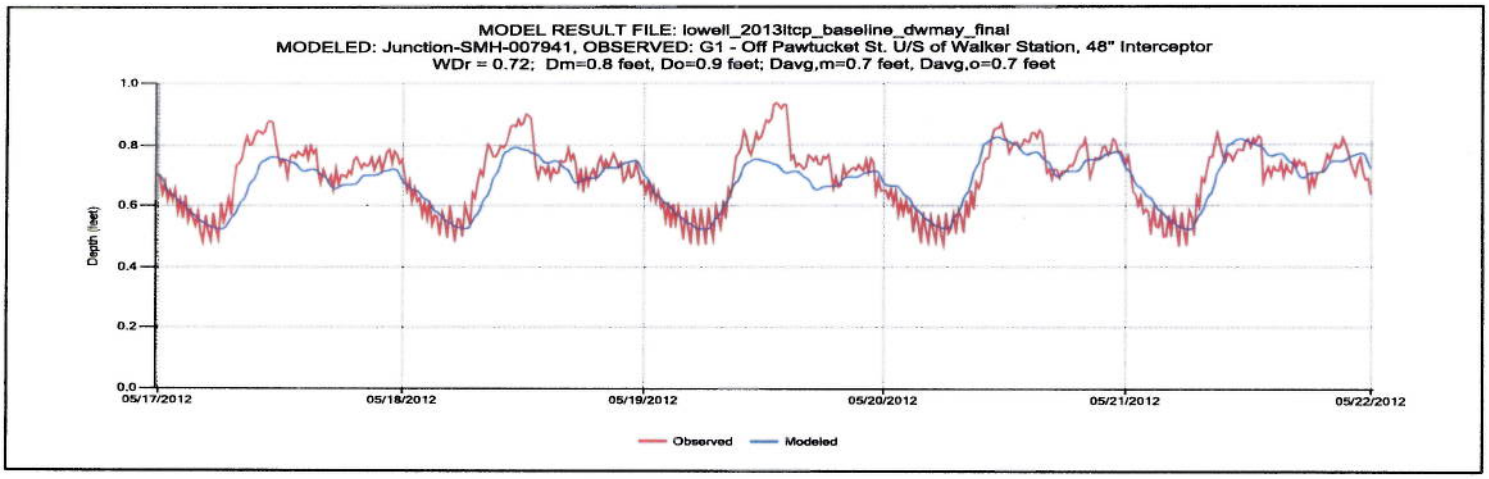
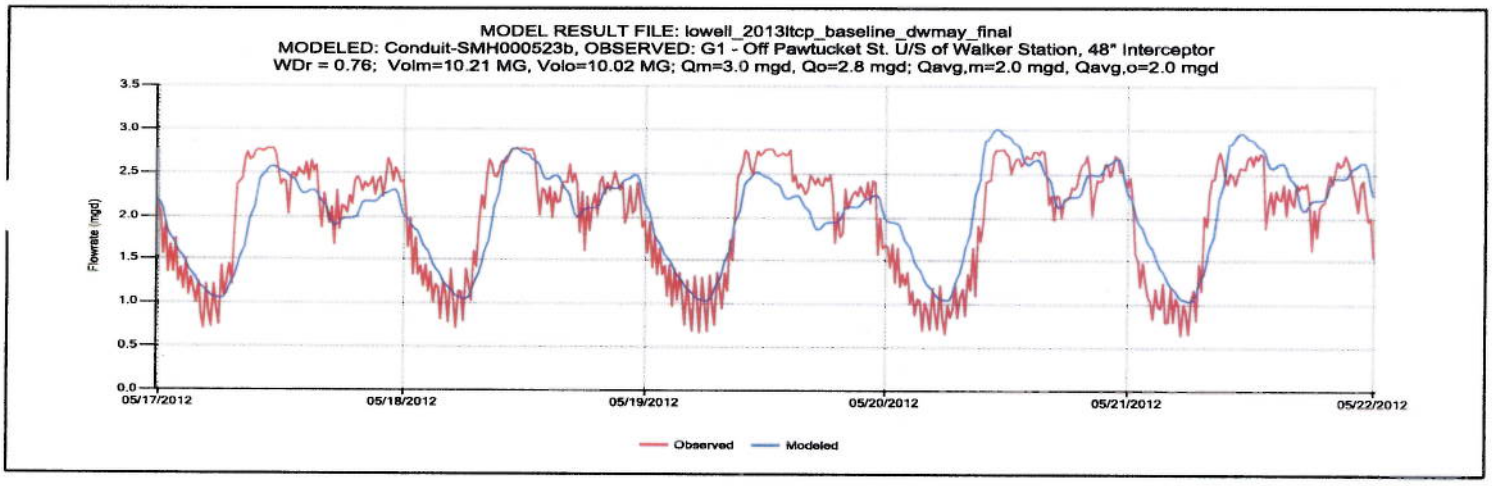
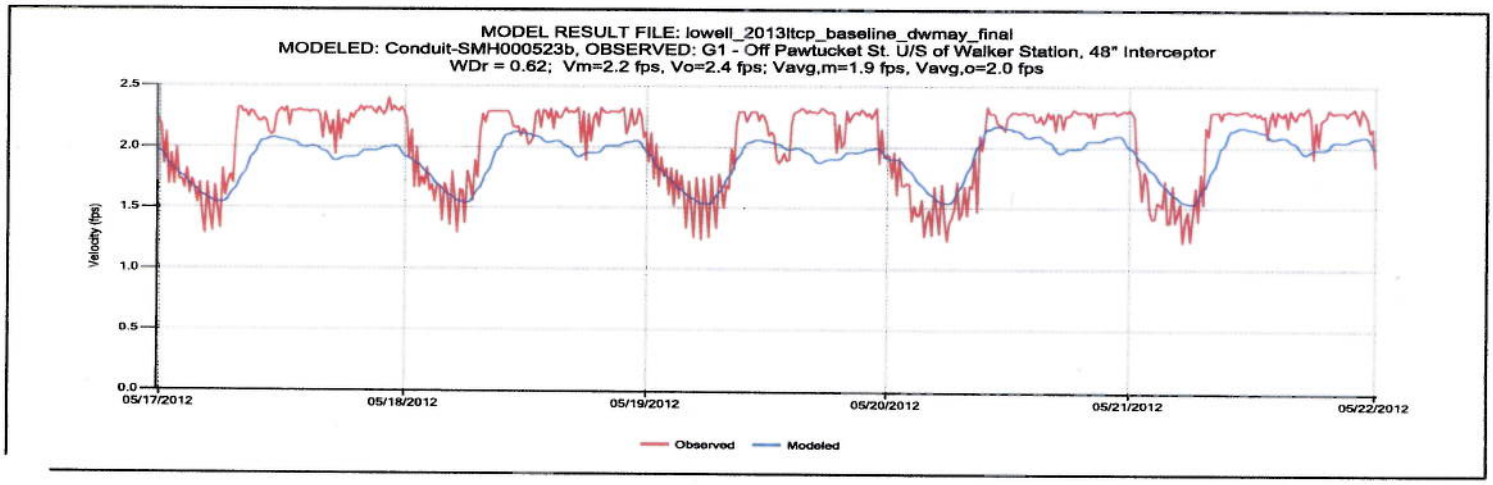
Attachment 2

May Dry Weather Period

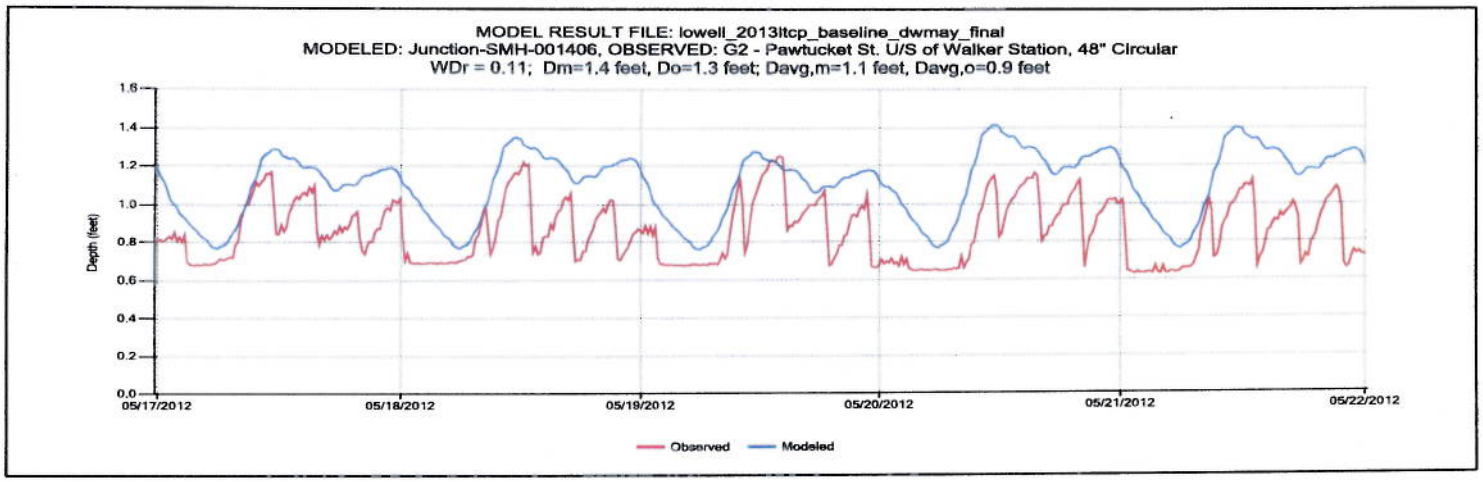
G1-May Dry Period

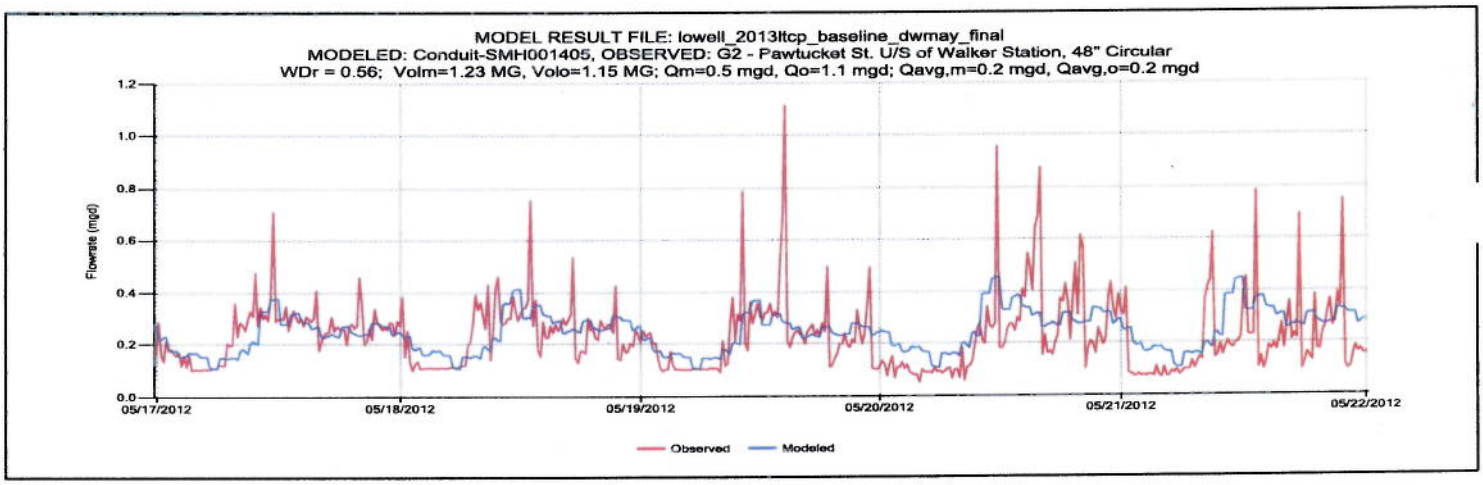


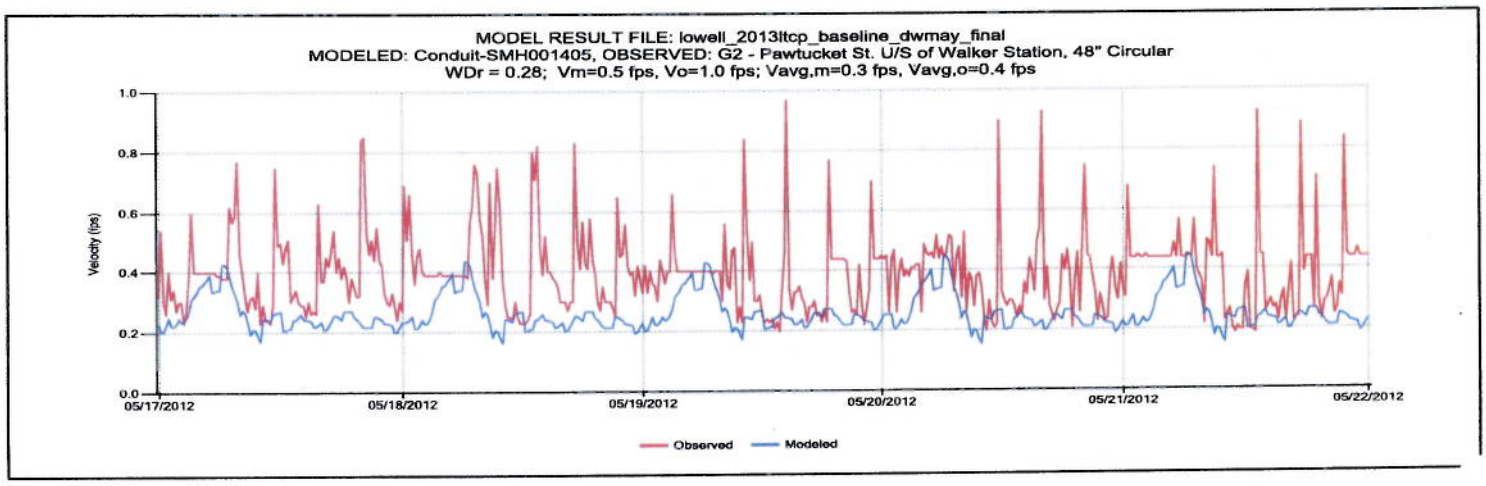




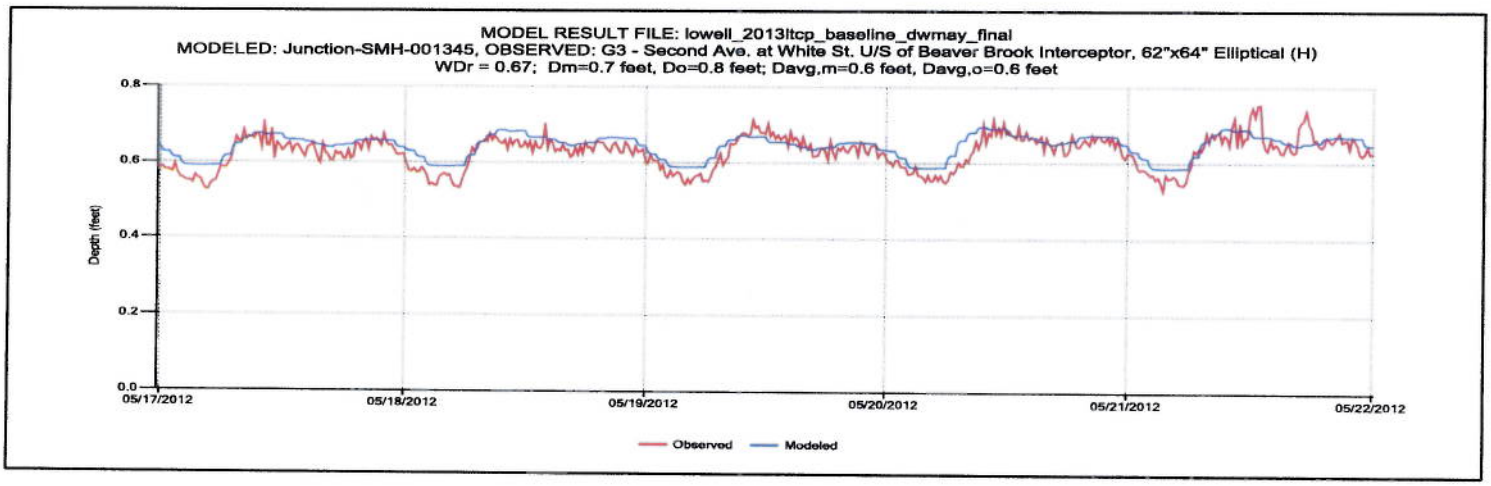
G2-May Dry Period

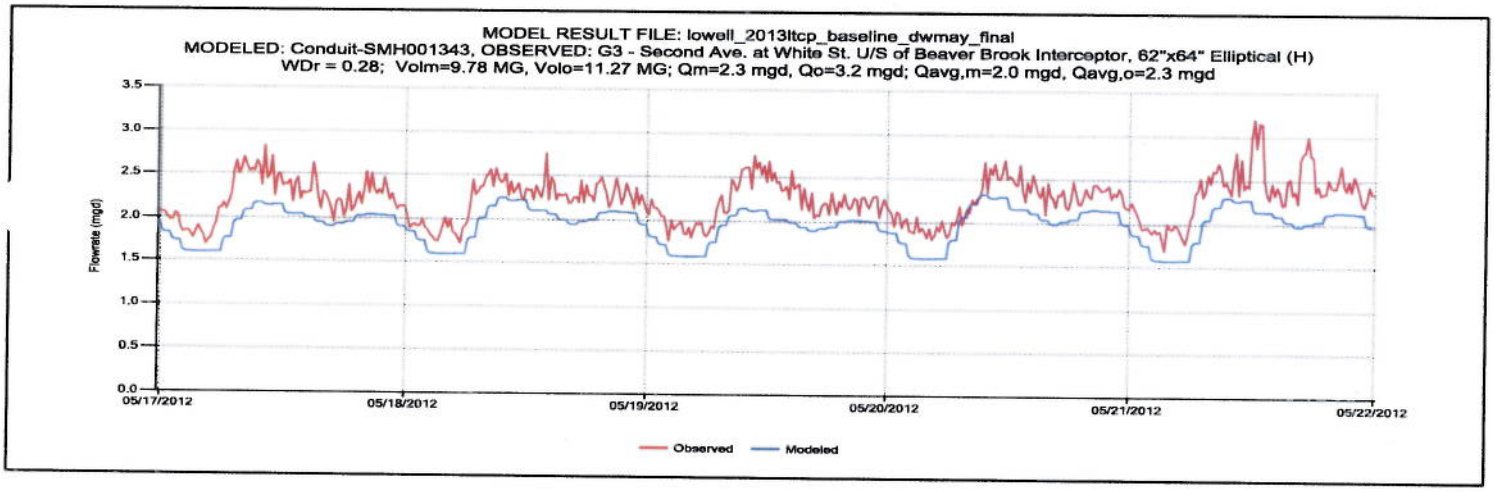


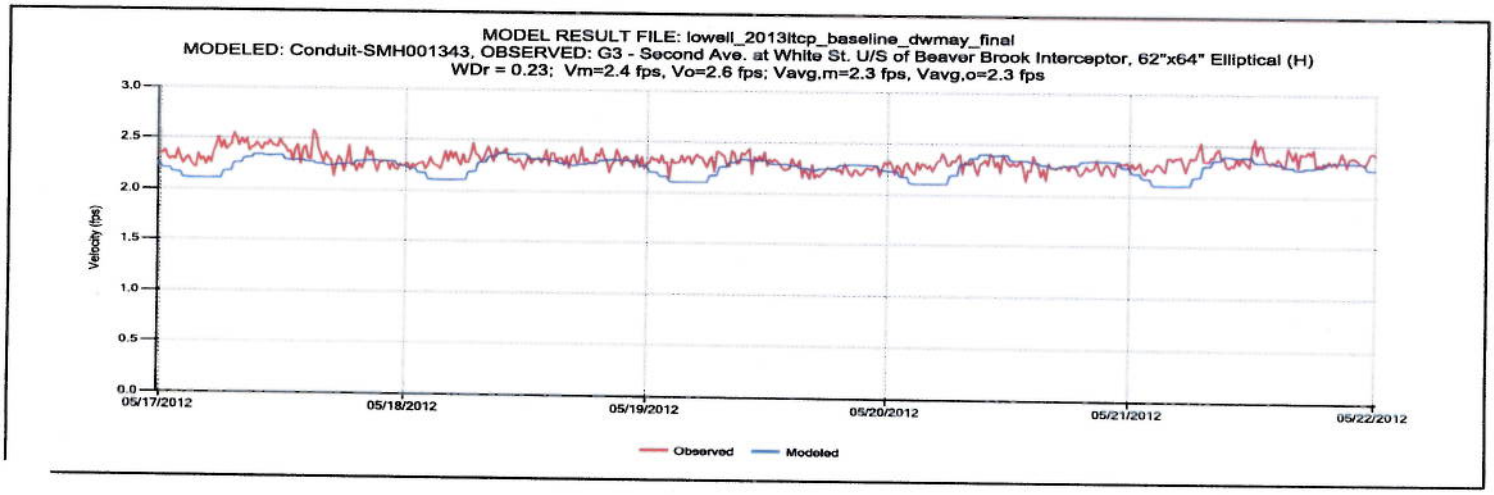




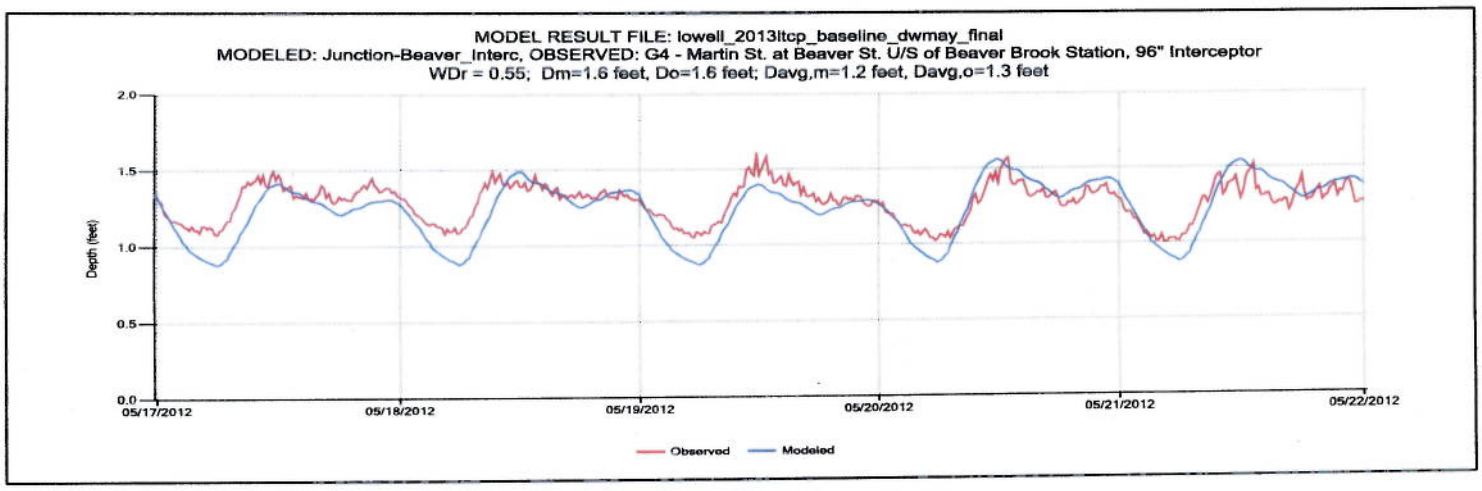
G3-May Dry Period

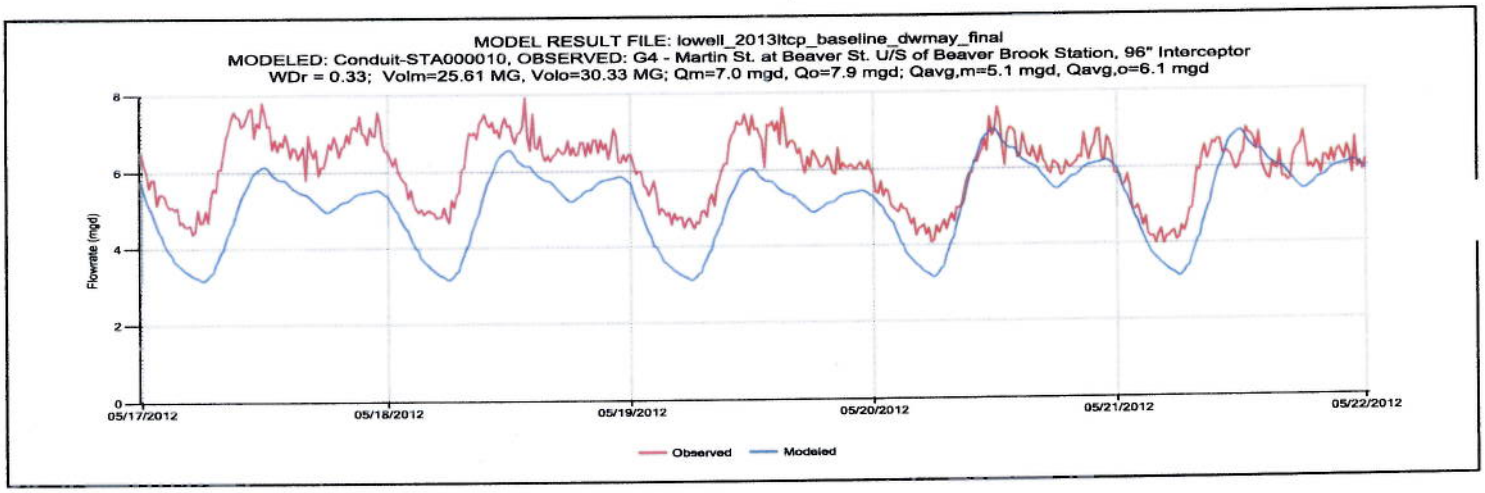


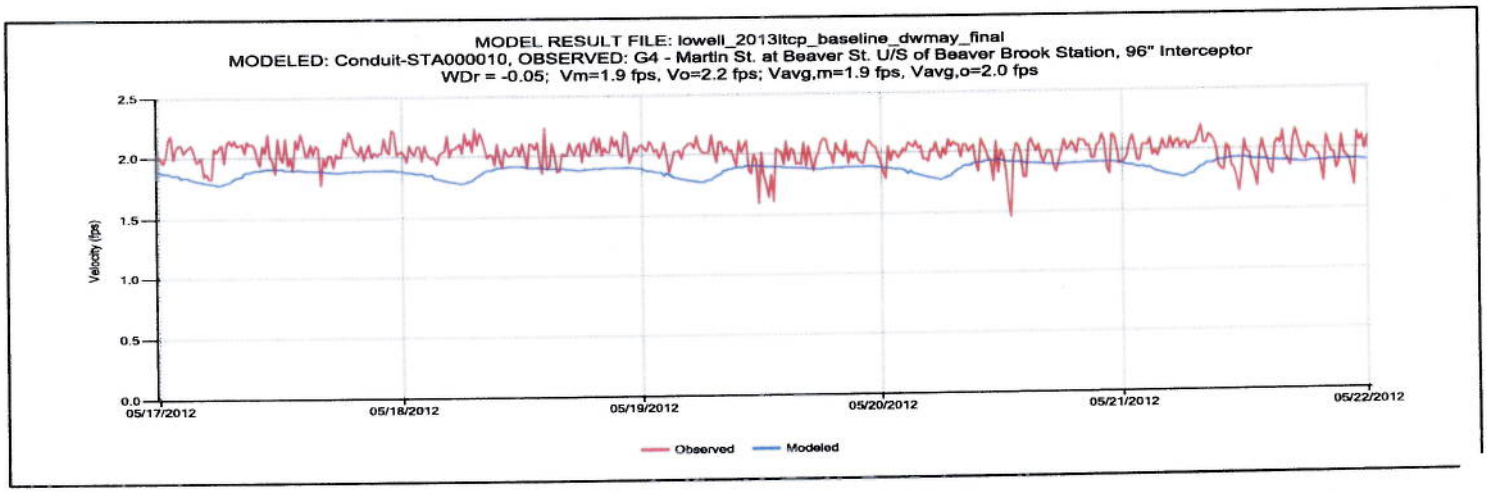




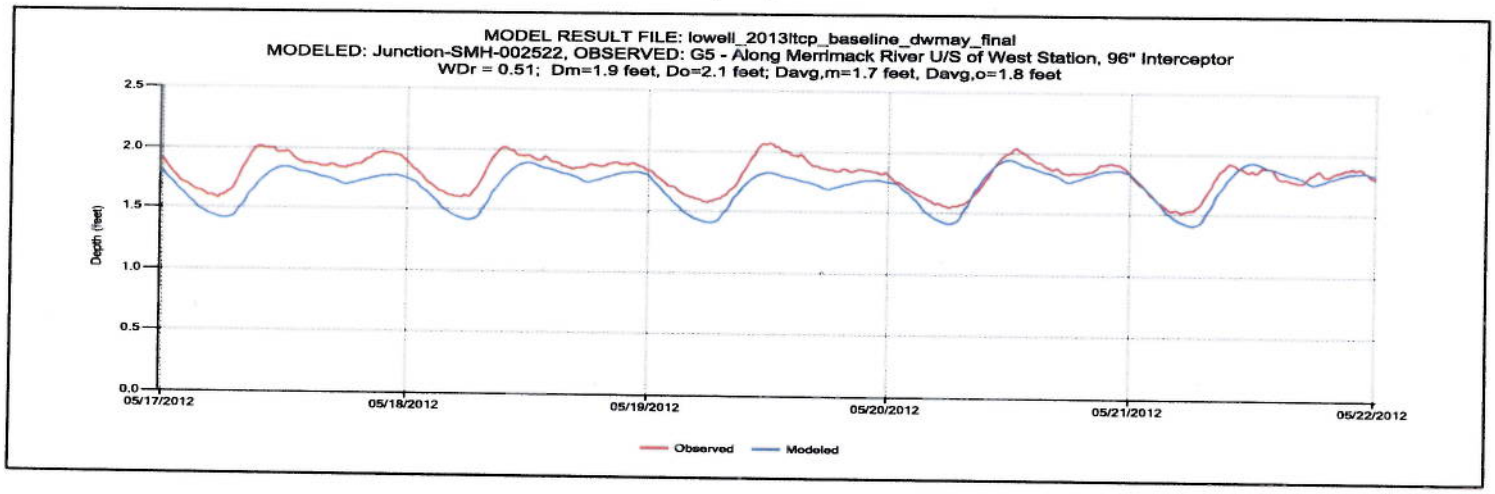
G4-May Dry Period

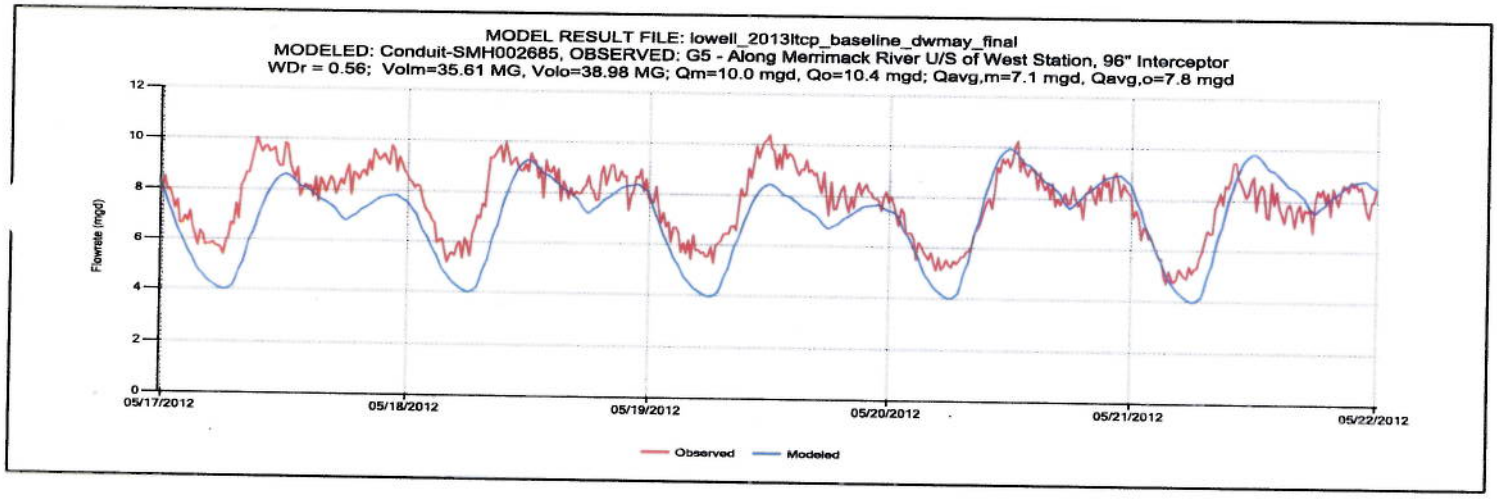


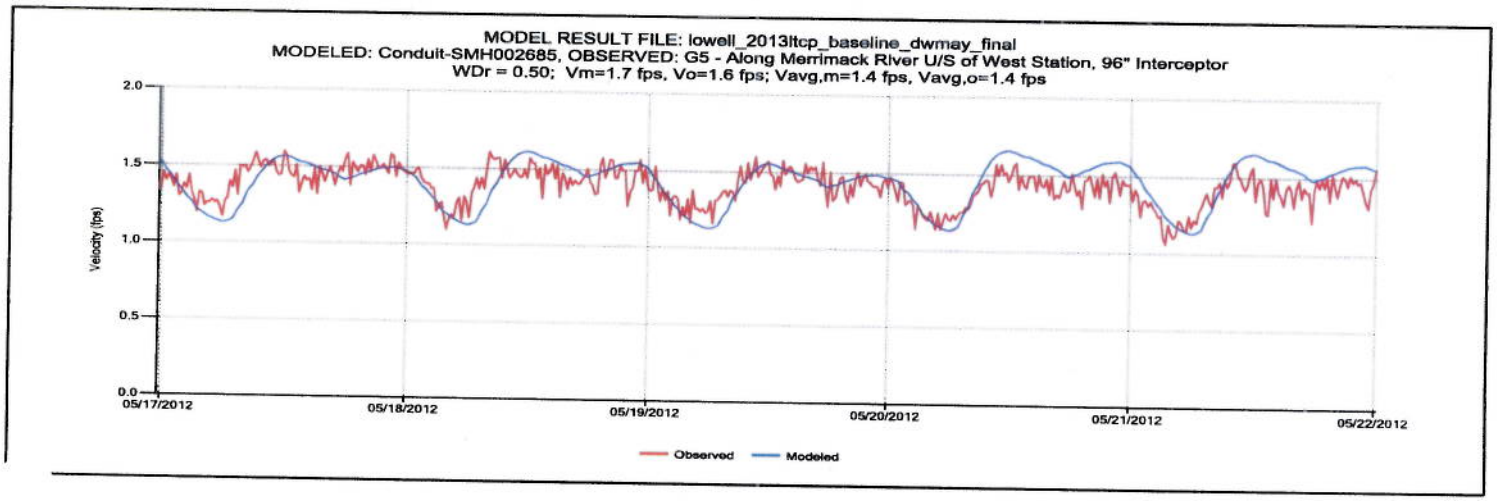




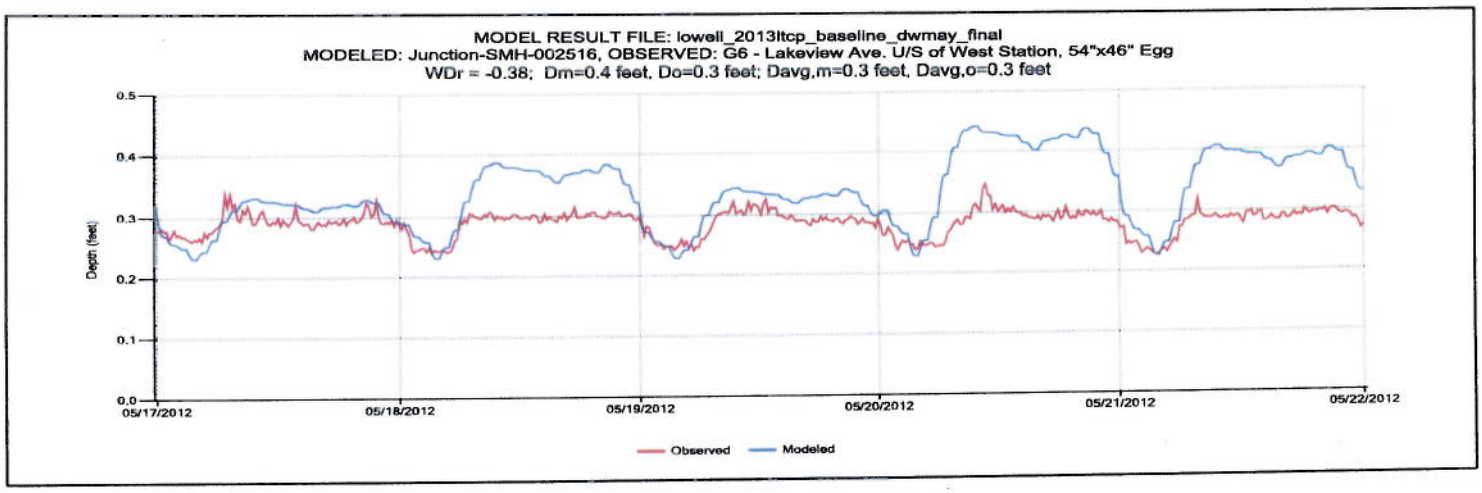
G5-May Dry Period

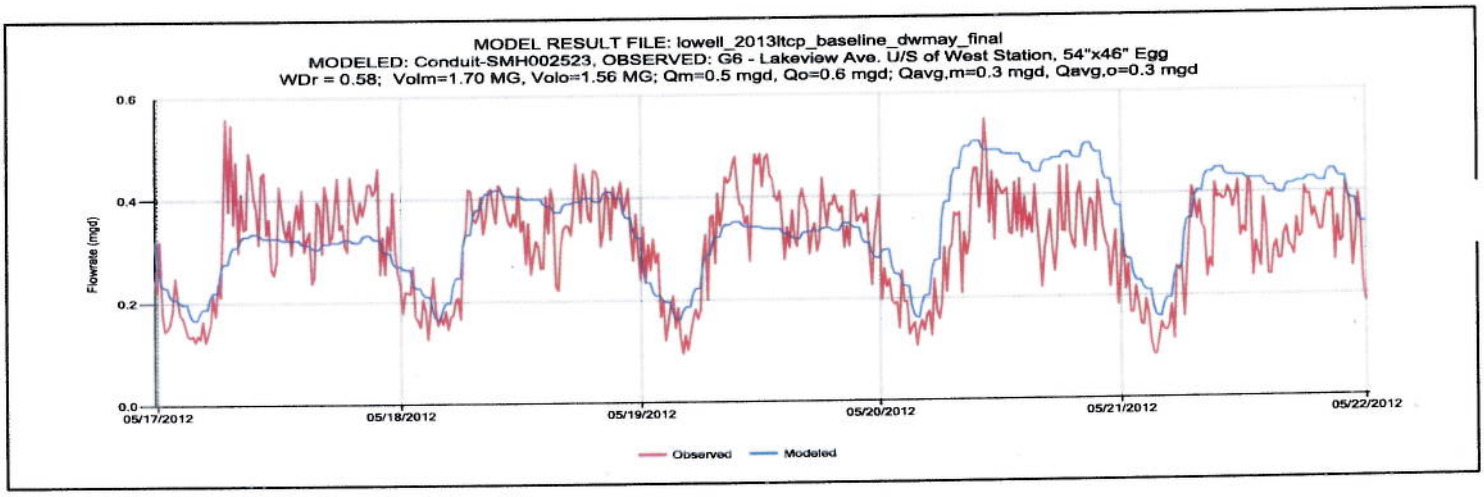


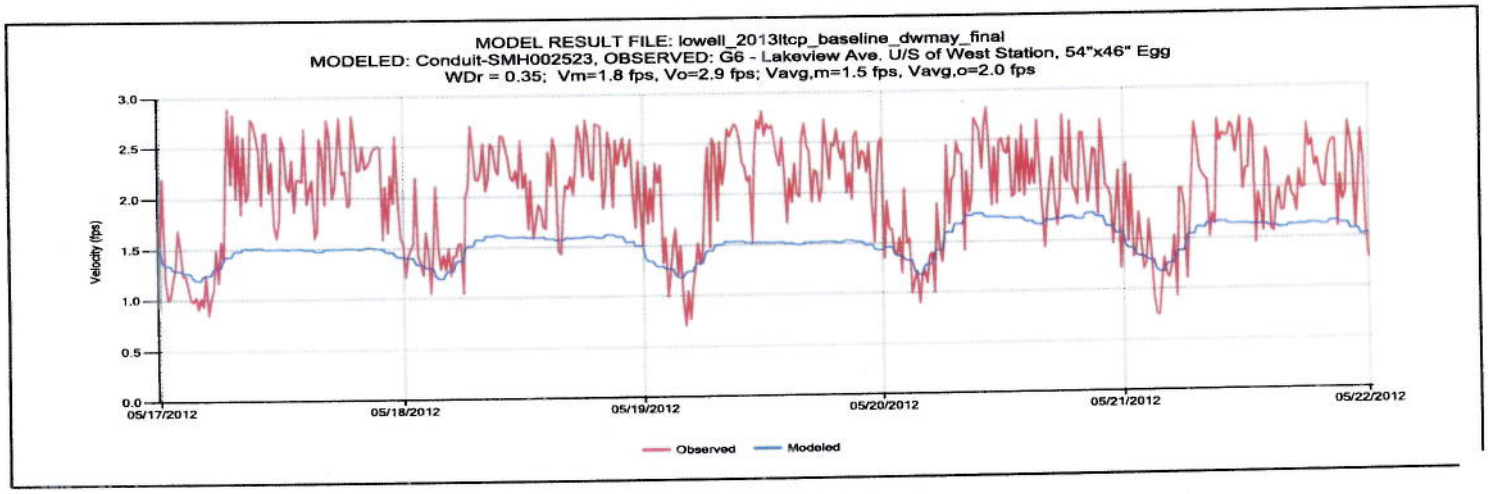




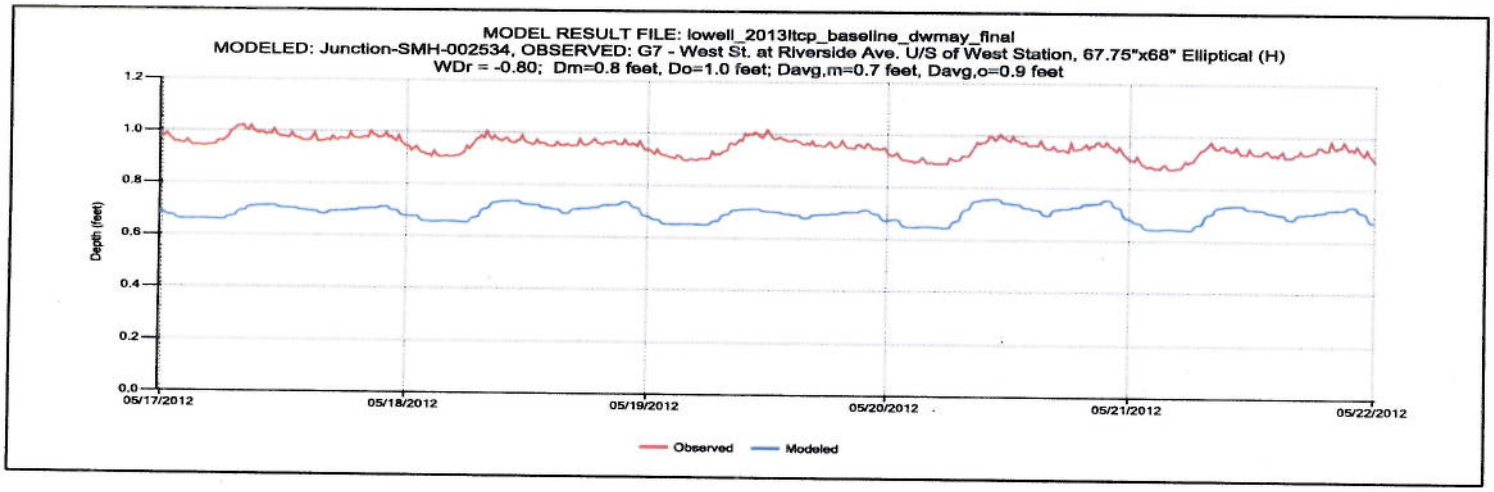
G6-May Dry Period

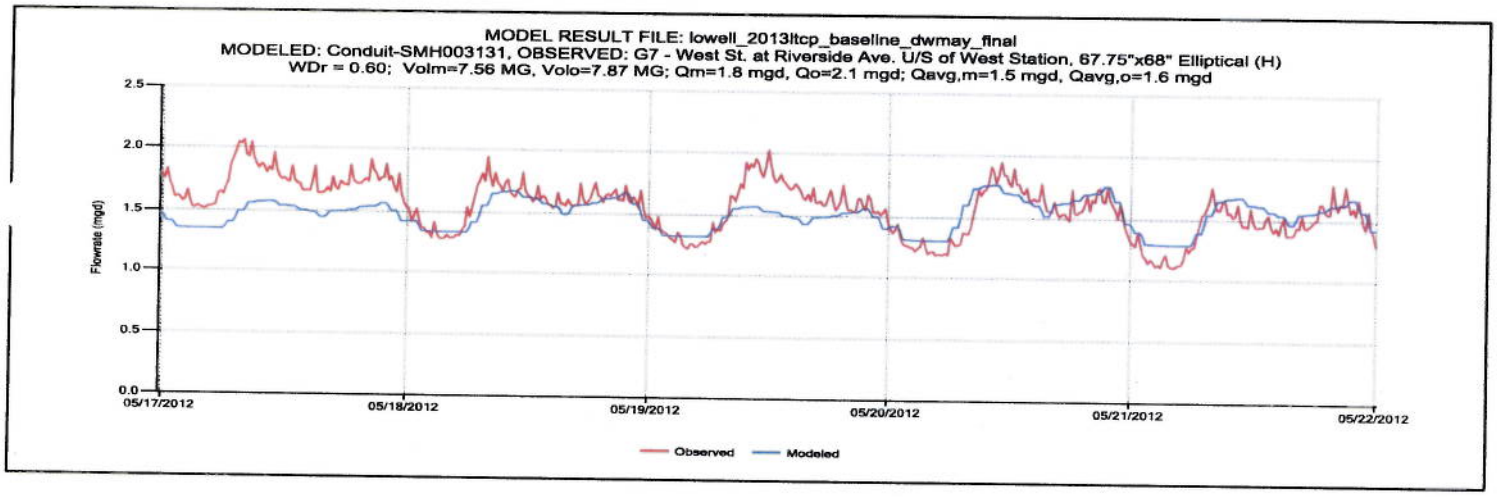


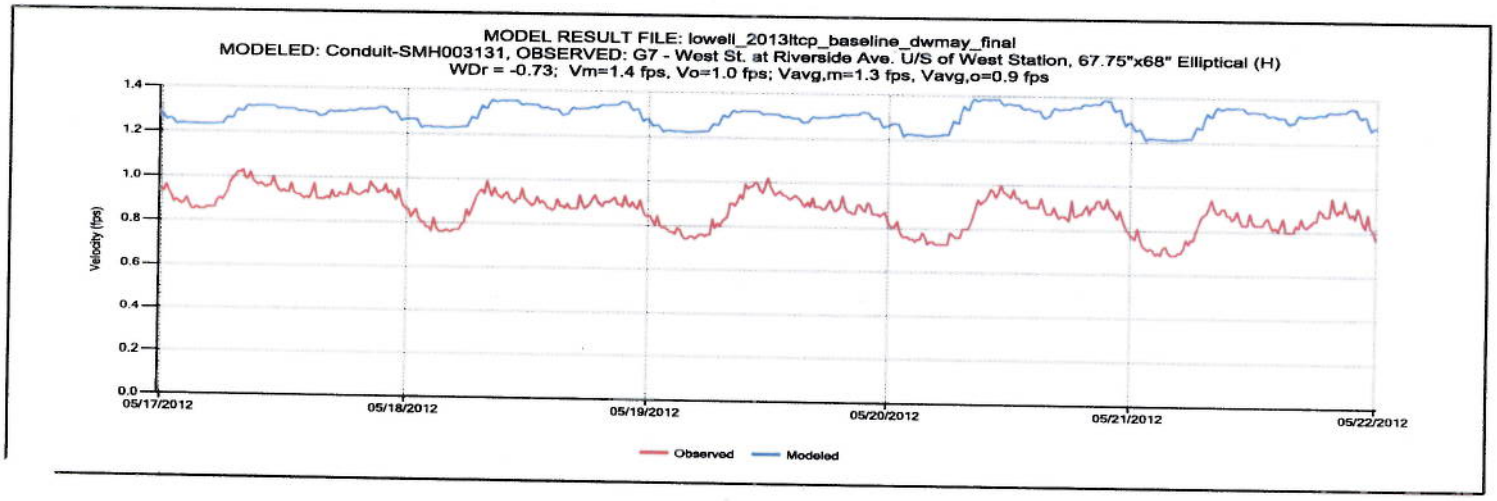




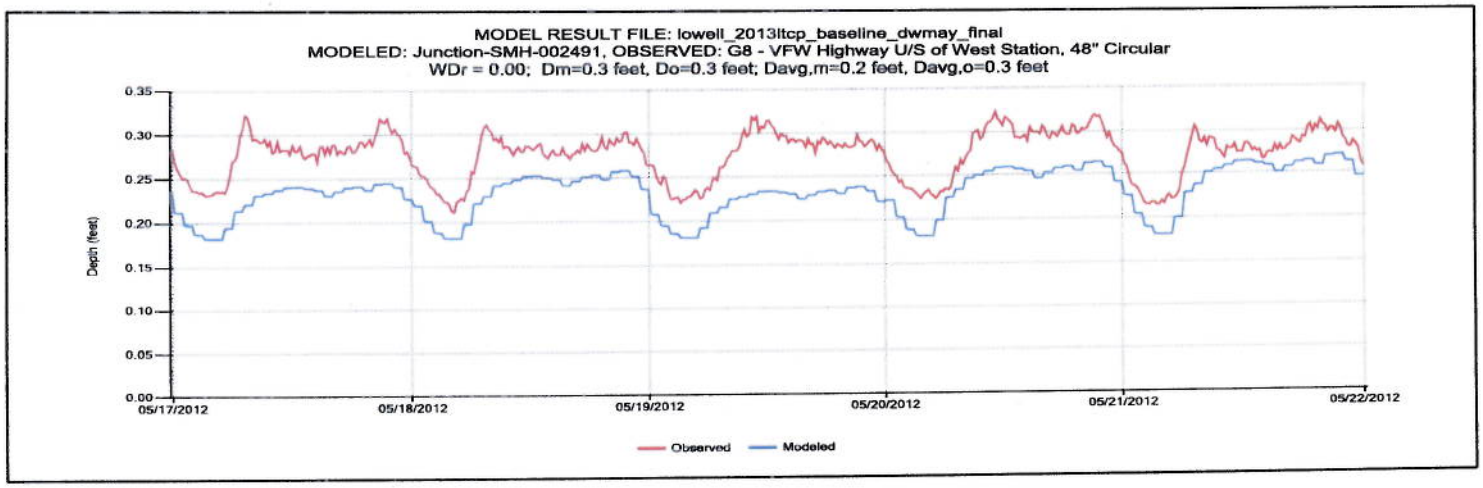
G7-May Dry Period

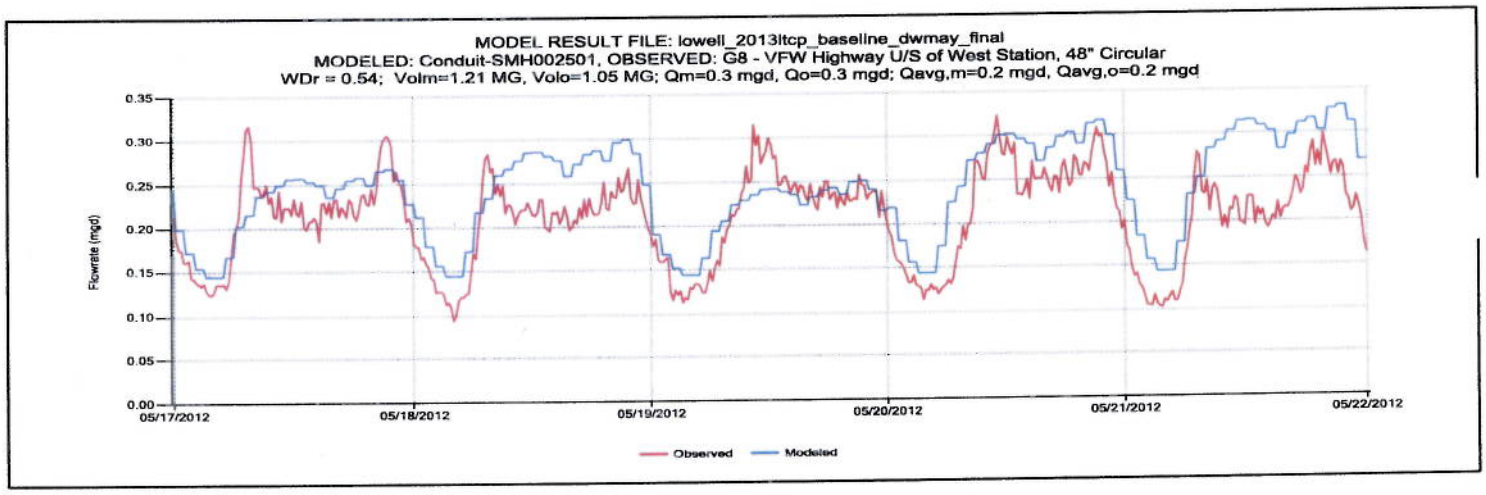


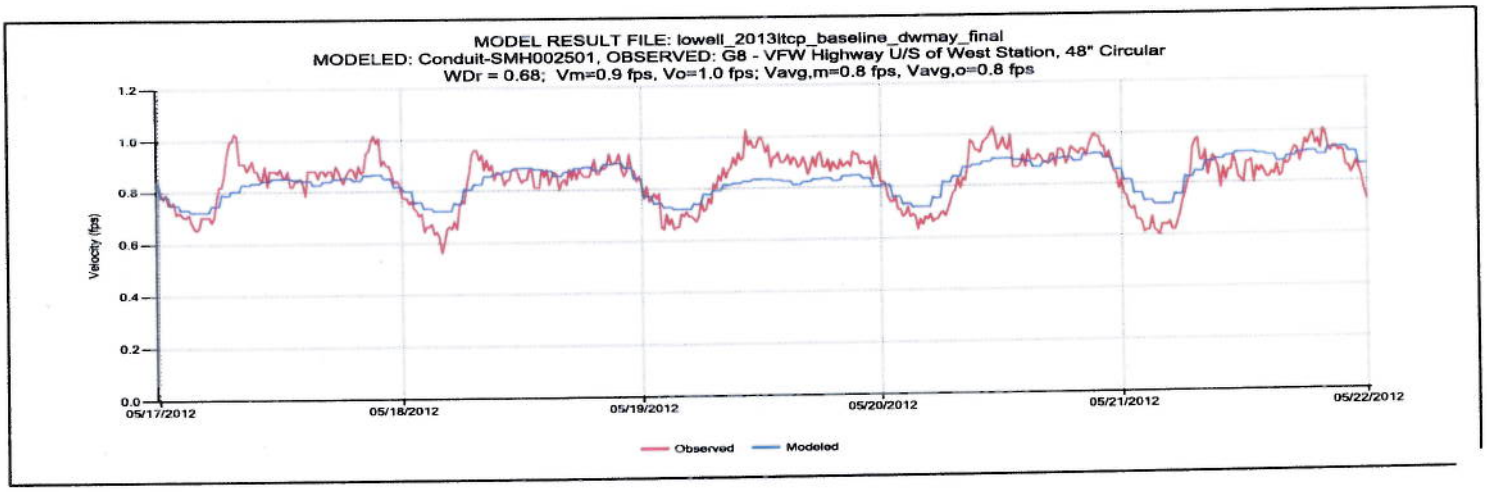




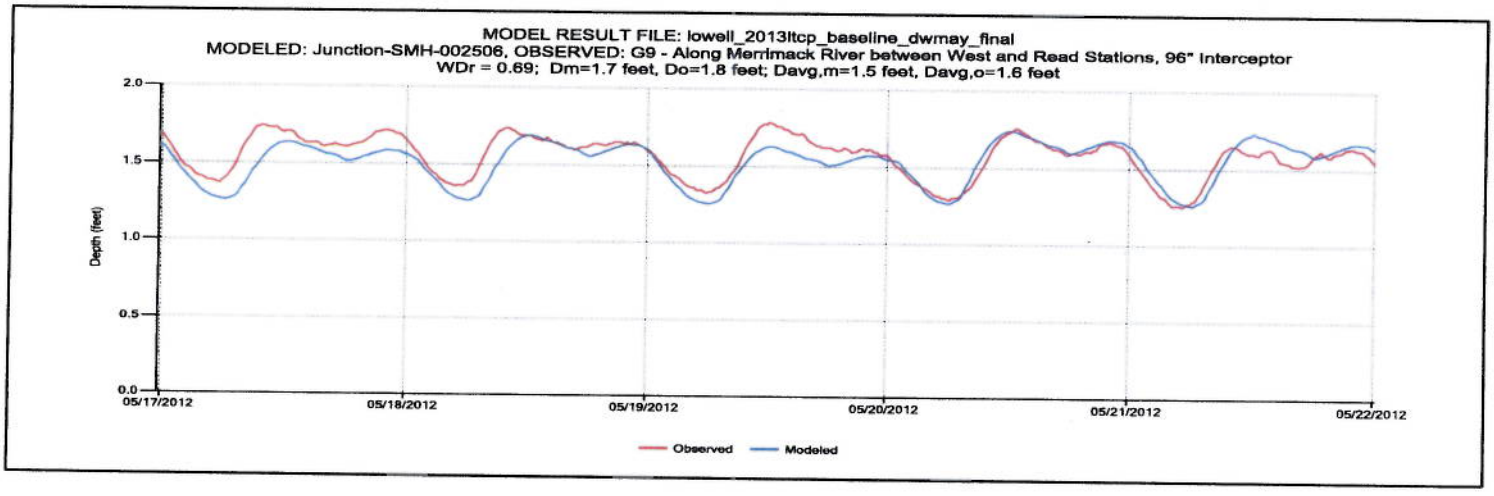
G8-May Dry Period

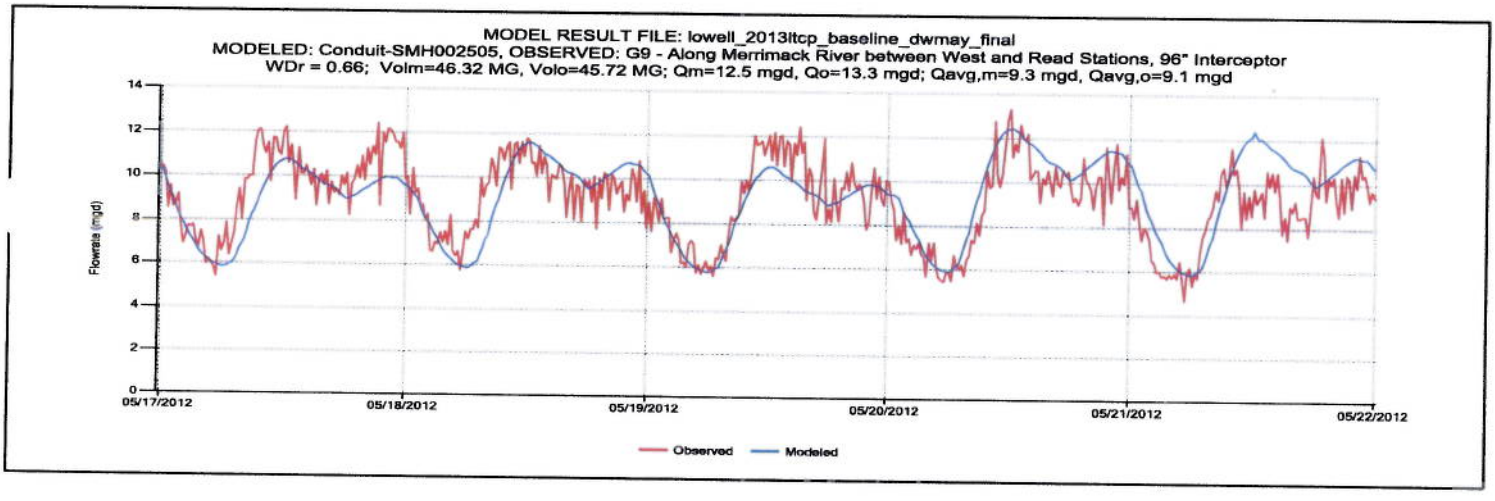


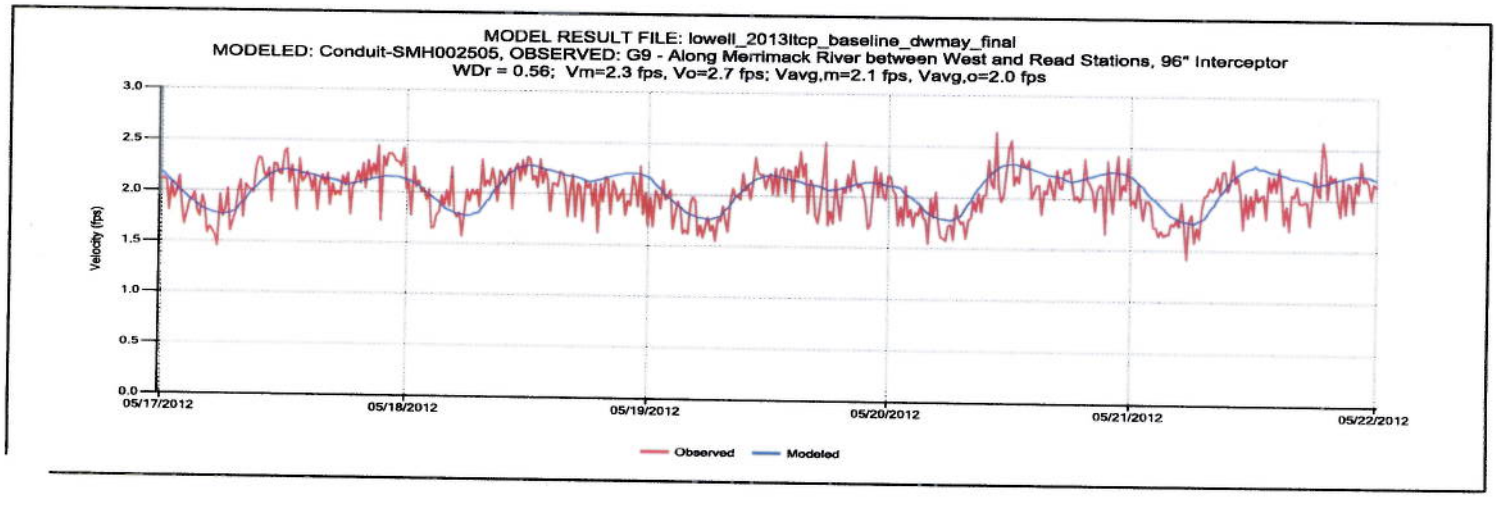




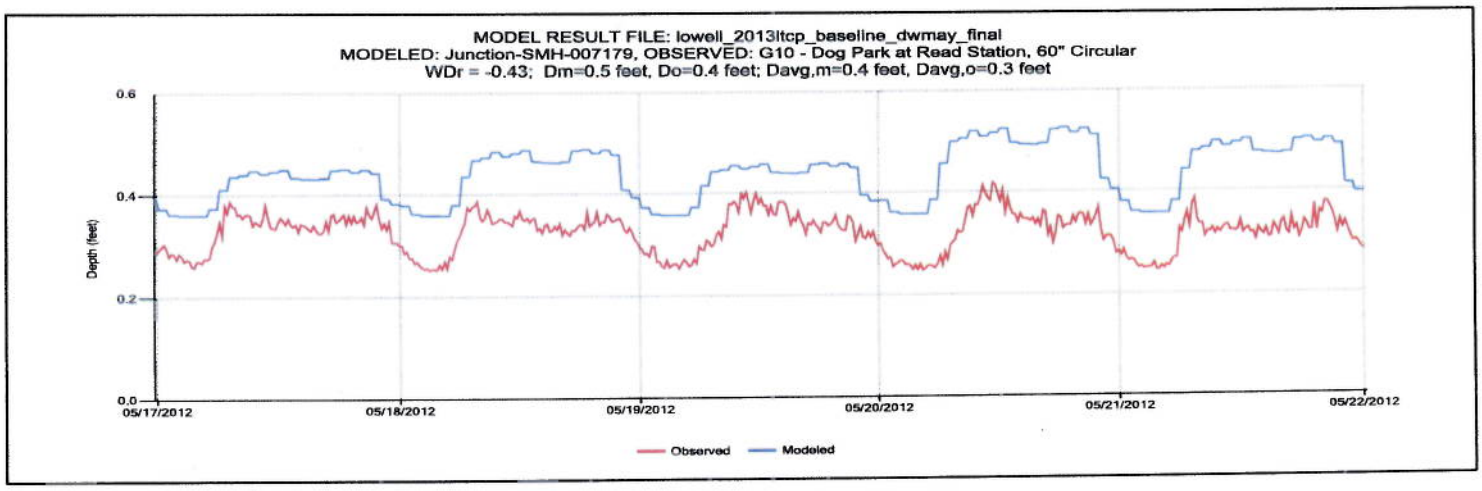
G9-May Dry Period

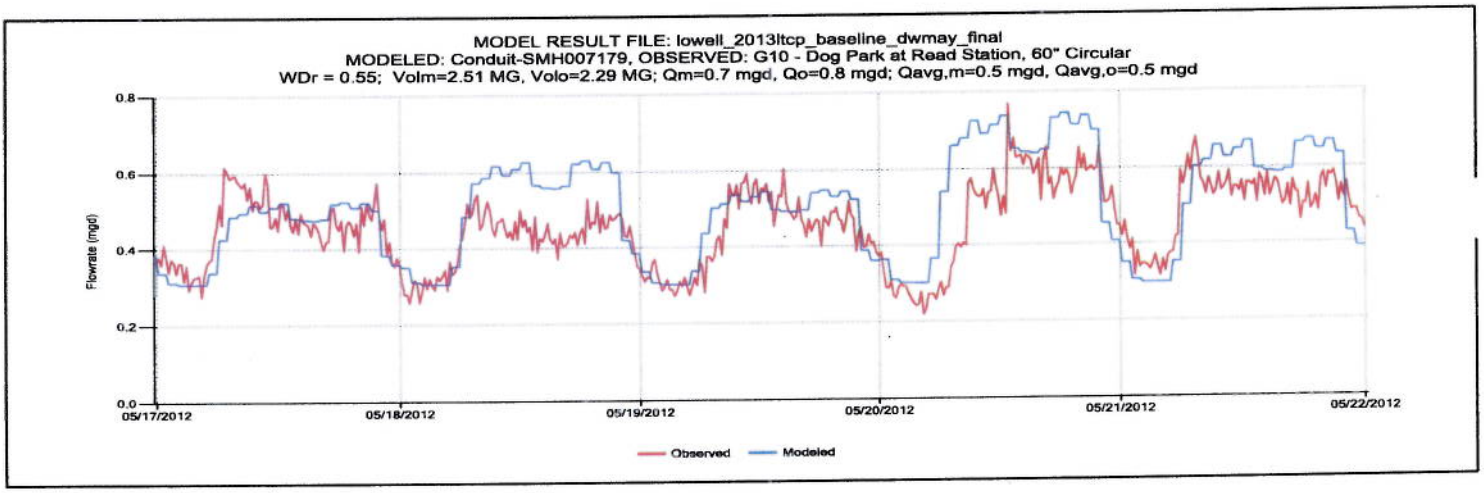


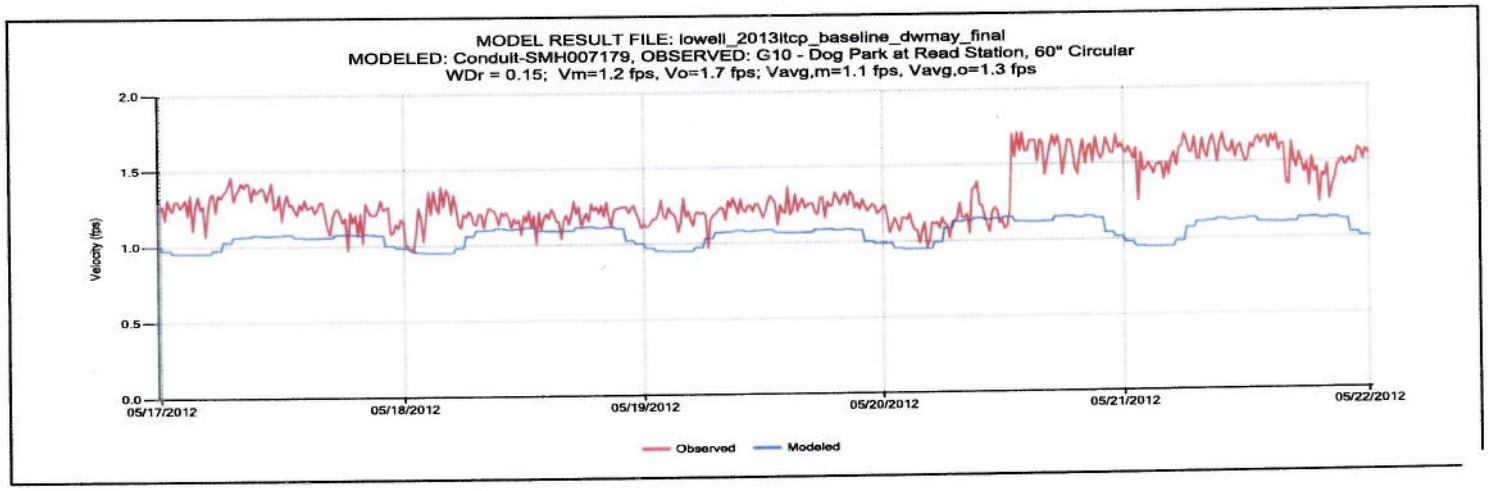




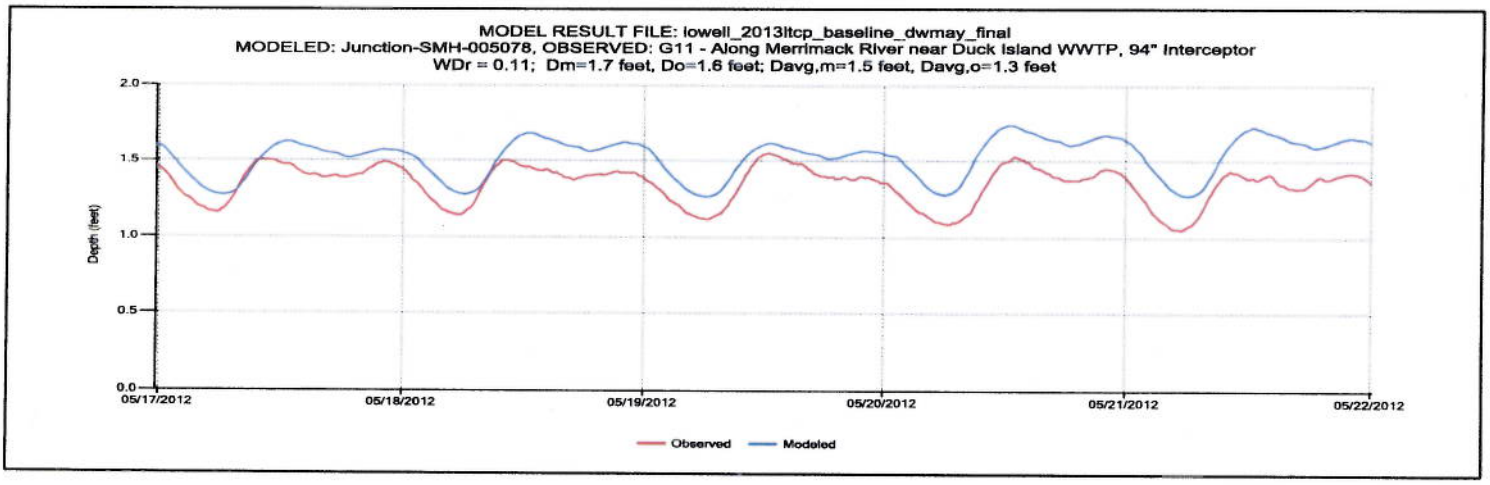
G10-May Dry Period

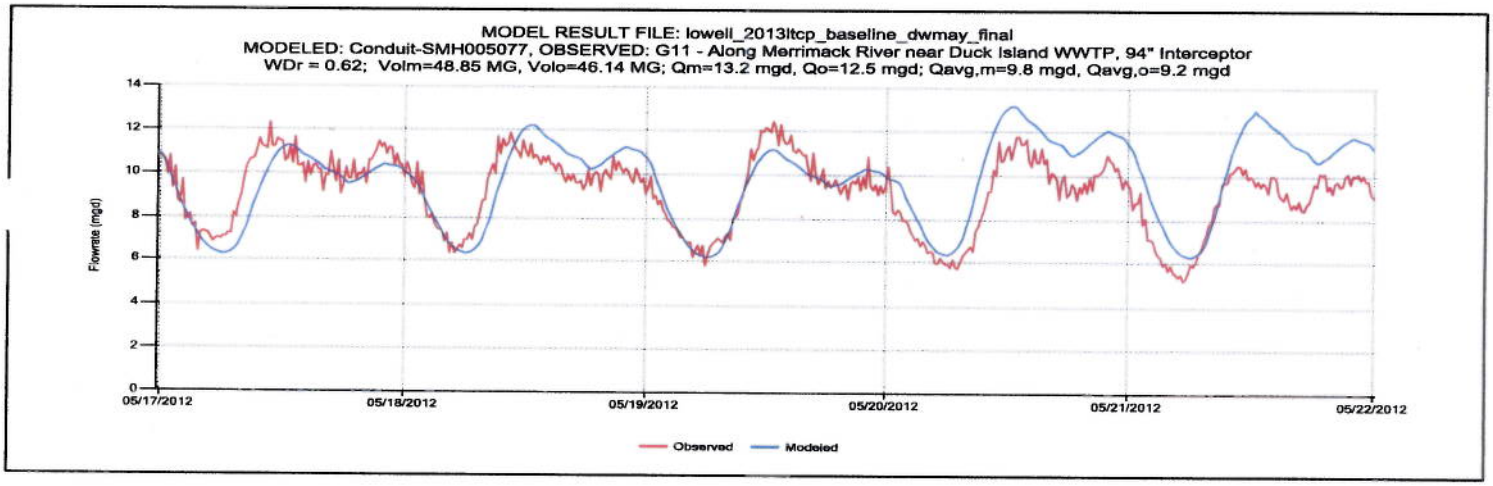


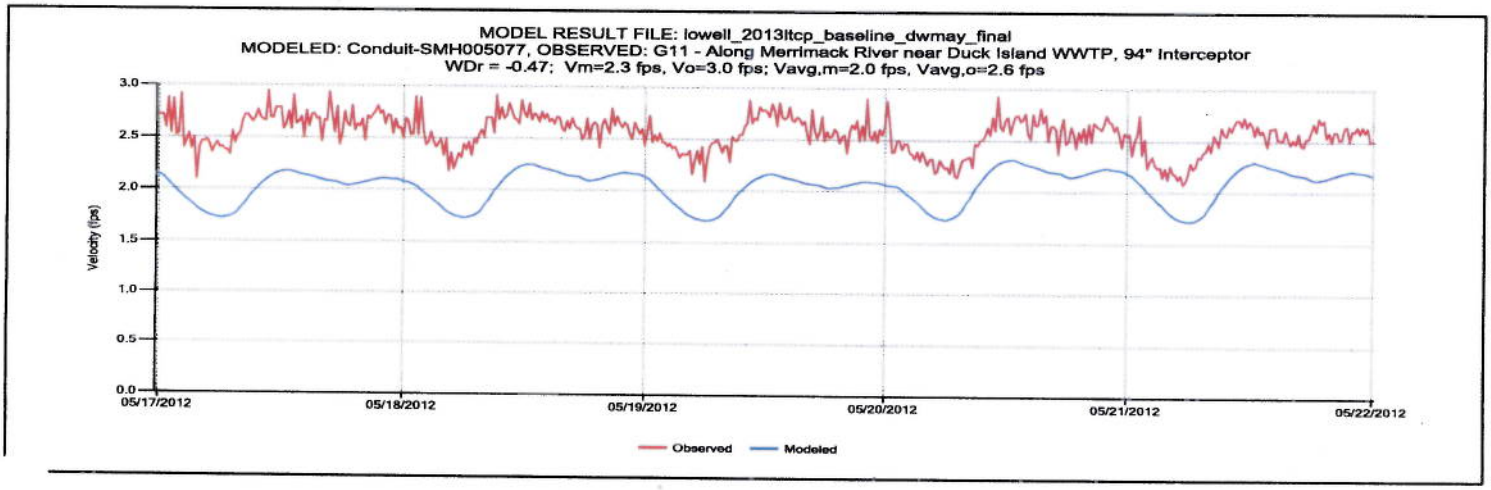




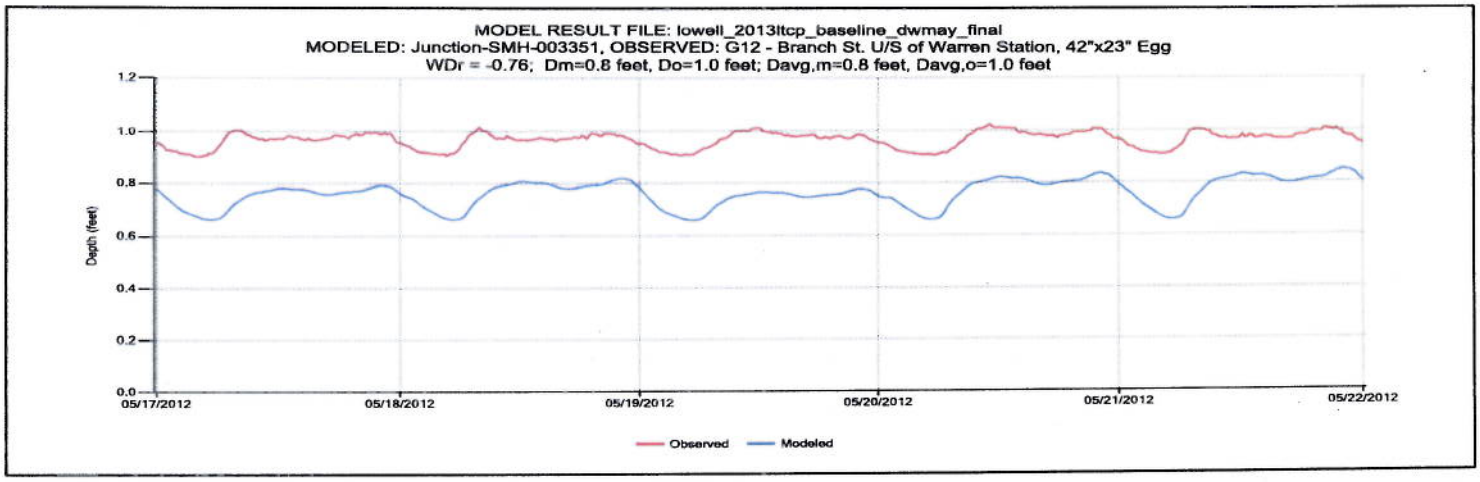
G11-May Dry Period

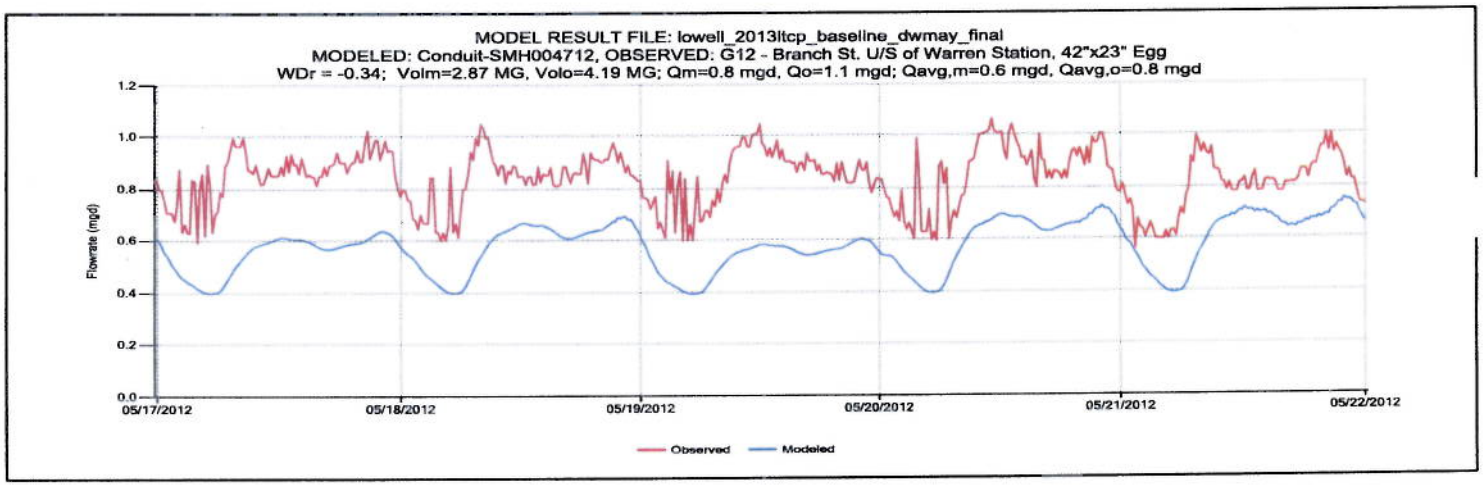


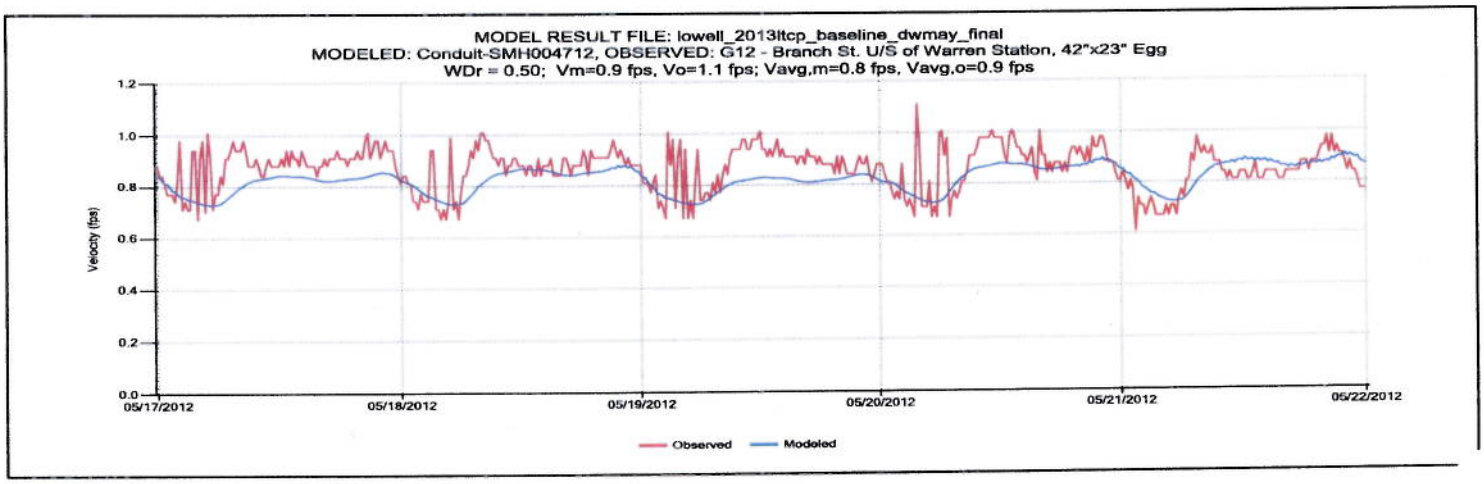




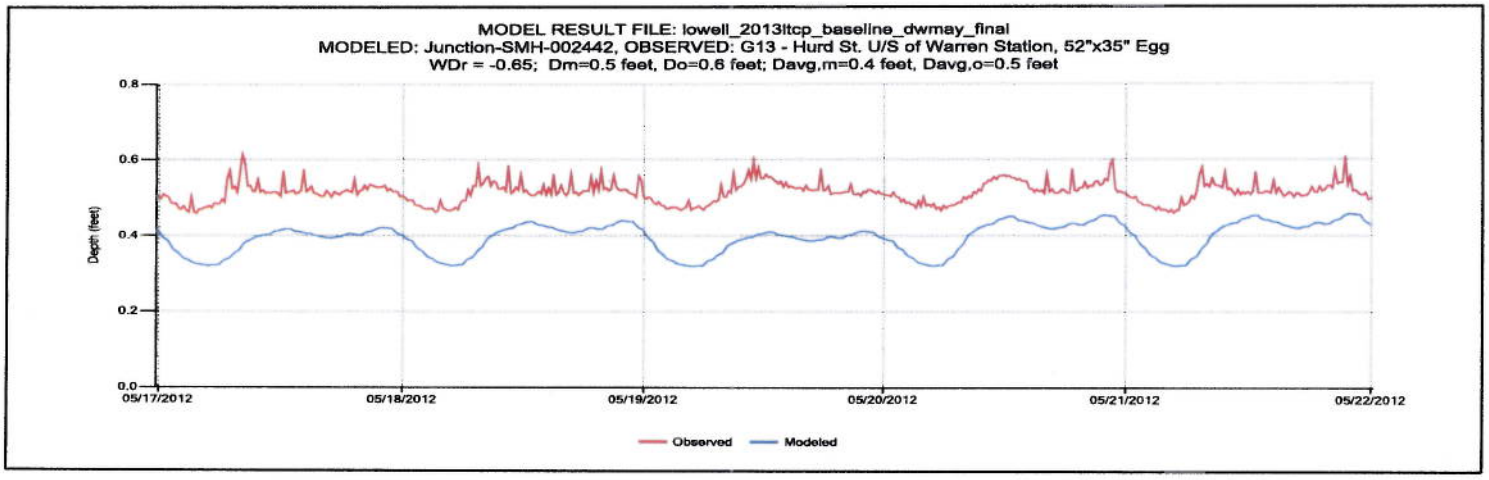
G12-May Dry Period

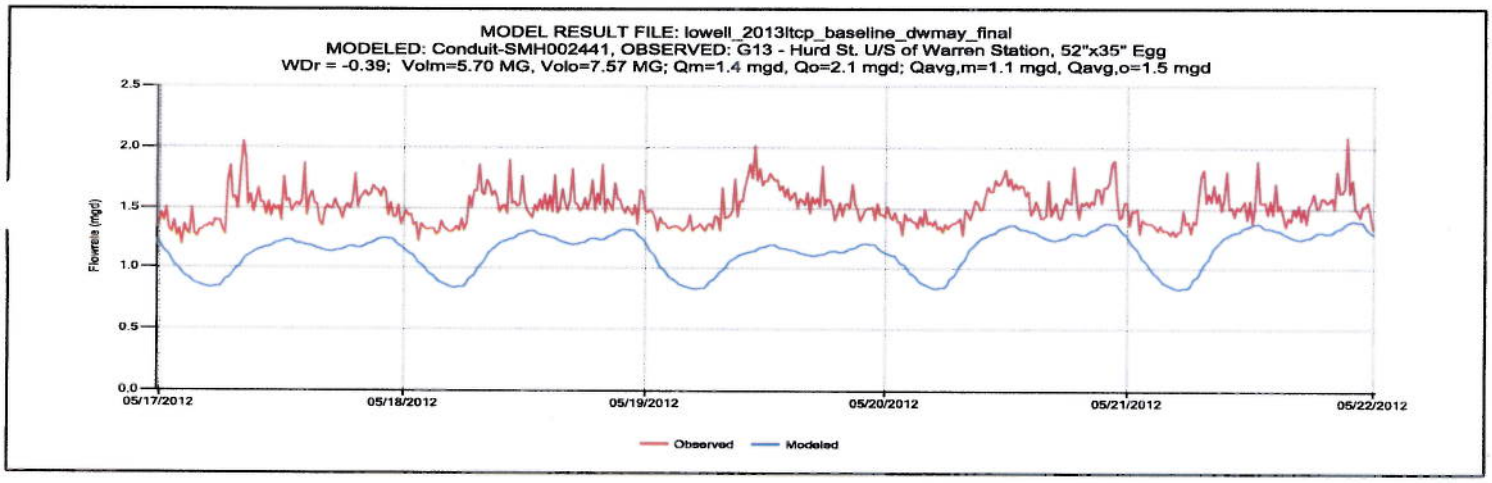


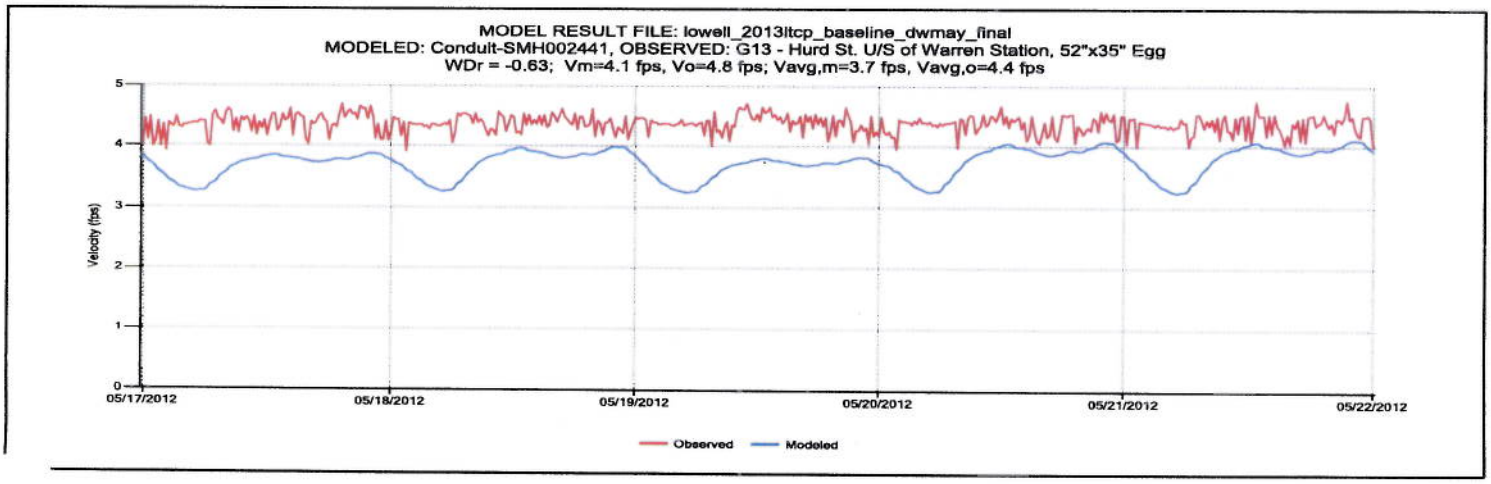




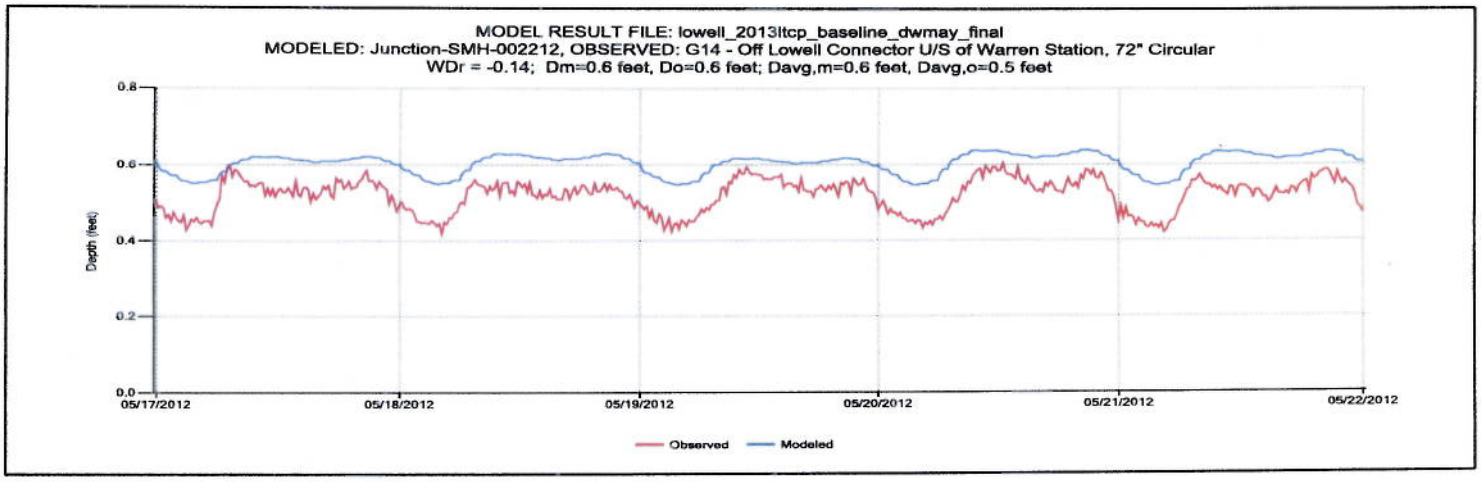
G13-May Dry Period

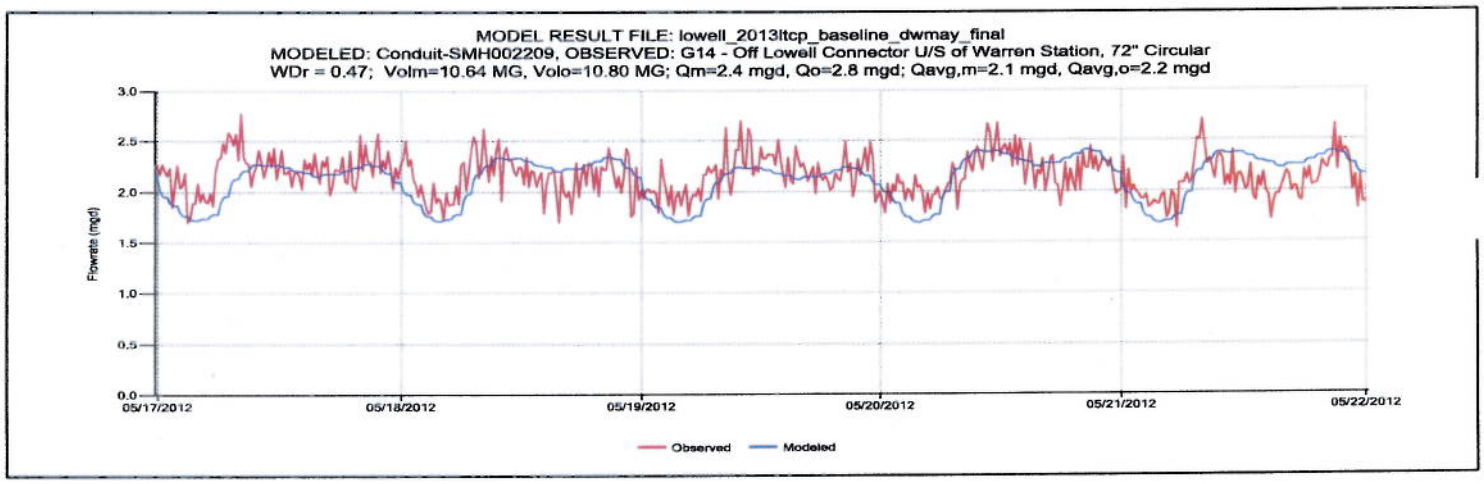


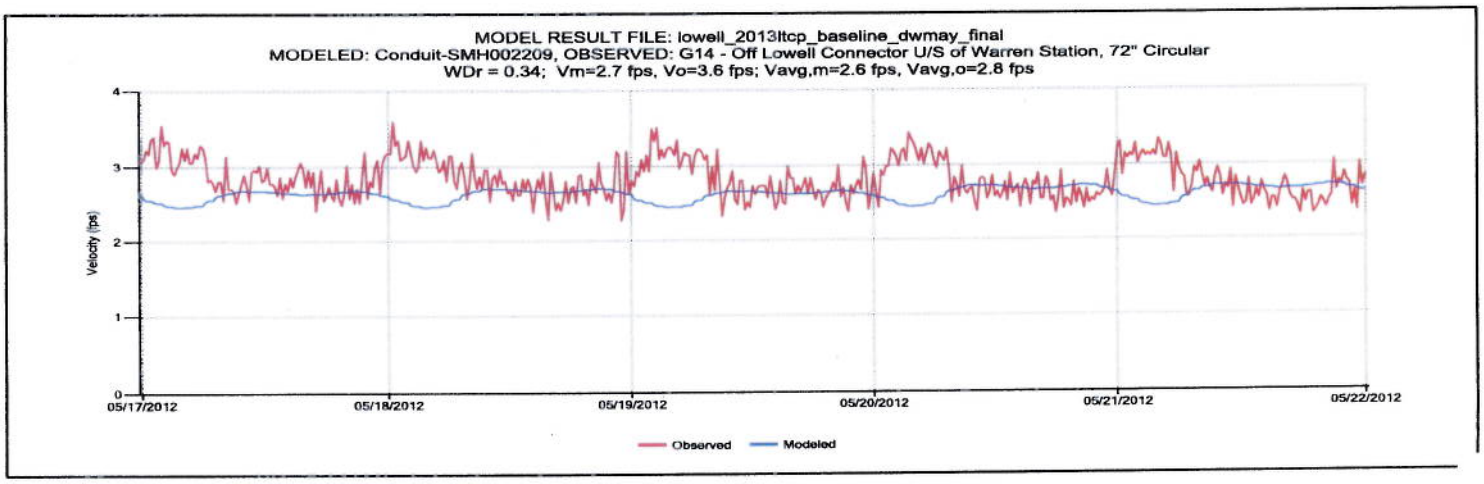




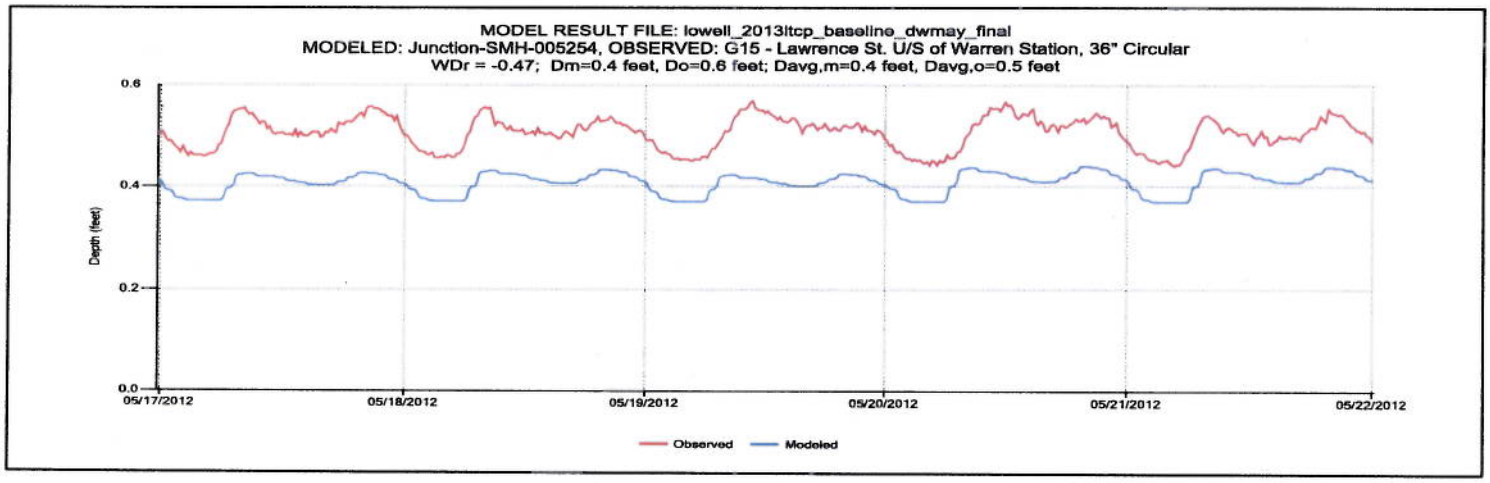
G14-May Dry Period

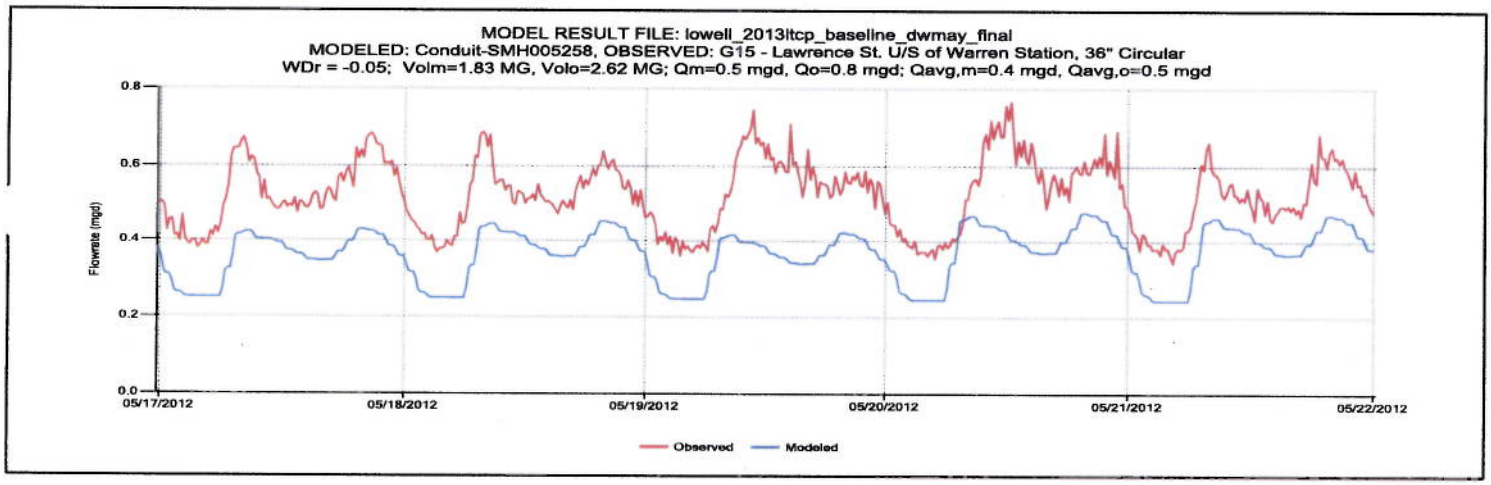


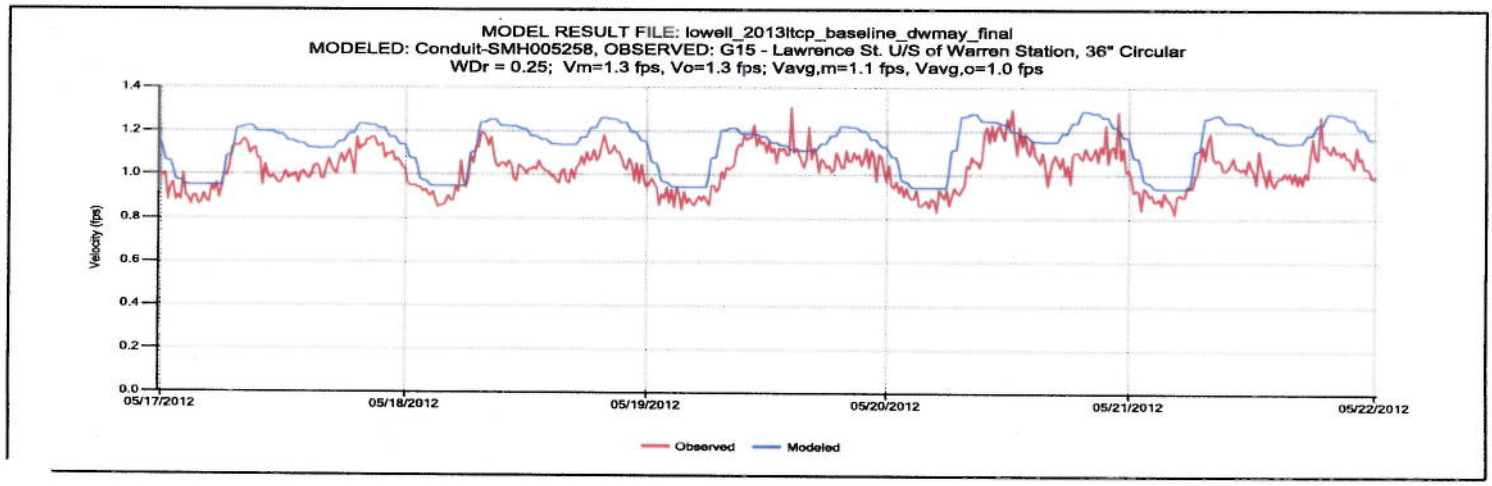




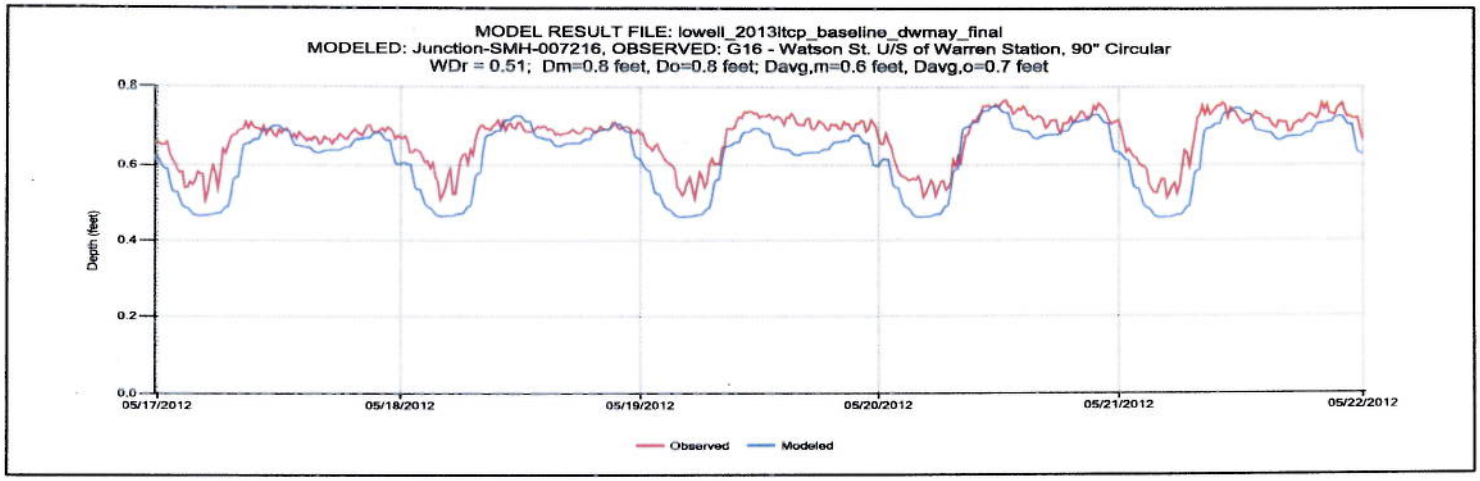
G15-May Dry Period

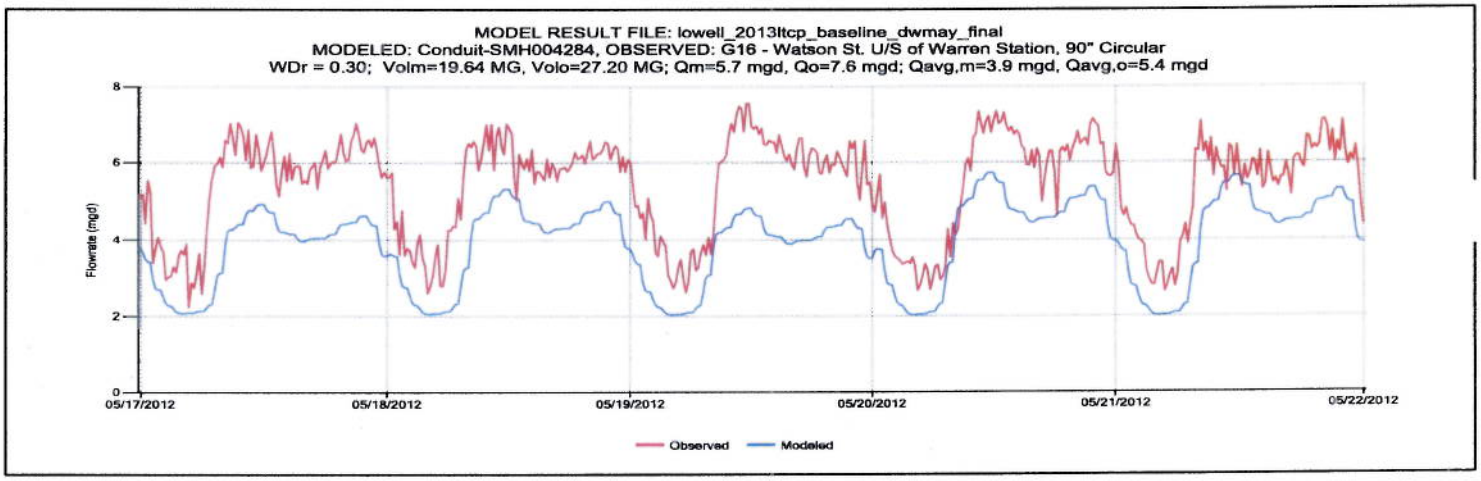


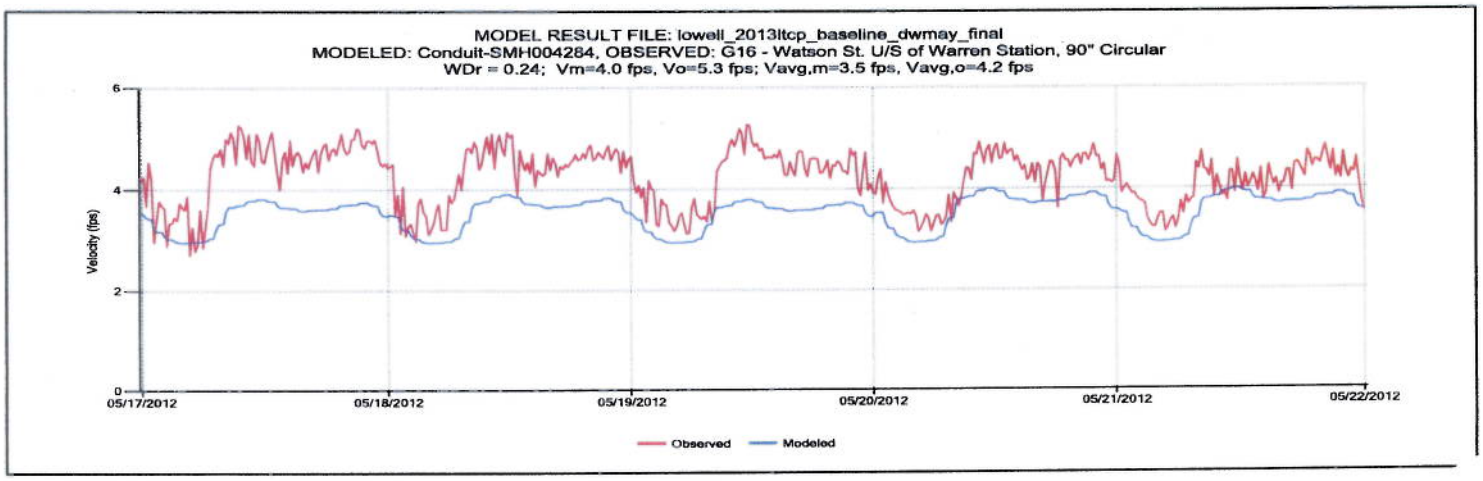




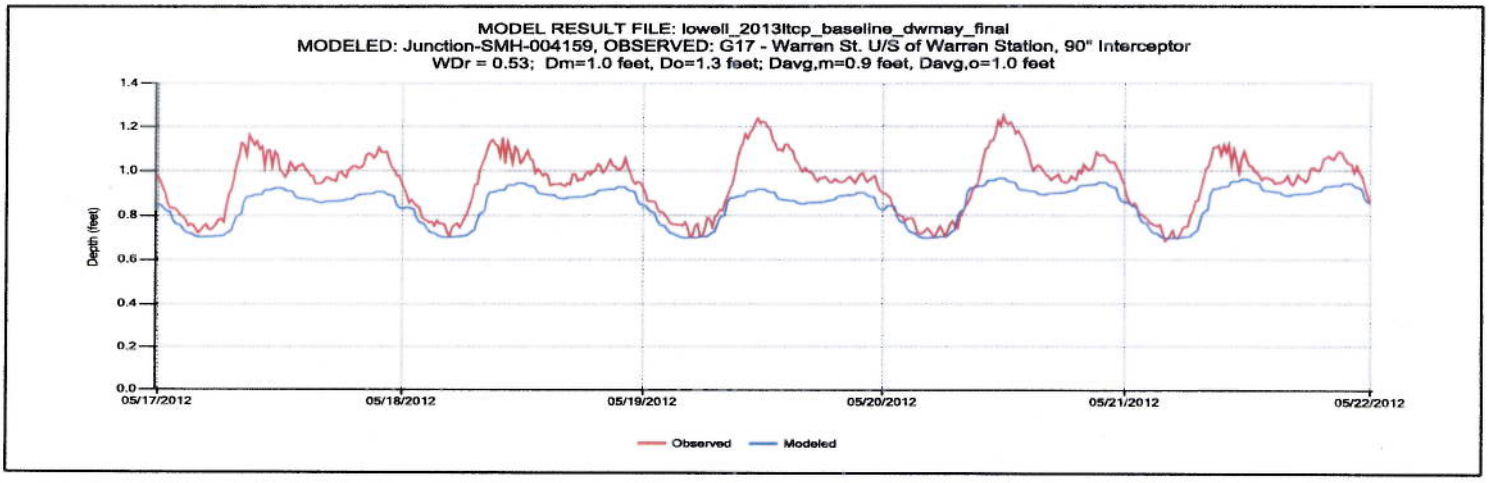
G16-May Dry Period

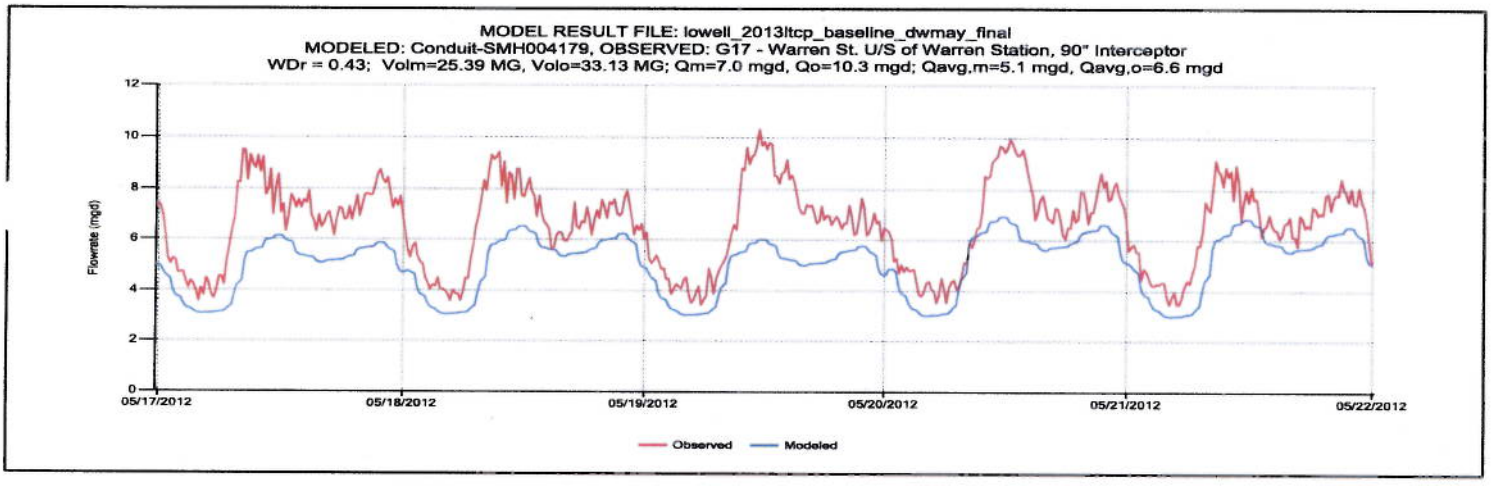


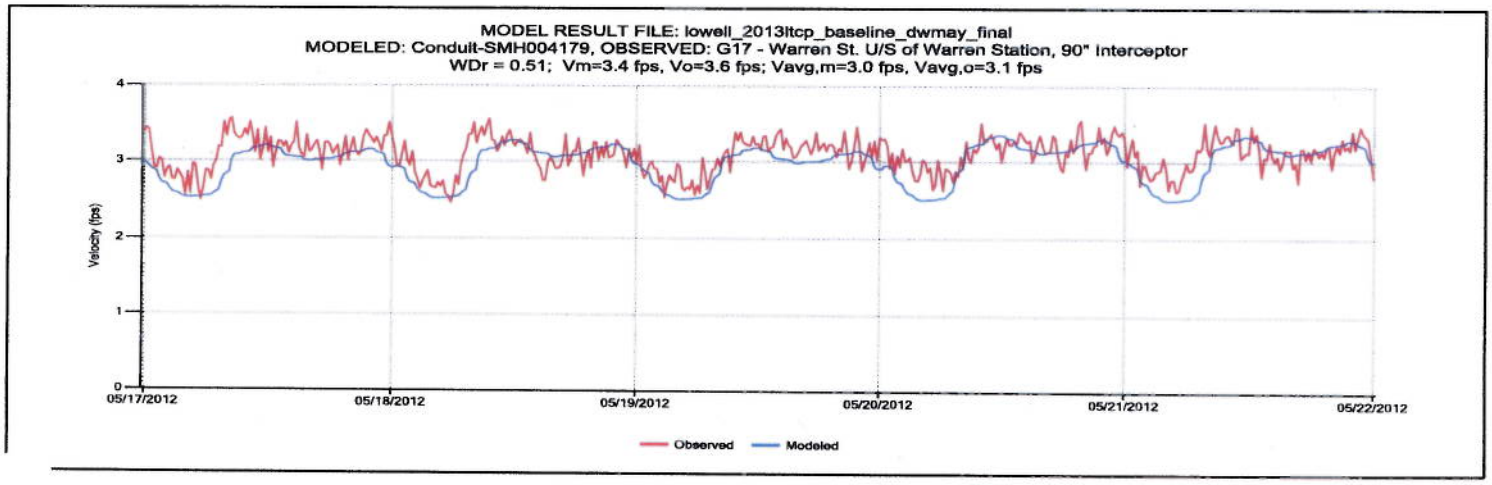




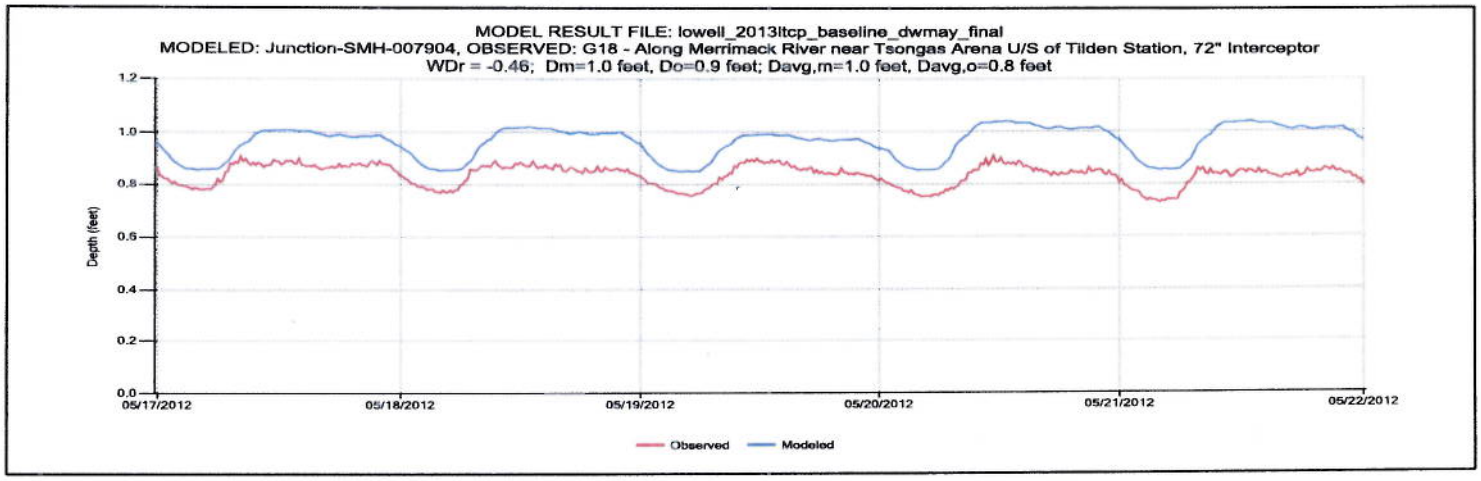
G17-May Dry Period

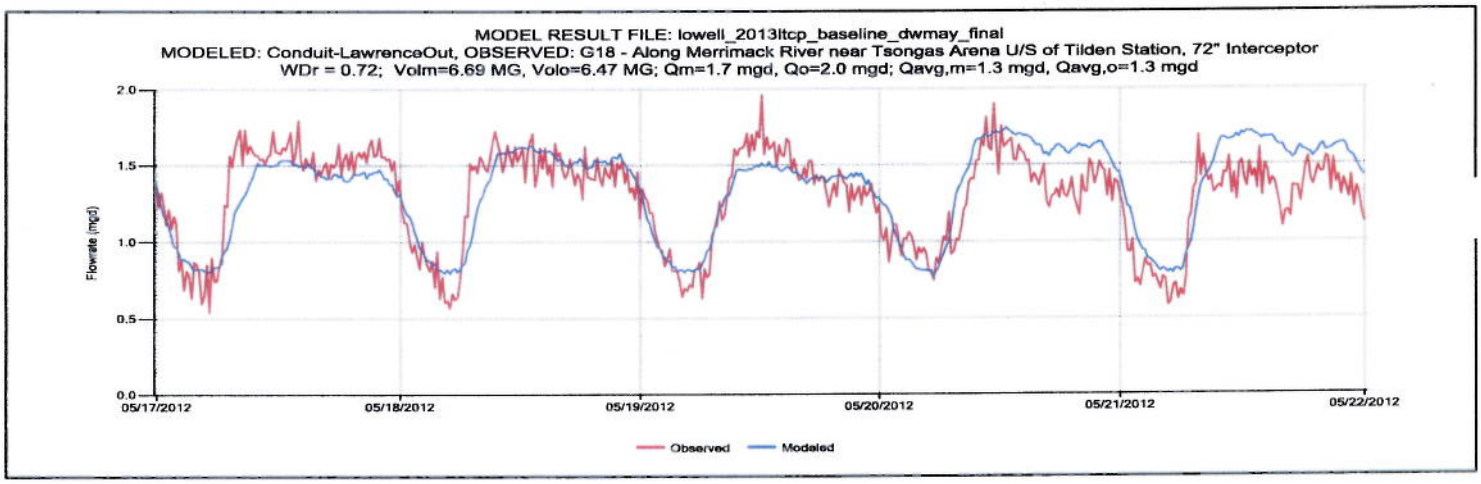


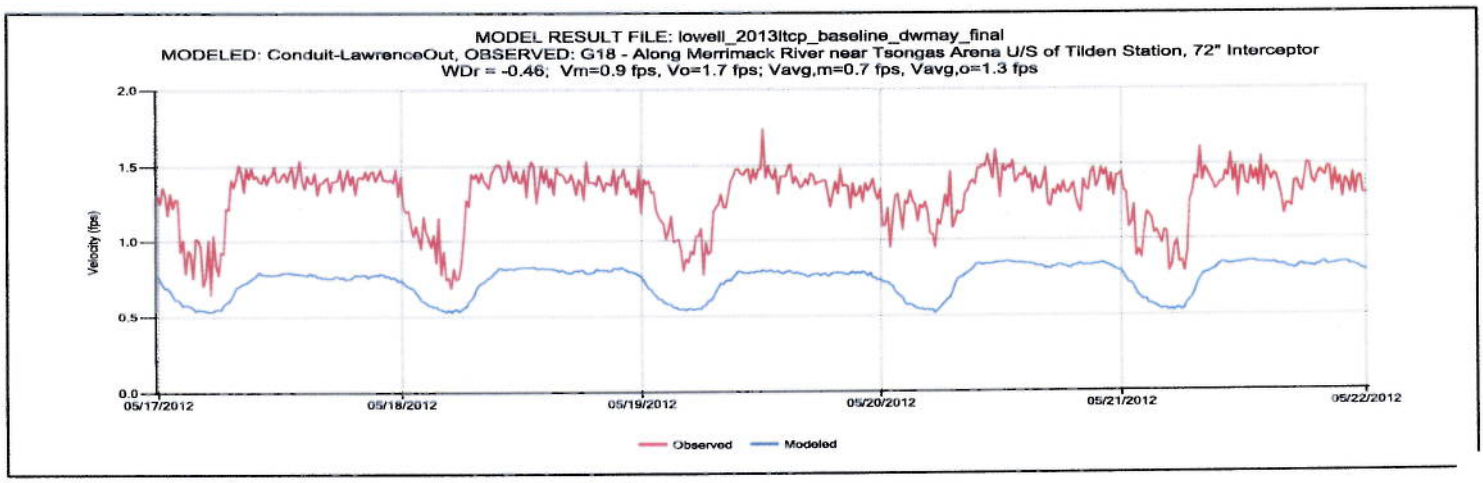




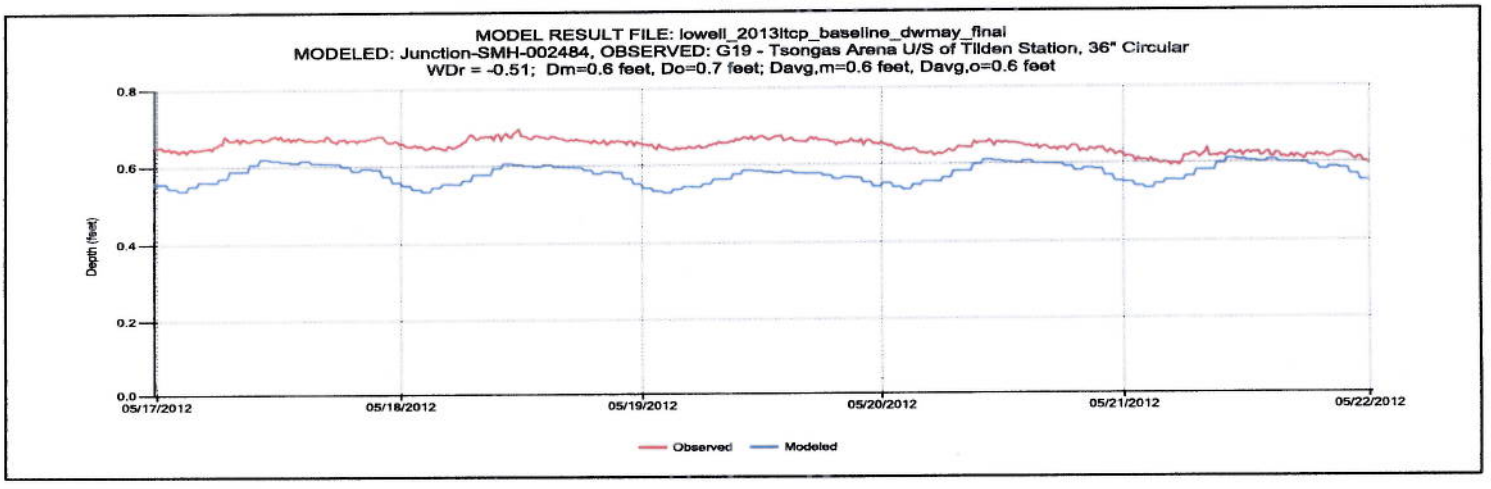
G18-May Dry Period

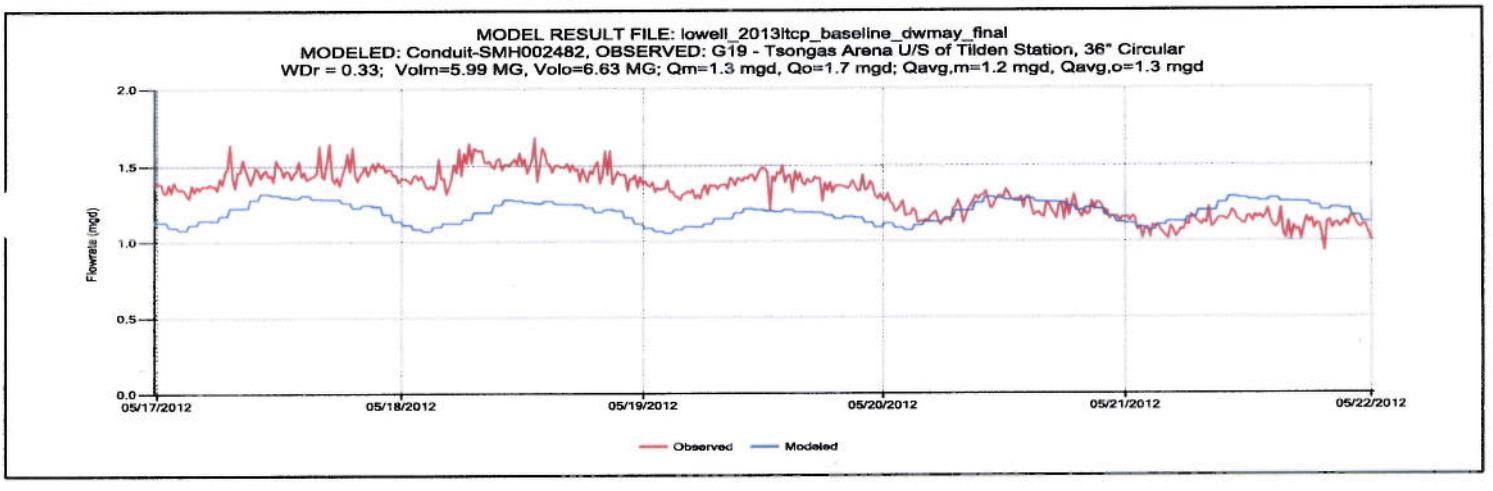


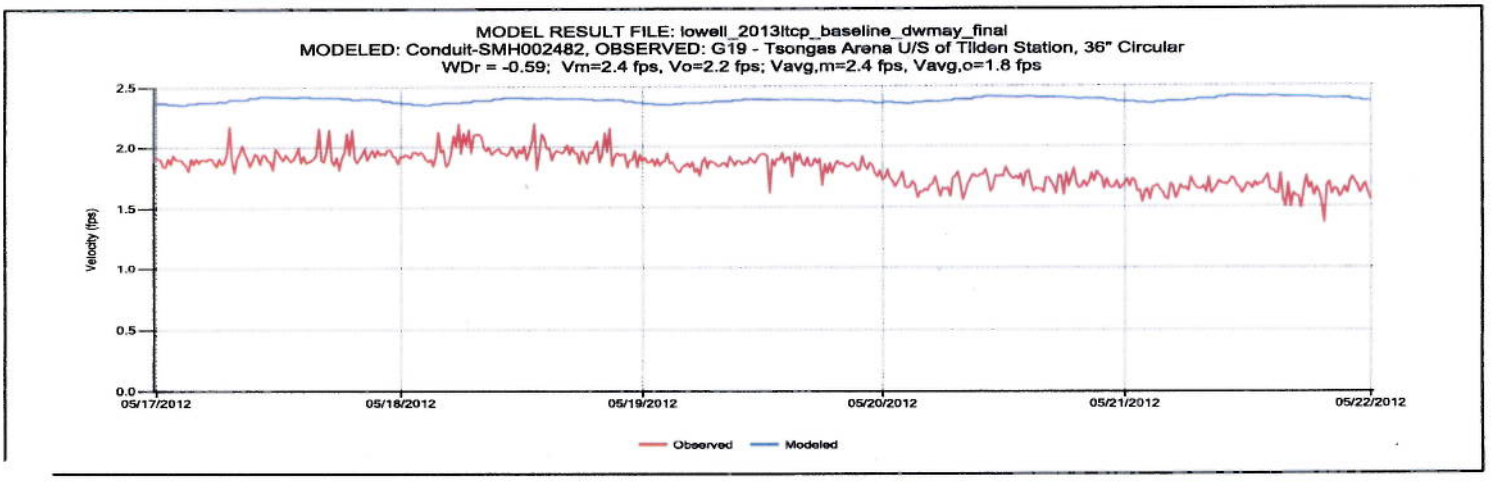




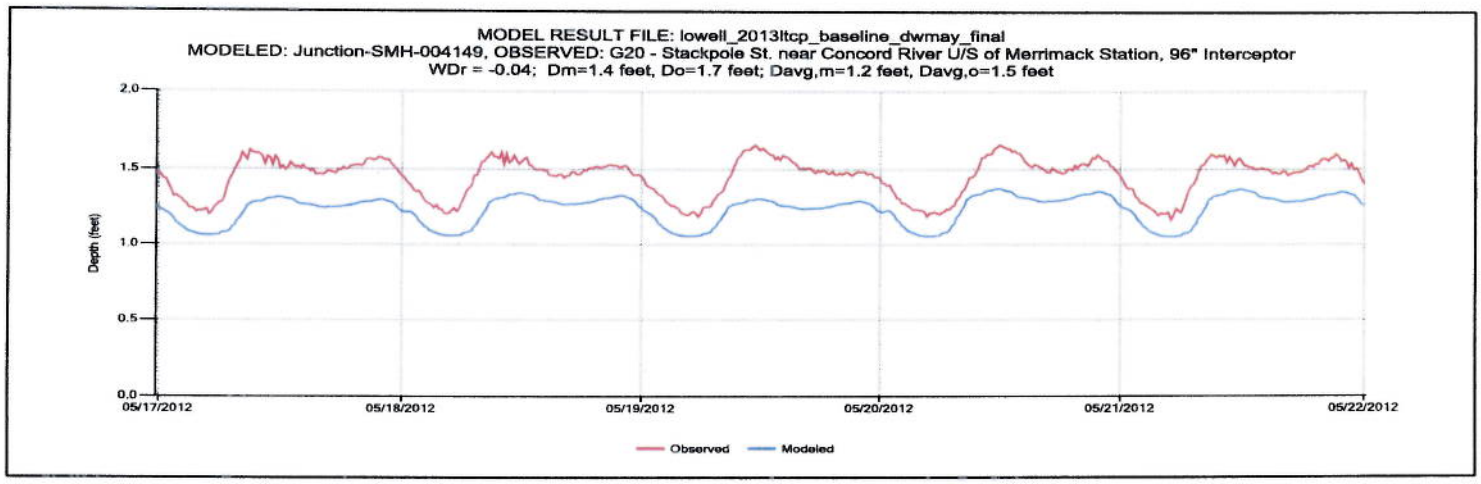
G19-May Dry Period

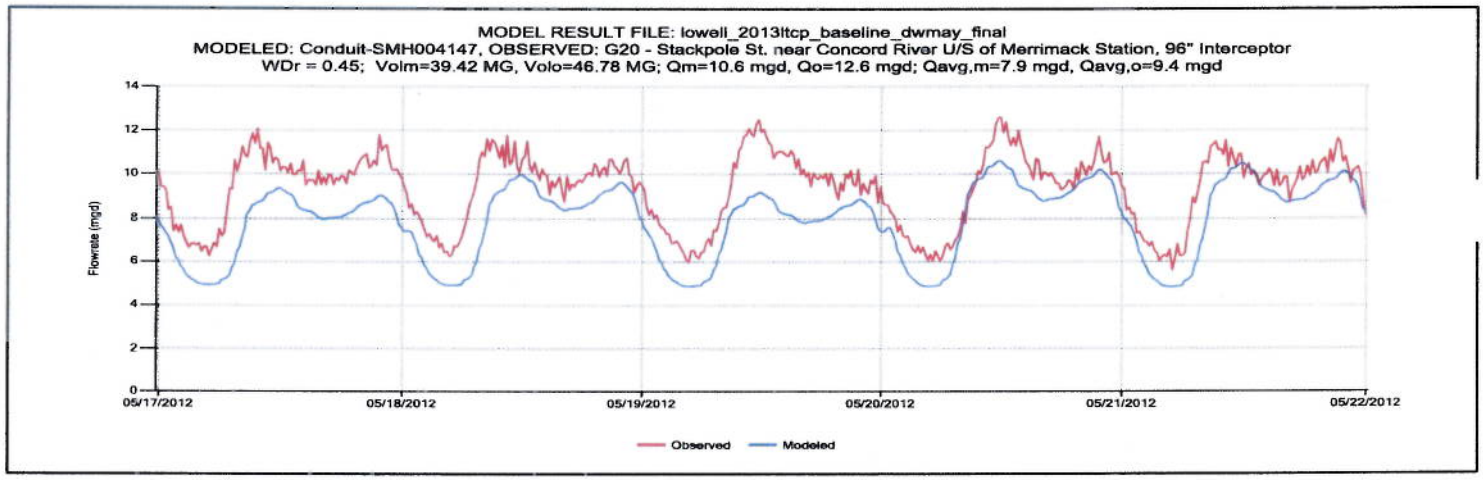


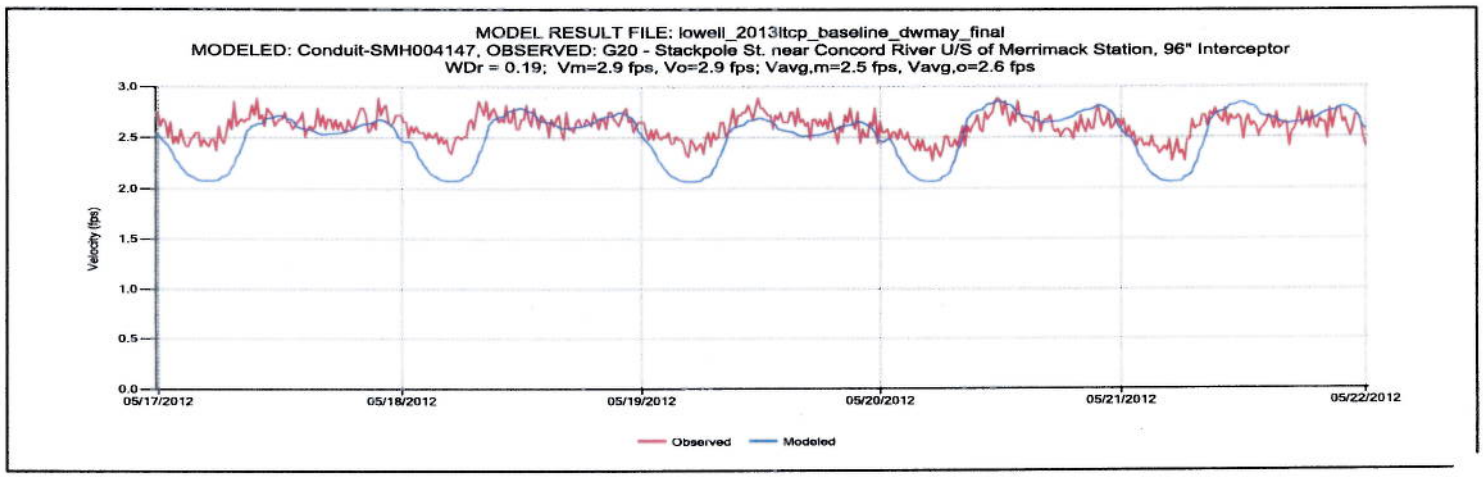




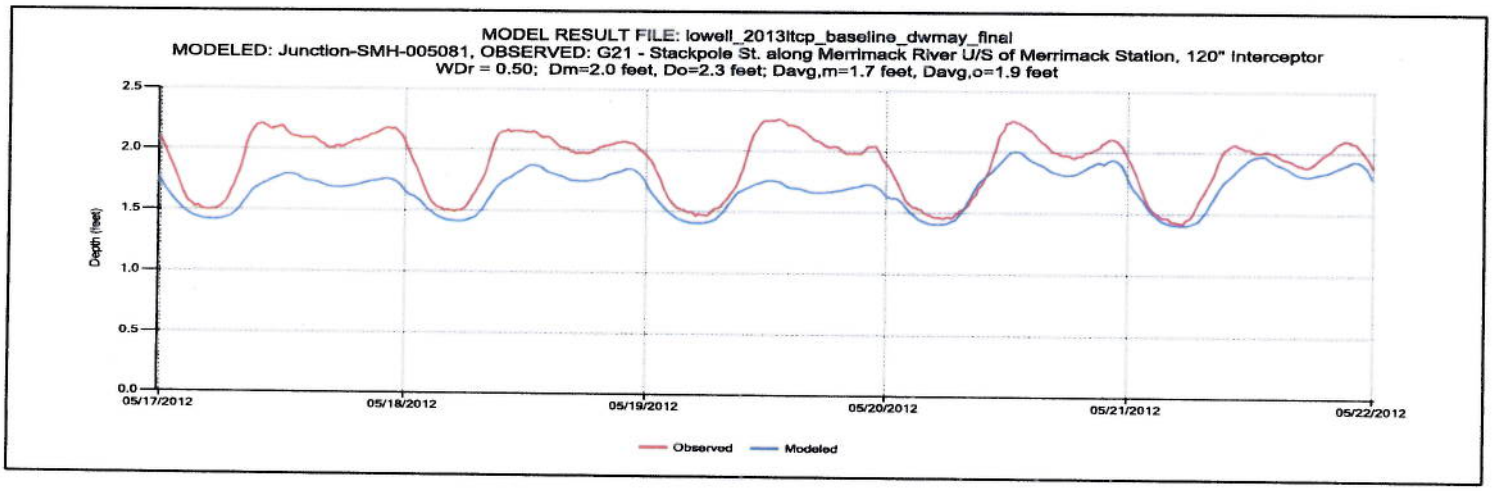
G20-May Dry Period

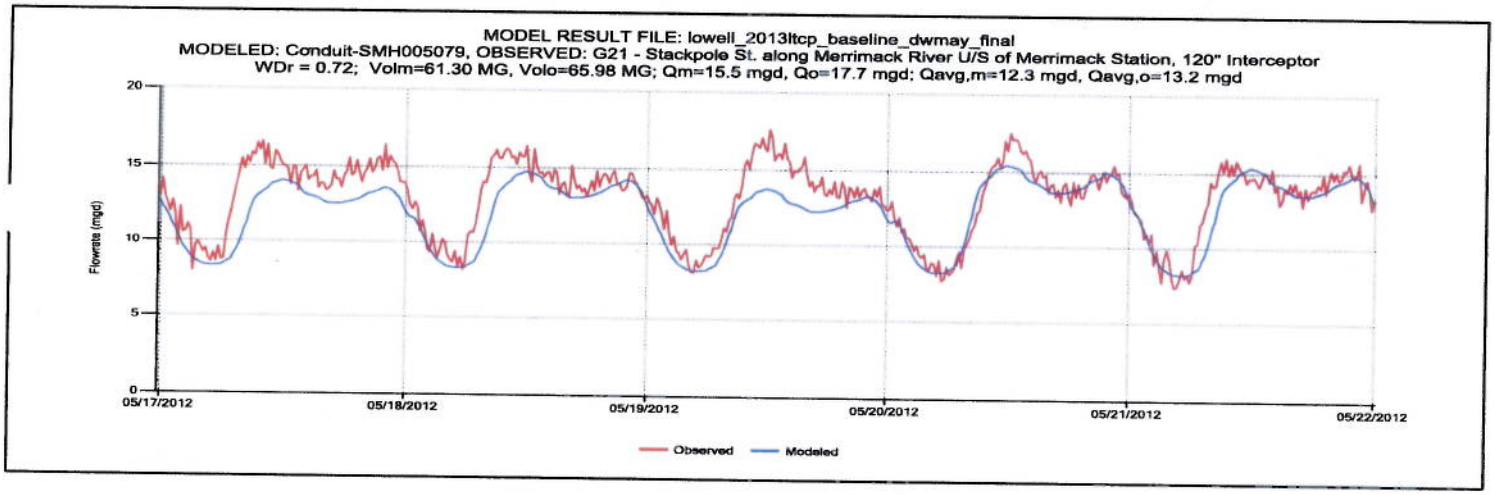


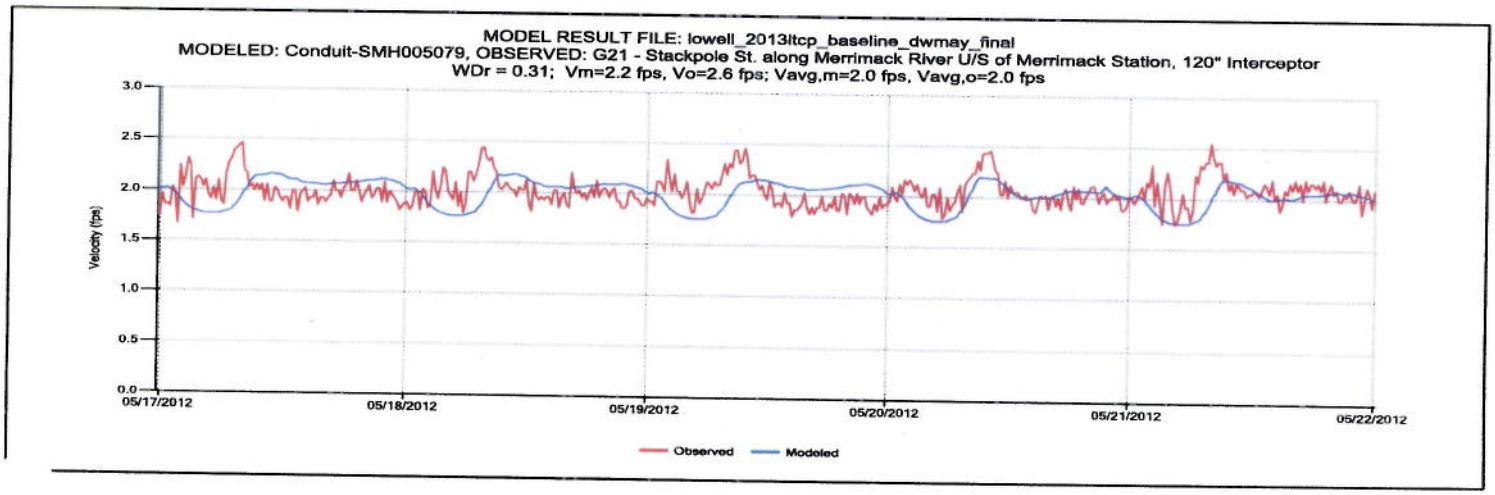




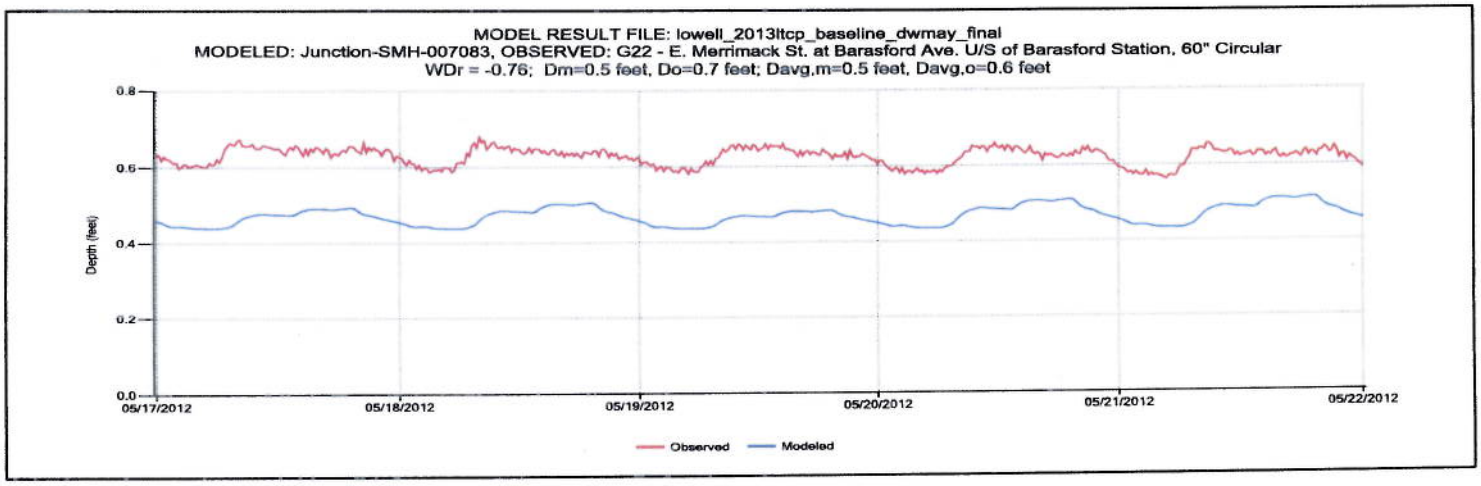
G21-May Dry Period

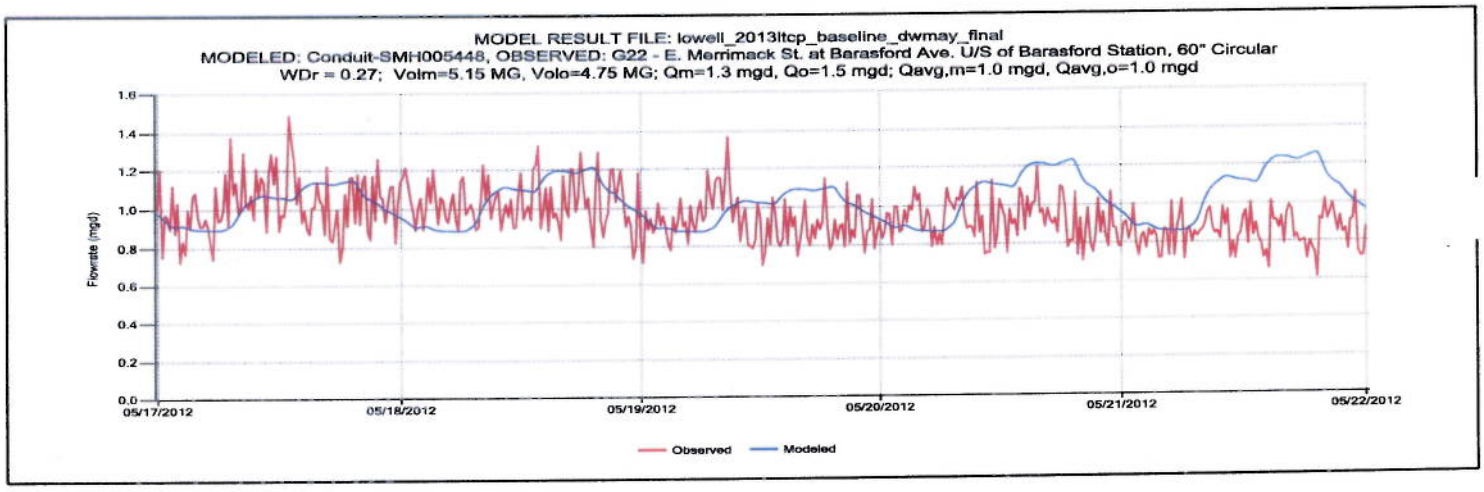


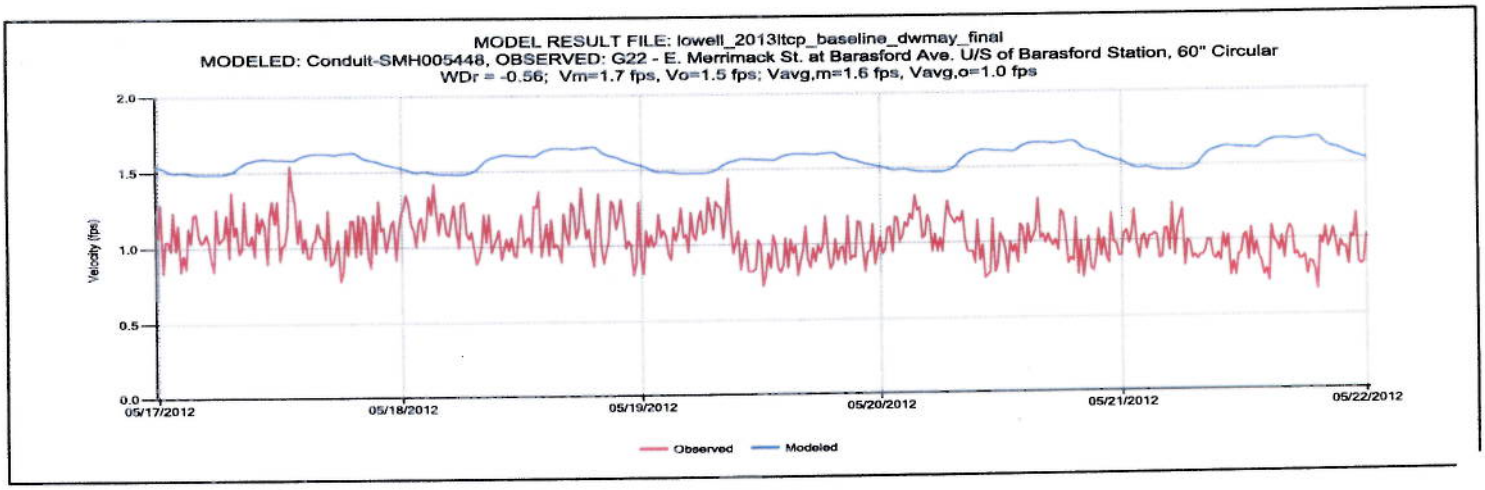




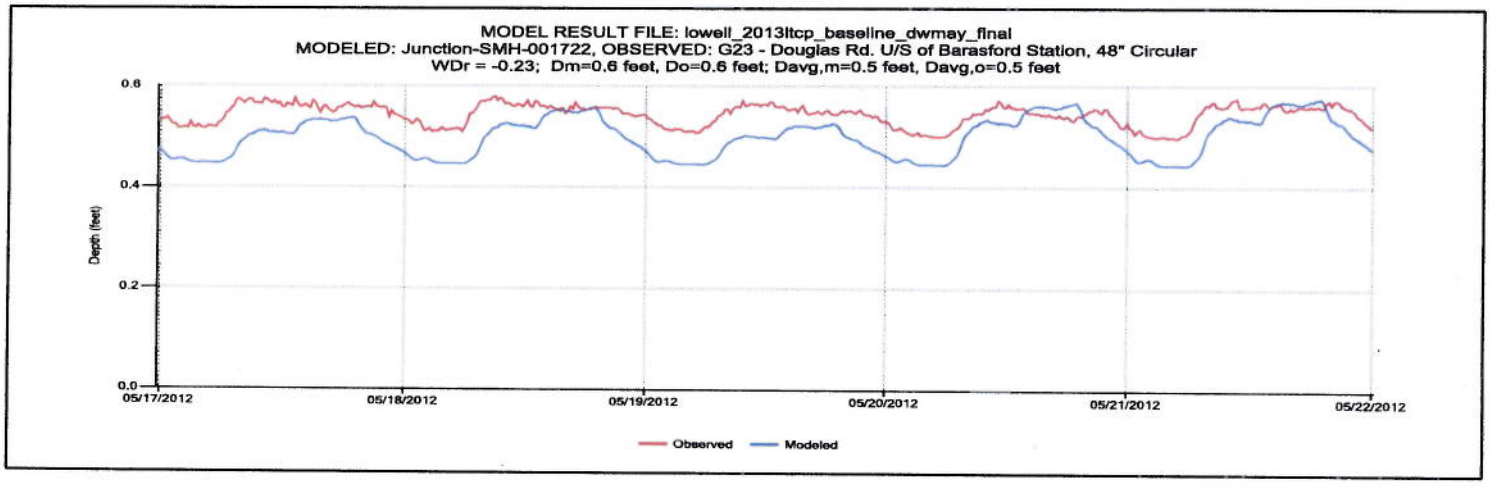
G22-May Dry Period

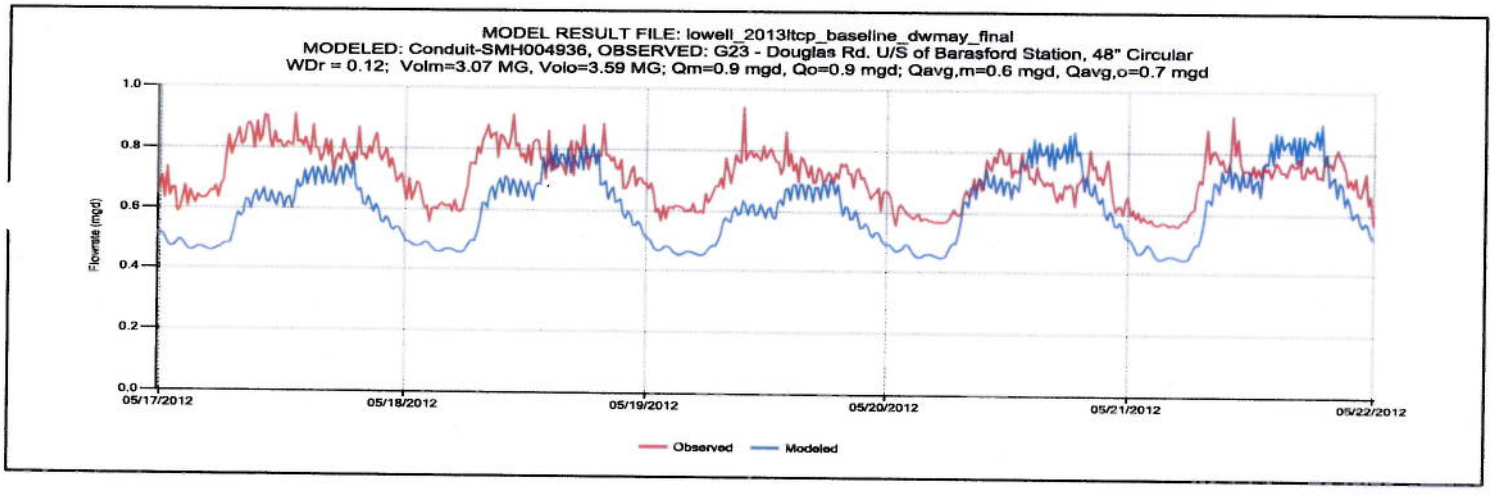


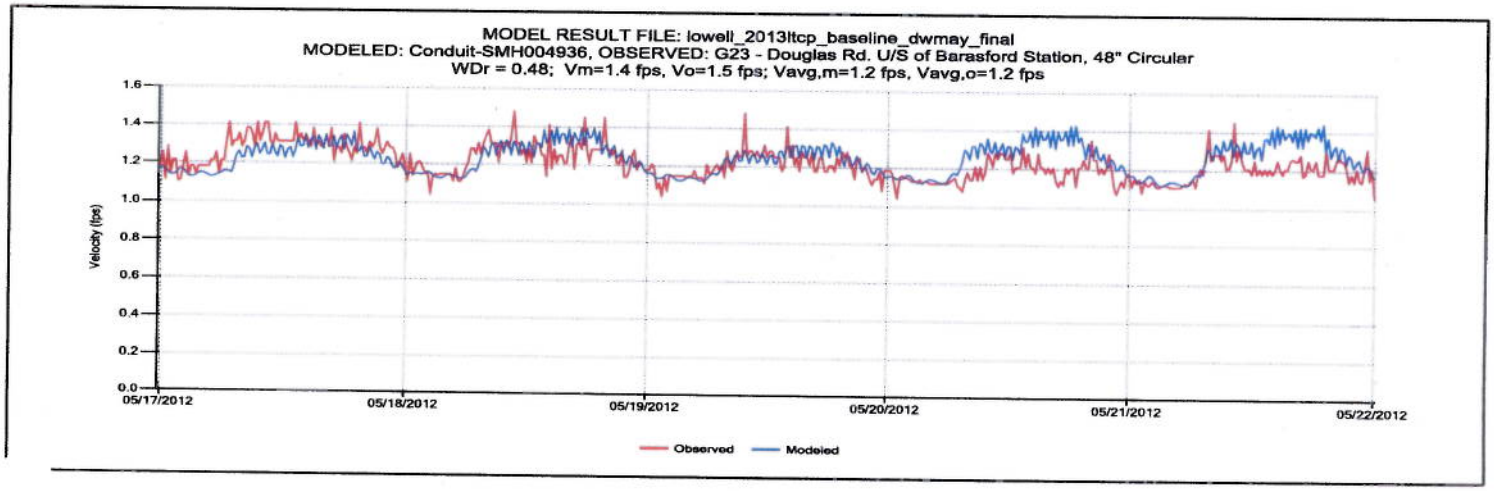




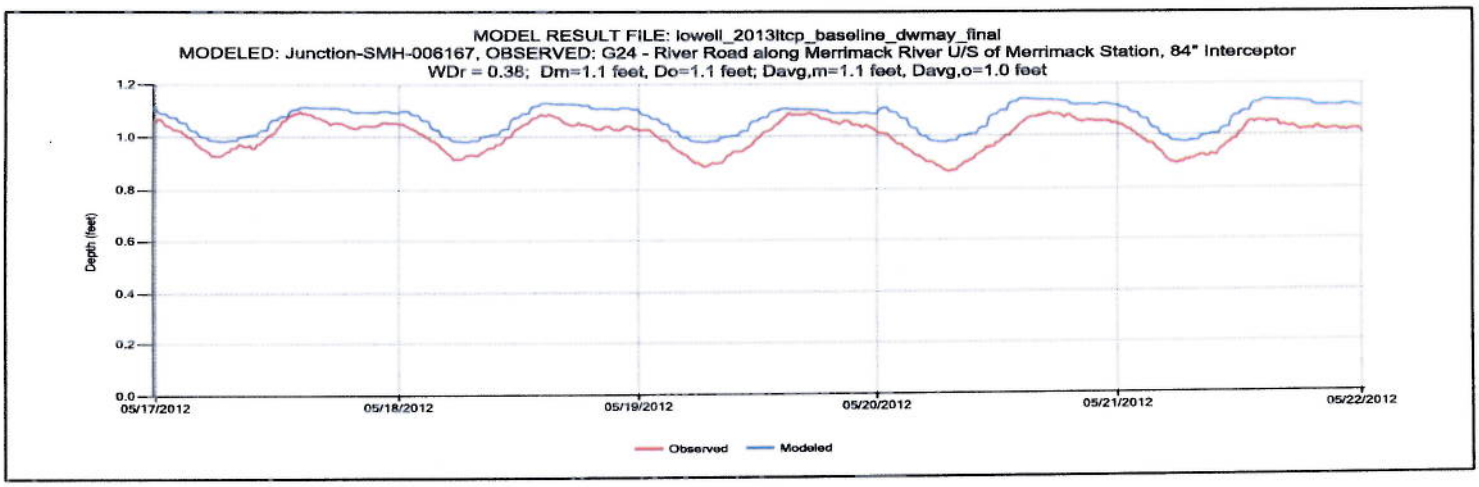
G23-May Dry Period

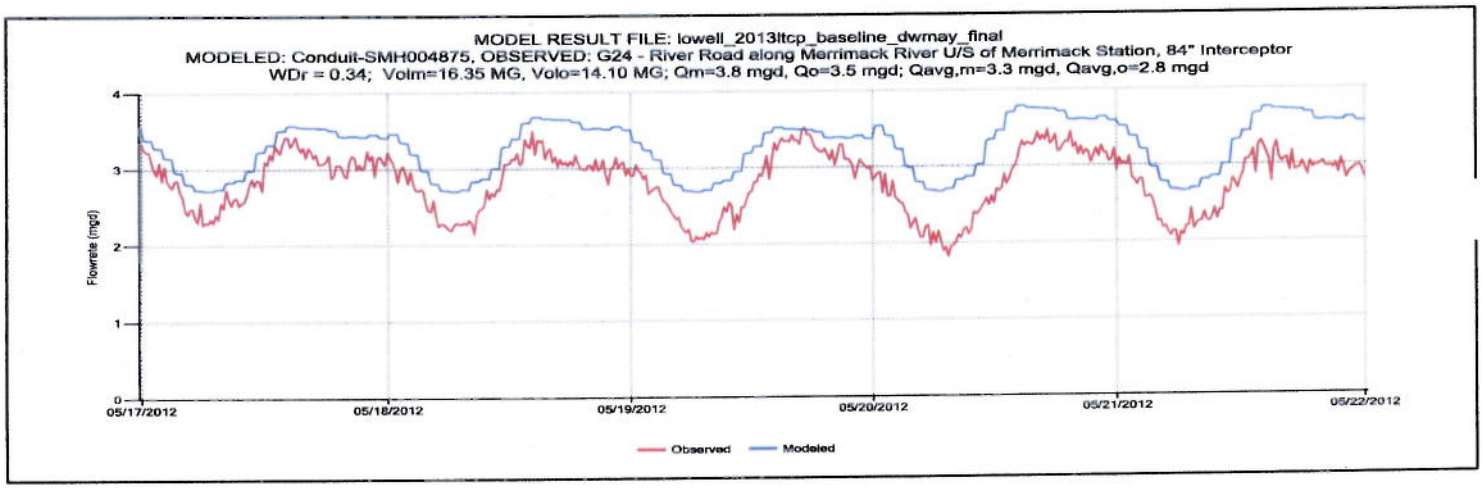


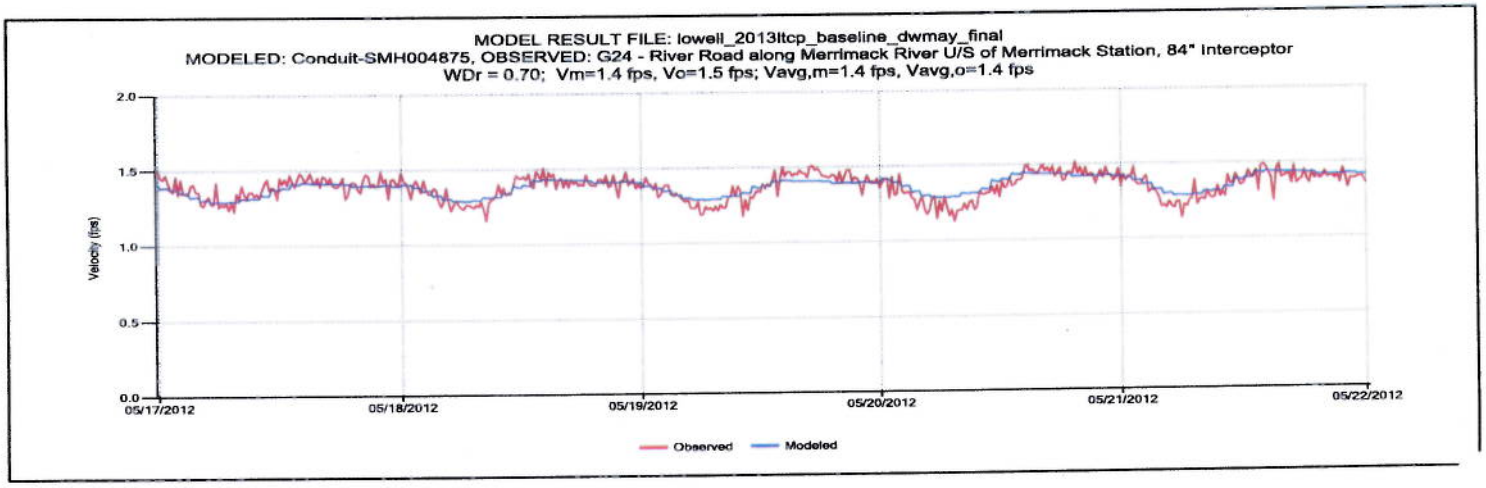




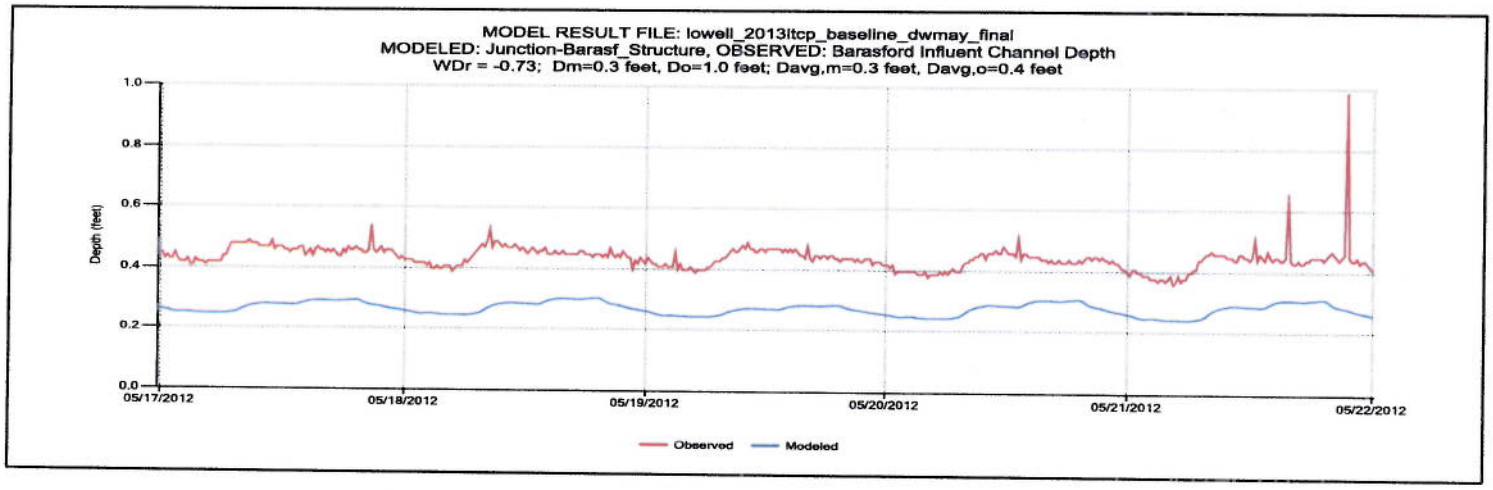
G24-May Dry Period



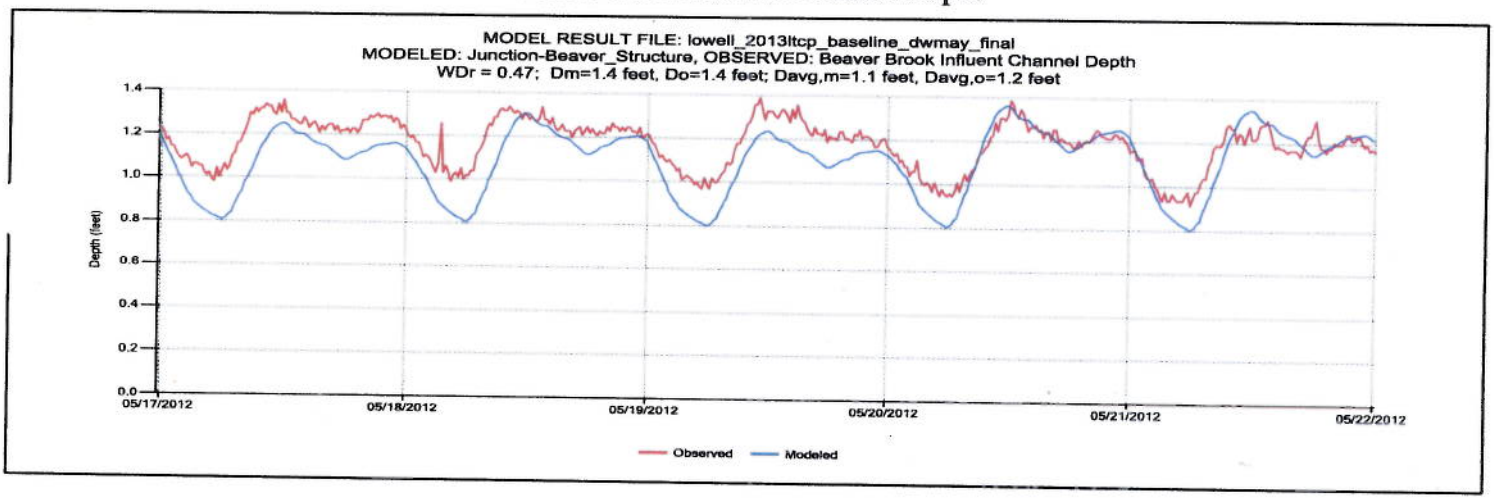




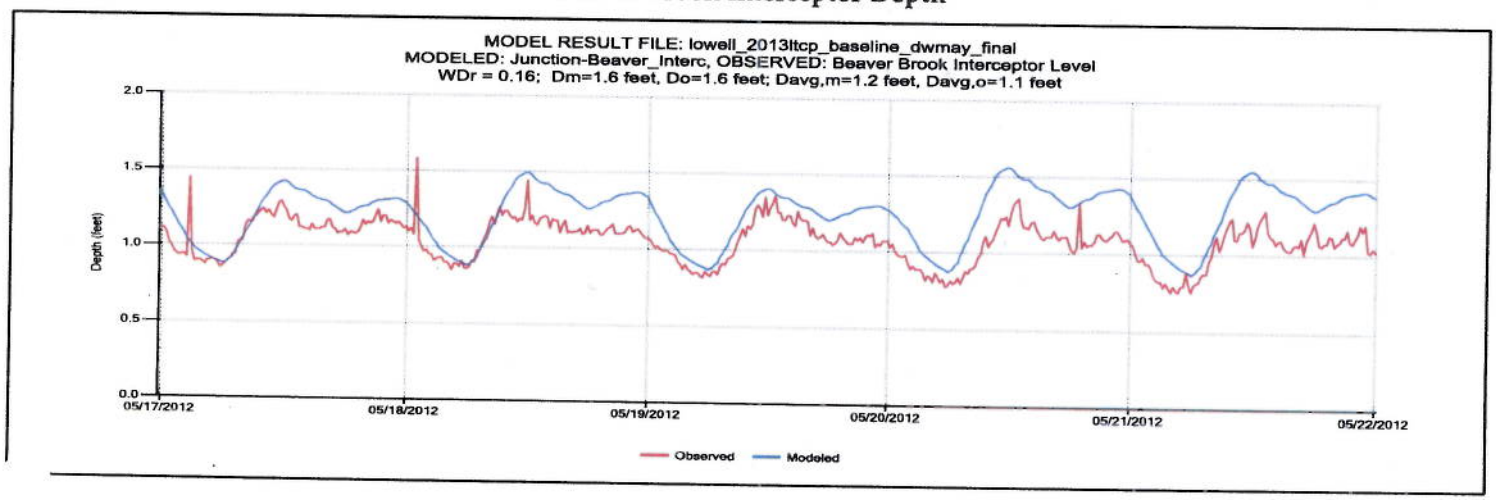
Barasford Influent Channel Depth



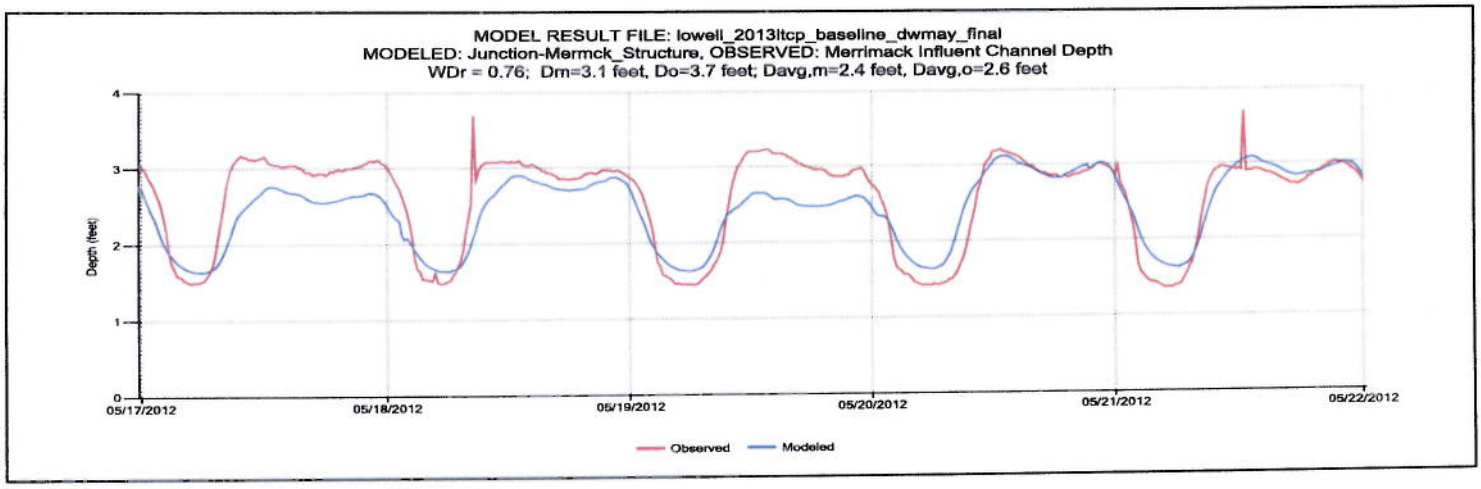
Beaver Brook Influent Channel Depth



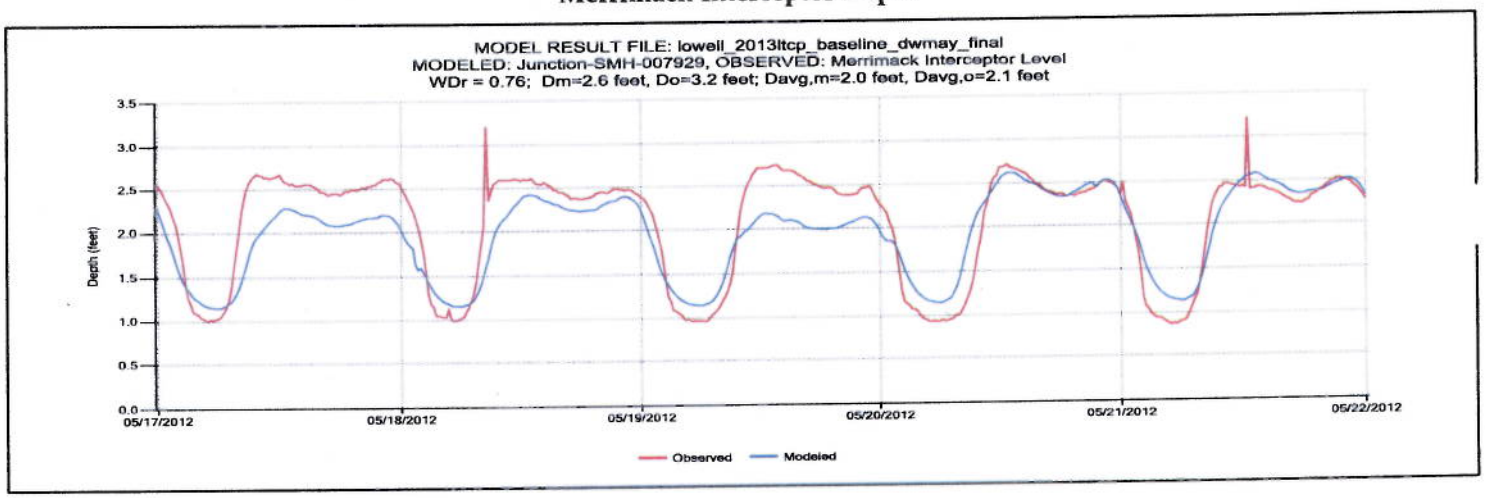
Beaver Brook Interceptor Depth



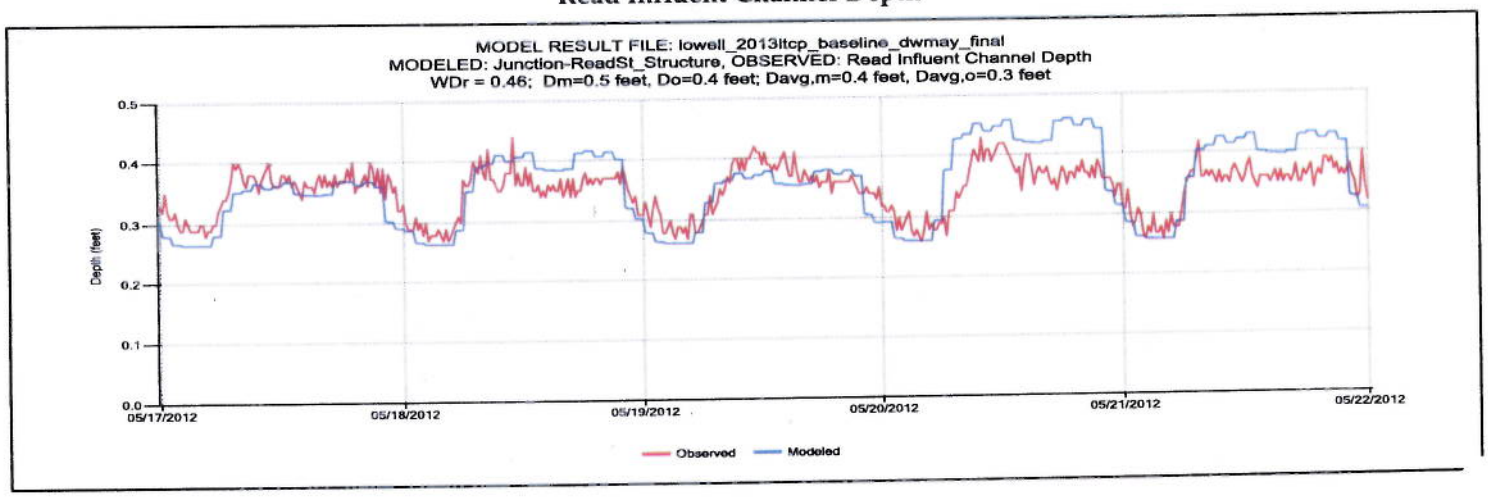
Merrimack Influent Channel Depth



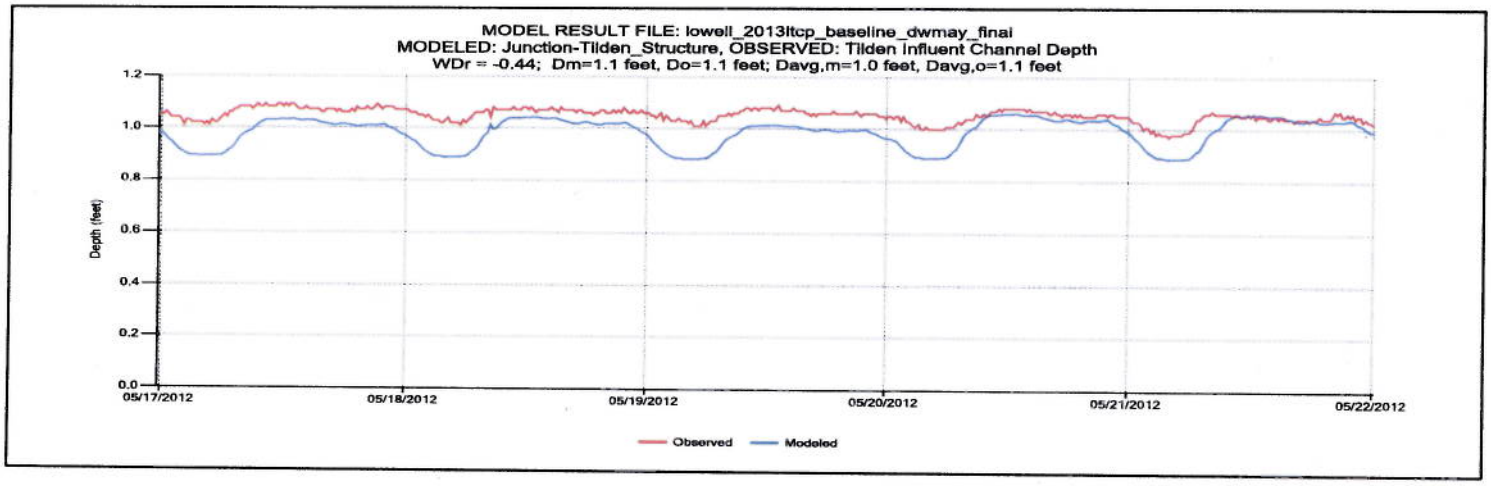
Merrimack Interceptor Depth



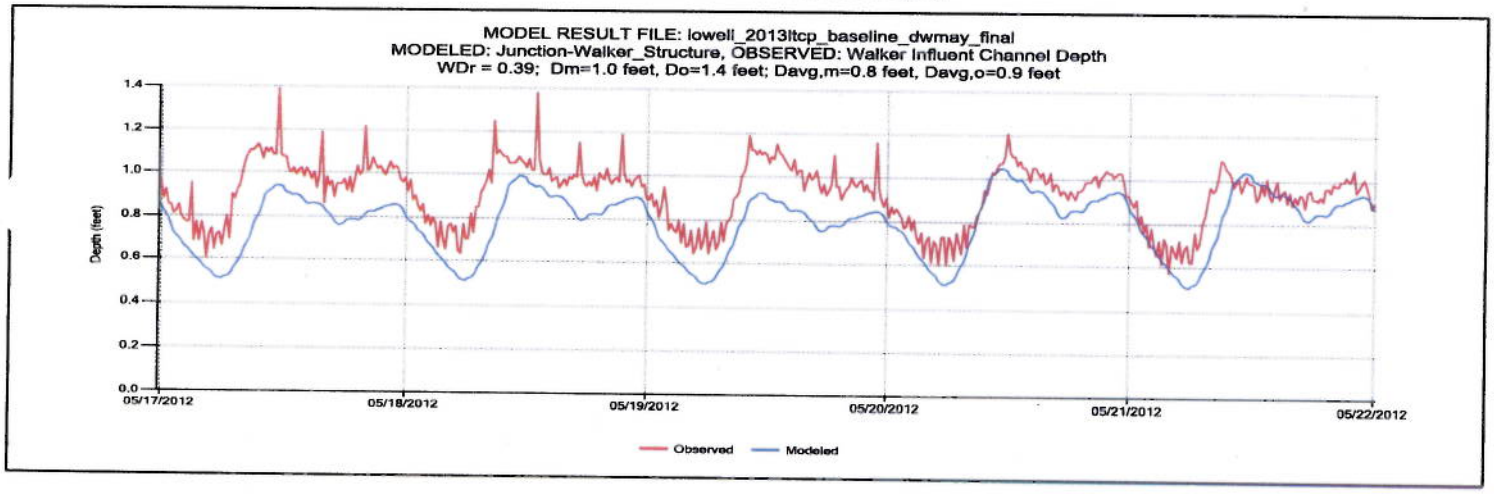
Read Influent Channel Depth



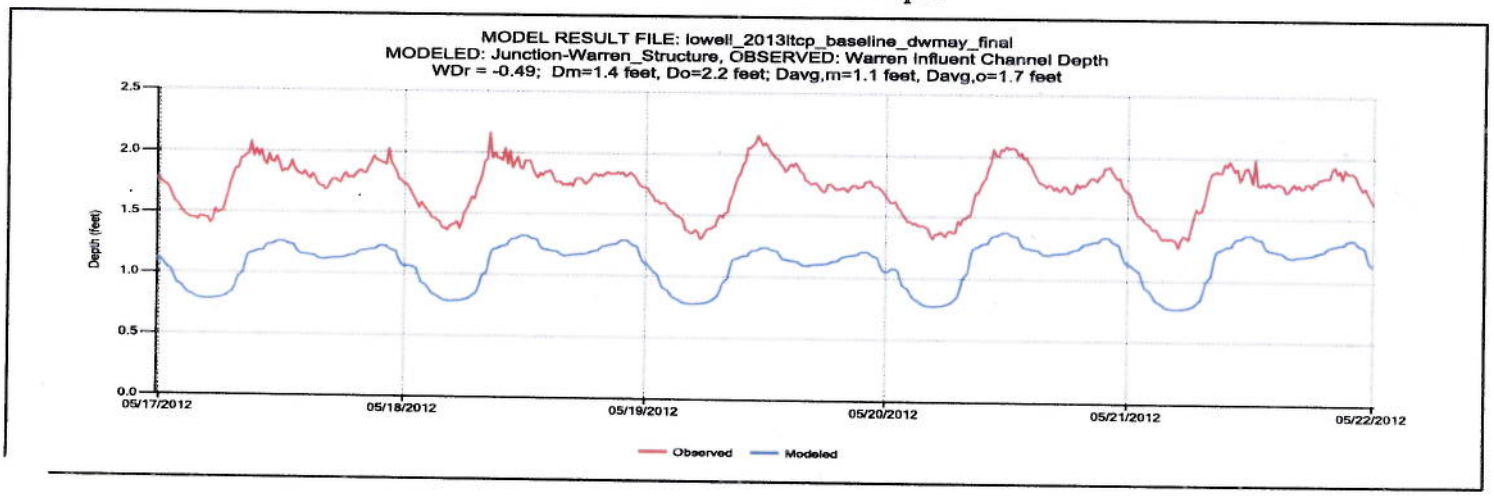
Tilden Influent Channel Depth



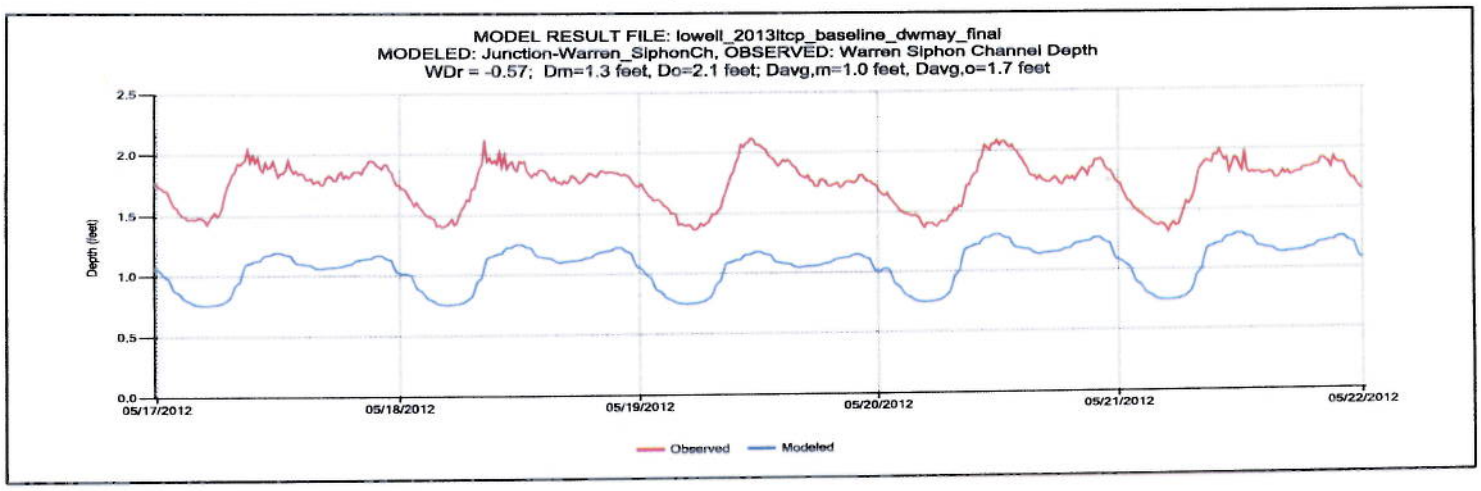
Walker Influent Channel Depth



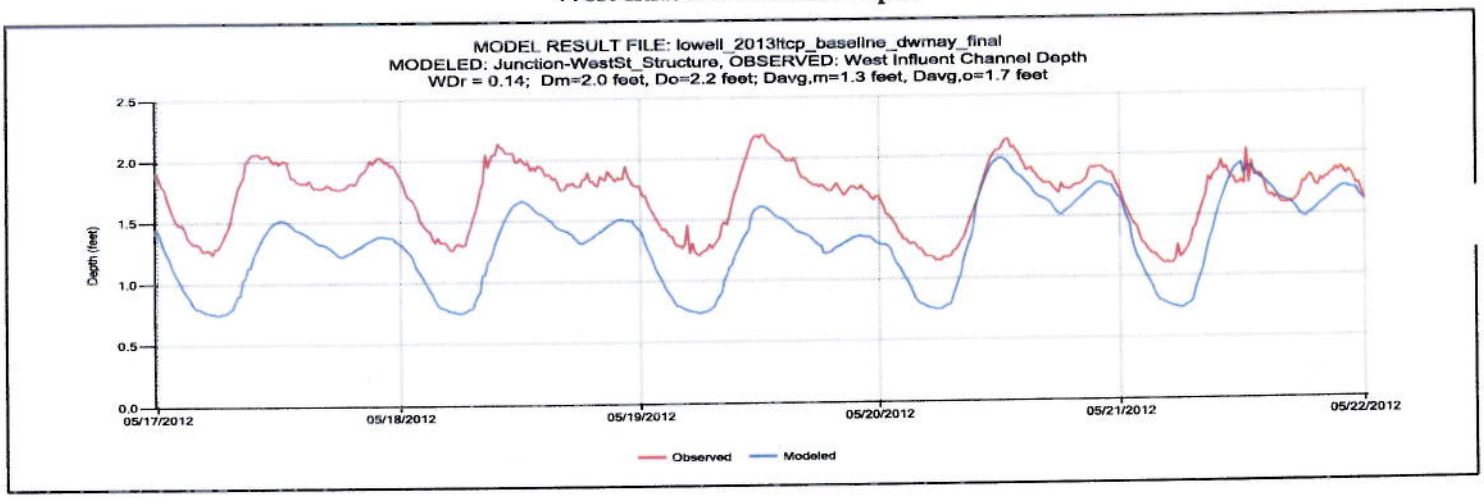
Warren Influent Channel Depth



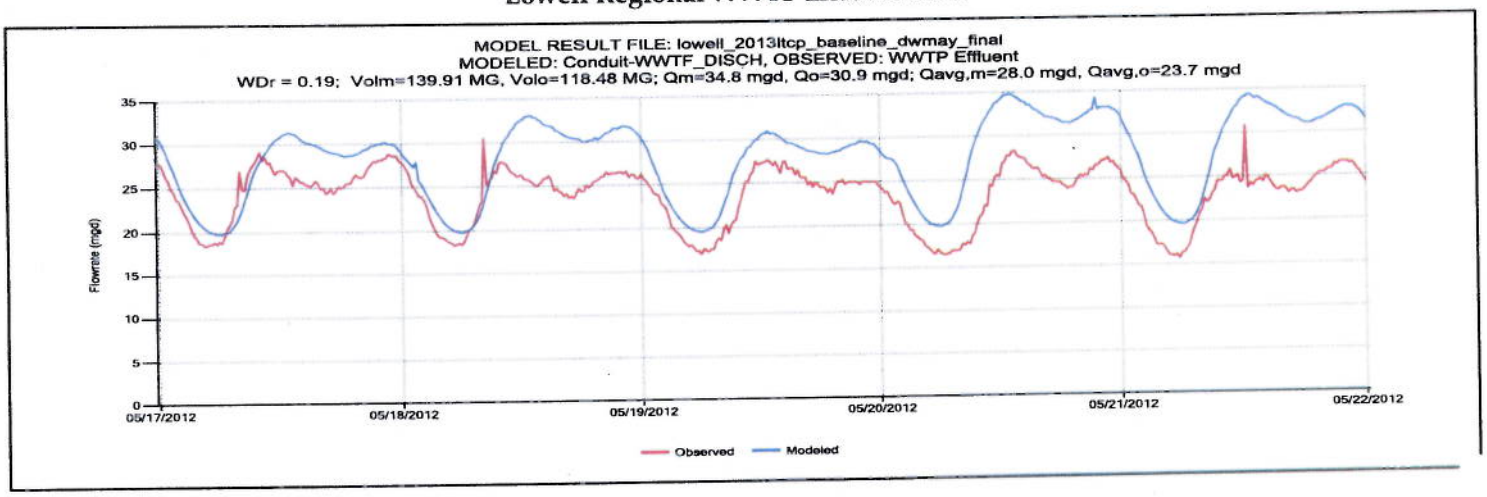
Warren Siphon Channel Depth



West Influent Channel Depth

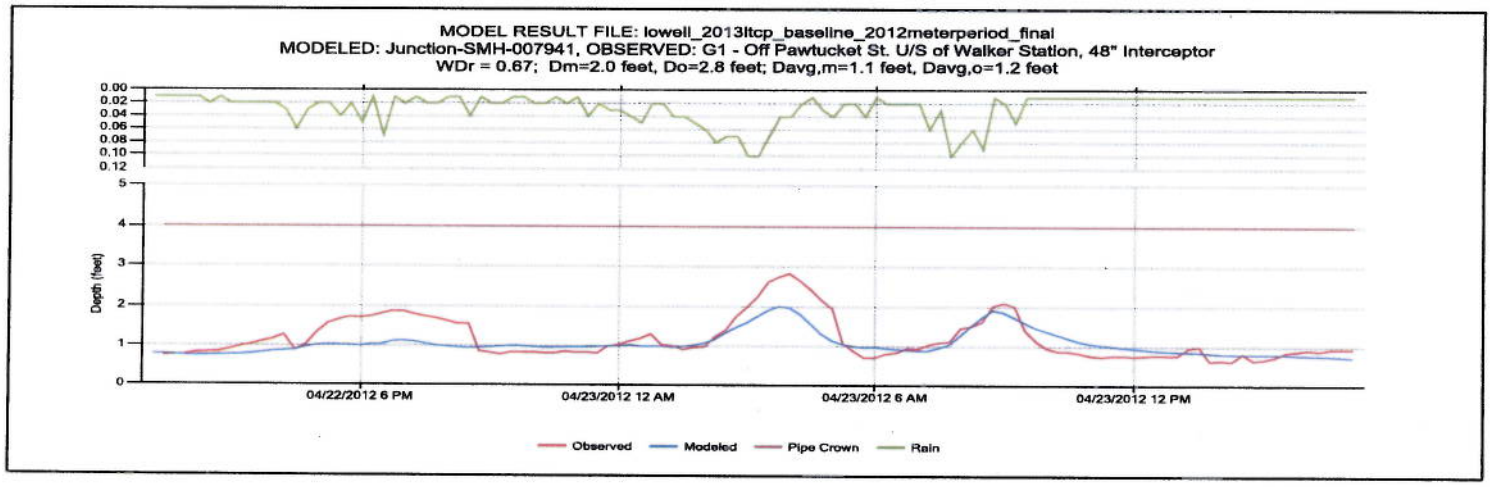


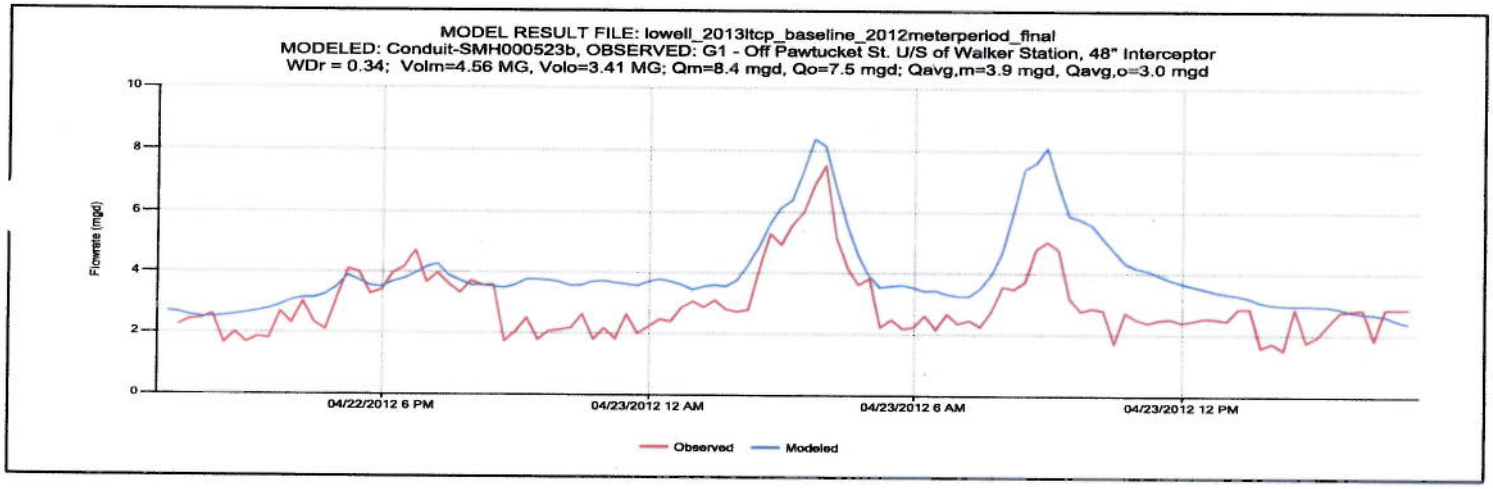
Lowell Regional WWTF Effluent Flow

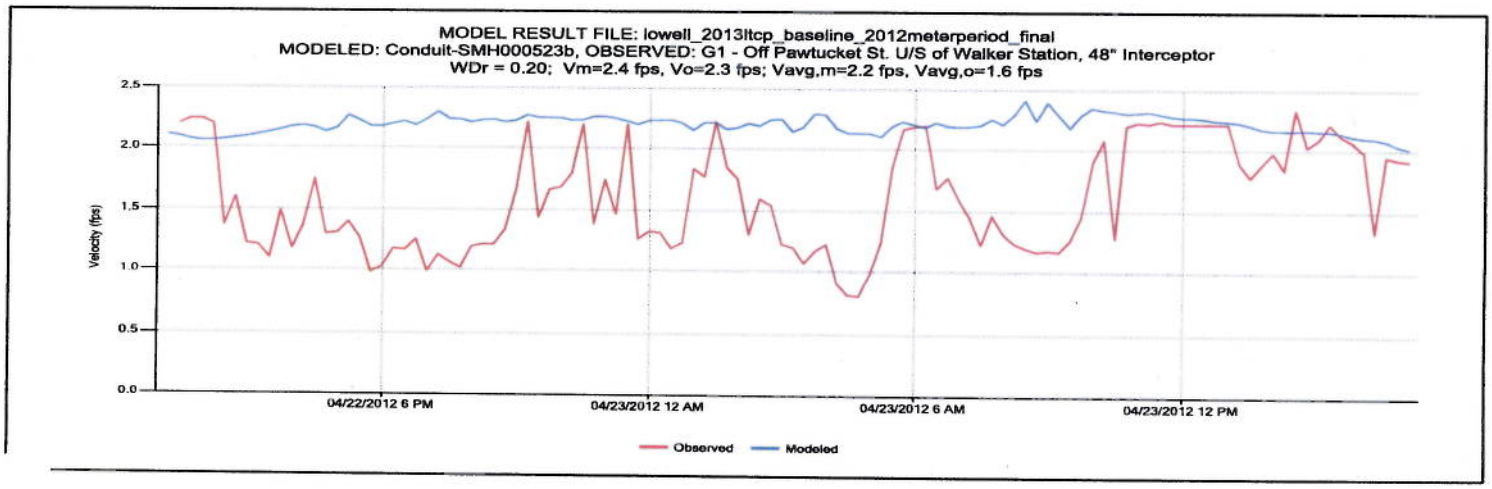


Attachment 3

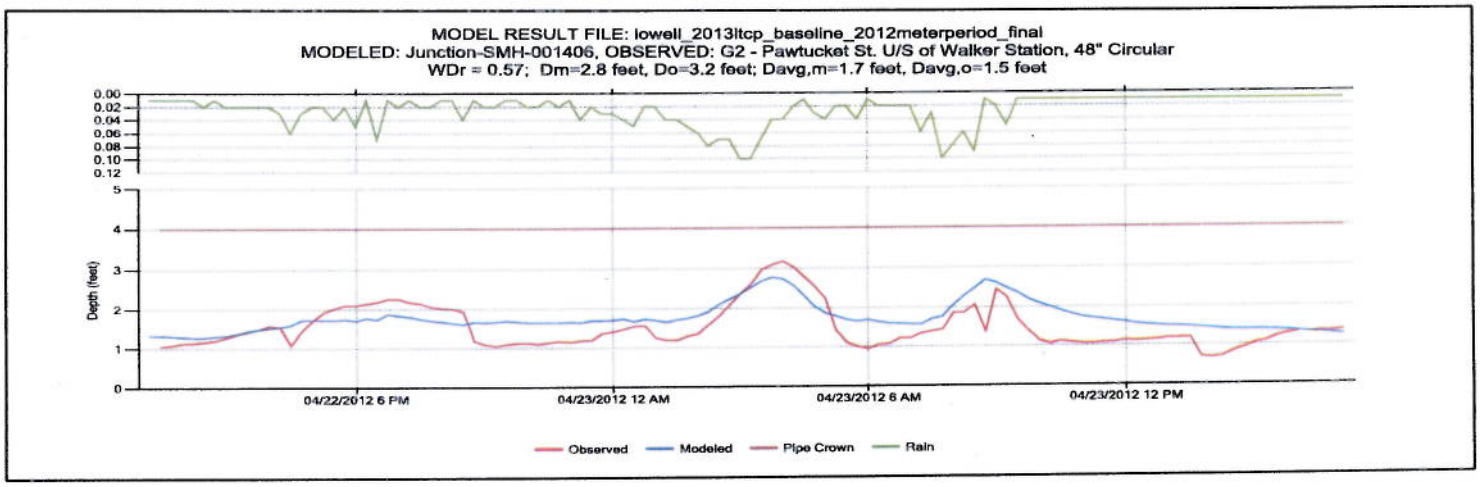
G1-Storm 1

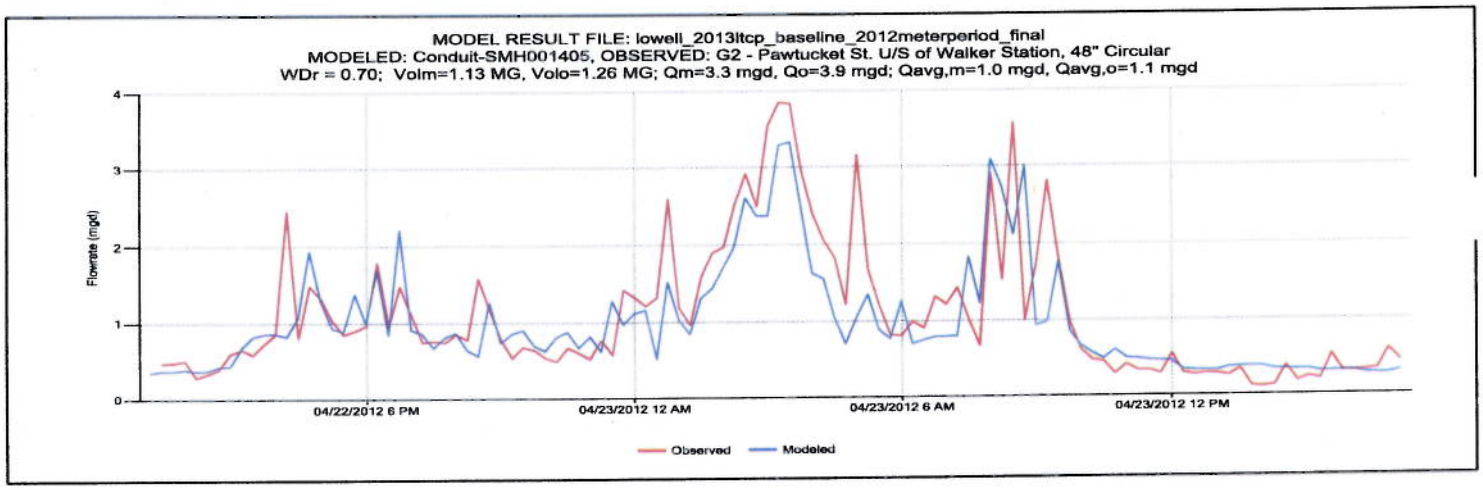

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007941, OBSERVED: G1 - Off Pawtucket St. U/S of Walker Station, 48" Interceptor
WDr = 0.67; Dm=2.0 feet, Do=2.8 feet; Davg,m=1.1 feet, Davg,o=1.2 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

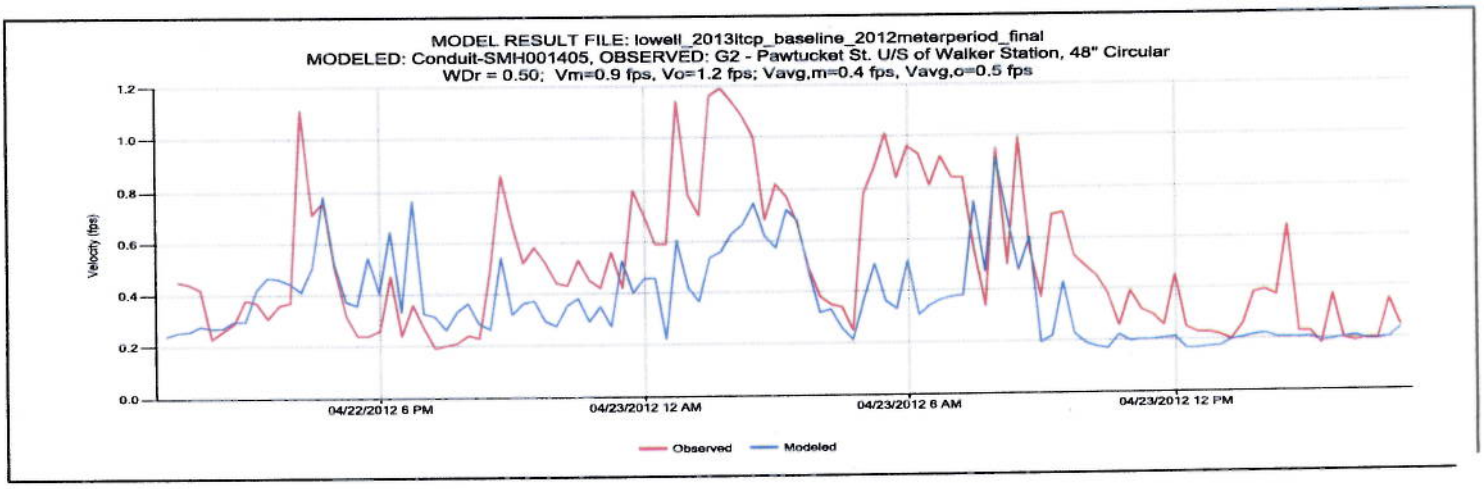

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH000523b, OBSERVED: G1 - Off Pawtucket St. U/S of Walker Station, 48" Interceptor
WDr = 0.34; Volm=4.56 MG, Volo=3.41 MG; Qm=8.4 mgd, Qo=7.5 mgd; Qavg,m=3.9 mgd, Qavg,o=3.0 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH000523b, OBSERVED: G1 - Off Pawtucket St. U/S of Walker Station, 48" Interceptor
WDr = 0.20; Vm=2.4 fps, Vo=2.3 fps; Vavg,m=2.2 fps, Vavg,o=1.6 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

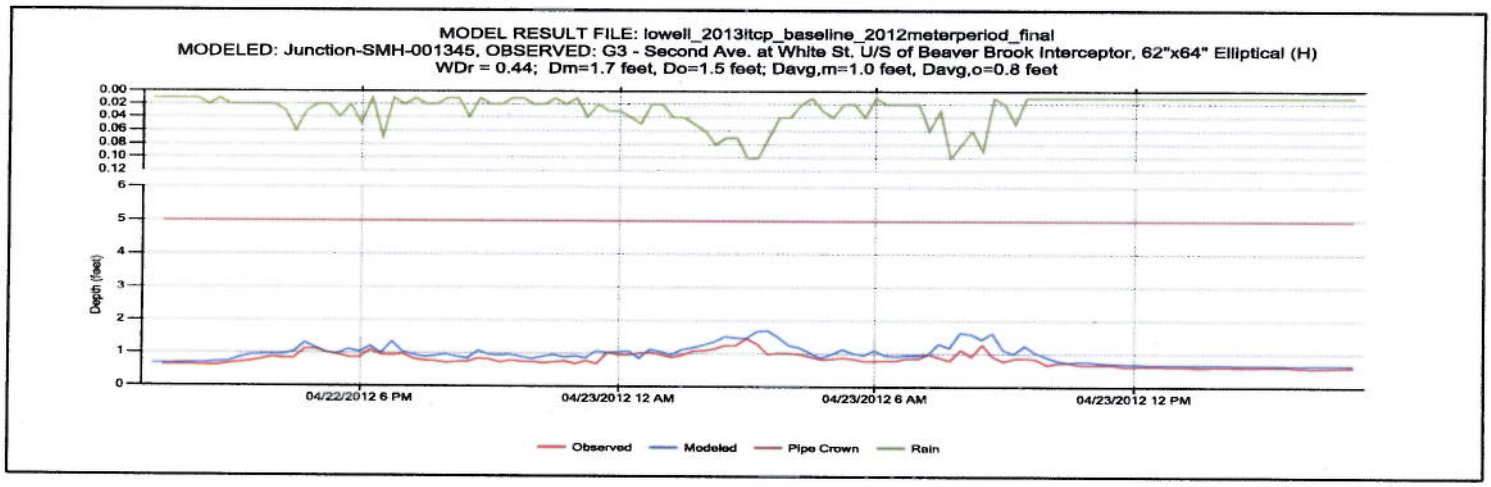
G2-Storm 1

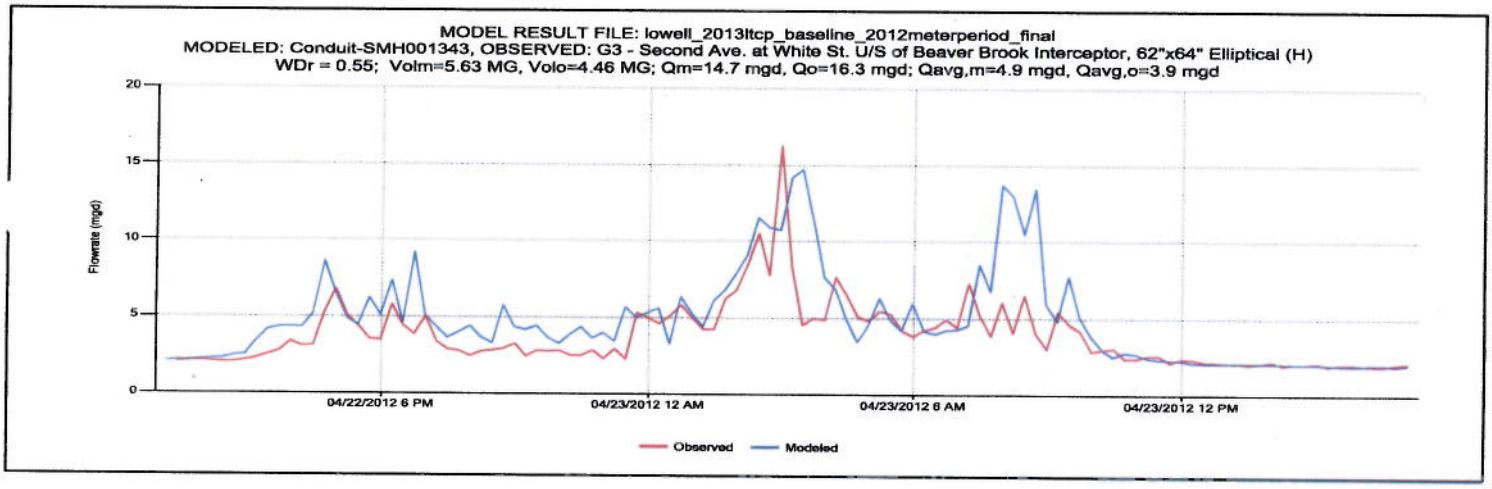

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-001406, OBSERVED: G2 - Pawtucket St. U/S of Walker Station, 48" Circular
WDr = 0.57; Dm=2.8 feet, Do=3.2 feet; Davg,m=1.7 feet, Davg,o=1.5 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

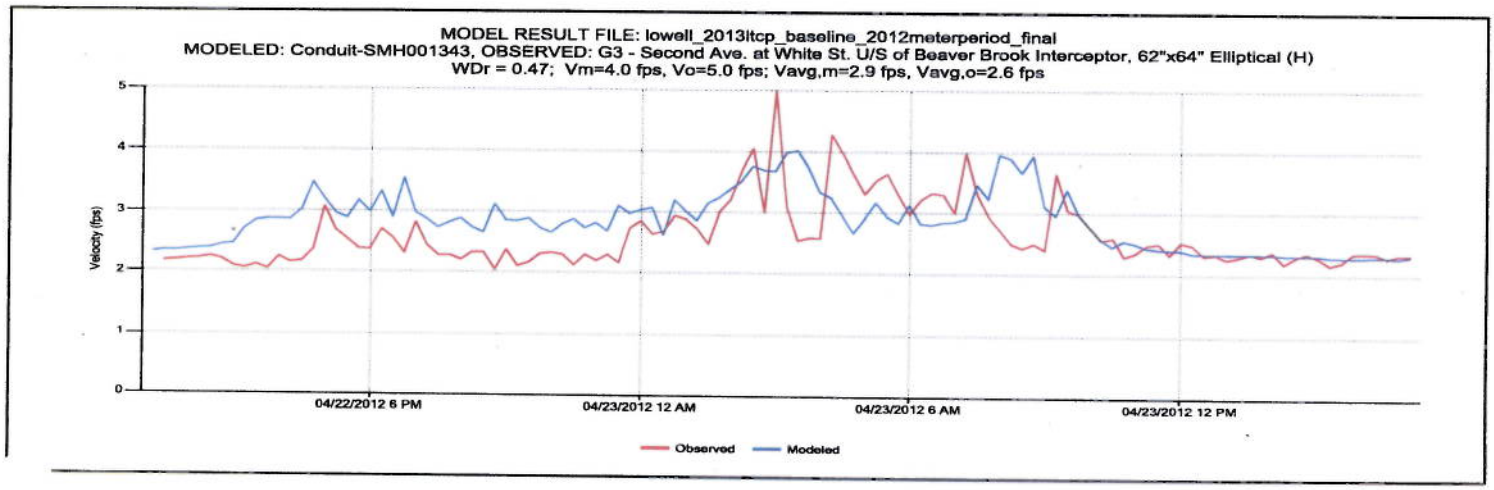

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001405, OBSERVED: G2 - Pawtucket St. U/S of Walker Station, 48" Circular
WDr = 0.70; Volm=1.13 MG, Volo=1.26 MG; Qm=3.3 mgd, Qo=3.9 mgd; Qavg,m=1.0 mgd, Qavg,o=1.1 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001405, OBSERVED: G2 - Pawtucket St. U/S of Walker Station, 48" Circular
WDr = 0.50; Vm=0.9 fps, Vo=1.2 fps; Vavg,m=0.4 fps, Vavg,o=0.5 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

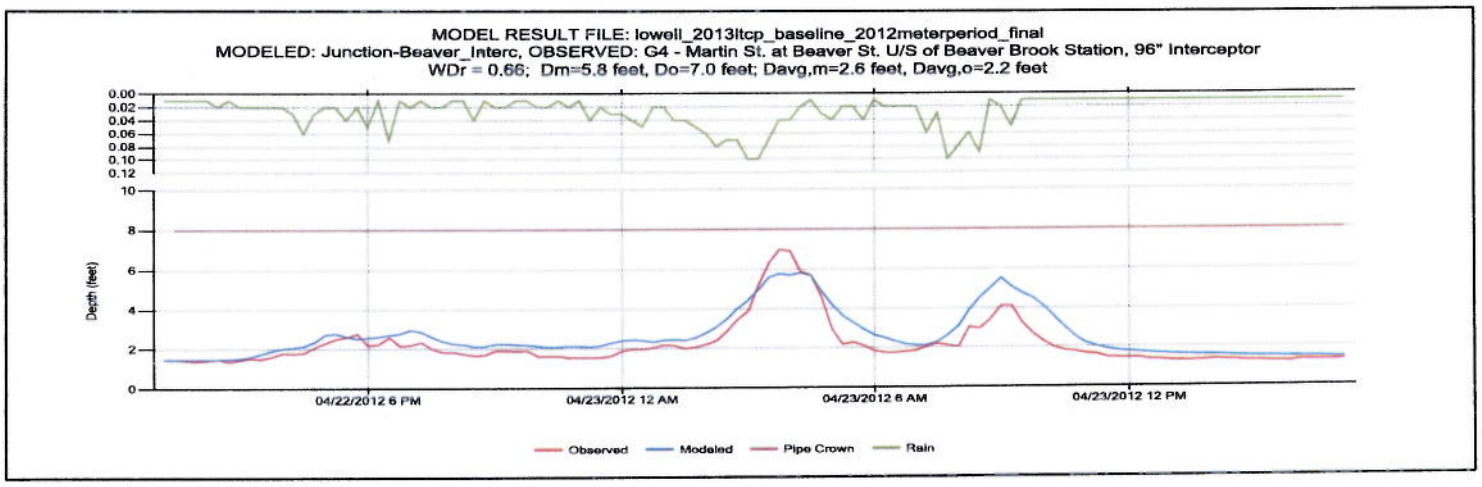
G3-Storm 1

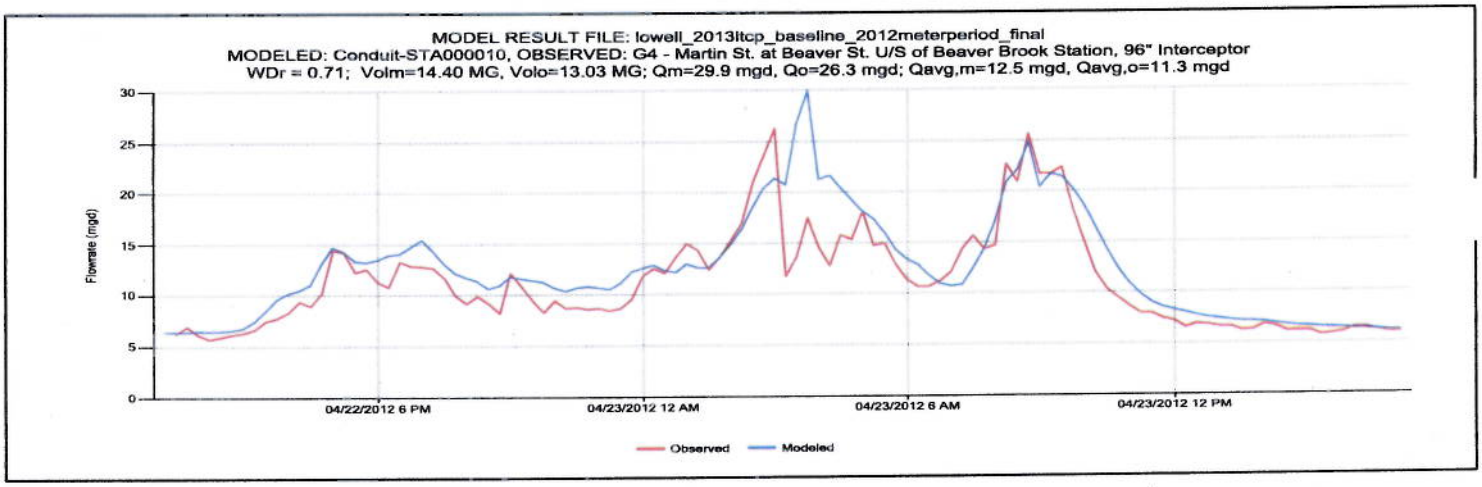

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-001345, OBSERVED: G3 - Second Ave. at White St. U/S of Beaver Brook Interceptor, 62"x64" Elliptical (H)
WDr = 0.44; Dm=1.7 feet, Do=1.5 feet; Davg,m=1.0 feet, Davg,o=0.8 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

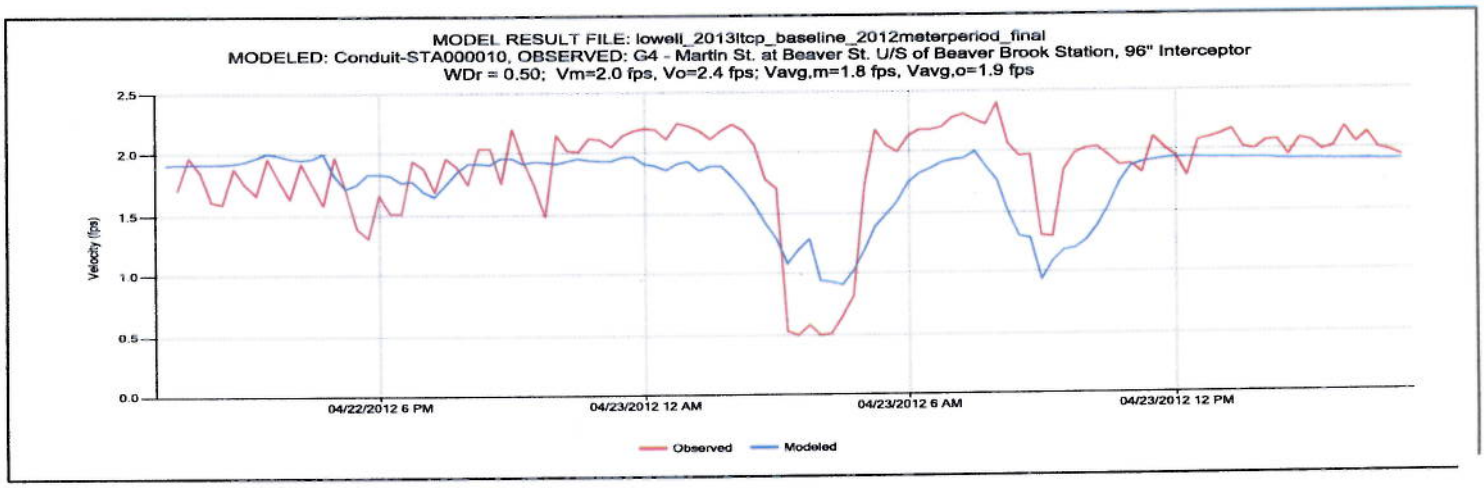

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001343, OBSERVED: G3 - Second Ave. at White St. U/S of Beaver Brook Interceptor, 62"x64" Elliptical (H)
WDr = 0.55; Volm=5.63 MG, Volo=4.46 MG; Qm=14.7 mgd, Qo=16.3 mgd; Qavg,m=4.9 mgd, Qavg,o=3.9 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001343, OBSERVED: G3 - Second Ave. at White St. U/S of Beaver Brook Interceptor, 62"x64" Elliptical (H)
WDr = 0.47; Vm=4.0 fps, Vo=5.0 fps; Vavg,m=2.9 fps, Vavg,o=2.6 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

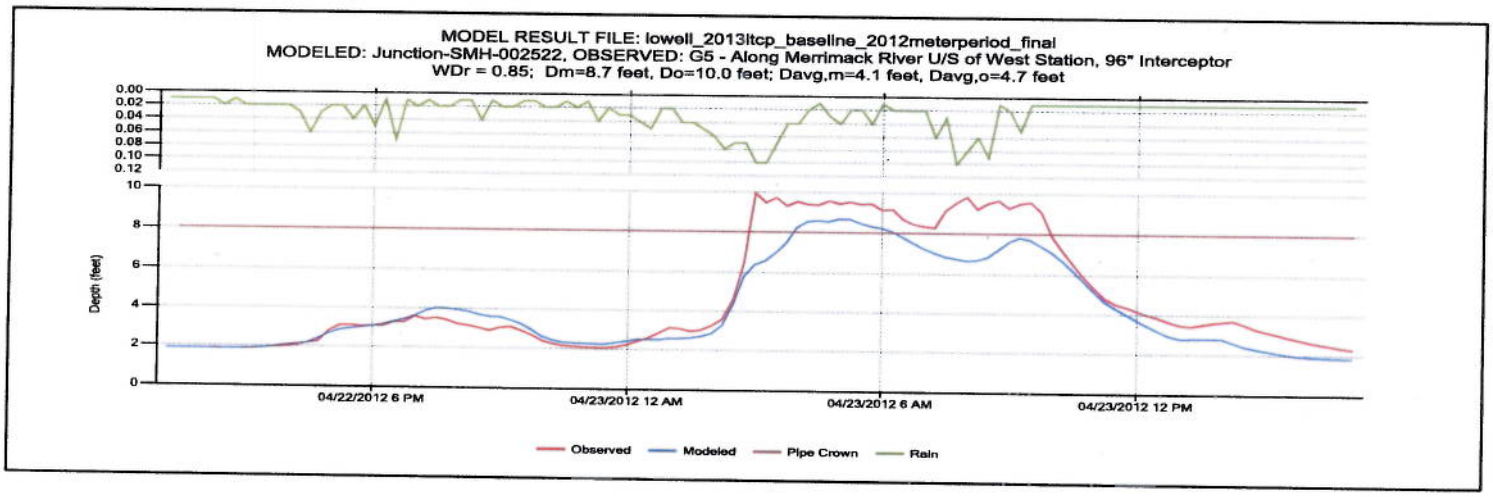
G4-Storm 1

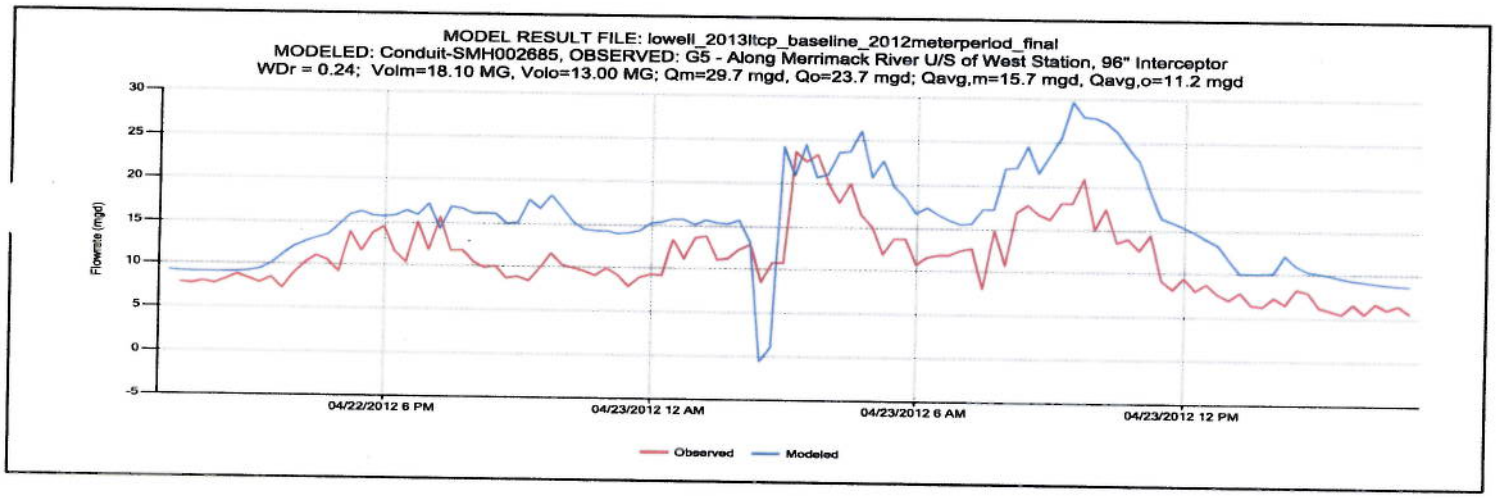

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-Beaver_Interc, OBSERVED: G4 - Martin St. at Beaver St. U/S of Beaver Brook Station, 96" Interceptor
WDr = 0.66; Dm=5.8 feet, Do=7.0 feet; Davg,m=2.6 feet, Davg,o=2.2 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

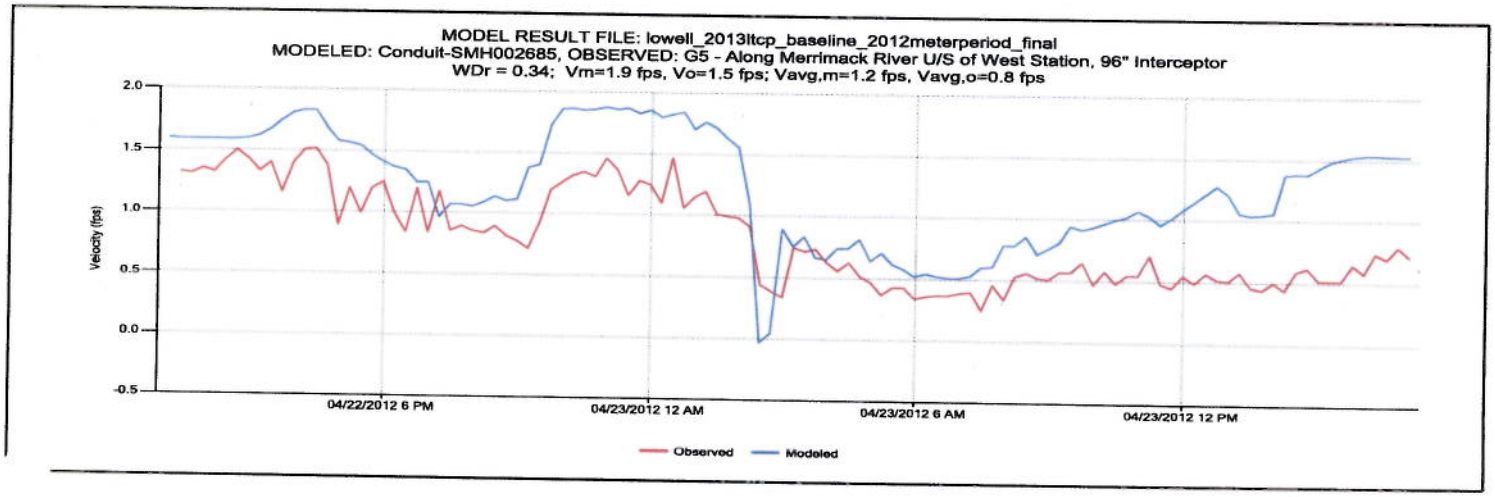

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-STA000010, OBSERVED: G4 - Martin St. at Beaver St. U/S of Beaver Brook Station, 96" Interceptor
WDr = 0.71; Volm=14.40 MG, Volo=13.03 MG; Qm=29.9 mgd, Qo=26.3 mgd; Qavg,m=12.5 mgd, Qavg,o=11.3 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-STA000010, OBSERVED: G4 - Martin St. at Beaver St. U/S of Beaver Brook Station, 96" Interceptor
WDr = 0.50; Vm=2.0 fps, Vo=2.4 fps; Vavg,m=1.8 fps, Vavg,o=1.9 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

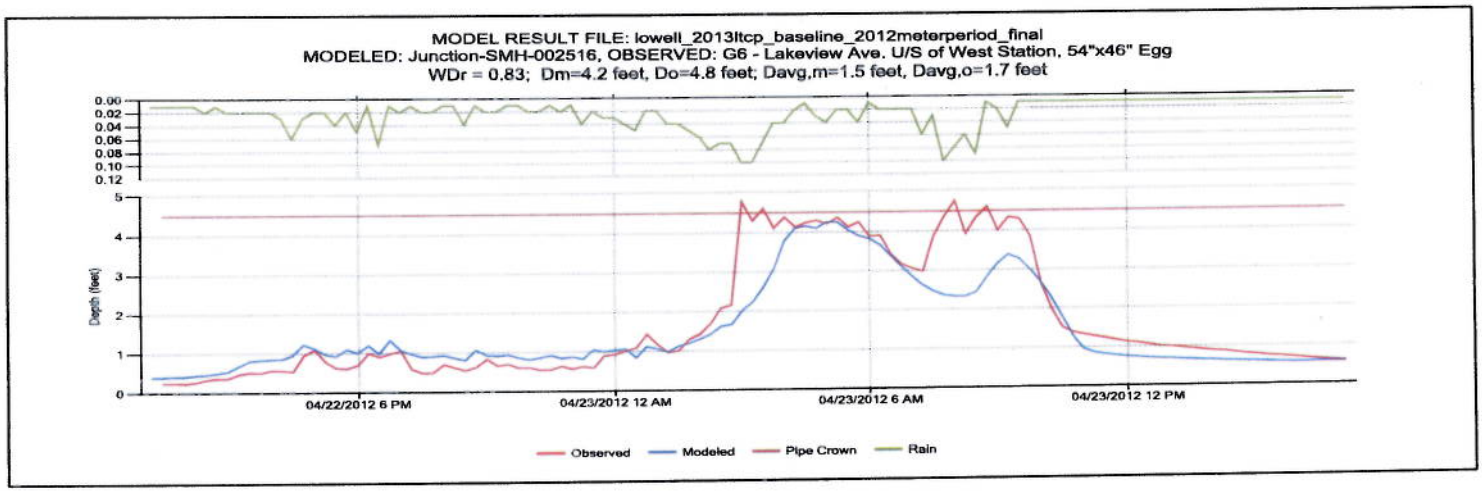
G5-Storm 1

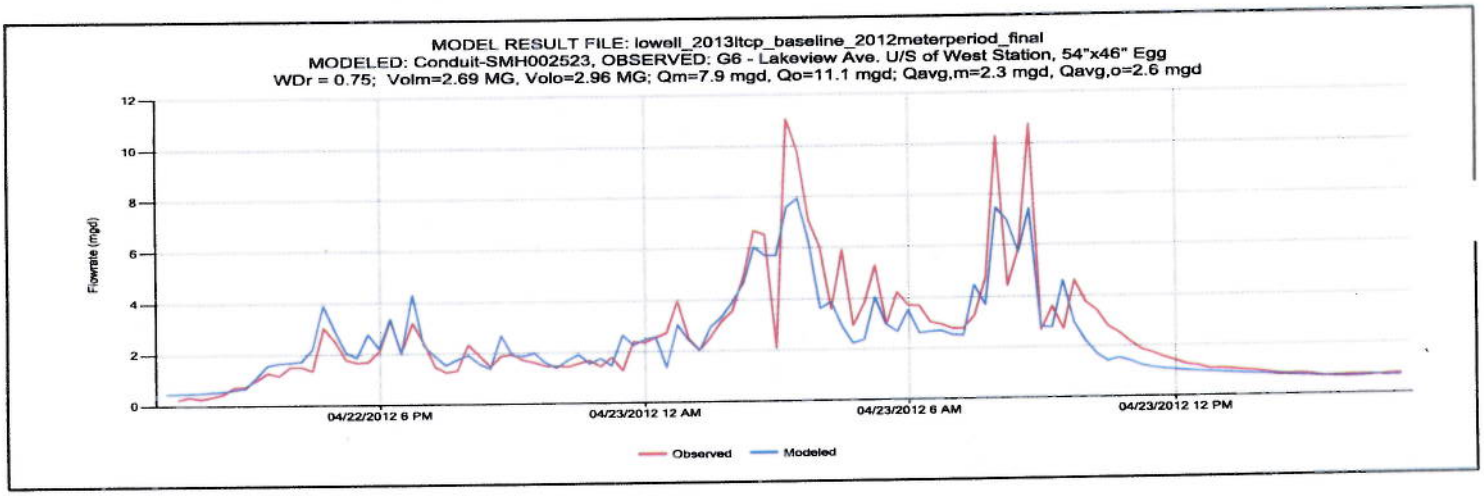

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002522, OBSERVED: G5 - Along Merrimack River U/S of West Station, 96" Interceptor
WDr = 0.85; Dm=8.7 feet, Do=10.0 feet; Davg,m=4.1 feet, Davg,o=4.7 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

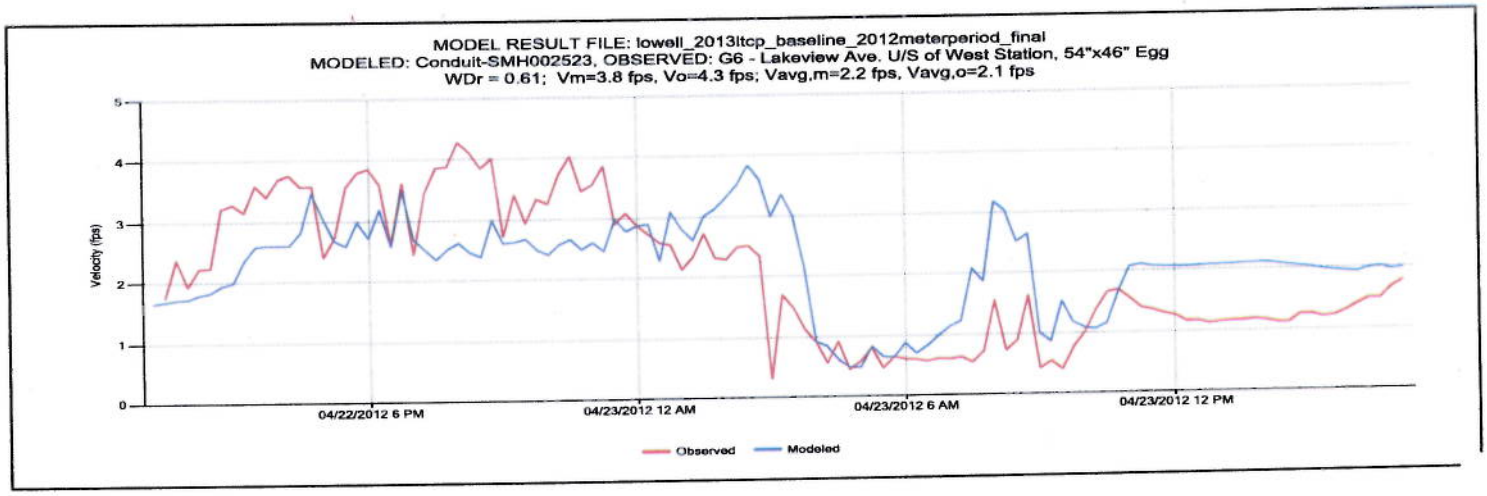

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002685, OBSERVED: G5 - Along Merrimack River U/S of West Station, 96" Interceptor
WDr = 0.24; Volm=18.10 MG, Volo=13.00 MG; Qm=29.7 mgd, Qo=23.7 mgd; Qavg,m=15.7 mgd, Qavg,o=11.2 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002685, OBSERVED: G5 - Along Merrimack River U/S of West Station, 96" Interceptor
WDr = 0.34; Vm=1.9 fps, Vo=1.5 fps; Vavg,m=1.2 fps, Vavg,o=0.8 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

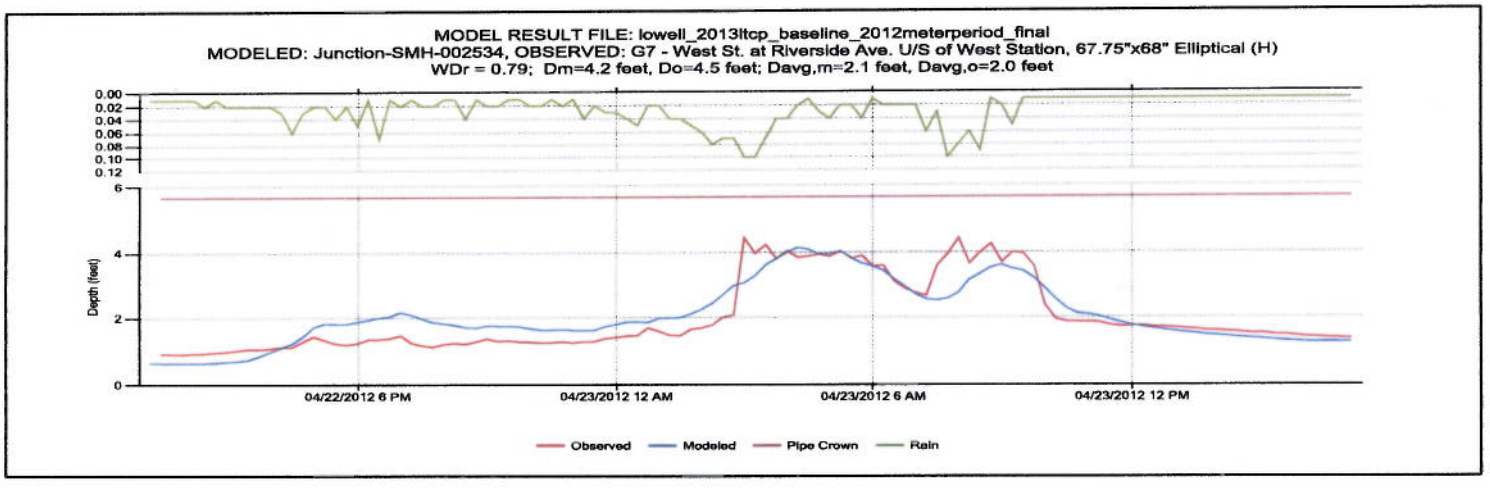
G6-Storm 1

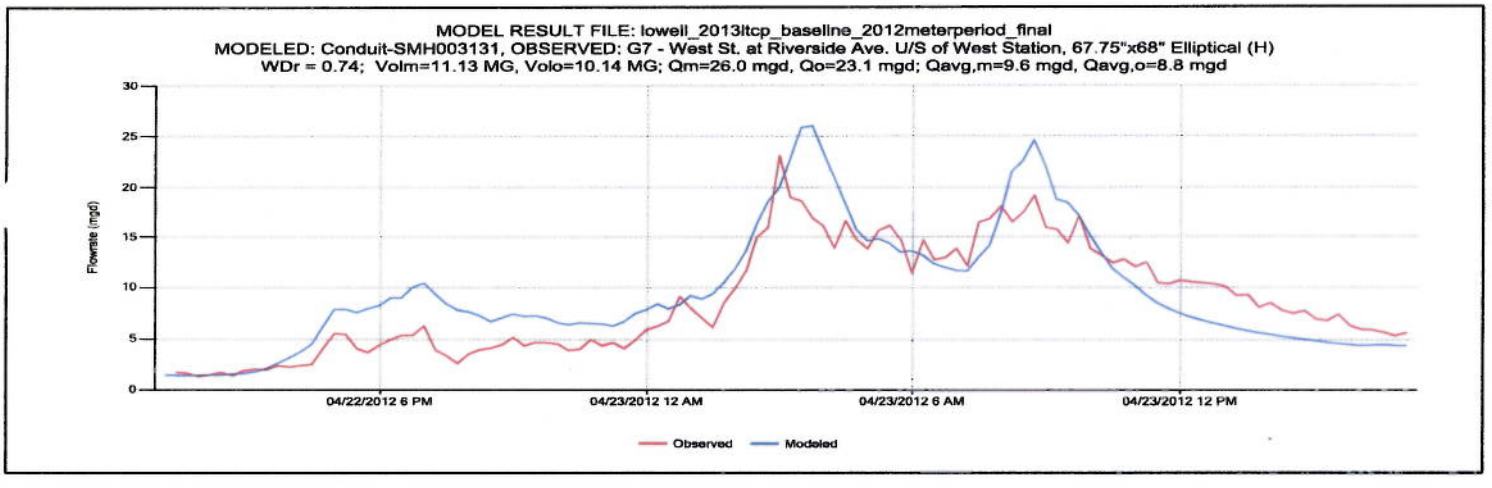

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002516, OBSERVED: G6 - Lakeview Ave. U/S of West Station, 54"x46" Egg
WDr = 0.83; Dm=4.2 feet, Do=4.8 feet; Davg,m=1.5 feet, Davg,o=1.7 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

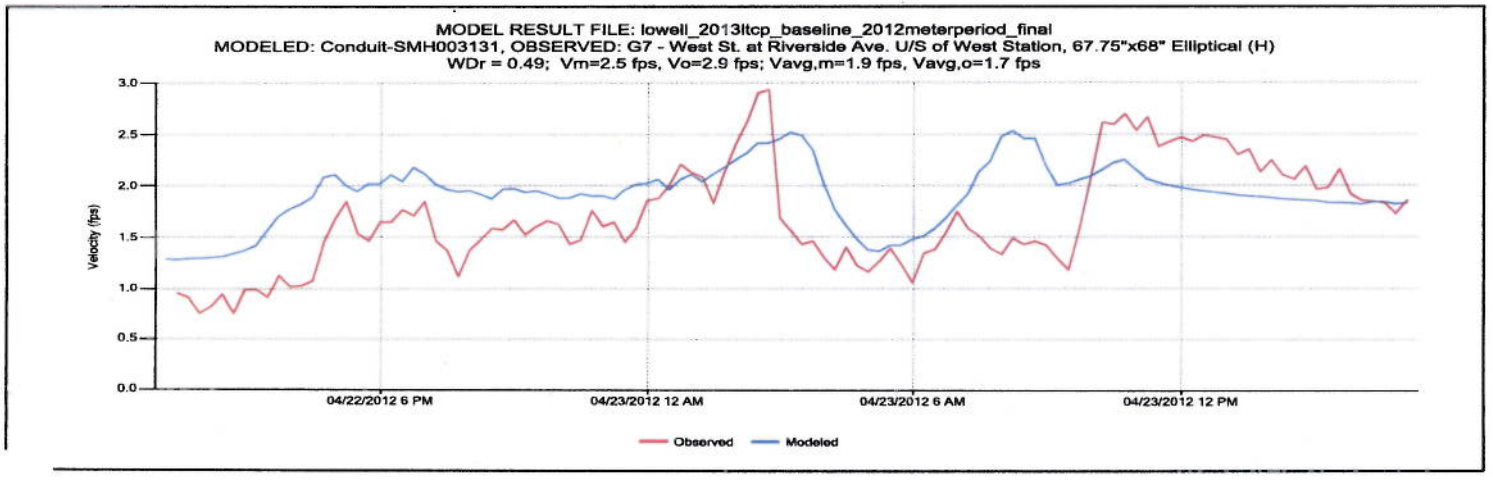

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002523, OBSERVED: G6 - Lakeview Ave. U/S of West Station, 54"x46" Egg
WDr = 0.75; Volm=2.69 MG, Volo=2.96 MG; Qm=7.9 mgd, Qo=11.1 mgd; Qavg,m=2.3 mgd, Qavg,o=2.6 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002523, OBSERVED: G6 - Lakeview Ave. U/S of West Station, 54"x46" Egg
WDr = 0.61; Vm=3.8 fps, Vo=4.3 fps; Vavg,m=2.2 fps, Vavg,o=2.1 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

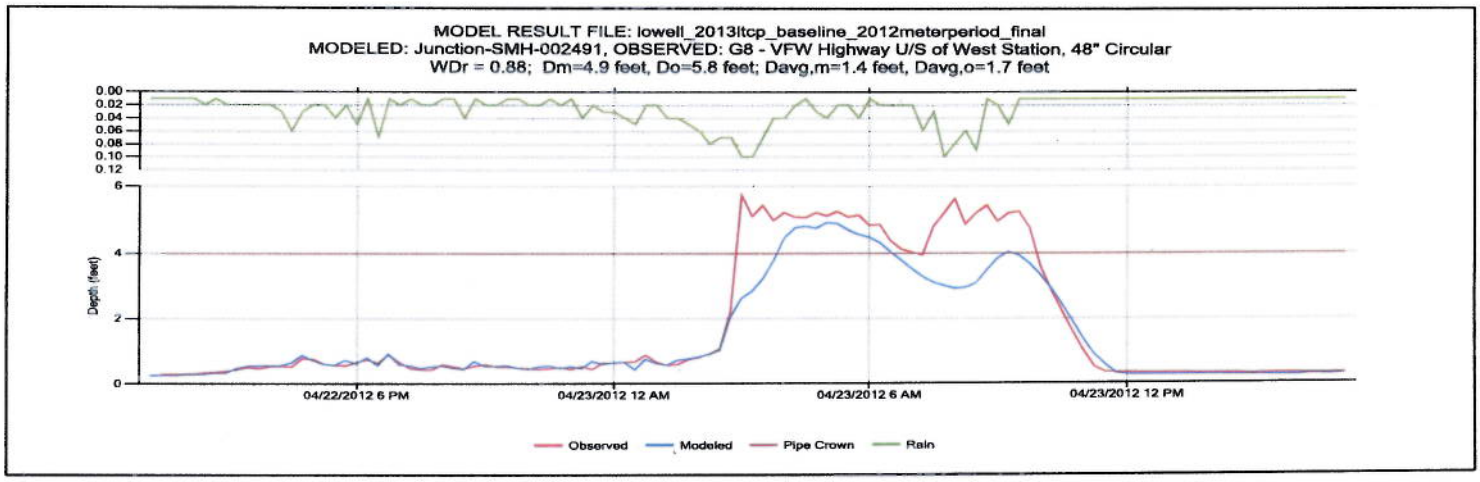
G7-Storm 1

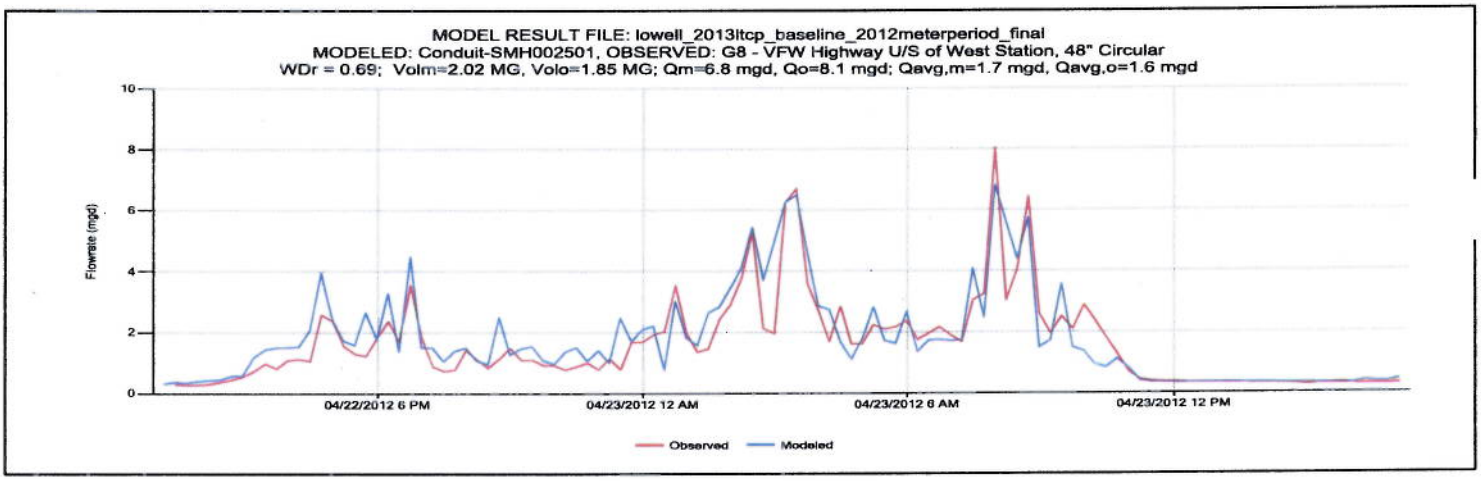

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002534, OBSERVED: G7 - West St. at Riverside Ave. U/S of West Station, 67.75"x68" Elliptical (H)
WDr = 0.79; Dm=4.2 feet, Do=4.5 feet; Davg,m=2.1 feet, Davg,o=2.0 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

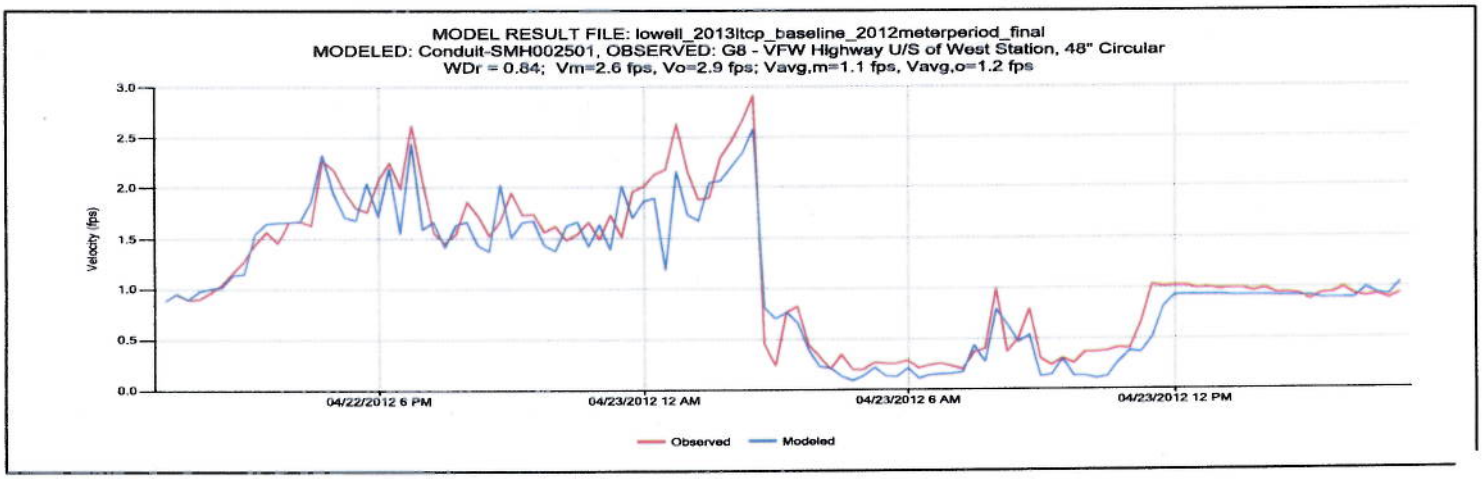

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH003131, OBSERVED: G7 - West St. at Riverside Ave. U/S of West Station, 67.75"x68" Elliptical (H)
WDr = 0.74; Volm=11.13 MG, Volo=10.14 MG; Qm=26.0 mgd, Qo=23.1 mgd; Qavg,m=9.6 mgd, Qavg,o=8.8 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH003131, OBSERVED: G7 - West St. at Riverside Ave. U/S of West Station, 67.75"x68" Elliptical (H)
WDr = 0.49; Vm=2.5 fps, Vo=2.9 fps; Vavg,m=1.9 fps, Vavg,o=1.7 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

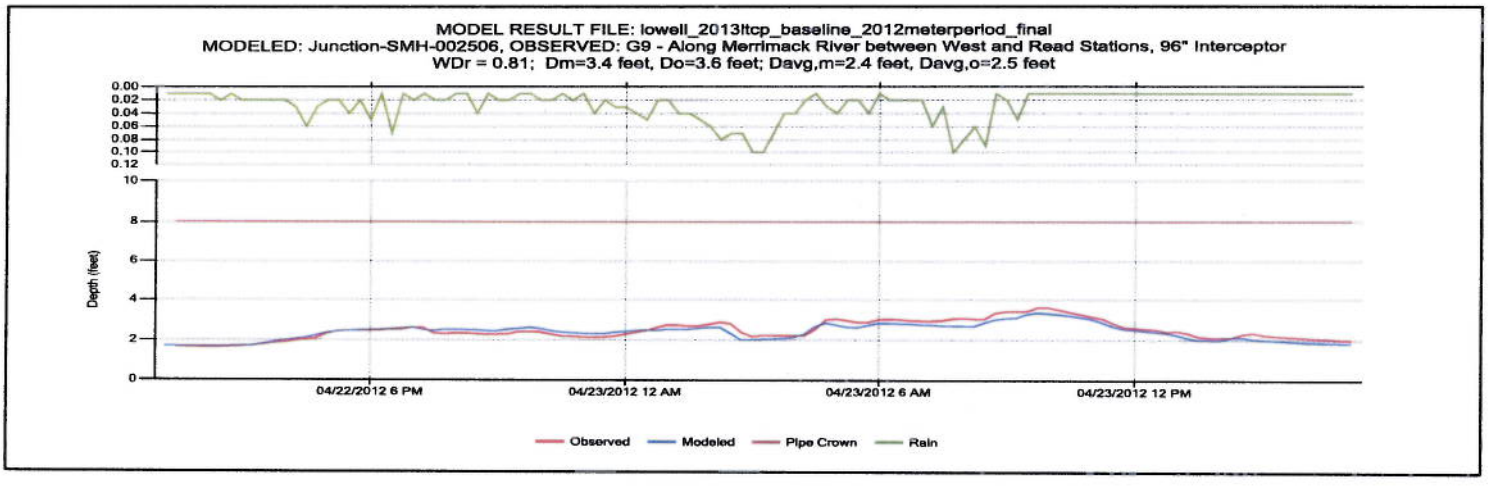
G8-Storm 1

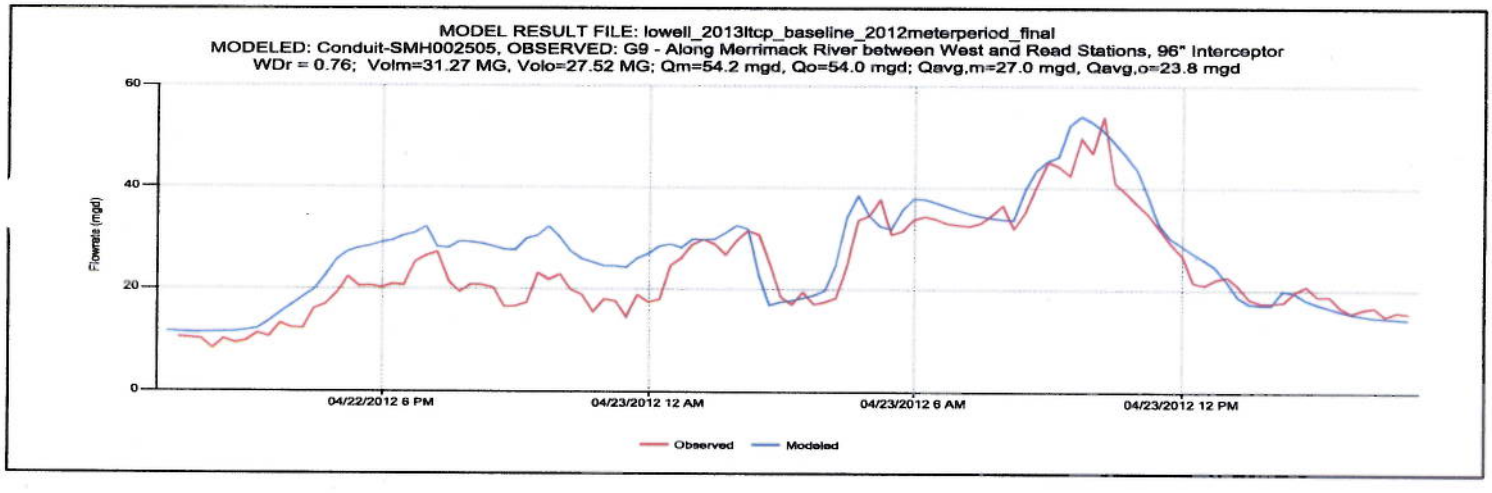

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002491, OBSERVED: G8 - VFW Highway U/S of West Station, 48" Circular
WDr = 0.88; Dm=4.9 feet, Do=5.8 feet; Davg,m=1.4 feet, Davg,o=1.7 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

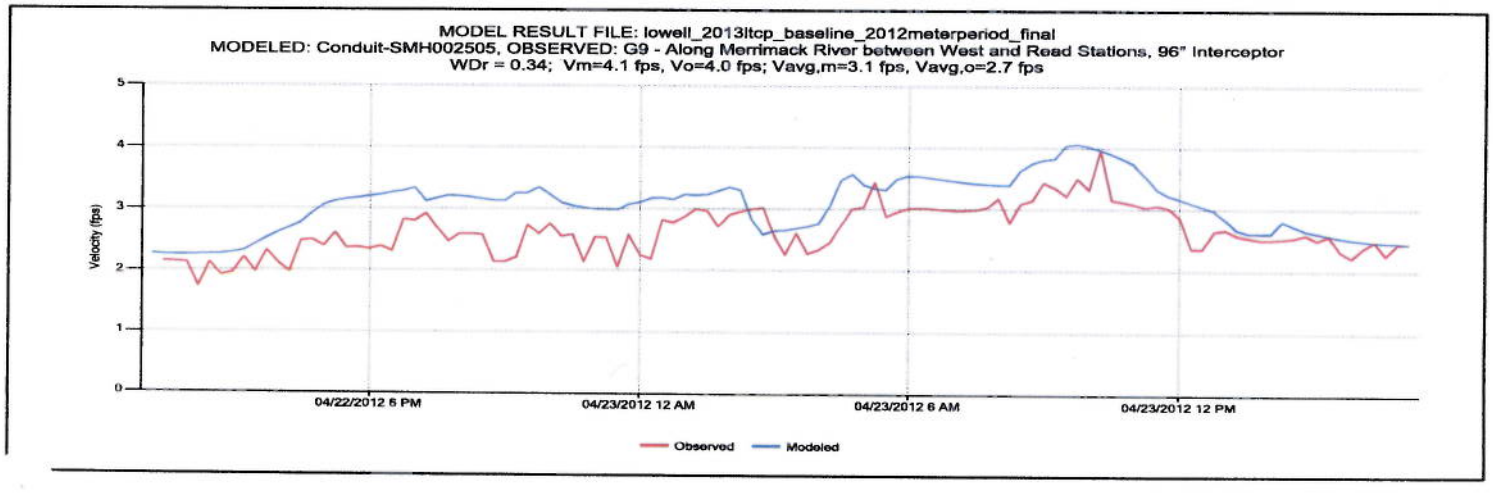

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002501, OBSERVED: G8 - VFW Highway U/S of West Station, 48" Circular
WDr = 0.69; Volm=2.02 MG, Volo=1.85 MG; Qm=6.8 mgd, Qo=8.1 mgd; Qavg,m=1.7 mgd, Qavg,o=1.6 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002501, OBSERVED: G8 - VFW Highway U/S of West Station, 48" Circular
WDr = 0.84; Vm=2.6 fps, Vo=2.9 fps; Vavg,m=1.1 fps, Vavg,o=1.2 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

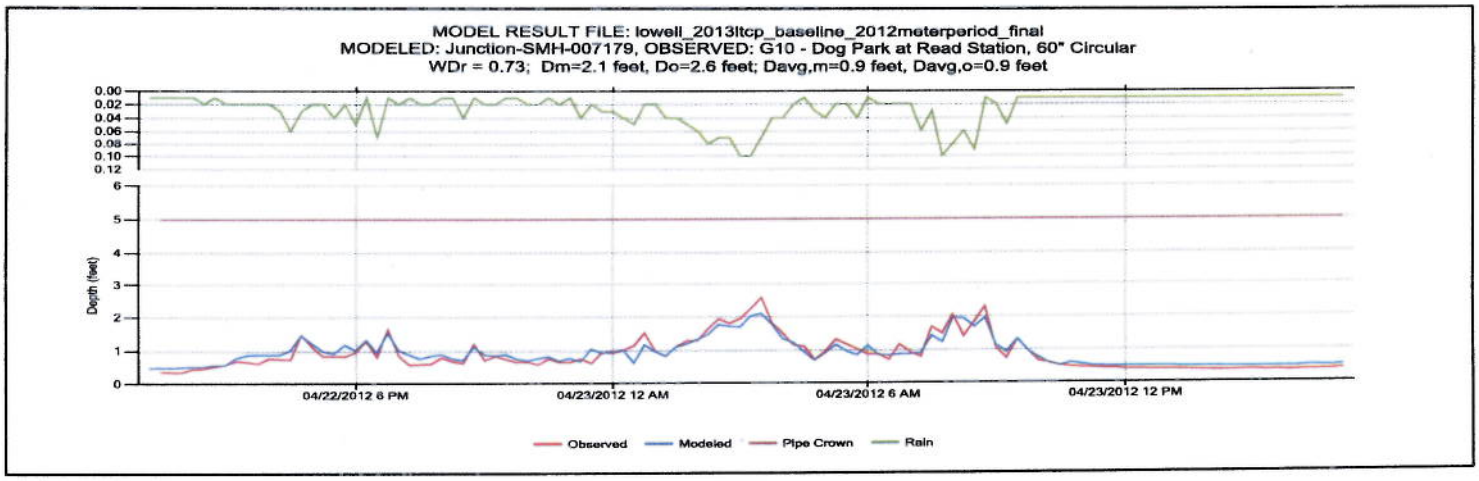
G9-Storm 1

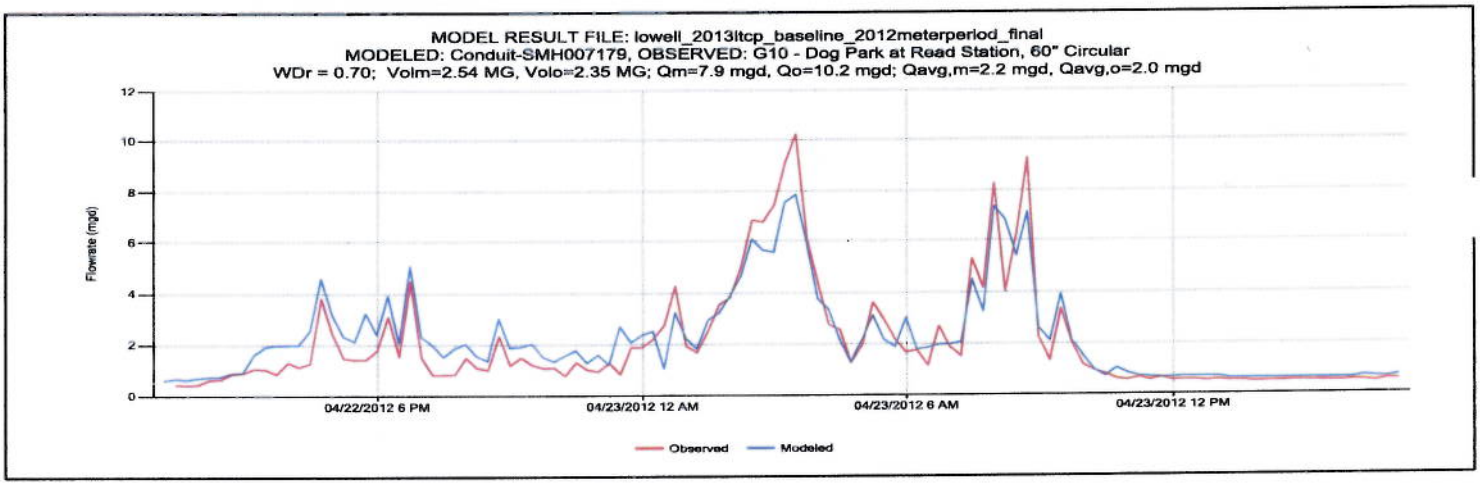

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002506, OBSERVED: G9 - Along Merrimack River between West and Read Stations, 96" Interceptor
WDr = 0.81; Dm=3.4 feet, Do=3.6 feet; Davg,m=2.4 feet, Davg,o=2.5 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

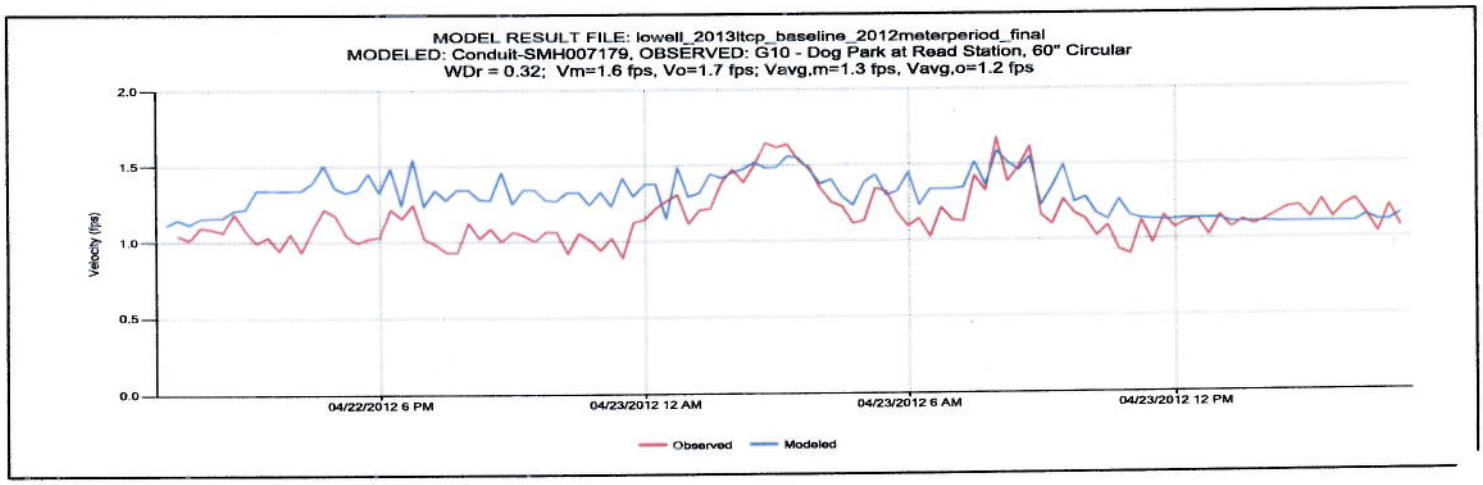

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002505, OBSERVED: G9 - Along Merrimack River between West and Read Stations, 96" Interceptor
WDr = 0.76; Volm=31.27 MG, Volo=27.52 MG; Qm=54.2 mgd, Qo=54.0 mgd; Qavg,m=27.0 mgd, Qavg,o=23.8 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002505, OBSERVED: G9 - Along Merrimack River between West and Read Stations, 96" Interceptor
WDr = 0.34; Vm=4.1 fps, Vo=4.0 fps; Vavg,m=3.1 fps, Vavg,o=2.7 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

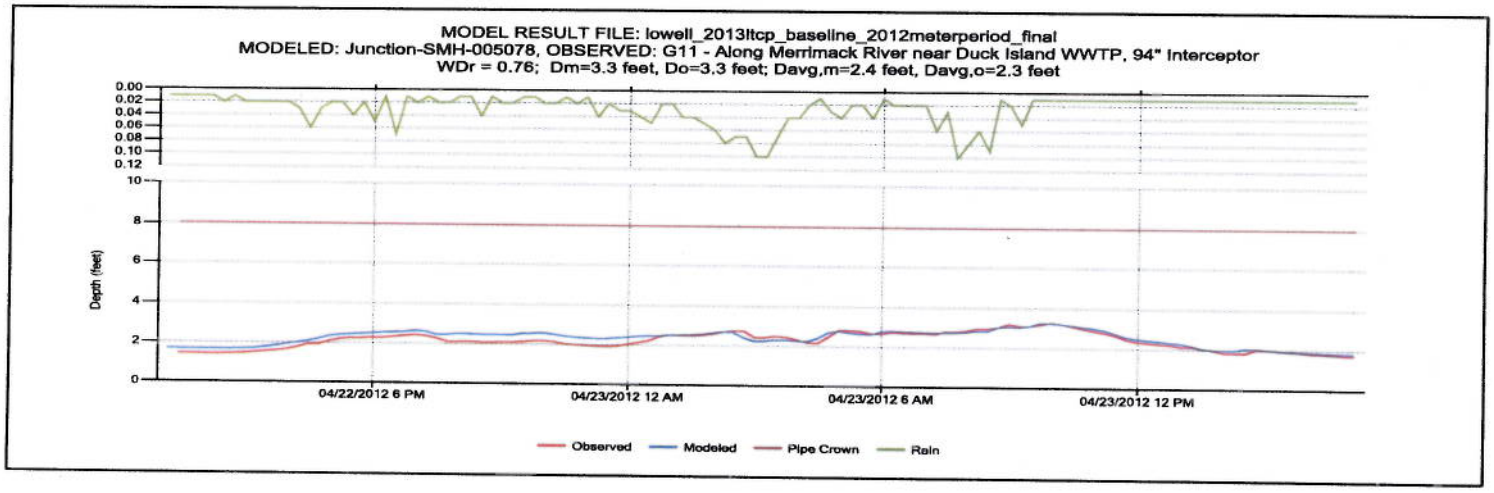
G10-Storm 1

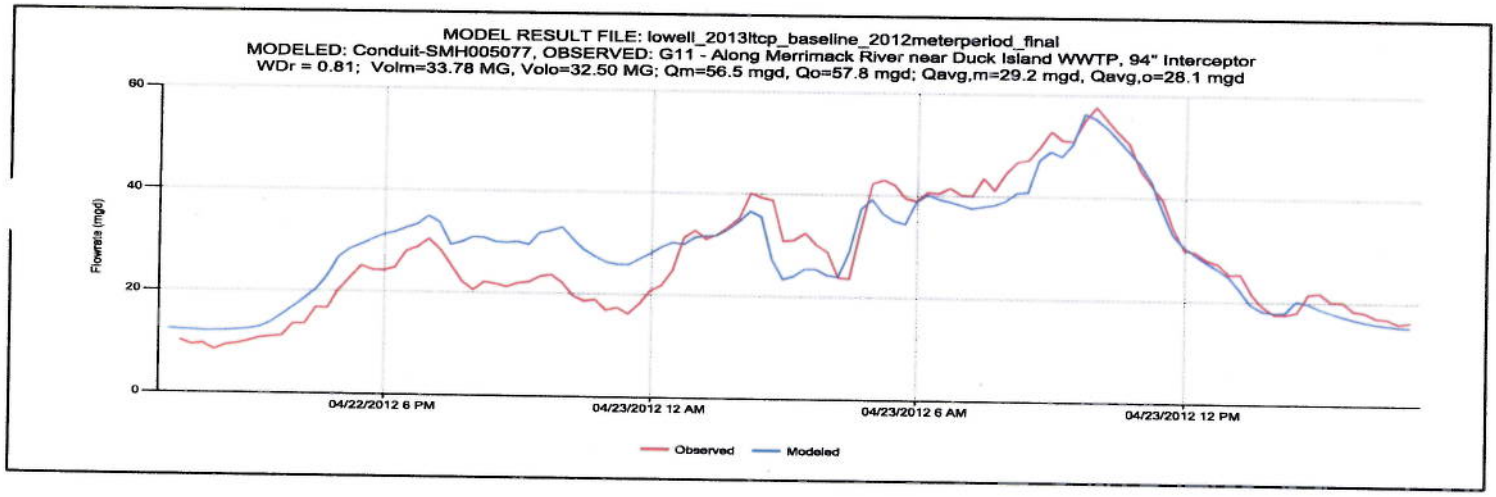

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007179, OBSERVED: G10 - Dog Park at Read Station, 60" Circular
WDr = 0.73; Dm=2.1 feet, Do=2.6 feet; Davg,m=0.9 feet, Davg,o=0.9 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

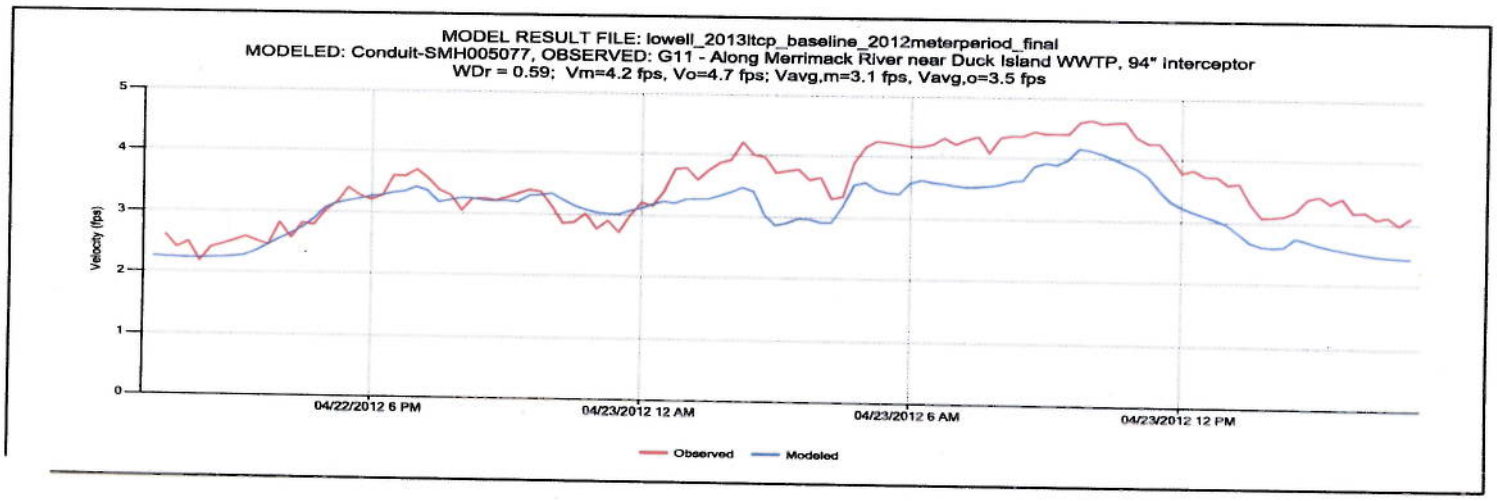

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH007179, OBSERVED: G10 - Dog Park at Read Station, 60" Circular
WDr = 0.70; Volm=2.54 MG, Volo=2.35 MG; Qm=7.9 mgd, Qo=10.2 mgd; Qavg,m=2.2 mgd, Qavg,o=2.0 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH007179, OBSERVED: G10 - Dog Park at Read Station, 60" Circular
WDr = 0.32; Vm=1.6 fps, Vo=1.7 fps; Vavg,m=1.3 fps, Vavg,o=1.2 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

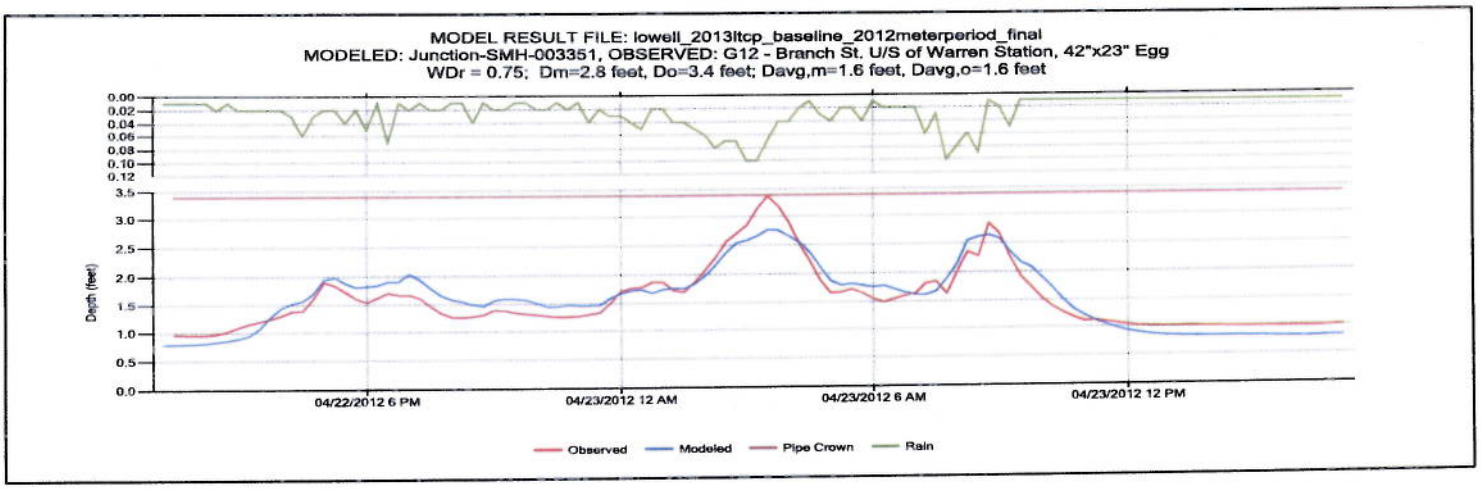
G11-Storm 1

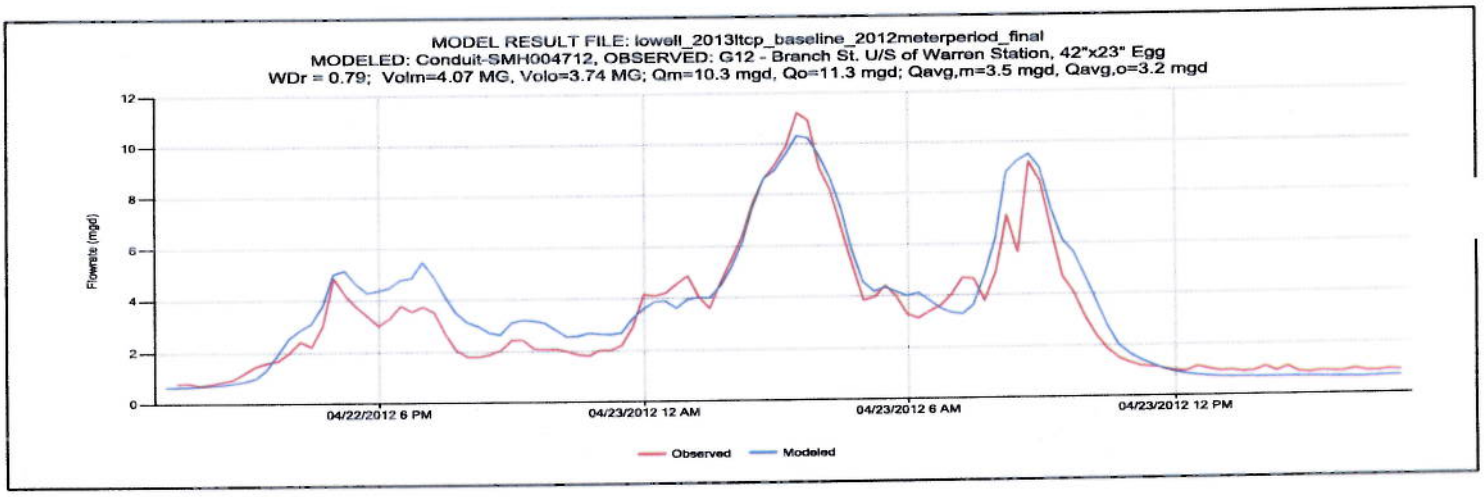

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-005078, OBSERVED: G11 - Along Merrimack River near Duck Island WWTP, 94" Interceptor
WDr = 0.76; Dm=3.3 feet, Do=3.3 feet; Davg,m=2.4 feet, Davg,o=2.3 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

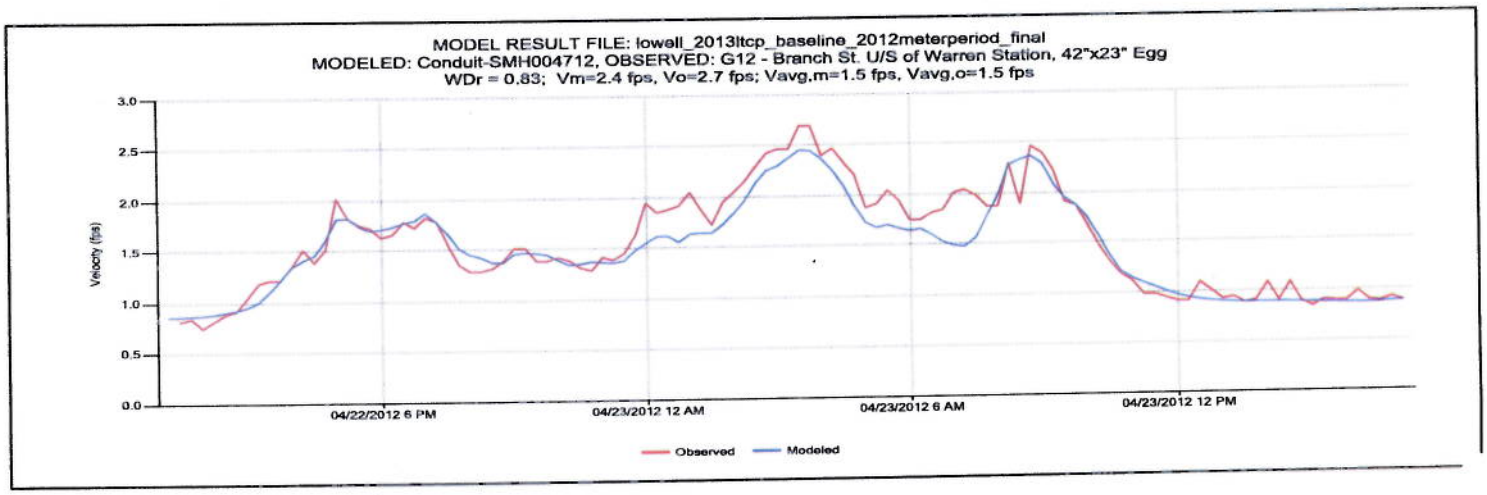

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005077, OBSERVED: G11 - Along Merrimack River near Duck Island WWTP, 94" Interceptor
WDr = 0.81; Volm=33.78 MG, Volo=32.50 MG; Qm=56.5 mgd, Qo=57.8 mgd; Qavg,m=29.2 mgd, Qavg,o=28.1 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005077, OBSERVED: G11 - Along Merrimack River near Duck Island WWTP, 94" Interceptor
WDr = 0.59; Vm=4.2 fps, Vo=4.7 fps; Vavg,m=3.1 fps, Vavg,o=3.5 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

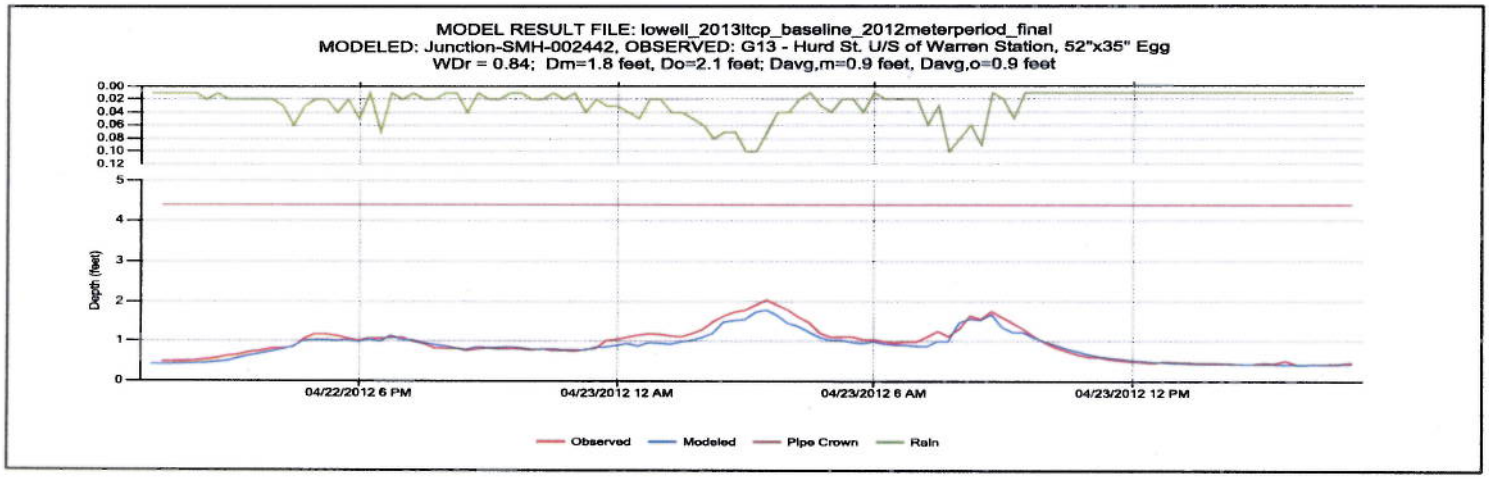
G12-Storm 1

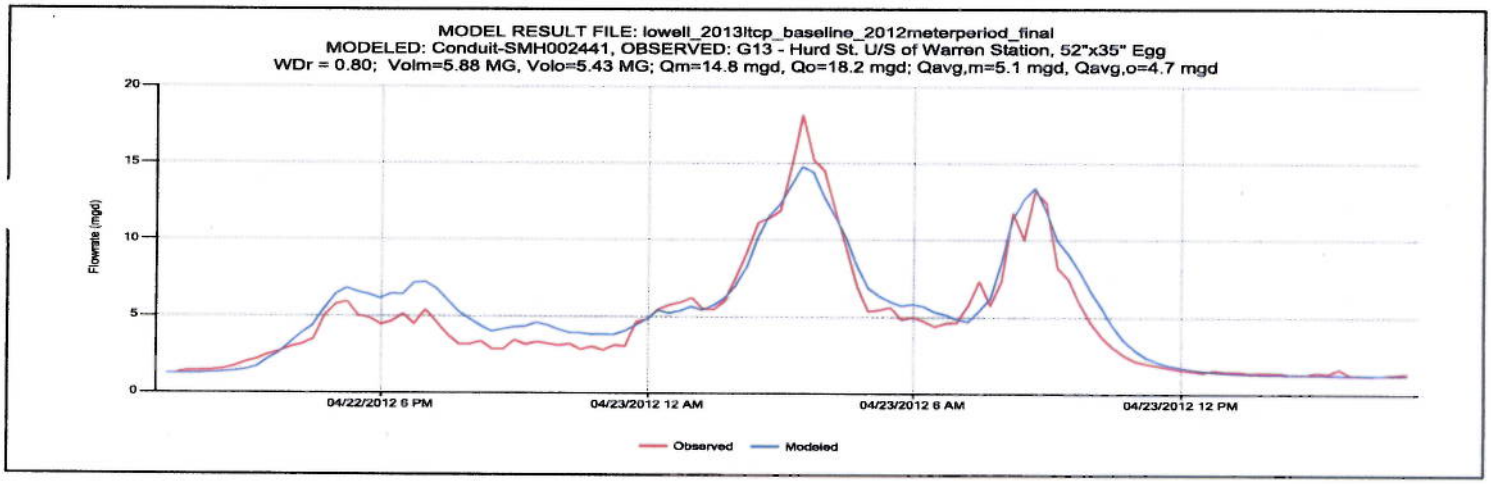

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-003351, OBSERVED: G12 - Branch St. U/S of Warren Station, 42"x23" Egg
WDr = 0.75; Dm=2.8 feet, Do=3.4 feet; Davg,m=1.6 feet, Davg,o=1.6 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

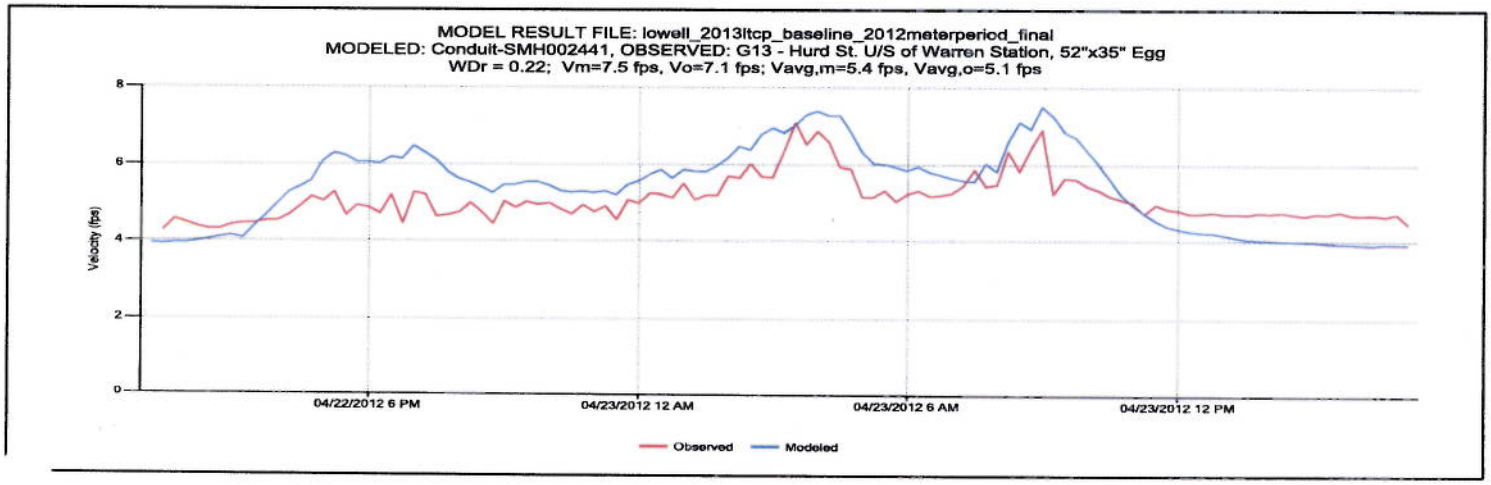

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004712, OBSERVED: G12 - Branch St. U/S of Warren Station, 42"x23" Egg
WDr = 0.79; Volm=4.07 MG, Volo=3.74 MG; Qm=10.3 mgd, Qo=11.3 mgd; Qavg,m=3.5 mgd, Qavg,o=3.2 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004712, OBSERVED: G12 - Branch St. U/S of Warren Station, 42"x23" Egg
WDr = 0.83; Vm=2.4 fps, Vo=2.7 fps; Vavg,m=1.5 fps, Vavg,o=1.5 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

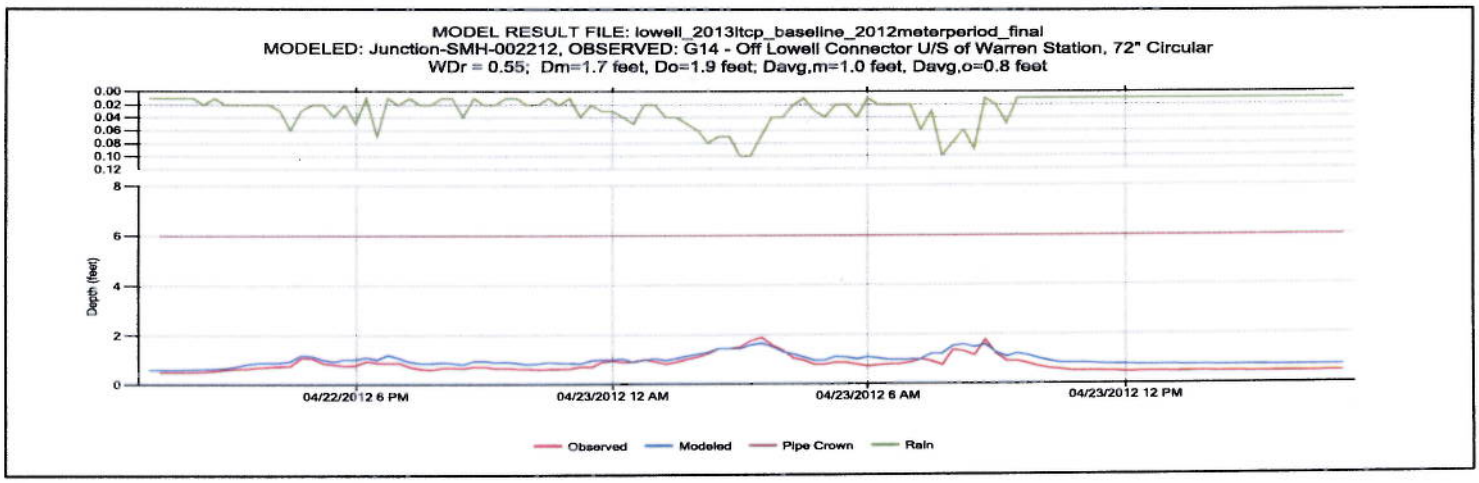
G13-Storm 1

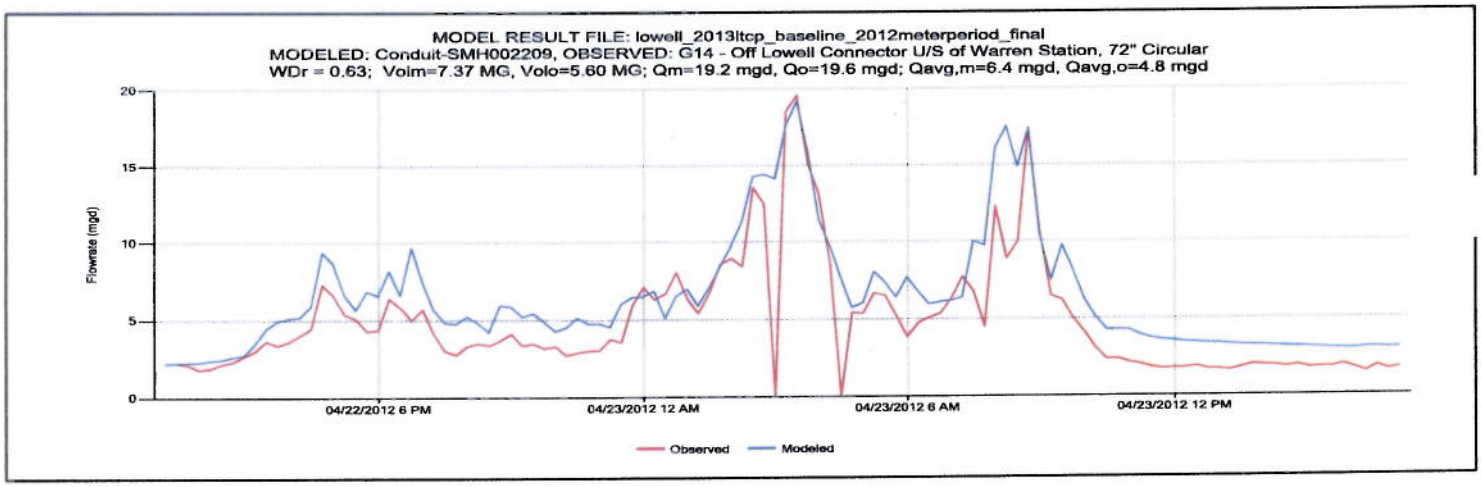

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002442, OBSERVED: G13 - Hurd St. U/S of Warren Station, 52"x35" Egg
WDr = 0.84; Dm=1.8 feet, Do=2.1 feet; Davg,m=0.9 feet, Davg,o=0.9 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

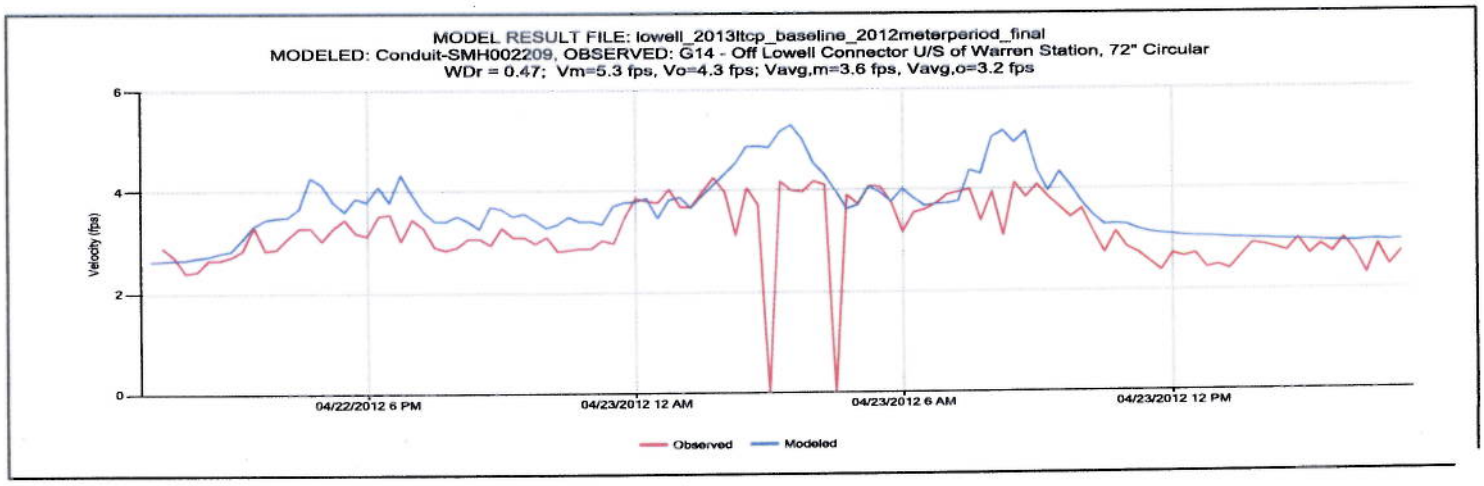

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002441, OBSERVED: G13 - Hurd St. U/S of Warren Station, 52"x35" Egg
WDr = 0.80; Volm=5.88 MG, Volo=5.43 MG; Qm=14.8 mgd, Qo=18.2 mgd; Qavg,m=5.1 mgd, Qavg,o=4.7 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002441, OBSERVED: G13 - Hurd St. U/S of Warren Station, 52"x35" Egg
WDr = 0.22; Vm=7.5 fps, Vo=7.1 fps; Vavg,m=5.4 fps, Vavg,o=5.1 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

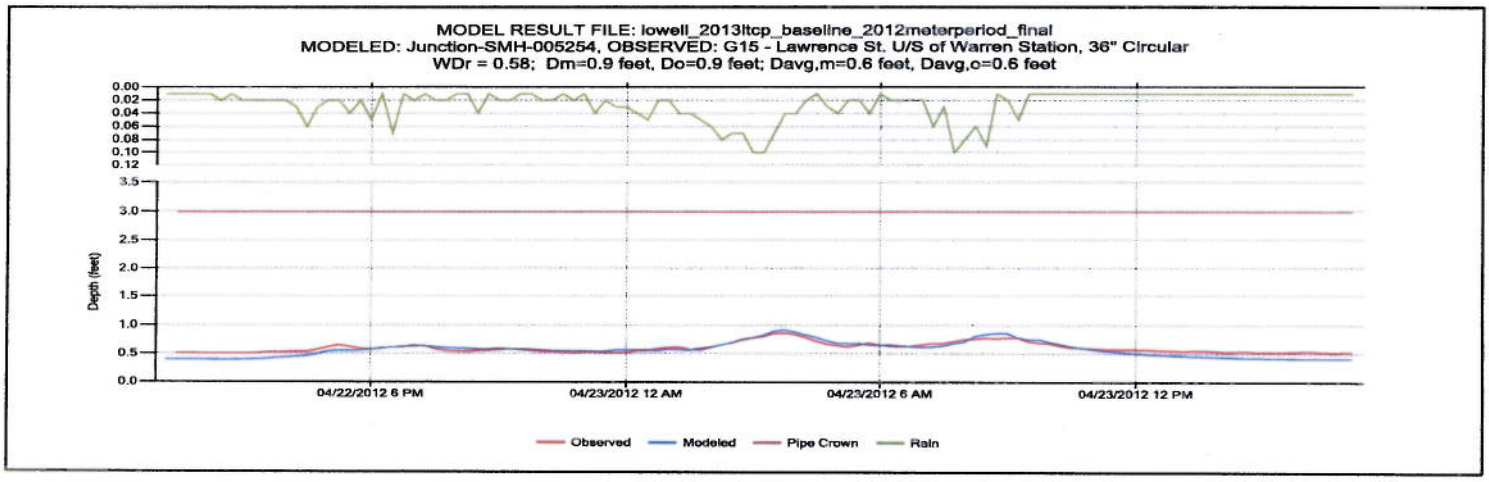
G14-Storm 1

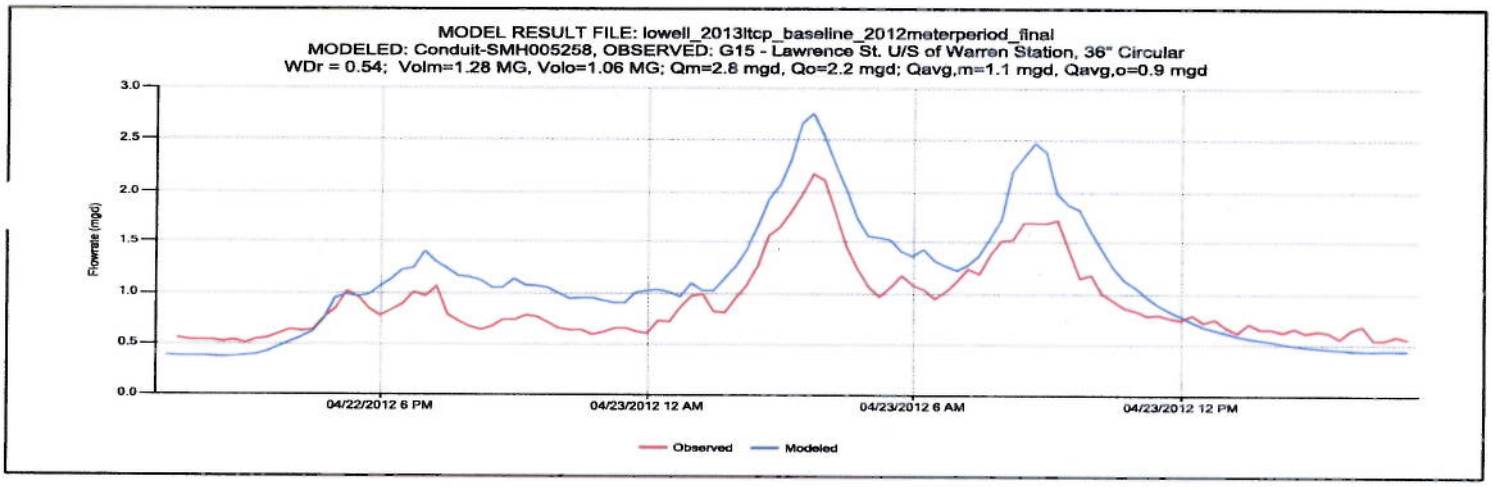

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002212, OBSERVED: G14 - Off Lowell Connector U/S of Warren Station, 72" Circular
WDr = 0.55; Dm=1.7 feet, Do=1.9 feet; Davg,m=1.0 feet, Davg,o=0.8 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

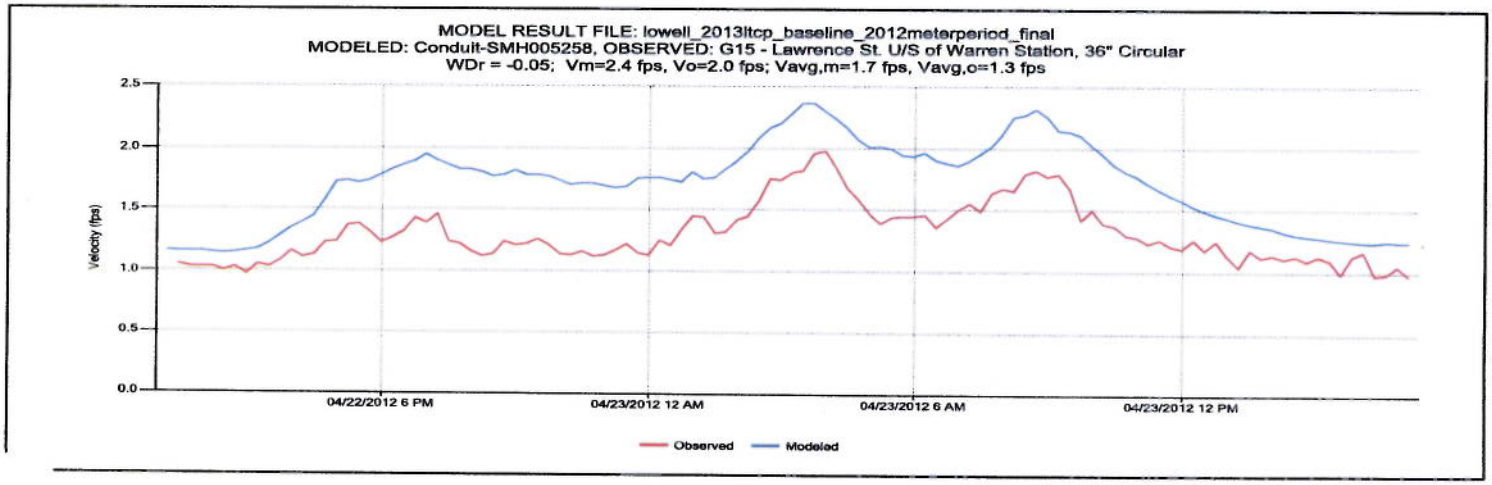

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002209, OBSERVED: G14 - Off Lowell Connector U/S of Warren Station, 72" Circular
WDr = 0.63; Voim=7.37 MG, Volo=5.60 MG; Qm=19.2 mgd, Qo=19.6 mgd; Qavg,m=6.4 mgd, Qavg,o=4.8 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002209, OBSERVED: G14 - Off Lowell Connector U/S of Warren Station, 72" Circular
WDr = 0.47; Vm=5.3 fps, Vo=4.3 fps; Vavg,m=3.6 fps, Vavg,o=3.2 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

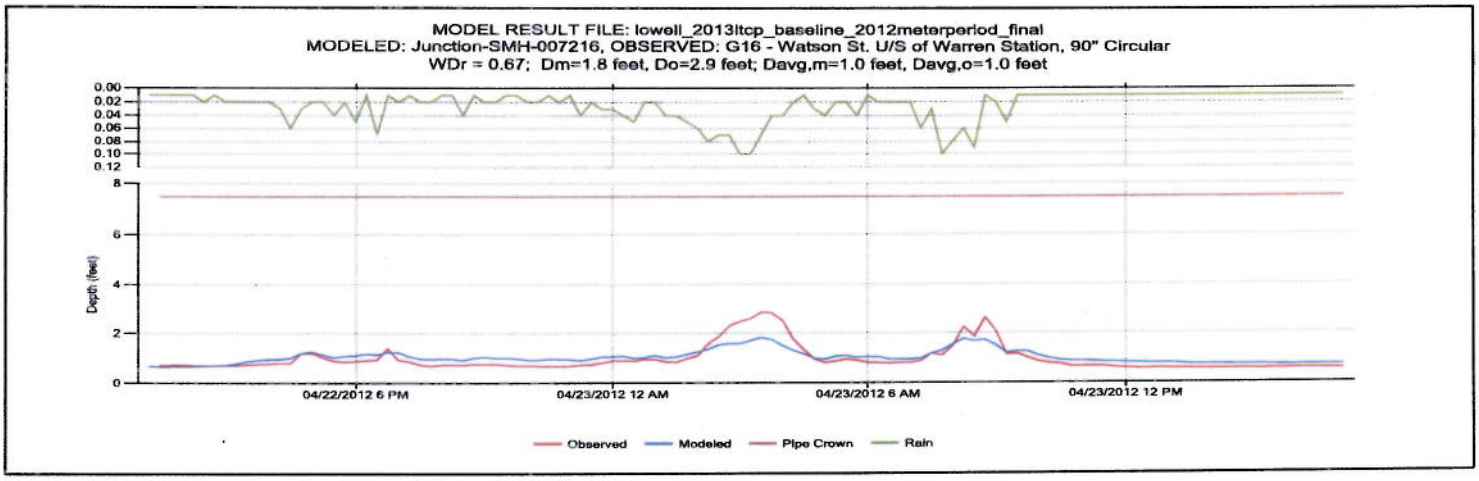
G15-Storm 1

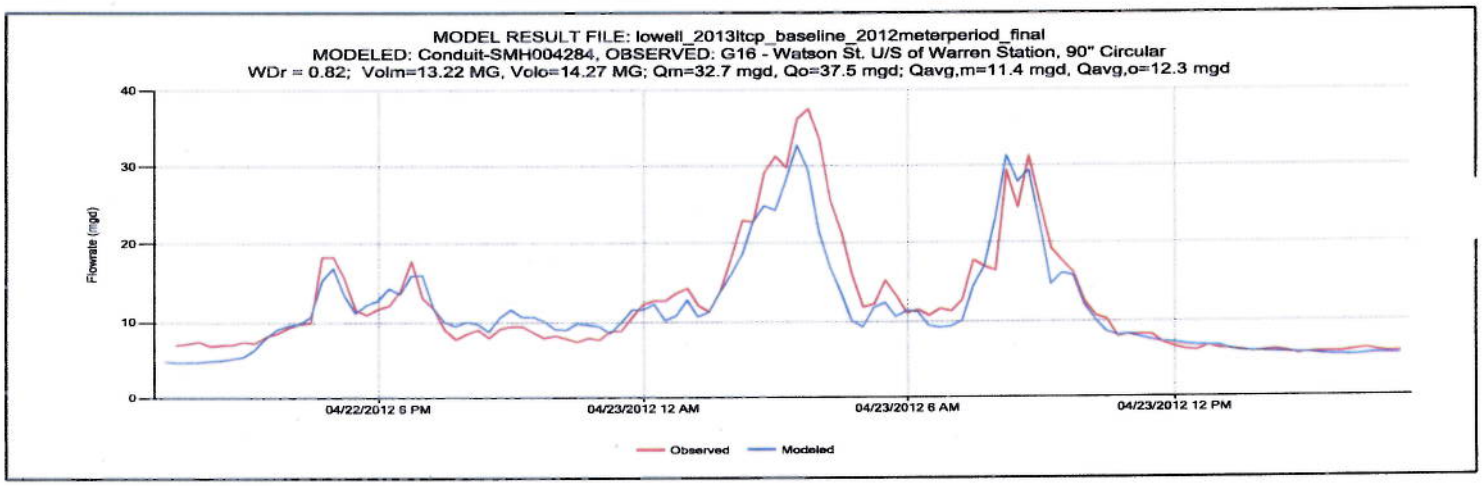

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-005254, OBSERVED: G15 - Lawrence St. U/S of Warren Station, 36" Circular
WDr = 0.58; Dm=0.9 feet, Do=0.9 feet; Davg,m=0.6 feet, Davg,o=0.6 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

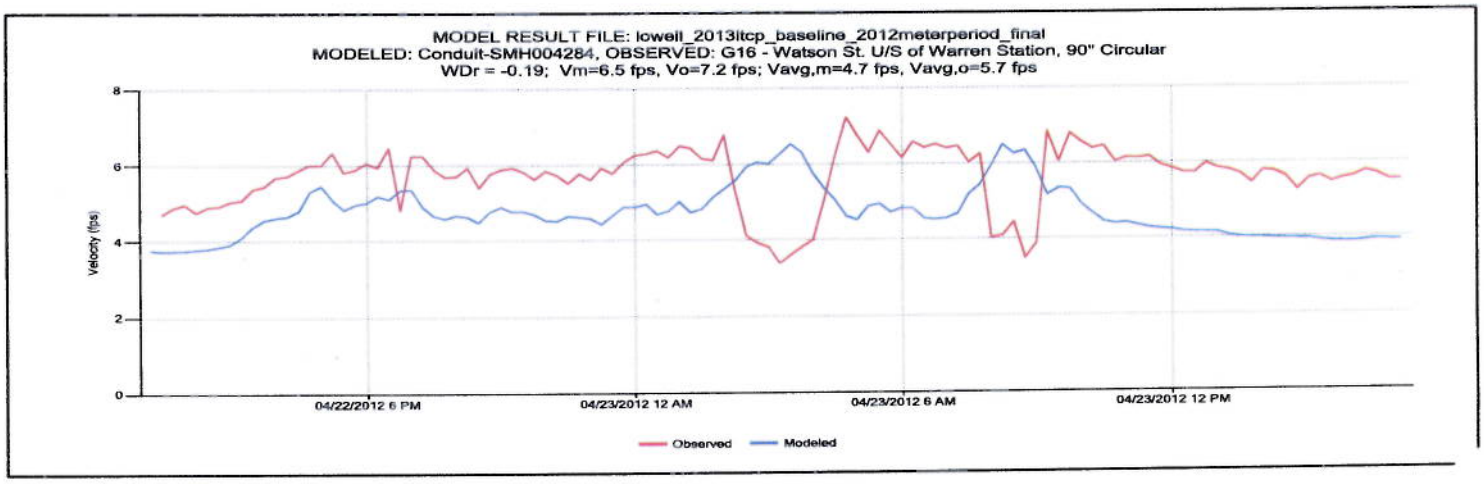

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005258, OBSERVED: G15 - Lawrence St. U/S of Warren Station, 36" Circular
WDr = 0.54; Volm=1.28 MG, Volo=1.06 MG; Qm=2.8 mgd, Qo=2.2 mgd; Qavg,m=1.1 mgd, Qavg,o=0.9 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005258, OBSERVED: G15 - Lawrence St. U/S of Warren Station, 36" Circular
WDr = -0.05; Vm=2.4 fps, Vo=2.0 fps; Vavg,m=1.7 fps, Vavg,o=1.3 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

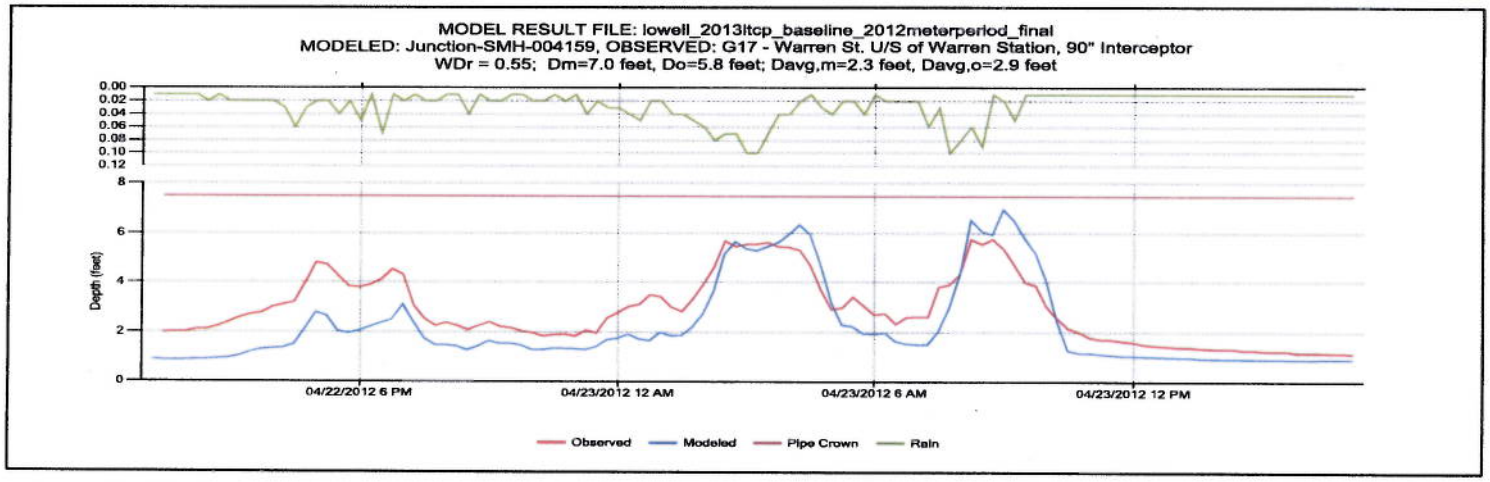
G16-Storm 1

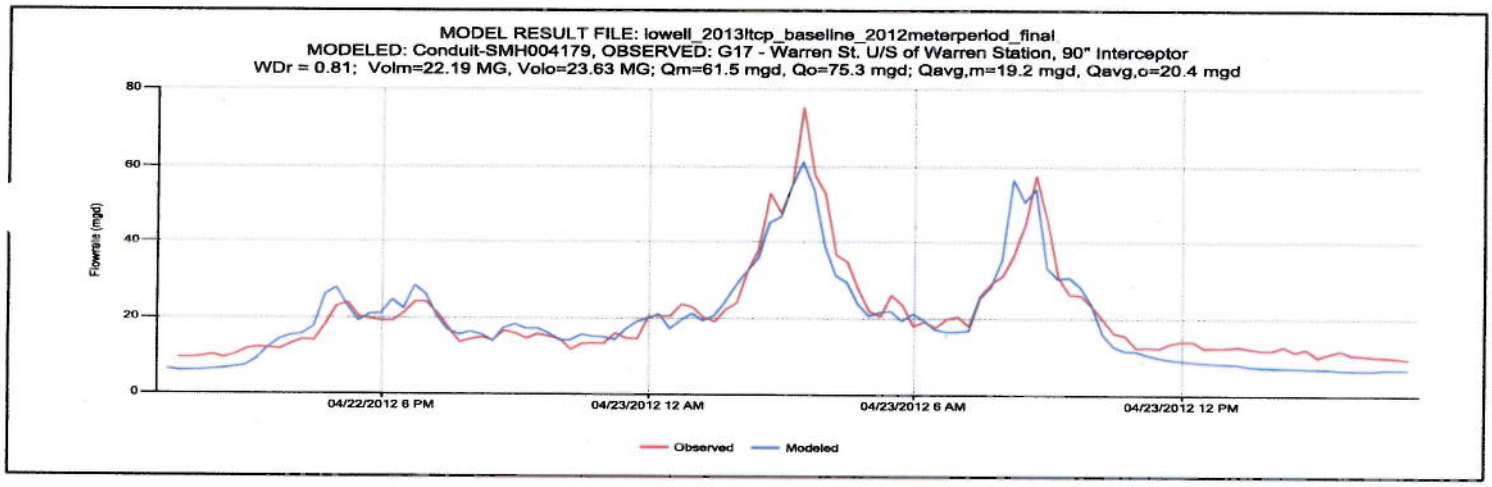

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007216, OBSERVED: G16 - Watson St. U/S of Warren Station, 90" Circular
WDr = 0.67; Dm=1.8 feet, Do=2.9 feet; Davg,m=1.0 feet, Davg,o=1.0 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

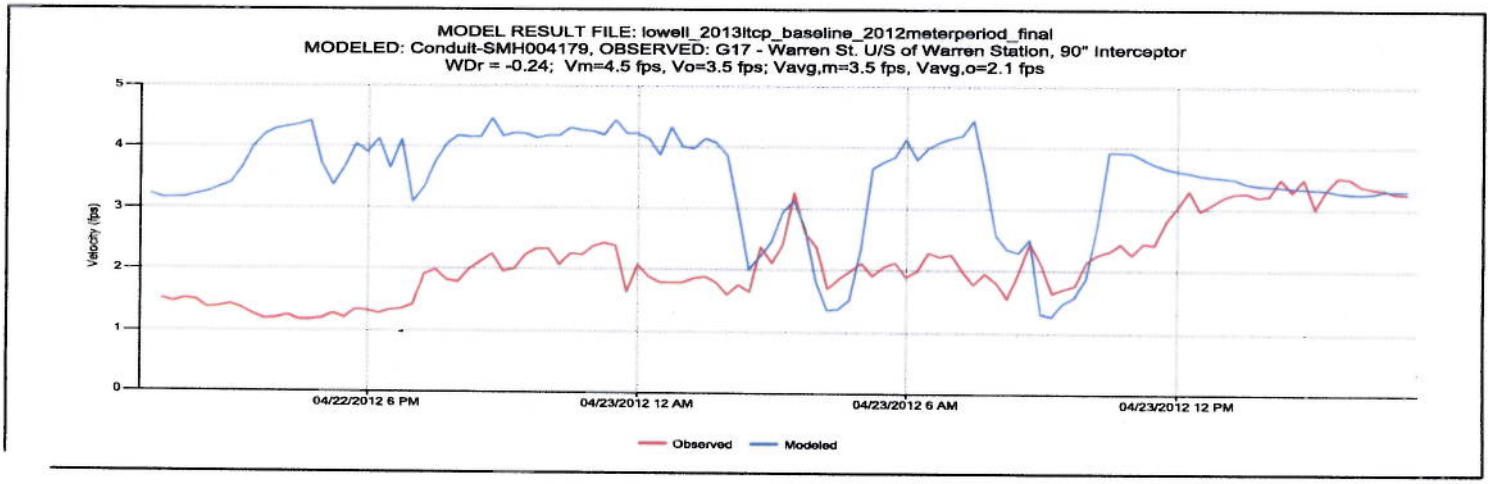

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004284, OBSERVED: G16 - Watson St. U/S of Warren Station, 90" Circular
WDr = 0.82; Volm=13.22 MG, Volo=14.27 MG; Qm=32.7 mgd, Qo=37.5 mgd; Qavg,m=11.4 mgd, Qavg,o=12.3 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004284, OBSERVED: G16 - Watson St. U/S of Warren Station, 90" Circular
WDr = -0.19; Vm=6.5 fps, Vo=7.2 fps; Vavg,m=4.7 fps, Vavg,o=5.7 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

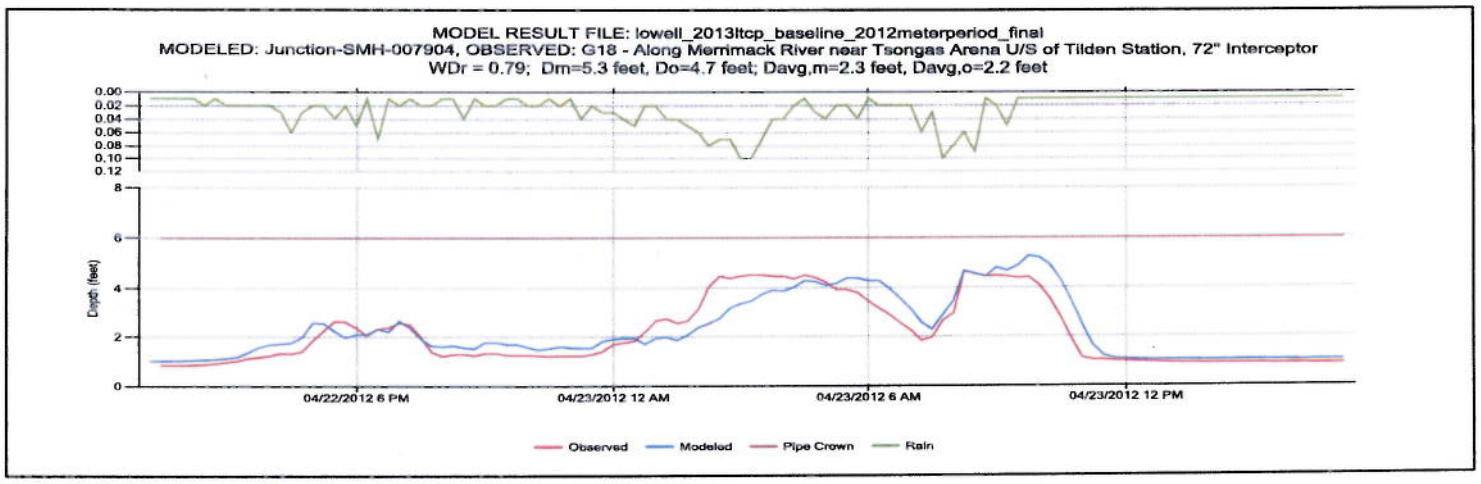
G17-Storm 1

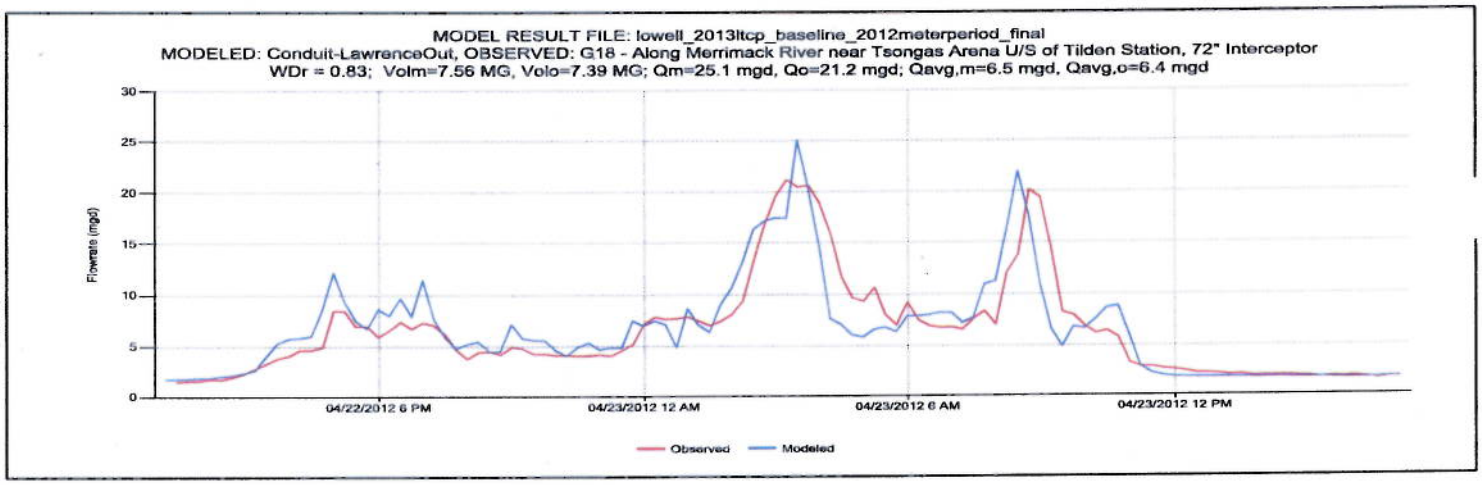

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-004159, OBSERVED: G17 - Warren St. U/S of Warren Station, 90" Interceptor
WDr = 0.55; Dm=7.0 feet, Do=5.8 feet; Davg,m=2.3 feet, Davg,o=2.9 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

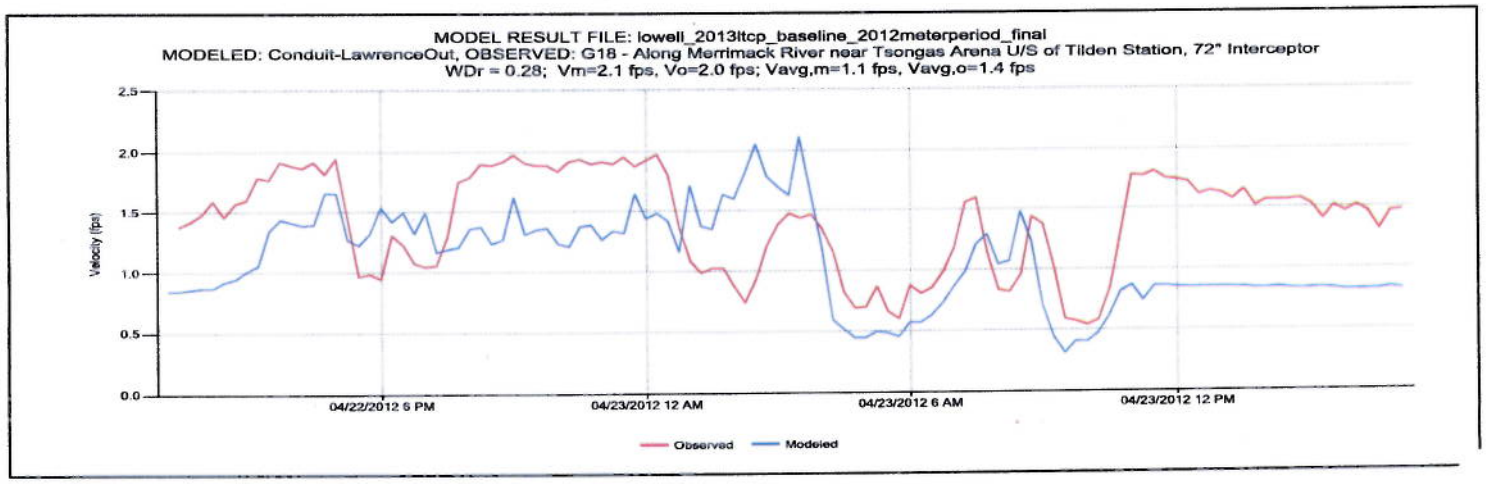

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004179, OBSERVED: G17 - Warren St. U/S of Warren Station, 90" Interceptor
WDr = 0.81; Volm=22.19 MG, Volo=23.63 MG; Qm=61.5 mgd, Qo=75.3 mgd; Qavg,m=19.2 mgd, Qavg,o=20.4 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004179, OBSERVED: G17 - Warren St. U/S of Warren Station, 90" Interceptor
WDr = -0.24; Vm=4.5 fps, Vo=3.5 fps; Vavg,m=3.5 fps, Vavg,o=2.1 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

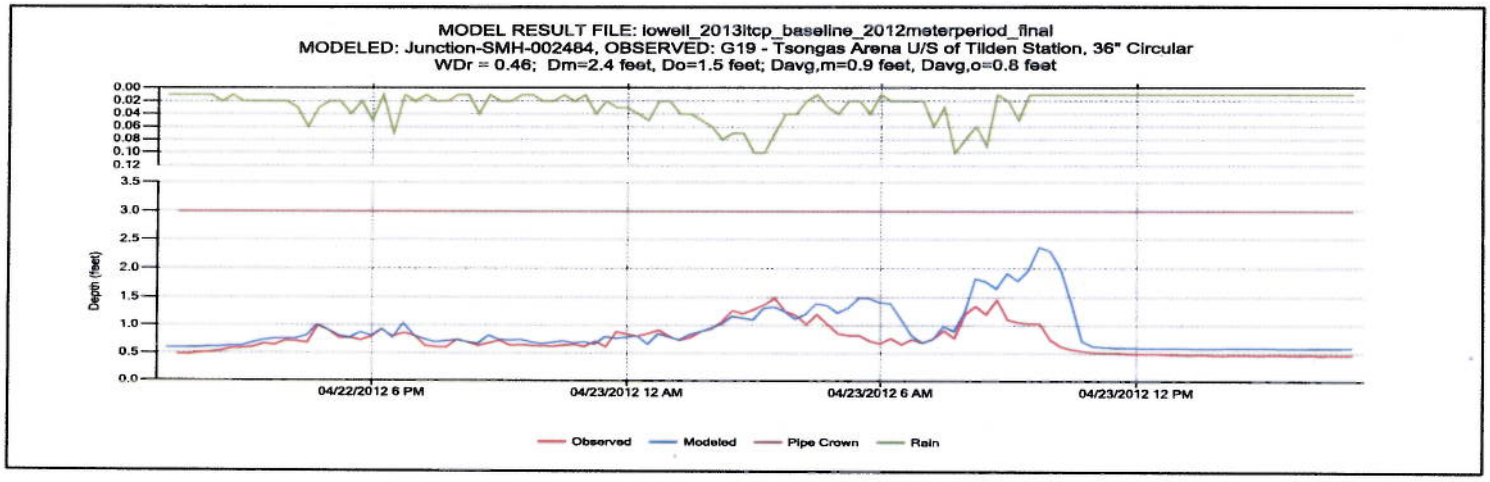
G18-Storm 1

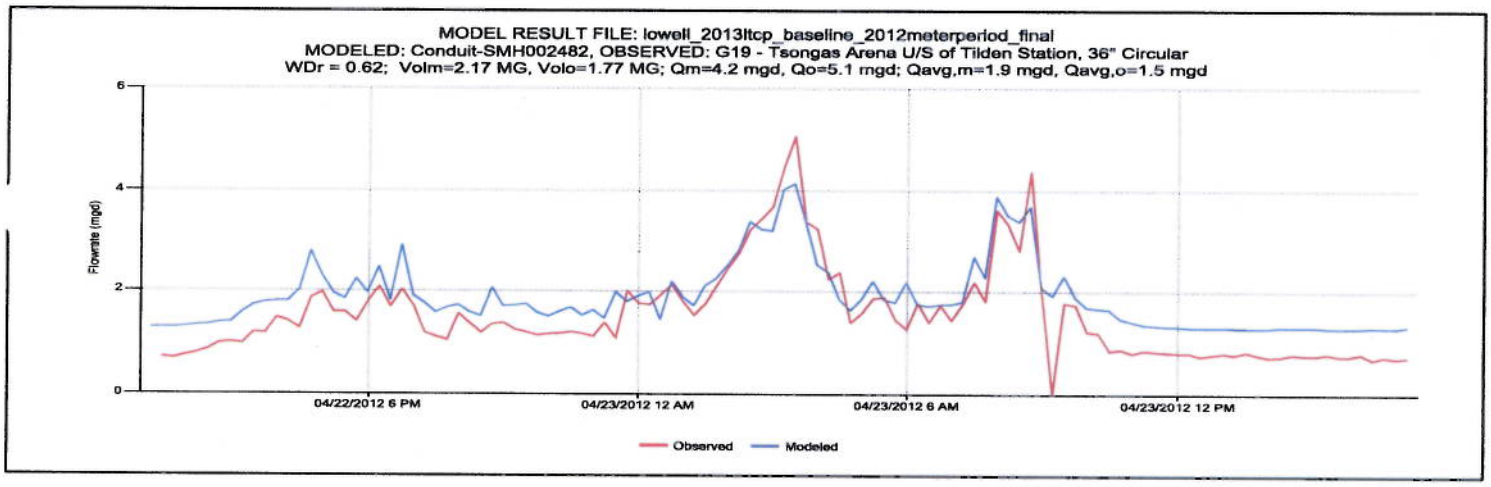

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007904, OBSERVED: G18 - Along Merrimack River near Tsongas Arena U/S of Tilden Station, 72" Interceptor
WDr = 0.79; Dm=5.3 feet, Do=4.7 feet; Davg,m=2.3 feet, Davg,o=2.2 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

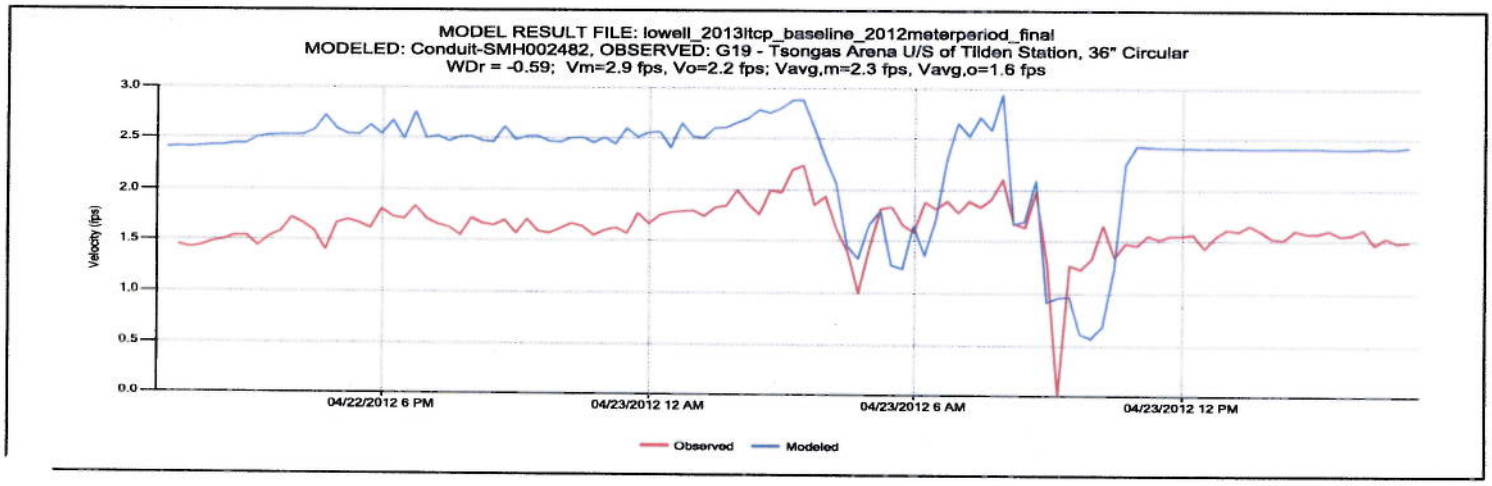

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-LawrenceOut, OBSERVED: G18 - Along Merrimack River near Tsongas Arena U/S of Tilden Station, 72" Interceptor
WDr = 0.83; Volm=7.56 MG, Volo=7.39 MG; Qm=25.1 mgd, Qo=21.2 mgd; Qavg,m=6.5 mgd, Qavg,o=6.4 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-LawrenceOut, OBSERVED: G18 - Along Merrimack River near Tsongas Arena U/S of Tilden Station, 72" Interceptor
WDr = 0.28; Vm=2.1 fps, Vo=2.0 fps; Vavg,m=1.1 fps, Vavg,o=1.4 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

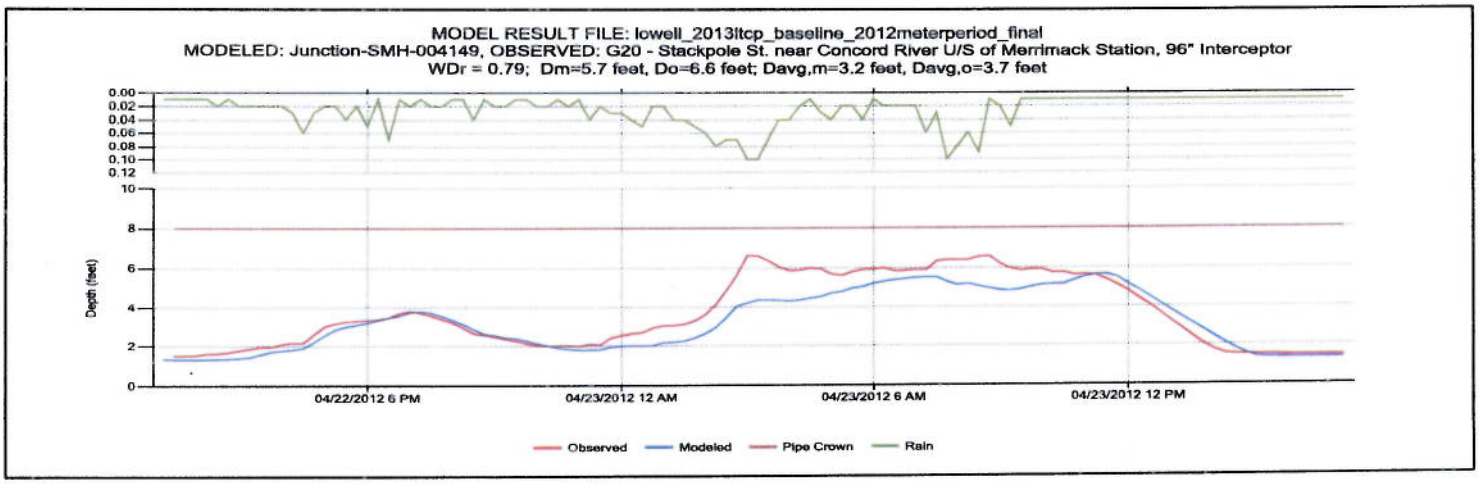
G19-Storm 1

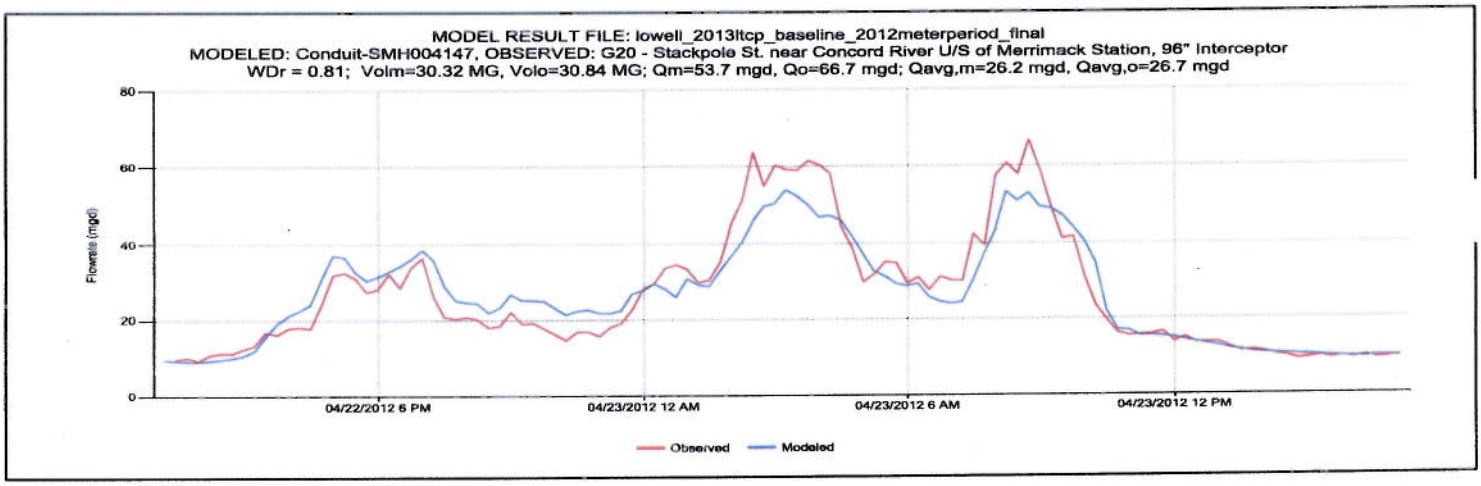

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002484, OBSERVED: G19 - Tsongas Arena U/S of Tilden Station, 36" Circular
WDr = 0.46; Dm=2.4 feet, Do=1.5 feet; Davg,m=0.9 feet, Davg,o=0.8 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

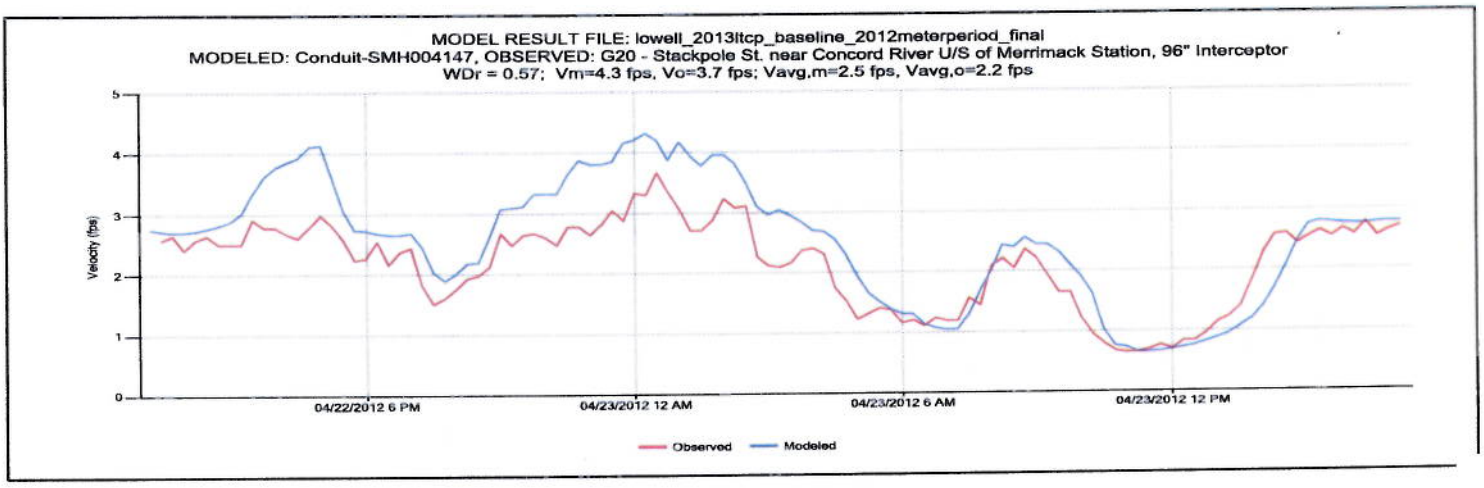

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002482, OBSERVED: G19 - Tsongas Arena U/S of Tilden Station, 36" Circular
WDr = 0.62; Volm=2.17 MG, Volo=1.77 MG; Qm=4.2 mgd, Qo=5.1 mgd; Qavg,m=1.9 mgd, Qavg,o=1.5 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002482, OBSERVED: G19 - Tsongas Arena U/S of Tilden Station, 36" Circular
WDr = -0.59; Vm=2.9 fps, Vo=2.2 fps; Vavg,m=2.3 fps, Vavg,o=1.6 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

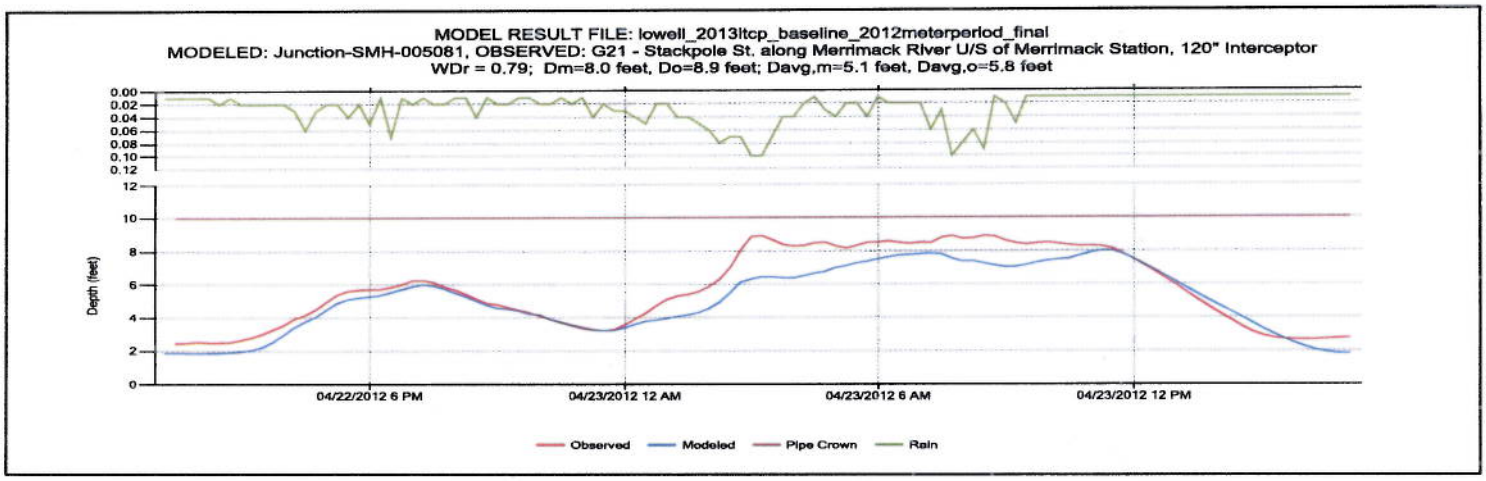
G20-Storm 1

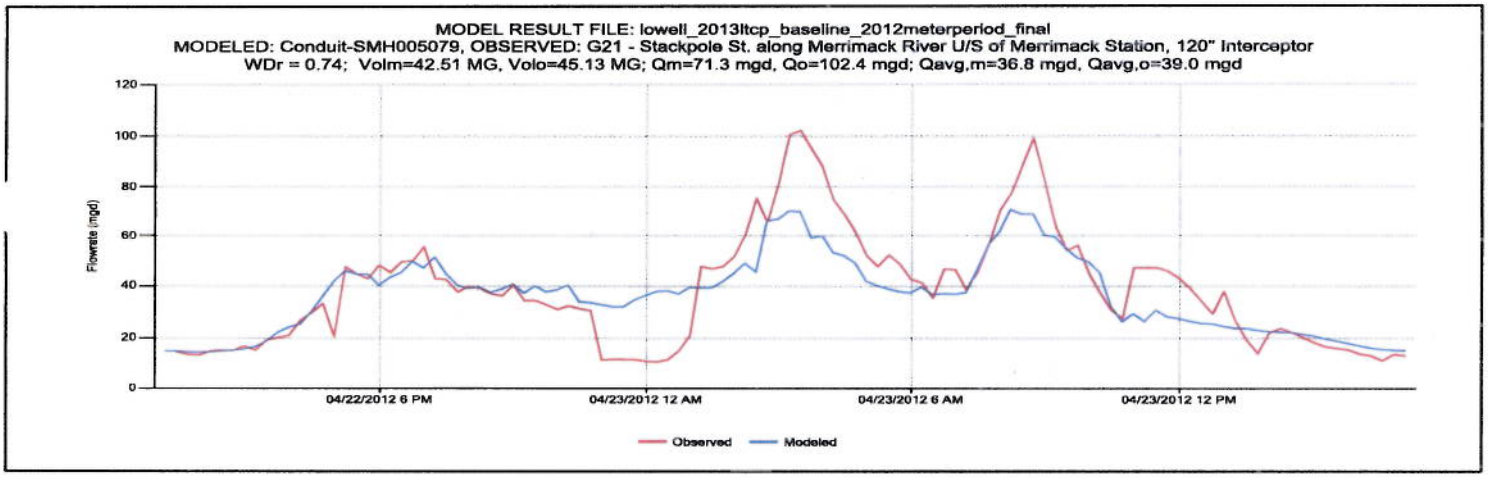

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-004149, OBSERVED: G20 - Stackpole St. near Concord River U/S of Merrimack Station, 96" Interceptor
WDr = 0.79; Dm=5.7 feet, Do=6.6 feet; Davg,m=3.2 feet, Davg,o=3.7 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

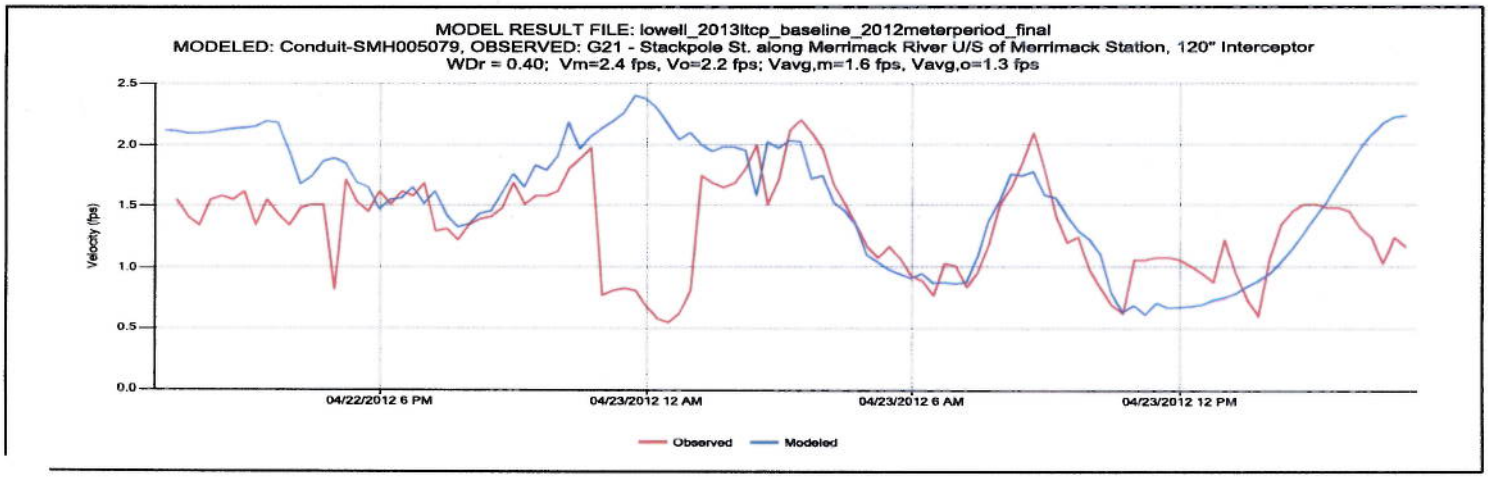

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004147, OBSERVED: G20 - Stackpole St. near Concord River U/S of Merrimack Station, 96" Interceptor
WDr = 0.81; Volm=30.32 MG, Volo=30.84 MG; Qm=53.7 mgd, Qo=66.7 mgd; Qavg,m=26.2 mgd, Qavg,o=26.7 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004147, OBSERVED: G20 - Stackpole St. near Concord River U/S of Merrimack Station, 96" Interceptor
WDr = 0.57; Vm=4.3 fps, Vo=3.7 fps; Vavg,m=2.5 fps, Vavg,o=2.2 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

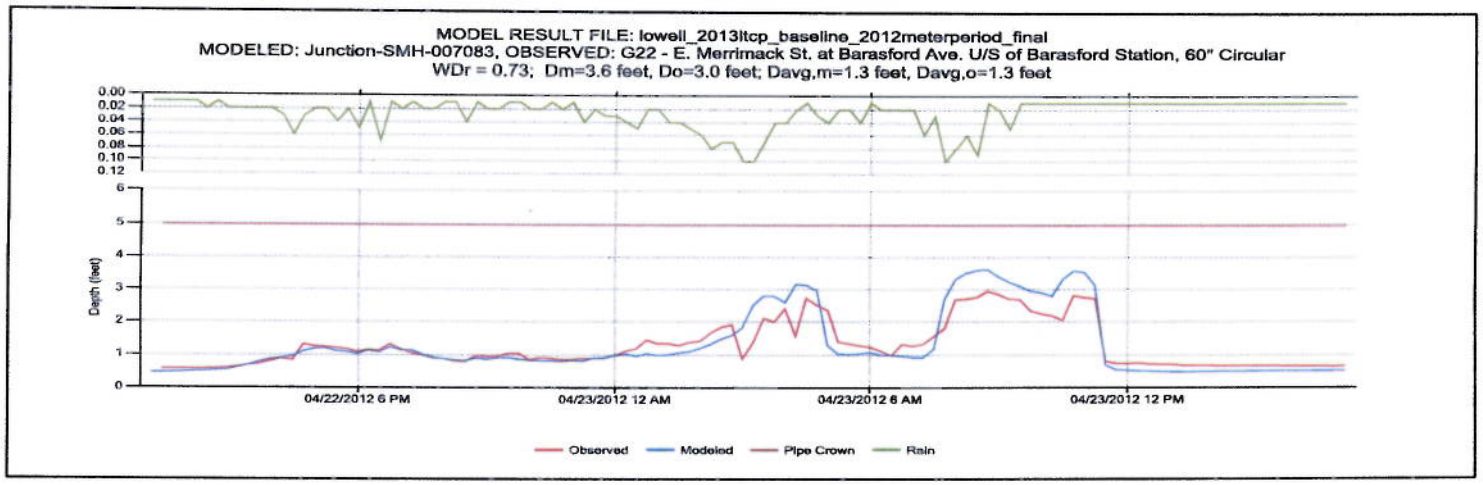
G21-Storm 1

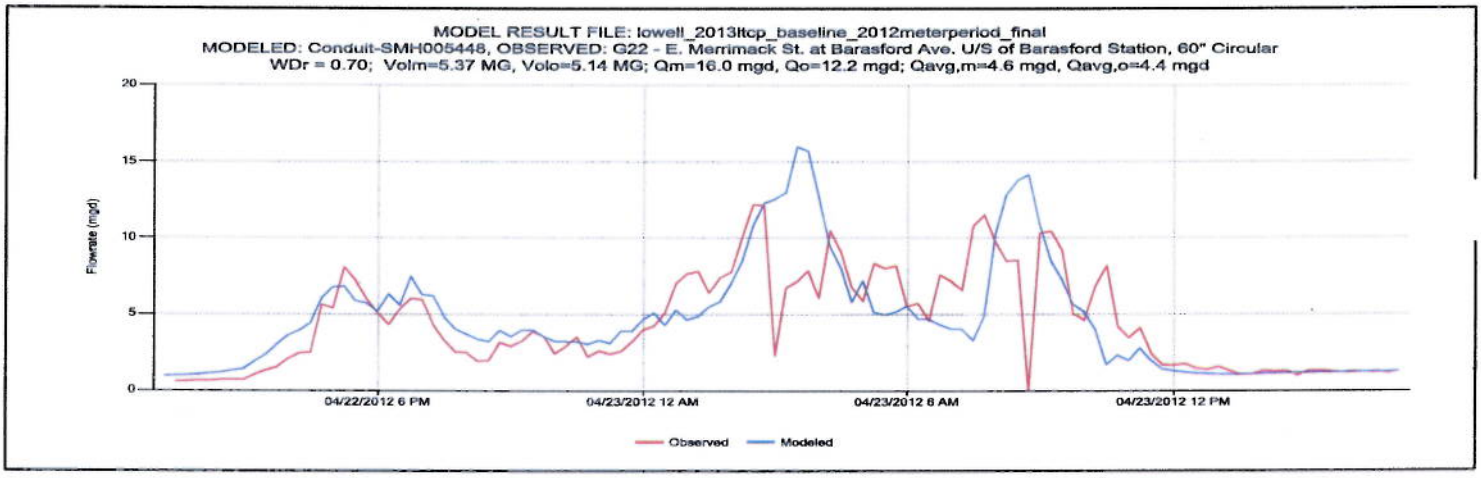

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-005081, OBSERVED: G21 - Stackpole St. along Merrimack River U/S of Merrimack Station, 120" Interceptor
WDr = 0.79; Dm=8.0 feet, Do=8.9 feet; Davg,m=5.1 feet, Davg,o=5.8 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

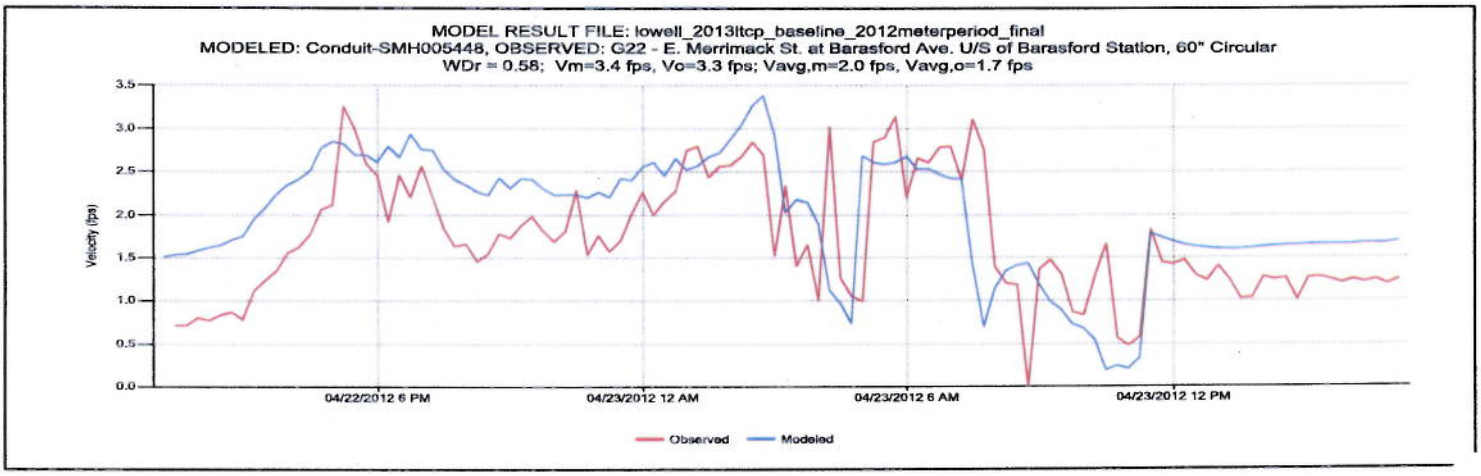

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005079, OBSERVED: G21 - Stackpole St. along Merrimack River U/S of Merrimack Station, 120" Interceptor
WDr = 0.74; Volm=42.51 MG, Volo=45.13 MG; Qm=71.3 mgd, Qo=102.4 mgd; Qavg,m=36.8 mgd, Qavg,o=39.0 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005079, OBSERVED: G21 - Stackpole St. along Merrimack River U/S of Merrimack Station, 120" Interceptor
WDr = 0.40; Vm=2.4 fps, Vo=2.2 fps; Vavg,m=1.6 fps, Vavg,o=1.3 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

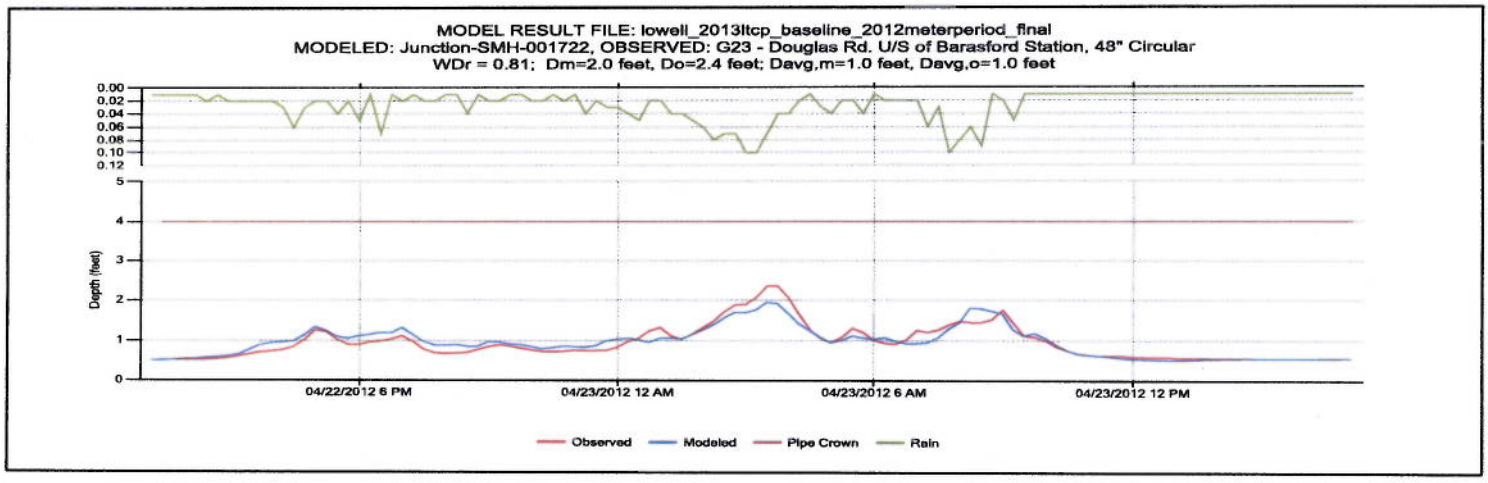
G22-Storm 1

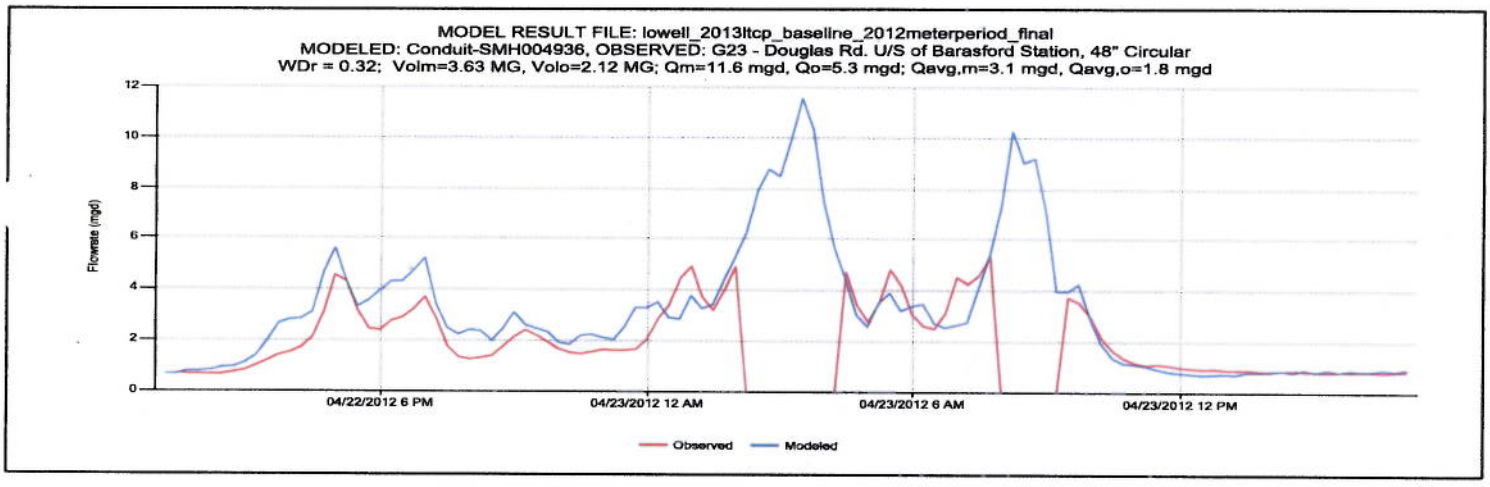

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007083, OBSERVED: G22 - E. Merrimack St. at Barasford Ave. U/S of Barasford Station, 60" Circular
WDr = 0.73; Dm=3.6 feet, Do=3.0 feet; Davg,m=1.3 feet, Davg,o=1.3 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

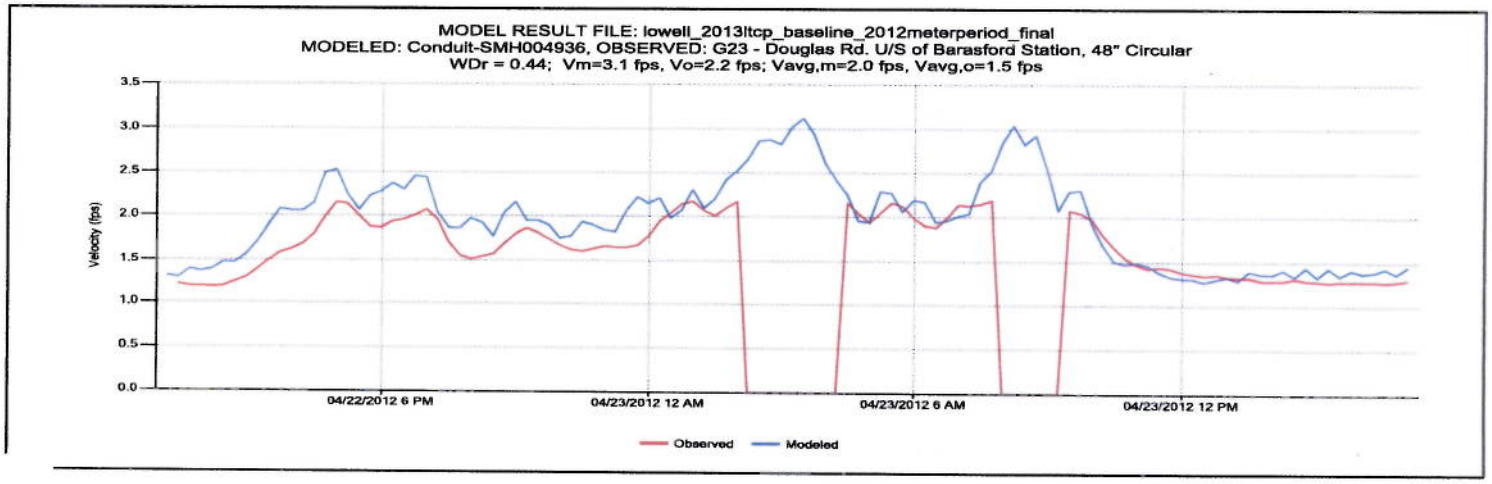

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005448, OBSERVED: G22 - E. Merrimack St. at Barasford Ave. U/S of Barasford Station, 60" Circular
WDr = 0.70; Volm=5.37 MG, Volo=5.14 MG; Qm=16.0 mgd, Qo=12.2 mgd; Qavg,m=4.6 mgd, Qavg,o=4.4 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005448, OBSERVED: G22 - E. Merrimack St. at Barasford Ave. U/S of Barasford Station, 60" Circular
WDr = 0.58; Vm=3.4 fps, Vo=3.3 fps; Vavg,m=2.0 fps, Vavg,o=1.7 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

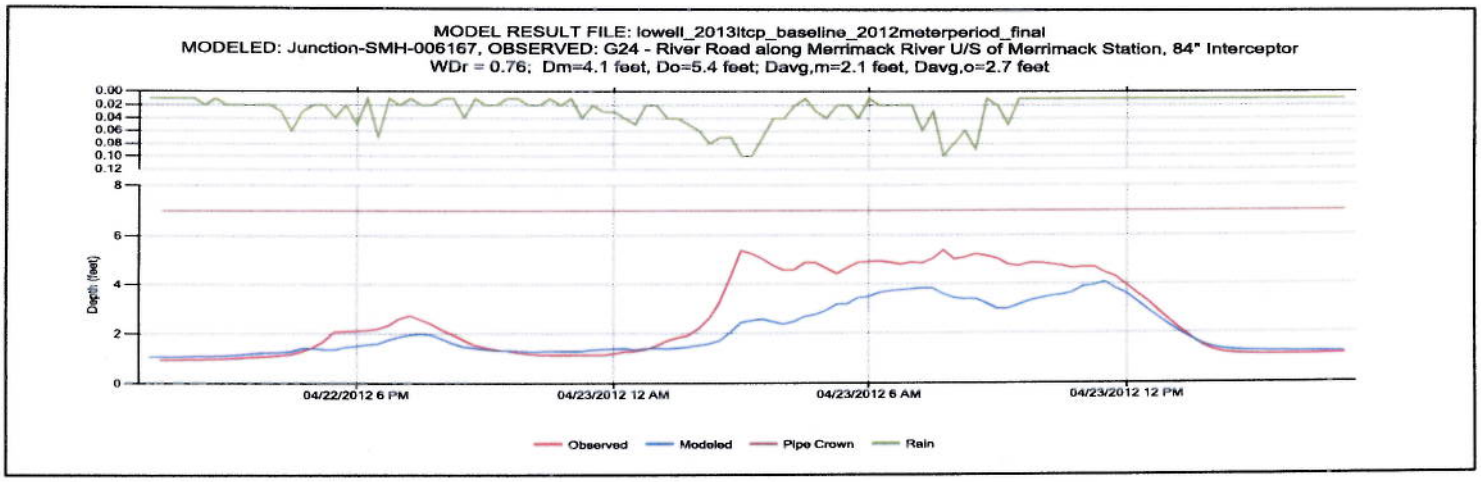
G23-Storm 1

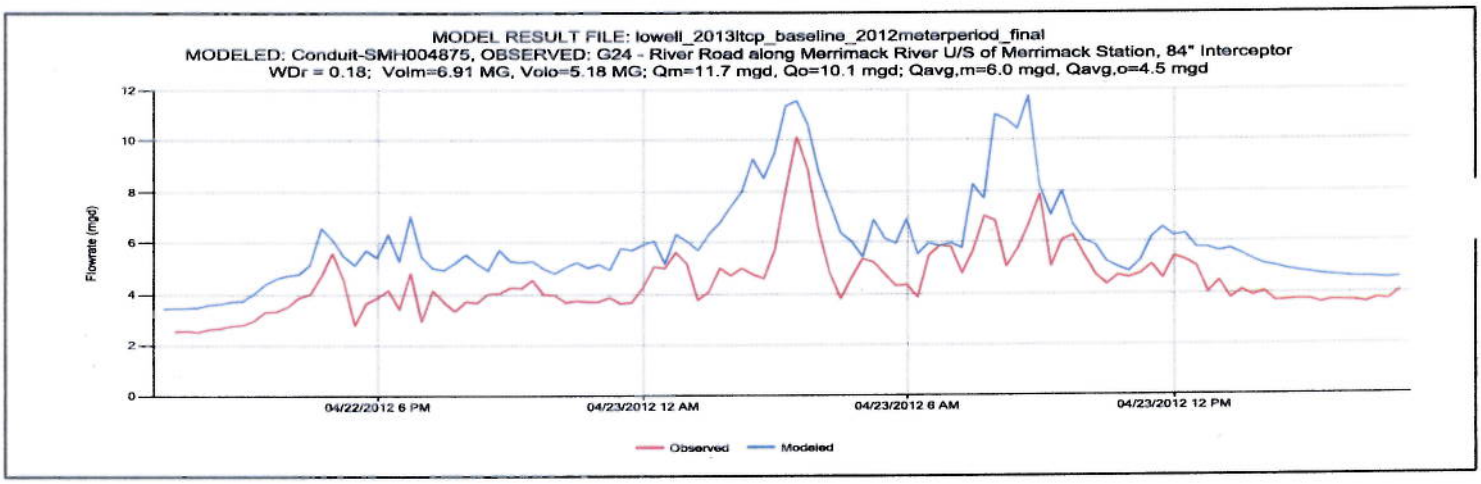

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-001722, OBSERVED: G23 - Douglas Rd. U/S of Barasford Station, 48" Circular
WDr = 0.81; Dm=2.0 feet, Do=2.4 feet; Davg,m=1.0 feet, Davg,o=1.0 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

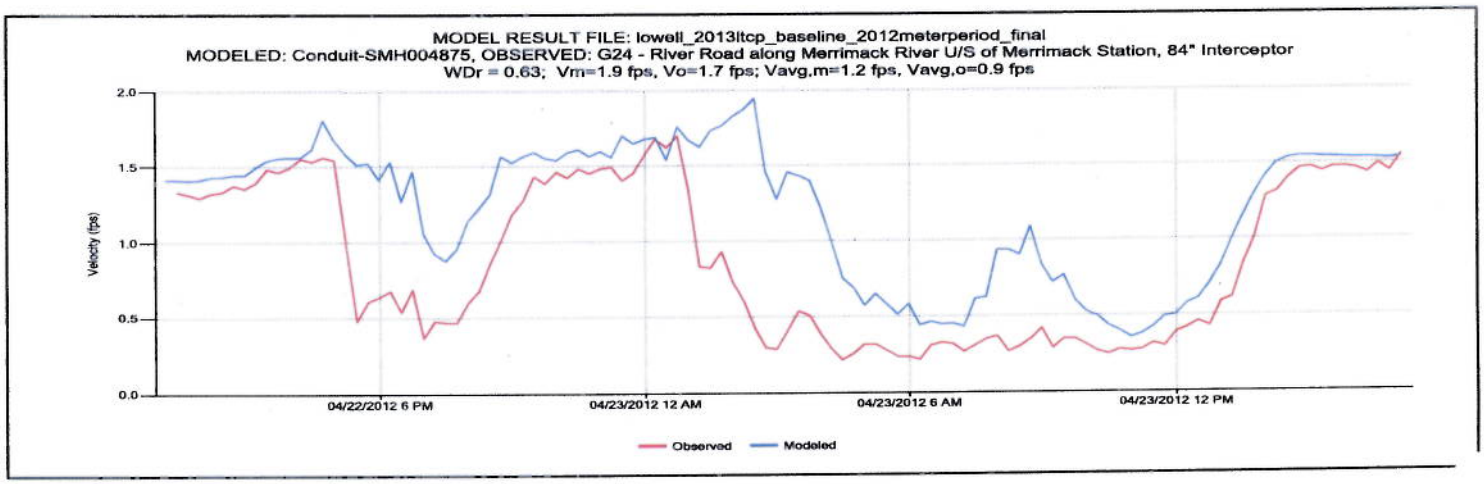

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004936, OBSERVED: G23 - Douglas Rd. U/S of Barasford Station, 48" Circular
WDr = 0.32; Volm=3.63 MG, Volo=2.12 MG; Qm=11.6 mgd, Qo=5.3 mgd; Qavg,m=3.1 mgd, Qavg,o=1.8 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004936, OBSERVED: G23 - Douglas Rd. U/S of Barasford Station, 48" Circular
WDr = 0.44; Vm=3.1 fps, Vo=2.2 fps; Vavg,m=2.0 fps, Vavg,o=1.5 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

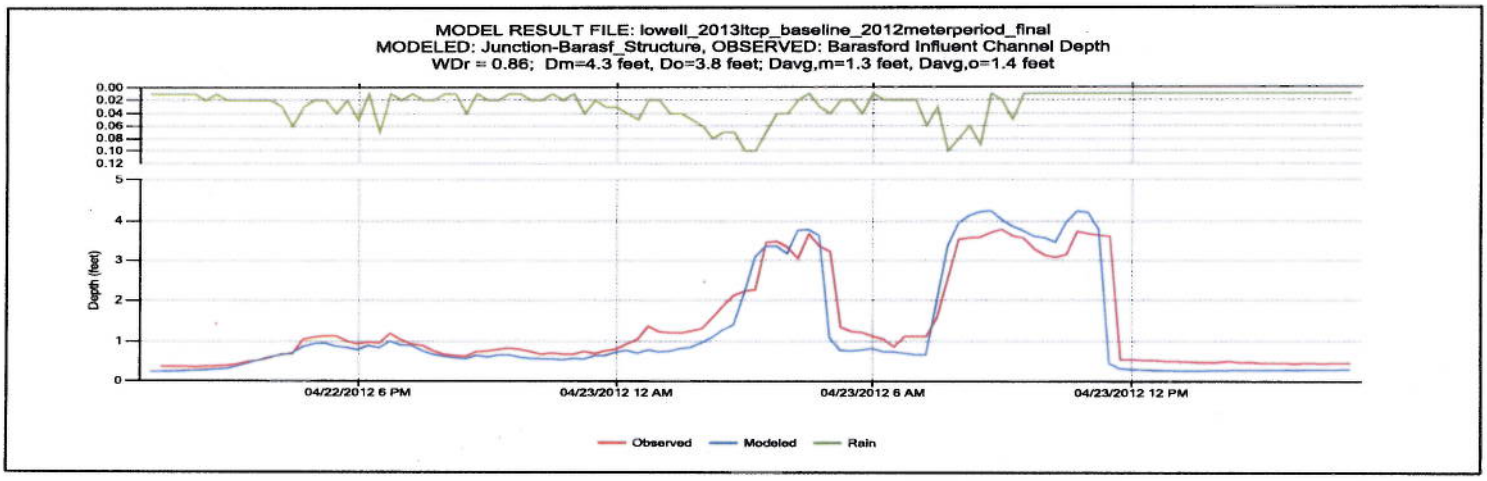
G24-Storm 1


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-006167, OBSERVED: G24 - River Road along Merrimack River U/S of Merrimack Station, 84" Interceptor
WDr = 0.76; Dm=4.1 feet; Do=5.4 feet; Davg,m=2.1 feet, Davg,o=2.7 feet
Depth (feet)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

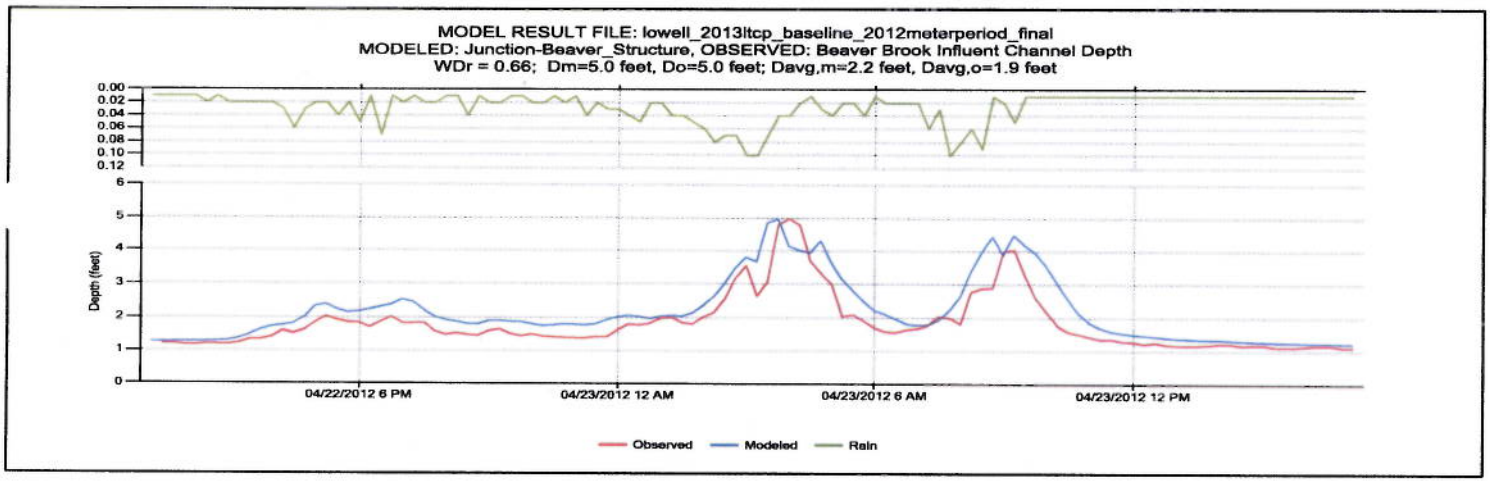

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004875, OBSERVED: G24 - River Road along Merrimack River U/S of Merrimack Station, 84" Interceptor
WDr = 0.18; Volm=6.91 MG, Volo=5.18 MG; Qm=11.7 mgd, Qo=10.1 mgd; Qavg,m=6.0 mgd, Qavg,o=4.5 mgd
Flowrate (mgd)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004875, OBSERVED: G24 - River Road along Merrimack River U/S of Merrimack Station, 84" Interceptor
WDr = 0.63; Vm=1.9 fps, Vo=1.7 fps; Vavg,m=1.2 fps, Vavg,o=0.9 fps
Velocity (fps)
04/22/2012 6 PM
04/23/2012 12 AM
04/23/2012 6 AM
04/23/2012 12 PM
Observed
Modeled

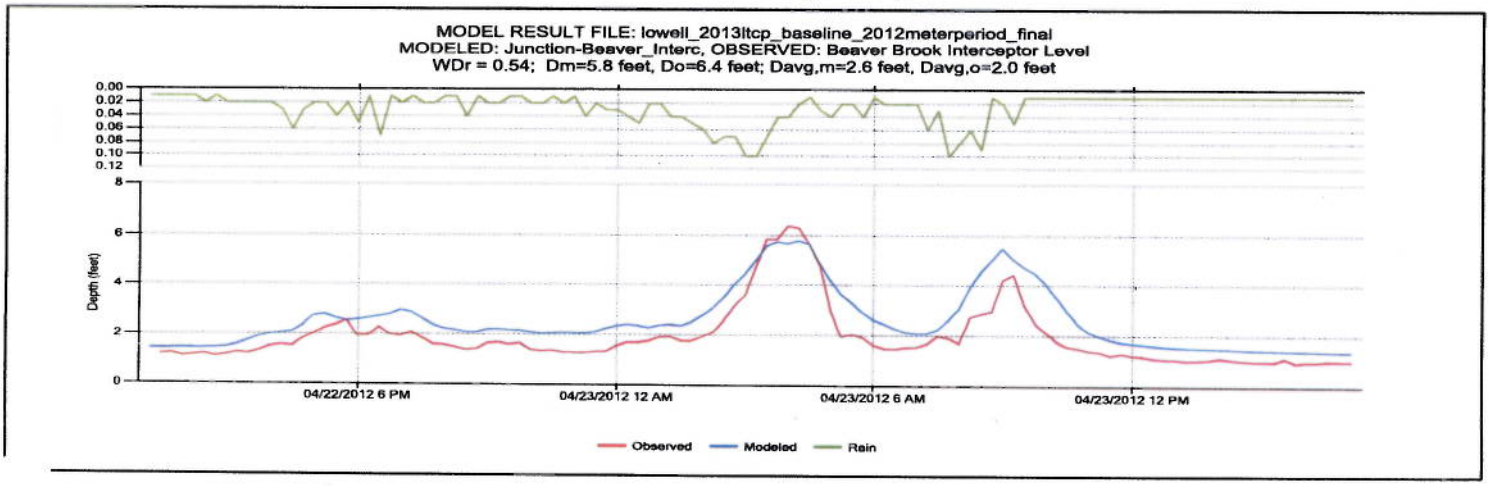
Barasford Influent Channel Depth



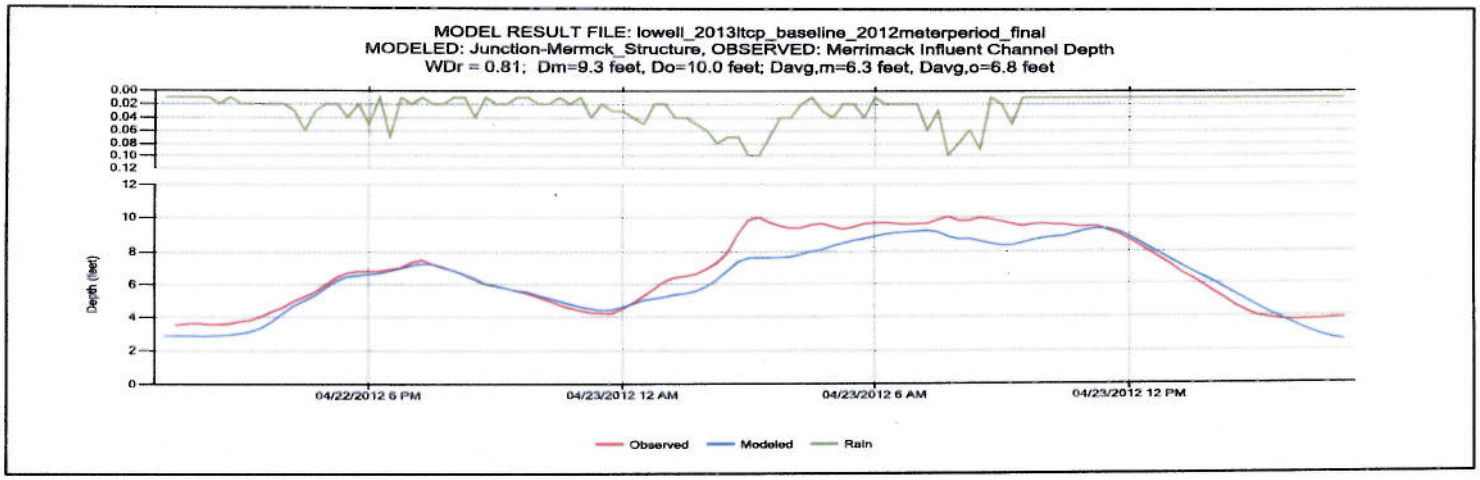
Beaver Brook Influent Channel Depth



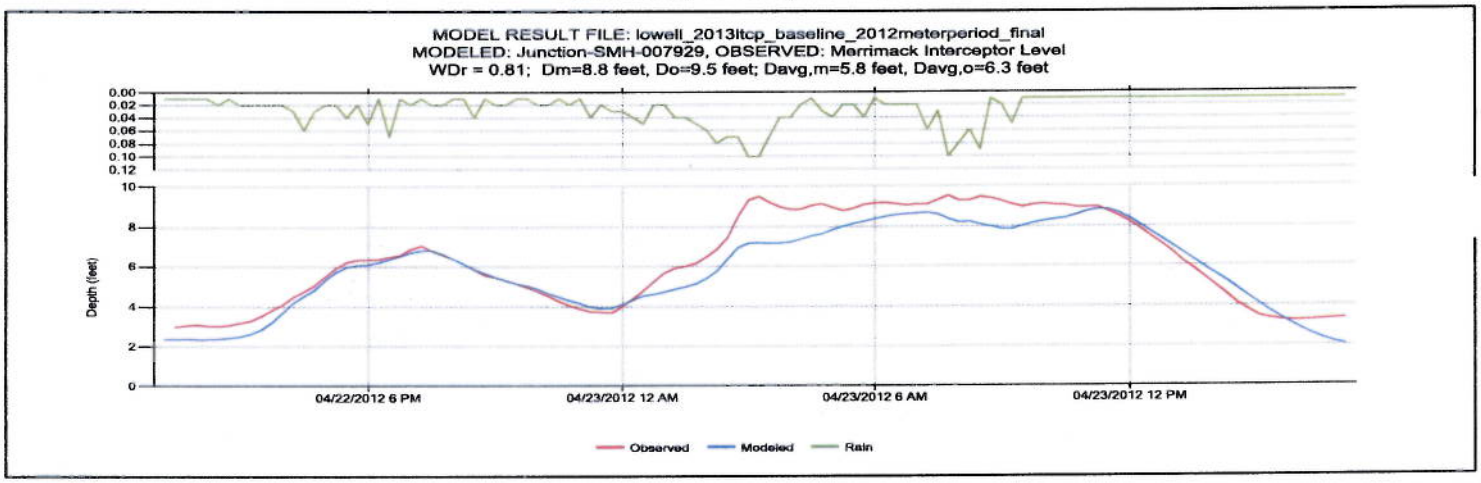
Beaver Brook Interceptor Depth



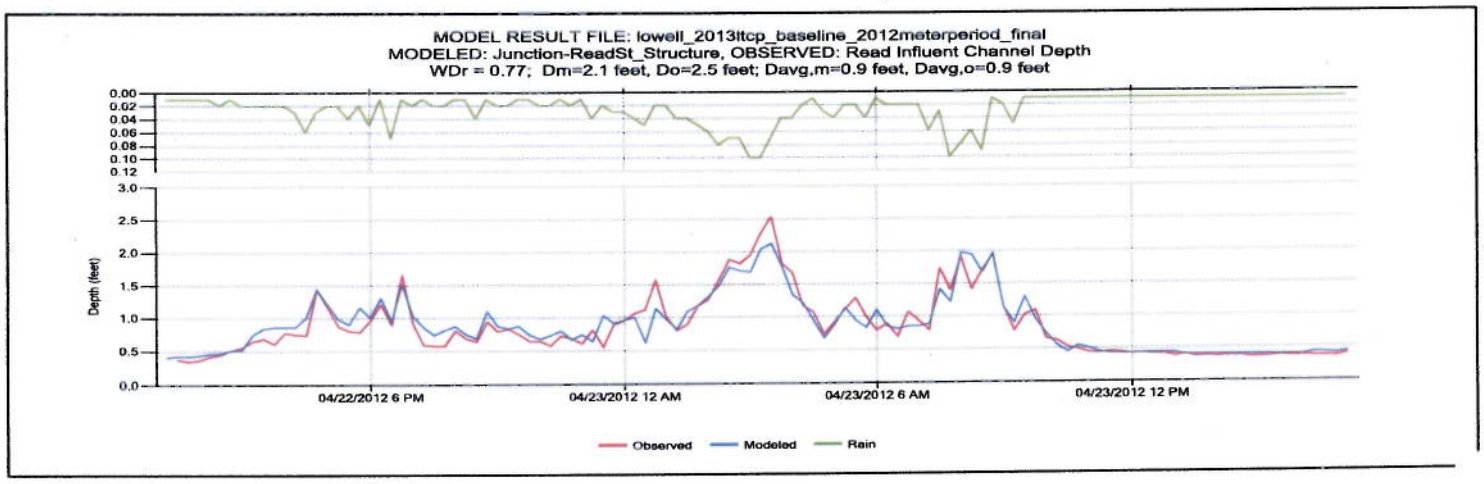
Merrimack Influent Channel Depth



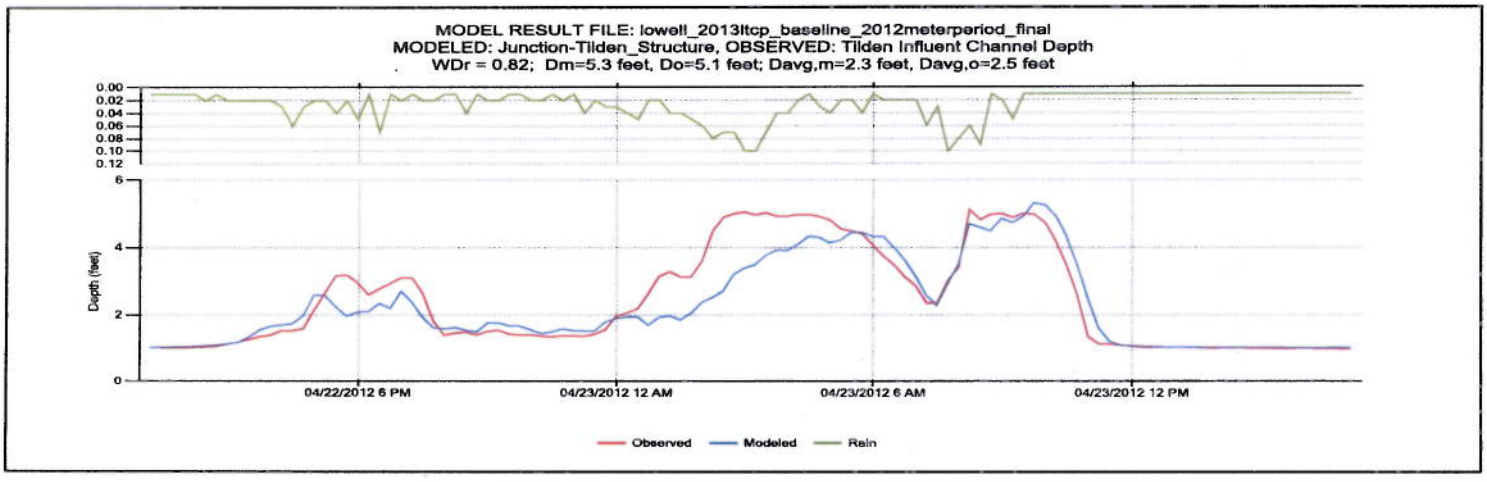
Merrimack Interceptor Depth



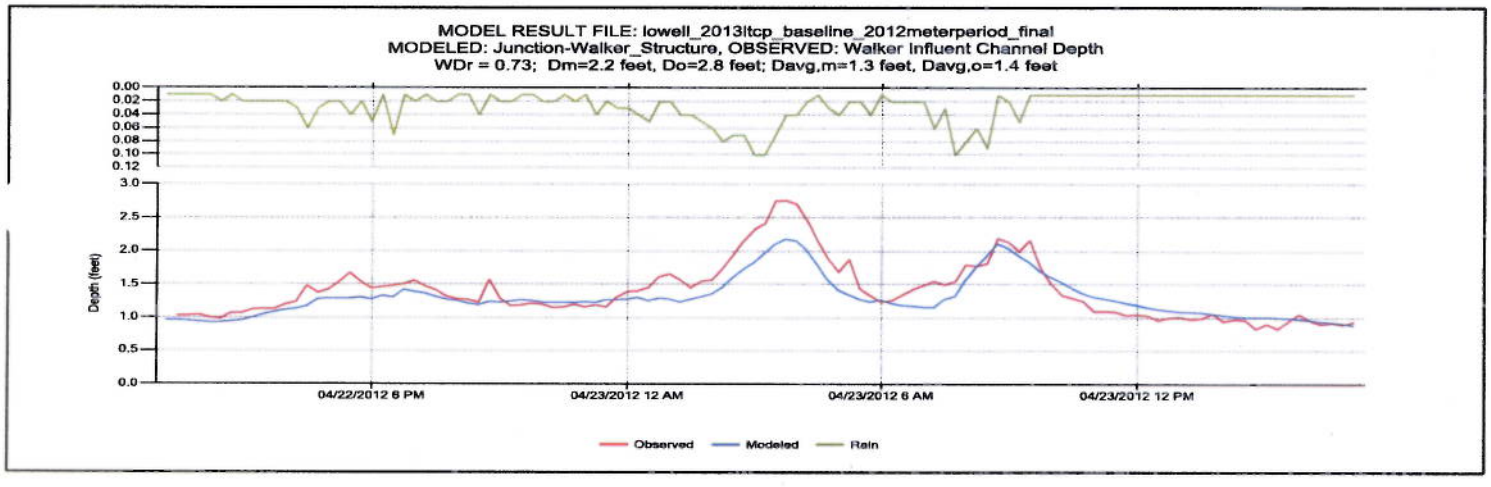
Read Influent Channel Depth



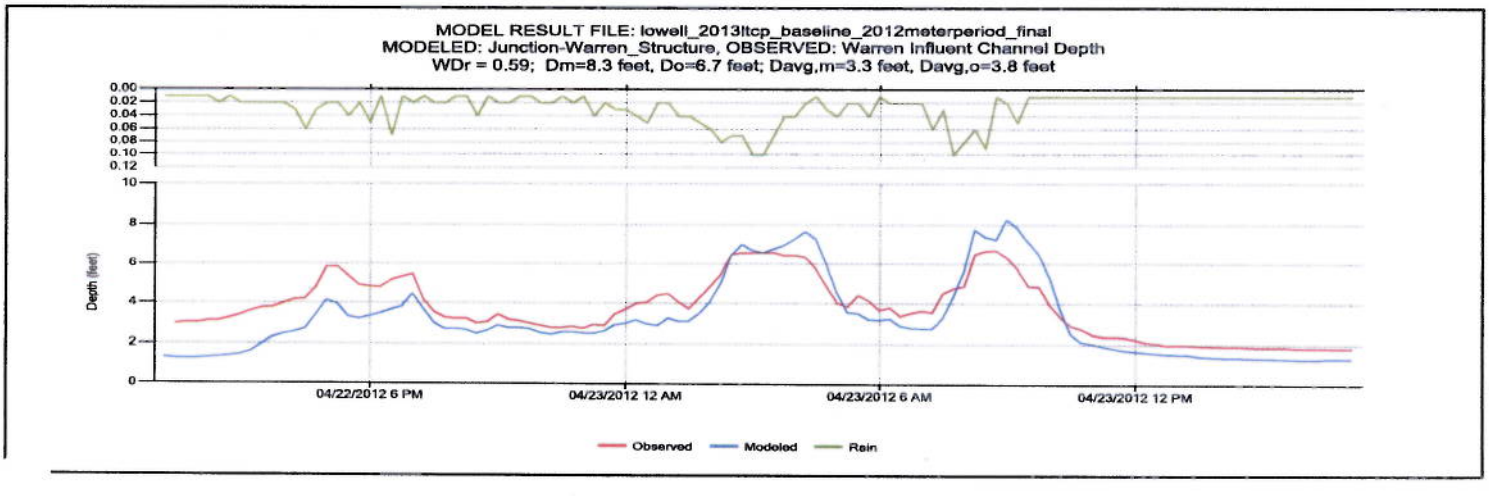
Tilden Influent Channel Depth



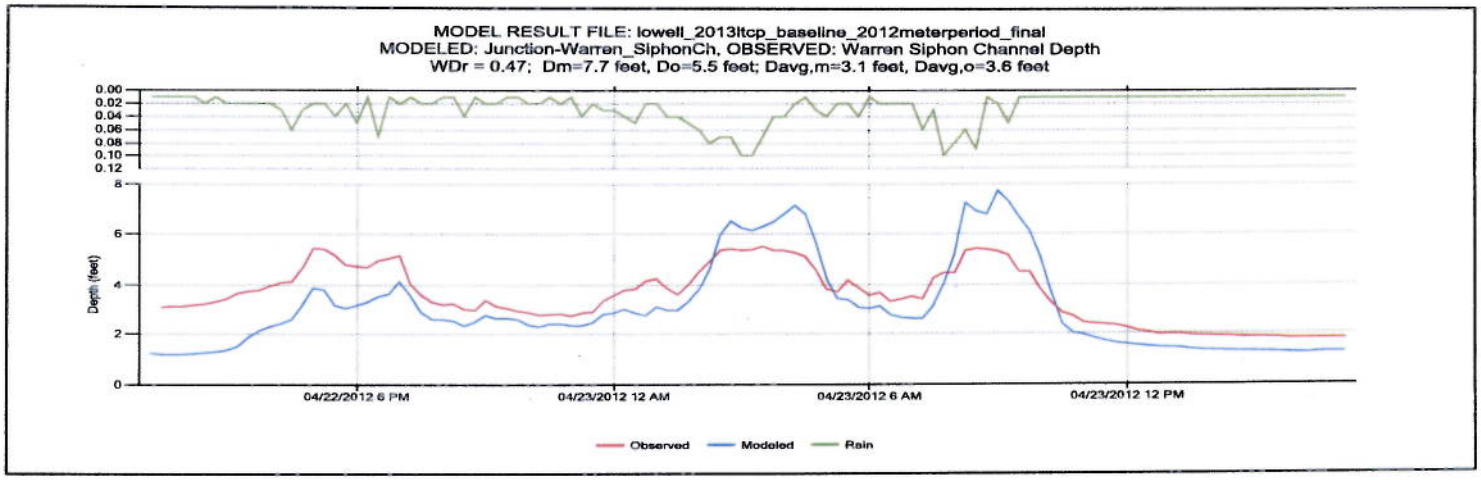
Walker Influent Channel Depth



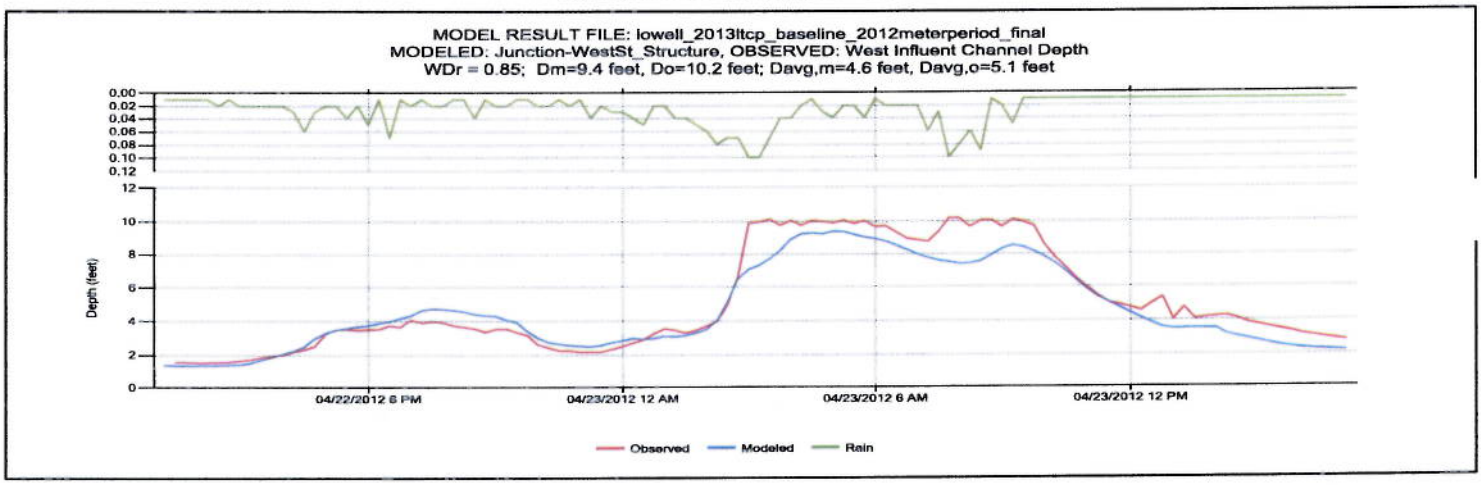
Warren Influent Channel Depth



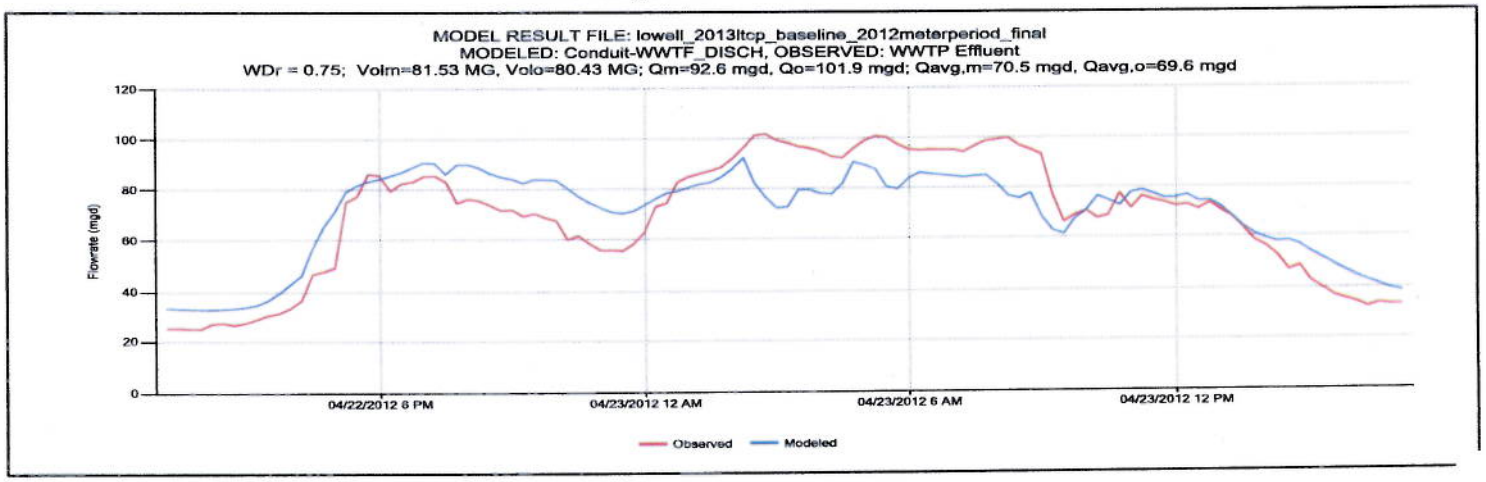
Warren Siphon Channel Depth



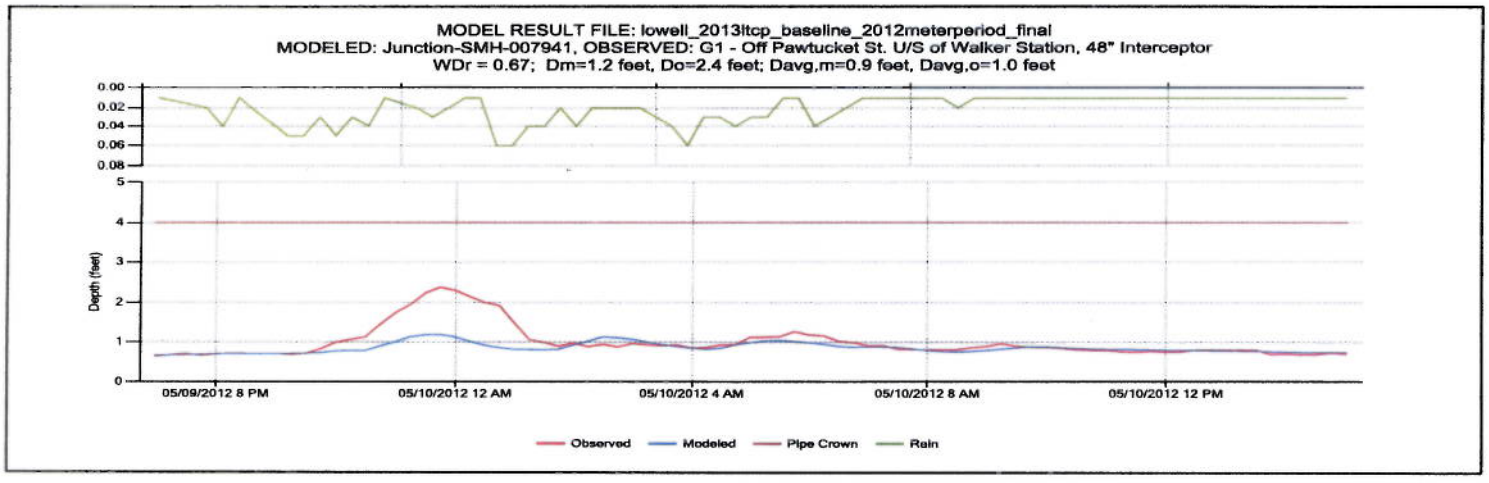
West Influent Channel Depth

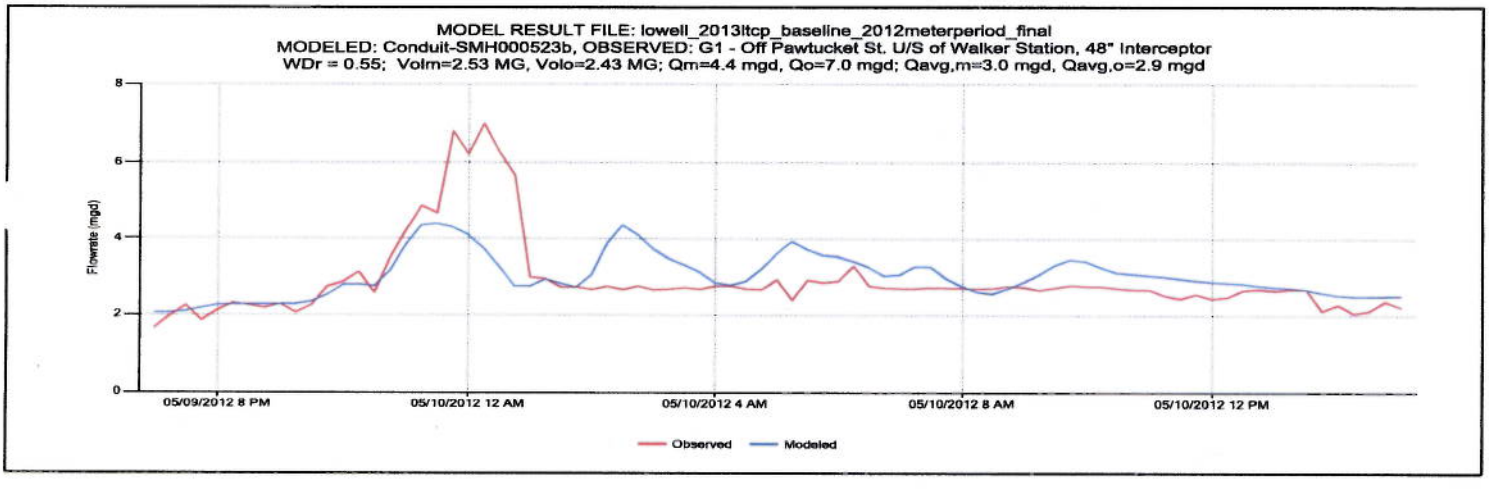


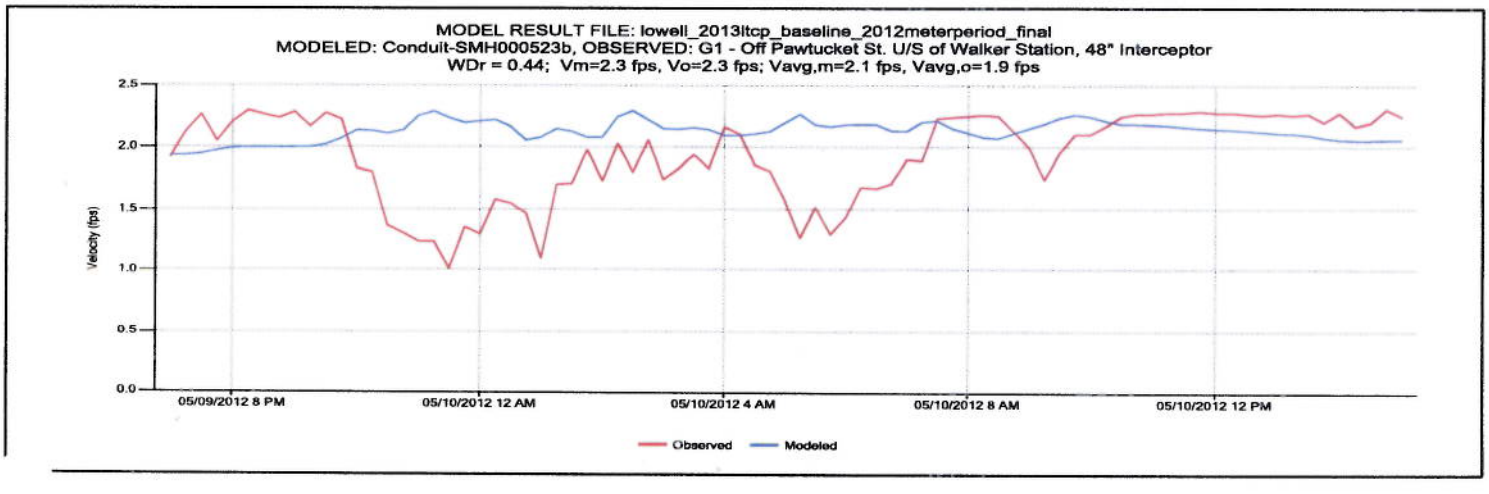
Lowell Regional WWTF Effluent Flow



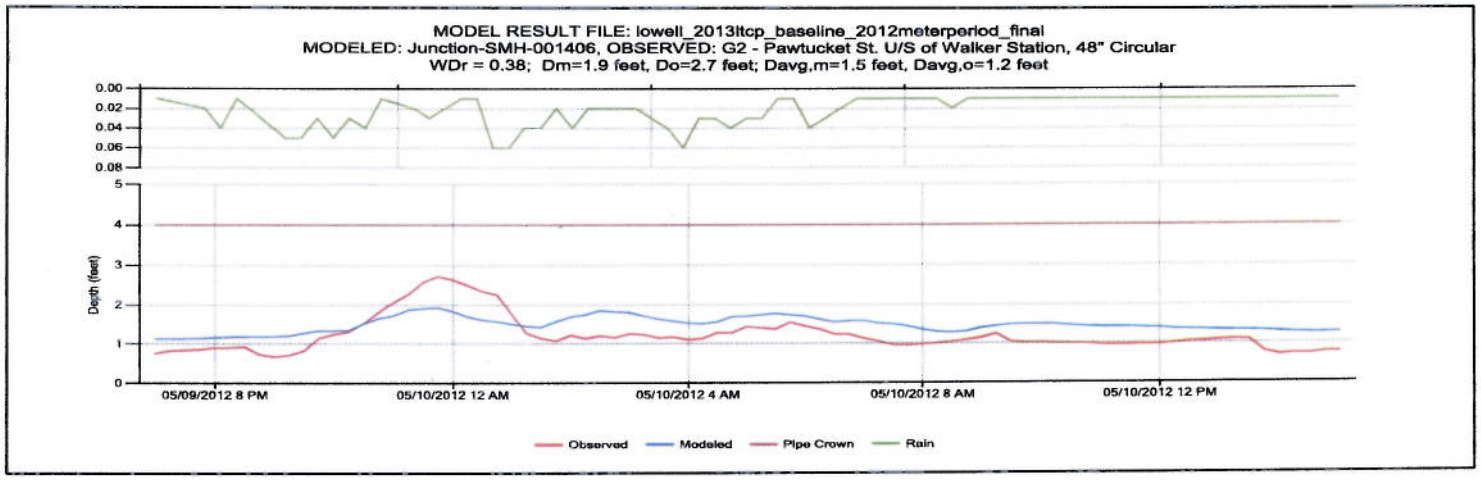
G1-Storm 2

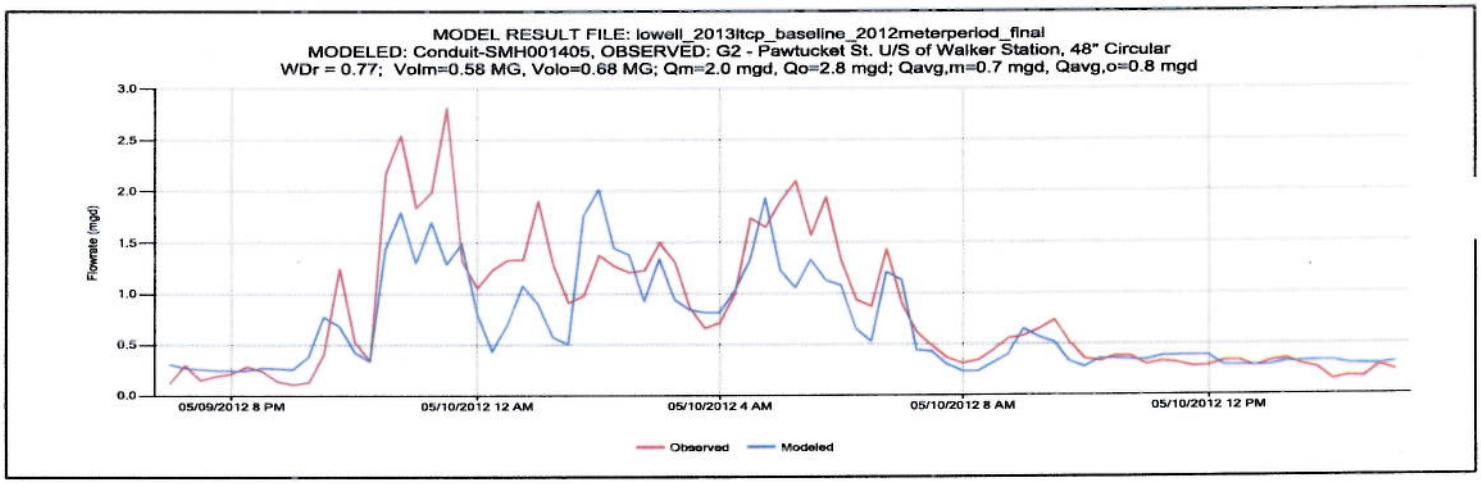

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007941, OBSERVED: G1 - Off Pawtucket St. U/S of Walker Station, 48" Interceptor
WDr = 0.67; Dm=1.2 feet, Do=2.4 feet; Davg,m=0.9 feet, Davg,o=1.0 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

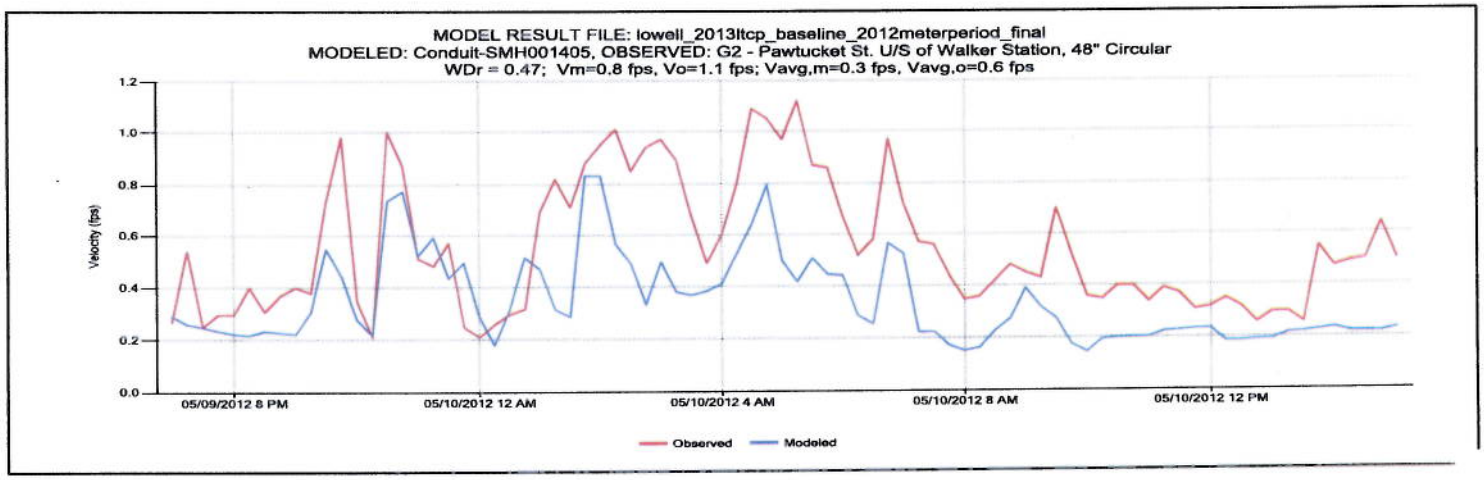

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH000523b, OBSERVED: G1 - Off Pawtucket St. U/S of Walker Station, 48" Interceptor
WDr = 0.55; Volm=2.53 MG, Volo=2.43 MG; Qm=4.4 mgd, Qo=7.0 mgd; Qavg,m=3.0 mgd, Qavg,o=2.9 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH000523b, OBSERVED: G1 - Off Pawtucket St. U/S of Walker Station, 48" Interceptor
WDr = 0.44; Vm=2.3 fps, Vo=2.3 fps; Vavg,m=2.1 fps, Vavg,o=1.9 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

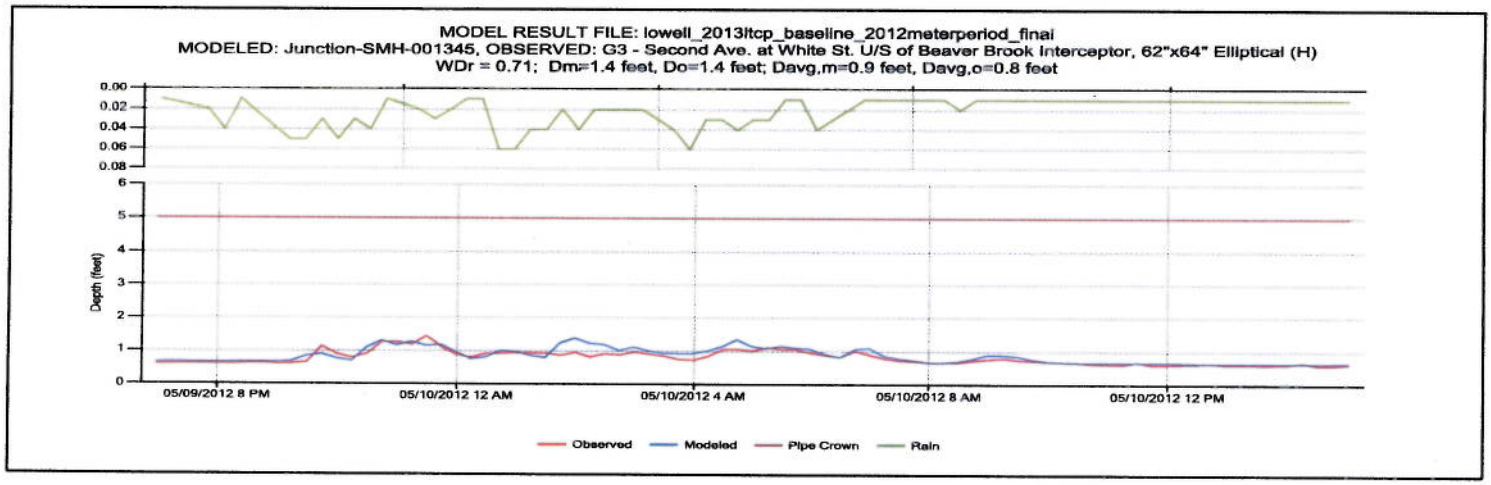
G2-Storm 2

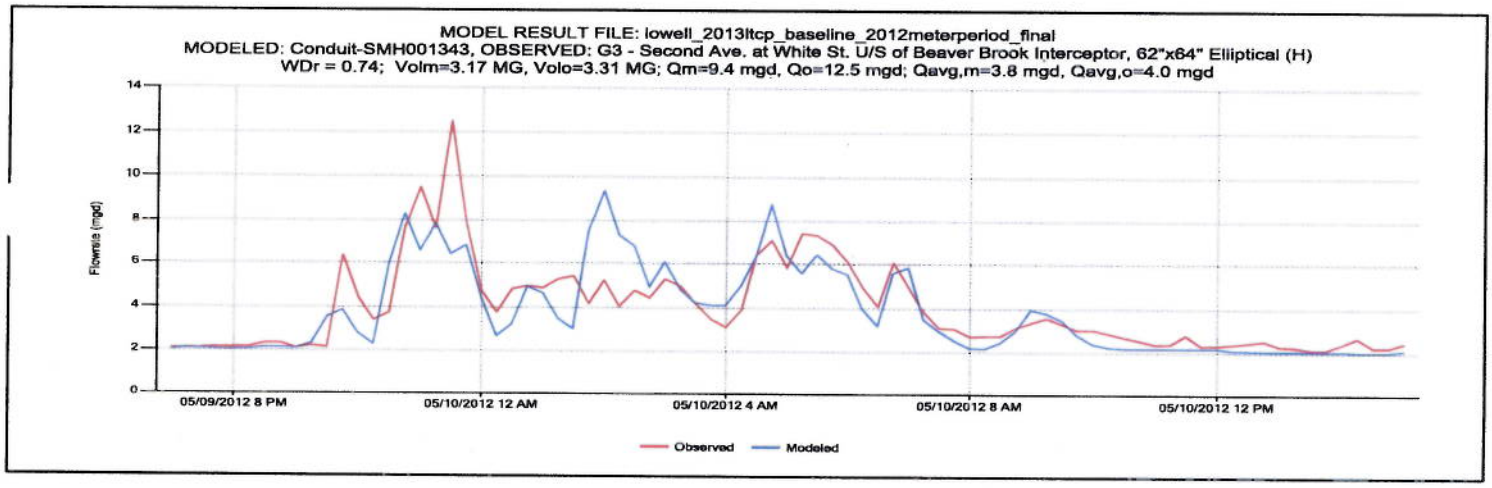

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-001406, OBSERVED: G2 - Pawtucket St. U/S of Walker Station, 48" Circular
WDr = 0.38; Dm=1.9 feet, Do=2.7 feet; Davg,m=1.5 feet, Davg,o=1.2 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

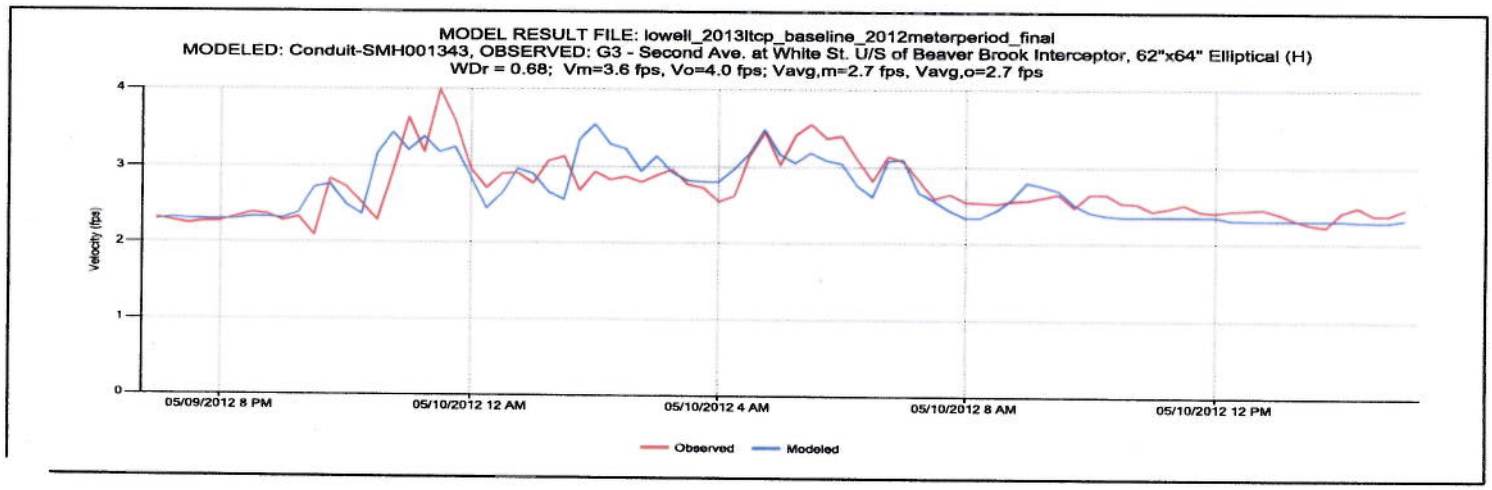

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001405, OBSERVED: G2 - Pawtucket St. U/S of Walker Station, 48" Circular
WDr = 0.77; Volm=0.58 MG, Volo=0.68 MG; Qm=2.0 mgd, Qo=2.8 mgd; Qavg,m=0.7 mgd, Qavg,o=0.8 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001405, OBSERVED: G2 - Pawtucket St. U/S of Walker Station, 48" Circular
WDr = 0.47; Vm=0.8 fps, Vo=1.1 fps; Vavg,m=0.3 fps, Vavg,o=0.6 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

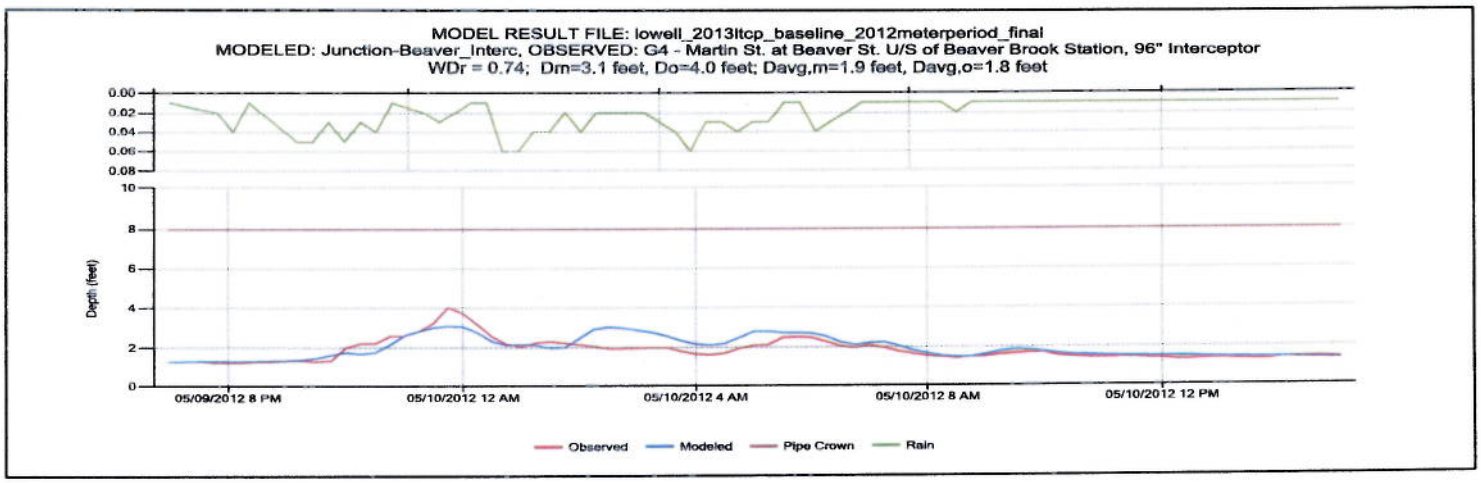
G3-Storm 2

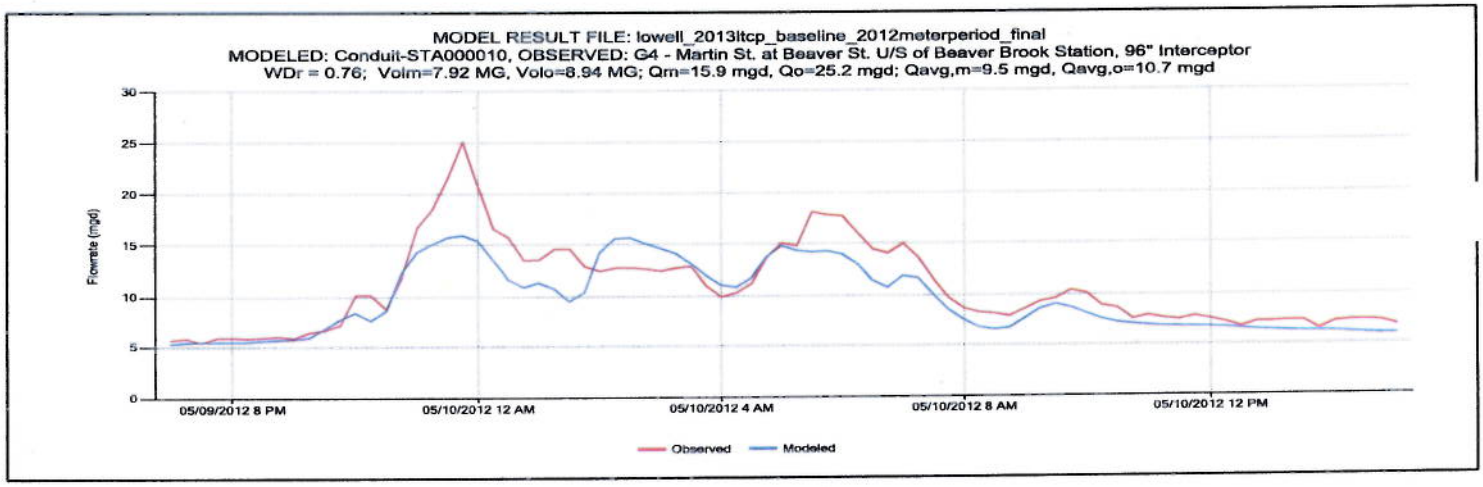

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-001345, OBSERVED: G3 - Second Ave. at White St. U/S of Beaver Brook Interceptor, 62"x64" Elliptical (H)
WDr = 0.71; Dm=1.4 feet, Do=1.4 feet; Davg,m=0.9 feet, Davg,o=0.8 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

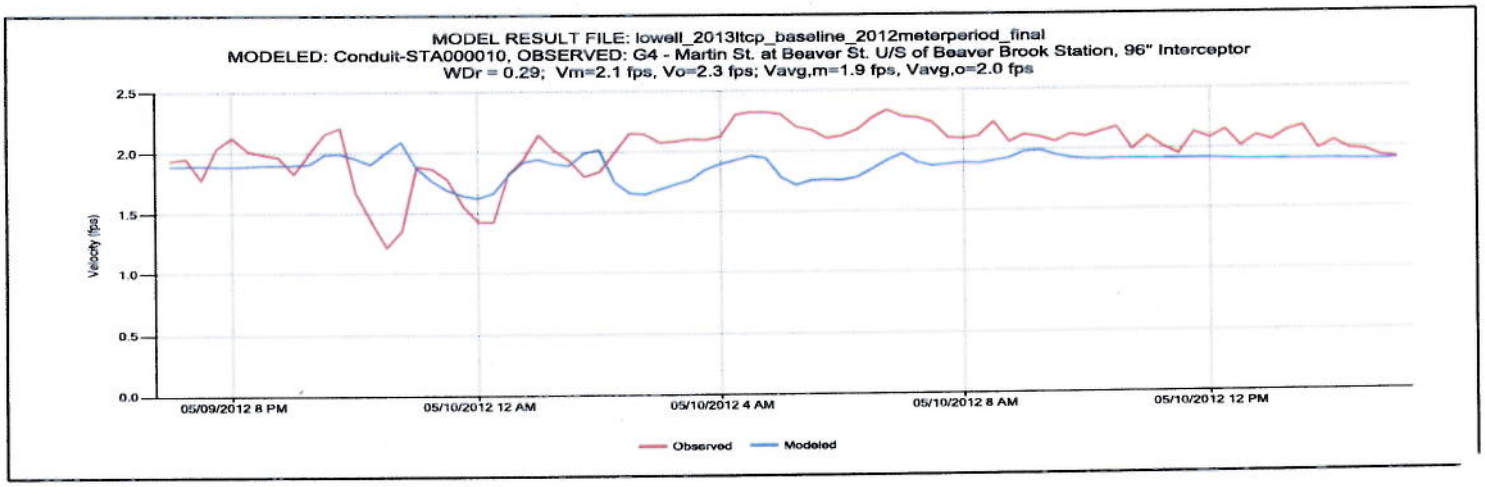

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001343, OBSERVED: G3 - Second Ave. at White St. U/S of Beaver Brook Interceptor, 62"x64" Elliptical (H)
WDr = 0.74; Volm=3.17 MG, Volo=3.31 MG; Qm=9.4 mgd, Qo=12.5 mgd; Qavg,m=3.8 mgd, Qavg,o=4.0 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH001343, OBSERVED: G3 - Second Ave. at White St. U/S of Beaver Brook Interceptor, 62"x64" Elliptical (H)
WDr = 0.68; Vm=3.6 fps, Vo=4.0 fps; Vavg,m=2.7 fps, Vavg,o=2.7 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

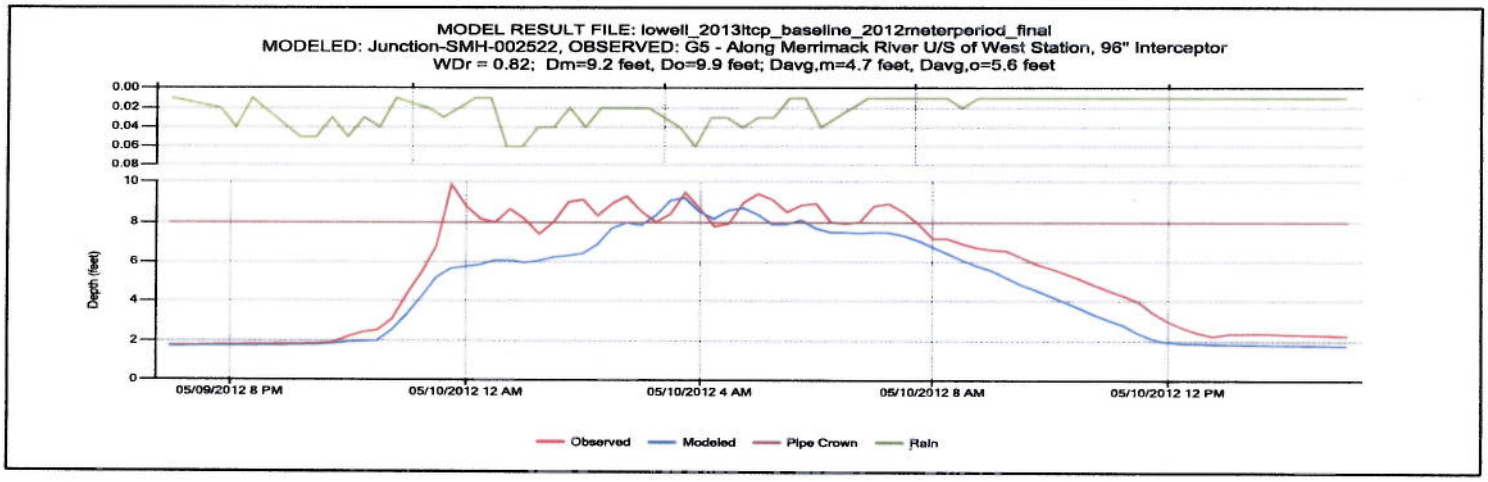
G4-Storm 2

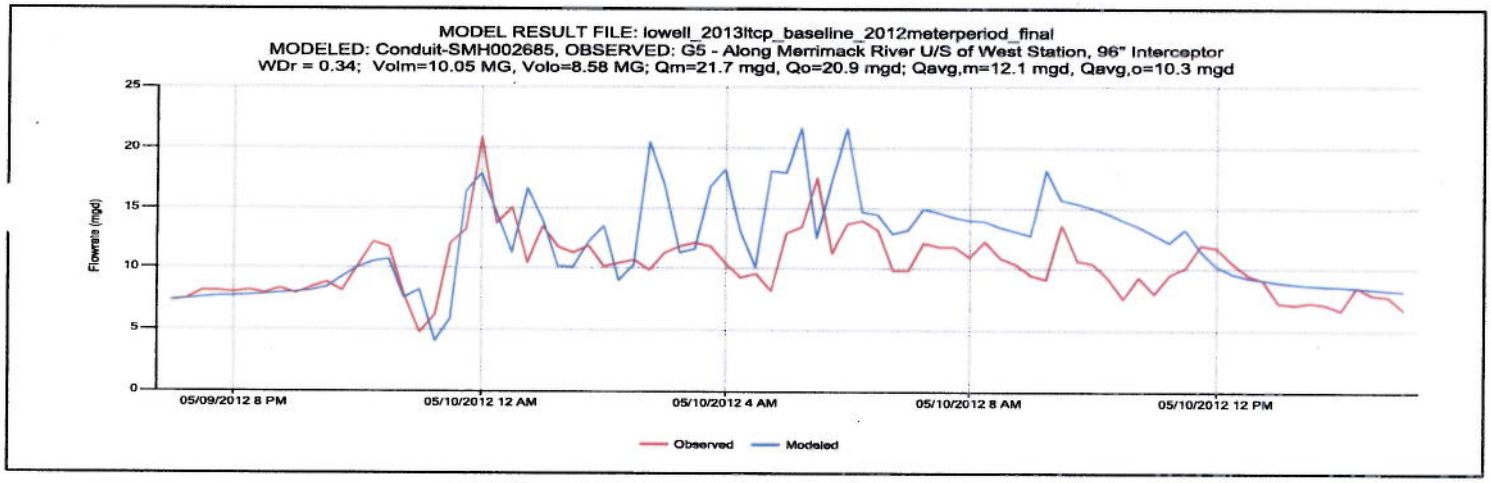

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-Beaver_Interc, OBSERVED: G4 - Martin St. at Beaver St. U/S of Beaver Brook Station, 96" Interceptor
WDr = 0.74; Dm=3.1 feet, Do=4.0 feet; Davg,m=1.9 feet, Davg,o=1.8 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

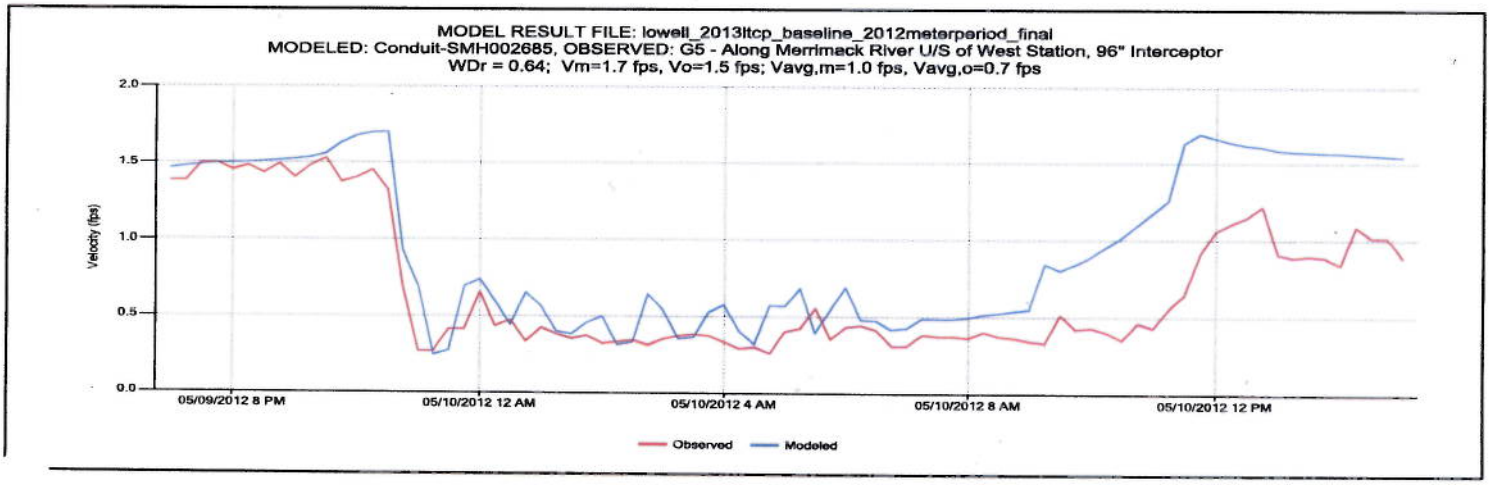

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-STA000010, OBSERVED: G4 - Martin St. at Beaver St. U/S of Beaver Brook Station, 96" Interceptor
WDr = 0.76; Volm=7.92 MG, Volo=8.94 MG; Qm=15.9 mgd, Qo=25.2 mgd; Qavg,m=9.5 mgd, Qavg,o=10.7 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-STA000010, OBSERVED: G4 - Martin St. at Beaver St. U/S of Beaver Brook Station, 96" Interceptor
WDr = 0.29; Vm=2.1 fps, Vo=2.3 fps; Vavg,m=1.9 fps, Vavg,o=2.0 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

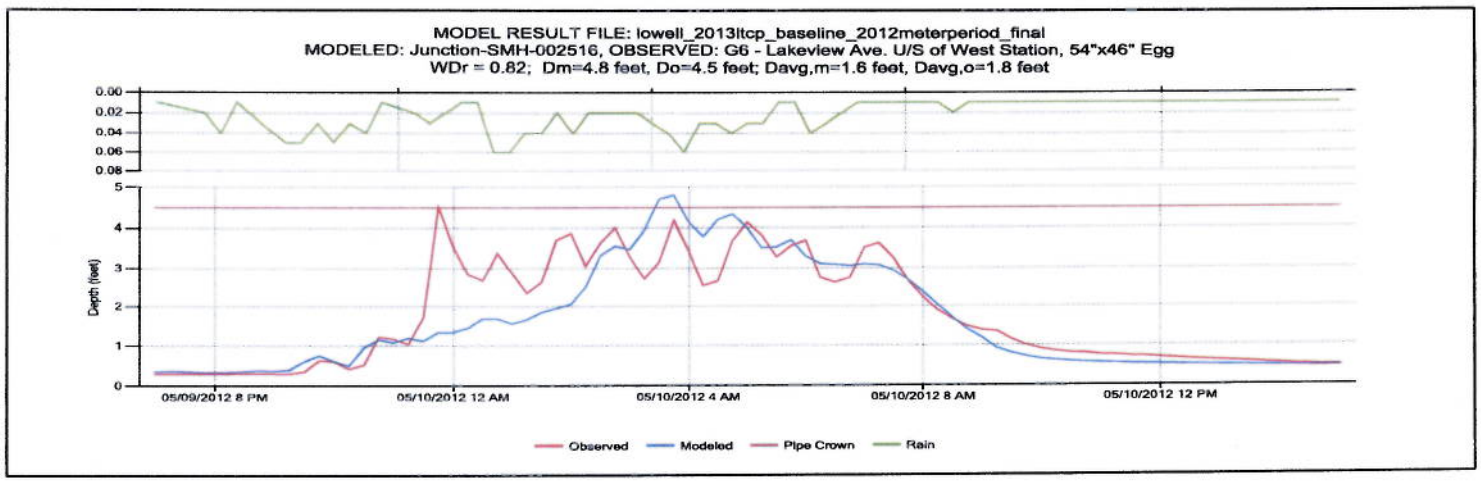
G5-Storm 2

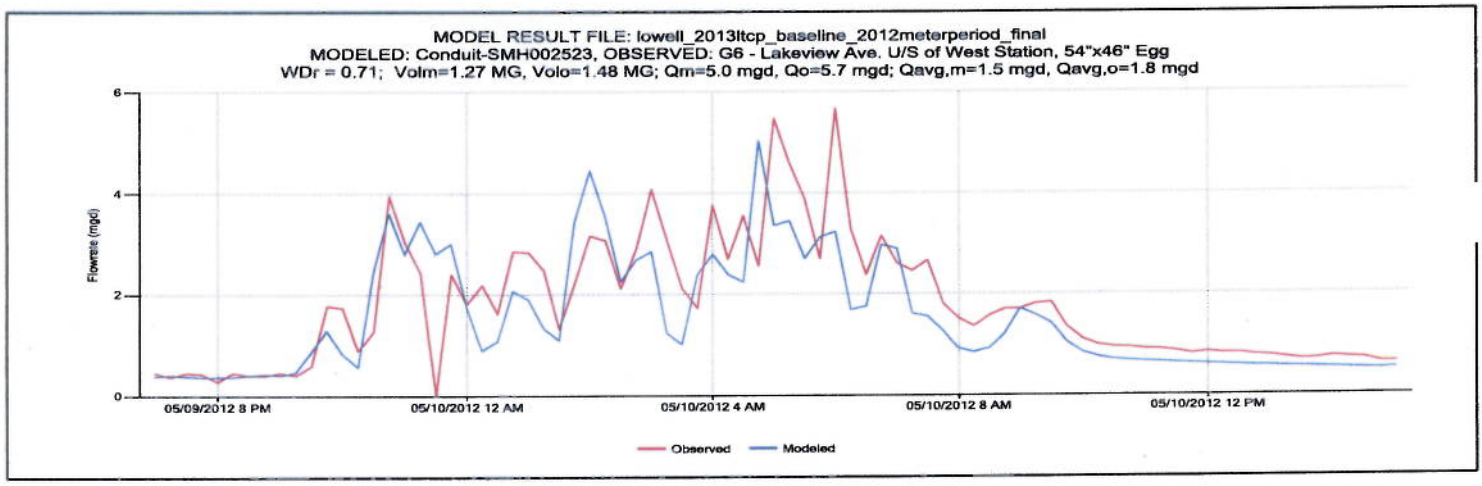

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002522, OBSERVED: G5 - Along Merrimack River U/S of West Station, 96" Interceptor
WDr = 0.82; Dm=9.2 feet, Do=9.9 feet; Davg,m=4.7 feet, Davg,o=5.6 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

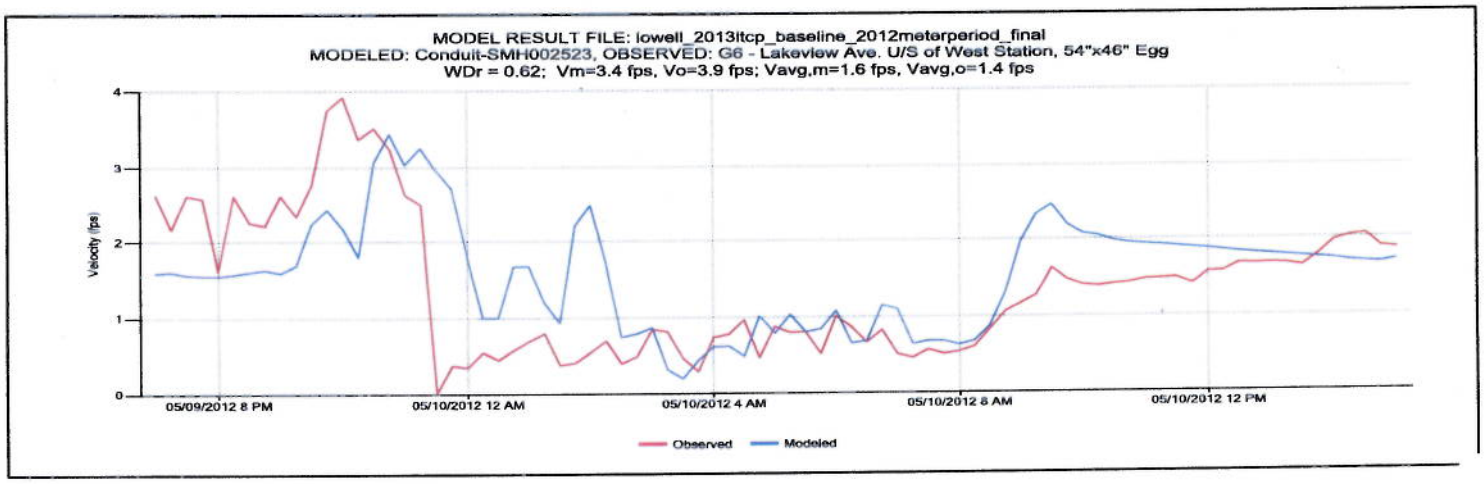

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002685, OBSERVED: G5 - Along Merrimack River U/S of West Station, 96" Interceptor
WDr = 0.34; Volm=10.05 MG, Volo=8.58 MG; Qm=21.7 mgd, Qo=20.9 mgd; Qavg,m=12.1 mgd, Qavg,o=10.3 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002685, OBSERVED: G5 - Along Merrimack River U/S of West Station, 96" Interceptor
WDr = 0.64; Vm=1.7 fps, Vo=1.5 fps; Vavg,m=1.0 fps, Vavg,o=0.7 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

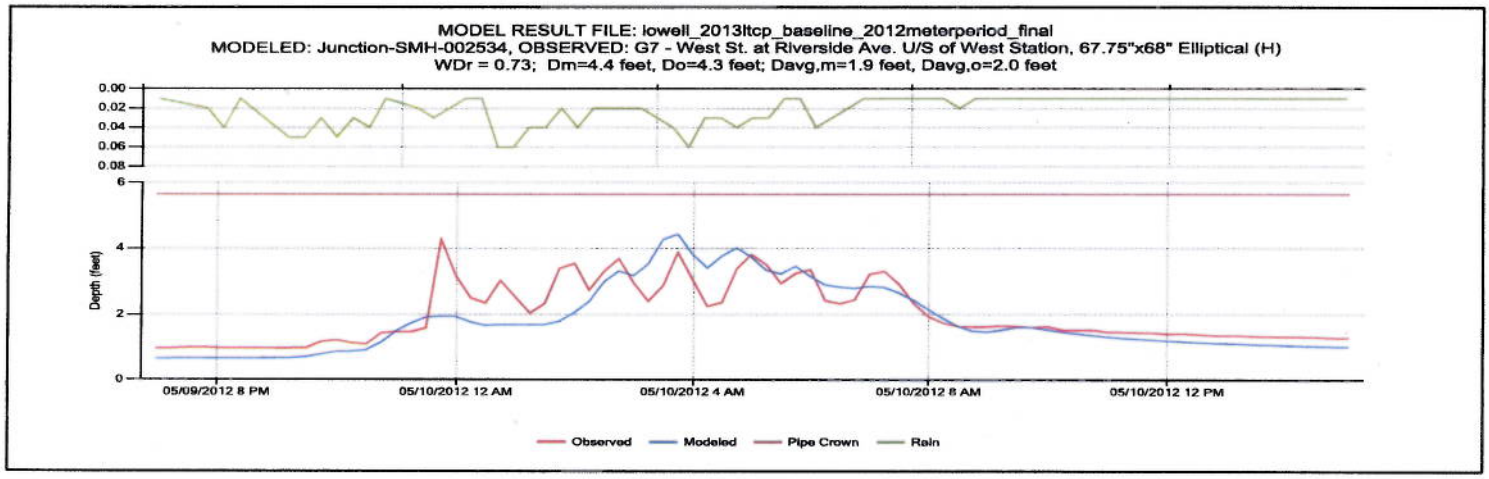
G6-Storm 2

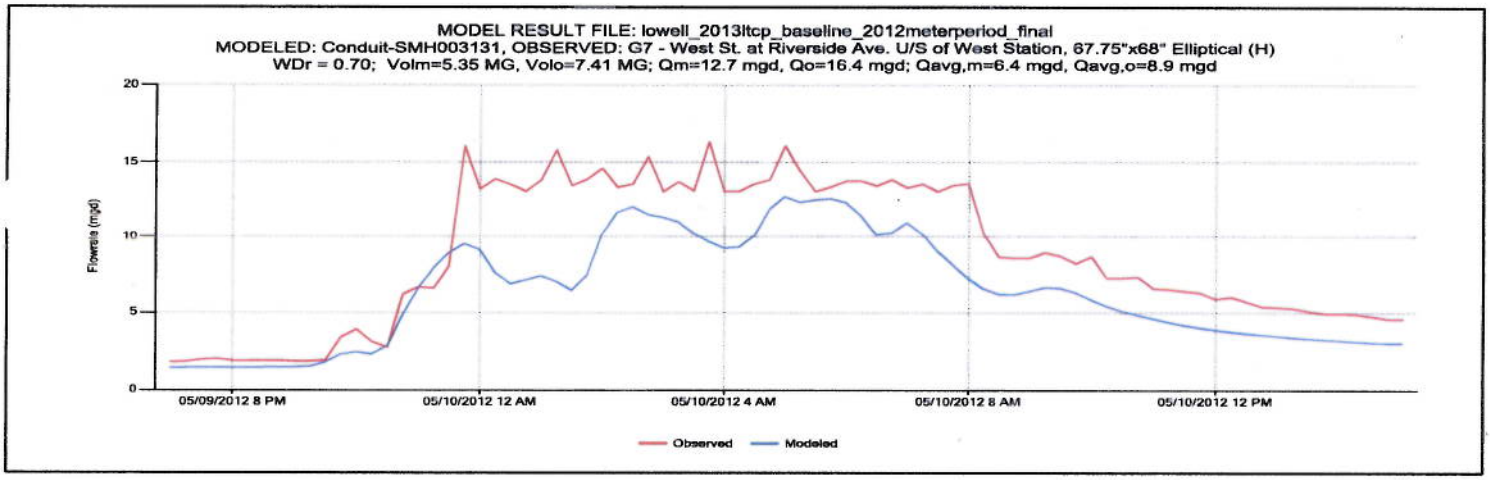

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002516, OBSERVED: G6 - Lakeview Ave. U/S of West Station, 54"x46" Egg
WDr = 0.82; Dm=4.8 feet, Do=4.5 feet; Davg,m=1.6 feet, Davg,o=1.8 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

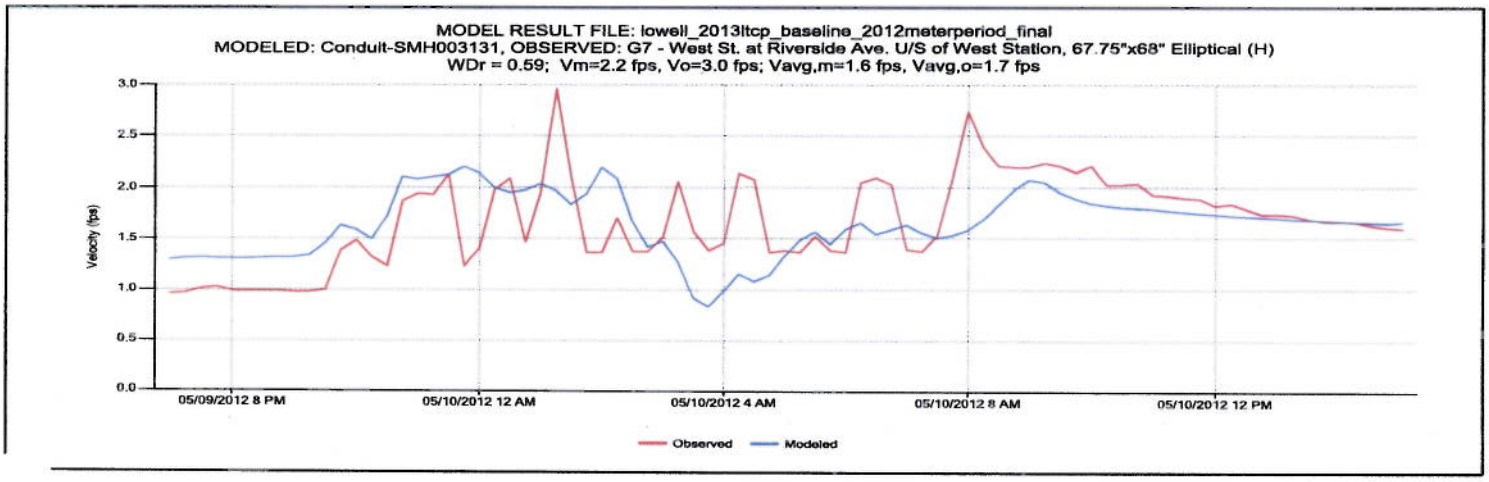

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002523, OBSERVED: G6 - Lakeview Ave. U/S of West Station, 54"x46" Egg
WDr = 0.71; Volm=1.27 MG, Volo=1.48 MG; Qm=5.0 mgd, Qo=5.7 mgd; Qavg,m=1.5 mgd, Qavg,o=1.8 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002523, OBSERVED: G6 - Lakeview Ave. U/S of West Station, 54"x46" Egg
WDr = 0.62; Vm=3.4 fps, Vo=3.9 fps; Vavg,m=1.6 fps, Vavg,o=1.4 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

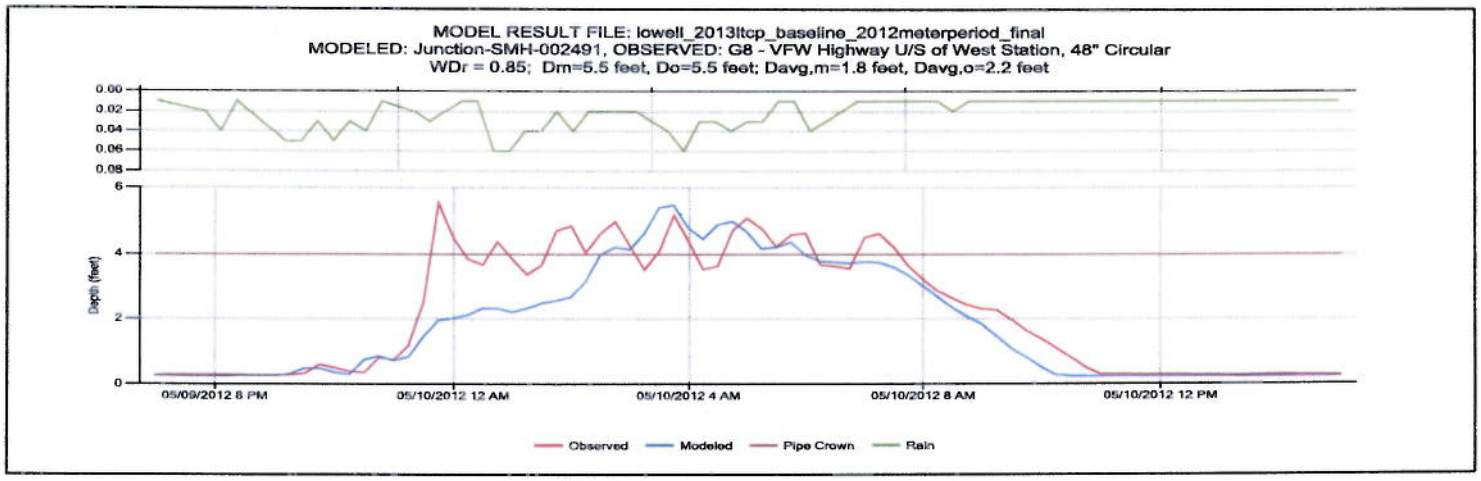
G7-Storm 2

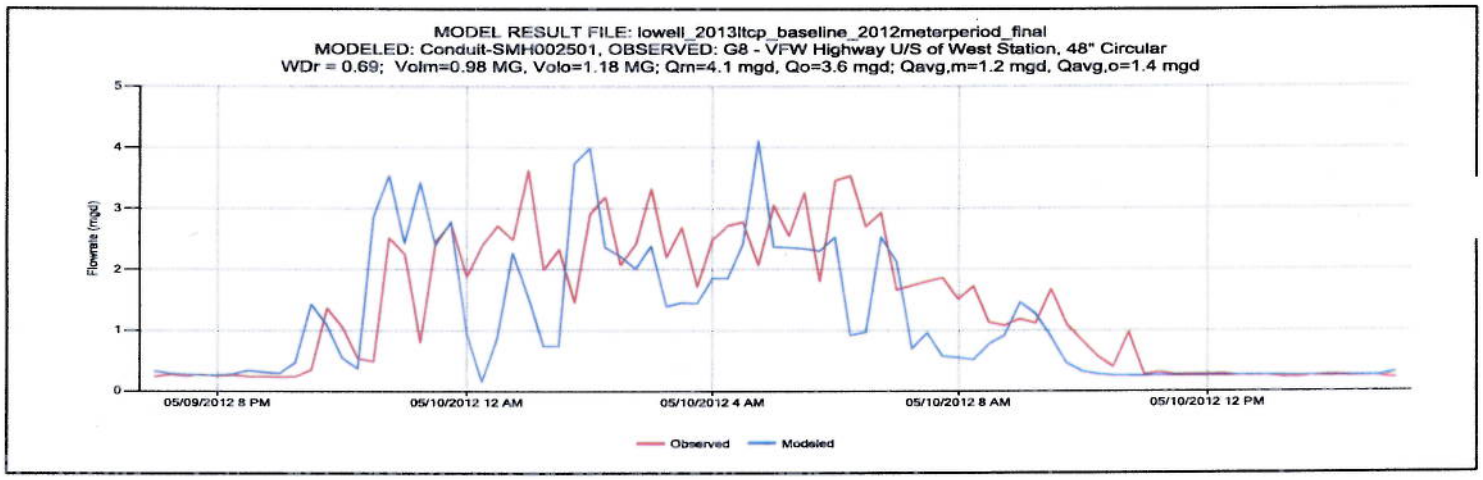

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002534, OBSERVED: G7 - West St. at Riverside Ave. U/S of West Station, 67.75"x68" Elliptical (H)
WDr = 0.73; Dm=4.4 feet, Do=4.3 feet; Davg,m=1.9 feet, Davg,o=2.0 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

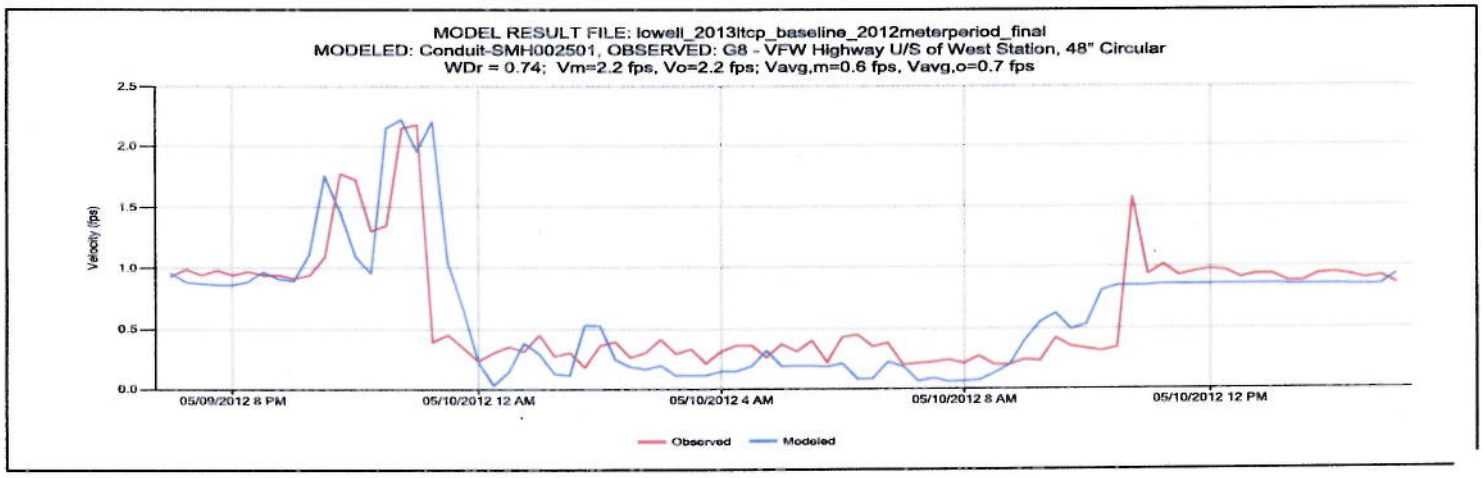

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH003131, OBSERVED: G7 - West St. at Riverside Ave. U/S of West Station, 67.75"x68" Elliptical (H)
WDr = 0.70; Volm=5.35 MG, Volo=7.41 MG; Qm=12.7 mgd, Qo=16.4 mgd; Qavg,m=6.4 mgd, Qavg,o=8.9 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH003131, OBSERVED: G7 - West St. at Riverside Ave. U/S of West Station, 67.75"x68" Elliptical (H)
WDr = 0.59; Vm=2.2 fps, Vo=3.0 fps; Vavg,m=1.6 fps, Vavg,o=1.7 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

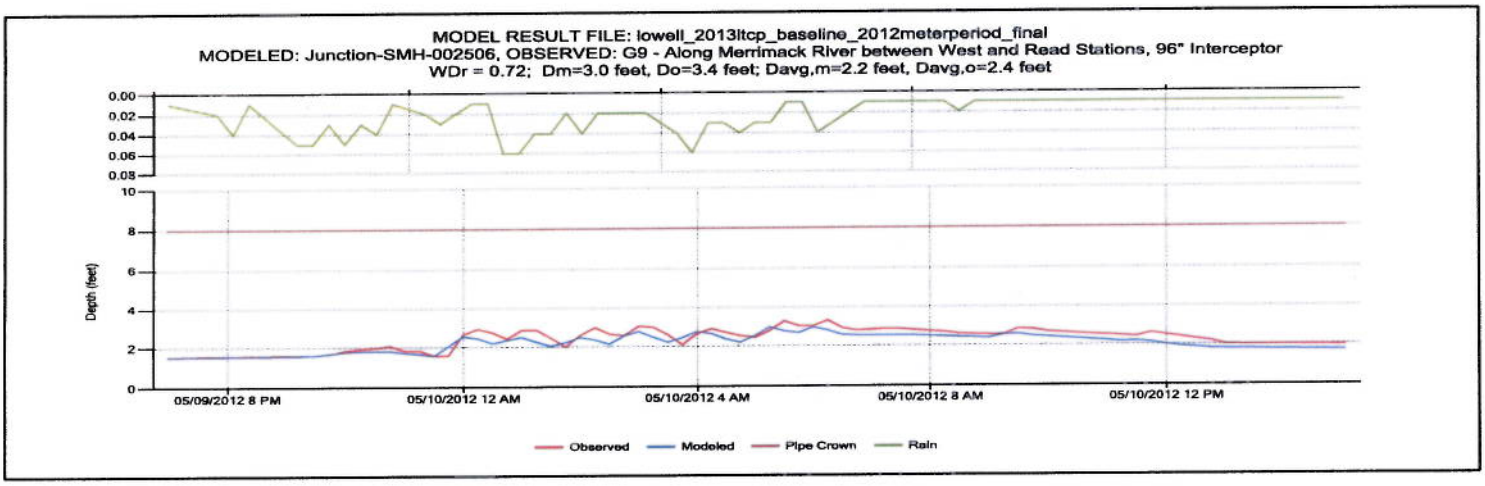
G8-Storm 2

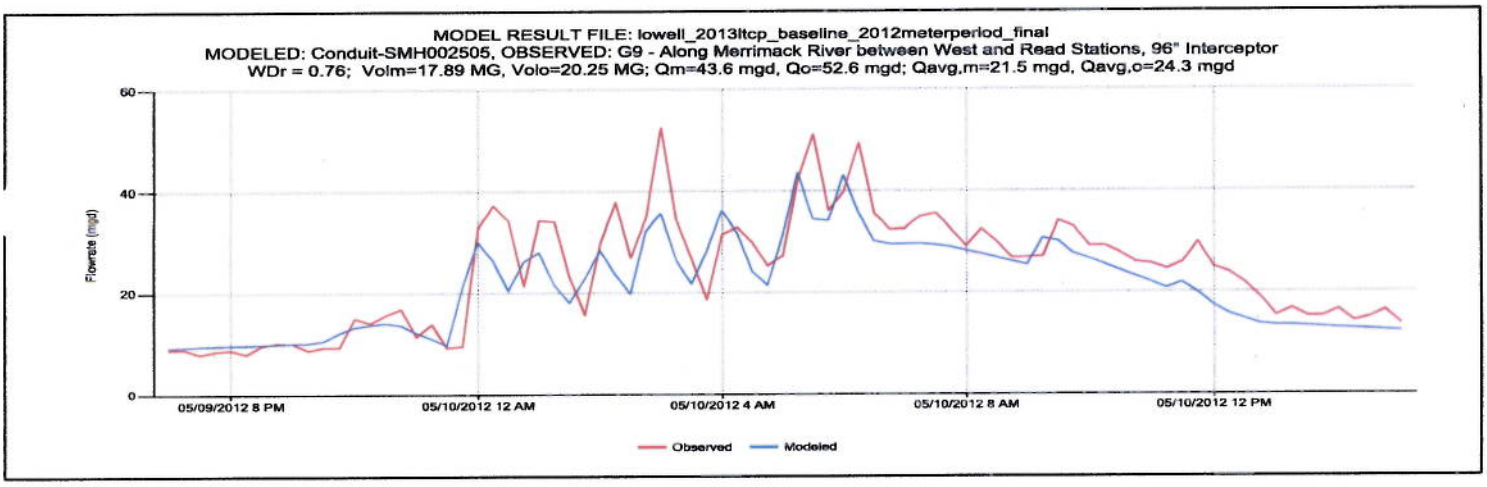

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002491, OBSERVED: G8 - VFW Highway U/S of West Station, 48" Circular
WDr = 0.85; Dm=5.5 feet, Do=5.5 feet; Davg,m=1.8 feet, Davg,o=2.2 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

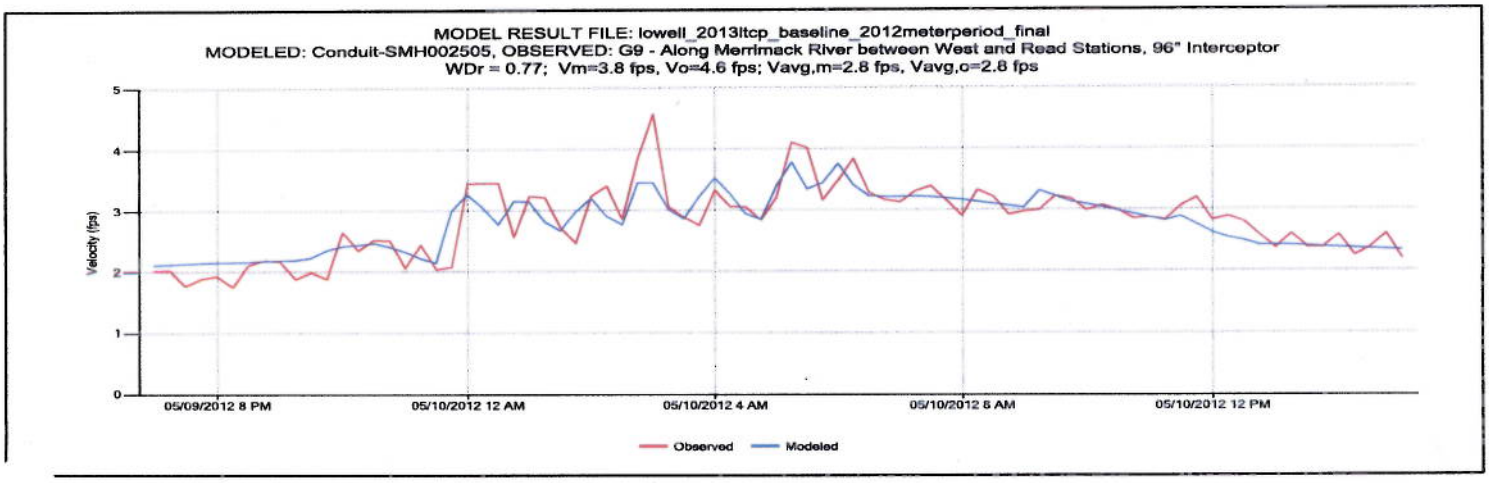

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002501, OBSERVED: G8 - VFW Highway U/S of West Station, 48" Circular
WDr = 0.69; Volm=0.98 MG, Volo=1.18 MG; Qm=4.1 mgd, Qo=3.6 mgd; Qavg,m=1.2 mgd, Qavg,o=1.4 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002501, OBSERVED: G8 - VFW Highway U/S of West Station, 48" Circular
WDr = 0.74; Vm=2.2 fps, Vo=2.2 fps; Vavg,m=0.6 fps, Vavg,o=0.7 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

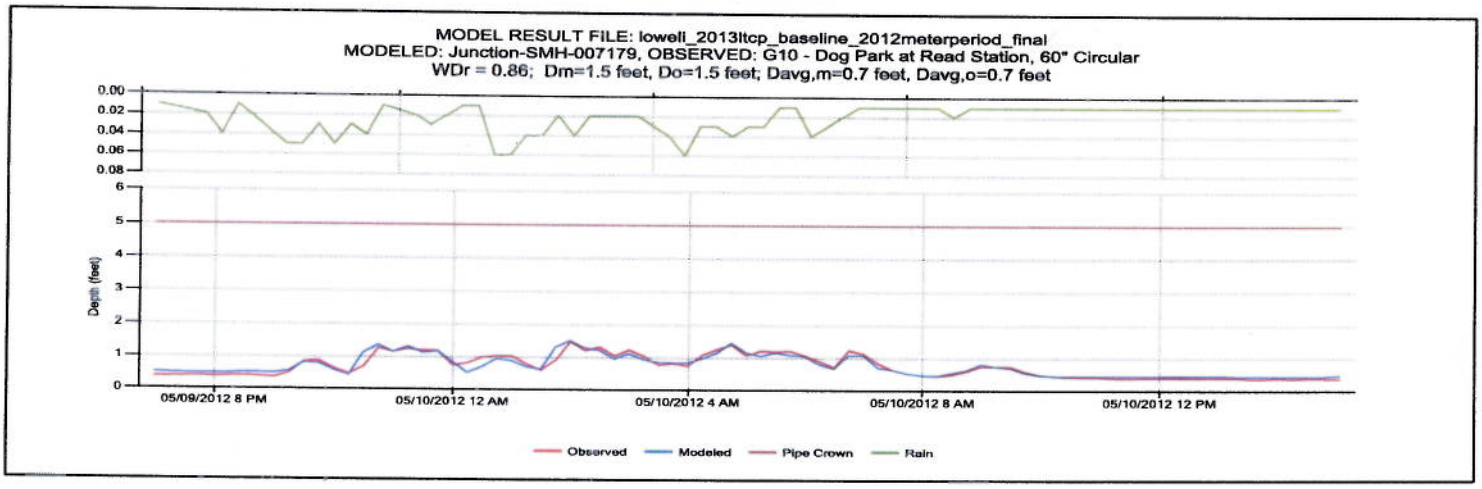
G9-Storm 2

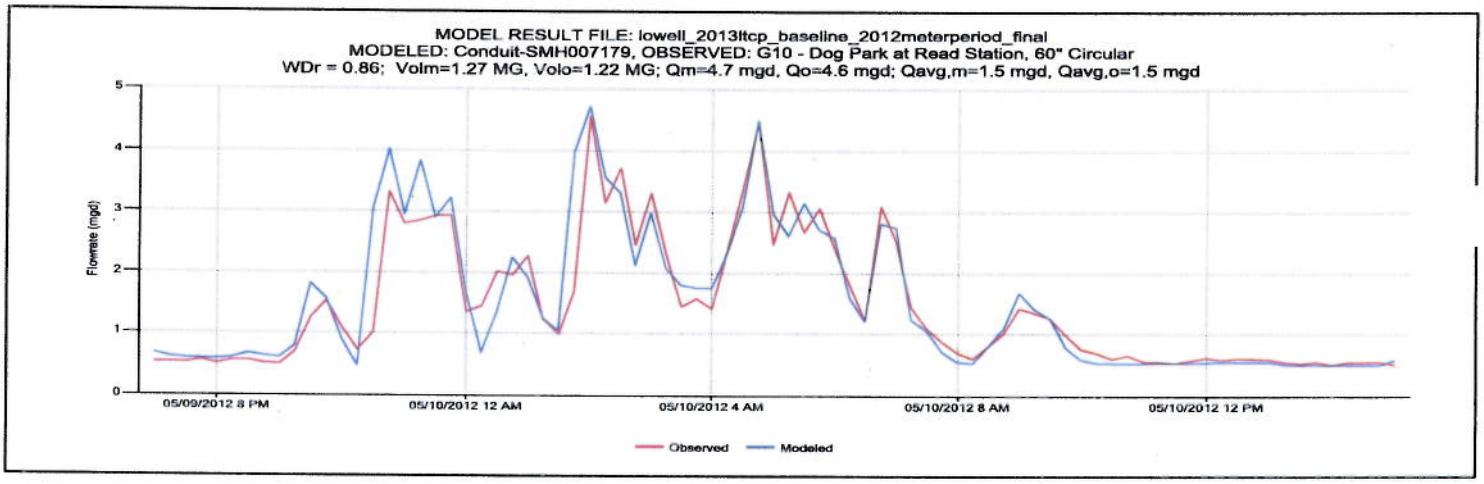

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002506, OBSERVED: G9 - Along Merrimack River between West and Read Stations, 96" Interceptor
WDr = 0.72; Dm=3.0 feet, Do=3.4 feet; Davg,m=2.2 feet, Davg,o=2.4 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

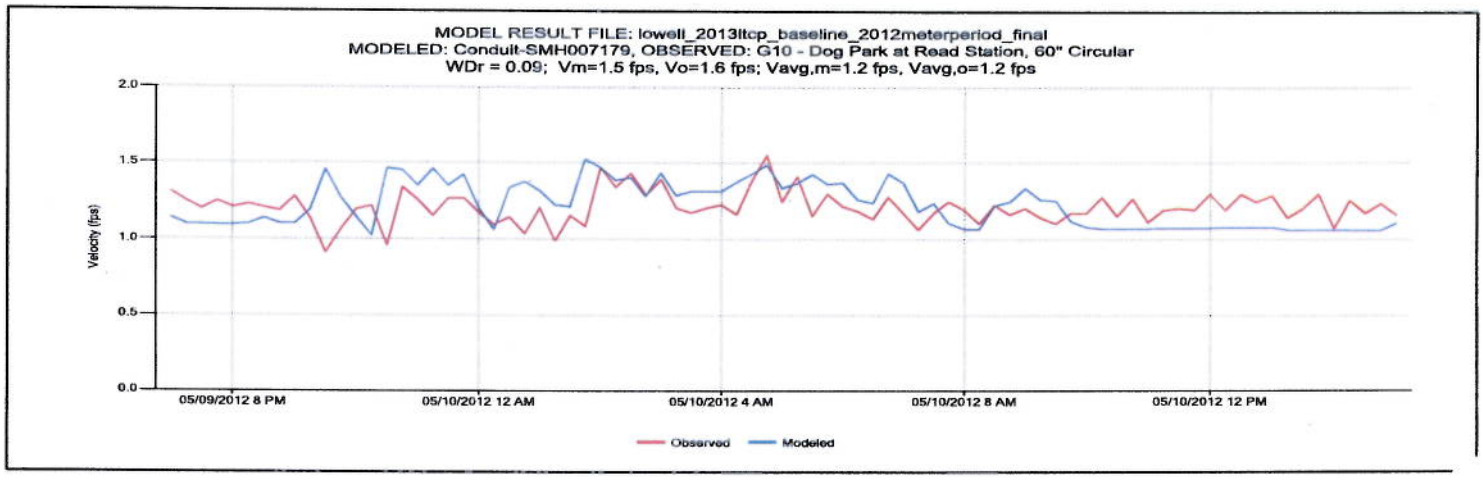

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002505, OBSERVED: G9 - Along Merrimack River between West and Read Stations, 96" Interceptor
WDr = 0.76; Volm=17.89 MG, Volo=20.25 MG; Qm=43.6 mgd, Qo=52.6 mgd; Qavg,m=21.5 mgd, Qavg,o=24.3 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002505, OBSERVED: G9 - Along Merrimack River between West and Read Stations, 96" Interceptor
WDr = 0.77; Vm=3.8 fps, Vo=4.6 fps; Vavg,m=2.8 fps, Vavg,o=2.8 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

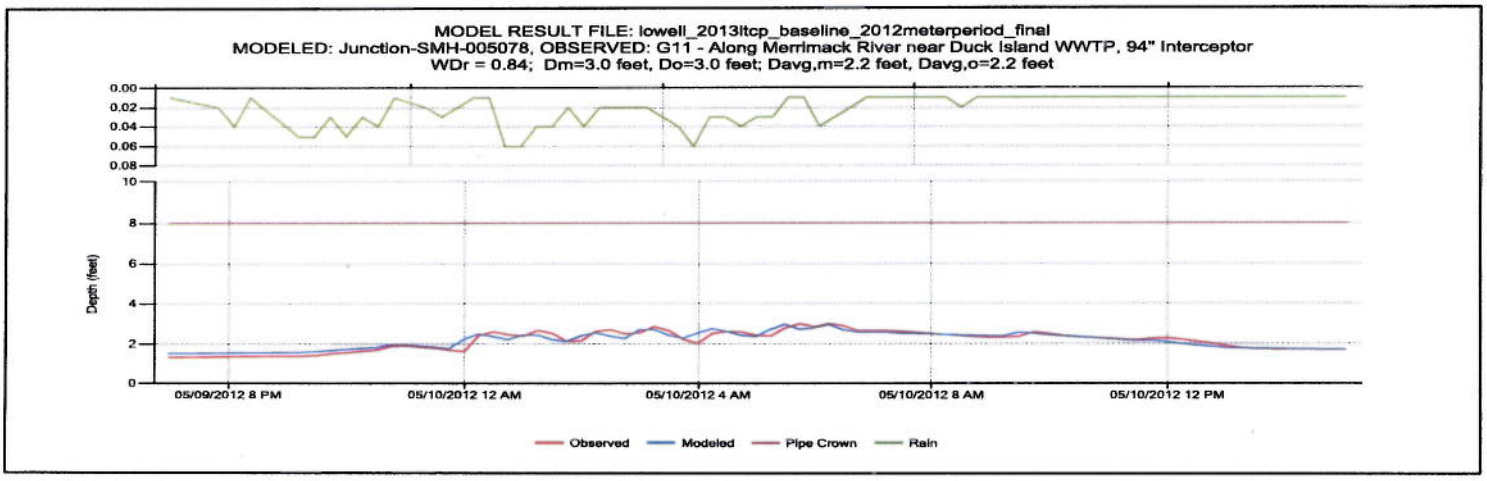
G10-Storm 2

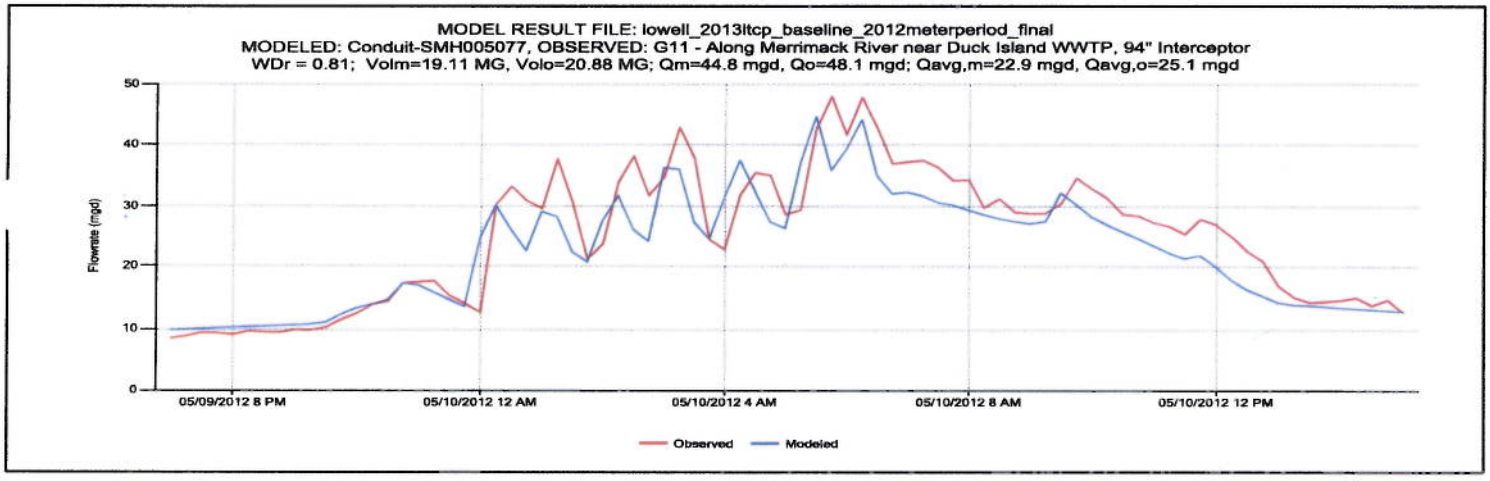

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007179, OBSERVED: G10 - Dog Park at Read Station, 60" Circular
WDr = 0.86; Dm=1.5 feet, Do=1.5 feet; Davg,m=0.7 feet, Davg,o=0.7 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

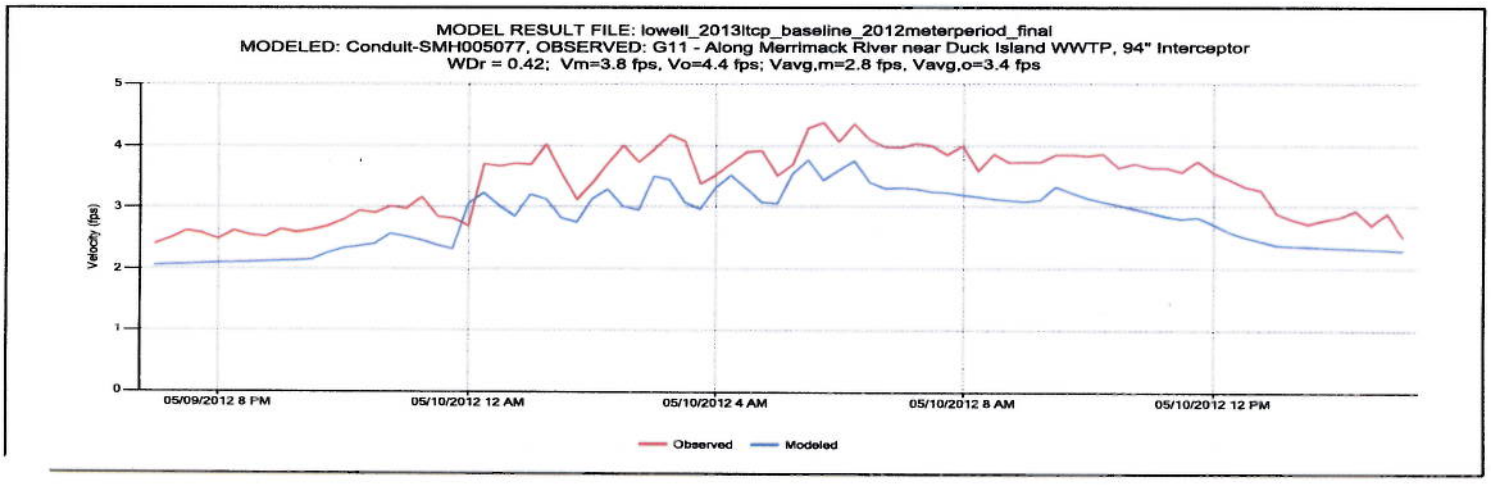

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH007179, OBSERVED: G10 - Dog Park at Read Station, 60" Circular
WDr = 0.86; Volm=1.27 MG, Volo=1.22 MG; Qm=4.7 mgd, Qo=4.6 mgd; Qavg,m=1.5 mgd, Qavg,o=1.5 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH007179, OBSERVED: G10 - Dog Park at Read Station, 60" Circular
WDr = 0.09; Vm=1.5 fps, Vo=1.6 fps; Vavg,m=1.2 fps, Vavg,o=1.2 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

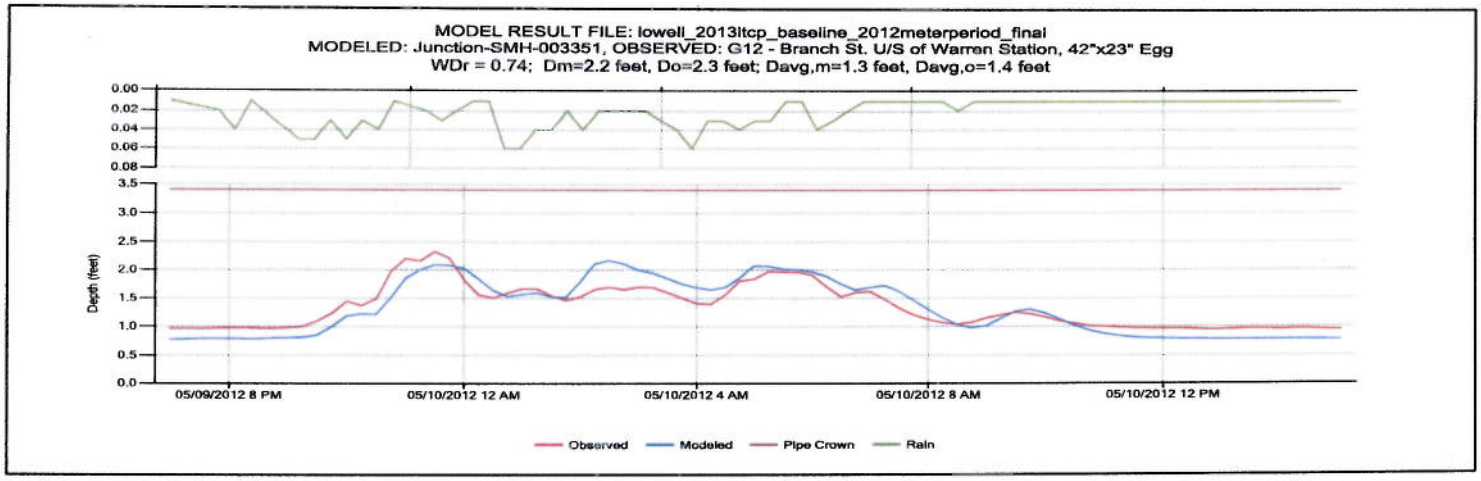
G11-Storm 2

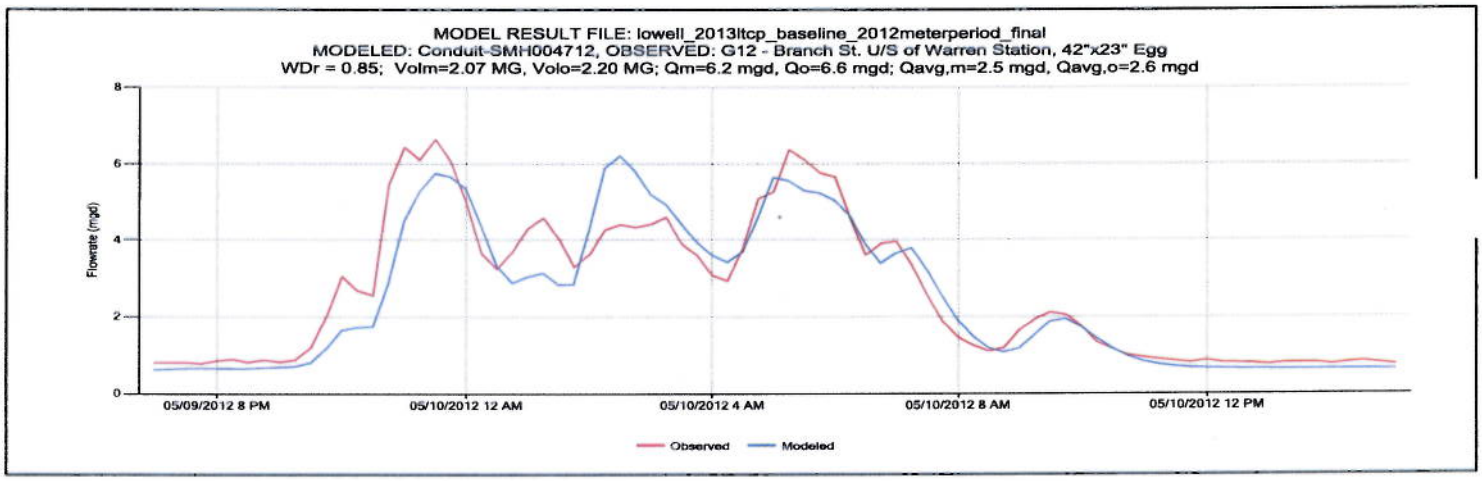

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-005078, OBSERVED: G11 - Along Merrimack River near Duck Island WWTP, 94" Interceptor
WDr = 0.84; Dm=3.0 feet, Do=3.0 feet; Davg,m=2.2 feet, Davg,o=2.2 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

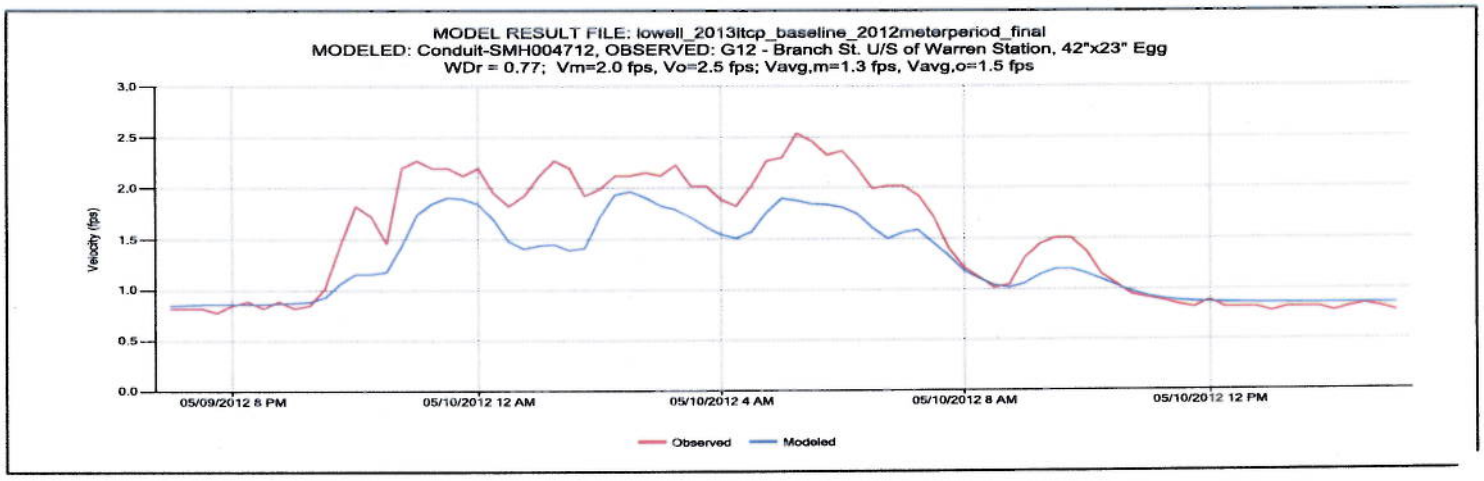

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005077, OBSERVED: G11 - Along Merrimack River near Duck Island WWTP, 94" Interceptor
WDr = 0.81; Volm=19.11 MG, Volo=20.88 MG; Qm=44.8 mgd, Qo=48.1 mgd; Qavg,m=22.9 mgd, Qavg,o=25.1 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005077, OBSERVED: G11 - Along Merrimack River near Duck Island WWTP, 94" Interceptor
WDr = 0.42; Vm=3.8 fps, Vo=4.4 fps; Vavg,m=2.8 fps, Vavg,o=3.4 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

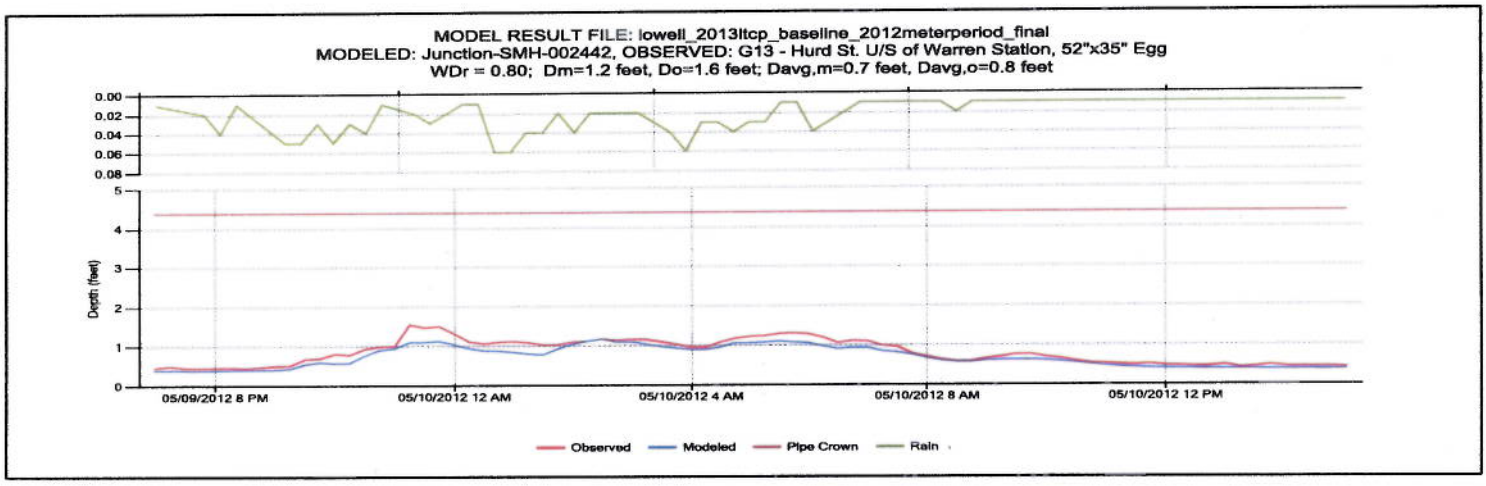
G12-Storm 2

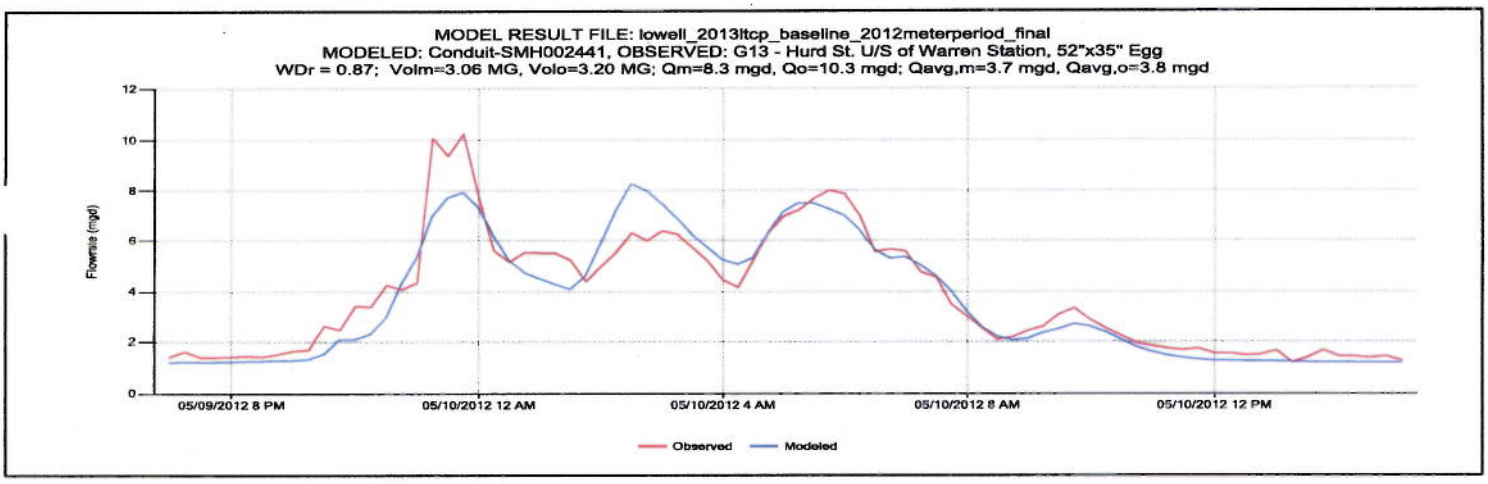

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-003351, OBSERVED: G12 - Branch St. U/S of Warren Station, 42"x23" Egg
WDr = 0.74; Dm=2.2 feet, Do=2.3 feet; Davg,m=1.3 feet, Davg,o=1.4 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004712, OBSERVED: G12 - Branch St. U/S of Warren Station, 42"x23" Egg
WDr = 0.85; Volm=2.07 MG, Volo=2.20 MG; Qm=6.2 mgd, Qo=6.6 mgd; Qavg,m=2.5 mgd, Qavg,o=2.6 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004712, OBSERVED: G12 - Branch St. U/S of Warren Station, 42"x23" Egg
WDr = 0.77; Vm=2.0 fps, Vo=2.5 fps; Vavg,m=1.3 fps, Vavg,o=1.5 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

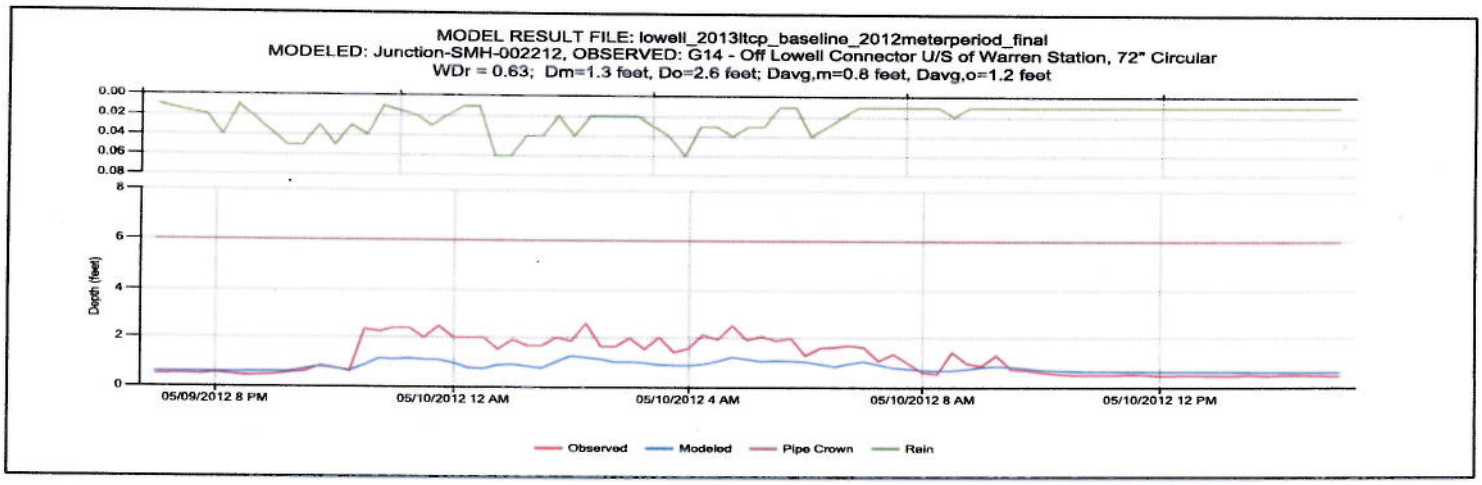
G13-Storm 2

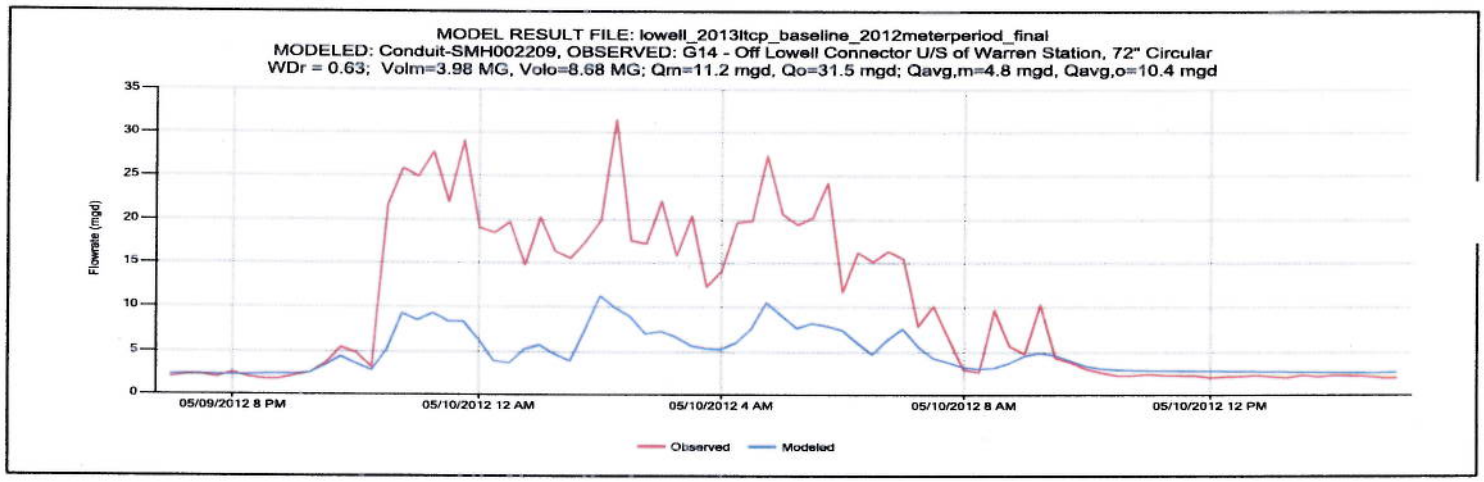

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002442, OBSERVED: G13 - Hurd St. U/S of Warren Station, 52"x35" Egg
WDr = 0.80; Dm=1.2 feet, Do=1.6 feet; Davg,m=0.7 feet, Davg,o=0.8 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

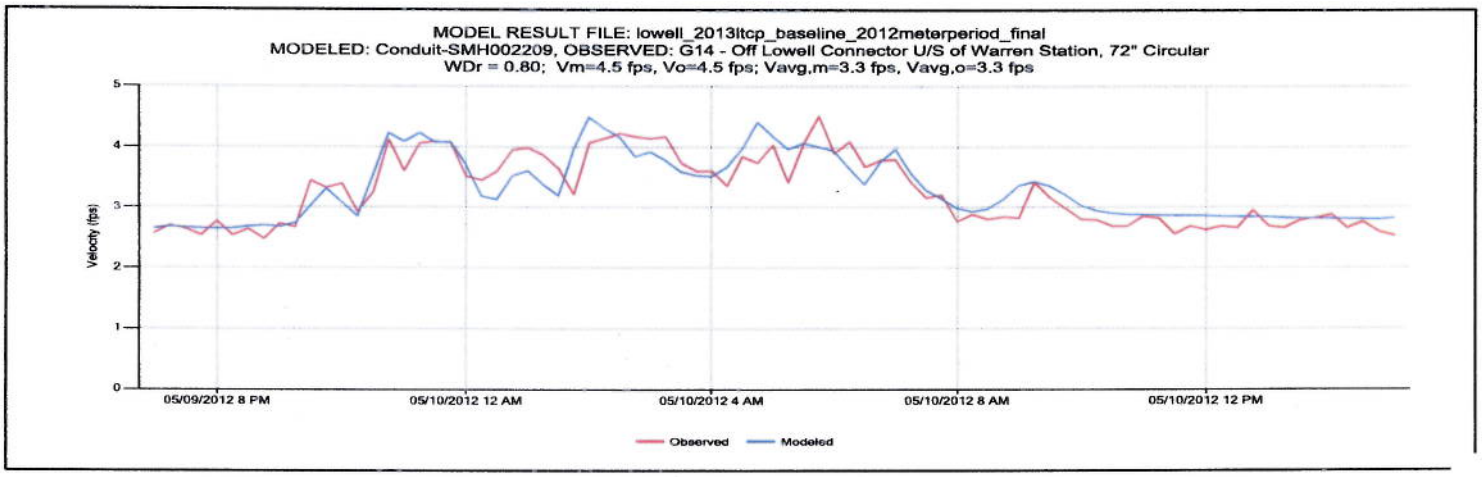

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002441, OBSERVED: G13 - Hurd St. U/S of Warren Station, 52"x35" Egg
WDr = 0.87; Volm=3.06 MG, Volo=3.20 MG; Qm=8.3 mgd, Qo=10.3 mgd; Qavg,m=3.7 mgd, Qavg,o=3.8 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002441, OBSERVED: G13 - Hurd St. U/S of Warren Station, 52"x35" Egg
WDr = 0.27; Vm=6.7 fps, Vo=6.2 fps; Vavg,m=5.0 fps, Vavg,o=5.0 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

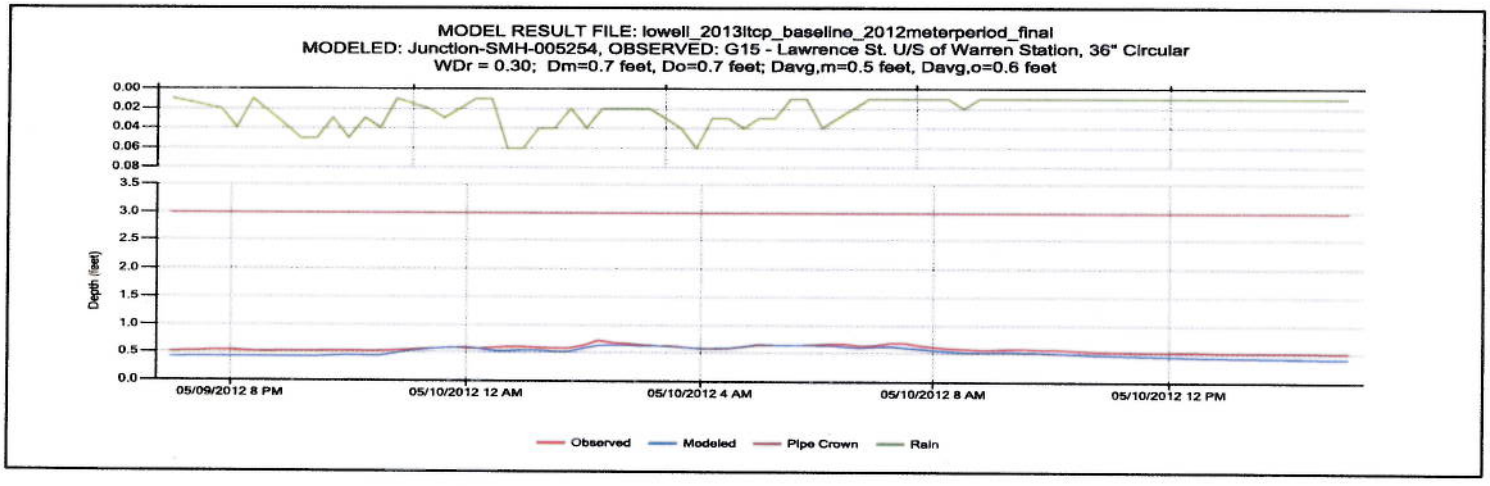
G14-Storm 2

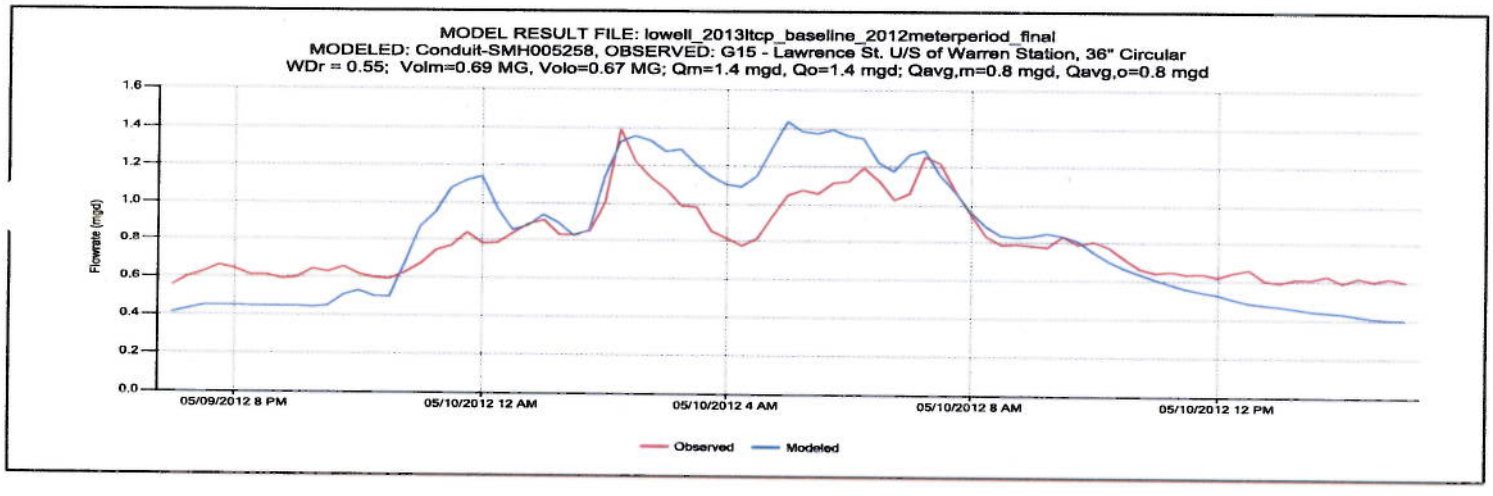

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002212, OBSERVED: G14 - Off Lowell Connector U/S of Warren Station, 72" Circular
WDr = 0.63; Dm=1.3 feet, Do=2.6 feet; Davg,m=0.8 feet, Davg,o=1.2 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

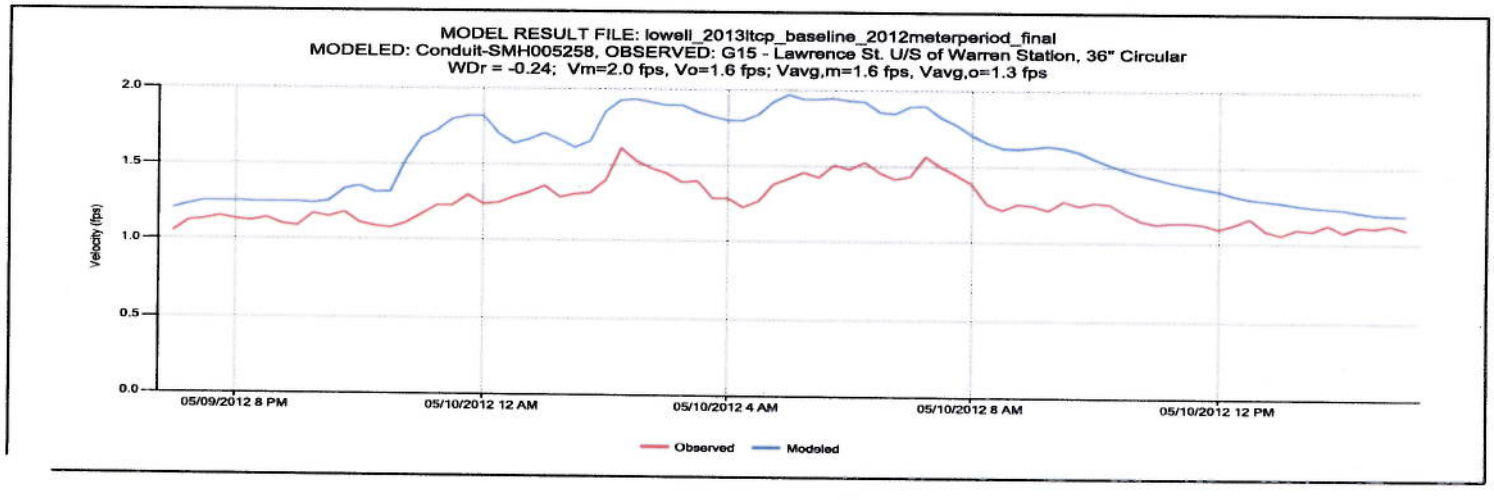

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002209, OBSERVED: G14 - Off Lowell Connector U/S of Warren Station, 72" Circular
WDr = 0.63; Volm=3.98 MG, Volo=8.68 MG; Qm=11.2 mgd, Qo=31.5 mgd; Qavg,m=4.8 mgd, Qavg,o=10.4 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002209, OBSERVED: G14 - Off Lowell Connector U/S of Warren Station, 72" Circular
WDr = 0.80; Vm=4.5 fps, Vo=4.5 fps; Vavg,m=3.3 fps, Vavg,o=3.3 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

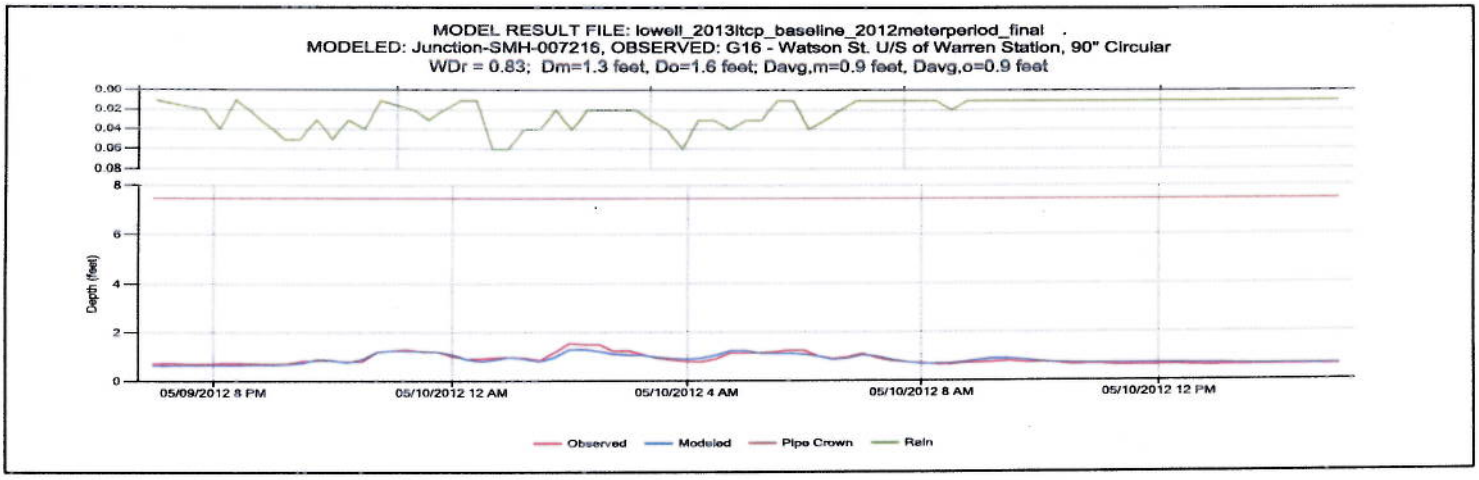
G15-Storm 2

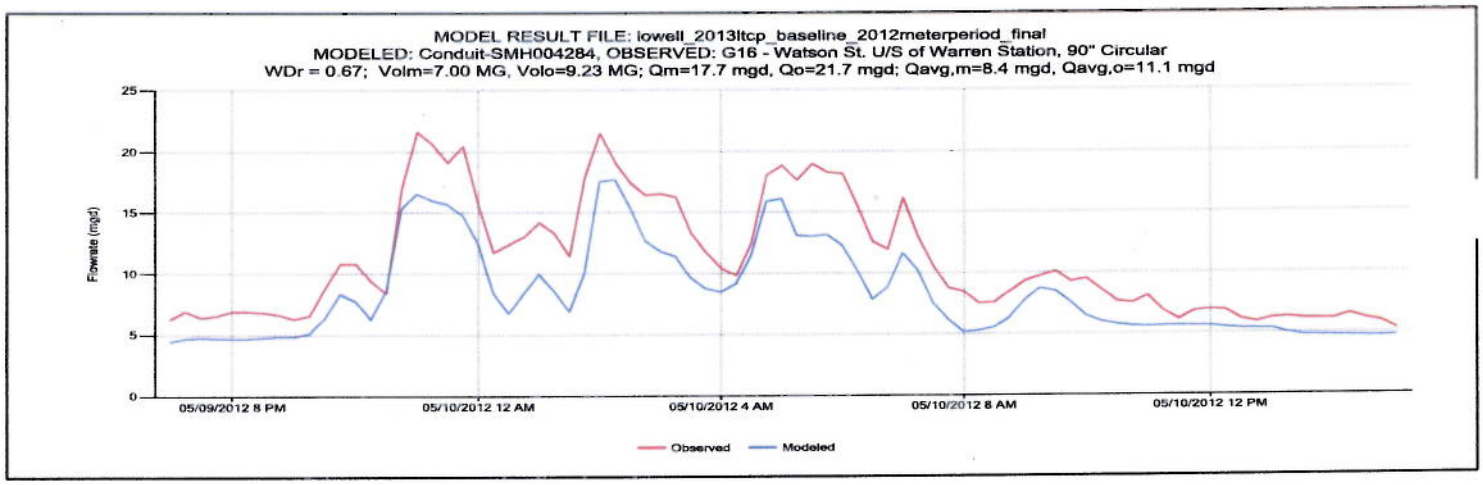

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-005254, OBSERVED: G15 - Lawrence St. U/S of Warren Station, 36" Circular
WDr = 0.30; Dm=0.7 feet, Do=0.7 feet; Davg,m=0.5 feet, Davg,o=0.6 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

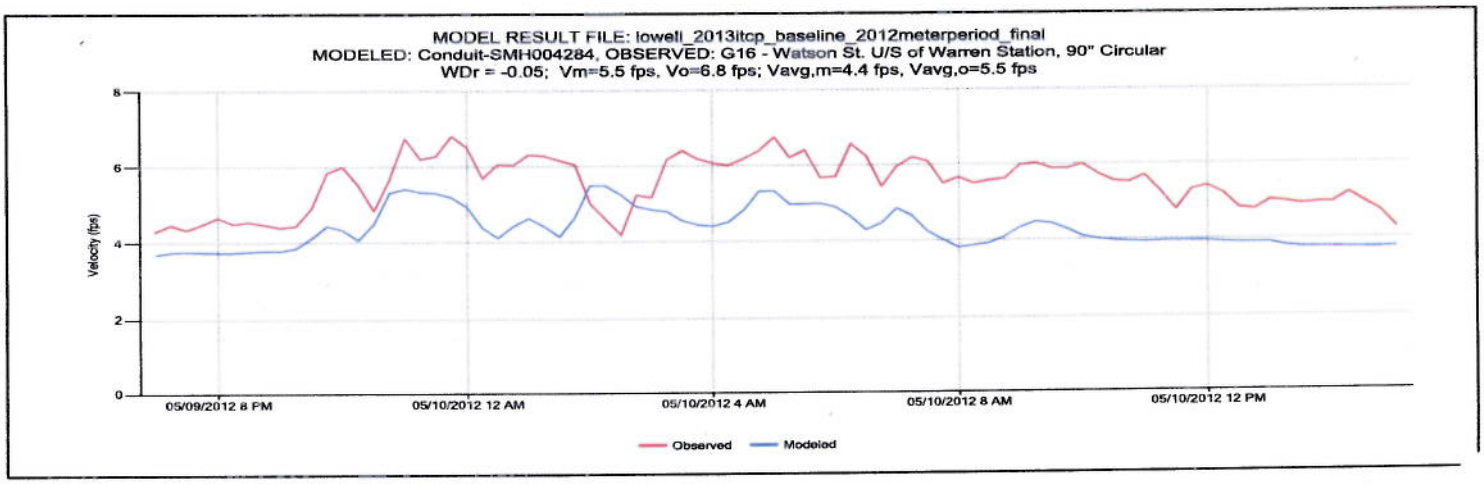

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005258, OBSERVED: G15 - Lawrence St. U/S of Warren Station, 36" Circular
WDr = 0.55; Volm=0.69 MG, Volo=0.67 MG; Qm=1.4 mgd, Qo=1.4 mgd; Qavg,m=0.8 mgd, Qavg,o=0.8 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005258, OBSERVED: G15 - Lawrence St. U/S of Warren Station, 36" Circular
WDr = -0.24; Vm=2.0 fps, Vo=1.6 fps; Vavg,m=1.6 fps, Vavg,o=1.3 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

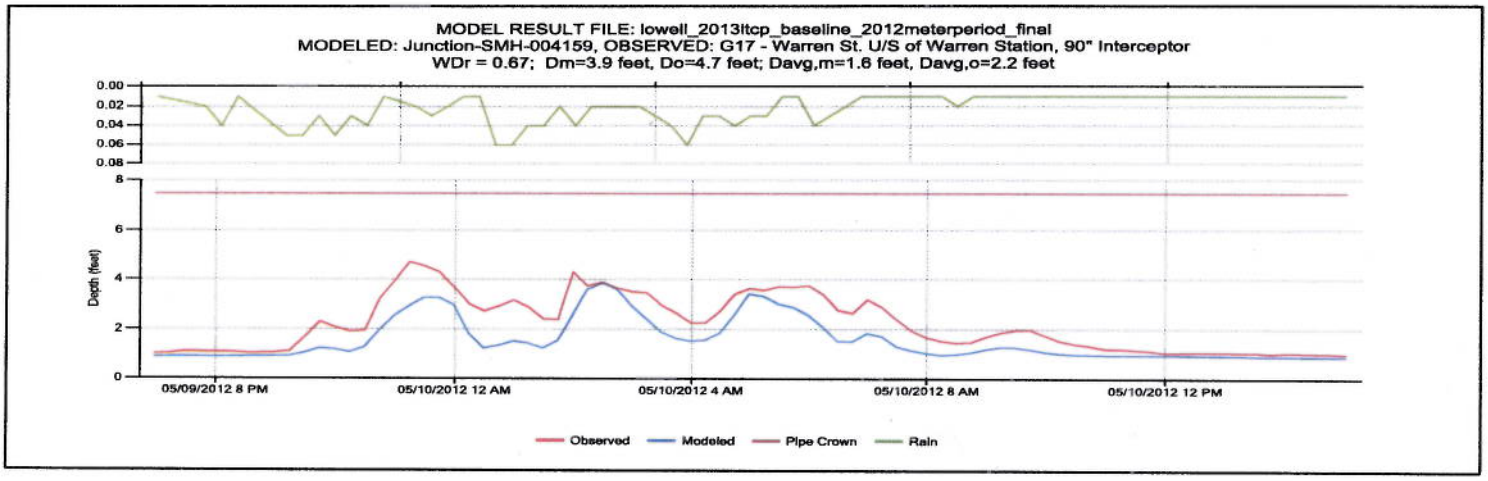
G16-Storm 2

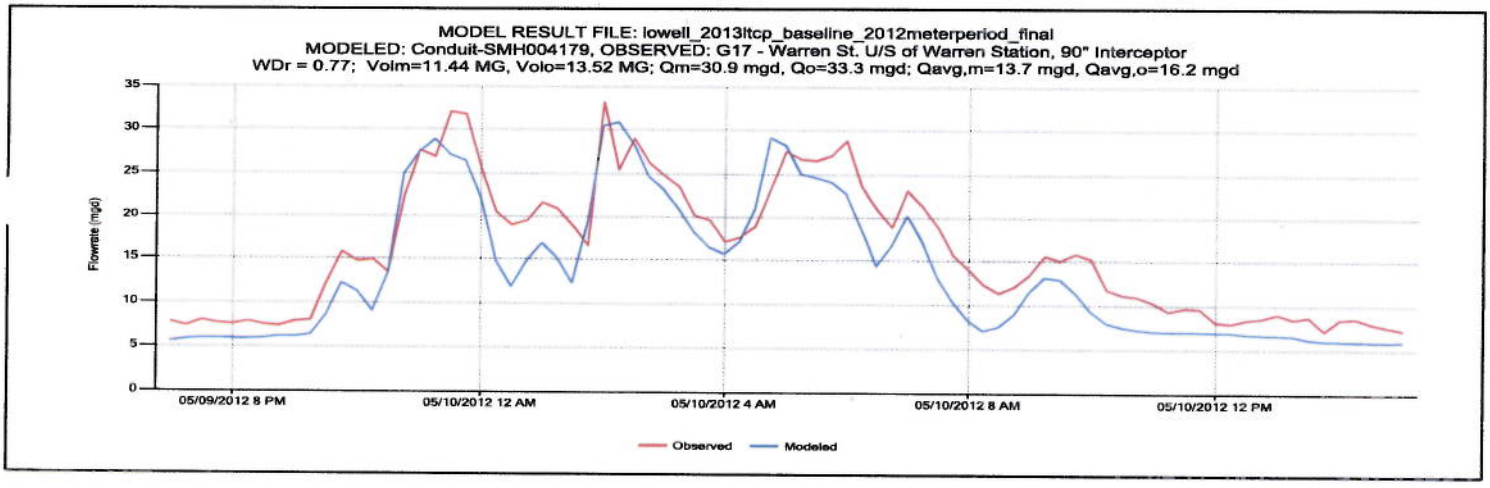

MODEL RESULT FILE: lowell_2013itcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007216, OBSERVED: G16 - Watson St. U/S of Warren Station, 90" Circular
WDr = 0.83; Dm=1.3 feet, Do=1.6 feet; Davg,m=0.9 feet, Davg,o=0.9 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

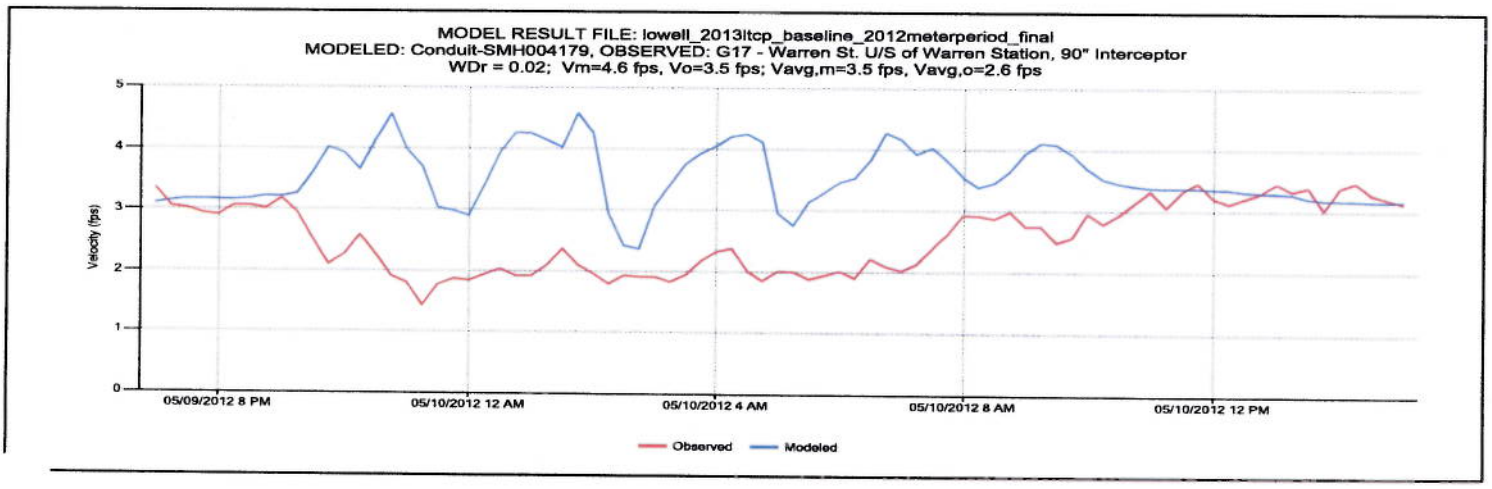

MODEL RESULT FILE: lowell_2013itcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004284, OBSERVED: G16 - Watson St. U/S of Warren Station, 90" Circular
WDr = 0.67; Volm=7.00 MG, Volo=9.23 MG; Qm=17.7 mgd, Qo=21.7 mgd; Qavg,m=8.4 mgd, Qavg,o=11.1 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013itcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004284, OBSERVED: G16 - Watson St. U/S of Warren Station, 90" Circular
WDr = -0.05; Vm=5.5 fps, Vo=6.8 fps; Vavg,m=4.4 fps, Vavg,o=5.5 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

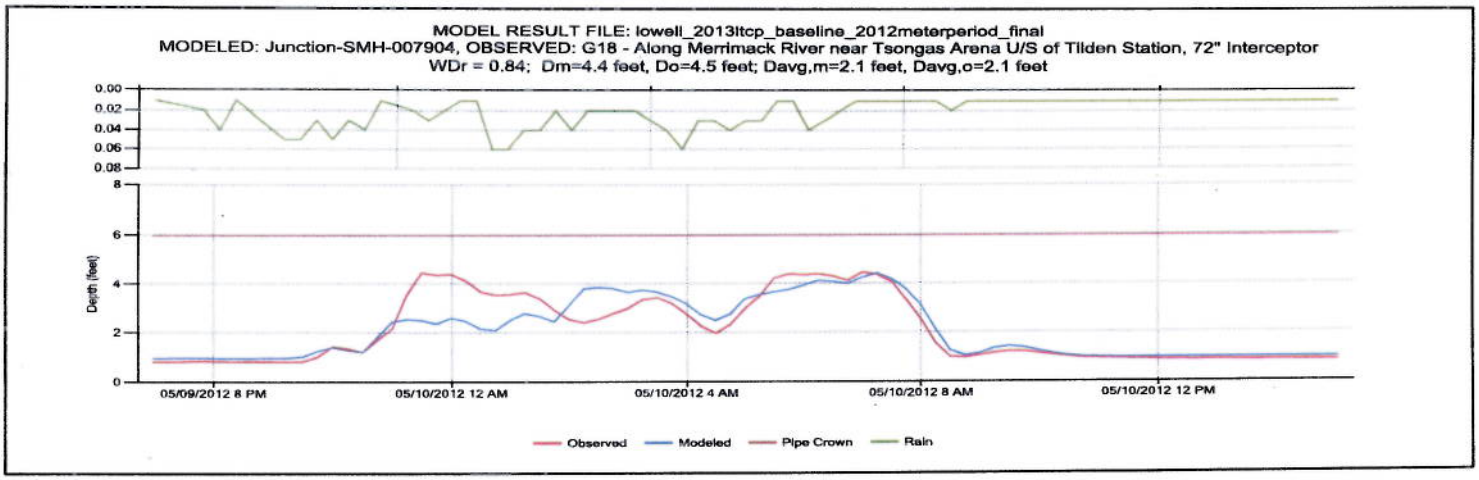
G17-Storm 2

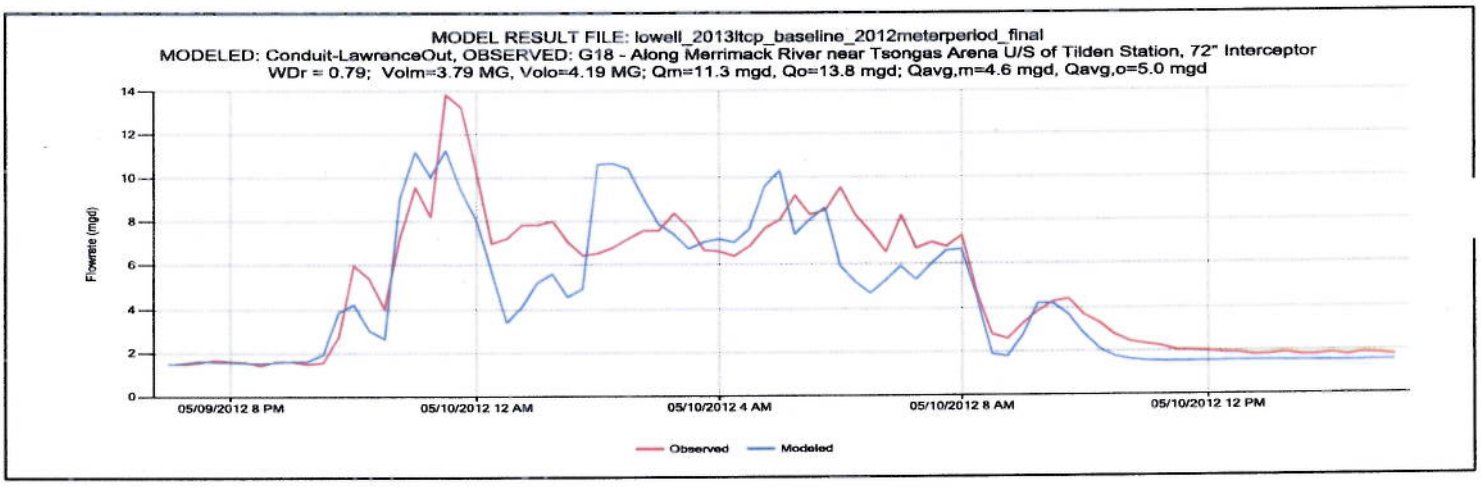

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-004159, OBSERVED: G17 - Warren St. U/S of Warren Station, 90" Interceptor
WDr = 0.67; Dm=3.9 feet, Do=4.7 feet; Davg,m=1.6 feet, Davg,o=2.2 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

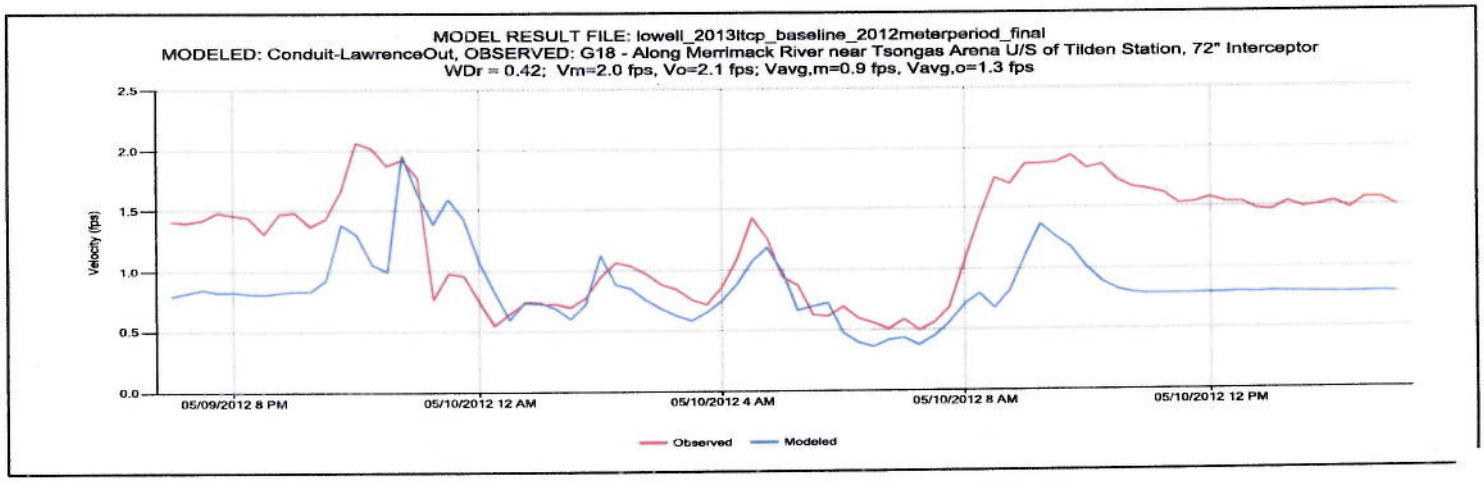

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004179, OBSERVED: G17 - Warren St. U/S of Warren Station, 90" Interceptor
WDr = 0.77; Volm=11.44 MG, Volo=13.52 MG; Qm=30.9 mgd, Qo=33.3 mgd; Qavg,m=13.7 mgd, Qavg,o=16.2 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004179, OBSERVED: G17 - Warren St. U/S of Warren Station, 90" Interceptor
WDr = 0.02; Vm=4.6 fps, Vo=3.5 fps; Vavg,m=3.5 fps, Vavg,o=2.6 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

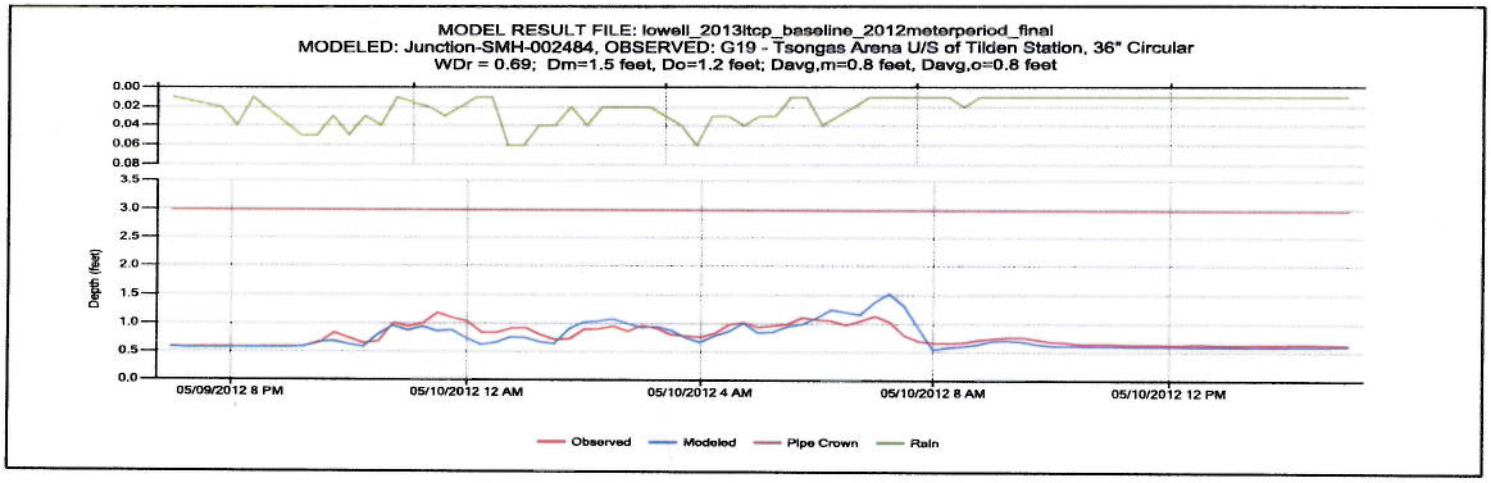
G18-Storm 2

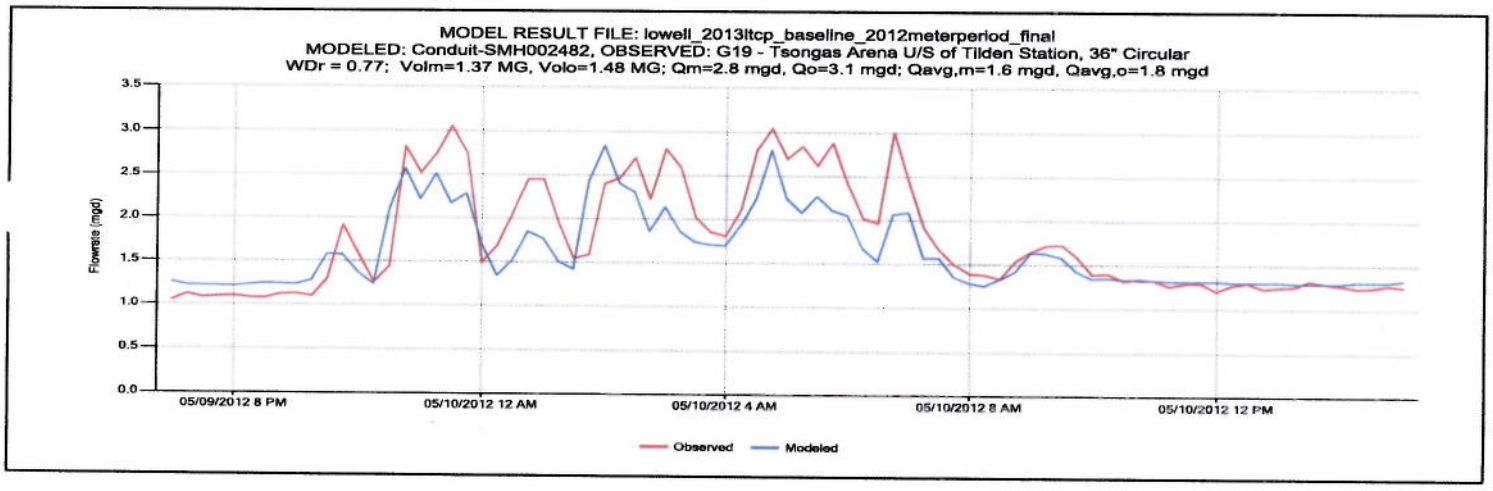

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007904, OBSERVED: G18 - Along Merrimack River near Tsongas Arena U/S of Tilden Station, 72" Interceptor
WDr = 0.84; Dm=4.4 feet, Do=4.5 feet; Davg,m=2.1 feet, Davg,o=2.1 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

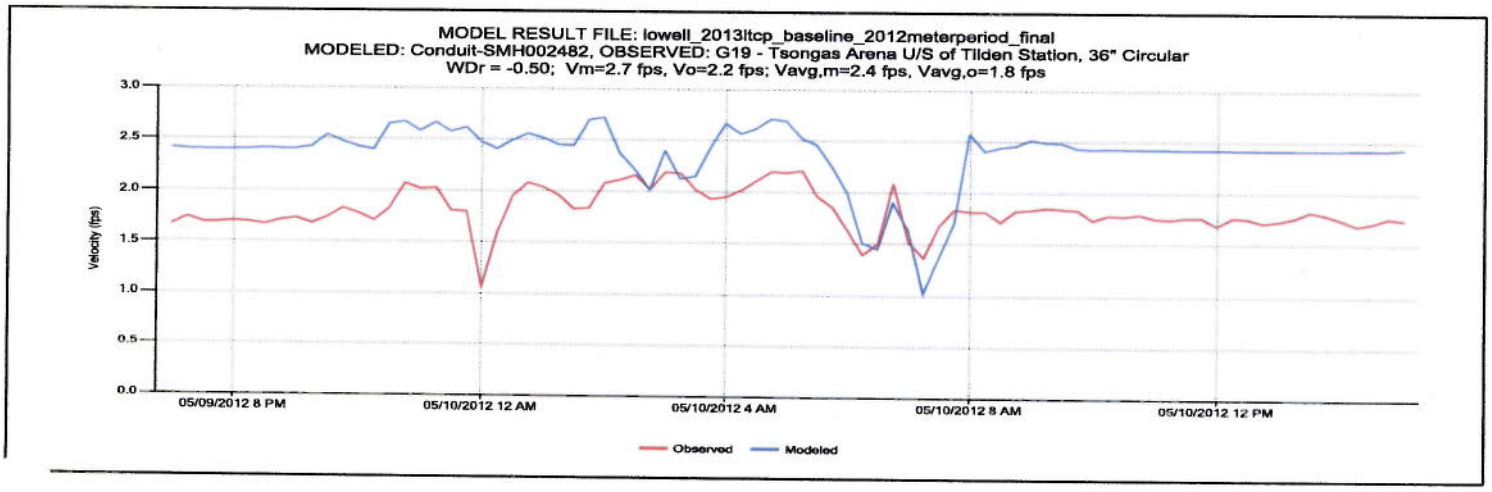

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-LawrenceOut, OBSERVED: G18 - Along Merrimack River near Tsongas Arena U/S of Tilden Station, 72" Interceptor
WDr = 0.79; Volm=3.79 MG, Volo=4.19 MG; Qm=11.3 mgd, Qo=13.8 mgd; Qavg,m=4.6 mgd, Qavg,o=5.0 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-LawrenceOut, OBSERVED: G18 - Along Merrimack River near Tsongas Arena U/S of Tilden Station, 72" Interceptor
WDr = 0.42; Vm=2.0 fps, Vo=2.1 fps; Vavg,m=0.9 fps, Vavg,o=1.3 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

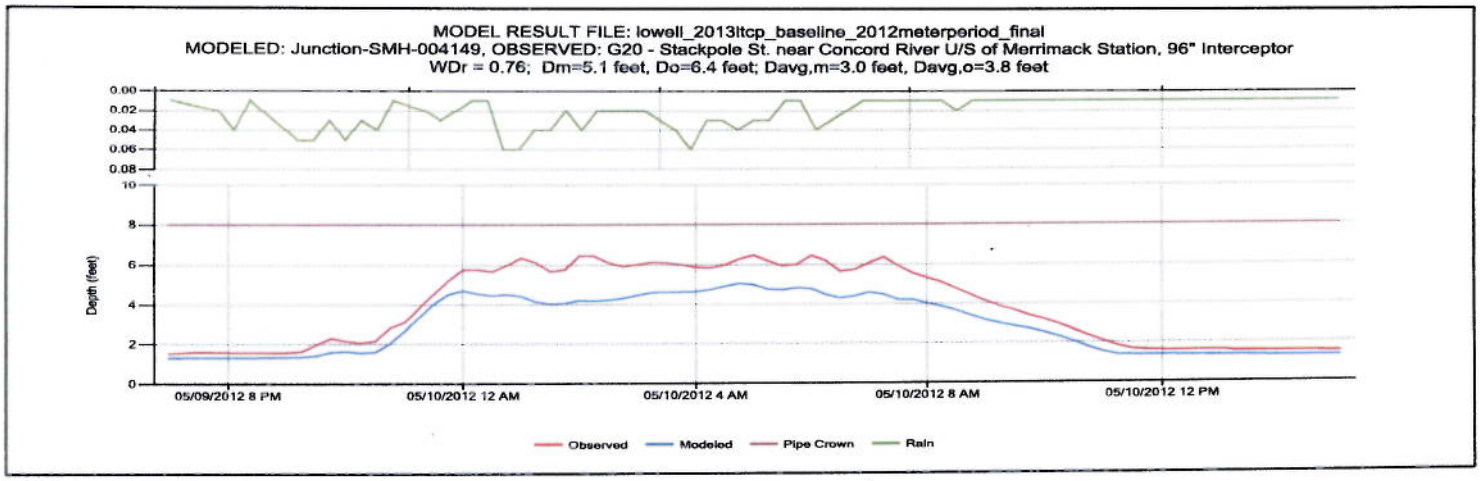
G19-Storm 2

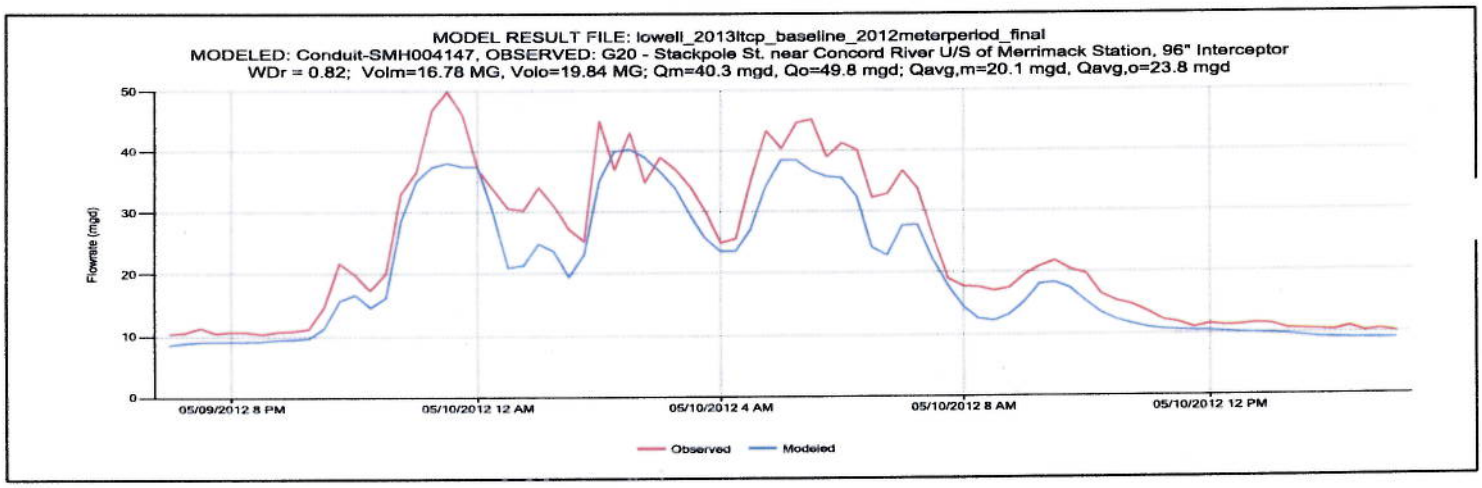

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-002484, OBSERVED: G19 - Tsongas Arena U/S of Tilden Station, 36" Circular
WDr = 0.69; Dm=1.5 feet, Do=1.2 feet; Davg,m=0.8 feet, Davg,o=0.8 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

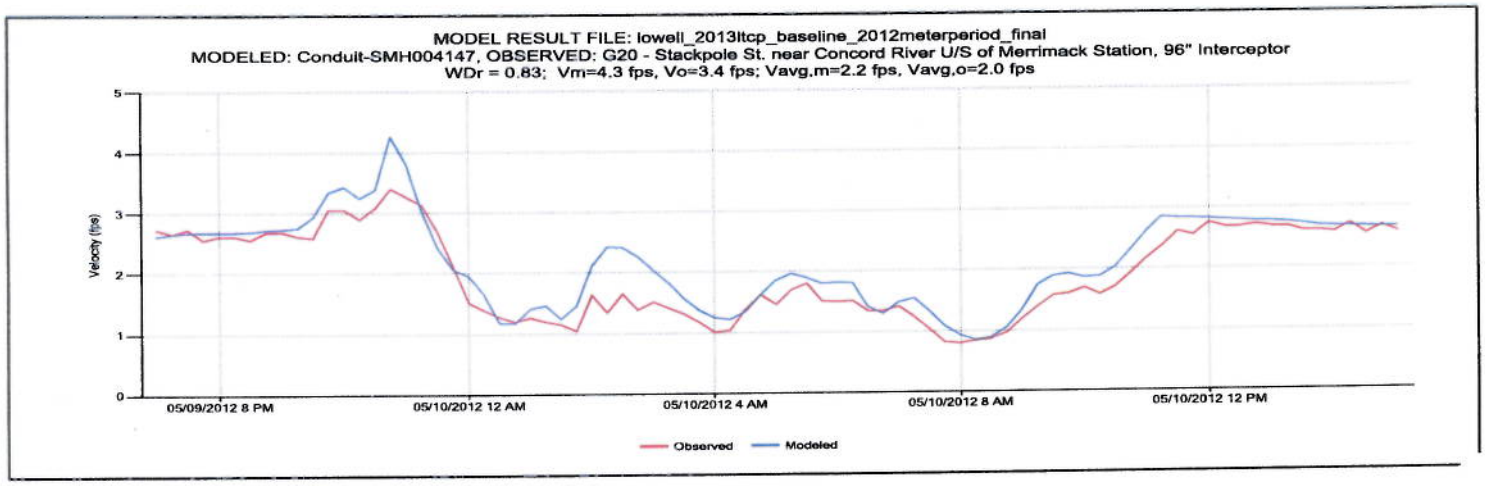

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002482, OBSERVED: G19 - Tsongas Arena U/S of Tilden Station, 36" Circular
WDr = 0.77; Volm=1.37 MG, Volo=1.48 MG; Qm=2.8 mgd, Qo=3.1 mgd; Qavg,m=1.6 mgd, Qavg,o=1.8 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH002482, OBSERVED: G19 - Tsongas Arena U/S of Tilden Station, 36" Circular
WDr = -0.50; Vm=2.7 fps, Vo=2.2 fps; Vavg,m=2.4 fps, Vavg,o=1.8 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

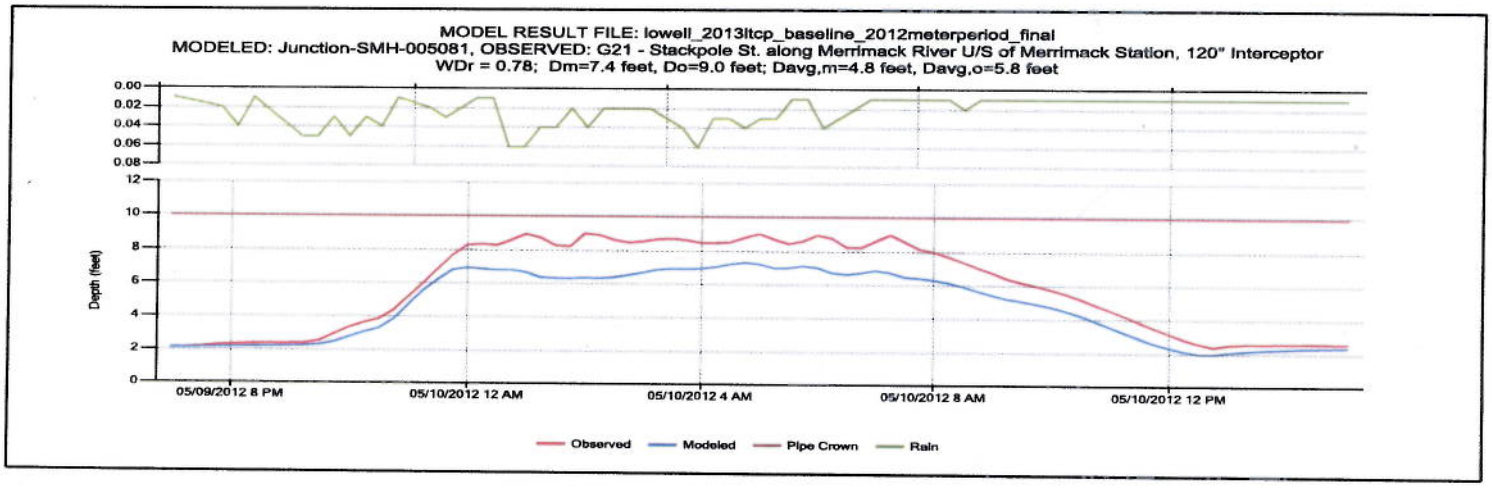
G20-Storm 2

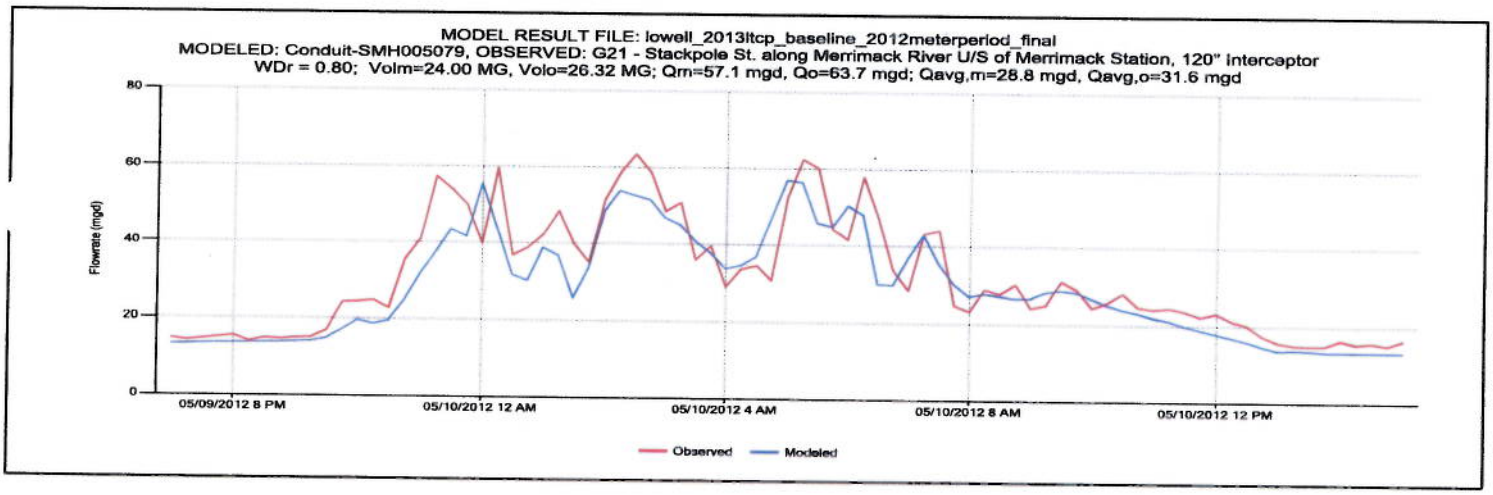

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-004149, OBSERVED: G20 - Stackpole St. near Concord River U/S of Merrimack Station, 96" Interceptor
WDr = 0.76; Dm=5.1 feet, Do=6.4 feet; Davg,m=3.0 feet, Davg,o=3.8 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

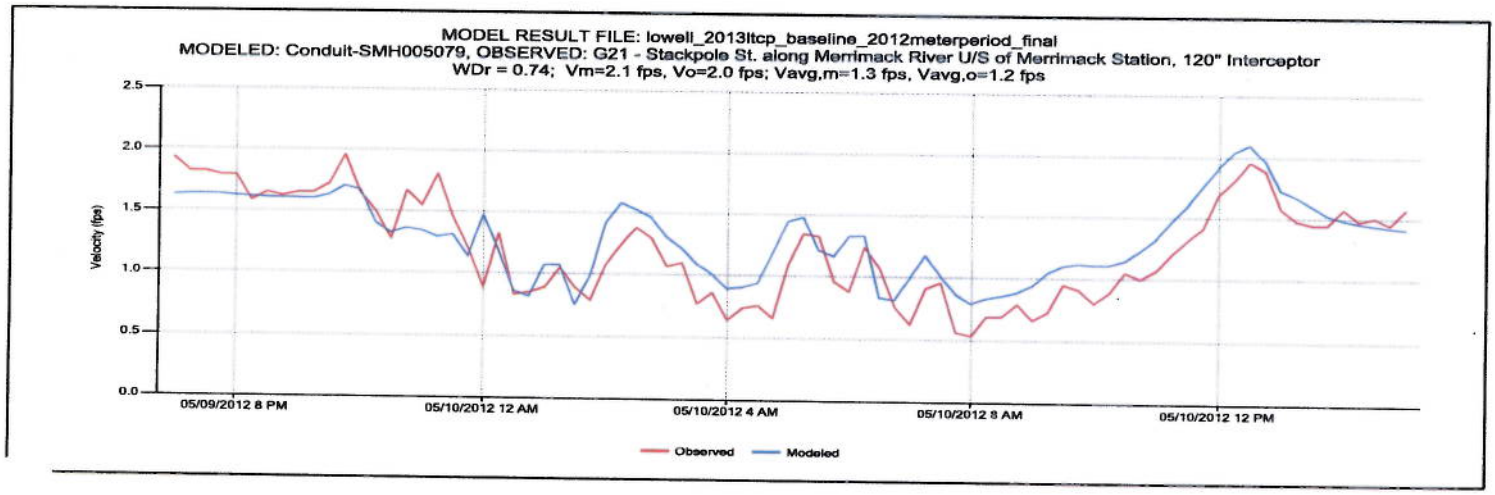

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004147, OBSERVED: G20 - Stackpole St. near Concord River U/S of Merrimack Station, 96" Interceptor
WDr = 0.82; Volm=16.78 MG, Volo=19.84 MG; Qm=40.3 mgd, Qo=49.8 mgd; Qavg,m=20.1 mgd, Qavg,o=23.8 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004147, OBSERVED: G20 - Stackpole St. near Concord River U/S of Merrimack Station, 96" Interceptor
WDr = 0.83; Vm=4.3 fps, Vo=3.4 fps; Vavg,m=2.2 fps, Vavg,o=2.0 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

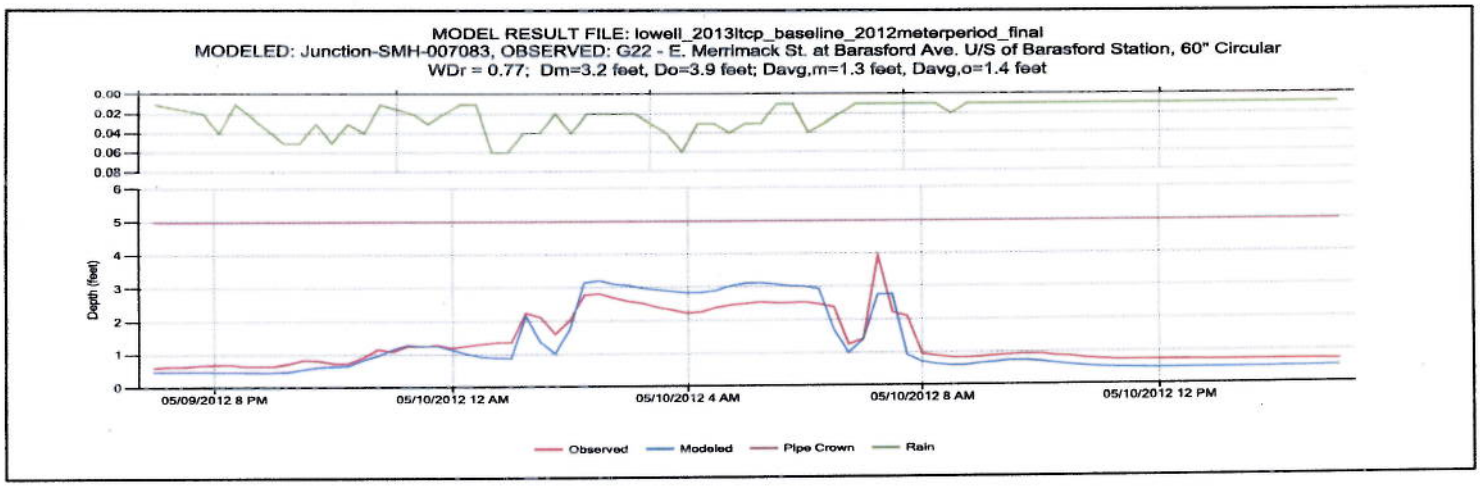
G21-Storm 2

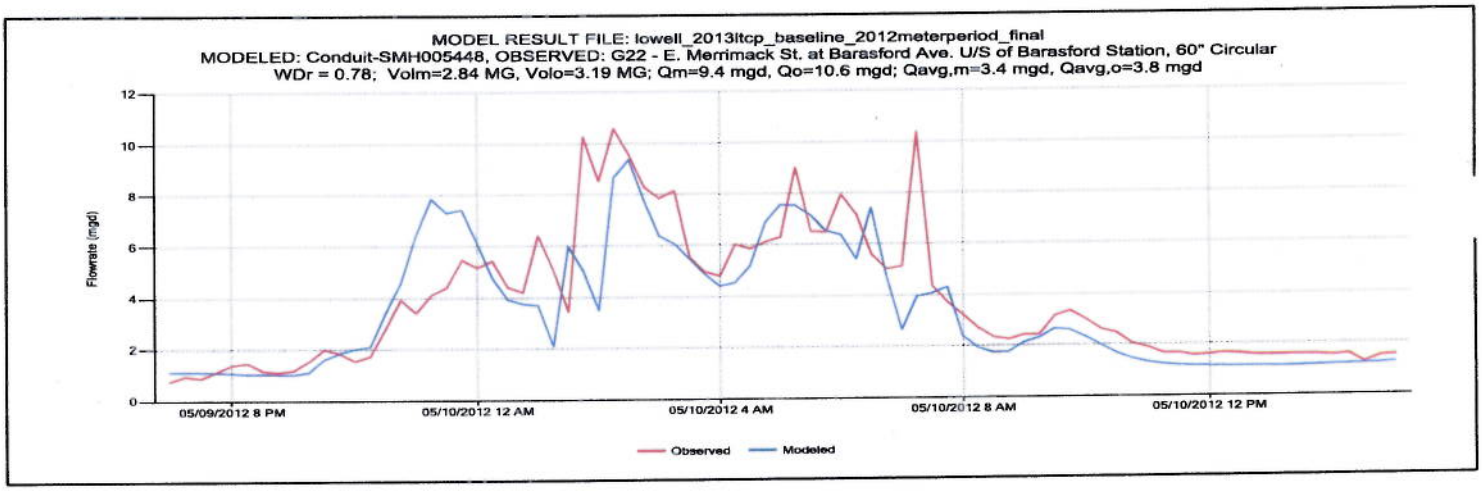

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-005081, OBSERVED: G21 - Stackpole St. along Merrimack River U/S of Merrimack Station, 120" Interceptor
WDr = 0.78; Dm=7.4 feet, Do=9.0 feet; Davg,m=4.8 feet, Davg,o=5.8 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

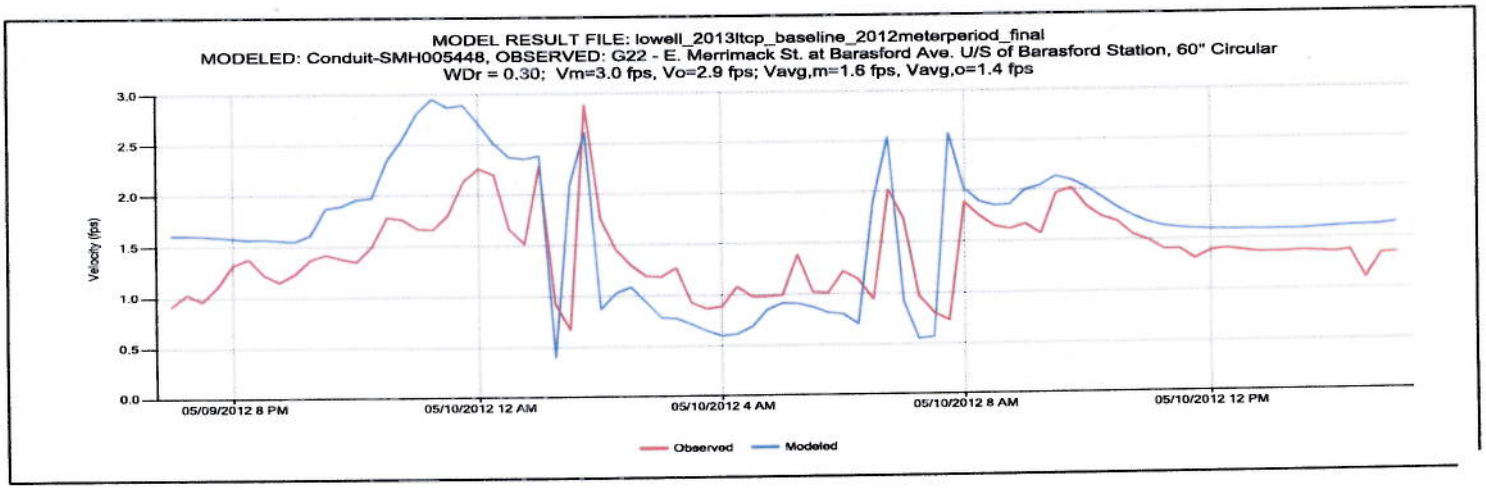

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005079, OBSERVED: G21 - Stackpole St. along Merrimack River U/S of Merrimack Station, 120" Interceptor
WDr = 0.80; Volm=24.00 MG, Volo=26.32 MG; Qm=57.1 mgd, Qo=63.7 mgd; Qavg,m=28.8 mgd, Qavg,o=31.6 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005079, OBSERVED: G21 - Stackpole St. along Merrimack River U/S of Merrimack Station, 120" Interceptor
WDr = 0.74; Vm=2.1 fps, Vo=2.0 fps; Vavg,m=1.3 fps, Vavg,o=1.2 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

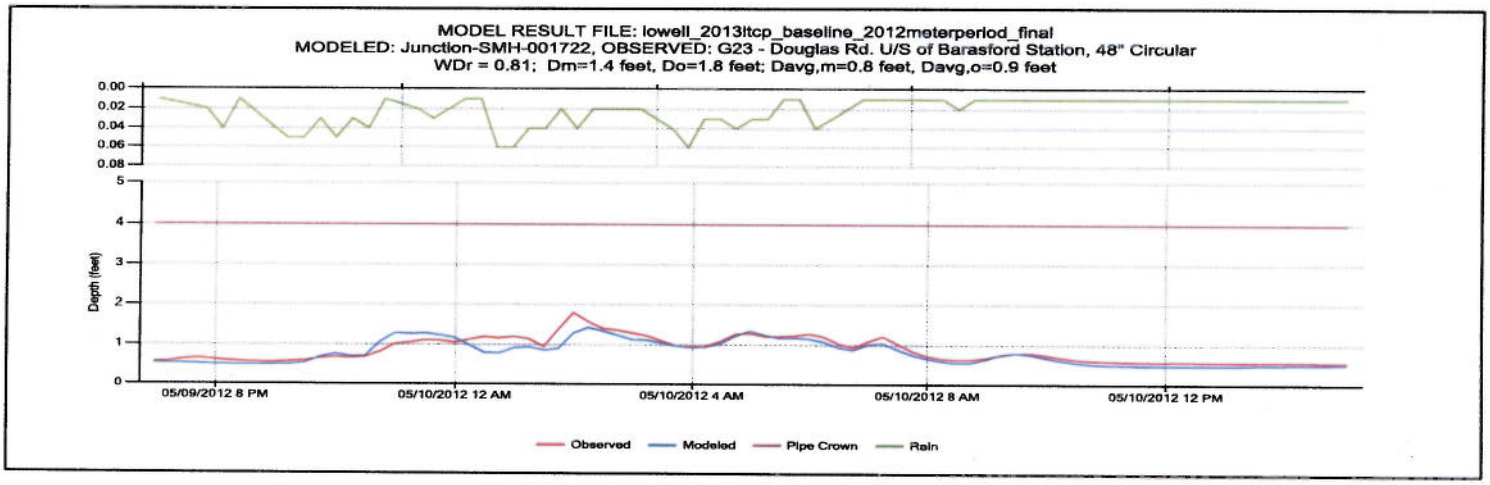
G22-Storm 2

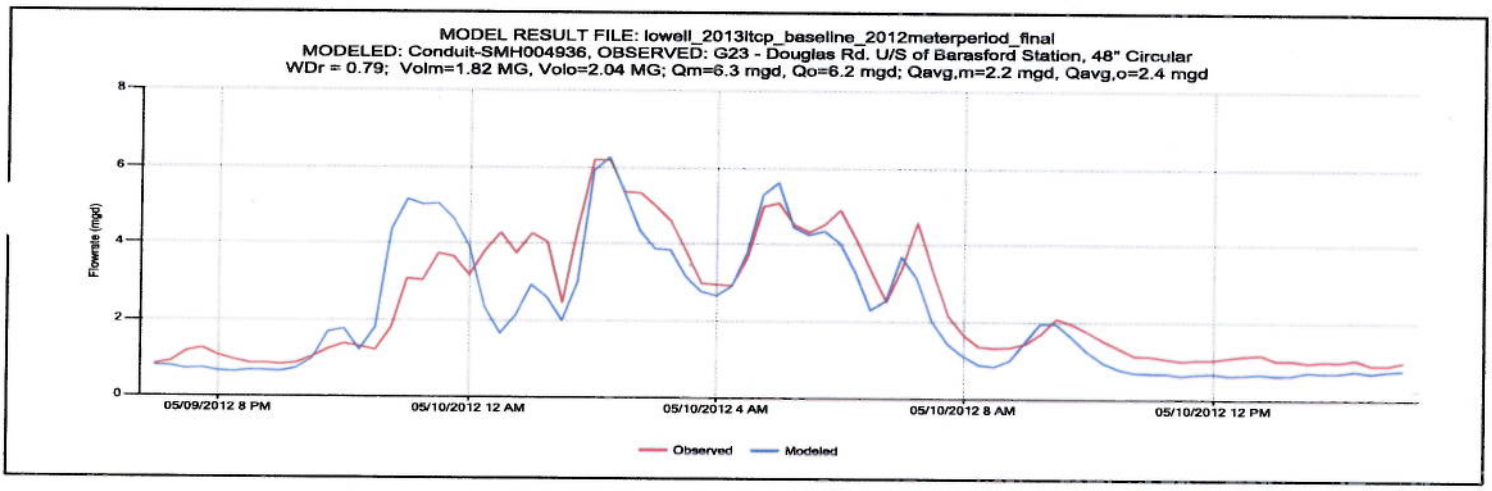

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-007083, OBSERVED: G22 - E. Merrimack St. at Barasford Ave. U/S of Barasford Station, 60" Circular
WDr = 0.77; Dm=3.2 feet, Do=3.9 feet; Davg,m=1.3 feet, Davg,o=1.4 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

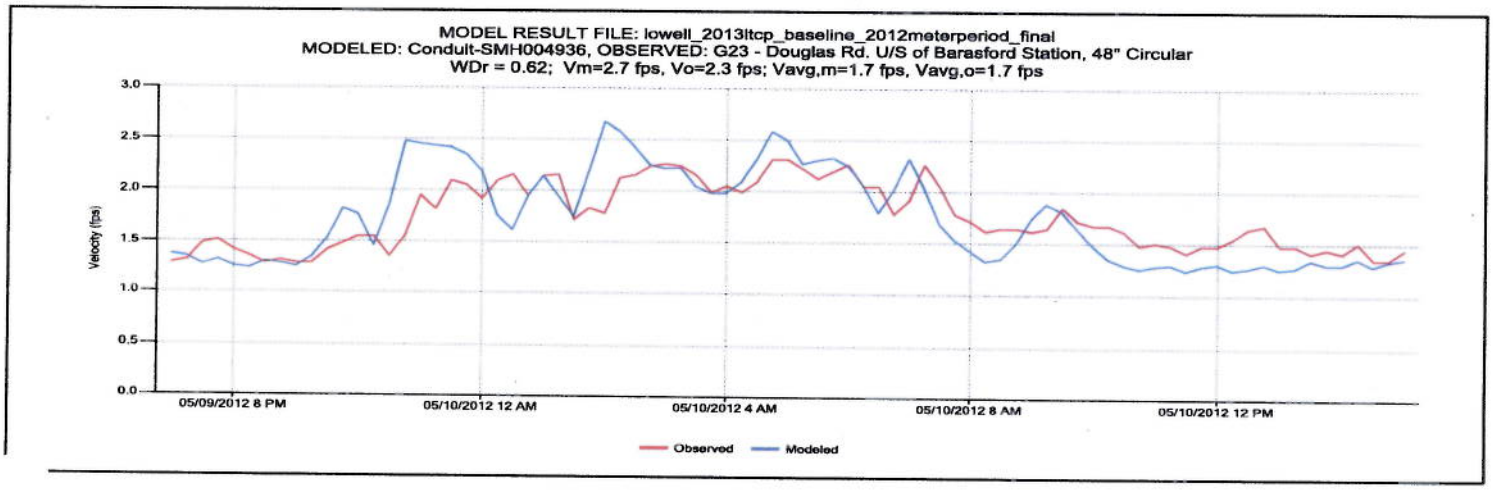

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005448, OBSERVED: G22 - E. Merrimack St. at Barasford Ave. U/S of Barasford Station, 60" Circular
WDr = 0.78; Volm=2.84 MG, Volo=3.19 MG; Qm=9.4 mgd, Qo=10.6 mgd; Qavg,m=3.4 mgd, Qavg,o=3.8 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH005448, OBSERVED: G22 - E. Merrimack St. at Barasford Station, 60" Circular
WDr = 0.30; Vm=3.0 fps, Vo=2.9 fps; Vavg,m=1.6 fps, Vavg,o=1.4 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

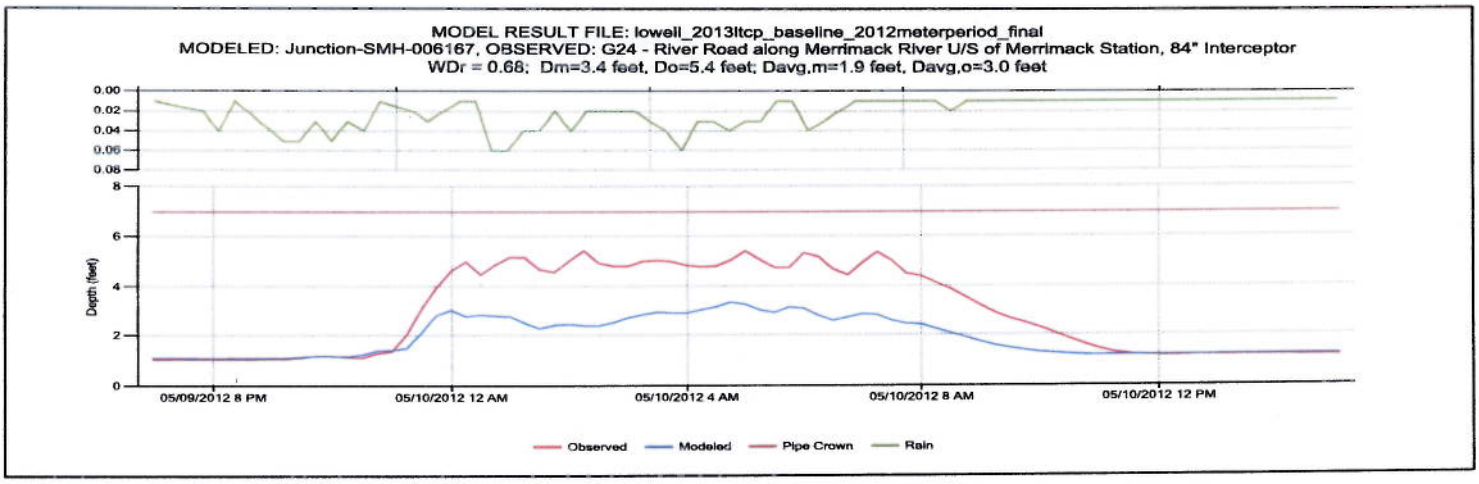
G23-Storm 2

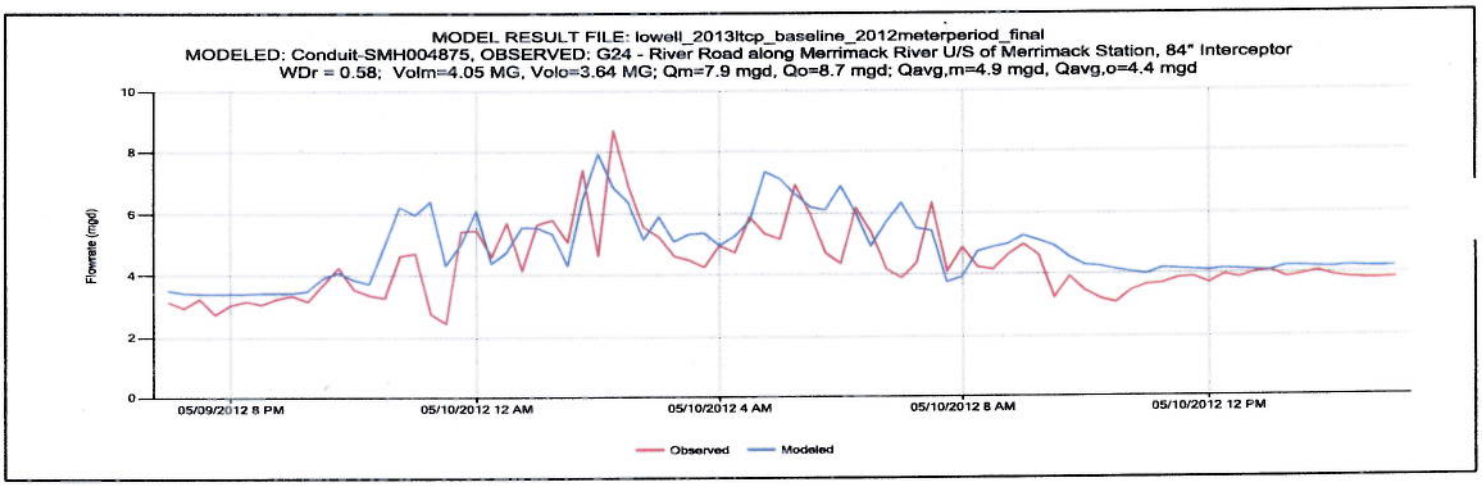

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-001722, OBSERVED: G23 - Douglas Rd. U/S of Barasford Station, 48" Circular
WDr = 0.81; Dm=1.4 feet, Do=1.8 feet; Davg,m=0.8 feet, Davg,o=0.9 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

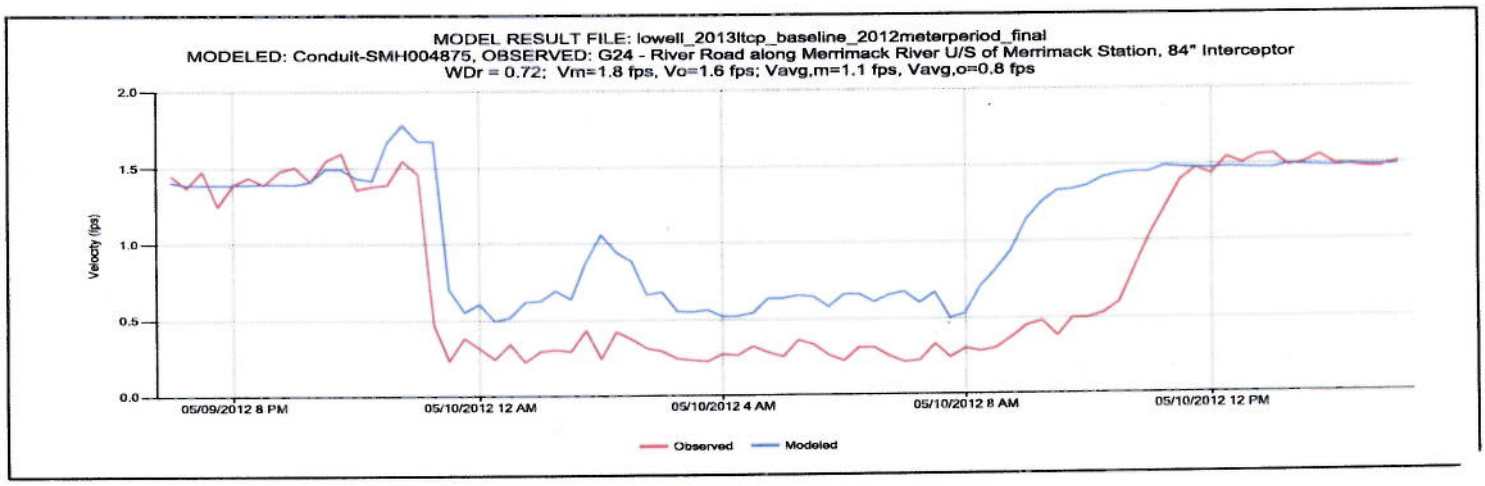

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004936, OBSERVED: G23 - Douglas Rd. U/S of Barasford Station, 48" Circular
WDr = 0.79; Volm=1.82 MG, Volo=2.04 MG; Qm=6.3 mgd, Qo=6.2 mgd; Qavg,m=2.2 mgd, Qavg,o=2.4 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004936, OBSERVED: G23 - Douglas Rd. U/S of Barasford Station, 48" Circular
WDr = 0.62; Vm=2.7 fps, Vo=2.3 fps; Vavg,m=1.7 fps, Vavg,o=1.7 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

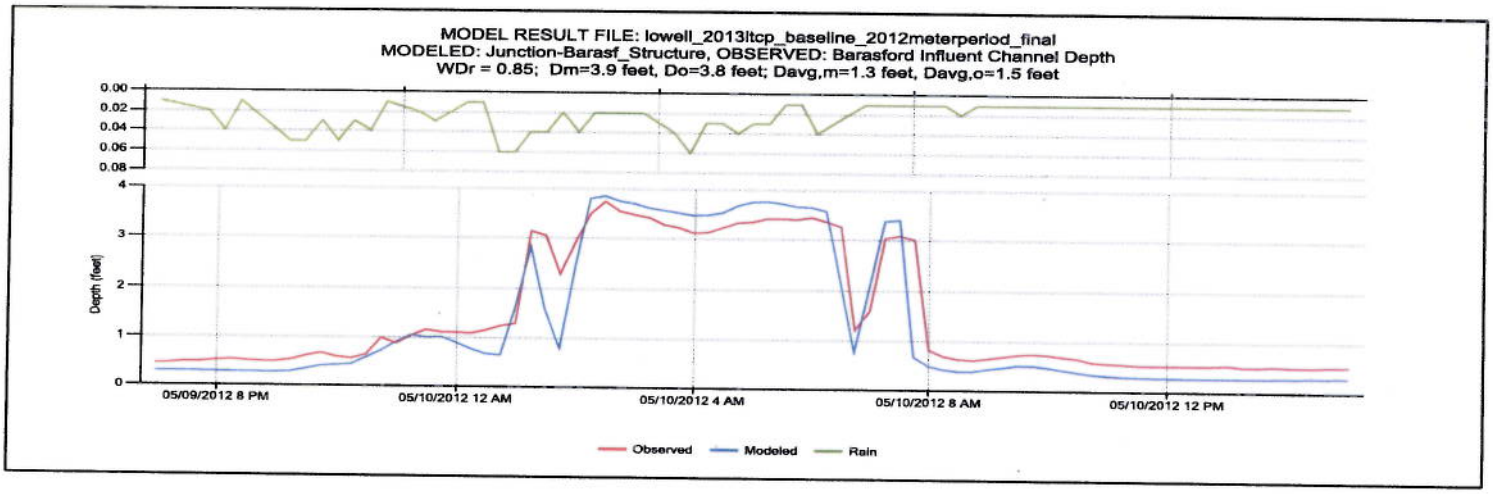
G24-Storm 2


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Junction-SMH-006167, OBSERVED: G24 - River Road along Merrimack River U/S of Merrimack Station, 84" Interceptor
WDr = 0.68; Dm=3.4 feet, Do=5.4 feet; Davg,m=1.9 feet, Davg,o=3.0 feet
Depth (feet)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled
Pipe Crown
Rain

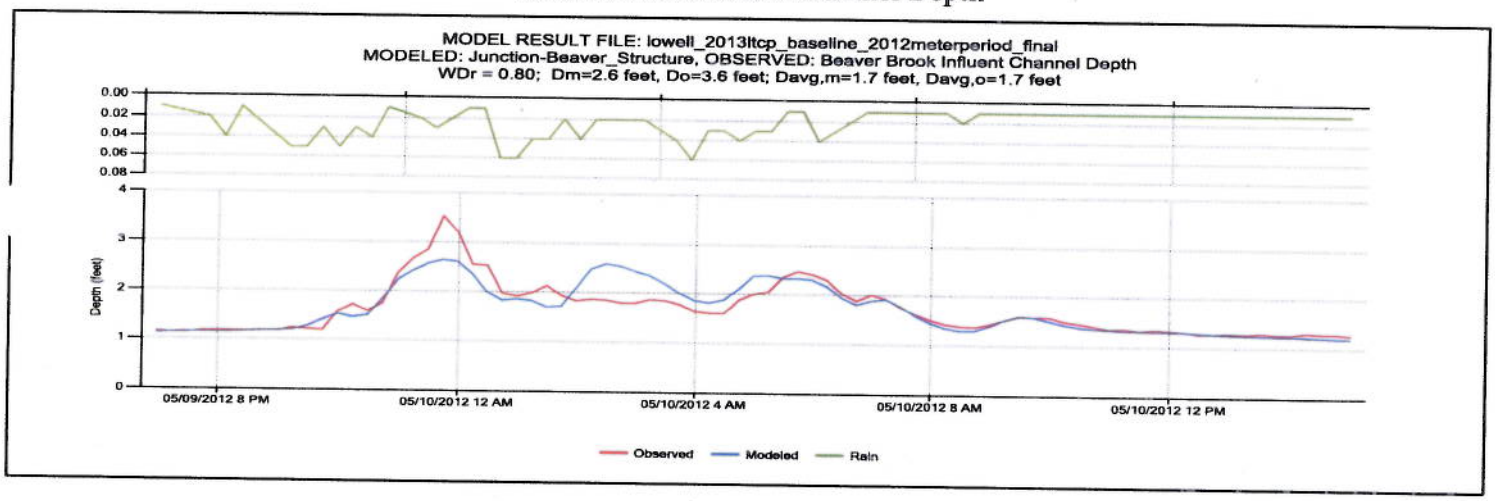

MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004875, OBSERVED: G24 - River Road along Merrimack River U/S of Merrimack Station, 84" Interceptor
WDr = 0.58; Volm=4.05 MG, Volo=3.64 MG; Qm=7.9 mgd, Qo=8.7 mgd; Qavg,m=4.9 mgd, Qavg,o=4.4 mgd
Flowrate (mgd)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled


MODEL RESULT FILE: lowell_2013ltcp_baseline_2012meterperiod_final
MODELED: Conduit-SMH004875, OBSERVED: G24 - River Road along Merrimack River U/S of Merrimack Station, 84" Interceptor
WDr = 0.72; Vm=1.8 fps, Vo=1.6 fps; Vavg,m=1.1 fps, Vavg,o=0.8 fps
Velocity (fps)
05/09/2012 8 PM
05/10/2012 12 AM
05/10/2012 4 AM
05/10/2012 8 AM
05/10/2012 12 PM
Observed
Modeled

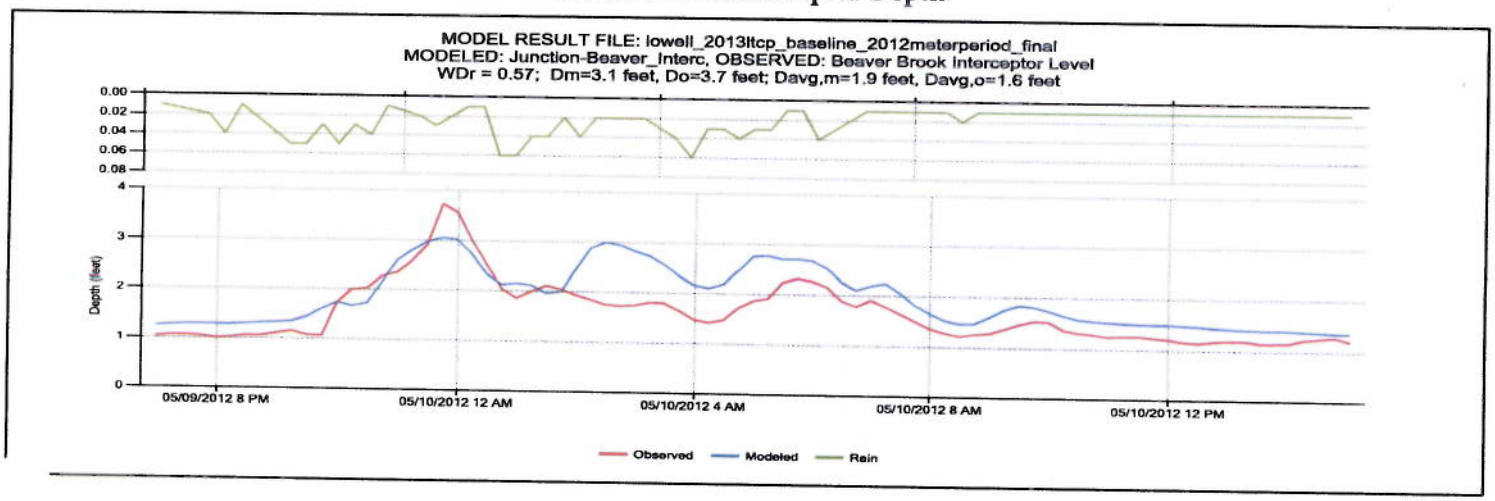
Barasford Influent Channel Depth



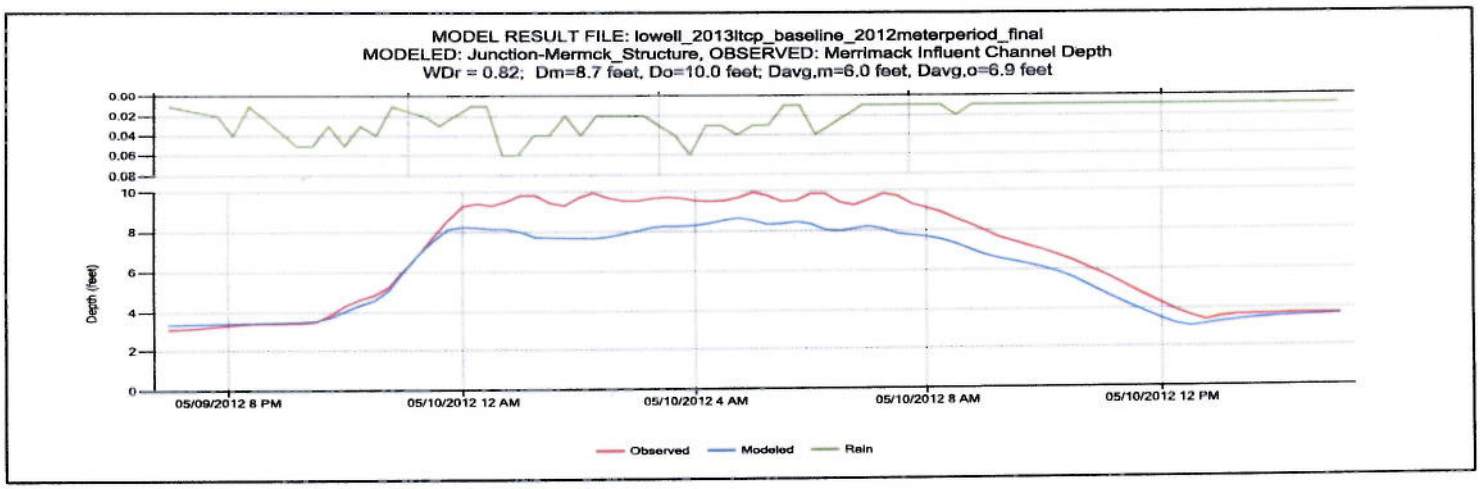
Beaver Brook Influent Channel Depth



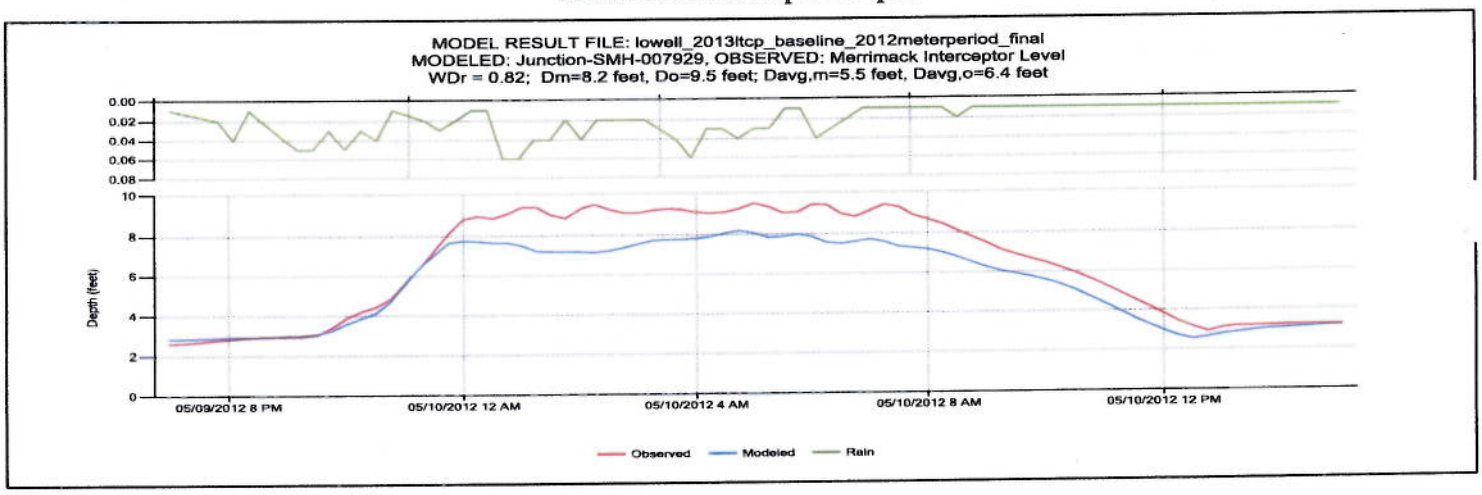
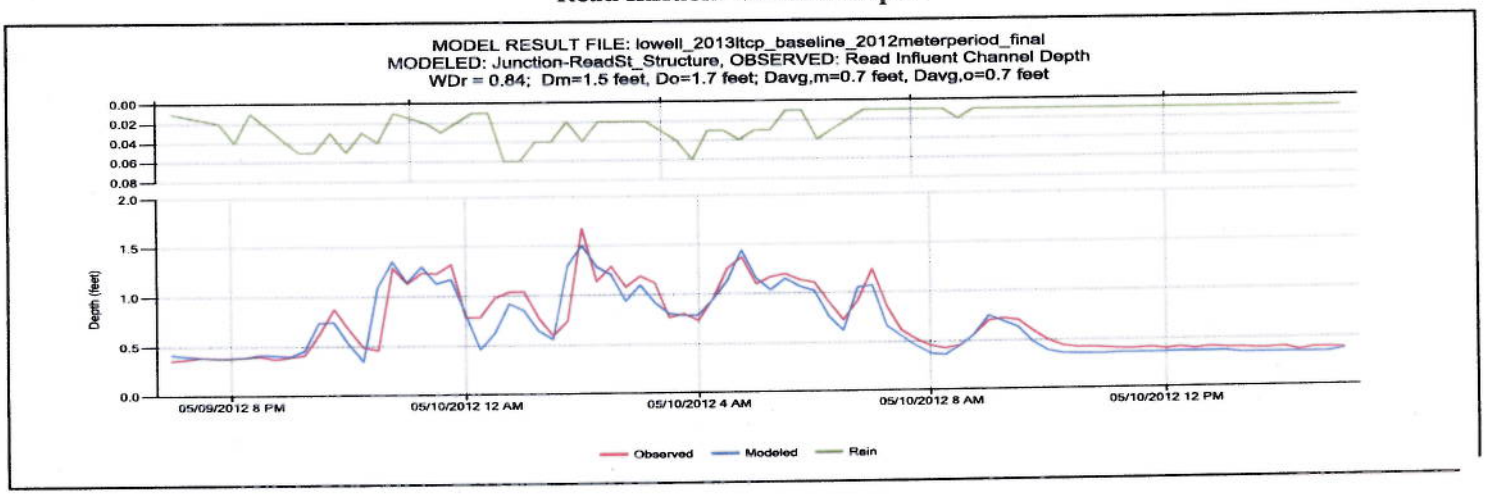
Beaver Brook Interceptor Depth



Merrimack Influent Channel Depth



Merrimack Interceptor Depth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