RCHRES 724    EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W    ENGL     0.77648 SAME RCHRES 726    EXTNL  NUADCN 2 1
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WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 726     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 726     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 726     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 736     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 736     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 736     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 736     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 746     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 746     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 746     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 746     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 130     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 130     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 130     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 130     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 101     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 101     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 101     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 101     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 104     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 104     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 104     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 104     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 140     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 140     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 140     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 140     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 150     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 150     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 150     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 150     EXTNL  NUADFX 1 1
WDM1  3012 ONE      ENGL      0.8264  SAME RCHRES 150     EXTNL  IVOL
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 160     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 160     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 160     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 160     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 600     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 600     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 600     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 600     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 610     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 610     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 610     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 610     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 524     EXTNL  NUADCN 2 1
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WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 524     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 524     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 524     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 620     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 620     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 620     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 620     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 630     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 630     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 630     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 630     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 635     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 635     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 635     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 635     EXTNL  NUADFX 1 1
*** Previous 5 lines updated by Nicole after Thiessen analysis on 4/10/2012
*** Diversion for Siloam Springs Municipality
WDM1  6371 DIVR     ENGL              SAME RCHRES 637     EXTNL  OUTDGT 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 637     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 637     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 637     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 637     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 640     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 640     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 640     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 640     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 650     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 650     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 650     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 650     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 922     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 922     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 922     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 922     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 936     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 936     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 936     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 936     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 808     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 808     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 808     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 808     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 660     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 660     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 660     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 660     EXTNL  NUADFX 1 1
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*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 670     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 670     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 670     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 670     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 800     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 800     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 800     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 800     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 810     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 810     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 810     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 810     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 820     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 820     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 820     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 820     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 830     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 830     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 830     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 830     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 748     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 748     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 748     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 748     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 751     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 751     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 751     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 751     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 752     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 752     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 752     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 752     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 809     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 809     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 809     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 809     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 840     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 840     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 840     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 840     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 850     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 850     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 850     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 850     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
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WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 914     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 914     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 914     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 914     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 860     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 860     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 860     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 860     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 870     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 870     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 870     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 870     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 880     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 880     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 880     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 880     EXTNL  NUADFX 1 1
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 890     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 890     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 890     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 890     EXTNL  NUADFX 1 1
WDM2   106 PREC     ENGLZERO          SAME RCHRES 900     EXTNL  PREC
*** convert mg-NH4/L and mg-NO3/L to mg-N/L for input to RCHRES NUTRX
WDM1  3001 NH4W     ENGL      0.77648 SAME RCHRES 900     EXTNL  NUADCN 2 1
WDM1  3002 NO3W     ENGL      0.22590 SAME RCHRES 900     EXTNL  NUADCN 1 1
WDM1  3005 NH4D     ENGL      0.69274 DIV  RCHRES 900     EXTNL  NUADFX 2 1
WDM1  3006 NO3D     ENGL      0.20154 DIV  RCHRES 900     EXTNL  NUADFX 1 1
END EXT SOURCES

NETWORK
***RCHRES 130 ROFLOW ROVOL  1 1 0.0002968     COPY     1     INPUT  MEAN   9
***RCHRES 104 ROFLOW ROVOL  1 1 1.0603e-3     COPY     1     INPUT  MEAN   9
***Operations to add the flow from RCHRES 900, 914, and 916
RCHRES 900 HYDR   ROVOL  1 1            COPY   800     INPUT  MEAN   1
RCHRES 914 HYDR   ROVOL  1 1            COPY   800     INPUT  MEAN   1
RCHRES 916 HYDR   ROVOL  1 1            COPY   800     INPUT  MEAN   1
***Operations to add the sediment load from RCHRES 900, 914, and 916
RCHRES 900 SEDTRN ROSED  4 1            COPY   800     INPUT  MEAN   2
RCHRES 914 SEDTRN ROSED  4 1            COPY   800     INPUT  MEAN   2
RCHRES 916 SEDTRN ROSED  4 1            COPY   800     INPUT  MEAN   2
***Operations to add the heat load from RCHRES 900, 914, and 916
RCHRES 900 HTRCH  ROHEAT 1 1            COPY   800     INPUT  MEAN   3
RCHRES 914 HTRCH  ROHEAT 1 1            COPY   800     INPUT  MEAN   3
RCHRES 916 HTRCH  ROHEAT 1 1            COPY   800     INPUT  MEAN   3
***Operation to get the composite concentration from the two time series above
***Multiplication factor converts t/ac-ft to mg/l
COPY   800 OUTPUT MEAN   2 1    735.48     GENER  800     INPUT  ONE
COPY   800 OUTPUT MEAN   1 1            GENER  800     INPUT  TWO
END NETWORK

SCHEMATIC
<-Volume->              <--Area-->     <-Volume->  <ML#> ***       <sb>
<Name>   x              <-factor->     <Name>   x        ***        x x
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PERLND 21	5850.9	RCHRES 100	2
PERLND 22	592.3	RCHRES 100	5
PERLND 23	532.8	RCHRES 100	5
PERLND 24	2200.0	RCHRES 100	5
PERLND 25	317.4	RCHRES 100	2
PERLND 26	428.7	RCHRES 100	2
IMPLND 26	8.7	RCHRES 100	1
PERLND 27	15.8	RCHRES 100	2
IMPLND 27	0.3	RCHRES 100	1
PERLND 28	13.1	RCHRES 100	2
IMPLND 28	8.7	RCHRES 100	1
PERLND 29	4.5	RCHRES 100	2
PERLND 30	11.1	RCHRES 100	2
PERLND 32	237.6	RCHRES 100	5
PERLND 41	10043.1	RCHRES 714	2
PERLND 42	974.1	RCHRES 714	5
PERLND 43	846.5	RCHRES 714	5
PERLND 44	2430.7	RCHRES 714	5
PERLND 45	378.5	RCHRES 714	2
PERLND 46	409.7	RCHRES 714	2
IMPLND 46	8.4	RCHRES 714	1
PERLND 47	5.1	RCHRES 714	2
IMPLND 47	0.1	RCHRES 714	1
PERLND 48	8.3	RCHRES 714	2
IMPLND 48	5.5	RCHRES 714	1
PERLND 49	67.2	RCHRES 714	2
PERLND 50	8.2	RCHRES 714	2
PERLND 52	361.9	RCHRES 714	5
PERLND 61	2126.6	RCHRES 702	2
PERLND 62	62.3	RCHRES 702	5
PERLND 63	355.4	RCHRES 702	5
PERLND 64	1372.0	RCHRES 702	5
PERLND 65	85.9	RCHRES 702	2
PERLND 66	189.8	RCHRES 702	2
IMPLND 66	3.9	RCHRES 702	1
PERLND 67	3.7	RCHRES 702	2
IMPLND 67	0.1	RCHRES 702	1
PERLND 72	294.8	RCHRES 702	5
PERLND 661	5327.2	RCHRES 716	2
PERLND 662	2453.4	RCHRES 716	5
PERLND 663	1193.2	RCHRES 716	5
PERLND 664	2821.0	RCHRES 716	5
PERLND 665	368.0	RCHRES 716	2
PERLND 666	746.0	RCHRES 716	2
IMPLND 666	15.2	RCHRES 716	1
PERLND 667	22.8	RCHRES 716	2
IMPLND 667	0.5	RCHRES 716	1
PERLND 668	7.7	RCHRES 716	2
IMPLND 668	5.1	RCHRES 716	1
PERLND 669	76.6	RCHRES 716	2
PERLND 670	7.1	RCHRES 716	2
PERLND 672	248.3	RCHRES 716	5
RCHRES 714		RCHRES 716	3
PERLND 101	2570.2	RCHRES 412	2
PERLND 102	1527.8	RCHRES 412	5
PERLND 103	1094.6	RCHRES 412	5

PERLND 104	1443.1	RCHRES 412	5
PERLND 105	130.4	RCHRES 412	2
PERLND 106	435.9	RCHRES 412	2
IMPLND 106	8.9	RCHRES 412	1
PERLND 107	165.8	RCHRES 412	2
IMPLND 107	3.4	RCHRES 412	1
PERLND 108	72.4	RCHRES 412	2
IMPLND 108	48.3	RCHRES 412	1
PERLND 109	38.0	RCHRES 412	2
PERLND 110	8.2	RCHRES 412	2
PERLND 112	319.9	RCHRES 412	5
PERLND 121	3910.2	RCHRES 608	2
PERLND 122	3719.0	RCHRES 608	5
PERLND 123	1745.0	RCHRES 608	5
PERLND 124	2176.6	RCHRES 608	5
PERLND 125	150.9	RCHRES 608	2
PERLND 126	760.0	RCHRES 608	2
IMPLND 126	15.5	RCHRES 608	1
PERLND 127	162.3	RCHRES 608	2
IMPLND 127	3.3	RCHRES 608	1
PERLND 128	56.3	RCHRES 608	2
IMPLND 128	37.5	RCHRES 608	1
PERLND 129	12.0	RCHRES 608	2
PERLND 130	8.0	RCHRES 608	2
PERLND 132	1125.9	RCHRES 608	5
PERLND 141	3036.6	RCHRES 728	2
PERLND 142	2445.3	RCHRES 728	5
PERLND 143	1156.4	RCHRES 728	5
PERLND 144	885.5	RCHRES 728	5
PERLND 145	1991.1	RCHRES 728	2
PERLND 146	451.6	RCHRES 728	2
IMPLND 146	9.2	RCHRES 728	1
PERLND 147	21.7	RCHRES 728	2
IMPLND 147	0.4	RCHRES 728	1
PERLND 148	15.0	RCHRES 728	2
IMPLND 148	10.0	RCHRES 728	1
PERLND 149	2.2	RCHRES 728	2
PERLND 150	4.5	RCHRES 728	2
PERLND 152	567.7	RCHRES 728	5
PERLND 421	2034.3	RCHRES 402	2
PERLND 422	120.4	RCHRES 402	5
PERLND 423	301.3	RCHRES 402	5
PERLND 424	1009.8	RCHRES 402	5
PERLND 425	31.9	RCHRES 402	2
PERLND 426	210.6	RCHRES 402	2
IMPLND 426	4.3	RCHRES 402	1
PERLND 427	7.5	RCHRES 402	2
IMPLND 427	0.2	RCHRES 402	1
PERLND 428	1.5	RCHRES 402	2
IMPLND 428	1.0	RCHRES 402	1
PERLND 432	367.0	RCHRES 402	5
PERLND 21	2975.8	RCHRES 108	2
PERLND 22	356.0	RCHRES 108	5
PERLND 23	354.4	RCHRES 108	5
PERLND 24	1264.8	RCHRES 108	5
PERLND 25	113.4	RCHRES 108	2

PERLND 26	188.4	RCHRES 108	2
IMPLND 26	3.8	RCHRES 108	1
PERLND 27	16.7	RCHRES 108	2
IMPLND 27	0.3	RCHRES 108	1
PERLND 28	31.1	RCHRES 108	2
IMPLND 28	20.7	RCHRES 108	1
PERLND 29	4.5	RCHRES 108	2
PERLND 30	6.5	RCHRES 108	2
PERLND 32	142.8	RCHRES 108	5
PERLND 121	113.6	RCHRES 609	2
PERLND 122	410.4	RCHRES 609	5
PERLND 123	147.2	RCHRES 609	5
PERLND 124	113.6	RCHRES 609	5
PERLND 125	2.8	RCHRES 609	2
PERLND 126	60.1	RCHRES 609	2
IMPLND 126	1.2	RCHRES 609	1
PERLND 127	1.0	RCHRES 609	2
IMPLND 127	0.0	RCHRES 609	1
PERLND 128	14.5	RCHRES 609	2
IMPLND 128	9.7	RCHRES 609	1
PERLND 132	124.3	RCHRES 609	5
RCHRES 608		RCHRES 609	3
PERLND 201	3672.3	RCHRES 602	2
PERLND 202	3366.0	RCHRES 602	5
PERLND 203	2114.4	RCHRES 602	5
PERLND 204	3560.7	RCHRES 602	5
PERLND 205	65.0	RCHRES 602	2
PERLND 206	567.6	RCHRES 602	2
IMPLND 206	11.6	RCHRES 602	1
PERLND 207	17.7	RCHRES 602	2
IMPLND 207	0.4	RCHRES 602	1
PERLND 208	33.0	RCHRES 602	2
IMPLND 208	22.0	RCHRES 602	1
PERLND 209	8.2	RCHRES 602	2
PERLND 210	21.4	RCHRES 602	2
PERLND 212	1440.1	RCHRES 602	5
PERLND 221	4150.4	RCHRES 604	2
PERLND 222	758.7	RCHRES 604	5
PERLND 223	1558.9	RCHRES 604	5
PERLND 224	2833.6	RCHRES 604	5
PERLND 225	189.9	RCHRES 604	2
PERLND 226	502.3	RCHRES 604	2
IMPLND 226	10.3	RCHRES 604	1
PERLND 227	50.4	RCHRES 604	2
IMPLND 227	1.0	RCHRES 604	1
PERLND 228	66.0	RCHRES 604	2
IMPLND 228	44.0	RCHRES 604	1
PERLND 229	10.7	RCHRES 604	2
PERLND 230	10.5	RCHRES 604	2
PERLND 232	2912.7	RCHRES 604	5
PERLND 361	1808.9	RCHRES 204	2
PERLND 362	672.3	RCHRES 204	5
PERLND 363	463.2	RCHRES 204	5
PERLND 364	1087.2	RCHRES 204	5
PERLND 365	39.1	RCHRES 204	2
PERLND 366	2427.8	RCHRES 204	2

IMPLND 366	49.5	RCHRES 204	1
PERLND 367	2615.2	RCHRES 204	2
IMPLND 367	53.4	RCHRES 204	1
PERLND 368	885.9	RCHRES 204	2
IMPLND 368	590.6	RCHRES 204	1
PERLND 369	14.0	RCHRES 204	2
PERLND 370	6.9	RCHRES 204	2
PERLND 372	0.0	RCHRES 204	5
PERLND 261	782.6	RCHRES 208	2
PERLND 262	375.8	RCHRES 208	5
PERLND 263	445.0	RCHRES 208	5
PERLND 264	2318.8	RCHRES 208	5
PERLND 265	37.1	RCHRES 208	2
PERLND 266	406.8	RCHRES 208	2
IMPLND 266	8.3	RCHRES 208	1
PERLND 267	211.4	RCHRES 208	2
IMPLND 267	4.3	RCHRES 208	1
PERLND 268	92.1	RCHRES 208	2
IMPLND 268	61.4	RCHRES 208	1
PERLND 270	0	RCHRES 208	2
PERLND 272	805.0	RCHRES 208	5
PERLND 181	132.0	RCHRES 102	2
PERLND 182	664.4	RCHRES 102	5
PERLND 183	193.8	RCHRES 102	5
PERLND 184	120.2	RCHRES 102	5
PERLND 186	150.0	RCHRES 102	2
IMPLND 186	3.1	RCHRES 102	1
PERLND 187	33.4	RCHRES 102	2
IMPLND 187	0.7	RCHRES 102	1
PERLND 188	15.9	RCHRES 102	2
IMPLND 188	10.6	RCHRES 102	1
PERLND 190	10.2	RCHRES 102	2
PERLND 192	51.5	RCHRES 102	5
PERLND 301	1842.1	RCHRES 638	2
PERLND 302	244.6	RCHRES 638	5
PERLND 303	99.3	RCHRES 638	5
PERLND 304	455.0	RCHRES 638	5
PERLND 305	72.2	RCHRES 638	2
PERLND 306	241.6	RCHRES 638	2
IMPLND 306	4.9	RCHRES 638	1
PERLND 307	96.0	RCHRES 638	2
IMPLND 307	2.0	RCHRES 638	1
PERLND 308	11.3	RCHRES 638	2
IMPLND 308	7.5	RCHRES 638	1
PERLND 312	38.5	RCHRES 638	5
PERLND 501	180.0	RCHRES 318	2
PERLND 502	279.1	RCHRES 318	5
PERLND 503	213.4	RCHRES 318	5
PERLND 504	581.0	RCHRES 318	5
PERLND 505	15.6	RCHRES 318	2
PERLND 506	588.2	RCHRES 318	2
IMPLND 506	12.0	RCHRES 318	1
PERLND 507	1383.2	RCHRES 318	2
IMPLND 507	28.2	RCHRES 318	1
PERLND 508	636.7	RCHRES 318	2
IMPLND 508	424.5	RCHRES 318	1

PERLND 509	2.5	RCHRES 318	2
PERLND 512	413.0	RCHRES 318	5
PERLND 341	2535.3	RCHRES 214	2
PERLND 342	1511.8	RCHRES 214	5
PERLND 343	583.4	RCHRES 214	5
PERLND 344	1302.1	RCHRES 214	5
PERLND 345	259.3	RCHRES 214	2
PERLND 346	1171.0	RCHRES 214	2
IMPLND 346	23.9	RCHRES 214	1
PERLND 347	1282.6	RCHRES 214	2
IMPLND 347	26.2	RCHRES 214	1
PERLND 348	431.3	RCHRES 214	2
IMPLND 348	287.5	RCHRES 214	1
PERLND 349	15.8	RCHRES 214	2
PERLND 350	33.6	RCHRES 214	2
PERLND 352	19.9	RCHRES 214	5
PERLND 241	479.7	RCHRES 202	2
PERLND 242	511.6	RCHRES 202	5
PERLND 243	386.6	RCHRES 202	5
PERLND 244	1322.2	RCHRES 202	5
PERLND 245	92.5	RCHRES 202	2
PERLND 246	571.2	RCHRES 202	2
IMPLND 246	11.7	RCHRES 202	1
PERLND 247	813.4	RCHRES 202	2
IMPLND 247	16.6	RCHRES 202	1
PERLND 248	453.6	RCHRES 202	2
IMPLND 248	302.4	RCHRES 202	1
PERLND 249	21.4	RCHRES 202	2
PERLND 252	717.2	RCHRES 202	5
PERLND 381	561.7	RCHRES 306	2
PERLND 382	739.1	RCHRES 306	5
PERLND 383	215.2	RCHRES 306	5
PERLND 384	694.3	RCHRES 306	5
PERLND 385	46.3	RCHRES 306	2
PERLND 386	1025.3	RCHRES 306	2
IMPLND 386	20.9	RCHRES 306	1
PERLND 387	1821.2	RCHRES 306	2
IMPLND 387	37.2	RCHRES 306	1
PERLND 388	1210.8	RCHRES 306	2
IMPLND 388	807.2	RCHRES 306	1
PERLND 389	6.7	RCHRES 306	2
PERLND 392	27.1	RCHRES 306	5
PERLND 81	469.9	RCHRES 901	2
PERLND 82	544.3	RCHRES 901	5
PERLND 83	194.4	RCHRES 901	5
PERLND 84	295.2	RCHRES 901	5
PERLND 85	40.2	RCHRES 901	2
PERLND 86	347.5	RCHRES 901	2
IMPLND 86	7.1	RCHRES 901	1
PERLND 87	422.1	RCHRES 901	2
IMPLND 87	8.6	RCHRES 901	1
PERLND 88	161.4	RCHRES 901	2
IMPLND 88	107.6	RCHRES 901	1
PERLND 92	83.3	RCHRES 901	5
PERLND 81	3876.7	RCHRES 718	2
PERLND 82	1200.7	RCHRES 718	5

PERLND 83	692.3	RCHRES 718	5
PERLND 84	1749.1	RCHRES 718	5
PERLND 85	276.4	RCHRES 718	2
PERLND 86	324.5	RCHRES 718	2
IMPLND 86	6.6	RCHRES 718	1
PERLND 87	23.3	RCHRES 718	2
IMPLND 87	0.5	RCHRES 718	1
PERLND 88	1.3	RCHRES 718	2
IMPLND 88	0.9	RCHRES 718	1
PERLND 89	93.3	RCHRES 718	2
PERLND 90	3.7	RCHRES 718	2
PERLND 92	183.4	RCHRES 718	5
RCHRES 716		RCHRES 718	3
PERLND 61	981.1	RCHRES 703	2
PERLND 62	59.9	RCHRES 703	5
PERLND 63	247.1	RCHRES 703	5
PERLND 64	643.5	RCHRES 703	5
PERLND 65	22.1	RCHRES 703	2
PERLND 66	108.6	RCHRES 703	2
IMPLND 66	2.2	RCHRES 703	1
PERLND 67	39.0	RCHRES 703	2
IMPLND 67	0.8	RCHRES 703	1
PERLND 68	7.0	RCHRES 703	2
IMPLND 68	4.7	RCHRES 703	1
PERLND 69	0.8	RCHRES 703	2
PERLND 72	283.5	RCHRES 703	5
PERLND 421	3430.8	RCHRES 404	2
PERLND 422	130.6	RCHRES 404	5
PERLND 423	461.9	RCHRES 404	5
PERLND 424	1399.7	RCHRES 404	5
PERLND 425	93.0	RCHRES 404	2
PERLND 426	196.1	RCHRES 404	2
IMPLND 426	4.0	RCHRES 404	1
PERLND 427	13.5	RCHRES 404	2
IMPLND 427	0.3	RCHRES 404	1
PERLND 428	8.7	RCHRES 404	2
IMPLND 428	5.8	RCHRES 404	1
PERLND 429	9.6	RCHRES 404	2
PERLND 430	0	RCHRES 404	2
PERLND 432	398.3	RCHRES 404	5
PERLND 81	3446.3	RCHRES 723	2
PERLND 82	1136.5	RCHRES 723	5
PERLND 83	778.6	RCHRES 723	5
PERLND 84	2756.7	RCHRES 723	5
PERLND 85	184.8	RCHRES 723	2
PERLND 86	648.9	RCHRES 723	2
IMPLND 86	13.2	RCHRES 723	1
PERLND 87	39.1	RCHRES 723	2
IMPLND 87	0.8	RCHRES 723	1
PERLND 88	10.0	RCHRES 723	2
IMPLND 88	6.7	RCHRES 723	1
PERLND 89	13.3	RCHRES 723	2
PERLND 92	173.6	RCHRES 723	5
PERLND 441	2511.7	RCHRES 502	2
PERLND 442	316.6	RCHRES 502	5
PERLND 443	696.2	RCHRES 502	5

PERLND 444	3858.4	RCHRES 502	5
PERLND 445	283.3	RCHRES 502	2
PERLND 446	475.2	RCHRES 502	2
IMPLND 446	9.7	RCHRES 502	1
PERLND 447	22.4	RCHRES 502	2
IMPLND 447	0.5	RCHRES 502	1
PERLND 448	13.7	RCHRES 502	2
IMPLND 448	9.1	RCHRES 502	1
PERLND 449	22.5	RCHRES 502	2
PERLND 450	0	RCHRES 502	2
PERLND 452	1331.7	RCHRES 502	5
PERLND 461	1043.2	RCHRES 302	2
PERLND 462	2893.3	RCHRES 302	5
PERLND 463	666.1	RCHRES 302	5
PERLND 464	1984.4	RCHRES 302	5
PERLND 465	248.6	RCHRES 302	2
PERLND 466	3013.1	RCHRES 302	2
IMPLND 466	61.5	RCHRES 302	1
PERLND 467	4624.1	RCHRES 302	2
IMPLND 467	94.4	RCHRES 302	1
PERLND 468	2620.2	RCHRES 302	2
IMPLND 468	1746.8	RCHRES 302	1
PERLND 469	23.1	RCHRES 302	2
PERLND 470	49.6	RCHRES 302	2
PERLND 472	0.0	RCHRES 302	5
PERLND 481	711.7	RCHRES 312	2
PERLND 482	4191.3	RCHRES 312	5
PERLND 483	1041.4	RCHRES 312	5
PERLND 484	2848.5	RCHRES 312	5
PERLND 485	56.8	RCHRES 312	2
PERLND 486	1421.8	RCHRES 312	2
IMPLND 486	29.0	RCHRES 312	1
PERLND 487	1239.1	RCHRES 312	2
IMPLND 487	25.3	RCHRES 312	1
PERLND 488	680.8	RCHRES 312	2
IMPLND 488	453.8	RCHRES 312	1
PERLND 489	21.6	RCHRES 312	2
PERLND 490	51.6	RCHRES 312	2
PERLND 492	423.9	RCHRES 312	5
RCHRES 318		RCHRES 322	3
PERLND 501	1624.2	RCHRES 322	2
PERLND 502	921.7	RCHRES 322	5
PERLND 503	736.1	RCHRES 322	5
PERLND 504	4091.4	RCHRES 322	5
PERLND 505	39.6	RCHRES 322	2
PERLND 506	815.6	RCHRES 322	2
IMPLND 506	16.6	RCHRES 322	1
PERLND 507	251.0	RCHRES 322	2
IMPLND 507	5.1	RCHRES 322	1
PERLND 508	209.6	RCHRES 322	2
IMPLND 508	139.7	RCHRES 322	1
PERLND 509	32.3	RCHRES 322	2
PERLND 510	0	RCHRES 322	2
PERLND 512	1364.2	RCHRES 322	5
PERLND 521	317.0	RCHRES 514	2
PERLND 522	1204.4	RCHRES 514	5

PERLND 523	530.7	RCHRES 514	5
PERLND 524	1069.7	RCHRES 514	5
PERLND 525	2.5	RCHRES 514	2
PERLND 526	1010.8	RCHRES 514	2
IMPLND 526	20.6	RCHRES 514	1
PERLND 527	1193.7	RCHRES 514	2
IMPLND 527	24.4	RCHRES 514	1
PERLND 528	657.6	RCHRES 514	2
IMPLND 528	438.4	RCHRES 514	1
PERLND 529	12.7	RCHRES 514	2
PERLND 530	3.8	RCHRES 514	2
PERLND 532	1836.1	RCHRES 514	5
RCHRES 312		RCHRES 314	3
PERLND 481	2532.2	RCHRES 314	2
PERLND 482	4530.0	RCHRES 314	5
PERLND 483	1403.0	RCHRES 314	5
PERLND 484	5385.7	RCHRES 314	5
PERLND 485	62.3	RCHRES 314	2
PERLND 486	1455.2	RCHRES 314	2
IMPLND 486	29.7	RCHRES 314	1
PERLND 487	253.0	RCHRES 314	2
IMPLND 487	5.2	RCHRES 314	1
PERLND 488	301.9	RCHRES 314	2
IMPLND 488	201.2	RCHRES 314	1
PERLND 489	8.6	RCHRES 314	2
PERLND 490	31.4	RCHRES 314	2
PERLND 492	458.1	RCHRES 314	5
PERLND 321	13693.8	RCHRES 916	2
PERLND 322	775.7	RCHRES 916	5
PERLND 323	328.3	RCHRES 916	5
PERLND 324	340.7	RCHRES 916	5
PERLND 325	1615.8	RCHRES 916	2
PERLND 326	639.9	RCHRES 916	2
IMPLND 326	13.1	RCHRES 916	1
PERLND 327	37.6	RCHRES 916	2
IMPLND 327	0.8	RCHRES 916	1
PERLND 328	2.5	RCHRES 916	2
IMPLND 328	1.7	RCHRES 916	1
PERLND 329	12.7	RCHRES 916	2
PERLND 332	62.1	RCHRES 916	5
PERLND 81	2128.7	RCHRES 902	2
PERLND 82	860.4	RCHRES 902	5
PERLND 83	408.4	RCHRES 902	5
PERLND 84	1480.4	RCHRES 902	5
PERLND 85	266.4	RCHRES 902	2
PERLND 86	260.2	RCHRES 902	2
IMPLND 86	5.3	RCHRES 902	1
PERLND 87	79.8	RCHRES 902	2
IMPLND 87	1.6	RCHRES 902	1
PERLND 88	31.8	RCHRES 902	2
IMPLND 88	21.2	RCHRES 902	1
PERLND 89	8.2	RCHRES 902	2
PERLND 90	36.3	RCHRES 902	2
PERLND 92	131.6	RCHRES 902	5
RCHRES 901		RCHRES 902	3
PERLND 141	4510.7	RCHRES 804	2

PERLND 142	196.7	RCHRES 804	5
PERLND 143	88.5	RCHRES 804	5
PERLND 144	115.5	RCHRES 804	5
PERLND 145	343.3	RCHRES 804	2
PERLND 146	110.0	RCHRES 804	2
IMPLND 146	2.2	RCHRES 804	1
PERLND 149	9.3	RCHRES 804	2
PERLND 152	45.6	RCHRES 804	5
PERLND 81	4800.3	RCHRES 904	2
PERLND 82	1345.0	RCHRES 904	5
PERLND 83	873.4	RCHRES 904	5
PERLND 84	2364.2	RCHRES 904	5
PERLND 85	394.8	RCHRES 904	2
PERLND 86	444.2	RCHRES 904	2
IMPLND 86	9.1	RCHRES 904	1
PERLND 87	5.9	RCHRES 904	2
IMPLND 87	0.1	RCHRES 904	1
PERLND 88	2.0	RCHRES 904	2
IMPLND 88	1.3	RCHRES 904	1
PERLND 89	15.6	RCHRES 904	2
PERLND 90	15.4	RCHRES 904	2
PERLND 92	205.4	RCHRES 904	5
RCHRES 902		RCHRES 904	3
PERLND 441	2534.6	RCHRES 504	2
PERLND 442	342.7	RCHRES 504	5
PERLND 443	551.2	RCHRES 504	5
PERLND 444	2342.6	RCHRES 504	5
PERLND 445	301.5	RCHRES 504	2
PERLND 446	873.9	RCHRES 504	2
IMPLND 446	17.8	RCHRES 504	1
PERLND 447	383.3	RCHRES 504	2
IMPLND 447	7.8	RCHRES 504	1
PERLND 448	144.7	RCHRES 504	2
IMPLND 448	96.5	RCHRES 504	1
PERLND 449	91.9	RCHRES 504	2
PERLND 452	1441.7	RCHRES 504	5
RCHRES 502		RCHRES 504	3
RCHRES 306		RCHRES 308	3
PERLND 381	2253.8	RCHRES 308	2
PERLND 382	3475.7	RCHRES 308	5
PERLND 383	1009.3	RCHRES 308	5
PERLND 384	3998.5	RCHRES 308	5
PERLND 385	283.5	RCHRES 308	2
PERLND 386	1893.5	RCHRES 308	2
IMPLND 386	38.6	RCHRES 308	1
PERLND 387	1955.3	RCHRES 308	2
IMPLND 387	39.9	RCHRES 308	1
PERLND 388	632.0	RCHRES 308	2
IMPLND 388	421.3	RCHRES 308	1
PERLND 389	20.3	RCHRES 308	2
PERLND 390	1.6	RCHRES 308	2
PERLND 392	127.3	RCHRES 308	5
PERLND 141	3247.9	RCHRES 738	2
PERLND 142	2075.5	RCHRES 738	5
PERLND 143	955.1	RCHRES 738	5
PERLND 144	894.1	RCHRES 738	5

PERLND 145	1814.7	RCHRES 738	2
PERLND 146	276.0	RCHRES 738	2
IMPLND 146	5.6	RCHRES 738	1
PERLND 147	16.8	RCHRES 738	2
IMPLND 147	0.3	RCHRES 738	1
PERLND 148	45.3	RCHRES 738	2
IMPLND 148	30.2	RCHRES 738	1
PERLND 149	2.0	RCHRES 738	2
PERLND 152	481.8	RCHRES 738	5
PERLND 621	835.3	RCHRES 806	2
PERLND 622	523.5	RCHRES 806	5
PERLND 623	274.1	RCHRES 806	5
PERLND 624	537.4	RCHRES 806	5
PERLND 625	52.4	RCHRES 806	2
PERLND 626	644.7	RCHRES 806	2
IMPLND 626	13.2	RCHRES 806	1
PERLND 627	895.4	RCHRES 806	2
IMPLND 627	18.3	RCHRES 806	1
PERLND 628	279.1	RCHRES 806	2
IMPLND 628	186.0	RCHRES 806	1
PERLND 629	10.0	RCHRES 806	2
PERLND 630	0.1	RCHRES 806	2
PERLND 632	11.0	RCHRES 806	5
PERLND 141	3649.6	RCHRES 732	2
PERLND 142	188.9	RCHRES 732	5
PERLND 143	89.4	RCHRES 732	5
PERLND 144	132.2	RCHRES 732	5
PERLND 145	1029.5	RCHRES 732	2
PERLND 146	293.7	RCHRES 732	2
IMPLND 146	6.0	RCHRES 732	1
PERLND 147	5.9	RCHRES 732	2
IMPLND 147	0.1	RCHRES 732	1
PERLND 148	0.9	RCHRES 732	2
IMPLND 148	0.6	RCHRES 732	1
PERLND 149	2.9	RCHRES 732	2
PERLND 152	43.8	RCHRES 732	5
RCHRES 728		RCHRES 732	3
PERLND 521	262.2	RCHRES 515	2
PERLND 522	138.7	RCHRES 515	5
PERLND 523	107.0	RCHRES 515	5
PERLND 524	292.0	RCHRES 515	5
PERLND 525	46.3	RCHRES 515	2
PERLND 526	99.7	RCHRES 515	2
IMPLND 526	2.0	RCHRES 515	1
PERLND 527	25.5	RCHRES 515	2
IMPLND 527	0.5	RCHRES 515	1
PERLND 528	1.8	RCHRES 515	2
IMPLND 528	1.2	RCHRES 515	1
PERLND 529	4.7	RCHRES 515	2
PERLND 532	211.4	RCHRES 515	5
PERLND 141	12108.3	RCHRES 742	2
PERLND 142	415.8	RCHRES 742	5
PERLND 143	240.9	RCHRES 742	5
PERLND 144	471.9	RCHRES 742	5
PERLND 145	3026.8	RCHRES 742	2
PERLND 146	513.2	RCHRES 742	2

IMPLND 146	10.5	RCHRES 742	1
PERLND 147	3.4	RCHRES 742	2
IMPLND 147	0.1	RCHRES 742	1
PERLND 148	1.5	RCHRES 742	2
IMPLND 148	1.0	RCHRES 742	1
PERLND 149	1.8	RCHRES 742	2
PERLND 152	96.5	RCHRES 742	5
RCHRES 738		RCHRES 742	3
PERLND 561	7695.9	RCHRES 802	2
PERLND 562	140.0	RCHRES 802	5
PERLND 563	102.4	RCHRES 802	5
PERLND 564	240.9	RCHRES 802	5
PERLND 565	1537.7	RCHRES 802	2
PERLND 566	409.0	RCHRES 802	2
IMPLND 566	8.3	RCHRES 802	1
PERLND 567	11.5	RCHRES 802	2
IMPLND 567	0.2	RCHRES 802	1
PERLND 568	4.1	RCHRES 802	2
IMPLND 568	2.8	RCHRES 802	1
PERLND 569	0.1	RCHRES 802	2
PERLND 572	46.9	RCHRES 802	5
PERLND 601	855.4	RCHRES 505	2
PERLND 602	963.0	RCHRES 505	5
PERLND 603	430.1	RCHRES 505	5
PERLND 604	1734.7	RCHRES 505	5
PERLND 605	22.9	RCHRES 505	2
PERLND 606	265.7	RCHRES 505	2
IMPLND 606	5.4	RCHRES 505	1
PERLND 607	103.5	RCHRES 505	2
IMPLND 607	2.1	RCHRES 505	1
PERLND 608	65.3	RCHRES 505	2
IMPLND 608	43.6	RCHRES 505	1
PERLND 609	1.6	RCHRES 505	2
PERLND 610	62.2	RCHRES 505	2
PERLND 612	299.5	RCHRES 505	5
RCHRES 302		RCHRES 304	3
PERLND 461	1168.9	RCHRES 304	2
PERLND 462	1698.8	RCHRES 304	5
PERLND 463	491.7	RCHRES 304	5
PERLND 464	2222.2	RCHRES 304	5
PERLND 465	39.6	RCHRES 304	2
PERLND 466	1315.6	RCHRES 304	2
IMPLND 466	26.8	RCHRES 304	1
PERLND 467	633.7	RCHRES 304	2
IMPLND 467	12.9	RCHRES 304	1
PERLND 468	169.4	RCHRES 304	2
IMPLND 468	112.9	RCHRES 304	1
PERLND 469	22.9	RCHRES 304	2
PERLND 472	0.0	RCHRES 304	5
RCHRES 304		RCHRES 316	3
RCHRES 308		RCHRES 316	3
RCHRES 314		RCHRES 316	3
PERLND 461	1088.5	RCHRES 316	2
PERLND 462	318.7	RCHRES 316	5
PERLND 463	121.5	RCHRES 316	5
PERLND 464	1014.6	RCHRES 316	5

PERLND 465	39.8	RCHRES 316	2
PERLND 466	141.1	RCHRES 316	2
IMPLND 466	2.9	RCHRES 316	1
PERLND 467	13.0	RCHRES 316	2
IMPLND 467	0.3	RCHRES 316	1
PERLND 468	4.0	RCHRES 316	2
IMPLND 468	2.7	RCHRES 316	1
PERLND 469	19.9	RCHRES 316	2
PERLND 472	0.0	RCHRES 316	5
RCHRES 316		RCHRES 324	3
PERLND 581	2369.1	RCHRES 324	2
PERLND 582	1364.3	RCHRES 324	5
PERLND 583	809.9	RCHRES 324	5
PERLND 584	3928.7	RCHRES 324	5
PERLND 585	154.8	RCHRES 324	2
PERLND 586	625.0	RCHRES 324	2
IMPLND 586	12.8	RCHRES 324	1
PERLND 587	17.1	RCHRES 324	2
IMPLND 587	0.3	RCHRES 324	1
PERLND 588	27.3	RCHRES 324	2
IMPLND 588	18.2	RCHRES 324	1
PERLND 589	88.4	RCHRES 324	2
PERLND 592	1158.0	RCHRES 324	5
PERLND 321	1586.0	RCHRES 938	2
PERLND 325	95.9	RCHRES 938	2
PERLND 326	86.4	RCHRES 938	2
IMPLND 326	1.8	RCHRES 938	1
PERLND 621	4367.0	RCHRES 805	2
PERLND 622	284.8	RCHRES 805	5
PERLND 623	132.7	RCHRES 805	5
PERLND 624	121.6	RCHRES 805	5
PERLND 625	236.2	RCHRES 805	2
PERLND 626	121.1	RCHRES 805	2
IMPLND 626	2.5	RCHRES 805	1
PERLND 627	1.1	RCHRES 805	2
IMPLND 627	0.0	RCHRES 805	1
PERLND 629	4.0	RCHRES 805	2
PERLND 632	5.9	RCHRES 805	5
RCHRES 804		RCHRES 805	3
PERLND 101	1801.0	RCHRES 414	2
PERLND 102	2590.9	RCHRES 414	5
PERLND 103	1040.5	RCHRES 414	5
PERLND 104	1320.8	RCHRES 414	5
PERLND 105	42.3	RCHRES 414	2
PERLND 106	275.0	RCHRES 414	2
IMPLND 106	5.6	RCHRES 414	1
PERLND 107	26.0	RCHRES 414	2
IMPLND 107	0.5	RCHRES 414	1
PERLND 108	41.7	RCHRES 414	2
IMPLND 108	27.8	RCHRES 414	1
PERLND 109	9.0	RCHRES 414	2
PERLND 110	22.5	RCHRES 414	2
PERLND 112	542.6	RCHRES 414	5
RCHRES 412		RCHRES 414	3
PERLND 221	659.8	RCHRES 606	2
PERLND 222	196.1	RCHRES 606	5

PERLND 223	398.8	RCHRES 606	5
PERLND 224	707.3	RCHRES 606	5
PERLND 225	27.8	RCHRES 606	2
PERLND 226	108.8	RCHRES 606	2
IMPLND 226	2.2	RCHRES 606	1
PERLND 227	11.1	RCHRES 606	2
IMPLND 227	0.2	RCHRES 606	1
PERLND 228	7.1	RCHRES 606	2
IMPLND 228	4.7	RCHRES 606	1
PERLND 229	1.6	RCHRES 606	2
PERLND 232	752.8	RCHRES 606	5
RCHRES 602		RCHRES 606	3
RCHRES 604		RCHRES 606	3
RCHRES 322		RCHRES 326	3
RCHRES 324		RCHRES 326	3
PERLND 581	7506.1	RCHRES 326	2
PERLND 582	1982.6	RCHRES 326	5
PERLND 583	1222.3	RCHRES 326	5
PERLND 584	8755.2	RCHRES 326	5
PERLND 585	437.8	RCHRES 326	2
PERLND 586	1104.4	RCHRES 326	2
IMPLND 586	22.5	RCHRES 326	1
PERLND 587	162.6	RCHRES 326	2
IMPLND 587	3.3	RCHRES 326	1
PERLND 588	65.7	RCHRES 326	2
IMPLND 588	43.8	RCHRES 326	1
PERLND 589	153.1	RCHRES 326	2
PERLND 590	6.5	RCHRES 326	2
PERLND 592	1682.6	RCHRES 326	5
RCHRES 202		RCHRES 206	3
RCHRES 204		RCHRES 206	3
PERLND 241	2381.7	RCHRES 206	2
PERLND 242	249.8	RCHRES 206	5
PERLND 243	241.9	RCHRES 206	5
PERLND 244	1716.9	RCHRES 206	5
PERLND 245	240.8	RCHRES 206	2
PERLND 246	1059.9	RCHRES 206	2
IMPLND 246	21.6	RCHRES 206	1
PERLND 247	1286.7	RCHRES 206	2
IMPLND 247	26.3	RCHRES 206	1
PERLND 248	590.2	RCHRES 206	2
IMPLND 248	393.4	RCHRES 206	1
PERLND 249	4.0	RCHRES 206	2
PERLND 250	21.6	RCHRES 206	2
PERLND 252	350.3	RCHRES 206	5
RCHRES 206		RCHRES 212	3
RCHRES 208		RCHRES 212	3
PERLND 261	1842.0	RCHRES 212	2
PERLND 262	196.4	RCHRES 212	5
PERLND 263	301.0	RCHRES 212	5
PERLND 264	1387.2	RCHRES 212	5
PERLND 265	273.9	RCHRES 212	2
PERLND 266	285.9	RCHRES 212	2
IMPLND 266	5.8	RCHRES 212	1
PERLND 267	23.4	RCHRES 212	2
IMPLND 267	0.5	RCHRES 212	1

PERLND 268	7.9	RCHRES 212	2
IMPLND 268	5.3	RCHRES 212	1
PERLND 269	0.1	RCHRES 212	2
PERLND 272	420.8	RCHRES 212	5
PERLND 81	3300.2	RCHRES 722	2
PERLND 82	746.1	RCHRES 722	5
PERLND 83	452.2	RCHRES 722	5
PERLND 84	934.4	RCHRES 722	5
PERLND 85	181.2	RCHRES 722	2
PERLND 86	249.1	RCHRES 722	2
IMPLND 86	5.1	RCHRES 722	1
PERLND 87	8.5	RCHRES 722	2
IMPLND 87	0.2	RCHRES 722	1
PERLND 88	1.6	RCHRES 722	2
IMPLND 88	1.1	RCHRES 722	1
PERLND 89	7.7	RCHRES 722	2
PERLND 90	57.7	RCHRES 722	2
PERLND 92	114.1	RCHRES 722	5
RCHRES 718		RCHRES 722	3
PERLND 621	602.3	RCHRES 807	2
PERLND 622	1018.1	RCHRES 807	5
PERLND 623	436.3	RCHRES 807	5
PERLND 624	800.5	RCHRES 807	5
PERLND 625	103.4	RCHRES 807	2
PERLND 626	329.9	RCHRES 807	2
IMPLND 626	6.7	RCHRES 807	1
PERLND 627	306.9	RCHRES 807	2
IMPLND 627	6.3	RCHRES 807	1
PERLND 628	161.3	RCHRES 807	2
IMPLND 628	107.6	RCHRES 807	1
PERLND 629	10.5	RCHRES 807	2
PERLND 632	21.3	RCHRES 807	5
PERLND 81	6795.8	RCHRES 906	2
PERLND 82	2963.7	RCHRES 906	5
PERLND 83	1745.4	RCHRES 906	5
PERLND 84	3999.1	RCHRES 906	5
PERLND 85	558.5	RCHRES 906	2
PERLND 86	792.0	RCHRES 906	2
IMPLND 86	16.2	RCHRES 906	1
PERLND 87	14.2	RCHRES 906	2
IMPLND 87	0.3	RCHRES 906	1
PERLND 88	10.1	RCHRES 906	2
IMPLND 88	6.8	RCHRES 906	1
PERLND 89	18.2	RCHRES 906	2
PERLND 92	452.9	RCHRES 906	5
RCHRES 904		RCHRES 906	3
PERLND 61	2648.4	RCHRES 704	2
PERLND 62	136.8	RCHRES 704	5
PERLND 63	531.3	RCHRES 704	5
PERLND 64	1167.0	RCHRES 704	5
PERLND 65	125.3	RCHRES 704	2
PERLND 66	182.3	RCHRES 704	2
IMPLND 66	3.7	RCHRES 704	1
PERLND 67	7.2	RCHRES 704	2
IMPLND 67	0.1	RCHRES 704	1
PERLND 68	11.4	RCHRES 704	2

IMPLND 68	7.6	RCHRES 704	1
PERLND 69	15.6	RCHRES 704	2
PERLND 70	0	RCHRES 704	2
PERLND 72	647.2	RCHRES 704	5
RCHRES 702		RCHRES 704	3
RCHRES 703		RCHRES 704	3
PERLND 61	5135.1	RCHRES 705	2
PERLND 62	299.4	RCHRES 705	5
PERLND 63	1040.3	RCHRES 705	5
PERLND 64	3055.8	RCHRES 705	5
PERLND 65	202.0	RCHRES 705	2
PERLND 66	351.8	RCHRES 705	2
IMPLND 66	7.2	RCHRES 705	1
PERLND 67	33.6	RCHRES 705	2
IMPLND 67	0.7	RCHRES 705	1
PERLND 68	21.9	RCHRES 705	2
IMPLND 68	14.6	RCHRES 705	1
PERLND 69	6.7	RCHRES 705	2
PERLND 72	1416.7	RCHRES 705	5
PERLND 321	4115.0	RCHRES 908	2
PERLND 322	2062.2	RCHRES 908	5
PERLND 323	1100.6	RCHRES 908	5
PERLND 324	2205.4	RCHRES 908	5
PERLND 325	166.9	RCHRES 908	2
PERLND 326	258.9	RCHRES 908	2
IMPLND 326	5.3	RCHRES 908	1
PERLND 329	1.6	RCHRES 908	2
PERLND 332	165.1	RCHRES 908	5
RCHRES 906		RCHRES 908	3
PERLND 121	256.4	RCHRES 612	2
PERLND 122	1272.6	RCHRES 612	5
PERLND 123	306.7	RCHRES 612	5
PERLND 124	360.3	RCHRES 612	5
PERLND 125	4.3	RCHRES 612	2
PERLND 126	147.3	RCHRES 612	2
IMPLND 126	3.0	RCHRES 612	1
PERLND 127	1.9	RCHRES 612	2
IMPLND 127	0.0	RCHRES 612	1
PERLND 128	8.4	RCHRES 612	2
IMPLND 128	5.6	RCHRES 612	1
PERLND 129	4.0	RCHRES 612	2
PERLND 132	385.3	RCHRES 612	5
RCHRES 609		RCHRES 612	3
RCHRES 514		RCHRES 516	3
RCHRES 515		RCHRES 516	3
PERLND 521	1174.4	RCHRES 516	2
PERLND 522	197.9	RCHRES 516	5
PERLND 523	127.7	RCHRES 516	5
PERLND 524	243.6	RCHRES 516	5
PERLND 525	189.9	RCHRES 516	2
PERLND 526	197.3	RCHRES 516	2
IMPLND 526	4.0	RCHRES 516	1
PERLND 527	135.1	RCHRES 516	2
IMPLND 527	2.8	RCHRES 516	1
PERLND 528	80.9	RCHRES 516	2
IMPLND 528	53.9	RCHRES 516	1

PERLND 529	6.9	RCHRES 516	2
PERLND 532	301.6	RCHRES 516	5
PERLND 61	1089.7	RCHRES 706	2
PERLND 62	42.5	RCHRES 706	5
PERLND 63	166.4	RCHRES 706	5
PERLND 64	636.6	RCHRES 706	5
PERLND 65	63.1	RCHRES 706	2
PERLND 66	80.5	RCHRES 706	2
IMPLND 66	1.6	RCHRES 706	1
PERLND 67	6.3	RCHRES 706	2
IMPLND 67	0.1	RCHRES 706	1
PERLND 68	3.9	RCHRES 706	2
IMPLND 68	2.6	RCHRES 706	1
PERLND 69	16.9	RCHRES 706	2
PERLND 72	201.6	RCHRES 706	5
RCHRES 704		RCHRES 706	3
RCHRES 705		RCHRES 706	3
PERLND 81	2877.1	RCHRES 725	2
PERLND 82	2527.2	RCHRES 725	5
PERLND 83	1201.0	RCHRES 725	5
PERLND 84	1637.9	RCHRES 725	5
PERLND 85	163.1	RCHRES 725	2
PERLND 86	663.4	RCHRES 725	2
IMPLND 86	13.5	RCHRES 725	1
PERLND 87	117.3	RCHRES 725	2
IMPLND 87	2.4	RCHRES 725	1
PERLND 88	28.4	RCHRES 725	2
IMPLND 88	18.9	RCHRES 725	1
PERLND 89	4.3	RCHRES 725	2
PERLND 90	4.3	RCHRES 725	2
PERLND 92	386.3	RCHRES 725	5
RCHRES 212		RCHRES 216	3
RCHRES 214		RCHRES 216	3
PERLND 261	2427.1	RCHRES 216	2
PERLND 262	107.6	RCHRES 216	5
PERLND 263	125.8	RCHRES 216	5
PERLND 264	824.9	RCHRES 216	5
PERLND 265	176.2	RCHRES 216	2
PERLND 266	254.7	RCHRES 216	2
IMPLND 266	5.2	RCHRES 216	1
PERLND 267	6.2	RCHRES 216	2
IMPLND 267	0.1	RCHRES 216	1
PERLND 268	0.4	RCHRES 216	2
IMPLND 268	0.2	RCHRES 216	1
PERLND 269	25.2	RCHRES 216	2
PERLND 272	230.5	RCHRES 216	5
PERLND 281	1826.9	RCHRES 418	2
PERLND 282	189.0	RCHRES 418	5
PERLND 283	115.5	RCHRES 418	5
PERLND 284	120.6	RCHRES 418	5
PERLND 285	20.7	RCHRES 418	2
PERLND 286	112.9	RCHRES 418	2
IMPLND 286	2.3	RCHRES 418	1
PERLND 287	0.2	RCHRES 418	2
IMPLND 287	0.0	RCHRES 418	1
PERLND 289	7.6	RCHRES 418	2

PERLND 290	28.8	RCHRES 418	2
PERLND 292	4.6	RCHRES 418	5
PERLND 281	443.7	RCHRES 420	2
PERLND 282	55.0	RCHRES 420	5
PERLND 283	13.6	RCHRES 420	5
PERLND 284	70.6	RCHRES 420	5
PERLND 285	4.2	RCHRES 420	2
PERLND 286	39.7	RCHRES 420	2
IMPLND 286	0.8	RCHRES 420	1
PERLND 287	2.8	RCHRES 420	2
IMPLND 287	0.1	RCHRES 420	1
PERLND 289	1.3	RCHRES 420	2
PERLND 292	1.3	RCHRES 420	5
RCHRES 418		RCHRES 420	3
PERLND 141	3531.6	RCHRES 614	2
PERLND 142	3038.3	RCHRES 614	5
PERLND 143	1056.1	RCHRES 614	5
PERLND 144	1774.1	RCHRES 614	5
PERLND 145	192.2	RCHRES 614	2
PERLND 146	844.7	RCHRES 614	2
IMPLND 146	17.2	RCHRES 614	1
PERLND 147	120.8	RCHRES 614	2
IMPLND 147	2.5	RCHRES 614	1
PERLND 148	51.7	RCHRES 614	2
IMPLND 148	34.5	RCHRES 614	1
PERLND 149	91.8	RCHRES 614	2
PERLND 150	5.1	RCHRES 614	2
PERLND 152	705.3	RCHRES 614	5
RCHRES 612		RCHRES 614	3
RCHRES 402		RCHRES 406	3
RCHRES 404		RCHRES 406	3
PERLND 421	1985.4	RCHRES 406	2
PERLND 422	512.3	RCHRES 406	5
PERLND 423	731.6	RCHRES 406	5
PERLND 424	1220.0	RCHRES 406	5
PERLND 425	121.2	RCHRES 406	2
PERLND 426	603.6	RCHRES 406	2
IMPLND 426	12.3	RCHRES 406	1
PERLND 427	368.9	RCHRES 406	2
IMPLND 427	7.5	RCHRES 406	1
PERLND 428	84.3	RCHRES 406	2
IMPLND 428	56.2	RCHRES 406	1
PERLND 429	31.1	RCHRES 406	2
PERLND 432	1563.0	RCHRES 406	5
PERLND 161	335.0	RCHRES 408	2
PERLND 162	1853.5	RCHRES 408	5
PERLND 163	691.6	RCHRES 408	5
PERLND 164	612.9	RCHRES 408	5
PERLND 165	11.9	RCHRES 408	2
PERLND 166	191.7	RCHRES 408	2
IMPLND 166	3.9	RCHRES 408	1
PERLND 167	67.0	RCHRES 408	2
IMPLND 167	1.4	RCHRES 408	1
PERLND 168	21.4	RCHRES 408	2
IMPLND 168	14.2	RCHRES 408	1
PERLND 169	19.5	RCHRES 408	2

PERLND 172	594.1	RCHRES 408	5
RCHRES 406		RCHRES 408	3
PERLND 161	2399.6	RCHRES 416	2
PERLND 162	2108.4	RCHRES 416	5
PERLND 163	1144.1	RCHRES 416	5
PERLND 164	2004.3	RCHRES 416	5
PERLND 165	134.8	RCHRES 416	2
PERLND 166	327.7	RCHRES 416	2
IMPLND 166	6.7	RCHRES 416	1
PERLND 167	23.1	RCHRES 416	2
IMPLND 167	0.5	RCHRES 416	1
PERLND 168	27.5	RCHRES 416	2
IMPLND 168	18.3	RCHRES 416	1
PERLND 169	7.7	RCHRES 416	2
PERLND 170	60.3	RCHRES 416	2
PERLND 172	675.7	RCHRES 416	5
RCHRES 408		RCHRES 416	3
RCHRES 414		RCHRES 416	3
RCHRES 504		RCHRES 508	3
PERLND 601	448.5	RCHRES 508	2
PERLND 602	267.7	RCHRES 508	5
PERLND 603	87.6	RCHRES 508	5
PERLND 604	239.7	RCHRES 508	5
PERLND 605	59.7	RCHRES 508	2
PERLND 606	76.1	RCHRES 508	2
IMPLND 606	1.6	RCHRES 508	1
PERLND 607	11.1	RCHRES 508	2
IMPLND 607	0.2	RCHRES 508	1
PERLND 609	1.3	RCHRES 508	2
PERLND 612	83.2	RCHRES 508	5
PERLND 21	4147.3	RCHRES 110	2
PERLND 22	759.3	RCHRES 110	5
PERLND 23	590.2	RCHRES 110	5
PERLND 24	1616.1	RCHRES 110	5
PERLND 25	145.2	RCHRES 110	2
PERLND 26	323.0	RCHRES 110	2
IMPLND 26	6.6	RCHRES 110	1
PERLND 27	12.7	RCHRES 110	2
IMPLND 27	0.3	RCHRES 110	1
PERLND 28	3.1	RCHRES 110	2
IMPLND 28	2.0	RCHRES 110	1
PERLND 29	47.2	RCHRES 110	2
PERLND 32	304.5	RCHRES 110	5
RCHRES 100		RCHRES 110	3
RCHRES 505		RCHRES 506	3
PERLND 601	759.6	RCHRES 506	2
PERLND 602	1092.6	RCHRES 506	5
PERLND 603	307.6	RCHRES 506	5
PERLND 604	771.7	RCHRES 506	5
PERLND 605	174.7	RCHRES 506	2
PERLND 606	213.2	RCHRES 506	2
IMPLND 606	4.4	RCHRES 506	1
PERLND 607	53.7	RCHRES 506	2
IMPLND 607	1.1	RCHRES 506	1
PERLND 608	33.7	RCHRES 506	2
IMPLND 608	22.4	RCHRES 506	1

PERLND 609	2.9	RCHRES 506	2
PERLND 612	339.8	RCHRES 506	5
RCHRES 506		RCHRES 507	3
PERLND 601	641.5	RCHRES 507	2
PERLND 602	301.1	RCHRES 507	5
PERLND 603	83.6	RCHRES 507	5
PERLND 604	227.4	RCHRES 507	5
PERLND 605	78.0	RCHRES 507	2
PERLND 606	57.9	RCHRES 507	2
IMPLND 606	1.2	RCHRES 507	1
PERLND 609	10.0	RCHRES 507	2
PERLND 612	93.7	RCHRES 507	5
RCHRES 507		RCHRES 512	3
RCHRES 508		RCHRES 512	3
PERLND 601	2181.3	RCHRES 512	2
PERLND 602	1275.6	RCHRES 512	5
PERLND 603	370.9	RCHRES 512	5
PERLND 604	838.8	RCHRES 512	5
PERLND 605	335.5	RCHRES 512	2
PERLND 606	230.6	RCHRES 512	2
IMPLND 606	4.7	RCHRES 512	1
PERLND 607	23.2	RCHRES 512	2
IMPLND 607	0.5	RCHRES 512	1
PERLND 608	9.4	RCHRES 512	2
IMPLND 608	6.3	RCHRES 512	1
PERLND 609	4.5	RCHRES 512	2
PERLND 610	14.2	RCHRES 512	2
PERLND 612	396.7	RCHRES 512	5
PERLND 141	381.1	RCHRES 639	2
PERLND 142	71.5	RCHRES 639	5
PERLND 143	25.0	RCHRES 639	5
PERLND 144	145.9	RCHRES 639	5
PERLND 145	12.2	RCHRES 639	2
PERLND 146	71.4	RCHRES 639	2
IMPLND 146	1.5	RCHRES 639	1
PERLND 147	4.6	RCHRES 639	2
IMPLND 147	0.1	RCHRES 639	1
PERLND 148	23.5	RCHRES 639	2
IMPLND 148	15.7	RCHRES 639	1
PERLND 149	1.6	RCHRES 639	2
PERLND 152	16.6	RCHRES 639	5
RCHRES 638		RCHRES 639	3
RCHRES 108		RCHRES 120	3
RCHRES 110		RCHRES 120	3
PERLND 181	3083.8	RCHRES 120	2
PERLND 182	3662.4	RCHRES 120	5
PERLND 183	1042.7	RCHRES 120	5
PERLND 184	1453.7	RCHRES 120	5
PERLND 185	92.3	RCHRES 120	2
PERLND 186	898.5	RCHRES 120	2
IMPLND 186	18.3	RCHRES 120	1
PERLND 187	176.0	RCHRES 120	2
IMPLND 187	3.6	RCHRES 120	1
PERLND 188	45.4	RCHRES 120	2
IMPLND 188	30.3	RCHRES 120	1
PERLND 189	93.4	RCHRES 120	2

PERLND 192	283.9	RCHRES 120	5
PERLND 401	3327.1	RCHRES 708	2
PERLND 402	585.4	RCHRES 708	5
PERLND 403	692.7	RCHRES 708	5
PERLND 404	1679.0	RCHRES 708	5
PERLND 405	147.7	RCHRES 708	2
PERLND 406	272.8	RCHRES 708	2
IMPLND 406	5.6	RCHRES 708	1
PERLND 407	18.8	RCHRES 708	2
IMPLND 407	0.4	RCHRES 708	1
PERLND 408	27.1	RCHRES 708	2
IMPLND 408	18.1	RCHRES 708	1
PERLND 409	12.6	RCHRES 708	2
PERLND 412	433.8	RCHRES 708	5
RCHRES 706		RCHRES 708	3
RCHRES 512		RCHRES 518	3
RCHRES 516		RCHRES 518	3
PERLND 561	6537.0	RCHRES 518	2
PERLND 562	3213.8	RCHRES 518	5
PERLND 563	782.8	RCHRES 518	5
PERLND 564	782.2	RCHRES 518	5
PERLND 565	1148.0	RCHRES 518	2
PERLND 566	619.9	RCHRES 518	2
IMPLND 566	12.7	RCHRES 518	1
PERLND 567	48.6	RCHRES 518	2
IMPLND 567	1.0	RCHRES 518	1
PERLND 568	36.6	RCHRES 518	2
IMPLND 568	24.4	RCHRES 518	1
PERLND 569	73.2	RCHRES 518	2
PERLND 570	69.2	RCHRES 518	2
PERLND 572	1079.9	RCHRES 518	5
RCHRES 518		RCHRES 522	3
PERLND 561	4661.9	RCHRES 522	2
PERLND 562	2187.5	RCHRES 522	5
PERLND 563	814.4	RCHRES 522	5
PERLND 564	689.4	RCHRES 522	5
PERLND 565	1090.8	RCHRES 522	2
PERLND 566	365.1	RCHRES 522	2
IMPLND 566	7.5	RCHRES 522	1
PERLND 567	18.9	RCHRES 522	2
IMPLND 567	0.4	RCHRES 522	1
PERLND 568	20.2	RCHRES 522	2
IMPLND 568	13.5	RCHRES 522	1
PERLND 569	19.9	RCHRES 522	2
PERLND 572	735.0	RCHRES 522	5
RCHRES 522		RCHRES 523	3
PERLND 561	245.3	RCHRES 523	2
PERLND 562	65.4	RCHRES 523	5
PERLND 563	33.8	RCHRES 523	5
PERLND 564	20.8	RCHRES 523	5
PERLND 565	19.9	RCHRES 523	2
PERLND 566	43.7	RCHRES 523	2
IMPLND 566	0.9	RCHRES 523	1
PERLND 567	4.1	RCHRES 523	2
IMPLND 567	0.1	RCHRES 523	1
PERLND 568	0.3	RCHRES 523	2

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IMPLND 568          0.2     RCHRES 523      1
PERLND 569          1.1     RCHRES 523      2
PERLND 572          22.0    RCHRES 523      5
PERLND 401          5263.6  RCHRES 712      2
PERLND 402          929.6   RCHRES 712      5
PERLND 403          876.0   RCHRES 712      5
PERLND 404          2375.6  RCHRES 712      5
PERLND 405          273.0   RCHRES 712      2
PERLND 406          427.9   RCHRES 712      2
IMPLND 406          8.7     RCHRES 712      1
PERLND 407          10.2    RCHRES 712      2
IMPLND 407          0.2     RCHRES 712      1
PERLND 408          15.5    RCHRES 712      2
IMPLND 408          10.3    RCHRES 712      1
PERLND 409          24.5    RCHRES 712      2
PERLND 410          5.1     RCHRES 712      2
PERLND 412          688.7   RCHRES 712      5
RCHRES 708                  RCHRES 712      3
***4 lines below are just to make sure HSPEXP+ outputs rate from these PERLNDs
PERLND 642          0       RCHRES 924      5
PERLND 643          0       RCHRES 924      5
PERLND 644          0       RCHRES 924      5
PERLND 652          0       RCHRES 924      5
***Subwatershed 924
PERLND 321          3336.9  RCHRES 924      2
PERLND 322          347.0   RCHRES 924      5
PERLND 323          236.6   RCHRES 924      5
PERLND 324          875.7   RCHRES 924      5
PERLND 325          272.2   RCHRES 924      2
PERLND 326          269.7   RCHRES 924      2
IMPLND 326          5.5     RCHRES 924      1
PERLND 327          18.1    RCHRES 924      2
IMPLND 327          0.4     RCHRES 924      1
PERLND 328          6.0     RCHRES 924      2
IMPLND 328          4.0     RCHRES 924      1
PERLND 329          19.8    RCHRES 924      2
PERLND 332          27.7    RCHRES 924      5
PERLND 321          6811.0  RCHRES 912      2
PERLND 322          1038.5  RCHRES 912      5
PERLND 323          604.7   RCHRES 912      5
PERLND 324          1755.2  RCHRES 912      5
PERLND 325          660.2   RCHRES 912      2
PERLND 326          373.3   RCHRES 912      2
IMPLND 326          7.6     RCHRES 912      1
PERLND 327          9.1     RCHRES 912      2
IMPLND 327          0.2     RCHRES 912      1
PERLND 328          6.2     RCHRES 912      2
IMPLND 328          4.1     RCHRES 912      1
PERLND 329          6.5     RCHRES 912      2
PERLND 330          4.9     RCHRES 912      2
PERLND 332          83.1    RCHRES 912      5
RCHRES 908                  RCHRES 912      3
PERLND  81          1625.1  RCHRES 724      2
PERLND  82          878.7   RCHRES 724      5
PERLND  83          417.6   RCHRES 724      5
PERLND  84          923.8   RCHRES 724      5
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PERLND 85	104.5	RCHRES 724	2
PERLND 86	113.4	RCHRES 724	2
IMPLND 86	2.3	RCHRES 724	1
PERLND 87	5.5	RCHRES 724	2
IMPLND 87	0.1	RCHRES 724	1
PERLND 88	5.2	RCHRES 724	2
IMPLND 88	3.5	RCHRES 724	1
PERLND 89	12.6	RCHRES 724	2
PERLND 90	6.4	RCHRES 724	2
PERLND 92	134.4	RCHRES 724	5
RCHRES 712		RCHRES 724	3
RCHRES 722		RCHRES 724	3
PERLND 81	10870.5	RCHRES 726	2
PERLND 82	3637.8	RCHRES 726	5
PERLND 83	1625.8	RCHRES 726	5
PERLND 84	3791.6	RCHRES 726	5
PERLND 85	1626.6	RCHRES 726	2
PERLND 86	980.7	RCHRES 726	2
IMPLND 86	20.0	RCHRES 726	1
PERLND 87	132.1	RCHRES 726	2
IMPLND 87	2.7	RCHRES 726	1
PERLND 88	32.7	RCHRES 726	2
IMPLND 88	21.8	RCHRES 726	1
PERLND 89	96.3	RCHRES 726	2
PERLND 90	9.8	RCHRES 726	2
PERLND 92	555.9	RCHRES 726	5
RCHRES 723		RCHRES 726	3
RCHRES 724		RCHRES 726	3
RCHRES 725		RCHRES 726	3
PERLND 81	8863.8	RCHRES 736	2
PERLND 82	739.9	RCHRES 736	5
PERLND 83	233.5	RCHRES 736	5
PERLND 84	337.8	RCHRES 736	5
PERLND 85	1468.0	RCHRES 736	2
PERLND 86	474.0	RCHRES 736	2
IMPLND 86	9.7	RCHRES 736	1
PERLND 87	5.7	RCHRES 736	2
IMPLND 87	0.1	RCHRES 736	1
PERLND 89	48.7	RCHRES 736	2
PERLND 90	7.1	RCHRES 736	2
PERLND 92	113.1	RCHRES 736	5
RCHRES 726		RCHRES 736	3
RCHRES 732		RCHRES 736	3
PERLND 621	6557.4	RCHRES 746	2
PERLND 622	1125.0	RCHRES 746	5
PERLND 623	362.5	RCHRES 746	5
PERLND 624	437.4	RCHRES 746	5
PERLND 625	840.8	RCHRES 746	2
PERLND 626	535.2	RCHRES 746	2
IMPLND 626	10.9	RCHRES 746	1
PERLND 627	17.3	RCHRES 746	2
IMPLND 627	0.4	RCHRES 746	1
PERLND 628	0.9	RCHRES 746	2
IMPLND 628	0.6	RCHRES 746	1
PERLND 629	31.4	RCHRES 746	2
PERLND 632	23.5	RCHRES 746	5

RCHRES 736		RCHRES 746	3
RCHRES 742		RCHRES 746	3
RCHRES 120		RCHRES 130	3
PERLND 181	756.4	RCHRES 130	2
PERLND 182	2425.6	RCHRES 130	5
PERLND 183	984.9	RCHRES 130	5
PERLND 184	1047.0	RCHRES 130	5
PERLND 185	28.3	RCHRES 130	2
PERLND 186	294.3	RCHRES 130	2
IMPLND 186	6.0	RCHRES 130	1
PERLND 187	37.3	RCHRES 130	2
IMPLND 187	0.8	RCHRES 130	1
PERLND 188	13.1	RCHRES 130	2
IMPLND 188	8.7	RCHRES 130	1
PERLND 189	72.8	RCHRES 130	2
PERLND 192	188.0	RCHRES 130	5
PERLND 181	1348.2	RCHRES 101	2
PERLND 182	543.7	RCHRES 101	5
PERLND 183	219.9	RCHRES 101	5
PERLND 184	334.5	RCHRES 101	5
PERLND 185	32.5	RCHRES 101	2
PERLND 186	349.9	RCHRES 101	2
IMPLND 186	7.1	RCHRES 101	1
PERLND 187	413.3	RCHRES 101	2
IMPLND 187	8.4	RCHRES 101	1
PERLND 188	114.5	RCHRES 101	2
IMPLND 188	76.3	RCHRES 101	1
PERLND 189	9.3	RCHRES 101	2
PERLND 192	42.2	RCHRES 101	5
RCHRES 101		RCHRES 104	3
RCHRES 102		RCHRES 104	3
PERLND 181	1075.0	RCHRES 104	2
PERLND 182	1989.3	RCHRES 104	5
PERLND 183	796.5	RCHRES 104	5
PERLND 184	1207.1	RCHRES 104	5
PERLND 185	41.4	RCHRES 104	2
PERLND 186	488.6	RCHRES 104	2
IMPLND 186	10.0	RCHRES 104	1
PERLND 187	394.1	RCHRES 104	2
IMPLND 187	8.0	RCHRES 104	1
PERLND 188	148.0	RCHRES 104	2
IMPLND 188	98.7	RCHRES 104	1
PERLND 189	20.2	RCHRES 104	2
PERLND 192	154.2	RCHRES 104	5
RCHRES 104		RCHRES 140	3
RCHRES 130		RCHRES 140	3
PERLND 281	1598.1	RCHRES 140	2
PERLND 282	713.7	RCHRES 140	5
PERLND 283	213.8	RCHRES 140	5
PERLND 284	627.2	RCHRES 140	5
PERLND 285	117.3	RCHRES 140	2
PERLND 286	175.3	RCHRES 140	2
IMPLND 286	3.6	RCHRES 140	1
PERLND 287	16.2	RCHRES 140	2
IMPLND 287	0.3	RCHRES 140	1
PERLND 288	3.2	RCHRES 140	2

IMPLND 288	2.1	RCHRES 140	1
PERLND 289	44.4	RCHRES 140	2
PERLND 292	17.4	RCHRES 140	5
RCHRES 140		RCHRES 150	3
PERLND 281	912.6	RCHRES 150	2
PERLND 282	306.2	RCHRES 150	5
PERLND 283	73.9	RCHRES 150	5
PERLND 284	336.8	RCHRES 150	5
PERLND 285	88.2	RCHRES 150	2
PERLND 286	94.2	RCHRES 150	2
IMPLND 286	1.9	RCHRES 150	1
PERLND 287	7.4	RCHRES 150	2
IMPLND 287	0.2	RCHRES 150	1
PERLND 289	56.6	RCHRES 150	2
PERLND 292	7.5	RCHRES 150	5
RCHRES 416		RCHRES 150	3
RCHRES 420		RCHRES 150	3
RCHRES 150		RCHRES 160	3
RCHRES 216		RCHRES 160	3
PERLND 281	7048.0	RCHRES 160	2
PERLND 282	1135.1	RCHRES 160	5
PERLND 283	359.7	RCHRES 160	5
PERLND 284	2100.3	RCHRES 160	5
PERLND 285	305.2	RCHRES 160	2
PERLND 286	385.5	RCHRES 160	2
IMPLND 286	7.9	RCHRES 160	1
PERLND 287	77.5	RCHRES 160	2
IMPLND 287	1.6	RCHRES 160	1
PERLND 288	22.5	RCHRES 160	2
IMPLND 288	15.0	RCHRES 160	1
PERLND 289	263.9	RCHRES 160	2
PERLND 290	10.2	RCHRES 160	2
PERLND 292	27.6	RCHRES 160	5
RCHRES 160		RCHRES 600	3
RCHRES 326		RCHRES 600	3
PERLND 541	9579.5	RCHRES 600	2
PERLND 542	0.0	RCHRES 600	5
PERLND 543	208.0	RCHRES 600	5
PERLND 544	4451.3	RCHRES 600	5
PERLND 545	325.6	RCHRES 600	2
PERLND 546	798.7	RCHRES 600	2
IMPLND 546	16.3	RCHRES 600	1
PERLND 547	167.6	RCHRES 600	2
IMPLND 547	3.4	RCHRES 600	1
PERLND 548	96.9	RCHRES 600	2
IMPLND 548	64.6	RCHRES 600	1
PERLND 549	100.6	RCHRES 600	2
PERLND 550	3.8	RCHRES 600	2
PERLND 552	3758.3	RCHRES 600	5
PERLND 301	2711.0	RCHRES 610	2
PERLND 302	997.4	RCHRES 610	5
PERLND 303	265.6	RCHRES 610	5
PERLND 304	1123.3	RCHRES 610	5
PERLND 305	80.3	RCHRES 610	2
PERLND 306	349.8	RCHRES 610	2
IMPLND 306	7.1	RCHRES 610	1

PERLND 307	65.2	RCHRES 610	2
IMPLND 307	1.3	RCHRES 610	1
PERLND 308	16.8	RCHRES 610	2
IMPLND 308	11.2	RCHRES 610	1
PERLND 309	119.5	RCHRES 610	2
PERLND 312	156.8	RCHRES 610	5
RCHRES 600		RCHRES 610	3
RCHRES 523		RCHRES 524	3
PERLND 561	5071.1	RCHRES 524	2
PERLND 562	170.0	RCHRES 524	5
PERLND 563	76.3	RCHRES 524	5
PERLND 564	145.4	RCHRES 524	5
PERLND 565	758.0	RCHRES 524	2
PERLND 566	478.3	RCHRES 524	2
IMPLND 566	9.8	RCHRES 524	1
PERLND 567	146.1	RCHRES 524	2
IMPLND 567	3.0	RCHRES 524	1
PERLND 568	11.8	RCHRES 524	2
IMPLND 568	7.9	RCHRES 524	1
PERLND 569	46.4	RCHRES 524	2
PERLND 572	57.1	RCHRES 524	5
PERLND 301	2400.5	RCHRES 620	2
PERLND 302	1285.3	RCHRES 620	5
PERLND 303	358.1	RCHRES 620	5
PERLND 304	1553.2	RCHRES 620	5
PERLND 305	125.9	RCHRES 620	2
PERLND 306	343.9	RCHRES 620	2
IMPLND 306	7.0	RCHRES 620	1
PERLND 307	23.4	RCHRES 620	2
IMPLND 307	0.5	RCHRES 620	1
PERLND 308	11.4	RCHRES 620	2
IMPLND 308	7.6	RCHRES 620	1
PERLND 309	126.5	RCHRES 620	2
PERLND 312	202.0	RCHRES 620	5
RCHRES 610		RCHRES 620	3
PERLND 301	37.0	RCHRES 630	2
PERLND 302	102.2	RCHRES 630	5
PERLND 303	12.8	RCHRES 630	5
PERLND 304	31.0	RCHRES 630	5
PERLND 306	16.6	RCHRES 630	2
IMPLND 306	0.3	RCHRES 630	1
PERLND 307	1.3	RCHRES 630	2
IMPLND 307	0.0	RCHRES 630	1
PERLND 309	27.3	RCHRES 630	2
PERLND 312	16.1	RCHRES 630	5
RCHRES 606		RCHRES 630	3
RCHRES 620		RCHRES 630	3
PERLND 301	336.0	RCHRES 635	2
PERLND 302	247.6	RCHRES 635	5
PERLND 303	68.3	RCHRES 635	5
PERLND 304	126.1	RCHRES 635	5
PERLND 305	20.2	RCHRES 635	2
PERLND 306	61.4	RCHRES 635	2
IMPLND 306	1.3	RCHRES 635	1
PERLND 307	1.9	RCHRES 635	2
IMPLND 307	0.0	RCHRES 635	1

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PERLND 308                    2.5    RCHRES 635     2
IMPLND 308                    1.6    RCHRES 635     1
PERLND 309                   21.5    RCHRES 635     2
PERLND 312                   38.9    RCHRES 635     5
RCHRES 630                           RCHRES 635     3
PERLND 301                 2529.5    RCHRES 637     2
PERLND 302                  982.1    RCHRES 637     5
PERLND 303                  313.5    RCHRES 637     5
PERLND 304                  761.2    RCHRES 637     5
PERLND 305                  233.5    RCHRES 637     2
PERLND 306                  268.8    RCHRES 637     2
IMPLND 306                    5.5    RCHRES 637     1
PERLND 307                    7.9    RCHRES 637     2
IMPLND 307                    0.2    RCHRES 637     1
PERLND 308                   13.3    RCHRES 637     2
IMPLND 308                    8.9    RCHRES 637     1
PERLND 309                  157.3    RCHRES 637     2
PERLND 310                   20.8    RCHRES 637     2
PERLND 312                  154.4    RCHRES 637     5
RCHRES 614                           RCHRES 637     3
RCHRES 635                           RCHRES 637     3
PERLND 141                   38.5    RCHRES 640     2
PERLND 142                   20.7    RCHRES 640     5
PERLND 143                    6.2    RCHRES 640     5
PERLND 144                   20.1    RCHRES 640     5
PERLND 146                   22.8    RCHRES 640     2
IMPLND 146                    0.5    RCHRES 640     1
PERLND 147                    0.9    RCHRES 640     2
IMPLND 147                    0.0    RCHRES 640     1
PERLND 148                    4.5    RCHRES 640     2
IMPLND 148                    3.0    RCHRES 640     1
PERLND 149                   13.7    RCHRES 640     2
PERLND 150                    4.3    RCHRES 640     2
PERLND 152                    4.9    RCHRES 640     5
RCHRES 637                           RCHRES 640     3
RCHRES 639                           RCHRES 640     3
PERLND 141                 1635.2    RCHRES 650     2
PERLND 142                  556.1    RCHRES 650     5
PERLND 143                  158.6    RCHRES 650     5
PERLND 144                  752.3    RCHRES 650     5
PERLND 145                   47.2    RCHRES 650     2
PERLND 146                  149.7    RCHRES 650     2
IMPLND 146                    3.1    RCHRES 650     1
PERLND 147                    9.4    RCHRES 650     2
IMPLND 147                    0.2    RCHRES 650     1
PERLND 148                   12.9    RCHRES 650     2
IMPLND 148                    8.6    RCHRES 650     1
PERLND 149                   54.3    RCHRES 650     2
PERLND 152                  129.2    RCHRES 650     5
RCHRES 640                           RCHRES 650     3
*** areas of local drainage near Lake Tenkiller (no RCHRES)
*** subwatershed 918
PERLND 321    *****          1747.2    RCHRES 918     2
PERLND 322    *****           118.3    RCHRES 918     5
PERLND 323    *****           108.8    RCHRES 918     5
PERLND 324    *****           272.2    RCHRES 918     5
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PERLND 325     *****          150.5     RCHRES 918      2
PERLND 326     *****          270.1     RCHRES 918      2
IMPLND 326     *****            5.5    RCHRES 918      1
PERLND 327     *****          240.0     RCHRES 918      2
IMPLND 327     *****            4.9    RCHRES 918      1
PERLND 328     *****           54.0     RCHRES 918      2
IMPLND 328     *****           36.0    RCHRES 918      1
PERLND 329     *****           11.0     RCHRES 918      2
PERLND 330     *****            1.4     RCHRES 918      2
PERLND 332     *****            9.5     RCHRES 918      5
PERLND 321                   8607.4     RCHRES 922      2
PERLND 322                    497.4     RCHRES 922      5
PERLND 323                    303.3     RCHRES 922      5
PERLND 324                    270.5     RCHRES 922      5
PERLND 325                    943.6     RCHRES 922      2
PERLND 326                    270.1     RCHRES 922      2
IMPLND 326                      5.5    RCHRES 922      1
PERLND 327                     21.7     RCHRES 922      2
IMPLND 327                      0.4    RCHRES 922      1
PERLND 328                      1.9     RCHRES 922      2
IMPLND 328                      1.2    RCHRES 922      1
PERLND 329                     15.3     RCHRES 922      2
PERLND 332                     39.8     RCHRES 922      5
***Subwatershed 928
PERLND 321 ***                4263.4     RCHRES 928      2
PERLND 322 ***                 580.0     RCHRES 928      5
PERLND 323 ***                 348.1     RCHRES 928      5
PERLND 324 ***                 167.8     RCHRES 928      5
PERLND 325 ***                 470.1     RCHRES 928      2
PERLND 326 ***                 685.8     RCHRES 928      2
IMPLND 326 ***                  14.0    RCHRES 928      1
PERLND 327 ***                 100.9     RCHRES 928      2
IMPLND 327 ***                   2.1    RCHRES 928      1
PERLND 328 ***                  12.2     RCHRES 928      2
IMPLND 328 ***                   8.1    RCHRES 928      1
PERLND 329 ***                  18.0     RCHRES 928      2
PERLND 332 ***                  46.3     RCHRES 928      5
***Subwatershed 932
PERLND 321 ***                3072.9     RCHRES 932      2
PERLND 322 ***                 139.8     RCHRES 932      5
PERLND 323 ***                 146.5     RCHRES 932      5
PERLND 324 ***                 672.6     RCHRES 932      5
PERLND 325 ***                 404.1     RCHRES 932      2
PERLND 326 ***                 247.2     RCHRES 932      2
IMPLND 326 ***                   5.0    RCHRES 932      1
PERLND 328 ***                   0.7     RCHRES 932      2
IMPLND 328 ***                   0.5    RCHRES 932      1
PERLND 329 ***                  12.8     RCHRES 932      2
PERLND 330 ***                   9.8     RCHRES 932      2
PERLND 332 ***                  11.2     RCHRES 932      5
***Subwatershed 936
PERLND 321                    4593.4     RCHRES 936      2
PERLND 322                      1.7    RCHRES 936      5
PERLND 323                      1.2    RCHRES 936      5
PERLND 324                      1.0    RCHRES 936      5
PERLND 325                    588.3     RCHRES 936      2
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PERLND 326	200.3	RCHRES 936	2
IMPLND 326	4.1	RCHRES 936	1
PERLND 328	1.7	RCHRES 936	2
IMPLND 328	1.2	RCHRES 936	1
PERLND 332	0.0	RCHRES 936	5
PERLND 621	252.5	RCHRES 808	2
PERLND 622	55.6	RCHRES 808	5
PERLND 623	42.3	RCHRES 808	5
PERLND 624	134.8	RCHRES 808	5
PERLND 625	35.9	RCHRES 808	2
PERLND 626	128.7	RCHRES 808	2
IMPLND 626	2.6	RCHRES 808	1
PERLND 627	154.9	RCHRES 808	2
IMPLND 627	3.2	RCHRES 808	1
PERLND 628	31.3	RCHRES 808	2
IMPLND 628	20.9	RCHRES 808	1
PERLND 632	1.2	RCHRES 808	5
RCHRES 806		RCHRES 808	3
RCHRES 807		RCHRES 808	3
PERLND 141	6695.8	RCHRES 660	2
PERLND 142	3689.1	RCHRES 660	5
PERLND 143	1259.6	RCHRES 660	5
PERLND 144	3375.9	RCHRES 660	5
PERLND 145	370.8	RCHRES 660	2
PERLND 146	799.2	RCHRES 660	2
IMPLND 146	16.3	RCHRES 660	1
PERLND 147	179.9	RCHRES 660	2
IMPLND 147	3.7	RCHRES 660	1
PERLND 148	105.6	RCHRES 660	2
IMPLND 148	70.4	RCHRES 660	1
PERLND 149	83.9	RCHRES 660	2
PERLND 150	77.4	RCHRES 660	2
PERLND 152	856.5	RCHRES 660	5
RCHRES 650		RCHRES 660	3
PERLND 561	6281.3	RCHRES 670	2
PERLND 562	1649.7	RCHRES 670	5
PERLND 563	289.9	RCHRES 670	5
PERLND 564	279.6	RCHRES 670	5
PERLND 565	979.3	RCHRES 670	2
PERLND 566	425.4	RCHRES 670	2
IMPLND 566	8.7	RCHRES 670	1
PERLND 567	60.2	RCHRES 670	2
IMPLND 567	1.2	RCHRES 670	1
PERLND 568	28.3	RCHRES 670	2
IMPLND 568	18.9	RCHRES 670	1
PERLND 569	159.4	RCHRES 670	2
PERLND 570	12.7	RCHRES 670	2
PERLND 572	554.3	RCHRES 670	5
RCHRES 660		RCHRES 670	3
RCHRES 524		RCHRES 800	3
PERLND 561	7035.5	RCHRES 800	2
PERLND 562	1002.9	RCHRES 800	5
PERLND 563	250.8	RCHRES 800	5
PERLND 564	291.5	RCHRES 800	5
PERLND 565	2201.5	RCHRES 800	2
PERLND 566	446.2	RCHRES 800	2

IMPLND 566	9.1	RCHRES 800	1
PERLND 567	3.9	RCHRES 800	2
IMPLND 567	0.1	RCHRES 800	1
PERLND 568	3.0	RCHRES 800	2
IMPLND 568	2.0	RCHRES 800	1
PERLND 569	284.3	RCHRES 800	2
PERLND 572	337.0	RCHRES 800	5
RCHRES 670		RCHRES 800	3
PERLND 561	5558.1	RCHRES 810	2
PERLND 562	338.1	RCHRES 810	5
PERLND 563	144.0	RCHRES 810	5
PERLND 564	169.4	RCHRES 810	5
PERLND 565	995.3	RCHRES 810	2
PERLND 566	211.5	RCHRES 810	2
IMPLND 566	4.3	RCHRES 810	1
PERLND 567	6.8	RCHRES 810	2
IMPLND 567	0.1	RCHRES 810	1
PERLND 568	1.2	RCHRES 810	2
IMPLND 568	0.8	RCHRES 810	1
PERLND 569	56.9	RCHRES 810	2
PERLND 572	113.7	RCHRES 810	5
RCHRES 800		RCHRES 810	3
PERLND 561	4581.8	RCHRES 820	2
PERLND 562	355.2	RCHRES 820	5
PERLND 563	122.3	RCHRES 820	5
PERLND 564	167.1	RCHRES 820	5
PERLND 565	1104.8	RCHRES 820	2
PERLND 566	209.7	RCHRES 820	2
IMPLND 566	4.3	RCHRES 820	1
PERLND 567	3.3	RCHRES 820	2
IMPLND 567	0.1	RCHRES 820	1
PERLND 568	5.5	RCHRES 820	2
IMPLND 568	3.6	RCHRES 820	1
PERLND 569	148.4	RCHRES 820	2
PERLND 570	1.3	RCHRES 820	2
PERLND 572	119.4	RCHRES 820	5
RCHRES 802		RCHRES 820	3
RCHRES 810		RCHRES 820	3
PERLND 561	8113.5	RCHRES 830	2
PERLND 562	799.5	RCHRES 830	5
PERLND 563	201.6	RCHRES 830	5
PERLND 564	298.6	RCHRES 830	5
PERLND 565	936.9	RCHRES 830	2
PERLND 566	320.0	RCHRES 830	2
IMPLND 566	6.5	RCHRES 830	1
PERLND 567	3.5	RCHRES 830	2
IMPLND 567	0.1	RCHRES 830	1
PERLND 568	0.7	RCHRES 830	2
IMPLND 568	0.4	RCHRES 830	1
PERLND 569	123.5	RCHRES 830	2
PERLND 570	3.1	RCHRES 830	2
PERLND 572	268.6	RCHRES 830	5
RCHRES 820		RCHRES 830	3
PERLND 621	5754.6	RCHRES 748	2
PERLND 622	2813.3	RCHRES 748	5
PERLND 623	1126.4	RCHRES 748	5

PERLND 624	2132.7	RCHRES 748	5
PERLND 625	953.9	RCHRES 748	2
PERLND 626	607.8	RCHRES 748	2
IMPLND 626	12.4	RCHRES 748	1
PERLND 627	44.2	RCHRES 748	2
IMPLND 627	0.9	RCHRES 748	1
PERLND 628	5.9	RCHRES 748	2
IMPLND 628	3.9	RCHRES 748	1
PERLND 629	54.9	RCHRES 748	2
PERLND 630	3.6	RCHRES 748	2
PERLND 632	59.0	RCHRES 748	5
RCHRES 746		RCHRES 748	3
PERLND 621	2651.4	RCHRES 751	2
PERLND 622	1060.9	RCHRES 751	5
PERLND 623	425.2	RCHRES 751	5
PERLND 624	759.5	RCHRES 751	5
PERLND 625	149.8	RCHRES 751	2
PERLND 626	221.3	RCHRES 751	2
IMPLND 626	4.5	RCHRES 751	1
PERLND 628	1.0	RCHRES 751	2
IMPLND 628	0.7	RCHRES 751	1
PERLND 629	135.5	RCHRES 751	2
PERLND 632	22.3	RCHRES 751	5
RCHRES 748		RCHRES 751	3
PERLND 621	1777.3	RCHRES 752	2
PERLND 622	376.7	RCHRES 752	5
PERLND 623	175.5	RCHRES 752	5
PERLND 624	316.9	RCHRES 752	5
PERLND 625	45.0	RCHRES 752	2
PERLND 626	99.4	RCHRES 752	2
IMPLND 626	2.0	RCHRES 752	1
PERLND 627	2.8	RCHRES 752	2
IMPLND 627	0.1	RCHRES 752	1
PERLND 628	0.6	RCHRES 752	2
IMPLND 628	0.4	RCHRES 752	1
PERLND 629	63.8	RCHRES 752	2
PERLND 630	4.5	RCHRES 752	2
PERLND 632	7.9	RCHRES 752	5
RCHRES 751		RCHRES 752	3
PERLND 621	239.4	RCHRES 809	2
PERLND 622	52.5	RCHRES 809	5
PERLND 623	38.3	RCHRES 809	5
PERLND 624	92.3	RCHRES 809	5
PERLND 625	10.4	RCHRES 809	2
PERLND 626	59.1	RCHRES 809	2
IMPLND 626	1.2	RCHRES 809	1
PERLND 627	23.6	RCHRES 809	2
IMPLND 627	0.5	RCHRES 809	1
PERLND 628	12.2	RCHRES 809	2
IMPLND 628	8.1	RCHRES 809	1
PERLND 629	12.2	RCHRES 809	2
PERLND 632	1.0	RCHRES 809	5
RCHRES 808		RCHRES 809	3
PERLND 621	7542.6	RCHRES 840	2
PERLND 622	944.2	RCHRES 840	5
PERLND 623	209.5	RCHRES 840	5

PERLND 624	165.4	RCHRES 840	5
PERLND 625	584.2	RCHRES 840	2
PERLND 626	277.5	RCHRES 840	2
IMPLND 626	5.7	RCHRES 840	1
PERLND 627	5.5	RCHRES 840	2
IMPLND 627	0.1	RCHRES 840	1
PERLND 628	5.4	RCHRES 840	2
IMPLND 628	3.6	RCHRES 840	1
PERLND 629	258.9	RCHRES 840	2
PERLND 632	19.8	RCHRES 840	5
RCHRES 830		RCHRES 840	3
PERLND 621	3793.9	RCHRES 850	2
PERLND 622	1311.5	RCHRES 850	5
PERLND 623	210.4	RCHRES 850	5
PERLND 624	203.3	RCHRES 850	5
PERLND 625	834.5	RCHRES 850	2
PERLND 626	306.1	RCHRES 850	2
IMPLND 626	6.2	RCHRES 850	1
PERLND 627	11.8	RCHRES 850	2
IMPLND 627	0.2	RCHRES 850	1
PERLND 628	0.9	RCHRES 850	2
IMPLND 628	0.6	RCHRES 850	1
PERLND 629	171.9	RCHRES 850	2
PERLND 632	27.5	RCHRES 850	5
RCHRES 840		RCHRES 850	3
PERLND 321	1727.0	RCHRES 914	2
PERLND 322	170.8	RCHRES 914	5
PERLND 323	121.4	RCHRES 914	5
PERLND 324	318.7	RCHRES 914	5
PERLND 325	145.9	RCHRES 914	2
PERLND 326	119.8	RCHRES 914	2
IMPLND 326	2.4	RCHRES 914	1
PERLND 327	1.7	RCHRES 914	2
IMPLND 327	0.0	RCHRES 914	1
PERLND 328	0.3	RCHRES 914	2
IMPLND 328	0.2	RCHRES 914	1
PERLND 329	32.6	RCHRES 914	2
PERLND 332	13.7	RCHRES 914	5
RCHRES 912		RCHRES 914	3
PERLND 621	5837.3	RCHRES 860	2
PERLND 622	434.7	RCHRES 860	5
PERLND 623	107.1	RCHRES 860	5
PERLND 624	115.6	RCHRES 860	5
PERLND 625	364.7	RCHRES 860	2
PERLND 626	213.7	RCHRES 860	2
IMPLND 626	4.4	RCHRES 860	1
PERLND 627	0.5	RCHRES 860	2
IMPLND 627	0.0	RCHRES 860	1
PERLND 629	213.3	RCHRES 860	2
PERLND 632	9.0	RCHRES 860	5
RCHRES 850		RCHRES 860	3
PERLND 621	6077.4	RCHRES 870	2
PERLND 622	913.1	RCHRES 870	5
PERLND 623	221.2	RCHRES 870	5
PERLND 624	466.8	RCHRES 870	5
PERLND 625	437.3	RCHRES 870	2

PERLND 626	456.7	RCHRES 870	2
IMPLND 626	9.3	RCHRES 870	1
PERLND 627	102.1	RCHRES 870	2
IMPLND 627	2.1	RCHRES 870	1
PERLND 628	16.7	RCHRES 870	2
IMPLND 628	11.1	RCHRES 870	1
PERLND 629	214.2	RCHRES 870	2
PERLND 630	5.6	RCHRES 870	2
PERLND 632	19.1	RCHRES 870	5
RCHRES 805		RCHRES 870	3
RCHRES 860		RCHRES 870	3
PERLND 621	1405.5	RCHRES 880	2
PERLND 622	800.8	RCHRES 880	5
PERLND 623	148.0	RCHRES 880	5
PERLND 624	276.6	RCHRES 880	5
PERLND 625	48.3	RCHRES 880	2
PERLND 626	213.4	RCHRES 880	2
IMPLND 626	4.4	RCHRES 880	1
PERLND 627	44.7	RCHRES 880	2
IMPLND 627	0.9	RCHRES 880	1
PERLND 628	9.1	RCHRES 880	2
IMPLND 628	6.1	RCHRES 880	1
PERLND 629	259.6	RCHRES 880	2
PERLND 632	16.7	RCHRES 880	5
RCHRES 870		RCHRES 880	3
PERLND 621	1458.1	RCHRES 890	2
PERLND 622	979.4	RCHRES 890	5
PERLND 623	291.2	RCHRES 890	5
PERLND 624	520.3	RCHRES 890	5
PERLND 625	98.1	RCHRES 890	2
PERLND 626	343.3	RCHRES 890	2
IMPLND 626	7.0	RCHRES 890	1
PERLND 627	21.4	RCHRES 890	2
IMPLND 627	0.4	RCHRES 890	1
PERLND 628	6.7	RCHRES 890	2
IMPLND 628	4.4	RCHRES 890	1
PERLND 629	165.7	RCHRES 890	2
PERLND 632	20.5	RCHRES 890	5
RCHRES 809		RCHRES 890	3
RCHRES 880		RCHRES 890	3
PERLND 621	8582.2	RCHRES 900	2
PERLND 622	5133.8	RCHRES 900	5
PERLND 623	2053.7	RCHRES 900	5
PERLND 624	4327.3	RCHRES 900	5
PERLND 625	547.6	RCHRES 900	2
PERLND 626	1254.4	RCHRES 900	2
IMPLND 626	25.6	RCHRES 900	1
PERLND 627	349.1	RCHRES 900	2
IMPLND 627	7.1	RCHRES 900	1
PERLND 628	196.3	RCHRES 900	2
IMPLND 628	130.9	RCHRES 900	1
PERLND 629	229.8	RCHRES 900	2
PERLND 630	23.6	RCHRES 900	2
PERLND 632	107.5	RCHRES 900	5
RCHRES 752		RCHRES 900	3
RCHRES 890		RCHRES 900	3

PERLND 321 ***	5327.1	RCHRES 942	2
PERLND 322 ***	0.0	RCHRES 942	5
PERLND 323 ***	186.1	RCHRES 942	5
PERLND 324 ***	683.8	RCHRES 942	5
PERLND 325 ***	599.1	RCHRES 942	2
PERLND 326 ***	461.9	RCHRES 942	2
IMPLND 326 ***	9.4	RCHRES 942	1
PERLND 327 ***	8.0	RCHRES 942	2
IMPLND 327 ***	0.2	RCHRES 942	1
PERLND 328 ***	0.9	RCHRES 942	2
IMPLND 328 ***	0.6	RCHRES 942	1
PERLND 329 ***	17.0	RCHRES 942	2
PERLND 332 ***	153.3	RCHRES 942	5
PERLND 321 ***	7200.3	RCHRES 946	2
PERLND 322 ***	557.9	RCHRES 946	5
PERLND 323 ***	294.1	RCHRES 946	5
PERLND 324 ***	198.6	RCHRES 946	5
PERLND 325 ***	1184.2	RCHRES 946	2
PERLND 326 ***	814.0	RCHRES 946	2
IMPLND 326 ***	16.6	RCHRES 946	1
PERLND 327 ***	93.0	RCHRES 946	2
IMPLND 327 ***	1.9	RCHRES 946	1
PERLND 328 ***	11.5	RCHRES 946	2
IMPLND 328 ***	7.7	RCHRES 946	1
PERLND 329 ***	14.6	RCHRES 946	2
PERLND 332 ***	44.5	RCHRES 946	5
PERLND 641 ***	4926.3	RCHRES 948	2
PERLND 642 ***	64.4	RCHRES 948	5
PERLND 643 ***	31.7	RCHRES 948	5
PERLND 644 ***	24.4	RCHRES 948	5
PERLND 645 ***	659.9	RCHRES 948	2
PERLND 645	0	RCHRES 900	2
PERLND 646 ***	375.3	RCHRES 948	2
PERLND 646	0	RCHRES 900	2
IMPLND 646 ***	7.7	RCHRES 948	1
IMPLND 646	0	RCHRES 900	1
PERLND 647	0	RCHRES 900	2
PERLND 647 ***	72.1	RCHRES 948	2
IMPLND 647 ***	1.5	RCHRES 948	1
IMPLND 647	0	RCHRES 900	1
PERLND 648 ***	9.4	RCHRES 948	2
PERLND 648	0	RCHRES 900	2
IMPLND 648 ***	6.3	RCHRES 948	1
IMPLND 648	0	RCHRES 900	1
PERLND 649 ***	15.3	RCHRES 948	2
PERLND 649	0	RCHRES 900	2
PERLND 652 ***	5.2	RCHRES 948	5
PERLND 641 ***	5083.3	RCHRES 980	2
PERLND 642 ***	1872.3	RCHRES 980	5
PERLND 643 ***	746.9	RCHRES 980	5
PERLND 644 ***	623.9	RCHRES 980	5
PERLND 645 ***	733.8	RCHRES 980	2
PERLND 646 ***	670.0	RCHRES 980	2
IMPLND 646 ***	13.7	RCHRES 980	1
PERLND 647 ***	100.1	RCHRES 980	2
IMPLND 647 ***	2.0	RCHRES 980	1

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PERLND 648 ***          20.6     RCHRES 980      2
IMPLND 648 ***          13.7     RCHRES 980      1
PERLND 649 ***          213.1    RCHRES 980      2
PERLND 650 ***          12.3     RCHRES 980      2
PERLND 652 ***          129.5    RCHRES 980      5
PERLND 650              0     RCHRES 900      2
PERLND 641 ***          10525.6     RCHRES 990      2
PERLND 641              0     RCHRES 900      2
PERLND 642 ***          5197.9     RCHRES 990      5
PERLND 643 ***          1447.0     RCHRES 990      5
PERLND 644 ***          3806.0     RCHRES 990      5
PERLND 645 ***          759.1     RCHRES 990      2
PERLND 646 ***          1035.6     RCHRES 990      2
IMPLND 646 ***          21.1     RCHRES 990      1
PERLND 647 ***          282.1     RCHRES 990      2
IMPLND 647 ***          5.8     RCHRES 990      1
PERLND 648 ***          29.8     RCHRES 990      2
IMPLND 648 ***          19.9     RCHRES 990      1
PERLND 649 ***          314.2     RCHRES 990      2
PERLND 650 ***          557.6     RCHRES 990      2
PERLND 652 ***          359.4     RCHRES 990      5
RCHRES 980 ***                    RCHRES 990      3
***Following operations are to transfer WQ constituents to copy block for EFDC Model
***Subwatershed 900
PERLND 621              8582.2     COPY   900     82
PERLND 622              5133.8     COPY   900     85
PERLND 623              2053.7     COPY   900     85
PERLND 624              4327.3     COPY   900     85
PERLND 625              547.6     COPY   900     82
PERLND 626              1254.4     COPY   900     82
IMPLND 626              25.6     COPY   900     81
PERLND 627              349.1     COPY   900     82
IMPLND 627              7.1     COPY   900     81
PERLND 628              196.3     COPY   900     82
IMPLND 628              130.9     COPY   900     81
PERLND 629              229.8     COPY   900     82
PERLND 630              23.6     COPY   900     82
PERLND 632              107.5     COPY   900     85
***Subwatershed 914
PERLND 321              1727.0     COPY   914     82
PERLND 322              170.8     COPY   914     85
PERLND 323              121.4     COPY   914     85
PERLND 324              318.7     COPY   914     85
PERLND 325              145.9     COPY   914     82
PERLND 326              119.8     COPY   914     82
IMPLND 326              2.4     COPY   914     81
PERLND 327              1.7     COPY   914     82
IMPLND 327              0.0     COPY   914     81
PERLND 328              0.3     COPY   914     82
IMPLND 328              0.2     COPY   914     81
PERLND 329              32.6     COPY   914     82
PERLND 332              13.7     COPY   914     85
*** subwatershed 928
PERLND 321              4263.4     COPY   928     82
PERLND 322              580.0     COPY   928     85
PERLND 323              348.1     COPY   928     85
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PERLND 324          167.8    COPY   928    85
PERLND 325          470.1    COPY   928    82
PERLND 326          685.8    COPY   928    82
IMPLND 326          14.0    COPY   928    81
PERLND 327          100.9    COPY   928    82
IMPLND 327          2.1    COPY   928    81
PERLND 328          12.2    COPY   928    82
IMPLND 328          8.1    COPY   928    81
PERLND 329          18.0    COPY   928    82
PERLND 332          46.3    COPY   928    85
PERLND 321          4344.6    COPY   928    82
***Subwatershed 918
PERLND 321          1747.2    COPY   918    82
PERLND 322          118.3    COPY   918    85
PERLND 323          108.8    COPY   918    85
PERLND 324          272.2    COPY   918    85
PERLND 325          150.5    COPY   918    82
PERLND 326          270.1    COPY   918    82
IMPLND 326          5.5    COPY   918    81
PERLND 327          240.0    COPY   918    82
IMPLND 327          4.9    COPY   918    81
PERLND 328          54.0    COPY   918    82
IMPLND 328          36.0    COPY   918    81
PERLND 329          11.0    COPY   918    82
PERLND 330          1.4    COPY   918    82
PERLND 332          9.5    COPY   918    85
*** subwatershed 924
PERLND 321          3336.9    COPY   924    82
PERLND 322          347.0    COPY   924    85
PERLND 323          236.6    COPY   924    85
PERLND 324          875.7    COPY   924    85
PERLND 325          272.2    COPY   924    82
PERLND 326          269.7    COPY   924    82
IMPLND 326          5.5    COPY   924    81
PERLND 327          18.1    COPY   924    82
IMPLND 327          0.4    COPY   924    81
PERLND 328          6.0    COPY   924    82
IMPLND 328          4.0    COPY   924    81
PERLND 329          19.8    COPY   924    82
PERLND 332          27.7    COPY   924    85
*** subwatershed 932
PERLND 321          3072.9    COPY   932    82
PERLND 322          139.8    COPY   932    85
PERLND 323          146.5    COPY   932    85
PERLND 324          672.6    COPY   932    85
PERLND 325          404.1    COPY   932    82
PERLND 326          247.2    COPY   932    82
IMPLND 326          5.0    COPY   932    81
PERLND 328          0.7    COPY   932    82
IMPLND 328          0.5    COPY   932    81
PERLND 329          12.8    COPY   932    82
PERLND 330          9.8    COPY   932    82
PERLND 332          11.2    COPY   932    85
*** subwatershed 942
PERLND 321          5327.1    COPY   942    82
PERLND 322          0.0    COPY   942    85
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PERLND 323          186.1    COPY   942    85
PERLND 324          683.8    COPY   942    85
PERLND 325          599.1    COPY   942    82
PERLND 326          461.9    COPY   942    82
IMPLND 326           9.4    COPY   942    81
PERLND 327           8.0    COPY   942    82
IMPLND 327           0.2    COPY   942    81
PERLND 328           0.9    COPY   942    82
IMPLND 328           0.6    COPY   942    81
PERLND 329          17.0    COPY   942    82
PERLND 332         153.3    COPY   942    85
*** subwatershed 948
PERLND 641        4926.3    COPY   948    82
PERLND 642          64.4    COPY   948    85
PERLND 643          31.7    COPY   948    85
PERLND 644          24.4    COPY   948    85
PERLND 645         659.9    COPY   948    82
PERLND 646         375.3    COPY   948    82
IMPLND 646           7.7    COPY   948    81
PERLND 647          72.1    COPY   948    82
IMPLND 647           1.5    COPY   948    81
PERLND 648           9.4    COPY   948    82
IMPLND 648           6.3    COPY   948    81
PERLND 649          15.3    COPY   948    82
PERLND 652           5.2    COPY   948    85
***Subwatershed 946
PERLND 321        7200.3    COPY   946    82
PERLND 322         557.9    COPY   946    85
PERLND 323         294.1    COPY   946    85
PERLND 324         198.6    COPY   946    85
PERLND 325        1184.2    COPY   946    82
PERLND 326         814.0    COPY   946    82
IMPLND 326          16.6    COPY   946    81
PERLND 327          93.0    COPY   946    82
IMPLND 327           1.9    COPY   946    81
PERLND 328          11.5    COPY   946    82
IMPLND 328           7.7    COPY   946    81
PERLND 329          14.6    COPY   946    82
PERLND 332          44.5    COPY   946    85
END SCHEMATIC

EXT TARGETS
*** Illinois River at Savoy 7194800-Calibrate
PERLND 281 PSTEMP SLTMP  1 1          WDM1  7051 SLTMP  1 ENGL AGGR REPL
PERLND 281 PSTEMP ULTMP  1 1          WDM1  7052 ULTMP  1 ENGL AGGR REPL
PERLND 281 PSTEMP LGTMP  1 1          WDM1  7053 LGTMP  1 ENGL AGGR REPL
PERLND 282 PSTEMP SLTMP  1 1          WDM1  7070 SLTMP  1 ENGL AGGR REPL
PERLND 282 PSTEMP ULTMP  1 1          WDM1  7071 ULTMP  1 ENGL AGGR REPL
PERLND 282 PSTEMP LGTMP  1 1          WDM1  7072 LGTMP  1 ENGL AGGR REPL
PERLND 286 PSTEMP SLTMP  1 1          WDM1  7073 SLTMP  1 ENGL AGGR REPL
PERLND 286 PSTEMP ULTMP  1 1          WDM1  7074 ULTMP  1 ENGL AGGR REPL
PERLND 286 PSTEMP LGTMP  1 1          WDM1  7075 LGTMP  1 ENGL AGGR REPL
PERLND 289 PSTEMP SLTMP  1 1          WDM1  7076 SLTMP  1 ENGL AGGR REPL
PERLND 289 PSTEMP ULTMP  1 1          WDM1  7077 ULTMP  1 ENGL AGGR REPL
PERLND 289 PSTEMP LGTMP  1 1          WDM1  7078 LGTMP  1 ENGL AGGR REPL
*** Baron Fork at Eldon 7197000-Calibrate
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PERLND 621 PSTEMP SLTMP  1 1            WDM1  7054 SLTMP  1 ENGL AGGR REPL
PERLND 621 PSTEMP ULTMP  1 1            WDM1  7055 ULTMP  1 ENGL AGGR REPL
PERLND 621 PSTEMP LGTMP  1 1            WDM1  7057 LGTMP  1 ENGL AGGR REPL
PERLND 622 PSTEMP SLTMP  1 1            WDM1  7079 SLTMP  1 ENGL AGGR REPL
PERLND 622 PSTEMP ULTMP  1 1            WDM1  7080 ULTMP  1 ENGL AGGR REPL
PERLND 622 PSTEMP LGTMP  1 1            WDM1  7096 LGTMP  1 ENGL AGGR REPL
PERLND 626 PSTEMP SLTMP  1 1            WDM1  7082 SLTMP  1 ENGL AGGR REPL
PERLND 626 PSTEMP ULTMP  1 1            WDM1  7083 ULTMP  1 ENGL AGGR REPL
PERLND 626 PSTEMP LGTMP  1 1            WDM1  7084 LGTMP  1 ENGL AGGR REPL
PERLND 629 PSTEMP SLTMP  1 1            WDM1  7085 SLTMP  1 ENGL AGGR REPL
PERLND 629 PSTEMP ULTMP  1 1            WDM1  7086 ULTMP  1 ENGL AGGR REPL
PERLND 629 PSTEMP LGTMP  1 1            WDM1  7087 LGTMP  1 ENGL AGGR REPL
*** Evansville Creek at State Line
RCHRES 714 PLANK  TPKCF1 4 1        SAME WDM1  7143 TNLD   1 ENGL      REPL
RCHRES 714 PLANK  TPKCF1 5 1        SAME WDM1  7144 TPLD   1 ENGL      REPL
RCHRES 714 SEDTRN ROSED  4 1            WDM1  7145 ROSED4 1 ENGL AGGR REPL
*** Ballard Creek  - output FLOW & TSS to compare to Brian Haggard data
RCHRES 609 HYDR   RO     1 1        AVER WDM1  6090 FLOW   1 ENGL AGGR REPL
RCHRES 609 SEDTRN SSED   4 1            WDM1  6091 SSED4  1 ENGL AGGR REPL
RCHRES 609 HYDR   RO     1 1        AVER WDM1  6092 FLOW   1 ENGL AGGR REPL
RCHRES 609 SEDTRN ROSED  4 1            WDM1  6093 ROSED4 1 ENGL AGGR REPL
RCHRES 609 NUTRX  DNUST  1 1            WDM1  6096 DNUST  1 ENGL AGGR REPL
RCHRES 609 NUTRX  DNUST  2 1            WDM1  6094 DNUST  1 ENGL AGGR REPL
RCHRES 609 NUTRX  DNUST  4 1            WDM1  6095 DNUST  1 ENGL AGGR REPL
RCHRES 609 PLANK  PKST4  1 1            WDM1  6098 PKST4  1 ENGL AGGR REPL
RCHRES 609 PLANK  PKST4  2 1            WDM1  6099 PKST4  1 ENGL AGGR REPL
RCHRES 609 PLANK  BALCLA 1 1            WDM1  6097 BALCLA 1 ENGL AGGR REPL
RCHRES 609 PLANK  TPKCF1 4 1        SAME WDM1  6100 TNLD   1 ENGL      REPL
RCHRES 609 PLANK  TPKCF1 5 1        SAME WDM1  6101 TPLD   1 ENGL      REPL
RCHRES 306 PLANK  BALCLA 1 1            WDM1  3303 BALCLA 1 ENGL AGGR REPL
RCHRES 502 HYDR   RO     1 1        AVER WDM1   502 FLOW   1 ENGL AGGR REPL
RCHRES 502 SEDTRN SSED   4 1            WDM1  7004 SSED4  1 ENGL AGGR REPL
RCHRES 502 HYDR   RO     1 1        AVER WDM1  5001 FLOW   1 ENGL AGGR REPL
RCHRES 502 OXRX   DOX    1 1            WDM1  5021 DOX    1 ENGL AGGR REPL
RCHRES 502 OXRX   BOD    1 1            WDM1  5022 BOD    1 ENGL AGGR REPL
RCHRES 502 NUTRX  DNUST  1 1            WDM1  5023 DNUST  1 ENGL AGGR REPL
RCHRES 502 NUTRX  DNUST  2 1            WDM1  5024 DNUST  1 ENGL AGGR REPL
RCHRES 502 NUTRX  DNUST  4 1            WDM1  5025 DNUST  1 ENGL AGGR REPL
RCHRES 502 PLANK  PKST3  4 1            WDM1  5026 PKST3  1 ENGL AGGR REPL
RCHRES 502 PLANK  PKST3  5 1            WDM1  5027 PKST3  1 ENGL AGGR REPL
RCHRES 502 PLANK  PKST3  6 1            WDM1  5028 PKST3  1 ENGL AGGR REPL
RCHRES 502 PLANK  PKST4  1 1            WDM1  5029 PKST4  1 ENGL AGGR REPL
RCHRES 502 PLANK  PKST4  2 1            WDM1  5030 PKST4  1 ENGL AGGR REPL
RCHRES 502 PLANK  PHYCLA 1 1            WDM1  5031 CHLO   1 ENGL AGGR REPL
RCHRES 502 PLANK  BALCLA 1 1            WDM1  5032 CHLO   1 ENGL AGGR REPL
RCHRES 502 PLANK  TPKCF1 4 1        SAME WDM1  5033 TNLD   1 ENGL      REPL
RCHRES 502 PLANK  TPKCF1 5 1        SAME WDM1  5034 TPLD   1 ENGL      REPL
RCHRES 302 PLANK  BALCLA 1 1            WDM1  3301 BALCLA 1 ENGL AGGR REPL
RCHRES 312 PLANK  BALCLA 1 1            WDM1  3305 BALCLA 1 ENGL AGGR REPL
RCHRES 314 PLANK  BALCLA 1 1            WDM1  3306 BALCLA 1 ENGL AGGR REPL
*** Dry Creek
RCHRES 916 HYDR   RO     1 1        AVER WDM1   916 FLOW   1 ENGL AGGR REPL
RCHRES 916 ROFLOW ROVOL  1 1 2.0793e-4     WDM1  9161 SIMQ   1 ENGL AGGR REPL
RCHRES 916 SEDTRN SSED   4 1            WDM1  9162 SSED4  1 ENGL AGGR REPL
RCHRES 916 HYDR   RO     1 1        AVER WDM1  9163 FLOW   1 ENGL AGGR REPL
RCHRES 916 HTRCH  TW     1 1            WDM1  9164 TW     1 ENGL AGGR REPL
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RCHRES 916 SEDTRN ROSED  4 1            WDM1  9165 ROSED4 1 ENGL AGGR REPL
RCHRES 916 OXRX   DOX    1 1            WDM1  9166 DOX    1 ENGL AGGR REPL
RCHRES 916 OXRX   BOD    1 1            WDM1  9167 BOD    1 ENGL AGGR REPL
RCHRES 916 NUTRX  DNUST  1 1            WDM1  9168 DNUST  1 ENGL AGGR REPL
RCHRES 916 NUTRX  DNUST  2 1            WDM1  9169 DNUST  1 ENGL AGGR REPL
RCHRES 916 NUTRX  DNUST  4 1            WDM1  9170 DNUST  1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST3  4 1            WDM1  9171 PKST3  1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST3  5 1            WDM1  9172 PKST3  1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST3  6 1            WDM1  9173 PKST3  1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST4  1 1            WDM1  9174 PKST4  1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST4  2 1            WDM1  9175 PKST4  1 ENGL AGGR REPL
RCHRES 916 PLANK  PHYCLA 1 1            WDM1  9176 CHLO   1 ENGL AGGR REPL
RCHRES 916 PLANK  BALCLA 1 1            WDM1  9177 BALCLA 1 ENGL AGGR REPL
RCHRES 916 NUTRX  DNUST  2 1        AVER WDM4  9161 TAM    1 ENGL AGGR REPL
RCHRES 916 NUTRX  DNUST  1 1        AVER WDM4  9162 NO3    1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST3  4 1        AVER WDM4  9163 TORN   1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST4  1 1        AVER WDM4  9164 TN     1 ENGL AGGR REPL
RCHRES 916 NUTRX  DNUST  4 1        AVER WDM4  9165 PO4    1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST3  5 1        AVER WDM4  9166 TORP   1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST4  2 1        AVER WDM4  9167 TP     1 ENGL AGGR REPL
RCHRES 916 PLANK  PKST3  6 1        AVER WDM4  9168 TORC   1 ENGL AGGR REPL
RCHRES 916 OXRX   BOD    1 1 0.35211  AVER WDM4  9169 BOD5   1 ENGL AGGR REPL
RCHRES 916 OXRX   DOX    1 1        AVER WDM4  9170 DO     1 ENGL AGGR REPL
RCHRES 916 SEDTRN SSED   2 1        AVER WDM4  9171 SILT   1 ENGL AGGR REPL
RCHRES 916 SEDTRN SSED   3 1        AVER WDM4  9172 CLAY   1 ENGL AGGR REPL
RCHRES 916 HYDR   RO     1 1        AVER WDM4  9173 FLOW   1 METR AGGR REPL
RCHRES 916 PLANK  PHYCLA 1 1 0.001    AVER WDM4  9174 CHLA   1 ENGL AGGR REPL
RCHRES 916 HTRCH  TW     1 1        AVER WDM4  9175 TW     1 METR AGGR REPL
RCHRES 308 PLANK  BALCLA 1 1            WDM1  3304 BALCLA 1 ENGL AGGR REPL
RCHRES 732 HYDR   RO     1 1        AVER WDM1   732 FLOW   1 ENGL AGGR REPL
RCHRES 304 PLANK  BALCLA 1 1            WDM1  3302 BALCLA 1 ENGL AGGR REPL
*** Osage Creek at Elm Springs 7195000-Calibrate
RCHRES 316 HYDR   RO     1 1        AVER WDM1   316 FLOW   1 ENGL AGGR REPL
RCHRES 316 ROFLOW ROVOL  1 1 1.4455e-4     WDM1  3161 SIMQ   1 ENGL AGGR REPL
RCHRES 316 SEDTRN SSED   4 1            WDM1  7002 SSED4  1 ENGL AGGR REPL
RCHRES 316 HYDR   RO     1 1        AVER WDM1  5010 FLOW   1 ENGL AGGR REPL
RCHRES 316 HTRCH  TW     1 1            WDM1  8002 TW     1 ENGL AGGR REPL
RCHRES 316 SEDTRN ROSED  4 1            WDM1  7093 ROSED4 1 ENGL AGGR REPL
RCHRES 316 OXRX   DOX    1 1            WDM1  3171 DOX    1 ENGL AGGR REPL
RCHRES 316 OXRX   BOD    1 1            WDM1  3172 BOD    1 ENGL AGGR REPL
RCHRES 316 NUTRX  DNUST  1 1            WDM1  3173 DNUST  1 ENGL AGGR REPL
RCHRES 316 NUTRX  DNUST  2 1            WDM1  3174 DNUST  1 ENGL AGGR REPL
RCHRES 316 NUTRX  DNUST  4 1            WDM1  3175 DNUST  1 ENGL AGGR REPL
RCHRES 316 PLANK  PKST3  4 1            WDM1  3176 PKST3  1 ENGL AGGR REPL
RCHRES 316 PLANK  PKST3  5 1            WDM1  3177 PKST3  1 ENGL AGGR REPL
RCHRES 316 PLANK  PKST3  6 1            WDM1  3178 PKST3  1 ENGL AGGR REPL
RCHRES 316 PLANK  PKST4  1 1            WDM1  3179 PKST4  1 ENGL AGGR REPL
RCHRES 316 PLANK  PKST4  2 1            WDM1  3180 PKST4  1 ENGL AGGR REPL
RCHRES 316 PLANK  PHYCLA 1 1            WDM1  3181 CHLO   1 ENGL AGGR REPL
RCHRES 316 PLANK  BALCLA 1 1            WDM1  3182 BALCLA 1 ENGL AGGR REPL
RCHRES 316 PLANK  TPKCF1 4 1        SAME WDM1  3183 TNLD   1 ENGL      REPL
RCHRES 316 PLANK  TPKCF1 5 1        SAME WDM1  3184 TPLD   1 ENGL      REPL
RCHRES 938 NUTRX  DNUST  2 1        AVER WDM4  9381 TAM    1 ENGL AGGR REPL
RCHRES 938 NUTRX  DNUST  1 1        AVER WDM4  9382 NO3    1 ENGL AGGR REPL
RCHRES 938 PLANK  PKST3  4 1        AVER WDM4  9383 TORN   1 ENGL AGGR REPL
RCHRES 938 PLANK  PKST4  1 1        AVER WDM4  9384 TN     1 ENGL AGGR REPL
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RCHRES 938 NUTRX  DNUST  4 1        AVER WDM4  9385 PO4    1 ENGL AGGR REPL
RCHRES 938 PLANK  PKST3  5 1        AVER WDM4  9386 TORP   1 ENGL AGGR REPL
RCHRES 938 PLANK  PKST4  2 1        AVER WDM4  9387 TP     1 ENGL AGGR REPL
RCHRES 938 PLANK  PKST3  6 1        AVER WDM4  9388 TORC   1 ENGL AGGR REPL
RCHRES 938 OXRX   BOD    1 1 0.35211  AVER WDM4  9389 BOD5   1 ENGL AGGR REPL
RCHRES 938 OXRX   DOX    1 1        AVER WDM4  9390 DO     1 ENGL AGGR REPL
RCHRES 938 SEDTRN SSED   2 1        AVER WDM4  9391 SILT   1 ENGL AGGR REPL
RCHRES 938 SEDTRN SSED   3 1        AVER WDM4  9392 CLAY   1 ENGL AGGR REPL
RCHRES 938 HYDR   RO     1 1        AVER WDM4  9393 FLOW   1 METR AGGR REPL
RCHRES 938 PLANK  PHYCLA 1 1  0.001   AVER WDM4  9394 CHLA   1 ENGL AGGR REPL
RCHRES 938 HTRCH  TW     1 1        AVER WDM4  9395 TW     1 METR AGGR REPL
*** Sager Creek near West Siloam Springs 7195865-Calibrate
RCHRES 516 HYDR   RO     1 1        AVER WDM1   516 FLOW   1 ENGL AGGR REPL
RCHRES 516 ROFLOW ROVOL  1 1 9.8096e-4     WDM1  5161 SIMQ   1 ENGL AGGR REPL
RCHRES 516 SEDTRN SSED   4 1            WDM1  7007 SSED4  1 ENGL AGGR REPL
RCHRES 516 HYDR   RO     1 1        AVER WDM1  5011 FLOW   1 ENGL AGGR REPL
RCHRES 516 HTRCH  TW     1 1            WDM1  8005 TW     1 ENGL AGGR REPL
RCHRES 516 SEDTRN ROSED  4 1            WDM1  7094 ROSED4 1 ENGL AGGR REPL
RCHRES 516 OXRX   DOX    1 1            WDM1  5171 DOX    1 ENGL AGGR REPL
RCHRES 516 OXRX   BOD    1 1            WDM1  5172 BOD    1 ENGL AGGR REPL
RCHRES 516 NUTRX  DNUST  1 1            WDM1  5173 DNUST  1 ENGL AGGR REPL
RCHRES 516 NUTRX  DNUST  2 1            WDM1  5174 DNUST  1 ENGL AGGR REPL
RCHRES 516 NUTRX  DNUST  4 1            WDM1  5175 DNUST  1 ENGL AGGR REPL
RCHRES 516 PLANK  PKST3  4 1            WDM1  5176 PKST3  1 ENGL AGGR REPL
RCHRES 516 PLANK  PKST3  5 1            WDM1  5177 PKST3  1 ENGL AGGR REPL
RCHRES 516 PLANK  PKST3  6 1            WDM1  5178 PKST3  1 ENGL AGGR REPL
RCHRES 516 PLANK  PKST4  1 1            WDM1  5179 PKST4  1 ENGL AGGR REPL
RCHRES 516 PLANK  PKST4  2 1            WDM1  5180 PKST4  1 ENGL AGGR REPL
RCHRES 516 PLANK  PHYCLA 1 1            WDM1  5181 CHLO   1 ENGL AGGR REPL
RCHRES 516 PLANK  BALCLA 1 1            WDM1  5182 BALCLA 1 ENGL AGGR REPL
RCHRES 516 PLANK  TPKCF1 4 1        SAME WDM1  5183 TNLD   1 ENGL      REPL
RCHRES 516 PLANK  TPKCF1 5 1        SAME WDM1  5184 TPLD   1 ENGL      REPL
*** Baron Fork at Dutch Mills 7196900-Calibrate
RCHRES 706 HYDR   RO     1 1        AVER WDM1   706 FLOW   1 ENGL AGGR REPL
RCHRES 706 ROFLOW ROVOL  1 1 4.5661e-4     WDM1  7061 SIMQ   1 ENGL AGGR REPL
RCHRES 706 SEDTRN SSED   4 1            WDM1  7012 SSED4  1 ENGL AGGR REPL
RCHRES 706 HYDR   RO     1 1        AVER WDM1  5006 FLOW   1 ENGL AGGR REPL
RCHRES 706 HTRCH  TW     1 1            WDM1  8008 TW     1 ENGL AGGR REPL
RCHRES 706 SEDTRN ROSED  4 1            WDM1  7088 ROSED4 1 ENGL AGGR REPL
RCHRES 706 OXRX   DOX    1 1            WDM1  7101 DOX    1 ENGL AGGR REPL
RCHRES 706 OXRX   BOD    1 1            WDM1  7102 BOD    1 ENGL AGGR REPL
RCHRES 706 NUTRX  DNUST  1 1            WDM1  7103 DNUST  1 ENGL AGGR REPL
RCHRES 706 NUTRX  DNUST  2 1            WDM1  7104 DNUST  1 ENGL AGGR REPL
RCHRES 706 NUTRX  DNUST  4 1            WDM1  7105 DNUST  1 ENGL AGGR REPL
RCHRES 706 PLANK  PKST3  4 1            WDM1  7106 PKST3  1 ENGL AGGR REPL
RCHRES 706 PLANK  PKST3  5 1            WDM1  7107 PKST3  1 ENGL AGGR REPL
RCHRES 706 PLANK  PKST3  6 1            WDM1  7108 PKST3  1 ENGL AGGR REPL
RCHRES 706 PLANK  PKST4  1 1            WDM1  7109 PKST4  1 ENGL AGGR REPL
RCHRES 706 PLANK  PKST4  2 1            WDM1  7110 PKST4  1 ENGL AGGR REPL
RCHRES 706 PLANK  PHYCLA 1 1            WDM1  7111 CHLO   1 ENGL AGGR REPL
RCHRES 706 PLANK  BALCLA 1 1            WDM1  7112 BALCLA 1 ENGL AGGR REPL
RCHRES 706 PLANK  TPKCF1 4 1        SAME WDM1  7113 TNLD   1 ENGL      REPL
RCHRES 706 PLANK  TPKCF1 5 1        SAME WDM1  7114 TPLD   1 ENGL      REPL
RCHRES 512 HYDR   RO     1 1        AVER WDM1   512 FLOW   1 ENGL AGGR REPL
RCHRES 512 SEDTRN SSED   4 1            WDM1  7013 SSED4  1 ENGL AGGR REPL
RCHRES 512 HYDR   RO     1 1        AVER WDM1  5012 FLOW   1 ENGL AGGR REPL
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RCHRES 512 OXRX   DOX    1 1            WDM1  5121 DOX    1 ENGL AGGR REPL
RCHRES 512 OXRX   BOD    1 1            WDM1  5122 BOD    1 ENGL AGGR REPL
RCHRES 512 NUTRX  DNUST  1 1            WDM1  5123 DNUST  1 ENGL AGGR REPL
RCHRES 512 NUTRX  DNUST  2 1            WDM1  5124 DNUST  1 ENGL AGGR REPL
RCHRES 512 NUTRX  DNUST  4 1            WDM1  5125 DNUST  1 ENGL AGGR REPL
RCHRES 512 PLANK  PKST3  4 1            WDM1  5126 PKST3  1 ENGL AGGR REPL
RCHRES 512 PLANK  PKST3  5 1            WDM1  5127 PKST3  1 ENGL AGGR REPL
RCHRES 512 PLANK  PKST3  6 1            WDM1  5128 PKST3  1 ENGL AGGR REPL
RCHRES 512 PLANK  PKST4  1 1            WDM1  5129 PKST4  1 ENGL AGGR REPL
RCHRES 512 PLANK  PKST4  2 1            WDM1  5130 PKST4  1 ENGL AGGR REPL
RCHRES 512 PLANK  PHYCLA 1 1            WDM1  5131 CHLO   1 ENGL AGGR REPL
RCHRES 512 PLANK  BALCLA 1 1            WDM1  5132 BALCLA 1 ENGL AGGR REPL
RCHRES 512 PLANK  TPKCF1 4 1        SAME WDM1  5133 TNLD   1 ENGL      REPL
RCHRES 512 PLANK  TPKCF1 5 1        SAME WDM1  5134 TPLD   1 ENGL      REPL
*** Flint Creek at Kansas 7196000-Calibrate
RCHRES 523 HYDR   RO     1 1        AVER WDM1   523 FLOW   1 ENGL AGGR REPL
RCHRES 523 ROFLOW ROVOL  1 1 .00016316     WDM1  5231 SIMQ   1 ENGL AGGR REPL
RCHRES 523 SEDTRN SSED   4 1            WDM1  7008 SSED4  1 ENGL AGGR REPL
RCHRES 523 HYDR   RO     1 1        AVER WDM1  5003 FLOW   1 ENGL AGGR REPL
RCHRES 523 HTRCH  TW     1 1            WDM1  8006 TW     1 ENGL AGGR REPL
RCHRES 523 SEDTRN ROSED  4 1            WDM1  7058 ROSED4 1 ENGL AGGR REPL
RCHRES 523 OXRX   DOX    1 1            WDM1  5241 DOX    1 ENGL AGGR REPL
RCHRES 523 OXRX   BOD    1 1            WDM1  5242 BOD    1 ENGL AGGR REPL
RCHRES 523 NUTRX  DNUST  1 1            WDM1  5243 DNUST  1 ENGL AGGR REPL
RCHRES 523 NUTRX  DNUST  2 1            WDM1  5244 DNUST  1 ENGL AGGR REPL
RCHRES 523 NUTRX  DNUST  4 1            WDM1  5245 DNUST  1 ENGL AGGR REPL
RCHRES 523 PLANK  PKST3  4 1            WDM1  5246 PKST3  1 ENGL AGGR REPL
RCHRES 523 PLANK  PKST3  5 1            WDM1  5247 PKST3  1 ENGL AGGR REPL
RCHRES 523 PLANK  PKST3  6 1            WDM1  5248 PKST3  1 ENGL AGGR REPL
RCHRES 523 PLANK  PKST4  1 1            WDM1  5249 PKST4  1 ENGL AGGR REPL
RCHRES 523 PLANK  PKST4  2 1            WDM1  5250 PKST4  1 ENGL AGGR REPL
RCHRES 523 PLANK  PHYCLA 1 1            WDM1  5251 CHLO   1 ENGL AGGR REPL
RCHRES 523 PLANK  BALCLA 1 1            WDM1  5252 BALCLA 1 ENGL AGGR REPL
RCHRES 523 PLANK  TPKCF1 4 1        SAME WDM1  5253 TNLD   1 ENGL      REPL
RCHRES 523 PLANK  TPKCF1 5 1        SAME WDM1  5254 TPLD   1 ENGL      REPL
RCHRES 924 NUTRX  DNUST  2 1        AVER WDM4  9252 TAM    1 ENGL AGGR REPL
RCHRES 924 NUTRX  DNUST  1 1        AVER WDM4  9253 NO3    1 ENGL AGGR REPL
RCHRES 924 PLANK  PKST3  4 1        AVER WDM4  9254 TORN   1 ENGL AGGR REPL
RCHRES 924 PLANK  PKST4  1 1        AVER WDM4  9255 TN     1 ENGL AGGR REPL
RCHRES 924 NUTRX  DNUST  4 1        AVER WDM4  9256 PO4    1 ENGL AGGR REPL
RCHRES 924 PLANK  PKST3  5 1        AVER WDM4  9257 TORP   1 ENGL AGGR REPL
RCHRES 924 PLANK  PKST4  2 1        AVER WDM4  9258 TP     1 ENGL AGGR REPL
RCHRES 924 PLANK  PKST3  6 1        AVER WDM4  9259 TORC   1 ENGL AGGR REPL
RCHRES 924 OXRX   BOD    1 1 0.35211  AVER WDM4  9260 BOD5   1 ENGL AGGR REPL
RCHRES 924 OXRX   DOX    1 1        AVER WDM4  9261 DO     1 ENGL AGGR REPL
RCHRES 924 SEDTRN SSED   2 1        AVER WDM4  9262 SILT   1 ENGL AGGR REPL
RCHRES 924 SEDTRN SSED   3 1        AVER WDM4  9263 CLAY   1 ENGL AGGR REPL
RCHRES 924 HYDR   RO     1 1        AVER WDM4  9264 FLOW   1 METR AGGR REPL
RCHRES 924 PLANK  PHYCLA 1 1 0.001    AVER WDM4  9265 CHLA   1 ENGL AGGR REPL
RCHRES 924 HTRCH  TW     1 1        AVER WDM4  9266 TW     1 METR AGGR REPL
*** Caney Creek near Barber 7197360-Calibrate
RCHRES 912 HYDR   RO     1 1        AVER WDM1   912 FLOW   1 ENGL AGGR REPL
RCHRES 912 ROFLOW ROVOL  1 1 2.0793e-4     WDM1  9121 SIMQ   1 ENGL AGGR REPL
RCHRES 912 SEDTRN SSED   4 1            WDM1  7011 SSED4  1 ENGL AGGR REPL
RCHRES 912 HYDR   RO     1 1        AVER WDM1  5009 FLOW   1 ENGL AGGR REPL
RCHRES 912 HTRCH  TW     1 1            WDM1  8010 TW     1 ENGL AGGR REPL
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RCHRES 912 SEDTRN ROSED  4 1            WDM1  7092 ROSED4 1 ENGL AGGR REPL
RCHRES 912 OXRX   DOX    1 1            WDM1  9101 DOX    1 ENGL AGGR REPL
RCHRES 912 OXRX   BOD    1 1            WDM1  9102 BOD    1 ENGL AGGR REPL
RCHRES 912 NUTRX  DNUST  1 1            WDM1  9103 DNUST  1 ENGL AGGR REPL
RCHRES 912 NUTRX  DNUST  2 1            WDM1  9104 DNUST  1 ENGL AGGR REPL
RCHRES 912 NUTRX  DNUST  4 1            WDM1  9105 DNUST  1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST3  4 1            WDM1  9106 PKST3  1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST3  5 1            WDM1  9107 PKST3  1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST3  6 1            WDM1  9108 PKST3  1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST4  1 1            WDM1  9109 PKST4  1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST4  2 1            WDM1  9110 PKST4  1 ENGL AGGR REPL
RCHRES 912 PLANK  PHYCLA 1 1            WDM1  9111 CHLO   1 ENGL AGGR REPL
RCHRES 912 PLANK  BALCLA 1 1            WDM1  9112 BALCLA 1 ENGL AGGR REPL
RCHRES 912 PLANK  TPKCF1 4 1        SAME WDM1  9113 TNLD   1 ENGL      REPL
RCHRES 912 PLANK  TPKCF1 5 1        SAME WDM1  9114 TPLD   1 ENGL      REPL
RCHRES 912 NUTRX  DNUST  2 1        AVER WDM4  9121 TAM    1 ENGL AGGR REPL
RCHRES 912 NUTRX  DNUST  1 1        AVER WDM4  9122 NO3    1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST3  4 1        AVER WDM4  9123 TORN   1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST4  1 1        AVER WDM4  9124 TN     1 ENGL AGGR REPL
RCHRES 912 NUTRX  DNUST  4 1        AVER WDM4  9125 PO4    1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST3  5 1        AVER WDM4  9126 TORP   1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST4  2 1        AVER WDM4  9127 TP     1 ENGL AGGR REPL
RCHRES 912 PLANK  PKST3  6 1        AVER WDM4  9128 TORC   1 ENGL AGGR REPL
RCHRES 912 OXRX   BOD    1 1 0.35211  AVER WDM4  9129 BOD5   1 ENGL AGGR REPL
RCHRES 912 OXRX   DOX    1 1        AVER WDM4  9130 DO     1 ENGL AGGR REPL
RCHRES 912 SEDTRN SSED   2 1        AVER WDM4  9131 SILT   1 ENGL AGGR REPL
RCHRES 912 SEDTRN SSED   3 1        AVER WDM4  9132 CLAY   1 ENGL AGGR REPL
RCHRES 912 HYDR   RO     1 1        AVER WDM4  9133 FLOW   1 METR AGGR REPL
RCHRES 912 PLANK  PHYCLA 1 1 0.001    AVER WDM4  9134 CHLA   1 ENGL AGGR REPL
RCHRES 912 HTRCH  TW     1 1        AVER WDM4  9135 TW     1 METR AGGR REPL
RCHRES 746 HYDR   RO     1 1        AVER WDM1   746 FLOW   1 ENGL AGGR REPL
RCHRES 746 ROFLOW ROVOL  1 1 6.0215e-5     WDM1  7461 SIMQ   1 ENGL AGGR REPL
RCHRES 746 SEDTRN SSED   4 1            WDM1  7009 SSED4  1 ENGL AGGR REPL
RCHRES 746 HYDR   RO     1 1        AVER WDM1  5007 FLOW   1 ENGL AGGR REPL
RCHRES 746 HTRCH  TW     1 1            WDM1  8009 TW     1 ENGL AGGR REPL
RCHRES 746 SEDTRN ROSED  4 1            WDM1  7089 ROSED4 1 ENGL AGGR REPL
RCHRES 746 OXRX   DOX    1 1            WDM1  7471 DOX    1 ENGL AGGR REPL
RCHRES 746 OXRX   BOD    1 1            WDM1  7472 BOD    1 ENGL AGGR REPL
RCHRES 746 NUTRX  DNUST  1 1            WDM1  7473 DNUST  1 ENGL AGGR REPL
RCHRES 746 NUTRX  DNUST  2 1            WDM1  7474 DNUST  1 ENGL AGGR REPL
RCHRES 746 NUTRX  DNUST  4 1            WDM1  7475 DNUST  1 ENGL AGGR REPL
RCHRES 746 PLANK  PKST3  4 1            WDM1  7476 PKST3  1 ENGL AGGR REPL
RCHRES 746 PLANK  PKST3  5 1            WDM1  7477 PKST3  1 ENGL AGGR REPL
RCHRES 746 PLANK  PKST3  6 1            WDM1  7478 PKST3  1 ENGL AGGR REPL
RCHRES 746 PLANK  PKST4  1 1            WDM1  7479 PKST4  1 ENGL AGGR REPL
RCHRES 746 PLANK  PKST4  2 1            WDM1  7480 PKST4  1 ENGL AGGR REPL
RCHRES 746 PLANK  PHYCLA 1 1            WDM1  7481 CHLO   1 ENGL AGGR REPL
RCHRES 746 PLANK  BALCLA 1 1            WDM1  7482 BALCLA 1 ENGL AGGR REPL
RCHRES 746 PLANK  TPKCF1 4 1        SAME WDM1  7483 TNLD   1 ENGL      REPL
RCHRES 746 PLANK  TPKCF1 5 1        SAME WDM1  7484 TPLD   1 ENGL      REPL
RCHRES 130 HYDR   RO     1 1        AVER WDM1   130 FLOW   1 ENGL AGGR REPL
RCHRES 150 HYDR   RO     1 1        AVER WDM1   150 FLOW   1 ENGL AGGR REPL
RCHRES 150 ROFLOW ROVOL  1 1 1.1243e-4     WDM1  1502 SIMQ   1 ENGL AGGR REPL
RCHRES 150 SEDTRN SSED   4 1            WDM1  7003 SSED4  1 ENGL AGGR REPL
RCHRES 150 HYDR   RO     1 1        AVER WDM1  5002 FLOW   1 ENGL AGGR REPL
RCHRES 150 HTRCH  TW     1 1            WDM1  8001 TW     1 ENGL AGGR REPL
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RCHRES 150 SEDTRN ROSED  4 1            WDM1  7056 ROSED4 1 ENGL AGGR REPL
RCHRES 150 OXRX   DOX    1 1            WDM1  1511 DOX    1 ENGL AGGR REPL
RCHRES 150 OXRX   BOD    1 1            WDM1  1512 BOD    1 ENGL AGGR REPL
RCHRES 150 NUTRX  DNUST  1 1            WDM1  1513 DNUST  1 ENGL AGGR REPL
RCHRES 150 NUTRX  DNUST  2 1            WDM1  1514 DNUST  1 ENGL AGGR REPL
RCHRES 150 NUTRX  DNUST  4 1            WDM1  1515 DNUST  1 ENGL AGGR REPL
RCHRES 150 PLANK  PKST3  4 1            WDM1  1516 PKST3  1 ENGL AGGR REPL
RCHRES 150 PLANK  PKST3  5 1            WDM1  1517 PKST3  1 ENGL AGGR REPL
RCHRES 150 PLANK  PKST3  6 1            WDM1  1518 PKST3  1 ENGL AGGR REPL
RCHRES 150 PLANK  PKST4  1 1            WDM1  1519 PKST4  1 ENGL AGGR REPL
RCHRES 150 PLANK  PKST4  2 1            WDM1  1520 PKST4  1 ENGL AGGR REPL
RCHRES 150 PLANK  PHYCLA 1 1            WDM1  1521 CHLO   1 ENGL AGGR REPL
RCHRES 150 PLANK  BALCLA 1 1            WDM1  1522 BALCLA 1 ENGL AGGR REPL
RCHRES 150 PLANK  TPKCF1 4 1         SAME WDM1  1523 TNLD   1 ENGL      REPL
RCHRES 150 PLANK  TPKCF1 5 1         SAME WDM1  1524 TPLD   1 ENGL      REPL
RCHRES 610 HYDR   RO     1 1        AVER WDM1   610 FLOW   1 ENGL AGGR REPL
*** Illinois River South of Siloam Springs 7195430-Calibrate
RCHRES 630 HYDR   RO     1 1        AVER WDM1   630 FLOW   1 ENGL AGGR REPL
RCHRES 630 ROFLOW ROVOL  1 1 3.3124e-5     WDM1  6301 SIMQ   1 ENGL AGGR REPL
RCHRES 630 SEDTRN SSED   4 1            WDM1  7005 SSED4  1 ENGL AGGR REPL
RCHRES 630 HYDR   RO     1 1        AVER WDM1  5004 FLOW   1 ENGL AGGR REPL
RCHRES 630 HTRCH  TW     1 1            WDM1  8003 TW     1 ENGL AGGR REPL
RCHRES 630 SEDTRN ROSED  4 1            WDM1  7059 ROSED4 1 ENGL AGGR REPL
RCHRES 630 OXRX   DOX    1 1            WDM1  6311 DOX    1 ENGL AGGR REPL
RCHRES 630 OXRX   BOD    1 1            WDM1  6312 BOD    1 ENGL AGGR REPL
RCHRES 630 NUTRX  DNUST  1 1            WDM1  6313 DNUST  1 ENGL AGGR REPL
RCHRES 630 NUTRX  DNUST  2 1            WDM1  6314 DNUST  1 ENGL AGGR REPL
RCHRES 630 NUTRX  DNUST  4 1            WDM1  6315 DNUST  1 ENGL AGGR REPL
RCHRES 630 PLANK  PKST3  4 1            WDM1  6316 PKST3  1 ENGL AGGR REPL
RCHRES 630 PLANK  PKST3  5 1            WDM1  6317 PKST3  1 ENGL AGGR REPL
RCHRES 630 PLANK  PKST3  6 1            WDM1  6318 PKST3  1 ENGL AGGR REPL
RCHRES 630 PLANK  PKST4  1 1            WDM1  6319 PKST4  1 ENGL AGGR REPL
RCHRES 630 PLANK  PKST4  2 1            WDM1  6320 PKST4  1 ENGL AGGR REPL
RCHRES 630 PLANK  PHYCLA 1 1            WDM1  6321 CHLO   1 ENGL AGGR REPL
RCHRES 630 PLANK  BALCLA 1 1            WDM1  6322 BALCLA 1 ENGL AGGR REPL
RCHRES 630 PLANK  TPKCF1 4 1         SAME WDM1  6323 TNLD   1 ENGL      REPL
RCHRES 630 PLANK  TPKCF1 5 1         SAME WDM1  6324 TPLD   1 ENGL      REPL
*** Illinois River at AR/OK State Line
RCHRES 635 PLANK  TPKCF1 4 1         SAME WDM1  6353 TNLD   1 ENGL      REPL
RCHRES 635 PLANK  TPKCF1 5 1         SAME WDM1  6354 TPLD   1 ENGL      REPL
RCHRES 635 SEDTRN ROSED  4 1            WDM1  6355 ROSED4 1 ENGL AGGR REPL
*** Illinois River near Watts 7195500-Calibrate
RCHRES 640 HYDR   RO     1 1        AVER WDM1   640 FLOW   1 ENGL AGGR REPL
RCHRES 640 ROFLOW ROVOL  1 1 2.9866e-5     WDM1  6401 SIMQ   1 ENGL AGGR REPL
RCHRES 640 SEDTRN SSED   4 1            WDM1  7006 SSED4  1 ENGL AGGR REPL
RCHRES 640 HYDR   RO     1 1        AVER WDM1  5005 FLOW   1 ENGL AGGR REPL
RCHRES 640 HTRCH  TW     1 1            WDM1  8004 TW     1 ENGL AGGR REPL
RCHRES 640 SEDTRN ROSED  4 1            WDM1  7060 ROSED4 1 ENGL AGGR REPL
RCHRES 640 OXRX   DOX    1 1            WDM1  6411 DOX    1 ENGL AGGR REPL
RCHRES 640 OXRX   BOD    1 1            WDM1  6412 BOD    1 ENGL AGGR REPL
RCHRES 640 NUTRX  DNUST  1 1            WDM1  6413 DNUST  1 ENGL AGGR REPL
RCHRES 640 NUTRX  DNUST  2 1            WDM1  6414 DNUST  1 ENGL AGGR REPL
RCHRES 640 NUTRX  DNUST  4 1            WDM1  6415 DNUST  1 ENGL AGGR REPL
RCHRES 640 PLANK  PKST3  4 1            WDM1  6416 PKST3  1 ENGL AGGR REPL
RCHRES 640 PLANK  PKST3  5 1            WDM1  6417 PKST3  1 ENGL AGGR REPL
RCHRES 640 PLANK  PKST3  6 1            WDM1  6418 PKST3  1 ENGL AGGR REPL
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RCHRES 640 PLANK  PKST4  1 1            WDM1  6419 PKST4  1 ENGL AGGR REPL
RCHRES 640 PLANK  PKST4  2 1            WDM1  6420 PKST4  1 ENGL AGGR REPL
RCHRES 640 PLANK  PHYCLA 1 1            WDM1  6421 CHLO   1 ENGL AGGR REPL
RCHRES 640 PLANK  BALCLA 1 1            WDM1  6422 BALCLA 1 ENGL AGGR REPL
RCHRES 640 PLANK  TPKCF1 4 1        SAME WDM1  6423 TNLD   1 ENGL      REPL
RCHRES 640 PLANK  TPKCF1 5 1        SAME WDM1  6424 TPLD   1 ENGL      REPL
RCHRES 922 NUTRX  DNUST  2 1        AVER WDM4  9221 TAM    1 ENGL AGGR REPL
RCHRES 922 NUTRX  DNUST  1 1        AVER WDM4  9222 NO3    1 ENGL AGGR REPL
RCHRES 922 PLANK  PKST3  4 1        AVER WDM4  9223 TORN   1 ENGL AGGR REPL
RCHRES 922 PLANK  PKST4  1 1        AVER WDM4  9224 TN     1 ENGL AGGR REPL
RCHRES 922 NUTRX  DNUST  4 1        AVER WDM4  9225 PO4    1 ENGL AGGR REPL
RCHRES 922 PLANK  PKST3  5 1        AVER WDM4  9226 TORP   1 ENGL AGGR REPL
RCHRES 922 PLANK  PKST4  2 1        AVER WDM4  9227 TP     1 ENGL AGGR REPL
RCHRES 922 PLANK  PKST3  6 1        AVER WDM4  9228 TORC   1 ENGL AGGR REPL
RCHRES 922 OXRX   BOD    1 1 0.35211  AVER WDM4  9229 BOD5   1 ENGL AGGR REPL
RCHRES 922 OXRX   DOX    1 1        AVER WDM4  9230 DO     1 ENGL AGGR REPL
RCHRES 922 SEDTRN SSED   2 1        AVER WDM4  9231 SILT   1 ENGL AGGR REPL
RCHRES 922 SEDTRN SSED   3 1        AVER WDM4  9232 CLAY   1 ENGL AGGR REPL
RCHRES 922 HYDR   RO     1 1        AVER WDM4  9233 FLOW   1 METR AGGR REPL
RCHRES 922 PLANK  PHYCLA 1 1 0.001    AVER WDM4  9234 CHLA   1 ENGL AGGR REPL
RCHRES 922 HTRCH  TW     1 1        AVER WDM4  9235 TW     1 METR AGGR REPL
RCHRES 936 NUTRX  DNUST  2 1        AVER WDM4  9361 TAM    1 ENGL AGGR REPL
RCHRES 936 NUTRX  DNUST  1 1        AVER WDM4  9362 NO3    1 ENGL AGGR REPL
RCHRES 936 PLANK  PKST3  4 1        AVER WDM4  9363 TORN   1 ENGL AGGR REPL
RCHRES 936 PLANK  PKST4  1 1        AVER WDM4  9364 TN     1 ENGL AGGR REPL
RCHRES 936 NUTRX  DNUST  4 1        AVER WDM4  9365 PO4    1 ENGL AGGR REPL
RCHRES 936 PLANK  PKST3  5 1        AVER WDM4  9366 TORP   1 ENGL AGGR REPL
RCHRES 936 PLANK  PKST4  2 1        AVER WDM4  9367 TP     1 ENGL AGGR REPL
RCHRES 936 PLANK  PKST3  6 1        AVER WDM4  9368 TORC   1 ENGL AGGR REPL
RCHRES 936 OXRX   BOD    1 1 0.35211  AVER WDM4  9369 BOD5   1 ENGL AGGR REPL
RCHRES 936 OXRX   DOX    1 1        AVER WDM4  9370 DO     1 ENGL AGGR REPL
RCHRES 936 SEDTRN SSED   2 1        AVER WDM4  9371 SILT   1 ENGL AGGR REPL
RCHRES 936 SEDTRN SSED   3 1        AVER WDM4  9372 CLAY   1 ENGL AGGR REPL
RCHRES 936 HYDR   RO     1 1        AVER WDM4  9373 FLOW   1 METR AGGR REPL
RCHRES 936 PLANK  PHYCLA 1 1 0.001    AVER WDM4  9374 CHLA   1 ENGL AGGR REPL
RCHRES 936 HTRCH  TW     1 1        AVER WDM4  9375 TW     1 METR AGGR REPL
RCHRES 800 HYDR   RO     1 1        AVER WDM1   800 FLOW   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   1 1 1.9315e-5     WDM1  1303 SURO   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   2 1 1.9315e-5     WDM1  1304 IFWO   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   3 1 1.9315e-5     WDM1  1305 AGWO   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   4 1 1.9315e-5     WDM1  1306 PETX   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   5 1 1.9315e-5     WDM1  1307 SAET   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   6 1 1.9315e-5AVER WDM1  1308 UZSX   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   7 1 1.9315e-5AVER WDM1  1309 LZSX   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   8 1 1.9315e-5     WDM1  1310 SUPY   1 ENGL AGGR REPL
***COPY    1 OUTPUT MEAN   9 1             WDM1  1302 SIMQ   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   1 1 9.3689e-6     WDM1  1503 SURO   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   2 1 9.3689e-6     WDM1  1504 IFWO   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   3 1 9.3689e-6     WDM1  1505 AGWO   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   4 1 9.3689e-6     WDM1  1506 PETX   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   5 1 9.3689e-6     WDM1  1507 SAET   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   6 1 9.3689e-6AVER WDM1  1508 UZSX   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   7 1 9.3689e-6AVER WDM1  1509 LZSX   1 ENGL AGGR REPL
***COPY    2 OUTPUT MEAN   8 1 9.3689e-6     WDM1  1510 SUPY   1 ENGL AGGR REPL
***COPY    3 OUTPUT MEAN   1 1 1.6512e-6     WDM1  8702 SURO   1 ENGL AGGR REPL
***COPY    3 OUTPUT MEAN   2 1 1.6512e-6     WDM1  8703 IFWO   1 ENGL AGGR REPL
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***COPY    3 OUTPUT MEAN  3 1 1.6512e-6     WDM1  8704 AGWO   1 ENGL AGGR REPL
***COPY    3 OUTPUT MEAN  4 1 1.6512e-6     WDM1  8705 PETX   1 ENGL AGGR REPL
***COPY    3 OUTPUT MEAN  5 1 1.6512e-6     WDM1  8706 SAET   1 ENGL AGGR REPL
***COPY    3 OUTPUT MEAN  6 1 1.6512e-6AVER WDM1  8707 UZSX   1 ENGL AGGR REPL
***COPY    3 OUTPUT MEAN  7 1 1.6512e-6AVER WDM1  8708 LZSX   1 ENGL AGGR REPL
***COPY    3 OUTPUT MEAN  8 1 1.6512e-6     WDM1  8709 SUPY   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  1 1 5.0179e-6     WDM1  7462 SURO   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  2 1 5.0179e-6     WDM1  7463 IFWO   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  3 1 5.0179e-6     WDM1  7464 AGWO   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  4 1 5.0179e-6     WDM1  7465 PETX   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  5 1 5.0179e-6     WDM1  7466 SAET   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  6 1 5.0179e-6AVER WDM1  7467 UZSX   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  7 1 5.0179e-6AVER WDM1  7468 LZSX   1 ENGL AGGR REPL
***COPY    4 OUTPUT MEAN  8 1 5.0179e-6     WDM1  7469 SUPY   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  1 1 1.3597e-5     WDM1  5232 SURO   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  2 1 1.3597e-5     WDM1  5233 IFWO   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  3 1 1.3597e-5     WDM1  5234 AGWO   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  4 1 1.3597e-5     WDM1  5235 PETX   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  5 1 1.3597e-5     WDM1  5236 SAET   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  6 1 1.3597e-5AVER WDM1  5237 UZSX   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  7 1 1.3597e-5AVER WDM1  5238 LZSX   1 ENGL AGGR REPL
***COPY    5 OUTPUT MEAN  8 1 1.3597e-5     WDM1  5239 SUPY   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  1 1 2.4889e-6     WDM1  6402 SURO   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  2 1 2.4889e-6     WDM1  6403 IFWO   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  3 1 2.4889e-6     WDM1  6404 AGWO   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  4 1 2.4889e-6     WDM1  6405 PETX   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  5 1 2.4889e-6     WDM1  6406 SAET   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  6 1 2.4889e-6AVER WDM1  6407 UZSX   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  7 1 2.4889e-6AVER WDM1  6408 LZSX   1 ENGL AGGR REPL
***COPY    6 OUTPUT MEAN  8 1 2.4889e-6     WDM1  6409 SUPY   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  1 1 1.2046e-5     WDM1  3162 SURO   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  2 1 1.2046e-5     WDM1  3163 IFWO   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  3 1 1.2046e-5     WDM1  3164 AGWO   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  4 1 1.2046e-5     WDM1  3165 PETX   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  5 1 1.2046e-5     WDM1  3166 SAET   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  6 1 1.2046e-5AVER WDM1  3167 UZSX   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  7 1 1.2046e-5AVER WDM1  3168 LZSX   1 ENGL AGGR REPL
***COPY    7 OUTPUT MEAN  8 1 1.2046e-5     WDM1  3169 SUPY   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  1 1 2.7603e-6     WDM1  6302 SURO   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  2 1 2.7603e-6     WDM1  6303 IFWO   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  3 1 2.7603e-6     WDM1  6304 AGWO   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  4 1 2.7603e-6     WDM1  6305 PETX   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  5 1 2.7603e-6     WDM1  6306 SAET   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  6 1 2.7603e-6AVER WDM1  6307 UZSX   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  7 1 2.7603e-6AVER WDM1  6308 LZSX   1 ENGL AGGR REPL
***COPY    8 OUTPUT MEAN  8 1 2.7603e-6     WDM1  6309 SUPY   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  1 1 1.7328e-5     WDM1  9122 SURO   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  2 1 1.7328e-5     WDM1  9123 IFWO   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  3 1 1.7328e-5     WDM1  9124 AGWO   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  4 1 1.7328e-5     WDM1  9125 PETX   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  5 1 1.7328e-5     WDM1  9126 SAET   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  6 1 1.7328e-5AVER WDM1  9127 UZSX   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  7 1 1.7328e-5AVER WDM1  9128 LZSX   1 ENGL AGGR REPL
***COPY    9 OUTPUT MEAN  8 1 1.7328e-5     WDM1  9129 SUPY   1 ENGL AGGR REPL
***COPY   10 OUTPUT MEAN  1 1 3.8051e-5     WDM1  7062 SURO   1 ENGL AGGR REPL
***COPY   10 OUTPUT MEAN  2 1 3.8051e-5     WDM1  7063 IFWO   1 ENGL AGGR REPL
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***COPY    10 OUTPUT MEAN   3 1 3.8051e-5     WDM1  7064 AGWO   1 ENGL AGGR REPL
***COPY    10 OUTPUT MEAN   4 1 3.8051e-5     WDM1  7065 PETX   1 ENGL AGGR REPL
***COPY    10 OUTPUT MEAN   5 1 3.8051e-5     WDM1  7066 SAET   1 ENGL AGGR REPL
***COPY    10 OUTPUT MEAN   6 1 3.8051e-5AVER WDM1  7067 UZSX   1 ENGL AGGR REPL
***COPY    10 OUTPUT MEAN   7 1 3.8051e-5AVER WDM1  7068 LZSX   1 ENGL AGGR REPL
***COPY    10 OUTPUT MEAN   8 1 3.8051e-5     WDM1  7069 SUPY   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   1 1 8.1747e-5     WDM1  5162 SURO   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   2 1 8.1747e-5     WDM1  5163 IFWO   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   3 1 8.1747e-5     WDM1  5164 AGWO   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   4 1 8.1747e-5     WDM1  5165 PETX   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   5 1 8.1747e-5     WDM1  5166 SAET   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   6 1 8.1747e-5AVER WDM1  5167 UZSX   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   7 1 8.1747e-5AVER WDM1  5168 LZSX   1 ENGL AGGR REPL
***COPY    11 OUTPUT MEAN   8 1 8.1747e-5     WDM1  5169 SUPY   1 ENGL AGGR REPL
***Output to EFDC.WDM
RCHRES 752 NUTRX  DNUST  2 1         AVER WDM4  7521 TAM    1 ENGL AGGR REPL
RCHRES 752 NUTRX  DNUST  1 1         AVER WDM4  7522 NO3    1 ENGL AGGR REPL
RCHRES 752 PLANK  PKST3  4 1         AVER WDM4  7523 TORN   1 ENGL AGGR REPL
RCHRES 752 PLANK  PKST4  1 1         AVER WDM4  7524 TN     1 ENGL AGGR REPL
RCHRES 752 NUTRX  DNUST  4 1         AVER WDM4  7525 PO4    1 ENGL AGGR REPL
RCHRES 752 PLANK  PKST3  5 1         AVER WDM4  7526 TORP   1 ENGL AGGR REPL
RCHRES 752 PLANK  PKST4  2 1         AVER WDM4  7527 TP     1 ENGL AGGR REPL
RCHRES 752 PLANK  PKST3  6 1         AVER WDM4  7528 TORC   1 ENGL AGGR REPL
***The multiplication factor converst BODu to BOD5
RCHRES 752 OXRX   BOD    1 1 0.35211  AVER WDM4  7529 BOD5   1 ENGL AGGR REPL
RCHRES 752 OXRX   DOX    1 1         AVER WDM4  7530 DO     1 ENGL AGGR REPL
RCHRES 752 SEDTRN SSED   2 1         AVER WDM4  7531 SILT   1 ENGL AGGR REPL
RCHRES 752 SEDTRN SSED   3 1         AVER WDM4  7532 CLAY   1 ENGL AGGR REPL
RCHRES 752 HYDR   RO     1 1         AVER WDM4  7533 FLOW   1 METR AGGR REPL
***The multiplication factor converts concentration from ug/L to mg/L
RCHRES 752 PLANK  PHYCLA 1 1 0.001    AVER WDM4  7534 CHLA   1 ENGL AGGR REPL
RCHRES 752 HTRCH  TW     1 1         AVER WDM4  7535 TW     1 METR AGGR REPL
*** Illinois River near Tahlequah 7196500-Calibrate
RCHRES 870 HYDR   RO     1 1         AVER WDM1   870 FLOW   1 ENGL AGGR REPL
RCHRES 870 ROFLOW ROVOL  1 1 1.9814e-5     WDM1  8701 SIMQ   1 ENGL AGGR REPL
RCHRES 870 SEDTRN SSED   4 1             WDM1  7010 SSED4  1 ENGL AGGR REPL
RCHRES 870 HYDR   RO     1 1         AVER WDM1  5008 FLOW   1 ENGL AGGR REPL
RCHRES 870 HTRCH  TW     1 1             WDM1  8007 TW     1 ENGL AGGR REPL
RCHRES 870 SEDTRN ROSED  4 1             WDM1  7090 ROSED4 1 ENGL AGGR REPL
RCHRES 870 OXRX   DOX    1 1             WDM1  8681 DOX    1 ENGL AGGR REPL
RCHRES 870 OXRX   BOD    1 1             WDM1  8682 BOD    1 ENGL AGGR REPL
RCHRES 870 NUTRX  DNUST  1 1             WDM1  8683 DNUST  1 ENGL AGGR REPL
RCHRES 870 NUTRX  DNUST  2 1             WDM1  8684 DNUST  1 ENGL AGGR REPL
RCHRES 870 NUTRX  DNUST  4 1             WDM1  8685 DNUST  1 ENGL AGGR REPL
RCHRES 870 PLANK  PKST3  4 1             WDM1  8686 PKST3  1 ENGL AGGR REPL
RCHRES 870 PLANK  PKST3  5 1             WDM1  8687 PKST3  1 ENGL AGGR REPL
RCHRES 870 PLANK  PKST3  6 1             WDM1  8688 PKST3  1 ENGL AGGR REPL
RCHRES 870 PLANK  PKST4  1 1             WDM1  8689 PKST4  1 ENGL AGGR REPL
RCHRES 870 PLANK  PKST4  2 1             WDM1  8690 PKST4  1 ENGL AGGR REPL
RCHRES 870 PLANK  PHYCLA 1 1             WDM1  8691 CHLO   1 ENGL AGGR REPL
RCHRES 870 PLANK  BALCLA 1 1             WDM1  8692 BALCLA 1 ENGL AGGR REPL
RCHRES 870 PLANK  TPKCF1 4 1         SAME WDM1  8693 TNLD   1 ENGL      REPL
RCHRES 870 PLANK  TPKCF1 5 1         SAME WDM1  8694 TPLD   1 ENGL      REPL
RCHRES 890 NUTRX  DNUST  2 1         AVER WDM4  8901 TAM    1 ENGL AGGR REPL
RCHRES 890 NUTRX  DNUST  1 1         AVER WDM4  8902 NO3    1 ENGL AGGR REPL
RCHRES 890 PLANK  PKST3  4 1         AVER WDM4  8903 TORN   1 ENGL AGGR REPL
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RCHRES 890 PLANK  PKST4  1 1        AVER WDM4  8904 TN     1 ENGL AGGR REPL
RCHRES 890 NUTRX  DNUST  4 1        AVER WDM4  8905 PO4    1 ENGL AGGR REPL
RCHRES 890 PLANK  PKST3  5 1        AVER WDM4  8906 TORP   1 ENGL AGGR REPL
RCHRES 890 PLANK  PKST4  2 1        AVER WDM4  8907 TP     1 ENGL AGGR REPL
RCHRES 890 PLANK  PKST3  6 1        AVER WDM4  8908 TORC   1 ENGL AGGR REPL
RCHRES 890 OXRX   BOD    1 1 0.35211  AVER WDM4  8909 BOD5   1 ENGL AGGR REPL
RCHRES 890 OXRX   DOX    1 1        AVER WDM4  8910 DO     1 ENGL AGGR REPL
RCHRES 890 SEDTRN SSED   2 1        AVER WDM4  8911 SILT   1 ENGL AGGR REPL
RCHRES 890 SEDTRN SSED   3 1        AVER WDM4  8912 CLAY   1 ENGL AGGR REPL
RCHRES 890 HYDR   RO     1 1        AVER WDM4  8913 FLOW   1 METR AGGR REPL
RCHRES 890 PLANK  PHYCLA 1 1 0.001    AVER WDM4  8914 CHLA   1 ENGL AGGR REPL
RCHRES 890 HTRCH  TW     1 1        AVER WDM4  8915 TW     1 METR AGGR REPL
COPY   900 OUTPUT MEAN   1 1        SUM  WDM4  9001 FLOV   1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   2 1        SUM  WDM4  9002 SSED   1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   3 1        SUM  WDM4  9003 HEAT   1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   4 1        SUM  WDM4  9004 TAM    1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   5 1        SUM  WDM4  9005 NO3    1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   6 1        SUM  WDM4  9006 TORN   1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   7 1        SUM  WDM4  9007 PO4    1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   8 1        SUM  WDM4  9008 TORP   1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN   9 1        SUM  WDM4  9009 TORC   1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN  10 1        SUM  WDM4  9010 BOD5   1 ENGL AGGR REPL
COPY   900 OUTPUT MEAN  11 1        SUM  WDM4  9011 DO     1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   1 1        SUM  WDM4  9141 FLOV   1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   2 1        SUM  WDM4  9142 SSED   1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   3 1        SUM  WDM4  9143 HEAT   1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   4 1        SUM  WDM4  9144 TAM    1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   5 1        SUM  WDM4  9145 NO3    1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   6 1        SUM  WDM4  9146 TORN   1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   7 1        SUM  WDM4  9147 PO4    1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   8 1        SUM  WDM4  9148 TORP   1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN   9 1        SUM  WDM4  9149 TORC   1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN  10 1        SUM  WDM4  9150 BOD5   1 ENGL AGGR REPL
COPY   914 OUTPUT MEAN  11 1        SUM  WDM4  9151 DO     1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   1 1        SUM  WDM4  9281 FLOV   1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   2 1        SUM  WDM4  9282 SSED   1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   3 1        SUM  WDM4  9283 HEAT   1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   4 1        SUM  WDM4  9284 TAM    1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   5 1        SUM  WDM4  9285 NO3    1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   6 1        SUM  WDM4  9286 TORN   1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   7 1        SUM  WDM4  9287 PO4    1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   8 1        SUM  WDM4  9288 TORP   1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN   9 1        SUM  WDM4  9289 TORC   1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN  10 1        SUM  WDM4  9290 BOD5   1 ENGL AGGR REPL
COPY   928 OUTPUT MEAN  11 1        SUM  WDM4  9291 DO     1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   1 1        SUM  WDM4  9181 FLOV   1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   2 1        SUM  WDM4  9182 SSED   1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   3 1        SUM  WDM4  9183 HEAT   1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   4 1        SUM  WDM4  9184 TAM    1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   5 1        SUM  WDM4  9185 NO3    1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   6 1        SUM  WDM4  9186 TORN   1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   7 1        SUM  WDM4  9187 PO4    1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   8 1        SUM  WDM4  9188 TORP   1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN   9 1        SUM  WDM4  9189 TORC   1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN  10 1        SUM  WDM4  9190 BOD5   1 ENGL AGGR REPL
COPY   918 OUTPUT MEAN  11 1        SUM  WDM4  9191 DO     1 ENGL AGGR REPL
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COPY   924 OUTPUT MEAN   1 1        SUM  WDM4  9241 FLOV   1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   2 1        SUM  WDM4  9242 SSED   1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   3 1        SUM  WDM4  9243 HEAT   1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   4 1        SUM  WDM4  9244 TAM    1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   5 1        SUM  WDM4  9245 NO3    1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   6 1        SUM  WDM4  9246 TORN   1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   7 1        SUM  WDM4  9247 PO4    1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   8 1        SUM  WDM4  9248 TORP   1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN   9 1        SUM  WDM4  9249 TORC   1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN  10 1        SUM  WDM4  9250 BOD5   1 ENGL AGGR REPL
COPY   924 OUTPUT MEAN  11 1        SUM  WDM4  9251 DO     1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   1 1        SUM  WDM4  9321 FLOV   1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   2 1        SUM  WDM4  9322 SSED   1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   3 1        SUM  WDM4  9323 HEAT   1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   4 1        SUM  WDM4  9324 TAM    1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   5 1        SUM  WDM4  9325 NO3    1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   6 1        SUM  WDM4  9326 TORN   1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   7 1        SUM  WDM4  9327 PO4    1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   8 1        SUM  WDM4  9328 TORP   1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN   9 1        SUM  WDM4  9329 TORC   1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN  10 1        SUM  WDM4  9330 BOD5   1 ENGL AGGR REPL
COPY   932 OUTPUT MEAN  11 1        SUM  WDM4  9331 DO     1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   1 1        SUM  WDM4  9421 FLOV   1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   2 1        SUM  WDM4  9422 SSED   1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   3 1        SUM  WDM4  9423 HEAT   1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   4 1        SUM  WDM4  9424 TAM    1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   5 1        SUM  WDM4  9425 NO3    1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   6 1        SUM  WDM4  9426 TORN   1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   7 1        SUM  WDM4  9427 PO4    1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   8 1        SUM  WDM4  9428 TORP   1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN   9 1        SUM  WDM4  9429 TORC   1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN  10 1        SUM  WDM4  9430 BOD5   1 ENGL AGGR REPL
COPY   942 OUTPUT MEAN  11 1        SUM  WDM4  9431 DO     1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   1 1        SUM  WDM4  9481 FLOV   1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   2 1        SUM  WDM4  9482 SSED   1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   3 1        SUM  WDM4  9483 HEAT   1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   4 1        SUM  WDM4  9484 TAM    1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   5 1        SUM  WDM4  9485 NO3    1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   6 1        SUM  WDM4  9486 TORN   1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   7 1        SUM  WDM4  9487 PO4    1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   8 1        SUM  WDM4  9488 TORP   1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN   9 1        SUM  WDM4  9489 TORC   1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN  10 1        SUM  WDM4  9490 BOD5   1 ENGL AGGR REPL
COPY   948 OUTPUT MEAN  11 1        SUM  WDM4  9491 DO     1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   1 1        SUM  WDM4  9461 FLOV   1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   2 1        SUM  WDM4  9462 SSED   1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   3 1        SUM  WDM4  9463 HEAT   1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   4 1        SUM  WDM4  9464 TAM    1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   5 1        SUM  WDM4  9465 NO3    1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   6 1        SUM  WDM4  9466 TORN   1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   7 1        SUM  WDM4  9467 PO4    1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   8 1        SUM  WDM4  9468 TORP   1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN   9 1        SUM  WDM4  9469 TORC   1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN  10 1        SUM  WDM4  9470 BOD5   1 ENGL AGGR REPL
COPY   946 OUTPUT MEAN  11 1        SUM  WDM4  9471 DO     1 ENGL AGGR REPL
***Composite concentration of RCHRES 900, 914, and 916
```

```
GENER  800 OUTPUT TIMSER 1 1              WDM1  8011 SSED4  1 ENGL AGGR REPL
END EXT TARGETS

GENER
  OPCODE
  GENER-opn***
   #thru#  OP- ***
         CODE ***
  800        19
  END OPCODE

END GENER

MASS-LINK

  MASS-LINK        2
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>           <Name> x x<-factor->     <Name>                <Name> x x  ***
PERLND     PWATER PERO       0.0833333     RCHRES        INFLOW IVOL
PERLND     PWTGAS PODOXM                   RCHRES        INFLOW OXIF   1
PERLND     PWTGAS POHT                     RCHRES        INFLOW IHEAT  1
PERLND     SEDMNT SOSED  1        0.10     RCHRES        INFLOW ISED   1
PERLND     SEDMNT SOSED  1        0.50     RCHRES        INFLOW ISED   2
PERLND     SEDMNT SOSED  1         0.4     RCHRES        INFLOW ISED   3
PERLND     PQUAL  POQUAL 1        0.25     RCHRES        INFLOW NUIF1  2
PERLND     PQUAL  POQUAL 2        0.25     RCHRES        INFLOW NUIF1  1
PERLND     PQUAL  POQUAL 3        0.25     RCHRES        INFLOW NUIF1  4
PERLND     PQUAL  POQUAL 4         0.1     RCHRES        INFLOW OXIF   2
PERLND     PQUAL  POQUAL 4       0.012     RCHRES        INFLOW PKIF   3
PERLND     PQUAL  POQUAL 4       0.001     RCHRES        INFLOW PKIF   4
PERLND     PQUAL  POQUAL 4        0.15     RCHRES        INFLOW PKIF   5
  END MASS-LINK    2

  MASS-LINK        5
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>           <Name> x x<-factor->     <Name>                <Name> x x  ***
*** pasture PERLNDs
PERLND     PWATER PERO       0.0833333     RCHRES        INFLOW IVOL
PERLND     PWTGAS PODOXM                   RCHRES        INFLOW OXIF   1
PERLND     PWTGAS POHT                     RCHRES        INFLOW IHEAT  1
PERLND     SEDMNT SOSED  1        0.10     RCHRES        INFLOW ISED   1
PERLND     SEDMNT SOSED  1        0.50     RCHRES        INFLOW ISED   2
PERLND     SEDMNT SOSED  1         0.4     RCHRES        INFLOW ISED   3
*** NO3
PERLND     NITR   PONO3           0.25     RCHRES        INFLOW NUIF1  1
*** Dissolved NH3
PERLND     NITR   TSAMS  1        0.25     RCHRES        INFLOW NUIF1  2
PERLND     NITR   TSAMS  5        0.25     RCHRES        INFLOW NUIF1  2
PERLND     NITR   SSAMS  3        0.25     RCHRES        INFLOW NUIF1  2
*** Adsorbed NH3
PERLND     NITR   SEDN   2       0.175     RCHRES        INFLOW NUIF2  2 1
PERLND     NITR   SEDN   2       0.075     RCHRES        INFLOW NUIF2  3 1
*** Dissolved PO4
PERLND     PHOS   TSP4S  1        0.25     RCHRES        INFLOW NUIF1  4
PERLND     PHOS   TSP4S  5        0.25     RCHRES        INFLOW NUIF1  4
PERLND     PHOS   SSP4S  3        0.25     RCHRES        INFLOW NUIF1  4
```

```
*** Adsorbed PO4
PERLND    PHOS   SEDP   2      0.175     RCHRES        INFLOW NUIF2  2 2
PERLND    PHOS   SEDP   2      0.075     RCHRES        INFLOW NUIF2  3 2
*** Organics
*** Refractory organic N (assume 60% refractory)
PERLND    NITR   POORN          0.15     RCHRES        INFLOW PKIF   3
*** Labile organic N (convert to BOD using CVON and 40% labile fraction)(factor = 0.4/CVON =
0.4/0.052945)
PERLND    NITR   POORN           1.9     RCHRES        INFLOW OXIF   2
*** Refractory Organic P
PERLND    PHOS   SEDP   1        0.3     RCHRES        INFLOW PKIF   4
*** Refractory Organic C (convert to refr organic C with 0.6 * CVOC/CVON = 0.6*0.3006/0.05294)
PERLND    NITR   POORN        0.8525     RCHRES        INFLOW PKIF   5
  END MASS-LINK    5

  MASS-LINK        1
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>           <Name> x x<-factor->     <Name>              <Name> x x  ***
IMPLND    IWATER SURO       0.0833333     RCHRES        INFLOW IVOL
IMPLND    IWTGAS SODOXM                   RCHRES        INFLOW OXIF   1
IMPLND    IWTGAS SOHT                     RCHRES        INFLOW IHEAT  1
IMPLND    SOLIDS SOSLD  1       0.10     RCHRES        INFLOW ISED   1
IMPLND    SOLIDS SOSLD  1       0.50     RCHRES        INFLOW ISED   2
IMPLND    SOLIDS SOSLD  1        0.4     RCHRES        INFLOW ISED   3
IMPLND    IQUAL  SOQUAL 1       0.25     RCHRES        INFLOW NUIF1  2
IMPLND    IQUAL  SOQUAL 2       0.25     RCHRES        INFLOW NUIF1  1
IMPLND    IQUAL  SOQUAL 3       0.25     RCHRES        INFLOW NUIF1  4
IMPLND    IQUAL  SOQUAL 4        0.1     RCHRES        INFLOW OXIF   2
IMPLND    IQUAL  SOQUAL 4      0.012     RCHRES        INFLOW PKIF   3
IMPLND    IQUAL  SOQUAL 4      0.001     RCHRES        INFLOW PKIF   4
IMPLND    IQUAL  SOQUAL 4       0.15     RCHRES        INFLOW PKIF   5
  END MASS-LINK    1

  MASS-LINK        3
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>           <Name> x x<-factor->     <Name>              <Name> x x  ***
RCHRES    ROFLOW                          RCHRES        INFLOW
  END MASS-LINK    3

  MASS-LINK        4
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>           <Name> x x<-factor->     <Name>              <Name> x x  ***
*** this is used for RCHRES where a diversion is modeled from exit 1 and the flow downstream uses exit
2
*** RCHRES 637 in this model
RCHRES    OFLOW         2                 RCHRES        INFLOW
  END MASS-LINK    4

  MASS-LINK       90
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>           <Name> x x<-factor->     <Name>              <Name> x x  ***
PERLND    PWATER SUPY                     COPY          INPUT  MEAN   8
PERLND    PWATER LZS                      COPY          INPUT  MEAN   7
PERLND    PWATER SURO                     COPY          INPUT  MEAN   1
PERLND    PWATER UZS                      COPY          INPUT  MEAN   6
PERLND    PWATER AGWO                     COPY          INPUT  MEAN   3
```

```
PERLND    PWATER TAET                COPY        INPUT  MEAN   5
PERLND    PWATER PET                 COPY        INPUT  MEAN   4
PERLND    PWATER IFWO                COPY        INPUT  MEAN   2
  END MASS-LINK   90

  MASS-LINK      91
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>          <Name> x x<-factor->     <Name>             <Name> x x  ***
IMPLND    IWATER SUPY                COPY        INPUT  MEAN   8
IMPLND    IWATER SURO                COPY        INPUT  MEAN   1
IMPLND    IWATER IMPEV               COPY        INPUT  MEAN   5
IMPLND    IWATER PET                 COPY        INPUT  MEAN   4
  END MASS-LINK   91

  MASS-LINK      82
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>          <Name> x x<-factor->     <Name>             <Name> x x  ***
*** non-pasture PERLNDs
***Flow in ac-ft
PERLND    PWATER PERO      0.0833333    COPY        INPUT  MEAN   1
***Only Silt + Clay is needed for EFDC modeling
PERLND    SEDMNT SOSED  1        0.9    COPY        INPUT  MEAN   2
***Heat
PERLND    PWTGAS POHT                COPY        INPUT  MEAN   3
***TAM
PERLND    PQUAL  POQUAL 1            COPY        INPUT  MEAN   4
***NO3
PERLND    PQUAL  POQUAL 2            COPY        INPUT  MEAN   5
***Organic N
PERLND    PQUAL  POQUAL 4   0.069176     COPY        INPUT  MEAN   6
***Ortho P
PERLND    PQUAL  POQUAL 3            COPY        INPUT  MEAN   7
***Organic P
PERLND    PQUAL  POQUAL 4   0.0075304    COPY        INPUT  MEAN   8
***Total Organic Carbon
PERLND    PQUAL  POQUAL 4       0.72    COPY        INPUT  MEAN   9
***BOD5
PERLND    PQUAL  POQUAL 4     0.1408    COPY        INPUT  MEAN  10
***DO
PERLND    PWTGAS PODOXM              COPY        INPUT  MEAN  11
  END MASS-LINK   82

  MASS-LINK      85
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>          <Name> x x<-factor->     <Name>             <Name> x x  ***
*** pasture PERLNDs
PERLND    PWATER PERO      0.0833333    COPY        INPUT  MEAN   1
***Only Silt + Clay is needed for EFDC modeling
PERLND    SEDMNT SOSED  1        0.9    COPY        INPUT  MEAN   2
***Heat
PERLND    PWTGAS POHT                COPY        INPUT  MEAN   3
*** Dissolved NH3
PERLND    NITR   TSAMS  1            COPY        INPUT  MEAN   4
PERLND    NITR   TSAMS  5            COPY        INPUT  MEAN   4
PERLND    NITR   SSAMS  3            COPY        INPUT  MEAN   4
*** Adsorbed NH3
```

```
PERLND    NITR   SEDN   2    0.70       COPY        INPUT  MEAN   4
PERLND    NITR   SEDN   2    0.30       COPY        INPUT  MEAN   4
*** NO3
PERLND    NITR   PONO3               COPY        INPUT  MEAN   5
***Organic N
PERLND    NITR   POORN               COPY        INPUT  MEAN   6
*** Dissolved PO4
PERLND    PHOS   TSP4S  1            COPY        INPUT  MEAN   7
PERLND    PHOS   TSP4S  5            COPY        INPUT  MEAN   7
PERLND    PHOS   SSP4S  3            COPY        INPUT  MEAN   7
*** Adsorbed PO4
PERLND    PHOS   SEDP   2            COPY        INPUT  MEAN   7
***Organic P
PERLND    PHOS   SEDP   1   1.20       COPY        INPUT  MEAN   8
PERLND    NITR   POORN     0.0553479    COPY        INPUT  MEAN   8
***Total Organic C
PERLND    NITR   POORN     5.681       COPY        INPUT  MEAN   9
***BOD5
PERLND    NITR   POORN     2.66        COPY        INPUT  MEAN  10
***DO
PERLND    PWTGAS PODOXM                COPY        INPUT  MEAN  11
  END MASS-LINK   85

  MASS-LINK       81
<-Volume-> <-Grp> <-Member-><--Mult-->     <-Target vols> <-Grp> <-Member->  ***
<Name>           <Name> x x<-factor->     <Name>              <Name> x x  ***
IMPLND    IWATER SURO       0.0833333    COPY        INPUT  MEAN   1
***Only Silt + Clay is needed for EFDC modeling
IMPLND    SOLIDS SOSLD  1        0.9     COPY        INPUT  MEAN   2
***Heat
IMPLND    IWTGAS SOHT                  COPY        INPUT  MEAN   3
***TAM
IMPLND    IQUAL  SOQUAL 1              COPY        INPUT  MEAN   4
***Nitrate
IMPLND    IQUAL  SOQUAL 2              COPY        INPUT  MEAN   5
***Organic N
IMPLND    IQUAL  SOQUAL 4   0.069176     COPY        INPUT  MEAN   6
***OrthoP
IMPLND    IQUAL  SOQUAL 3              COPY        INPUT  MEAN   7
***Organic P
IMPLND    IQUAL  SOQUAL 4   0.0075304    COPY        INPUT  MEAN   8
***Total Organic Carbon
IMPLND    IQUAL  SOQUAL 4     0.72      COPY        INPUT  MEAN   9
***BOD5
IMPLND    IQUAL  SOQUAL 4     0.1408    COPY        INPUT  MEAN  10
***DO
IMPLND    IWTGAS SODOXM                COPY        INPUT  MEAN  11
  END MASS-LINK   81
END MASS-LINK



*** not used!!
MONTH-DATA

  MONTH-DATA       1
```

```
  Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec ***
    0     00.03640.03640.03640.03640.03640.03640.03640.03640.0364     0
  END MONTH-DATA   1

  MONTH-DATA       2
  Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec ***
    0     00.03640.03640.03640.03640.03640.03640.03640.03640.0364     0
  END MONTH-DATA   2

  MONTH-DATA       3
  Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec ***
    0     0 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004     0
  END MONTH-DATA   3

  MONTH-DATA       4
  Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec ***
    0     0 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004     0
  END MONTH-DATA   4

  MONTH-DATA       5
  Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec ***
    0     00.07160.07160.07160.07160.07160.07160.07160.07160.0716     0
  END MONTH-DATA   5

  MONTH-DATA       6
  Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec ***
    0     00.07160.07160.07160.07160.07160.07160.07160.07160.0716     0
  END MONTH-DATA   6

END MONTH-DATA

SPEC-ACTIONS
***                        addr
***                      <------>
*** kwd  varnam optyp  opn  vari  s1 s2 s3 tp multiply  lc ls ac as agfn ***
  <****> <----> <----> <-> <----><-><-><-><-><--------> <><-> <><-> <--> ***
  UVQUAN prec42 PERLND 442 SUPY             3                 DY  1 SUM
*** above in case we decide to use deferral for rain

*** DISTRB FUNCTION
*** DISTRB #1 = 5 applications of litter separated by two months
*** "5" refers to number of applications
*** "MO   2" means apply every two months
*** if deferred, shift
*** each application is 20% of total
*** EDIT by TAS on 07/06/2016 - 6 Applications on 2 month interval; using ODAFF data and 25%
weighting on Spr/fall
*** EDIT by TAS on 09/14/2016 - Aplign applications to start in March
*** kwd  ds  ct tc  ts  def     f1   f2   f3   f4   f5   f6   f7   f8   f9  f10
  <****>< > < > <> < > <--->  <---><---><---><---><---><---><---><---><---><--->
  DISTRB  1   6 MO   2 SHIFT   0.40  .16  .10  .17  .09  .08

*** UVNAME FUNCTION ***
*** USER Defined Variable for Litter Application ***
*** litter applications assumed to be tons/ac
*** NO3 = 0.8 lb/ton
```

```
*** NH4 = 7.7 lb/ton
*** ORGN = 53.5 lb/ton
*** PO4 = 27 lb/ton (1.9 dissolved + 25.1 adsorbed)
*** ORGP = 3 lb/ton
*** split all constituents 50% Surface and 50% Upper Layer
*** assume all NH4 and PO4 applied to adsorbed forms
*** run 32 - change 50-50 to 70-30 for litter
*** TAS EDIT Suface 10% and 90% Upper Layer - 09/12/2016
  UVNAME  LITTER 10 SNO3          0.08 QUAN    UNO3          0.72 QUAN
                SAMAD          0.77 QUAN    UAMAD          6.93 QUAN
                SORGN          5.35 QUAN    UORGN         48.15 QUAN
                SP4AD          2.7 QUAN    UP4AD          24.3 QUAN
                SORGP           0.3 QUAN    UORGP           2.7 QUAN

*** Action Line (currently set for 1.00 tons/ac and no deferral)
  <oper><f><-l> *** <yr><m><d><h><n>dstp  <vari><1><2><3><a><-value--> tc tst nu
*** 1992
  PERLND 32    DY  11992  3  1 12    1 3  LITTER        +=     0.38
  PERLND 52    DY  11992  3  1 12    1 3  LITTER        +=     1.25
  PERLND 72    DY  11992  3  1 12    1 3  LITTER        +=     0.58
  PERLND 92    DY  11992  3  1 12    1 3  LITTER        +=     1.05
  PERLND112    DY  11992  3  1 12    1 3  LITTER        +=     0.41
  PERLND132    DY  11992  3  1 12    1 3  LITTER        +=     0.46
  PERLND152    DY  11992  3  1 12    1 3  LITTER        +=     0.53
  PERLND172    DY  11992  3  1 12    1 3  LITTER        +=     2.03
  PERLND192    DY  11992  3  1 12    1 3  LITTER        +=     0.42
  PERLND212    DY  11992  3  1 12    1 3  LITTER        +=     0.55
  PERLND232    DY  11992  3  1 12    1 3  LITTER        +=     0.28
  PERLND252    DY  11992  3  1 12    1 3  LITTER        +=     0.20
  PERLND272    DY  11992  3  1 12    1 3  LITTER        +=     0.16
  PERLND292    DY  11992  3  1 12    1 3  LITTER        +=     0.16
  PERLND312    DY  11992  3  1 12    1 3  LITTER        +=     0.05
  PERLND332    DY  11992  3  1 12    1 3  LITTER        +=     1.11
  PERLND352    DY  11992  3  1 12    1 3  LITTER        +=     0.70
  PERLND372    DY  11992  3  1 12    1 3  LITTER        +=     0.00
  PERLND392    DY  11992  3  1 12    1 3  LITTER        +=     1.15
  PERLND412    DY  11992  3  1 12    1 3  LITTER        +=     0.46
  PERLND432    DY  11992  3  1 12    1 3  LITTER        +=     0.42
  PERLND452    DY  11992  3  1 12    1 3  LITTER        +=     0.21
  PERLND472    DY  11992  3  1 12    1 3  LITTER        +=     0.00
  PERLND492    DY  11992  3  1 12    1 3  LITTER        +=     0.60
  PERLND512    DY  11992  3  1 12    1 3  LITTER        +=     0.52
  PERLND532    DY  11992  3  1 12    1 3  LITTER        +=     0.16
  PERLND552    DY  11992  3  1 12    1 3  LITTER        +=     0.10
  PERLND572    DY  11992  3  1 12    1 3  LITTER        +=     0.60
  PERLND592    DY  11992  3  1 12    1 3  LITTER        +=     0.23
  PERLND612    DY  11992  3  1 12    1 3  LITTER        +=     0.20
  PERLND632    DY  11992  3  1 12    1 3  LITTER        +=     1.27
  PERLND652    DY  11992  3  1 12    1 3  LITTER        +=     1.29
  PERLND672    DY  11992  3  1 12    1 3  LITTER        +=     1.29
*** 1993
  PERLND 32    DY  11993  3  1 12    1 3  LITTER        +=     0.38
  PERLND 52    DY  11993  3  1 12    1 3  LITTER        +=     1.25
  PERLND 72    DY  11993  3  1 12    1 3  LITTER        +=     0.58
  PERLND 92    DY  11993  3  1 12    1 3  LITTER        +=     1.05
  PERLND112    DY  11993  3  1 12    1 3  LITTER        +=     0.41
```

```
  PERLND132   DY  11993  3  1 12   1 3  LITTER       +=    0.46
  PERLND152   DY  11993  3  1 12   1 3  LITTER       +=    0.53
  PERLND172   DY  11993  3  1 12   1 3  LITTER       +=    2.03
  PERLND192   DY  11993  3  1 12   1 3  LITTER       +=    0.42
  PERLND212   DY  11993  3  1 12   1 3  LITTER       +=    0.55
  PERLND232   DY  11993  3  1 12   1 3  LITTER       +=    0.28
  PERLND252   DY  11993  3  1 12   1 3  LITTER       +=    0.20
  PERLND272   DY  11993  3  1 12   1 3  LITTER       +=    0.16
  PERLND292   DY  11993  3  1 12   1 3  LITTER       +=    0.16
  PERLND312   DY  11993  3  1 12   1 3  LITTER       +=    0.05
  PERLND332   DY  11993  3  1 12   1 3  LITTER       +=    1.11
  PERLND352   DY  11993  3  1 12   1 3  LITTER       +=    0.70
  PERLND372   DY  11993  3  1 12   1 3  LITTER       +=    0.00
  PERLND392   DY  11993  3  1 12   1 3  LITTER       +=    1.15
  PERLND412   DY  11993  3  1 12   1 3  LITTER       +=    0.46
  PERLND432   DY  11993  3  1 12   1 3  LITTER       +=    0.42
  PERLND452   DY  11993  3  1 12   1 3  LITTER       +=    0.21
  PERLND472   DY  11993  3  1 12   1 3  LITTER       +=    0.00
  PERLND492   DY  11993  3  1 12   1 3  LITTER       +=    0.60
  PERLND512   DY  11993  3  1 12   1 3  LITTER       +=    0.52
  PERLND532   DY  11993  3  1 12   1 3  LITTER       +=    0.16
  PERLND552   DY  11993  3  1 12   1 3  LITTER       +=    0.10
  PERLND572   DY  11993  3  1 12   1 3  LITTER       +=    0.60
  PERLND592   DY  11993  3  1 12   1 3  LITTER       +=    0.23
  PERLND612   DY  11993  3  1 12   1 3  LITTER       +=    0.20
  PERLND632   DY  11993  3  1 12   1 3  LITTER       +=    1.27
  PERLND652   DY  11993  3  1 12   1 3  LITTER       +=    1.29
  PERLND672   DY  11993  3  1 12   1 3  LITTER       +=    1.29
*** 1994
  PERLND 32   DY  11994  3  1 12   1 3  LITTER       +=    0.38
  PERLND 52   DY  11994  3  1 12   1 3  LITTER       +=    1.25
  PERLND 72   DY  11994  3  1 12   1 3  LITTER       +=    0.58
  PERLND 92   DY  11994  3  1 12   1 3  LITTER       +=    1.05
  PERLND112   DY  11994  3  1 12   1 3  LITTER       +=    0.41
  PERLND132   DY  11994  3  1 12   1 3  LITTER       +=    0.46
  PERLND152   DY  11994  3  1 12   1 3  LITTER       +=    0.53
  PERLND172   DY  11994  3  1 12   1 3  LITTER       +=    2.03
  PERLND192   DY  11994  3  1 12   1 3  LITTER       +=    0.42
  PERLND212   DY  11994  3  1 12   1 3  LITTER       +=    0.55
  PERLND232   DY  11994  3  1 12   1 3  LITTER       +=    0.28
  PERLND252   DY  11994  3  1 12   1 3  LITTER       +=    0.20
  PERLND272   DY  11994  3  1 12   1 3  LITTER       +=    0.16
  PERLND292   DY  11994  3  1 12   1 3  LITTER       +=    0.16
  PERLND312   DY  11994  3  1 12   1 3  LITTER       +=    0.05
  PERLND332   DY  11994  3  1 12   1 3  LITTER       +=    1.11
  PERLND352   DY  11994  3  1 12   1 3  LITTER       +=    0.70
  PERLND372   DY  11994  3  1 12   1 3  LITTER       +=    0.00
  PERLND392   DY  11994  3  1 12   1 3  LITTER       +=    1.15
  PERLND412   DY  11994  3  1 12   1 3  LITTER       +=    0.46
  PERLND432   DY  11994  3  1 12   1 3  LITTER       +=    0.42
  PERLND452   DY  11994  3  1 12   1 3  LITTER       +=    0.21
  PERLND472   DY  11994  3  1 12   1 3  LITTER       +=    0.00
  PERLND492   DY  11994  3  1 12   1 3  LITTER       +=    0.60
  PERLND512   DY  11994  3  1 12   1 3  LITTER       +=    0.52
  PERLND532   DY  11994  3  1 12   1 3  LITTER       +=    0.16
  PERLND552   DY  11994  3  1 12   1 3  LITTER       +=    0.10
```

```
  PERLND572   DY  11994  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  11994  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  11994  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  11994  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  11994  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  11994  3  1 12   1 3  LITTER       +=     1.29
*** 1995
  PERLND 32   DY  11995  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  11995  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  11995  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  11995  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  11995  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  11995  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  11995  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  11995  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  11995  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  11995  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  11995  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  11995  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  11995  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  11995  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  11995  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  11995  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  11995  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  11995  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  11995  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  11995  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  11995  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  11995  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  11995  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  11995  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  11995  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  11995  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  11995  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  11995  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  11995  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  11995  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  11995  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  11995  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  11995  3  1 12   1 3  LITTER       +=     1.29
*** 1996
  PERLND 32   DY  11996  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  11996  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  11996  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  11996  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  11996  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  11996  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  11996  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  11996  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  11996  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  11996  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  11996  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  11996  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  11996  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  11996  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  11996  3  1 12   1 3  LITTER       +=     0.05
```

```
  PERLND332   DY  11996  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  11996  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  11996  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  11996  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  11996  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  11996  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  11996  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  11996  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  11996  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  11996  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  11996  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  11996  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  11996  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  11996  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  11996  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  11996  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  11996  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  11996  3  1 12   1 3  LITTER       +=     1.29
*** 1997
  PERLND 32   DY  11997  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  11997  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  11997  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  11997  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  11997  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  11997  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  11997  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  11997  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  11997  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  11997  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  11997  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  11997  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  11997  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  11997  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  11997  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  11997  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  11997  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  11997  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  11997  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  11997  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  11997  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  11997  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  11997  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  11997  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  11997  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  11997  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  11997  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  11997  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  11997  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  11997  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  11997  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  11997  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  11997  3  1 12   1 3  LITTER       +=     1.29
*** 1998
  PERLND 32   DY  11998  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  11998  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  11998  3  1 12   1 3  LITTER       +=     0.58
```

```
  PERLND 92   DY  11998  3  1 12   1 3  LITTER       +=    1.05
  PERLND112   DY  11998  3  1 12   1 3  LITTER       +=    0.41
  PERLND132   DY  11998  3  1 12   1 3  LITTER       +=    0.46
  PERLND152   DY  11998  3  1 12   1 3  LITTER       +=    0.53
  PERLND172   DY  11998  3  1 12   1 3  LITTER       +=    2.03
  PERLND192   DY  11998  3  1 12   1 3  LITTER       +=    0.42
  PERLND212   DY  11998  3  1 12   1 3  LITTER       +=    0.55
  PERLND232   DY  11998  3  1 12   1 3  LITTER       +=    0.28
  PERLND252   DY  11998  3  1 12   1 3  LITTER       +=    0.20
  PERLND272   DY  11998  3  1 12   1 3  LITTER       +=    0.16
  PERLND292   DY  11998  3  1 12   1 3  LITTER       +=    0.16
  PERLND312   DY  11998  3  1 12   1 3  LITTER       +=    0.05
  PERLND332   DY  11998  3  1 12   1 3  LITTER       +=    1.11
  PERLND352   DY  11998  3  1 12   1 3  LITTER       +=    0.70
  PERLND372   DY  11998  3  1 12   1 3  LITTER       +=    0.00
  PERLND392   DY  11998  3  1 12   1 3  LITTER       +=    1.15
  PERLND412   DY  11998  3  1 12   1 3  LITTER       +=    0.46
  PERLND432   DY  11998  3  1 12   1 3  LITTER       +=    0.42
  PERLND452   DY  11998  3  1 12   1 3  LITTER       +=    0.21
  PERLND472   DY  11998  3  1 12   1 3  LITTER       +=    0.00
  PERLND492   DY  11998  3  1 12   1 3  LITTER       +=    0.60
  PERLND512   DY  11998  3  1 12   1 3  LITTER       +=    0.52
  PERLND532   DY  11998  3  1 12   1 3  LITTER       +=    0.16
  PERLND552   DY  11998  3  1 12   1 3  LITTER       +=    0.10
  PERLND572   DY  11998  3  1 12   1 3  LITTER       +=    0.60
  PERLND592   DY  11998  3  1 12   1 3  LITTER       +=    0.23
  PERLND612   DY  11998  3  1 12   1 3  LITTER       +=    0.20
  PERLND632   DY  11998  3  1 12   1 3  LITTER       +=    1.27
  PERLND652   DY  11998  3  1 12   1 3  LITTER       +=    1.29
  PERLND672   DY  11998  3  1 12   1 3  LITTER       +=    1.29
*** 1999
  PERLND 32   DY  11999  3  1 12   1 3  LITTER       +=    0.38
  PERLND 52   DY  11999  3  1 12   1 3  LITTER       +=    1.25
  PERLND 72   DY  11999  3  1 12   1 3  LITTER       +=    0.58
  PERLND 92   DY  11999  3  1 12   1 3  LITTER       +=    1.05
  PERLND112   DY  11999  3  1 12   1 3  LITTER       +=    0.41
  PERLND132   DY  11999  3  1 12   1 3  LITTER       +=    0.46
  PERLND152   DY  11999  3  1 12   1 3  LITTER       +=    0.53
  PERLND172   DY  11999  3  1 12   1 3  LITTER       +=    2.03
  PERLND192   DY  11999  3  1 12   1 3  LITTER       +=    0.42
  PERLND212   DY  11999  3  1 12   1 3  LITTER       +=    0.55
  PERLND232   DY  11999  3  1 12   1 3  LITTER       +=    0.28
  PERLND252   DY  11999  3  1 12   1 3  LITTER       +=    0.20
  PERLND272   DY  11999  3  1 12   1 3  LITTER       +=    0.16
  PERLND292   DY  11999  3  1 12   1 3  LITTER       +=    0.16
  PERLND312   DY  11999  3  1 12   1 3  LITTER       +=    0.05
  PERLND332   DY  11999  3  1 12   1 3  LITTER       +=    1.11
  PERLND352   DY  11999  3  1 12   1 3  LITTER       +=    0.70
  PERLND372   DY  11999  3  1 12   1 3  LITTER       +=    0.00
  PERLND392   DY  11999  3  1 12   1 3  LITTER       +=    1.15
  PERLND412   DY  11999  3  1 12   1 3  LITTER       +=    0.46
  PERLND432   DY  11999  3  1 12   1 3  LITTER       +=    0.42
  PERLND452   DY  11999  3  1 12   1 3  LITTER       +=    0.21
  PERLND472   DY  11999  3  1 12   1 3  LITTER       +=    0.00
  PERLND492   DY  11999  3  1 12   1 3  LITTER       +=    0.60
  PERLND512   DY  11999  3  1 12   1 3  LITTER       +=    0.52
```

```
  PERLND532   DY  11999  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  11999  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  11999  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  11999  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  11999  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  11999  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  11999  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  11999  3  1 12   1 3  LITTER       +=     1.29
*** 2000
  PERLND 32   DY  12000  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  12000  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  12000  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  12000  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  12000  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  12000  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  12000  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  12000  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  12000  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  12000  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  12000  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  12000  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  12000  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  12000  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  12000  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  12000  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  12000  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  12000  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  12000  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  12000  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  12000  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  12000  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  12000  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  12000  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  12000  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  12000  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  12000  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  12000  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  12000  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  12000  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  12000  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  12000  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  12000  3  1 12   1 3  LITTER       +=     1.29
*** 2001
  PERLND 32   DY  12001  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  12001  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  12001  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  12001  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  12001  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  12001  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  12001  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  12001  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  12001  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  12001  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  12001  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  12001  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  12001  3  1 12   1 3  LITTER       +=     0.16
```

```
  PERLND292   DY  12001  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  12001  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  12001  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  12001  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  12001  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  12001  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  12001  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  12001  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  12001  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  12001  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  12001  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  12001  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  12001  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  12001  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  12001  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  12001  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  12001  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  12001  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  12001  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  12001  3  1 12   1 3  LITTER       +=     1.29
*** 2002
  PERLND 32   DY  12002  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  12002  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  12002  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  12002  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  12002  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  12002  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  12002  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  12002  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  12002  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  12002  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  12002  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  12002  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  12002  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  12002  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  12002  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  12002  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  12002  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  12002  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  12002  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  12002  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  12002  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  12002  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  12002  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  12002  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  12002  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  12002  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  12002  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  12002  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  12002  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  12002  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  12002  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  12002  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  12002  3  1 12   1 3  LITTER       +=     1.29
*** 2003
  PERLND 32   DY  12003  3  1 12   1 3  LITTER       +=     0.38
```

```
  PERLND 52   DY  12003  3  1 12   1 3  LITTER        +=     1.25
  PERLND 72   DY  12003  3  1 12   1 3  LITTER        +=     0.58
  PERLND 92   DY  12003  3  1 12   1 3  LITTER        +=     1.05
  PERLND112   DY  12003  3  1 12   1 3  LITTER        +=     0.41
  PERLND132   DY  12003  3  1 12   1 3  LITTER        +=     0.46
  PERLND152   DY  12003  3  1 12   1 3  LITTER        +=     0.53
  PERLND172   DY  12003  3  1 12   1 3  LITTER        +=     2.03
  PERLND192   DY  12003  3  1 12   1 3  LITTER        +=     0.42
  PERLND212   DY  12003  3  1 12   1 3  LITTER        +=     0.55
  PERLND232   DY  12003  3  1 12   1 3  LITTER        +=     0.28
  PERLND252   DY  12003  3  1 12   1 3  LITTER        +=     0.20
  PERLND272   DY  12003  3  1 12   1 3  LITTER        +=     0.16
  PERLND292   DY  12003  3  1 12   1 3  LITTER        +=     0.16
  PERLND312   DY  12003  3  1 12   1 3  LITTER        +=     0.05
  PERLND332   DY  12003  3  1 12   1 3  LITTER        +=     1.11
  PERLND352   DY  12003  3  1 12   1 3  LITTER        +=     0.70
  PERLND372   DY  12003  3  1 12   1 3  LITTER        +=     0.00
  PERLND392   DY  12003  3  1 12   1 3  LITTER        +=     1.15
  PERLND412   DY  12003  3  1 12   1 3  LITTER        +=     0.46
  PERLND432   DY  12003  3  1 12   1 3  LITTER        +=     0.42
  PERLND452   DY  12003  3  1 12   1 3  LITTER        +=     0.21
  PERLND472   DY  12003  3  1 12   1 3  LITTER        +=     0.00
  PERLND492   DY  12003  3  1 12   1 3  LITTER        +=     0.60
  PERLND512   DY  12003  3  1 12   1 3  LITTER        +=     0.52
  PERLND532   DY  12003  3  1 12   1 3  LITTER        +=     0.16
  PERLND552   DY  12003  3  1 12   1 3  LITTER        +=     0.10
  PERLND572   DY  12003  3  1 12   1 3  LITTER        +=     0.60
  PERLND592   DY  12003  3  1 12   1 3  LITTER        +=     0.23
  PERLND612   DY  12003  3  1 12   1 3  LITTER        +=     0.20
  PERLND632   DY  12003  3  1 12   1 3  LITTER        +=     1.27
  PERLND652   DY  12003  3  1 12   1 3  LITTER        +=     1.29
  PERLND672   DY  12003  3  1 12   1 3  LITTER        +=     1.29
*** 2004
  PERLND 32   DY  12004  3  1 12   1 3  LITTER        +=     0.38
  PERLND 52   DY  12004  3  1 12   1 3  LITTER        +=     1.25
  PERLND 72   DY  12004  3  1 12   1 3  LITTER        +=     0.58
  PERLND 92   DY  12004  3  1 12   1 3  LITTER        +=     1.05
  PERLND112   DY  12004  3  1 12   1 3  LITTER        +=     0.41
  PERLND132   DY  12004  3  1 12   1 3  LITTER        +=     0.46
  PERLND152   DY  12004  3  1 12   1 3  LITTER        +=     0.53
  PERLND172   DY  12004  3  1 12   1 3  LITTER        +=     2.03
  PERLND192   DY  12004  3  1 12   1 3  LITTER        +=     0.42
  PERLND212   DY  12004  3  1 12   1 3  LITTER        +=     0.55
  PERLND232   DY  12004  3  1 12   1 3  LITTER        +=     0.28
  PERLND252   DY  12004  3  1 12   1 3  LITTER        +=     0.20
  PERLND272   DY  12004  3  1 12   1 3  LITTER        +=     0.16
  PERLND292   DY  12004  3  1 12   1 3  LITTER        +=     0.16
  PERLND312   DY  12004  3  1 12   1 3  LITTER        +=     0.05
  PERLND332   DY  12004  3  1 12   1 3  LITTER        +=     1.11
  PERLND352   DY  12004  3  1 12   1 3  LITTER        +=     0.70
  PERLND372   DY  12004  3  1 12   1 3  LITTER        +=     0.00
  PERLND392   DY  12004  3  1 12   1 3  LITTER        +=     1.15
  PERLND412   DY  12004  3  1 12   1 3  LITTER        +=     0.46
  PERLND432   DY  12004  3  1 12   1 3  LITTER        +=     0.42
  PERLND452   DY  12004  3  1 12   1 3  LITTER        +=     0.21
  PERLND472   DY  12004  3  1 12   1 3  LITTER        +=     0.00
```

```
  PERLND492   DY  12004  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  12004  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  12004  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  12004  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  12004  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  12004  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  12004  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  12004  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  12004  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  12004  3  1 12   1 3  LITTER       +=     1.29
*** 2005
  PERLND 32   DY  12005  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  12005  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  12005  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  12005  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  12005  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  12005  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  12005  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  12005  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  12005  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  12005  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  12005  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  12005  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  12005  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  12005  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  12005  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  12005  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  12005  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  12005  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  12005  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  12005  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  12005  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  12005  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  12005  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  12005  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  12005  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  12005  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  12005  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  12005  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  12005  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  12005  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  12005  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  12005  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  12005  3  1 12   1 3  LITTER       +=     1.29
*** 2006
  PERLND 32   DY  12006  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  12006  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  12006  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  12006  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  12006  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  12006  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  12006  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  12006  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  12006  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  12006  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  12006  3  1 12   1 3  LITTER       +=     0.28
```

```
  PERLND252   DY  12006  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  12006  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  12006  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  12006  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  12006  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  12006  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  12006  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  12006  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  12006  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  12006  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  12006  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  12006  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  12006  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  12006  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  12006  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  12006  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  12006  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  12006  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  12006  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  12006  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  12006  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  12006  3  1 12   1 3  LITTER       +=     1.29
*** 2007
  PERLND 32   DY  12007  3  1 12   1 3  LITTER       +=     0.38
  PERLND 52   DY  12007  3  1 12   1 3  LITTER       +=     1.25
  PERLND 72   DY  12007  3  1 12   1 3  LITTER       +=     0.58
  PERLND 92   DY  12007  3  1 12   1 3  LITTER       +=     1.05
  PERLND112   DY  12007  3  1 12   1 3  LITTER       +=     0.41
  PERLND132   DY  12007  3  1 12   1 3  LITTER       +=     0.46
  PERLND152   DY  12007  3  1 12   1 3  LITTER       +=     0.53
  PERLND172   DY  12007  3  1 12   1 3  LITTER       +=     2.03
  PERLND192   DY  12007  3  1 12   1 3  LITTER       +=     0.42
  PERLND212   DY  12007  3  1 12   1 3  LITTER       +=     0.55
  PERLND232   DY  12007  3  1 12   1 3  LITTER       +=     0.28
  PERLND252   DY  12007  3  1 12   1 3  LITTER       +=     0.20
  PERLND272   DY  12007  3  1 12   1 3  LITTER       +=     0.16
  PERLND292   DY  12007  3  1 12   1 3  LITTER       +=     0.16
  PERLND312   DY  12007  3  1 12   1 3  LITTER       +=     0.05
  PERLND332   DY  12007  3  1 12   1 3  LITTER       +=     1.11
  PERLND352   DY  12007  3  1 12   1 3  LITTER       +=     0.70
  PERLND372   DY  12007  3  1 12   1 3  LITTER       +=     0.00
  PERLND392   DY  12007  3  1 12   1 3  LITTER       +=     1.15
  PERLND412   DY  12007  3  1 12   1 3  LITTER       +=     0.46
  PERLND432   DY  12007  3  1 12   1 3  LITTER       +=     0.42
  PERLND452   DY  12007  3  1 12   1 3  LITTER       +=     0.21
  PERLND472   DY  12007  3  1 12   1 3  LITTER       +=     0.00
  PERLND492   DY  12007  3  1 12   1 3  LITTER       +=     0.60
  PERLND512   DY  12007  3  1 12   1 3  LITTER       +=     0.52
  PERLND532   DY  12007  3  1 12   1 3  LITTER       +=     0.16
  PERLND552   DY  12007  3  1 12   1 3  LITTER       +=     0.10
  PERLND572   DY  12007  3  1 12   1 3  LITTER       +=     0.60
  PERLND592   DY  12007  3  1 12   1 3  LITTER       +=     0.23
  PERLND612   DY  12007  3  1 12   1 3  LITTER       +=     0.20
  PERLND632   DY  12007  3  1 12   1 3  LITTER       +=     1.27
  PERLND652   DY  12007  3  1 12   1 3  LITTER       +=     1.29
  PERLND672   DY  12007  3  1 12   1 3  LITTER       +=     1.29
```

```
*** 2008
  PERLND 32   DY  12008  3  1 12   1 3  LITTER       +=    0.38
  PERLND 52   DY  12008  3  1 12   1 3  LITTER       +=    1.25
  PERLND 72   DY  12008  3  1 12   1 3  LITTER       +=    0.58
  PERLND 92   DY  12008  3  1 12   1 3  LITTER       +=    1.05
  PERLND112   DY  12008  3  1 12   1 3  LITTER       +=    0.41
  PERLND132   DY  12008  3  1 12   1 3  LITTER       +=    0.46
  PERLND152   DY  12008  3  1 12   1 3  LITTER       +=    0.53
  PERLND172   DY  12008  3  1 12   1 3  LITTER       +=    2.03
  PERLND192   DY  12008  3  1 12   1 3  LITTER       +=    0.42
  PERLND212   DY  12008  3  1 12   1 3  LITTER       +=    0.55
  PERLND232   DY  12008  3  1 12   1 3  LITTER       +=    0.28
  PERLND252   DY  12008  3  1 12   1 3  LITTER       +=    0.20
  PERLND272   DY  12008  3  1 12   1 3  LITTER       +=    0.16
  PERLND292   DY  12008  3  1 12   1 3  LITTER       +=    0.16
  PERLND312   DY  12008  3  1 12   1 3  LITTER       +=    0.05
  PERLND332   DY  12008  3  1 12   1 3  LITTER       +=    1.11
  PERLND352   DY  12008  3  1 12   1 3  LITTER       +=    0.70
  PERLND372   DY  12008  3  1 12   1 3  LITTER       +=    0.00
  PERLND392   DY  12008  3  1 12   1 3  LITTER       +=    1.15
  PERLND412   DY  12008  3  1 12   1 3  LITTER       +=    0.46
  PERLND432   DY  12008  3  1 12   1 3  LITTER       +=    0.42
  PERLND452   DY  12008  3  1 12   1 3  LITTER       +=    0.21
  PERLND472   DY  12008  3  1 12   1 3  LITTER       +=    0.00
  PERLND492   DY  12008  3  1 12   1 3  LITTER       +=    0.60
  PERLND512   DY  12008  3  1 12   1 3  LITTER       +=    0.52
  PERLND532   DY  12008  3  1 12   1 3  LITTER       +=    0.16
  PERLND552   DY  12008  3  1 12   1 3  LITTER       +=    0.10
  PERLND572   DY  12008  3  1 12   1 3  LITTER       +=    0.60
  PERLND592   DY  12008  3  1 12   1 3  LITTER       +=    0.23
  PERLND612   DY  12008  3  1 12   1 3  LITTER       +=    0.20
  PERLND632   DY  12008  3  1 12   1 3  LITTER       +=    1.27
  PERLND652   DY  12008  3  1 12   1 3  LITTER       +=    1.29
  PERLND672   DY  12008  3  1 12   1 3  LITTER       +=    1.29
*** 2009
  PERLND 32   DY  12009  3  1 12   1 3  LITTER       +=    0.38
  PERLND 52   DY  12009  3  1 12   1 3  LITTER       +=    1.25
  PERLND 72   DY  12009  3  1 12   1 3  LITTER       +=    0.58
  PERLND 92   DY  12009  3  1 12   1 3  LITTER       +=    1.05
  PERLND112   DY  12009  3  1 12   1 3  LITTER       +=    0.41
  PERLND132   DY  12009  3  1 12   1 3  LITTER       +=    0.46
  PERLND152   DY  12009  3  1 12   1 3  LITTER       +=    0.53
  PERLND172   DY  12009  3  1 12   1 3  LITTER       +=    2.03
  PERLND192   DY  12009  3  1 12   1 3  LITTER       +=    0.42
  PERLND212   DY  12009  3  1 12   1 3  LITTER       +=    0.55
  PERLND232   DY  12009  3  1 12   1 3  LITTER       +=    0.28
  PERLND252   DY  12009  3  1 12   1 3  LITTER       +=    0.20
  PERLND272   DY  12009  3  1 12   1 3  LITTER       +=    0.16
  PERLND292   DY  12009  3  1 12   1 3  LITTER       +=    0.16
  PERLND312   DY  12009  3  1 12   1 3  LITTER       +=    0.05
  PERLND332   DY  12009  3  1 12   1 3  LITTER       +=    1.11
  PERLND352   DY  12009  3  1 12   1 3  LITTER       +=    0.70
  PERLND372   DY  12009  3  1 12   1 3  LITTER       +=    0.00
  PERLND392   DY  12009  3  1 12   1 3  LITTER       +=    1.15
  PERLND412   DY  12009  3  1 12   1 3  LITTER       +=    0.46
  PERLND432   DY  12009  3  1 12   1 3  LITTER       +=    0.42
```

```
  PERLND452    DY  12009  3  1 12    1 3  LITTER          +=     0.21
  PERLND472    DY  12009  3  1 12    1 3  LITTER          +=     0.00
  PERLND492    DY  12009  3  1 12    1 3  LITTER          +=     0.60
  PERLND512    DY  12009  3  1 12    1 3  LITTER          +=     0.52
  PERLND532    DY  12009  3  1 12    1 3  LITTER          +=     0.16
  PERLND552    DY  12009  3  1 12    1 3  LITTER          +=     0.10
  PERLND572    DY  12009  3  1 12    1 3  LITTER          +=     0.60
  PERLND592    DY  12009  3  1 12    1 3  LITTER          +=     0.23
  PERLND612    DY  12009  3  1 12    1 3  LITTER          +=     0.20
  PERLND632    DY  12009  3  1 12    1 3  LITTER          +=     1.27
  PERLND652    DY  12009  3  1 12    1 3  LITTER          +=     1.29
  PERLND672    DY  12009  3  1 12    1 3  LITTER          +=     1.29

*** DISTRB #2 and #3 = total of 12 applications of N fertilizer separated by 30 days
*** "6" refers to number of applications
*** "DY  30" means apply every 30 days
*** if deferred, shift
*** distrib #1 is January - June and #2 is July - December
*** winter applications are 8.33% of the half-year total
*** spring/summer applications are 25% of the half-year total
*** EDIT by TAS on 07/06/2016, May - August receive all of the N fertilizer
*** kwd  ds  ct tc  ts  def     f1   f2   f3   f4   f5   f6   f7   f8   f9  f10
  <****>< > < > <> < > <--->  <---><---><---><---><---><---><---><---><---><--->
  DISTRB  2   6 DY  30 SHIFT    .00  .00  .00  .00  .50  .50
  DISTRB  3   6 DY  30 SHIFT    .50  .50  .00  .00  .00  .00

*** add N fertilizer to non-litter pasture starting on Jan3
*** Nitrogen Fertilizer Application - 30% Surface and 70% Upper Layer ***
*** and assumed 50% NO3 and 50% NH3
*** TAS EDIT Suface 10% and 90% Upper Layer - 09/12/2016
  UVNAME  NH455   2 SAMAD            0.1 QUAN    UAMAD            0.9 QUAN
  UVNAME  NO355   2 SNO3             0.1 QUAN    UNO3             0.9 QUAN

***Adsorbed NH3 - January - June
  <oper><f><-l> *** <yr><m><d><h><n>dstp  <vari><1><2><3><a><-value--> tc tst nu
  PERLND 22  24DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND 42  44DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND 62  64DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND 82  84DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND102 104DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND122 124DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND142 144DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND162 164DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND182 184DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND202 204DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND222 224DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND242 244DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND262 264DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND282 284DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND302 304DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND322 324DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND342 344DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND362 364DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND382 384DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND402 404DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
  PERLND422 424DY  11992  1  3 12    2 3  NH455          +=     19.75 YR   1 18
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  PERLND442 444DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND462 464DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND482 484DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND502 504DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND522 524DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND542 544DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND562 564DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND582 584DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND602 604DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND622 624DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND642 644DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
  PERLND662 664DY  11992  1  3 12   2 3  NH455        +=    19.75 YR   1 18
*** Ads NH3 - July - December
  PERLND 22  24DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND 42  44DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND 62  64DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND 82  84DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND102 104DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND122 124DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND142 144DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND162 164DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND182 184DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND202 204DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND222 224DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND242 244DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND262 264DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND282 284DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND302 304DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND322 324DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND342 344DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND362 364DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND382 384DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND402 404DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND422 424DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND442 444DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND462 464DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND482 484DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND502 504DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND522 524DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND542 544DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND562 564DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND582 584DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND602 604DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND622 624DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND642 644DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18
  PERLND662 664DY  11992  7  3 12   3 3  NH455        +=    19.75 YR   1 18

***NO3 January - June
  PERLND 22  24DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND 42  44DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND 62  64DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND 82  84DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND102 104DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND122 124DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND142 144DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND162 164DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
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  PERLND182 184DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND202 204DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND222 224DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND242 244DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND262 264DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND282 284DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND302 304DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND322 324DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND342 344DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND362 364DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND382 384DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND402 404DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND422 424DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND442 444DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND462 464DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND482 484DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND502 504DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND522 524DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND542 544DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND562 564DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND582 584DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND602 604DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND622 624DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND642 644DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
  PERLND662 664DY  11992  1  3 12   2 3  NO355        +=    19.75 YR   1 18
*** NO3 - July - December
  PERLND 22  24DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND 42  44DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND 62  64DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND 82  84DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND102 104DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND122 124DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND142 144DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND162 164DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND182 184DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND202 204DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND222 224DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND242 244DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND262 264DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND282 284DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND302 304DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND322 324DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND342 344DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND362 364DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND382 384DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND402 404DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND422 424DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND442 444DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND462 464DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND482 484DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND502 504DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND522 524DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND542 544DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND562 564DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND582 584DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
  PERLND602 604DY  11992  7  3 12   3 3  NO355        +=    19.75 YR   1 18
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  PERLND622 624DY  11992  7  3 12    3 3  NO355          +=     19.75 YR   1 18
  PERLND642 644DY  11992  7  3 12    3 3  NO355          +=     19.75 YR   1 18
  PERLND662 664DY  11992  7  3 12    3 3  NO355          +=     19.75 YR   1 18


*** reset plant N and P to 0 on Jan 1 every year
  PERLND 22 672     1992  1  1  2     3  SPLTN          =      0.0 YR   1 18
  PERLND 22 672     1992  1  1  2     3  UPLTN          =      0.0 YR   1 18
  PERLND 22 672     1992  1  1  2     3  LPLTN          =      0.0 YR   1 18
  PERLND 22 672     1992  1  1  2     3  SPLTP          =      0.0 YR   1 18
  PERLND 22 672     1992  1  1  2     3  UPLTP          =      0.0 YR   1 18
  PERLND 22 672     1992  1  1  2     3  LPLTP          =      0.0 YR   1 18

END SPEC-ACTIONS

END RUN
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