Illinois River Watershed Technical Workgroup

Cherokee Hotel & Casino, West Siloam Springs, OK

June 27-28

Goals

- Share our findings
- Focus on areas needing further discussion
- Agree on a direction for each comment with responses/action items to address them
- Establish a firm path forward based on a consensus of the group

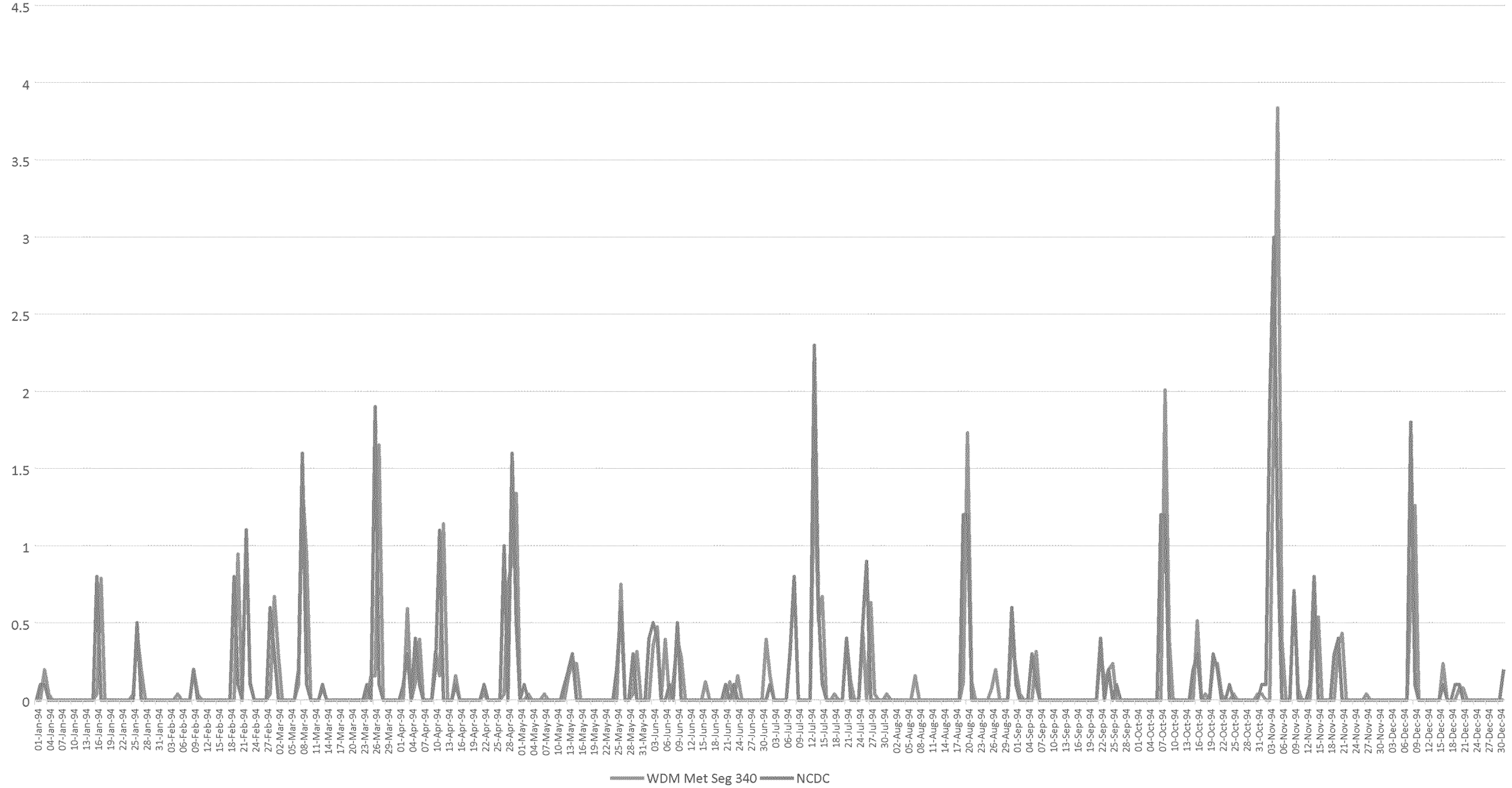
Topics

- Overview of Previous Action Items
- April Action Items
  - Surface vs Upper Layer
  - Regular and Augmented Flows
    - Addressing the ½ flow question
  - Lake Tenkiller
- Next Steps

Assessing Meteorology

Fayetteville Experimental Station, AR

Comparison WDM vs Fayetteville 1994



For Further Meteorological Analysis

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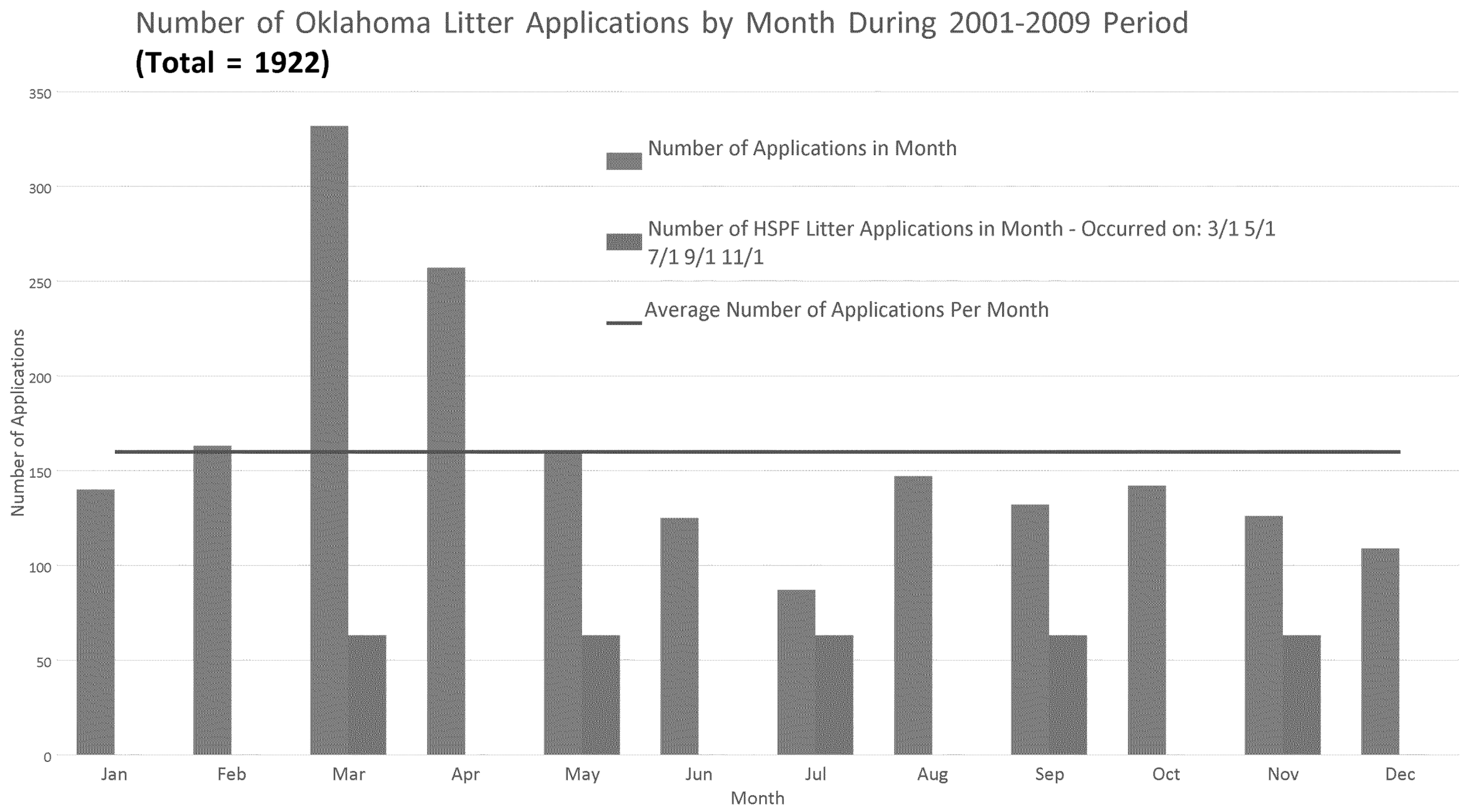
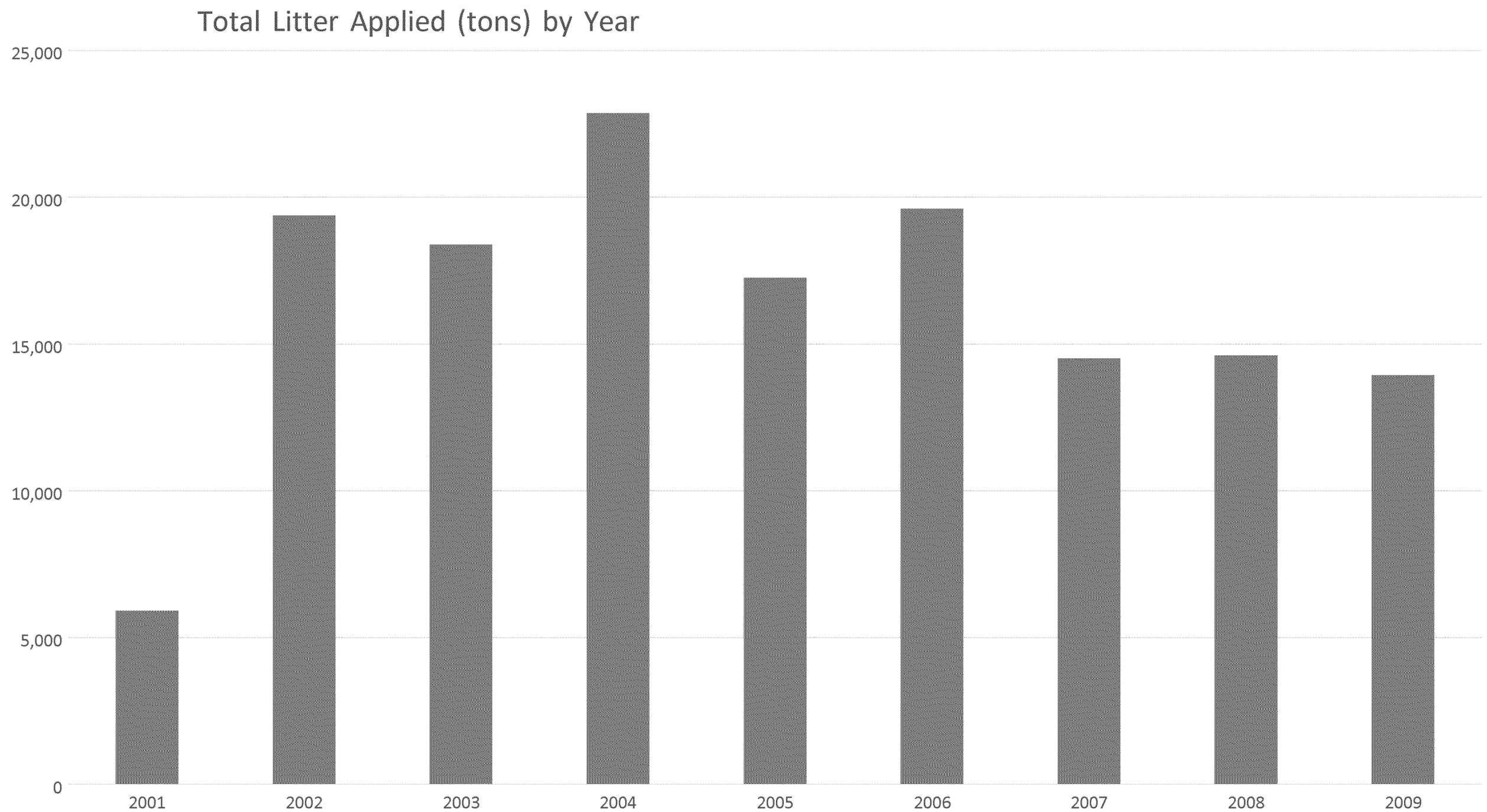
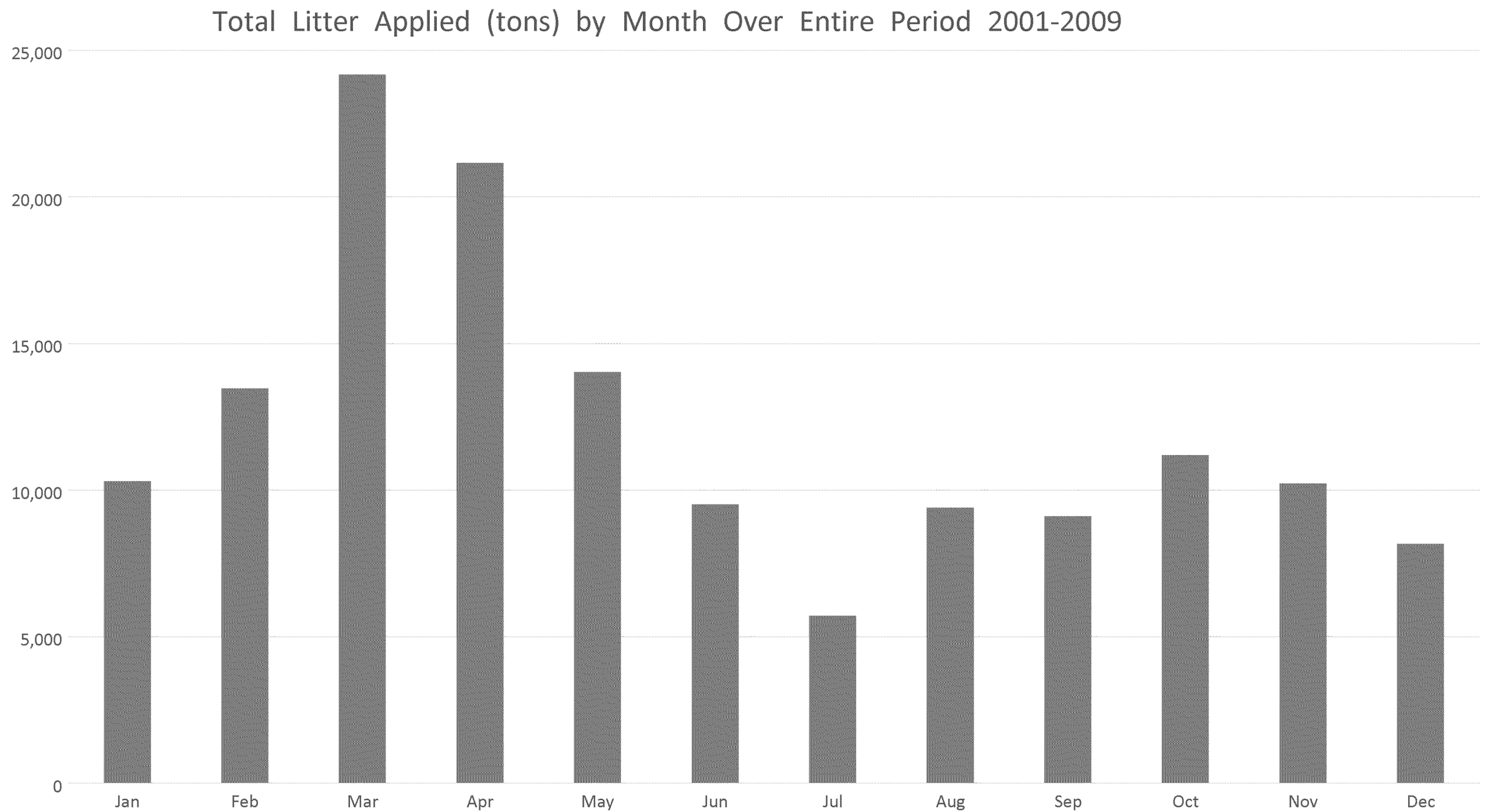
Litter Applications in Oklahoma


Number of Oklahoma Litter Applications by Month During 2001-2009 Period
(Total = 1922)
Number of Applications in Month
Number of HSPF Litter Applications in Month - Occurred on: 3/1 5/1 7/1 9/1 11/1
Average Number of Applications Per Month
Number of Applications
350
300
250
200
150
100
50
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Total Litter Applied (tons) by Year
25,000
20,000
15,000
10,000
5,000
0
2001
2002
2003
2004
2005
2006
2007
2008
2009


Total Litter Applied (tons) by Month Over Entire Period 2001-2009
25,000
20,000
15,000
10,000
5,000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

For Further Litter Application Analysis

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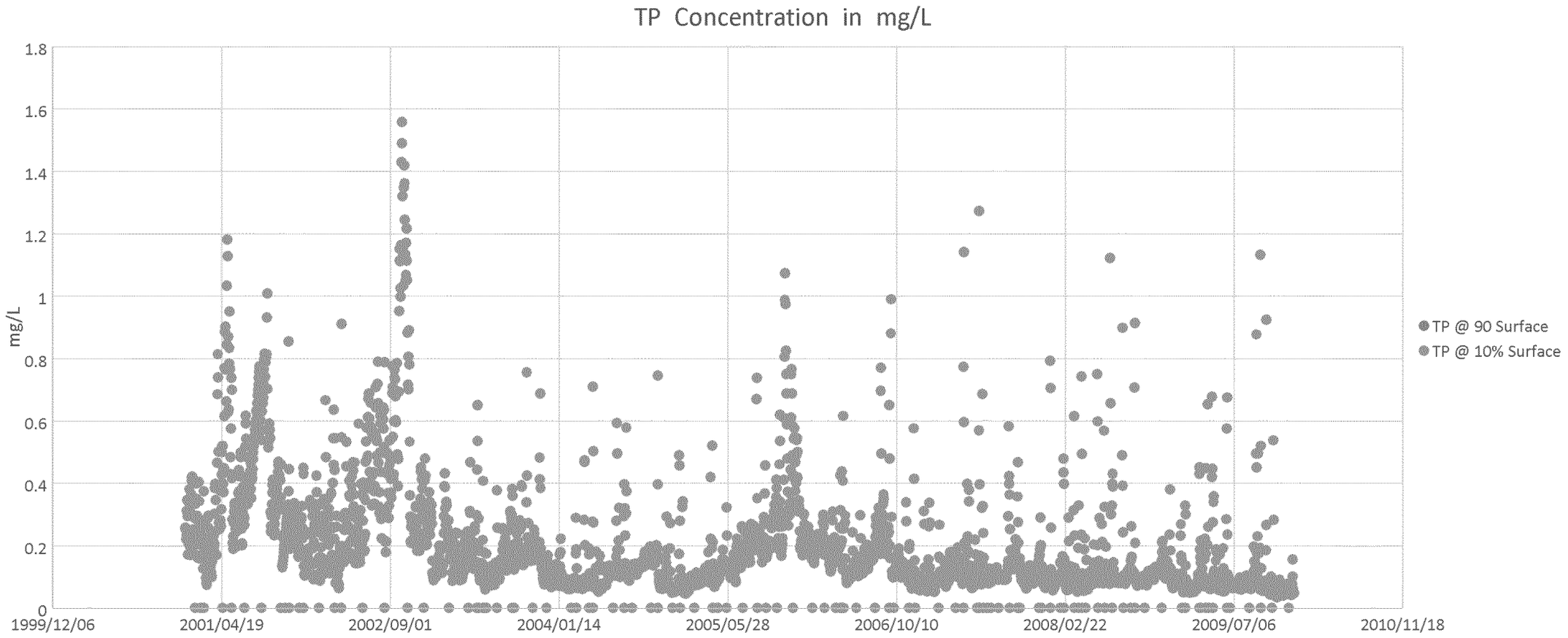
Accomplished Since The April Meeting

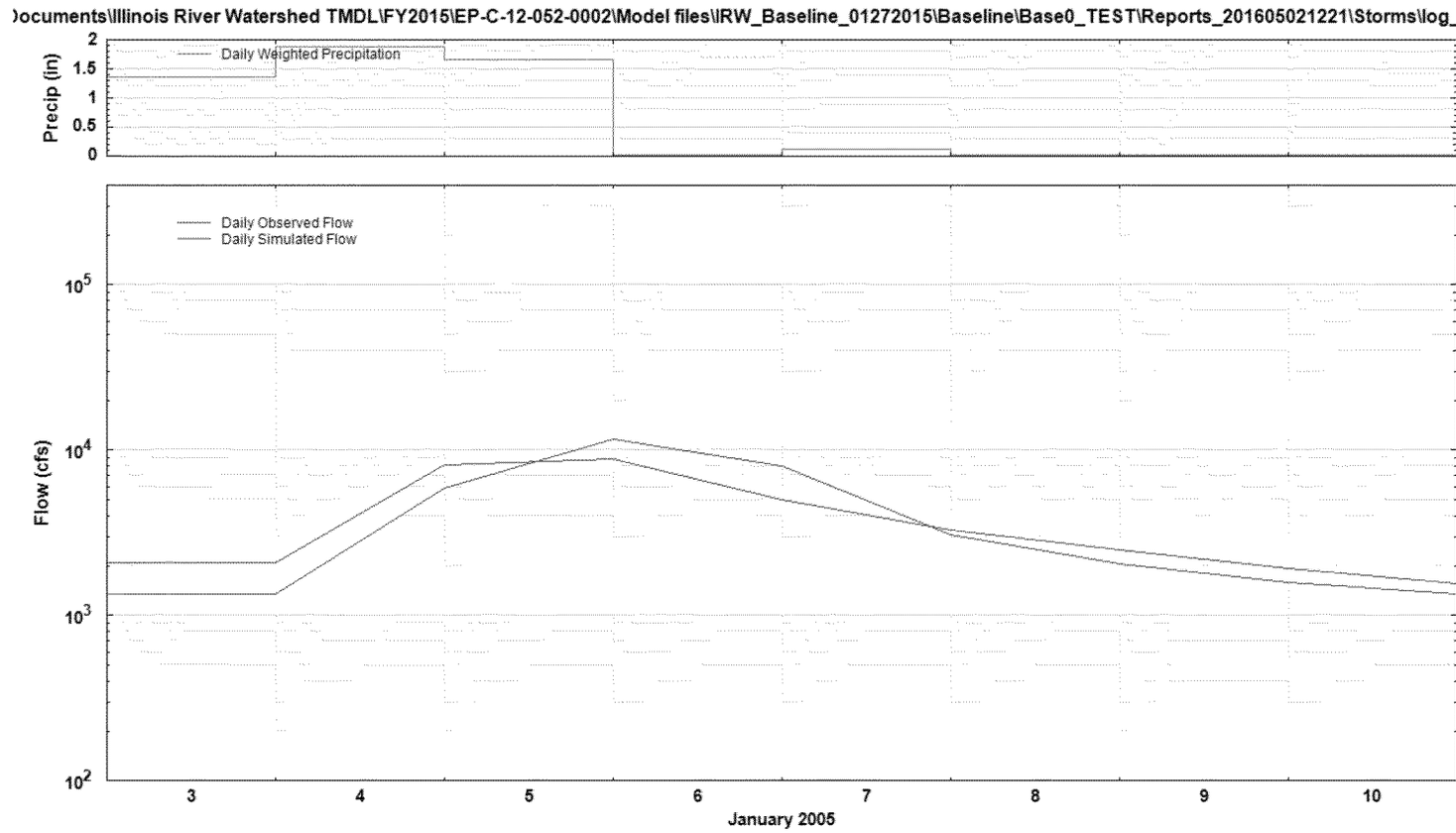
Surface vs Upper Layer Regarding Litter Application

Surface vs. Upper Layer at RCH 870

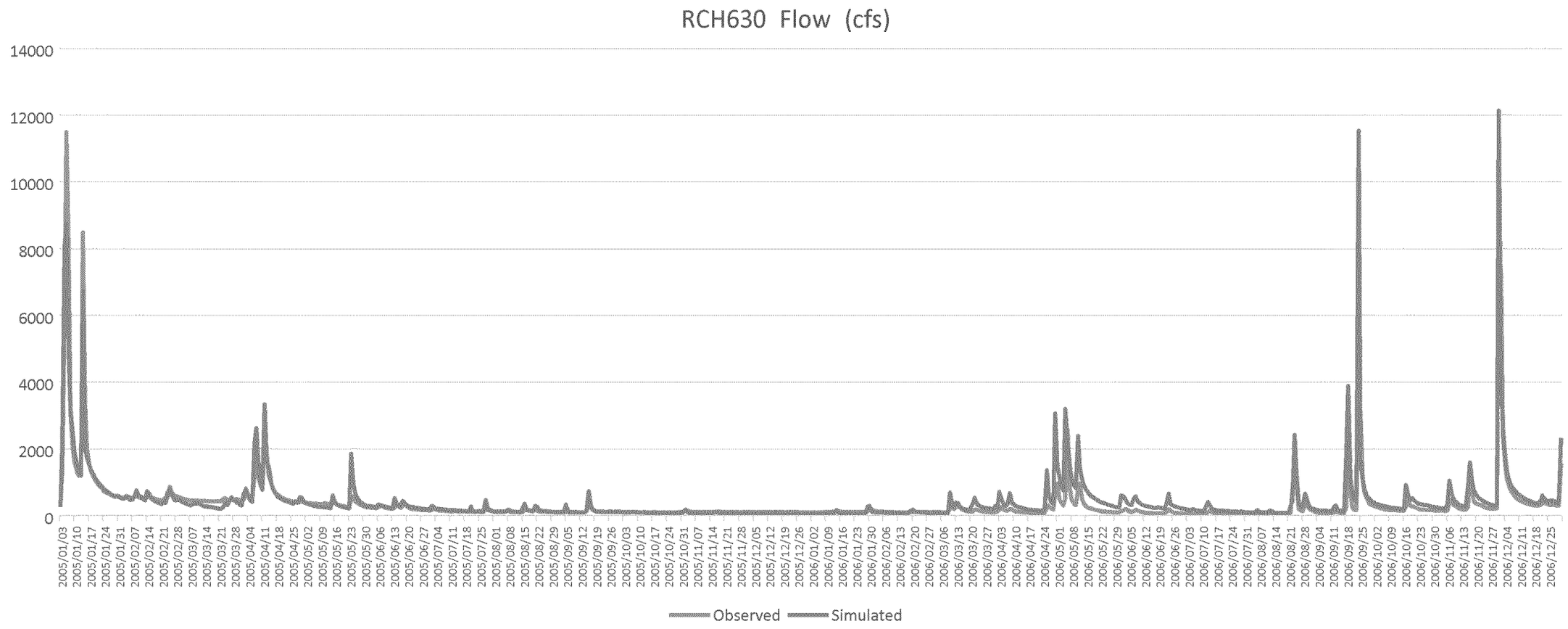


Current vs Augmented Flows: Flow at RCH630 and RCH 870

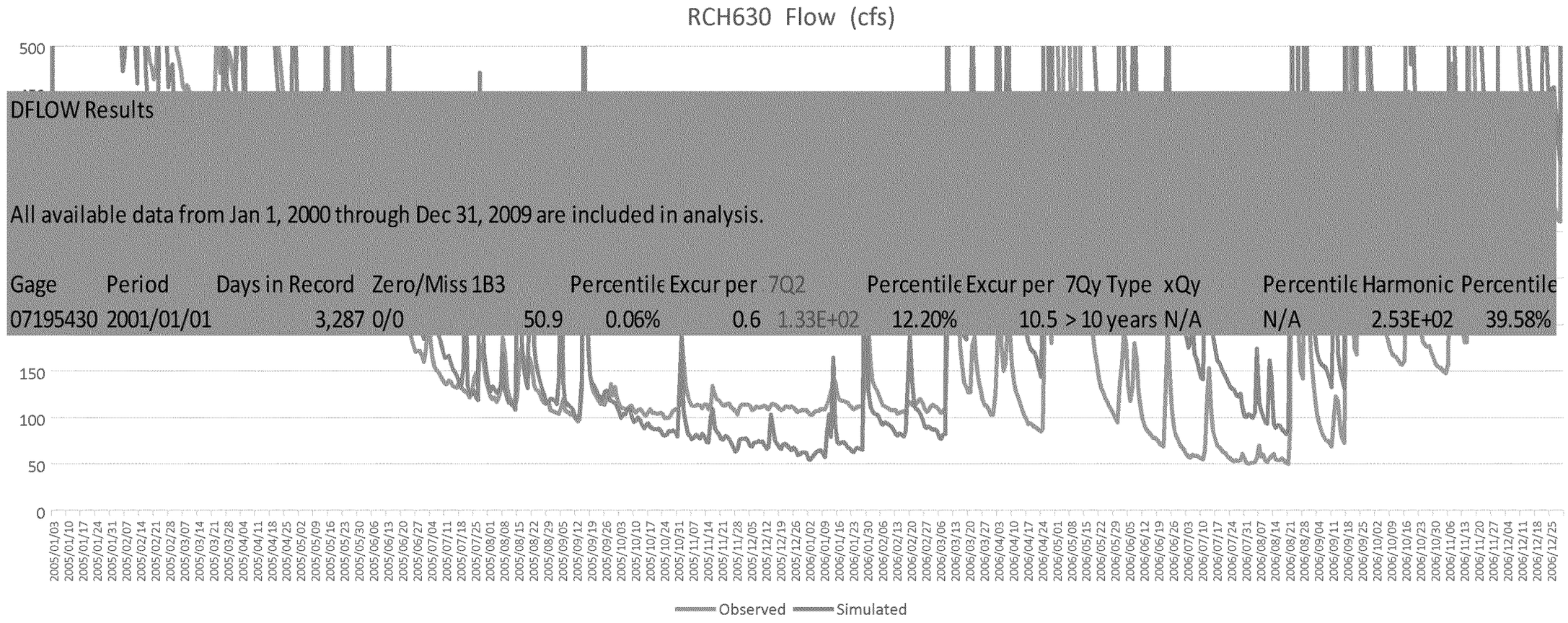
RCH630 Storms 2005-2006



RCH630 Flow (cfs) - Unaugmented



RCH630 Flow (cfs) - Unaugmented

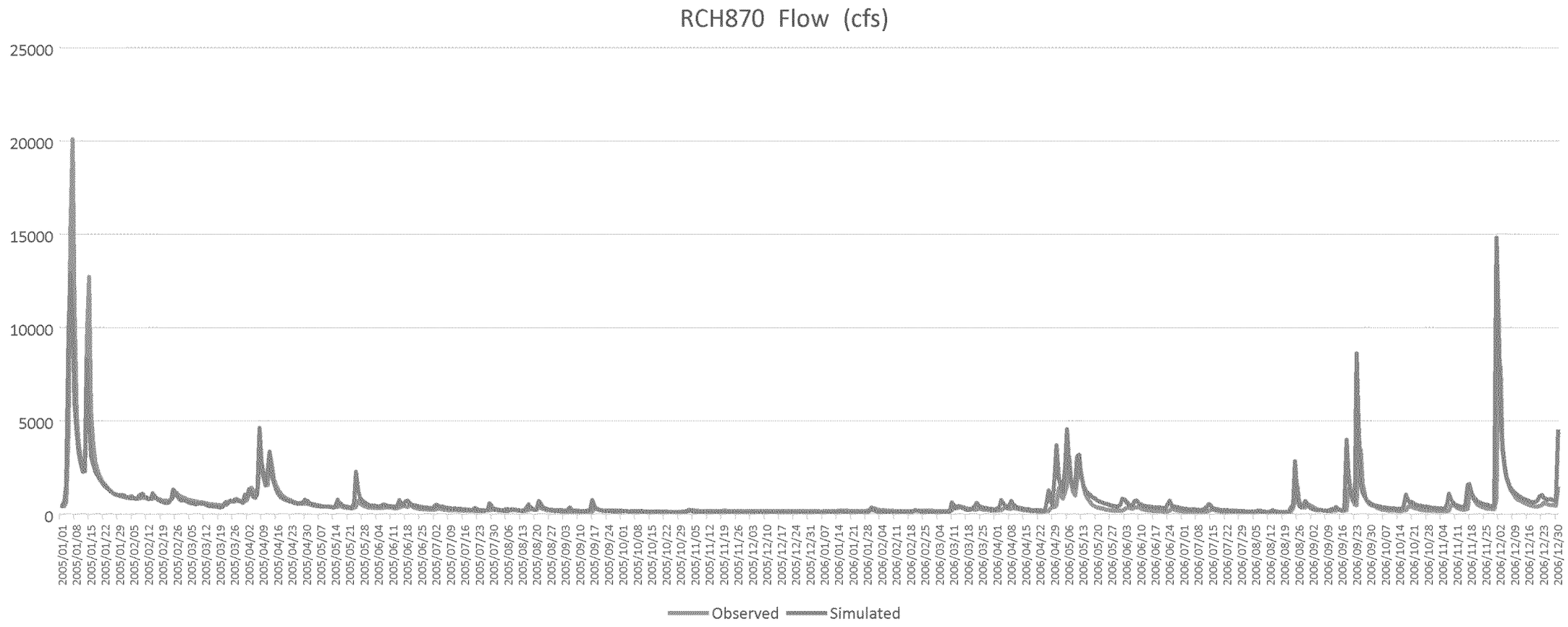


DFLOW Results

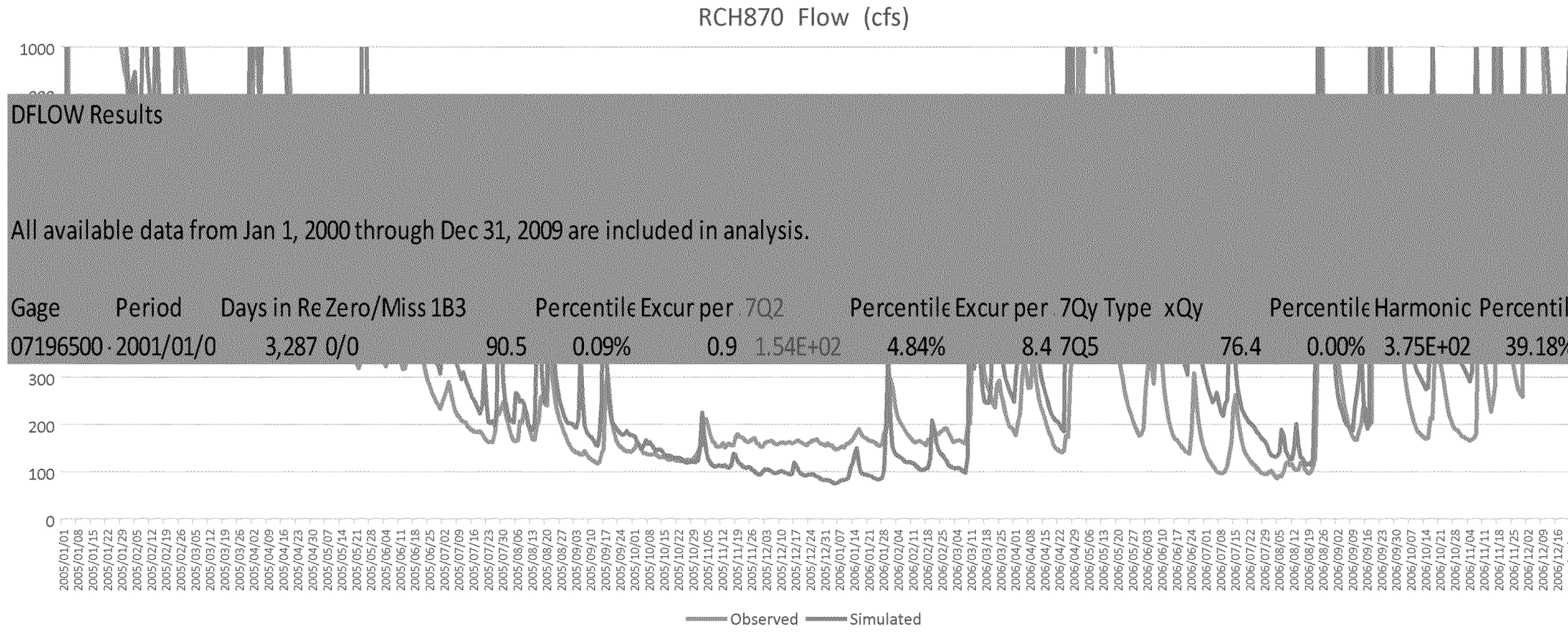
All available data from Jan 1, 2000 through Dec 31, 2009 are included in analysis.

Gage	Period	Days in Record	Zero/Miss	1B3	Percentile	Excur per	7Q2	Percentile	Excur per	7Qy Type	xQy	Percentile	Harmonic	Percentile
07195430	2001/01/01	3,287	0/0	50.9	0.06%	0.6	1.33E+02	12.20%	10.5	> 10 years	N/A	N/A	2.53E+02	39.58%

RCH870 Flow (cfs) - Unaugmented



RCH870 Flow (cfs) - Unaugmented

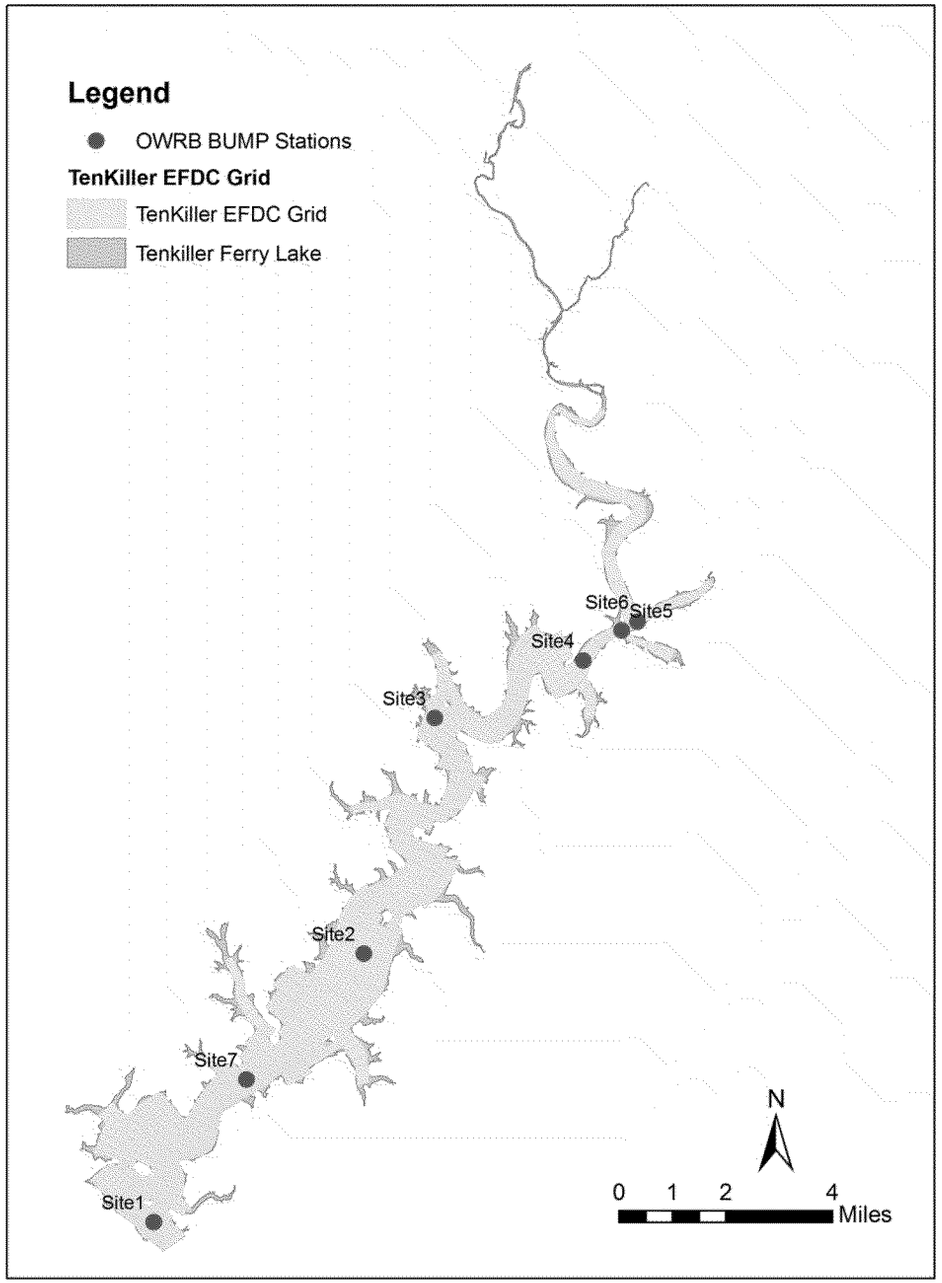


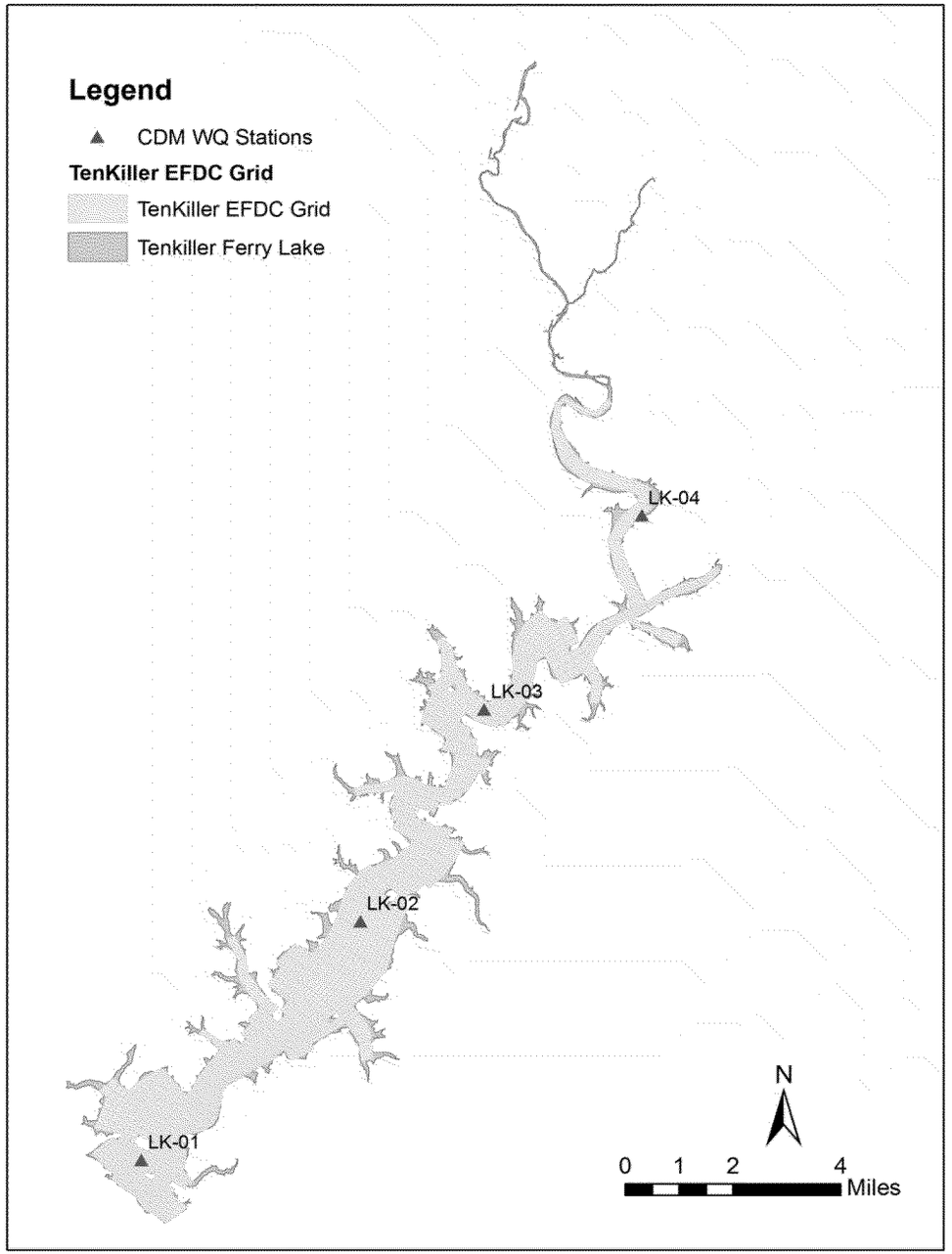
DFLOW Results

All available data from Jan 1, 2000 through Dec 31, 2009 are included in analysis.

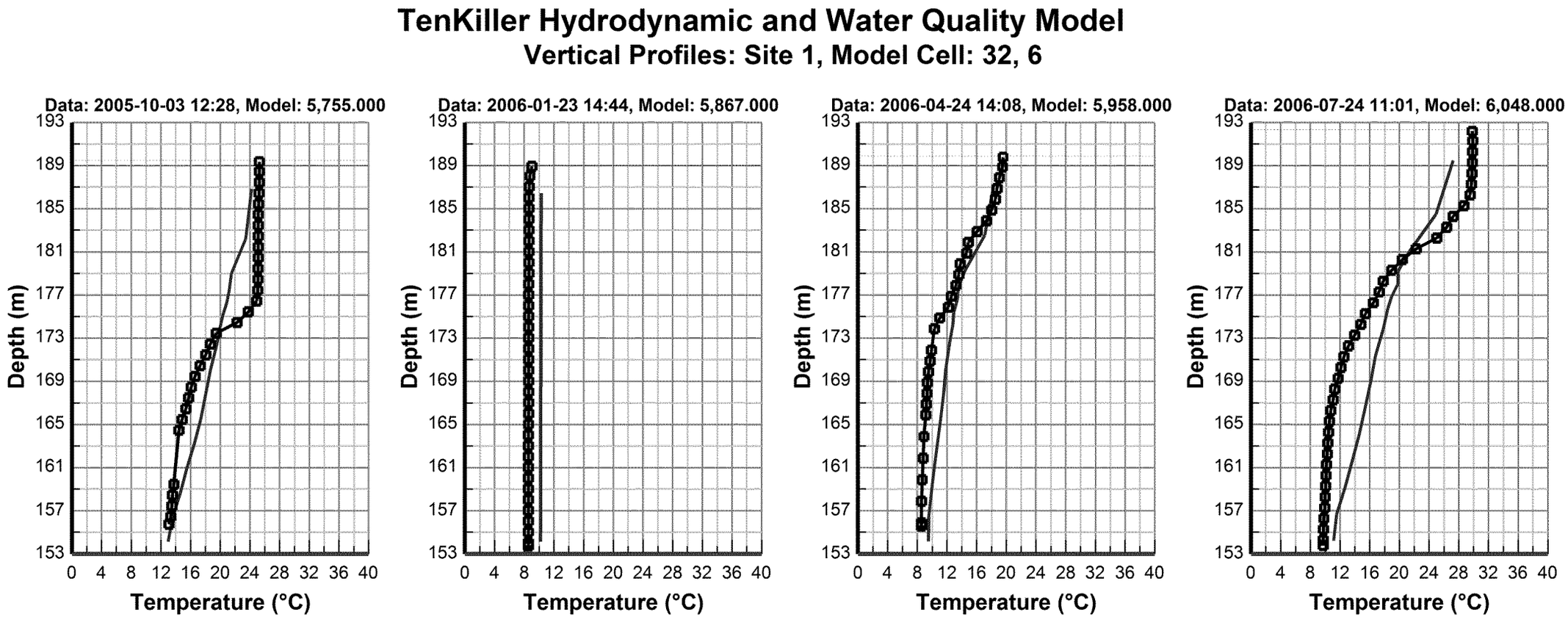
Gage	Period	Days in Re	Zero/Miss	1B3	Percentile	Excur per	7Q2	Percentile	Excur per	7Qy Type	xQy	Percentile	Harmonic	Percentile
07196500	2001/01/0	3,287	0/0	90.5	0.09%	0.9	1.54E+02	4.84%	8.4	7Q5	76.4	0.00%	3.75E+02	39.18%

Lake Tenkiller Temperature Profiles

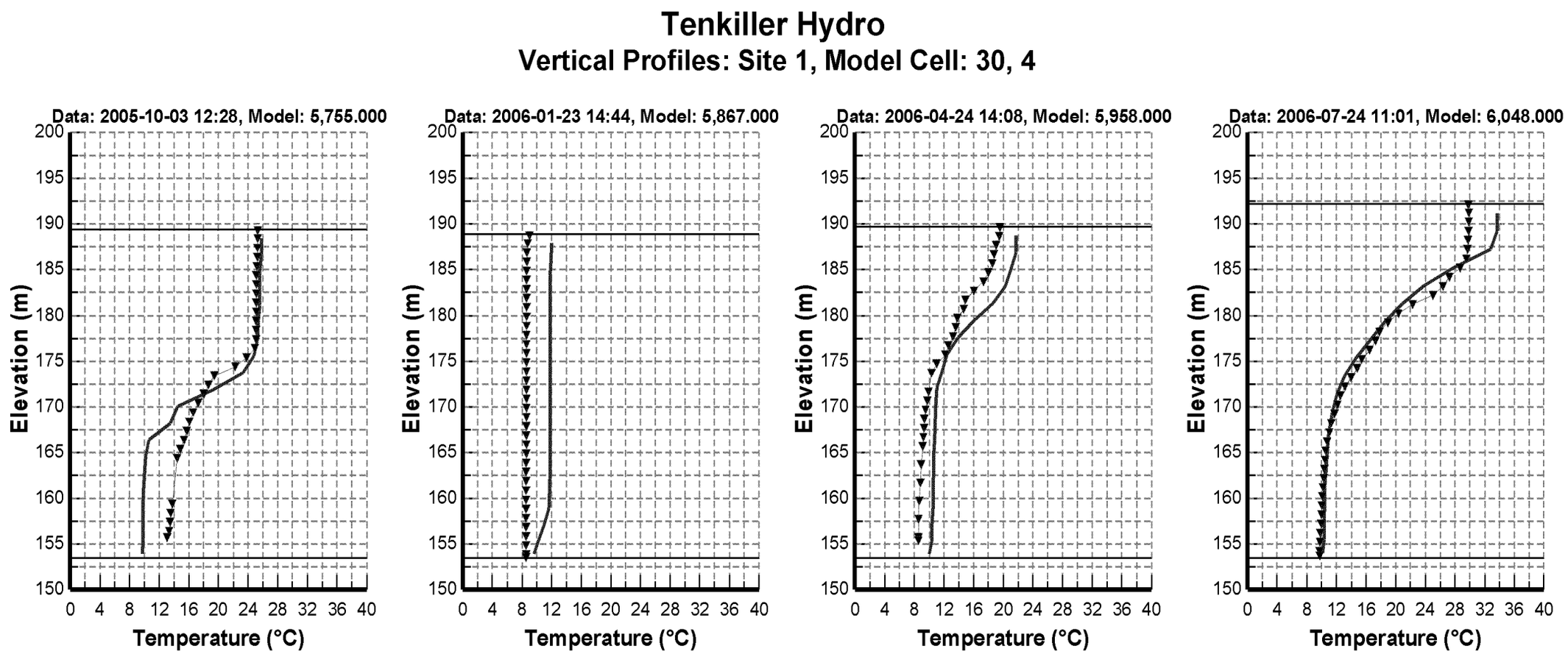

Legend
OWRB BUMP Stations
TenKiller EFDC Grid
TenKiller EFDC Grid
Tenkiller Ferry Lake
Site1
Site2
Site3
Site4
Site5
Site6
Site7
N
0 1 2 4
Miles


Legend
CDM WQ Stations
TenKiller EFDC Grid
TenKiller EFDC Grid
Tenkiller Ferry Lake
LK-04
LK-03
LK-02
LK-01
N
0 1 2 4
Miles

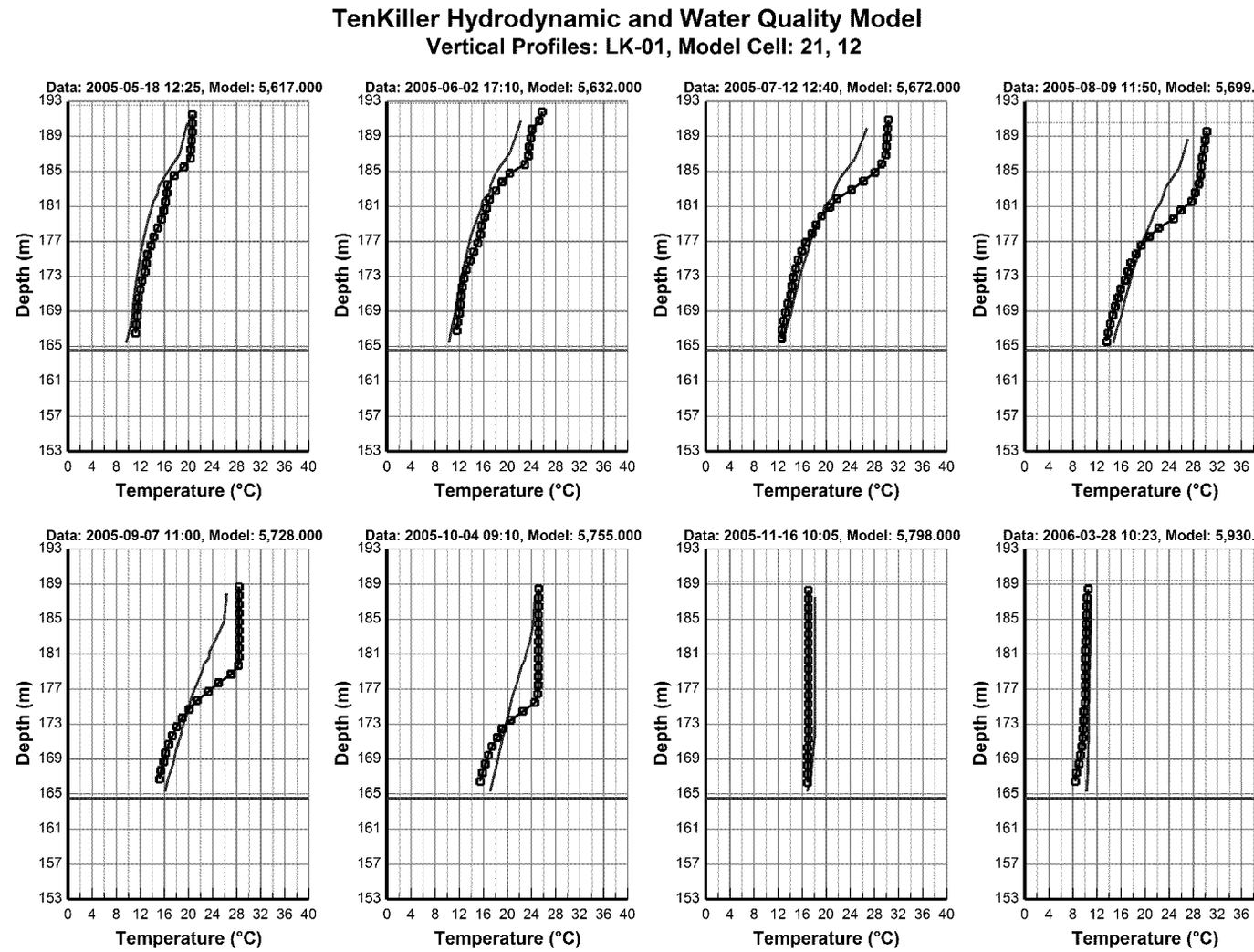
Site 1 - Original



Site 1 - Regrid



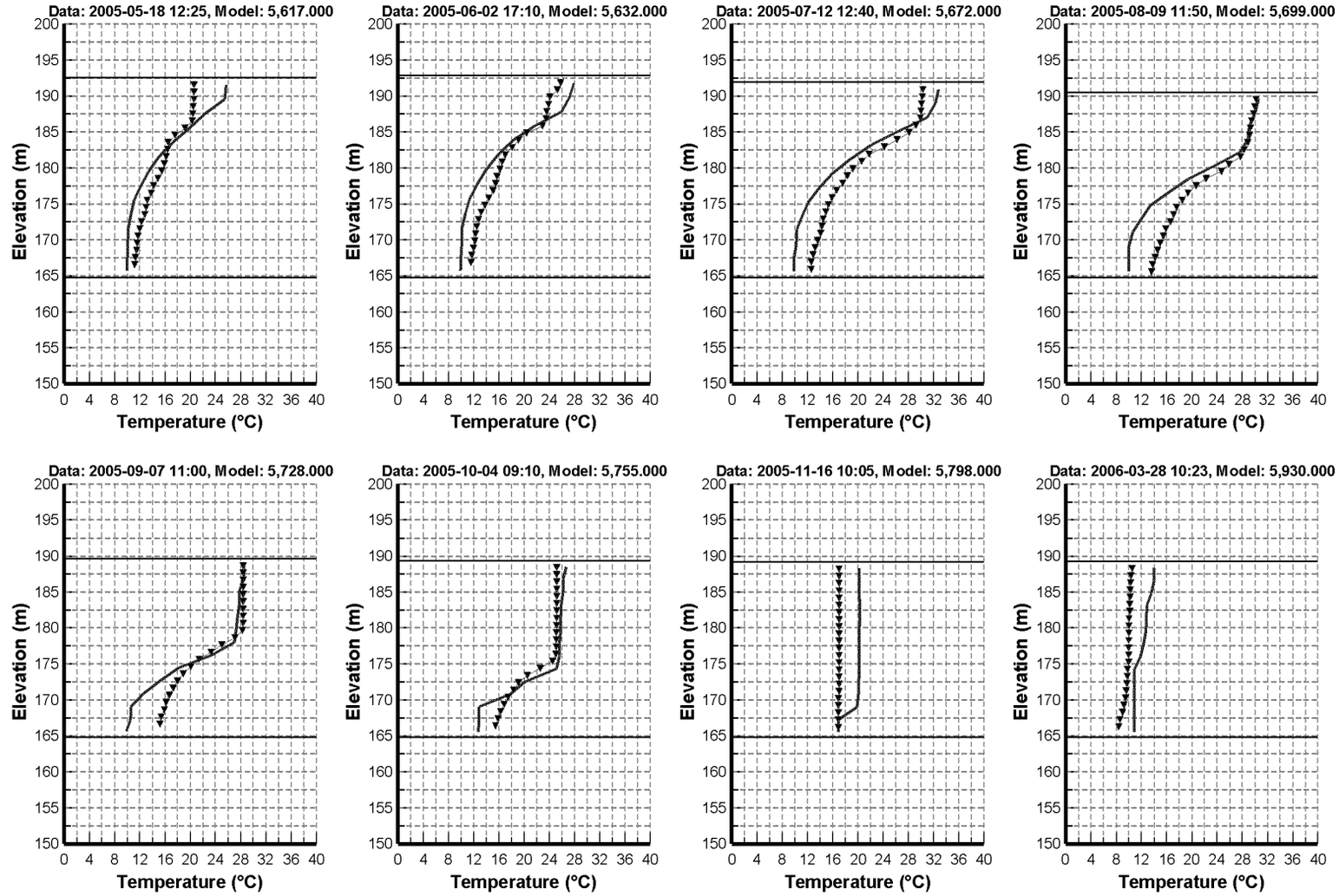
LK-01 – Original – 05/18/2005 - 03/28/2006



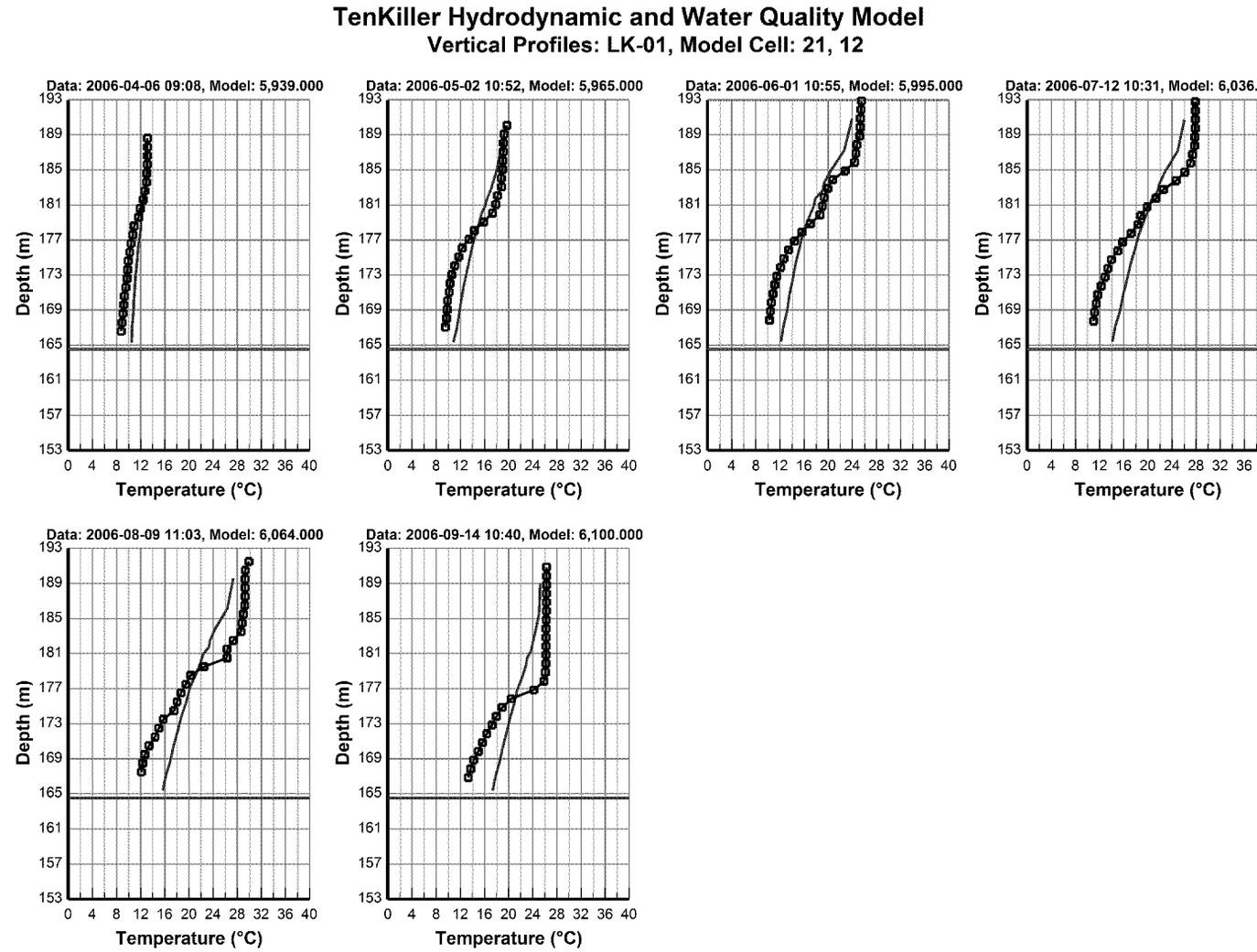
LK-01 Regrid – 05/18/2005 - 03/28/2006

Tenkiller Hydro

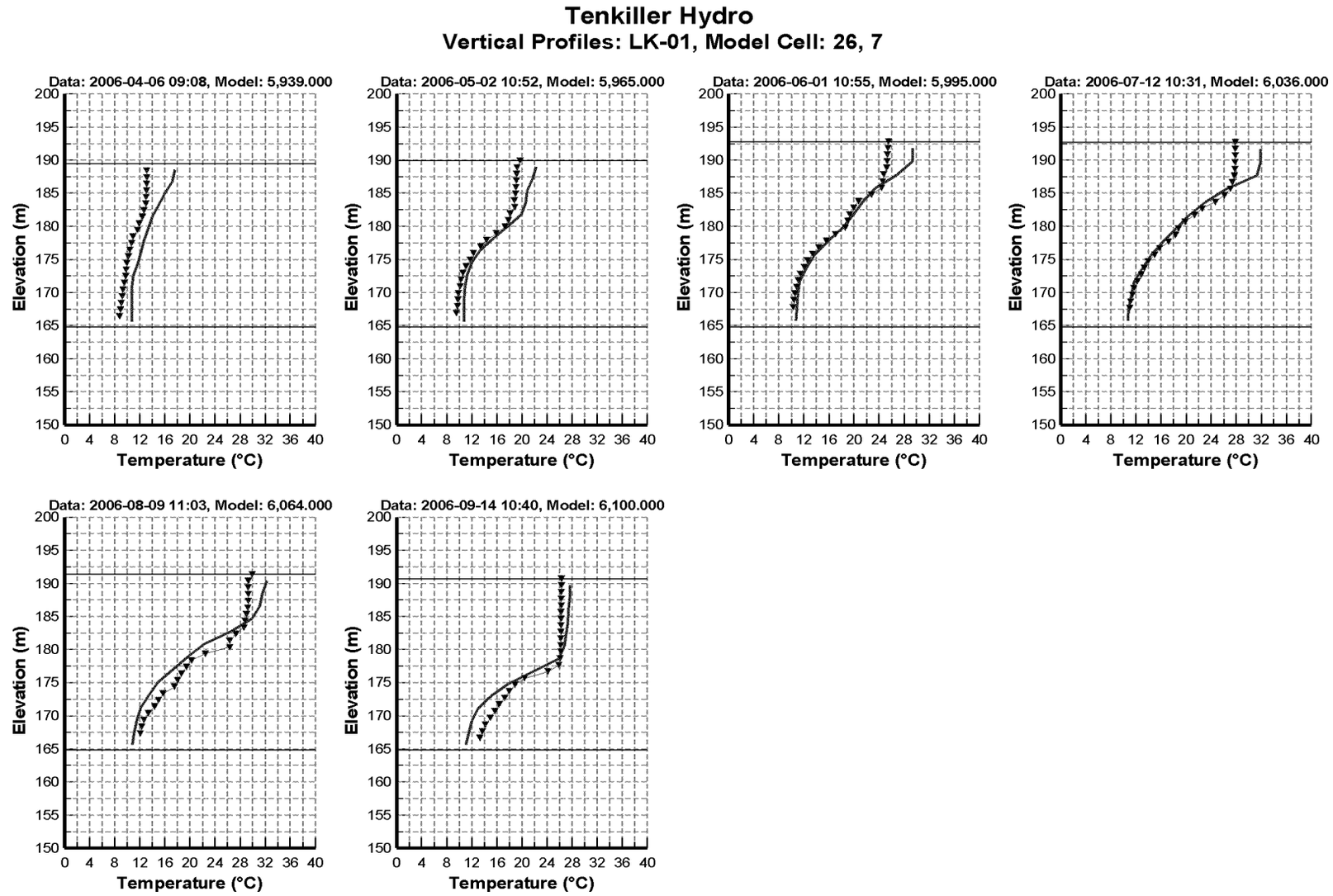
Vertical Profiles: LK-01, Model Cell: 26, 7



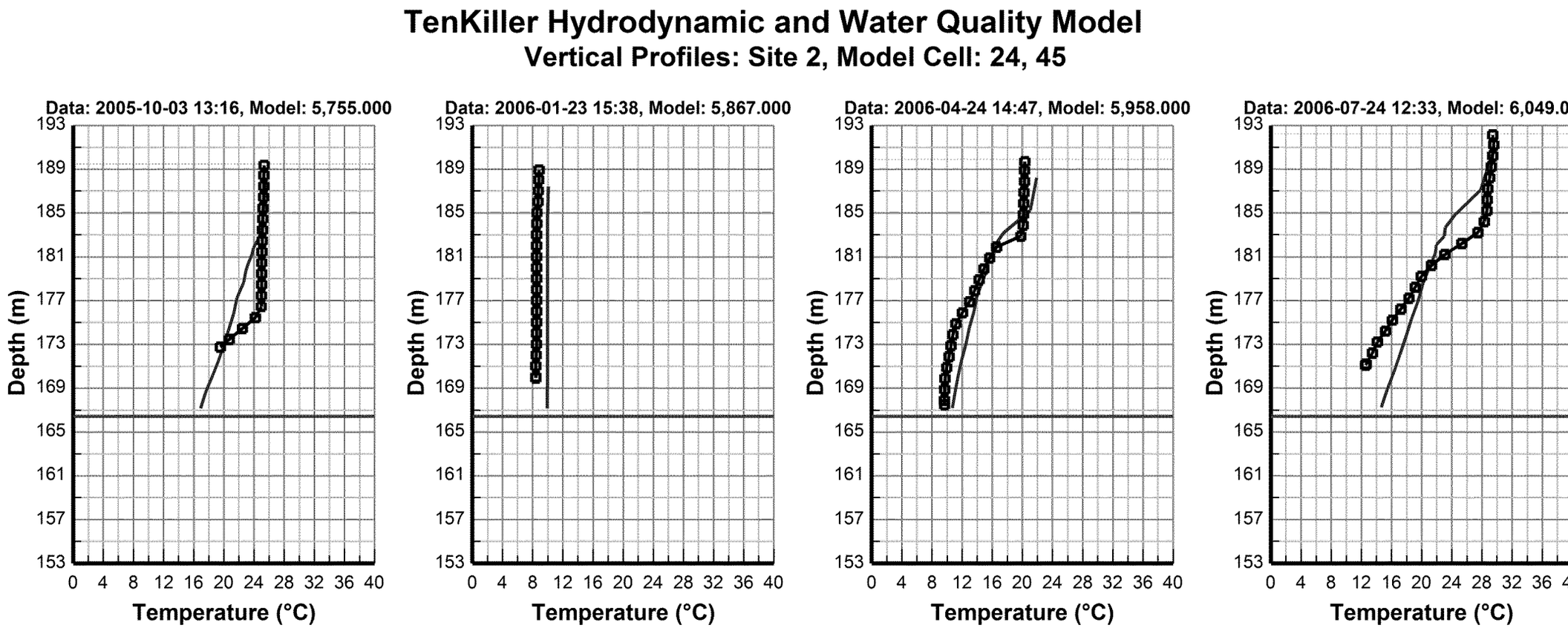
LK-01 Original – 04/06/2006 – 09/14/2006



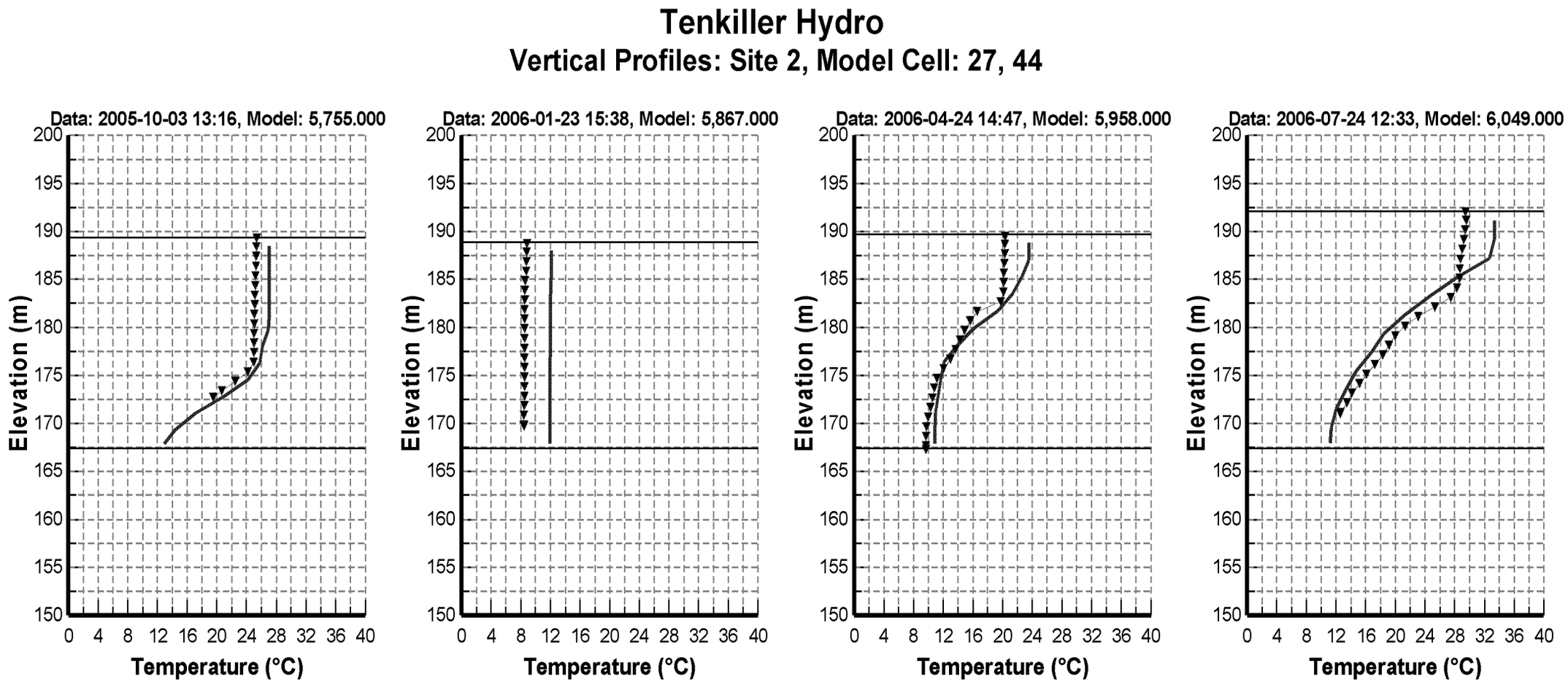
LK-01 Regrid – 04/06/2006 – 09/14/2006



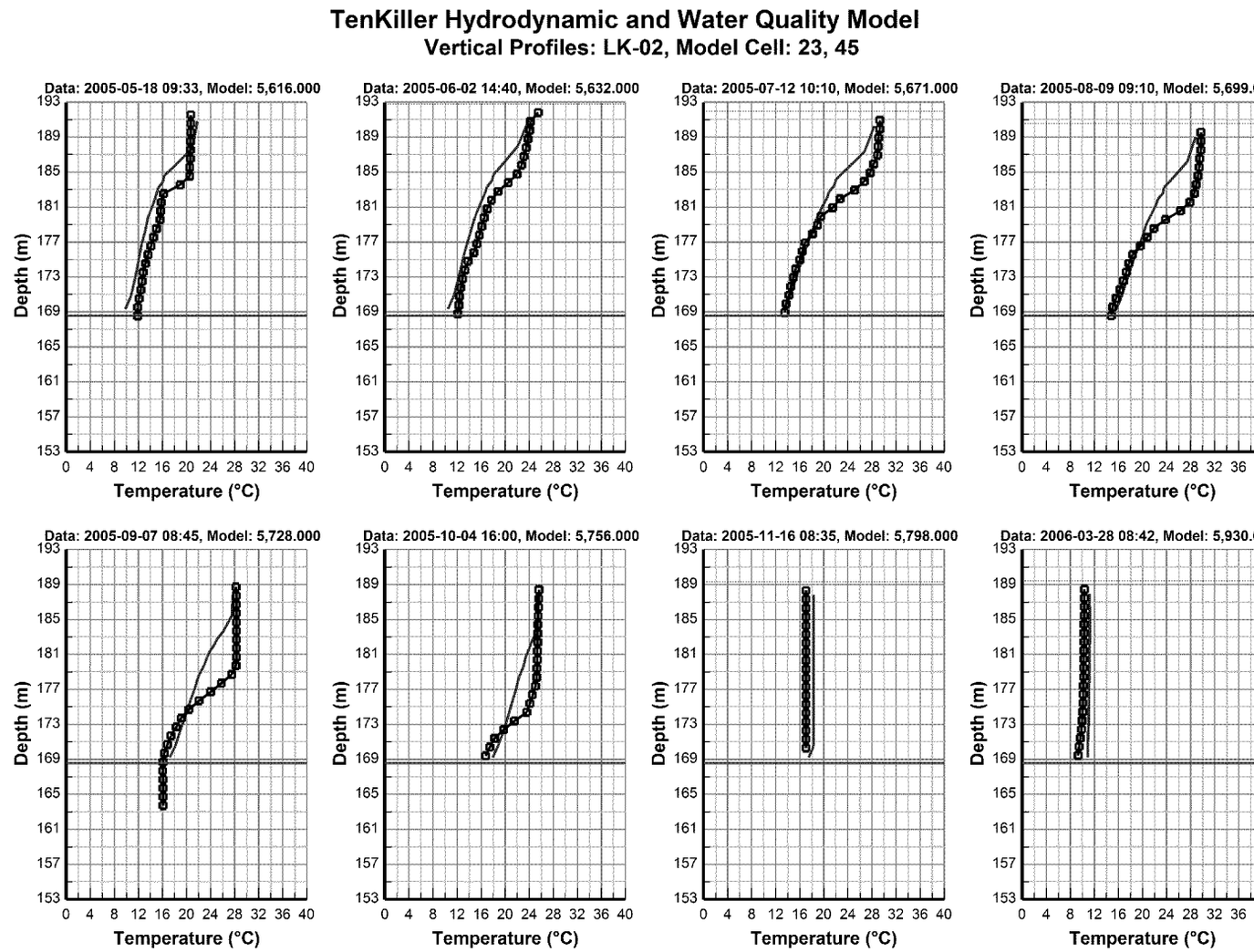
Site 2 - Original



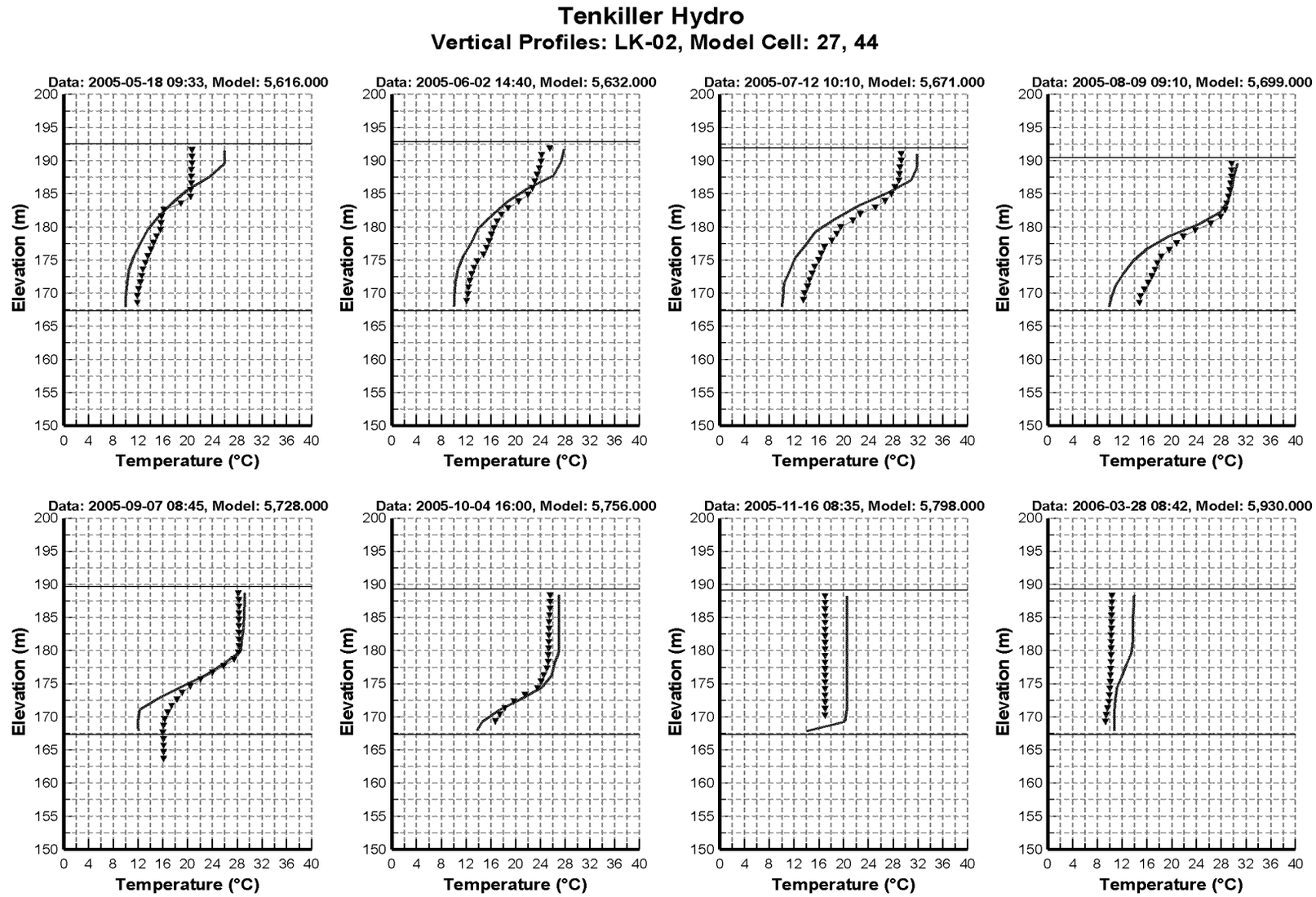
Site 2 - Regrid



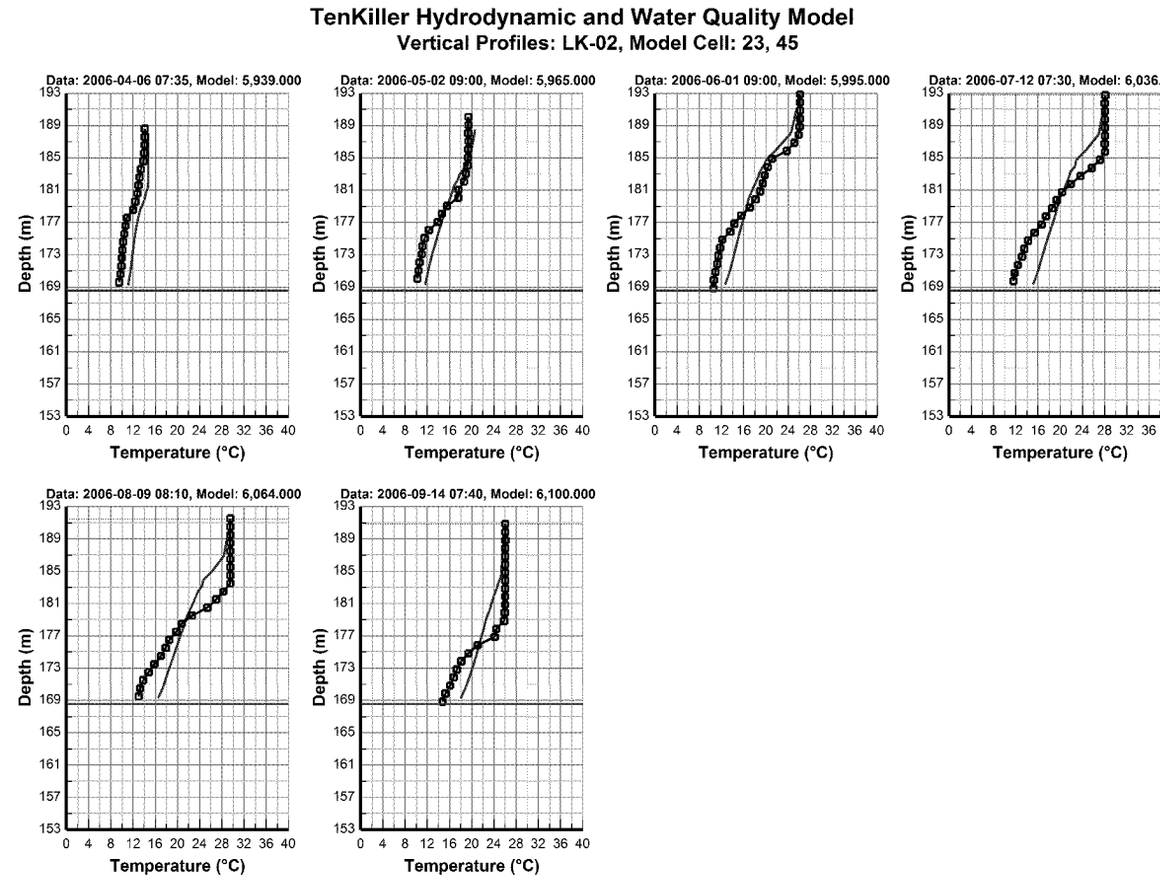
LK-02 – Original 05/18/2005 – 03/28/2006



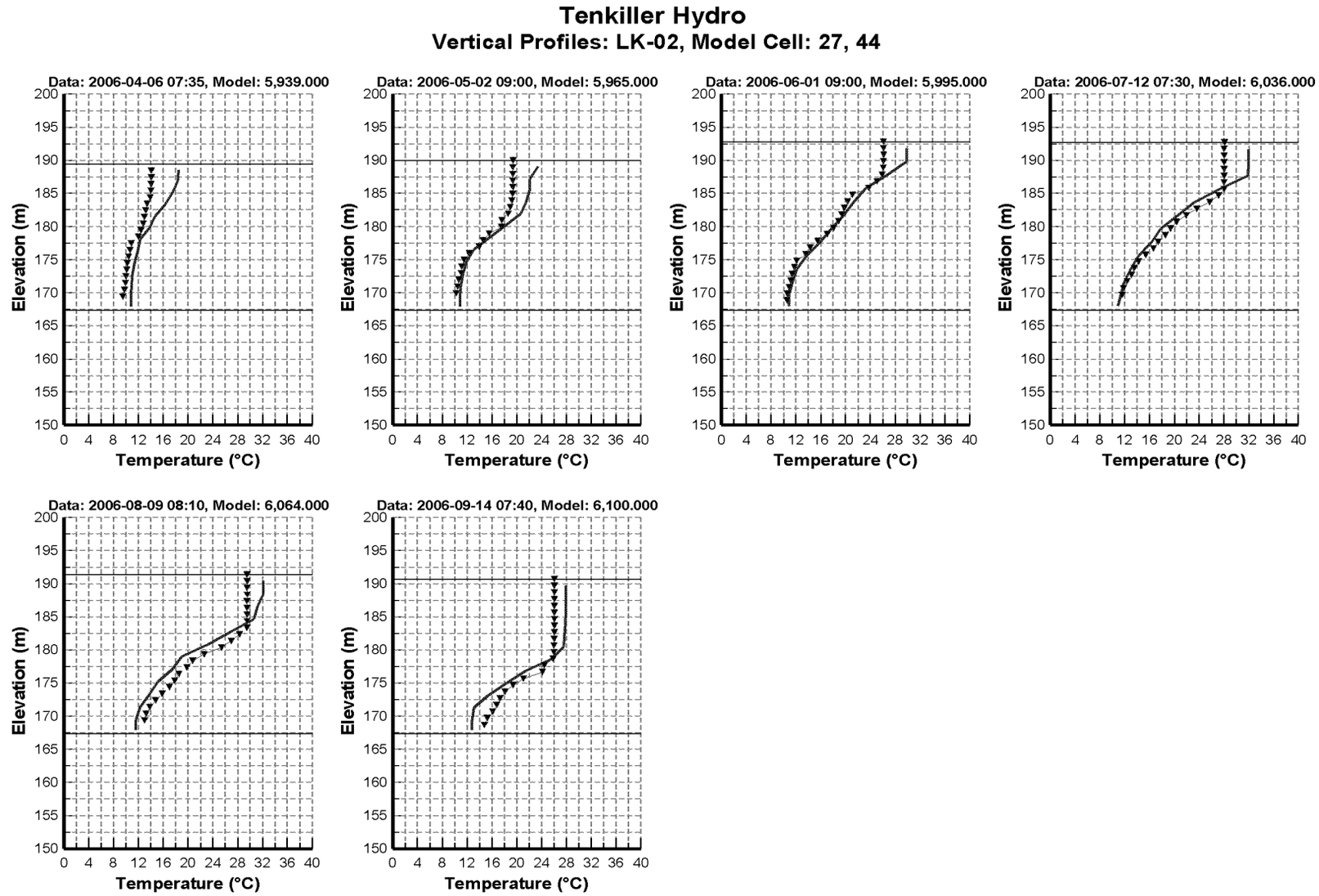
LK-02 Regrid 05/18/2005 – 03/28/2006



LK-02 – Original 04/06/2006 – 09/14/2006



LK-02 Regrid 04/06/2006 – 09/14/2006



For Further Temperature Analysis

Click Here

Next Steps

- Agree that the modeled revisions are sufficient
- Discuss and capture model scenarios
- Agree on the documentation path forward

Capture Conclusions & Discussion

Group Discussion