SECAP HYDRAULIC MODELING
LITTLE ROCK, AR

INTRODUCTION AND BACKGROUND

This Appendix describes the methodology utilized and the results from the hydraulic modeling undertaken on the sanitary sewer system by RJN Group, Inc for Little Rock Wastewater as part of the 2009 SECAP Update.

The objectives of this modeling project were to:

- Update the hydraulic model from the 2002 SECAP including all auxiliary facilities;
- Calibrate the model to reflect current recorded flows and surcharge depth data;
- Evaluate existing system capacity to transport dry and wet-weather flows;
- Simulate a 2-year/48-hour design storm on the calibrated system model to identify areas with insufficient capacity and overflows;
- Develop a staged system implementation strategy to eliminate wet-weather sanitary sewer overflows (SSO's);
- Evaluate alternatives to optimize system performance.

HYDRAULIC MODEL CONSTRUCTION

2004 HYDRAULIC MODEL ANALYSIS

Little Rock Wastewater provided RJN Group, Inc with the hydraulic model used in the 2002 SECAP report. The model, which was constructed from record drawings and available GIS data, consisted of sewer mains 10 inches and larger in diameter with built in storage compensation for un-modeled mains.

As part of the scope of this project, RJN was to incorporate any new sewer mains 10 inches and larger in diameter constructed since 2002, and add selected 8-inch diameter mains up to reported overflow locations. During this process the 2002 model was compared with the current LRW GIS. This comparison determined there were more changes and additions than anticipated.

The 2002 model utilized storage compensation to reflect the storage volume provided by un-modeled sewer mains. This allows the model to take into account additional storage for surcharging. The 2002 model contained approximately 30 million gallons of additional storage. This volume approximately assumed that all un-modeled manholes could store flow up to the manhole cover at the same time. Due to the topographic nature of the land in Little Rock, this cannot be achieved. Evaluating the elevations and depths of the un-modeled sewer mains, it was determined that approximately 20 million gallons of additional storage could be reasonably attained in the system.

Other issues identified with the 2002 model were:

- Incorrect manhole cover levels upstream of Cantrell Road PS
- Use of Mannings equation for force mains, resulting in incorrect estimation of losses in force mains.
- The hydrology available in Hydroworks at the time that the model was created was limited and unable to reflect the significant change in wet-weather run-off that occurs as a result of the antecedent wetness of the catchment.
- Hydroworks did not have the functionality to display and sub-catchment polygons. It was unclear as to the catchment boundaries that had been used in the model.

2009 HYDRAULIC MODEL UPDATE

Because of the large amount of network changes from 2002 to the present, it was determined that the best course of action would be to construct the new model geometry based upon the current GIS database augmented with pipe attribute data from the 2002 model as necessary. This approach provided more accurate geometry than incorporating current changes into the 2002 model.

The first step in this process was to import all the manholes and sewer mains from Little Rock Wastewater's GIS files into Infoworks CS. Second, a 3-dimensional terrain model was constructed from the available 2' contour data and the 2002 model manhole elevations. Third, all the manhole elevations were interpolated from the terrain model. Then, the 2002 manhole cover elevations were imported into the current model, overwriting the interpolated elevations for the manholes previously modeled. This process allows the incorporation of new lines, without losing any data from the 2002 model.

Once the manhole elevations were assigned, then work began on the invert levels of the sewer mains. Little Rock Wastewater's GIS files contained the depth to invert at all manholes. Using this data, invert elevations were calculated for the entire sewer network. Then, the 2002 model invert elevations were imported into the new model. Again, this incorporated new data while maintaining the integrity of the previously modeled data.

After all the network data was in the model database, then all sewer mains 10-inches in diameter and larger constructed since 2001 were updated from as-built plans. Areas with conflicting data were verified by survey or field verification.

The model was then verified for proper slopes and connectivity using the validation tools built into Infoworks. Line segments found to be disconnected or that contained negative or questionable slopes were manually adjusted based on field verifications or engineer's judgment.

All data in the hydraulic model network is color coded / flagged to define its data source. More accurate information such as record drawings or survey data was used in preference to GIS or interpolated data.

The following table contains the pipeline characteristics for the modeled sections of the City sanitary sewer system.

Table 1

PIPE LENGTHS PER DIAMETER

Pipe Diameter (in)	Type	Length (lf)
6	Force Main	3,643
8	Force Main	6,611
24	Force Main	31,954
30	Force Main	9,165
42	Force Main	26,488
Subtotal		77,861
3	Gravity	219
4	Gravity	7,887
5	Gravity	15,204
6	Gravity	1,167,814
7	Gravity	9,049
8	Gravity	2,748,307
9	Gravity	3,958
10	Gravity	396,239
11	Gravity	1,518
12	Gravity	240,282
13	Gravity	1,532
14	Gravity	798
15	Gravity	110,108
16	Gravity	24,668
17	Gravity	173
17.5	Gravity	203
18	Gravity	99,049
19	Gravity	299
20	Gravity	10,771
21	Gravity	41,300
22	Gravity	419
24	Gravity	130,768
26	Gravity	62
27	Gravity	2,301

Table 1 (Cont.)

PIPE LENGTHS PER DIAMETER

Pipe Diameter (in)	Type	Length (lf)
30	Gravity	74,032
35	Gravity	394
36	Gravity	64,911
37	Gravity	58
38	Gravity	16
42	Gravity	85,794
48	Gravity	38,999
54	Gravity	27,587
56	Gravity	340
60	Gravity	58,123
72	Gravity	805
Subtotal		5,363,987
Total		**5,441,848**

PUMPING STATIONS

The updated hydraulic model includes all of the major pumping stations located within the sanitary sewer system. The pump stations modeled include Adams Field MPS, Arch Street PS, Cantrell Road PS, College Station PS, Jamison Road PS, and Little Maumelle PS. All pump station geometry was entered into the model from record drawings provided by Little Rock Wastewater. All wet wells, influent chambers, and gates are included in the model. Pump curves supplied by LRW were also input for all pumps. Pump control levels were extracted from the Little Rock Wastewater SCADA system.

During the flow monitoring period, the Little Maumelle PS was being re-constructed and temporary pumps were installed to maintain flow from the Little Maumelle basin. Little Rock Wastewater provided the information for the temporary pumps installed and the model was updated to reflect this correct configuration during the monitoring period.

PEAK FLOW ATTENUATION SYSTEM

The Little Rock sanitary sewer system contains a 30 million gallon (mg) offline storage facility that stores flow during wet-weather events. This equalization basin known as the Peak Flow Attenuation Facility was incorporated into the model. The attenuation facility is fed from a pumping station which receives flow from two diversion structures that relieve the South 60 trunk sewer. Once the system activates, the flow is pumped to the storage facility where it is detained until being released back into the Fourche Interceptor sewer via the Fourche Creek diversion valve once capacity becomes available following a storm event.

The model contains the peak flow pump station and force main, the north and south diversion structures, the Fourche Creek diversion valve, the attenuation basins and their associated grit chamber. All the facilities were input from record drawings. The controls for all of the peak flow facilities were derived from the SCADA system.

SUBCATCHMENT DELINEATION

Model subcatchments are geometric sub-areas within each drainage basin. These modeled areas contain all the parameters for loading flow into the model pipe network including population, non-residential flow and inflow/infiltration (I/I) runoff parameters. Subcatchments were delineated manually with reference to current aerial photography and the complete sewer network.

The subcatchment delineation encompasses all areas that contribute flow into the sewer system. Areas such as parks, golf courses, cemeteries, etc. that are not connected to the sewerage system have been omitted from the subcatchment delineation as they do not contribute any wastewater flow or I/I. The hydraulic model has the entire contributing area broken up into 1,655 subcatchments with an average size of 22 acres.

During the creation of the subcatchments, some of the minor sewer mains not contributing to inline storage were removed from the model. This slight simplification helps to decrease model calculation times without sacrificing model integrity and accuracy.

POPULATION PROCESSING

Population data is critical in developing wastewater flows to generate dry-weather flows from residential areas. Residential flows were developed through a multi-stage process using 2000 US Census block data and the property coverage provided by the city.

The first stage of the process involved estimation of the number of residential housing units in each property based upon the structure code. Each property was then referenced to the Census Block in which it resided. The number of residential housing units within each Census Block was then summarized and compared with the number of housing units determined in the 2000 Census. The population density per household was then calculated for each Census Block using the 2000 and 2009 housing unit estimates.

In general, each property was assigned a population based upon the 2009 housing unit density, thus ensuring that the total population within each Census Block was equitably distributed.

Investigations were undertaken on Census Blocks where there was a large discrepancy between the number of properties between 2000 and the present. The majority of these Blocks were in the west of the City where it was apparent by the age of the sewers that significant development had occurred since the 2000 Census or, in some cases; major apartment blocks had been constructed. In these Census Blocks the properties were assigned the population density based upon the 2000 housing unit numbers and thus resulted in an increased population estimate for the Census Block from 2000 numbers.

The modeled sub-catchments were then superimposed over the property coverage and the populations summarized for each sewer sub-catchment resulting in an estimated total population served by the sewerage system of approximately 206,000 people.

COMMERCIAL/INDUSTRIAL LOADING

Central Arkansas Water provided water usage records for their largest commercial and industrial customers. In addition, Little Rock Wastewater provided permitted flow records from their largest industrial sources. Using this data, commercial and industrial flow input locations were determined and aggregated into the appropriate subcatchments.

MODEL TESTING

A series of validation tests was undertaken on the model to confirm logical network connectivity as well as consistent vertical alignment. A standard residential hydrograph was applied to each subcatchment in the model and a validation simulation undertaken. After a few minor alterations the model was able to run a 24-hour dry-weather simulation without any issues and was considered to be a stable platform for calibration to proceed.

FLOW DATA ANALYSIS

FLOW MONITORING SURVEY

Flow and rainfall data for model calibration was collected from sixty-nine (69) temporary flow monitors and twenty (20) rain gauges. These meters recorded level, velocity, flow and rainfall at five minute intervals from October 2009 to February 2010.

When given the opportunity, the meters were placed in the same locations as the 2000 City-wide flow monitoring project in conjunction with the 2002 SECAP. This enables direct comparison to the previous model results. The total uptime for all meters was 97 percent.

RAINFALL ANALYSIS

There were eight significant rainfall events captured during the flow monitoring period. These eight events all had a depth greater than 0.15 inches. The measured flow data from the different basins indicated a large response to rainfall. This response was due to high inflow and infiltration lasting several days.

Two rain events during the flow monitoring period were of particular interest. The first event occurred on October 29, 2009. This storm event was near a 5-year/24-hour rainfall event with an imbedded 2-year/1-hour event included. In addition, on average there was 3.05 inches that accumulated from October 22, 2009 to October 27, 2009.

A 100-year event occurred beginning late on December 23, 2009 and through December 24, 2009. On average the service area of Little Rock Wastewater gathered 9.75 inches of rain in a 24-hour period. The highest intensity of the rain during that time was near 1.00 inches/per hour.

DRY-WEATHER CALIBRATION

DRY-WEATHER PERIOD

Dry-weather calibration ideally requires at least a 7-day period, including one weekend, unaffected by rainfall induced flows. The recorded flow data was assessed in conjunction with the rainfall data and from this comparison, the period from November 11, 2009 through November 20, 2009 was selected as a representative dry-weather week for the system and suitable for dry-weather calibration period. A calendar showing rainfall amounts for the month of November can be found in Figure 1.

November 2009

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						1 Rain: 0.00"
2 Rain: 0.00"	3 Rain: 0.00"	4 Rain: 0.00"	5 Rain: 0.00"	6 Rain: 0.00"	7 Rain: 0.00"	8 Rain: 0.00"
9 Rain: 0.00"	10 Rain: 0.00"	11 Rain: 0.00"	12 Rain: 0.00"	13 Rain: 0.00"	14 Rain: 0.00"	15 Rain: 0.00"
16 Rain: 0.20"	17 Rain: 0.00"	18 Rain: 0.00"	19 Rain: 0.00"	20 Rain: 0.00"	21 Rain: 0.00"	22 Rain: 0.00"

Figure 1: Rainfall Calendar

RESIDENTIAL DRY-WEATHER ANALYSIS

Using the flow data collected from each meter during a dry period in November 2009, weekday and weekend average hydrographs were calculated and graphed for each flow monitor with a primarily residential catchment. Weekday and weekend dimensionless diurnal profiles were developed through a process of groundwater subtraction and normalization. From this process, 9 unique residential flow profiles were created. These profiles were input into the model and used to modulate dry-weather flows in the model. Figure 2 graphically depicts the 9 residential flow profiles used for the SECAP update.

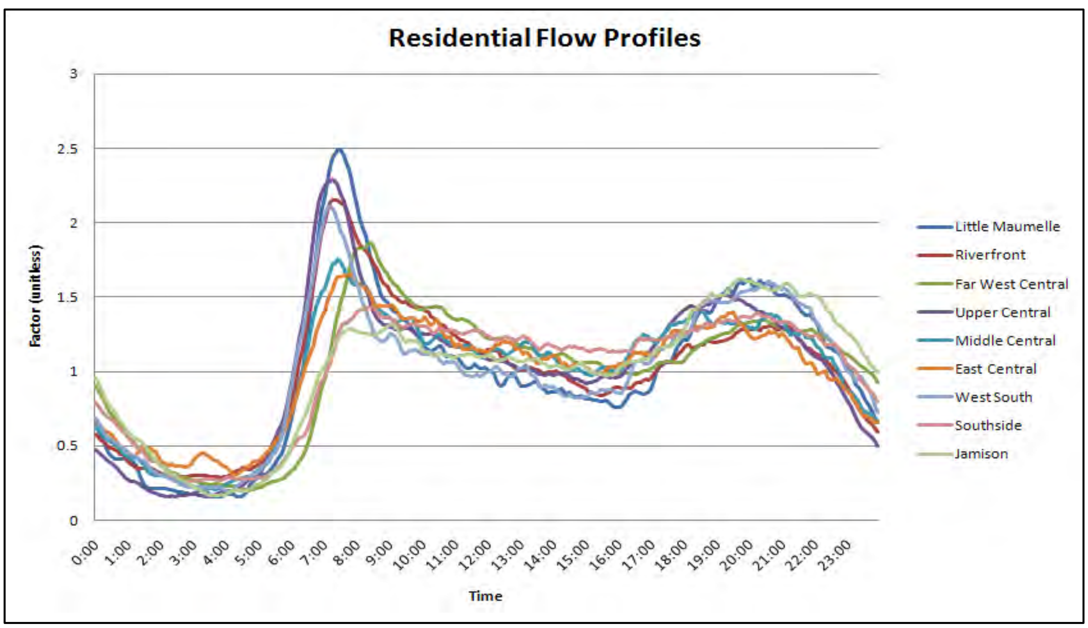


Figure 2: Residential Flow Profiles

COMMERCIAL / INDUSTRIAL FLOWS

Commercial and industrial areas produce flow patterns that are unique from residential areas. The flow profiles used for commercial and industrial areas were previously determined during the detailed Sanitary Sewer Evaluation Studies conducted by RJN on the Little Rock sewer system. These profiles, as well as a set of standard profiles were input into the model. The profiles were assigned based on the predominant type of business or industry in each sub-catchment as determined during model construction. Figure 3 graphically depicts both commercial and industrial flow profiles used for this project.

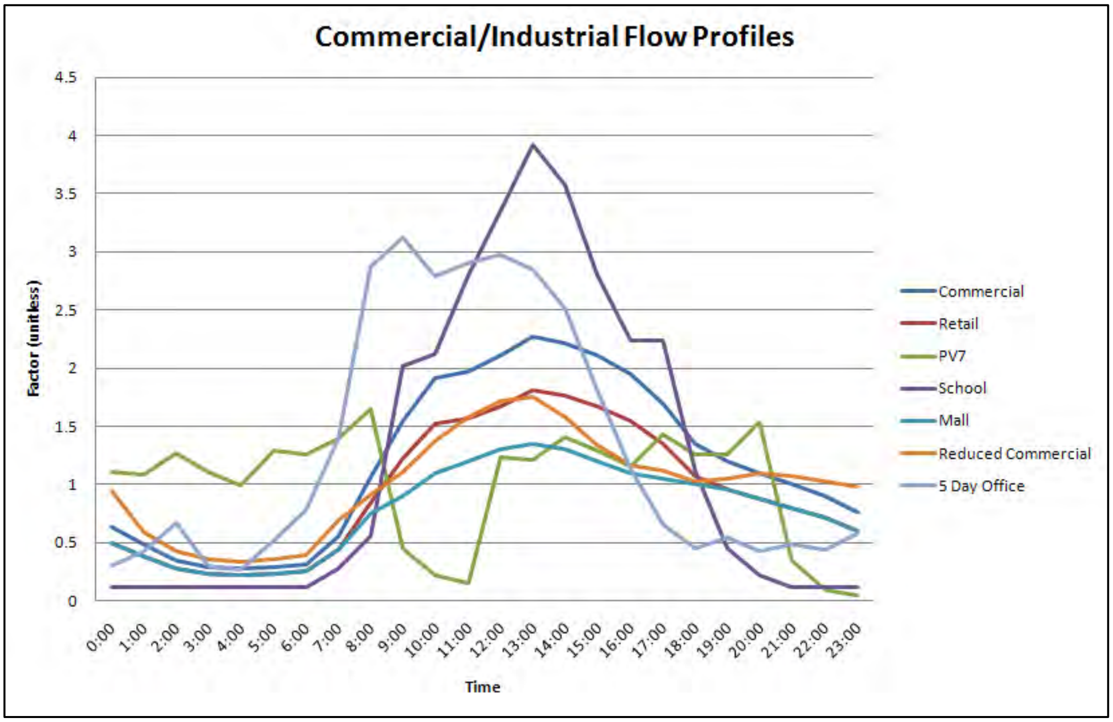


Figure 3: Commercial/Industrial Flow Profiles

CALIBRATION

Although wet-weather flows are several times greater than dry-weather flows, it is sound modeling practice to have a reasonably accurate representation of these flows in the model. Calibrating the model for dry-weather flow was achieved by modifying:

- Permanent groundwater infiltration rates
- Per capita flow rates
- Commercial / industrial flow rates.

The calibration is considered successful when minimum flow, peak flow and total volume at all meter sites matches recorded data within five (5) percent. Final input values and comparison hydrographs for the dry-weather period are provided at the back of this Appendix.

DRY-WEATHER DATA

The following summarizes the final dry-weather flow data summary.

- Contributing area: 36,600 Acres
- Average per capita flow: 63 gal/day
- Total Residential wastewater flow: 12.8 MG
- Commercial/Industrial flow: 3.6 MG (Does not include port area)
- Permanent groundwater (dry-weather) infiltration: 6.4 MG
- Total daily dry-weather flow: 22.8 MG

WET-WEATHER CALIBRATION

ANTECEDENT CONDITIONS

Prior to the monitoring period, there was significant rainfall across the region. This rainfall led to an abnormally high ground water condition when compared with conditions previously observed during SSES studies. In order to account for this, 3 months of rainfall data was obtained and loaded into the model. Also, evaporation data was accessed from the Southern Regional Climate Center monitoring site located at Blakely Mountain Dam in Hot Springs, AR. Both sets of data were run through the model before all model runs in order to correctly initialize the saturation conditions in the subcatchments.

RAINFALL LOADING

The 20 rain gauges placed in the system were used to calibrate rainfall recorded by NEXRAD. The radar recorded data in a 1x1 km grid. Using software called Calamar, each pixel was correlated with nearby rain gauges and adjusted to be within 10 percent of recorded data. Figure 4 shows an example of the radar images and pixels used for rainfall measurement.

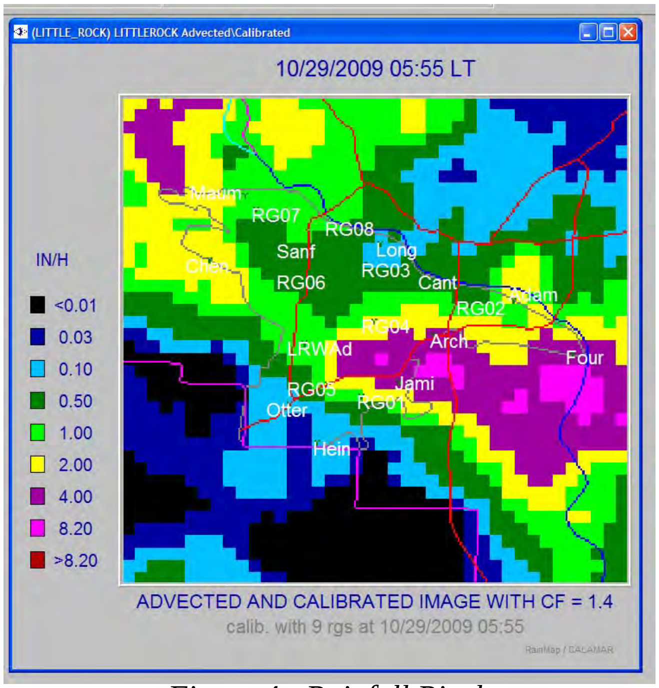


Figure 4: Rainfall Pixels

WET-WEATHER CALIBRATION

Review of the wet-weather response to rainfall indicated that there is a significant amount of inflow and infiltration throughout the sewer system. Once the correct antecedent groundwater conditions were established, all storm events produced consistent runoff and were used for calibration.

Wet-weather flows were generated in the model using both fixed response surfaces as well as infiltration flows:

- Up to three "fixed" response surface areas were calibrated for each subcatchment. These surface types are fundamentally independent of the catchment condition prior to the rainfall event and represent fast responses from areas such as illegally connected roof drainage and storm water cross connections.

- Rainfall induced infiltration was modeled using hydrology in the Ground Infiltration Module (GIM) within Infoworks. This hydrological module has soil and groundwater storage zones and the inflow into the model is dependent upon the wetness of the catchment prior to the rainfall event. These flows represent the delayed ingress of storm water from the ground into the sewer system through cracks and leaks in sewers and private drains.

During the calibration process peak flows, infiltration time, depth, surcharge time and velocity was matched at all meter sites during rain events. The storm event occurring on December 24, 2009 was excluded from calibration due to the rainfall depth being in excess of a 100 year storm event for the region. Final input values and comparison hydrographs for the wet-weather period are provided at the back of this Appendix.

SCADA CALIBRATION

Data recorded by the Little Rock Wastewater SCADA system was used in conjunction with the meter data to confirm depth and flow at all pump stations, the Peak Flow Attenuation system, and Adams Field WWTP during the wet-weather events.

At the Peak Flow Attenuation Facility, the SCADA data also enabled calibration of the filling and draining processes used during the study.

EXISTING SYSTEM ANALYSIS

SYSTEM GEOMETRY

During calibration, several areas of concern were identified due to irregular flow patterns. The following are some of the more pertinent issues that were verified through field investigations:

- Manhole 2O024: Sanitary sewer aerial crossing located in Hindman Park is buckled upward due to debris from the creek. (Figure 5)

- Manhole 4L013: Box type crossing underneath creek is filled with silt and debris. (Figure 6)

- 119 manhole cover elevations were re-surveyed by Little Rock Wastewater at the request of RJN.

Figure 5: Hindman Park Aerial Crossing

Figure 6: Manhole 14L013 Junction Box Crossing

SYSTEM PERFORMANCE

The silt and debris found in MH 4L013 was of particular interest because it verified the atypical behavior predicted in this area. During rain events, the South 60 interceptor surcharges very quickly and causes the trunk main from Brodie Creek to reverse flow. This main connects to the South 60 downstream of MH 4L013. The flow reversal accounts for loss in velocity and the ability to transport sediment through the box structure. This reversal of flow significantly affects the system during wet-weather events.

In dry-weather conditions, flow from Rock Creek and the majority of Brodie Creek flows to the North and South 60 interceptors. The remainder of Brodie Creek flow is conveyed to the Fourche Creek interceptor. In addition, there are several high level bypasses along the two mains in Brodie Creek that allow flow to transfer between the two systems. Overall, there are no hydraulic issues in the system under dry-weather conditions.

In wet-weather conditions the pattern is altered. Once the North and South 60 interceptors surcharge, a hydraulic restriction is created at the junction of the two systems. As rainfall continues, discharge from Rock Creek is forced upstream through the main from Brodie Creek causing a reverse flow. This flow continues upstream until it spills across the high level bypass into the Fourche Creek interceptor. The activation of the Peak Flow Attenuation system in its current configuration has insufficient impact upstream to prevent the flow reversal occurrence.

INFLOWS AND INFILTRATION

Several of the meter basins experience high inflow and infiltration rates which were observed during calibration. These rates were validated from the flow data analysis performed during the City-wide flow monitoring. Figure 7 is an example of one basin with high inflow.

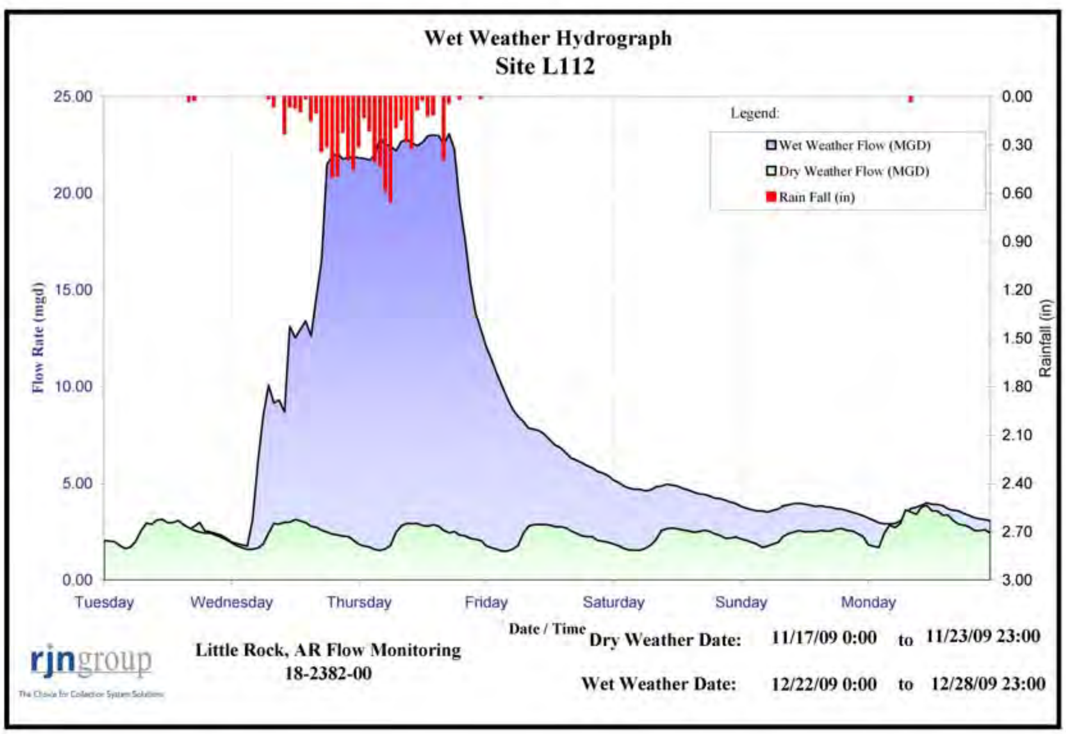


Figure 7: High inflow/infiltration example at Meter L112.

OVERFLOWS

Several overflows were predicted to be extremely large and required verification by field staff. The field investigations confirmed that the overflows at these sites are extreme in volume when they occur due to heavy erosion plumes around the manholes.

Figure 8 is an example of erosion occurring at MH 3K059. A map outlining the locations of the model predicted overflows and recorded overflows can be seen in Figure 9 on page 14.

Figure 8: Overflow erosion at MH 3K059

DESIGN STORM ANALYSIS

SYSTEM UPDATES

In order to analyze the system and identify capacity improvements under the design storm, the model was updated to reflect existing planned improvements. The updates include:

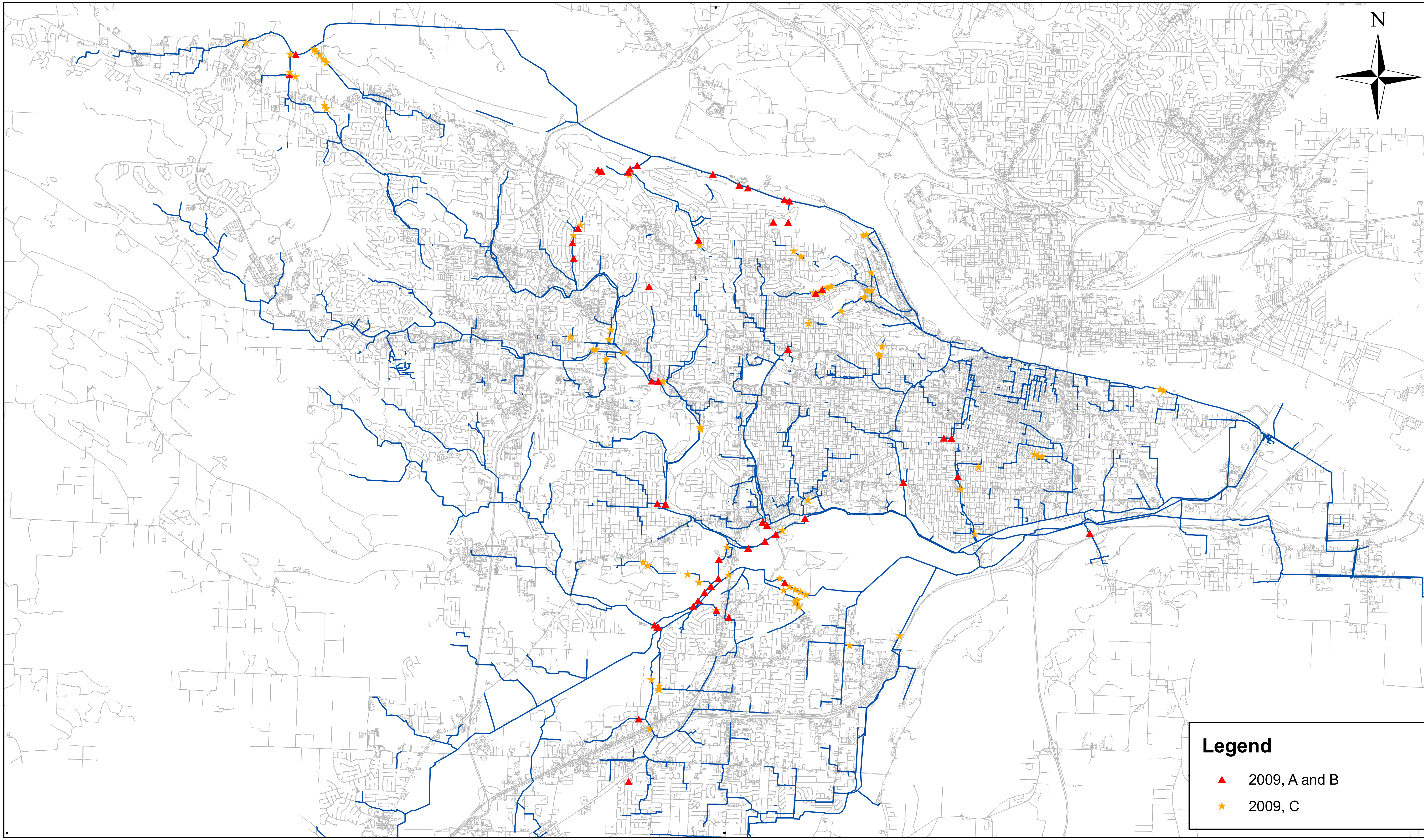
- Recent construction in Jimmerson and Allsopp basins
- Sewer mains that have been designed, but not constructed
- Capacity improvement recommendations from previous SSES projects completed by RJN Group, Inc.
- Arch Street Pump Station upgrades with the additional force main
- Abandonment of College Station Pump Station
- Removal of Little Maumelle sub-system due to new WWTP construction

OPERATIONAL ASSUMPTIONS

In addition to the geometry updates, assumptions were made on how the system can operate in wet-weather conditions. All assumptions were verified with Little Rock Wastewater staff prior to modeling of the design storm.

- Adams Field MPS – 94 mgd capacity
- Adams Field WWTP – 60 mgd treatment capacity + 34 mgd to storage (14 mg total volume)
- Arch Street PS – 45 mgd design capacity with dual force mains

Recorded Overflows



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LITTLE ROCK WASTEWATER
SECAP UPDATE
FIGURE 9

- Fourche Creek WWTP – 52 mgd treatment capacity (after improvements)
- Peak Flow PS – 68 mgd with additional pump

The Adams Field MPS can sustain 94 mgd for approximately 12 hours. This breaks down as 60 mgd being treated and 34 mgd conveyed to the Adams Field storage basin. After the storage basin is full the MPS needs to be cut back to the peak treatment rate of 60 mgd.

DESIGN STORM

The design storm used for the model analysis was provided by Little Rock Wastewater and occurred during the development of the original SECAP. This storm is a recorded event that occurred in November 2000. The 48-hour event was recorded in 2x2 km pixels by a NEXRAD system. The average rainfall of 4.15 inches is similar to a 2-year/48-hour storm event for the region. The November 2000 rainfall event equates to a design event with a return period between two and five years. During the first SECAP the November 2000 event was selected because the rainfall event:

- Exceeds LRW design criteria
- Provides a realistic spatial distribution of rainfall
- Coincides with reported hydraulic wet-weather overflows
- Was used for confirming model calibration with the permanent flow meters available in 2000
- Occurred after an unusually long period of rainfall, giving rise to saturated soils, high groundwater infiltration and therefore creating a worst-case scenario
- Had available rainfall data providing an accurate spatial representation of rainfall depths.

Figure 10 shows the design rainfall event hyetograph.

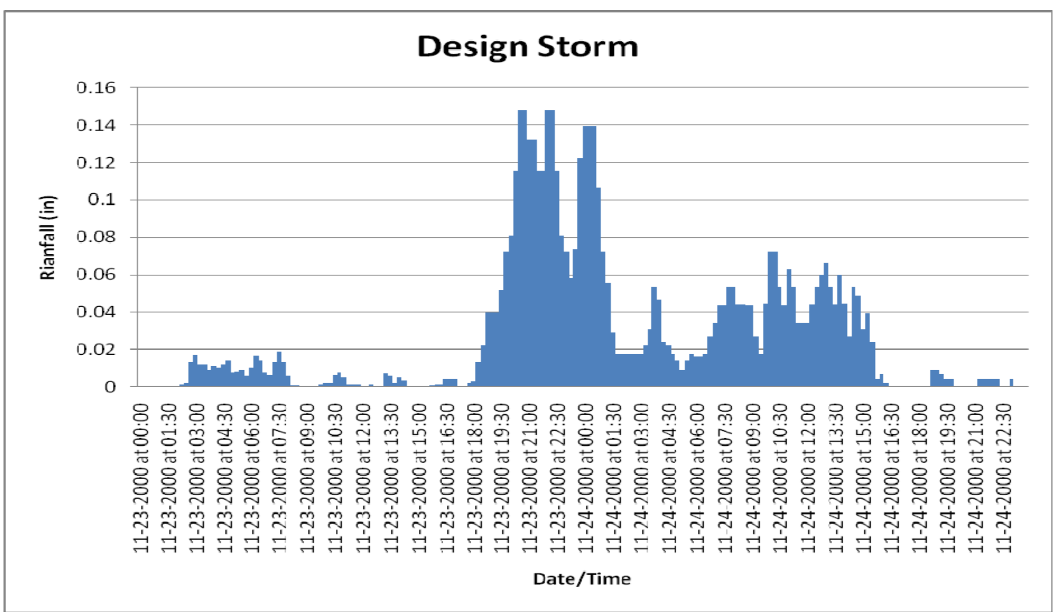


Figure 10: Representative Rainfall Profile Hyetograph

LOCAL IMPROVEMENTS

The first step in analyzing the system performance was to isolate local basin capacity restrictions from overall system restrictions. The model was split into eight (8) large sub-sewersheds and each was given a free outfall to remove any downstream restrictions. All capacity issues and overflows predicted by the model were recorded. Improvements were made to increase conveyance capacity and eliminate overflows within each sub-sewershed. The improvements fell into two categories, those that were required to eliminate reported / documented overflows and those that eliminated unconfirmed model predicted overflows. In addition, solutions to resolving overflows in several locations only required raising manhole rim elevations in remote areas. After the local capacity restrictions were resolved, the model was recombined to evaluate the overall system capacity issues.

CANTRELL ROAD PUMP STATION

The Cantrell Road PS is located along the Riverfront area of Little Rock. The basins tributary to the station experience high levels of I/I. This produces high wet-weather flows that exceed the pump station capacity and result in high levels of surcharge. The sewer main into the station is very deep and provides a moderate amount of inline storage, however once this main is filled, overflows occur upstream as the rainfall continues. The surcharge in the main provides a benefit to the Cantrell Road PS as the increased head elevates the pumping capacity to 32 mgd. Another issue identified at the Cantrell Road PS are the pump level controls. The last pump is not programmed to activate until the sewer main is completely filled and begins to surcharge. By the time the pump activates, a significant length of available in-line storage has already been used up. Figures 11 and 12 graphically depict the hydraulic grade line in the interceptor upstream of Cantrell Road Pump Station shortly before a wet-weather event and during the design storm event.

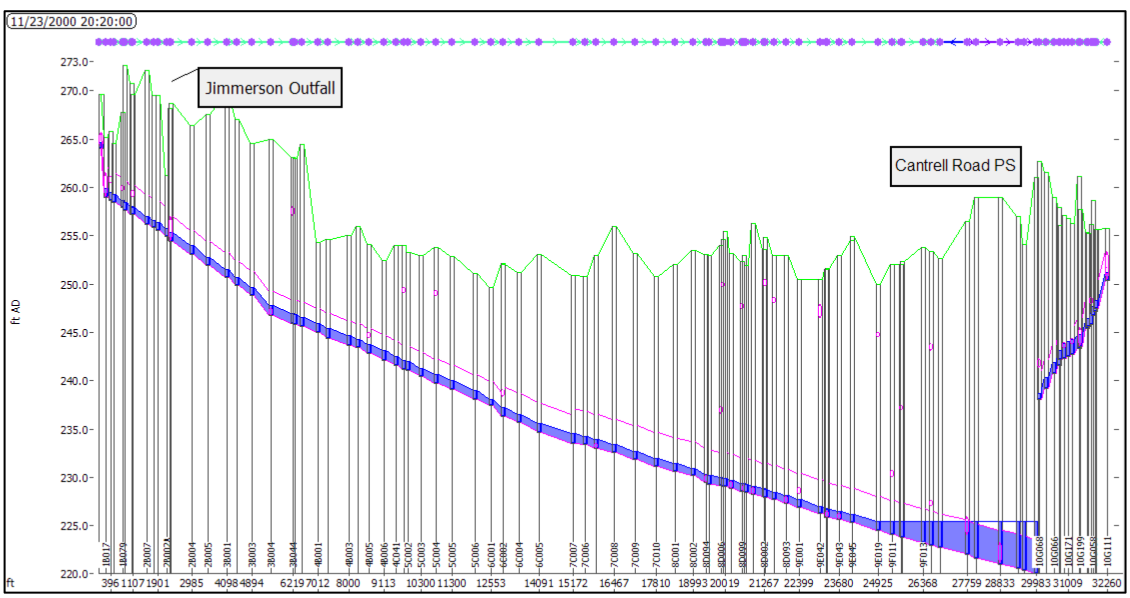


Figure 11: Dry-Weather Condition for Cantrell Road Interceptor

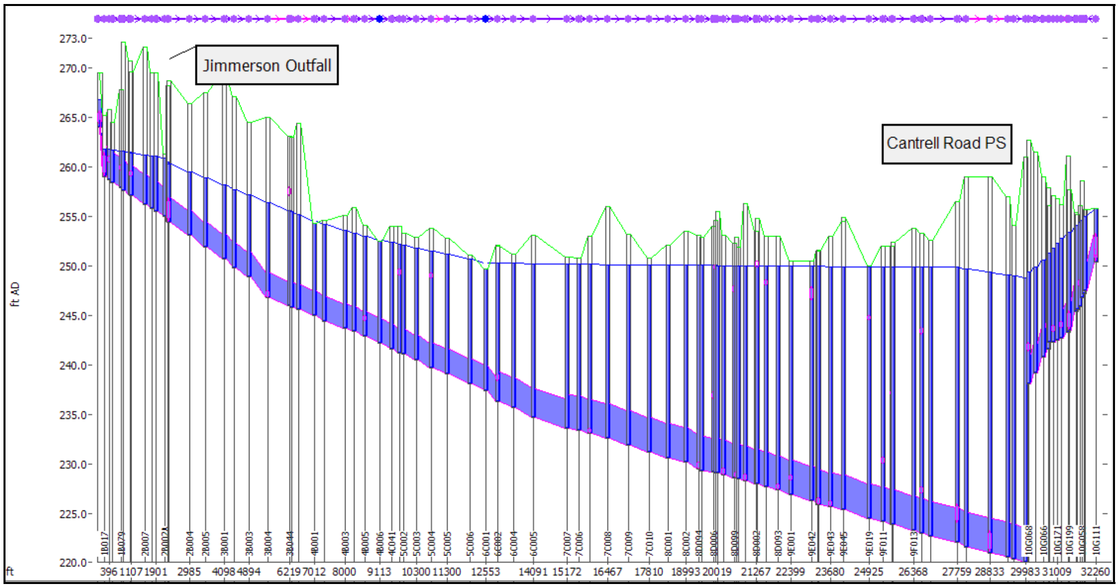


Figure 12: Wet-weather Condition for Cantrell Road Interceptor

RIVERFRONT

The Riverfront section of Little Rock extends from the Cantrell Road PS to the Adams Field WWTP. There are several critical manholes in this area with known overflows due to their low elevation near the William Clinton Presidential Library. In addition, the main has a limited free flow capacity of 30 mgd. The limited capacity of the main, combined with the high pump controls at the Adams Field MPS causes surcharging upstream to the Cantrell Road PS. Once the interceptor surcharges, any additional flow from upstream will initiate overflows at the shallow manholes. The impact of the Adams Field MPS operation levels can be seen in Figure 13.

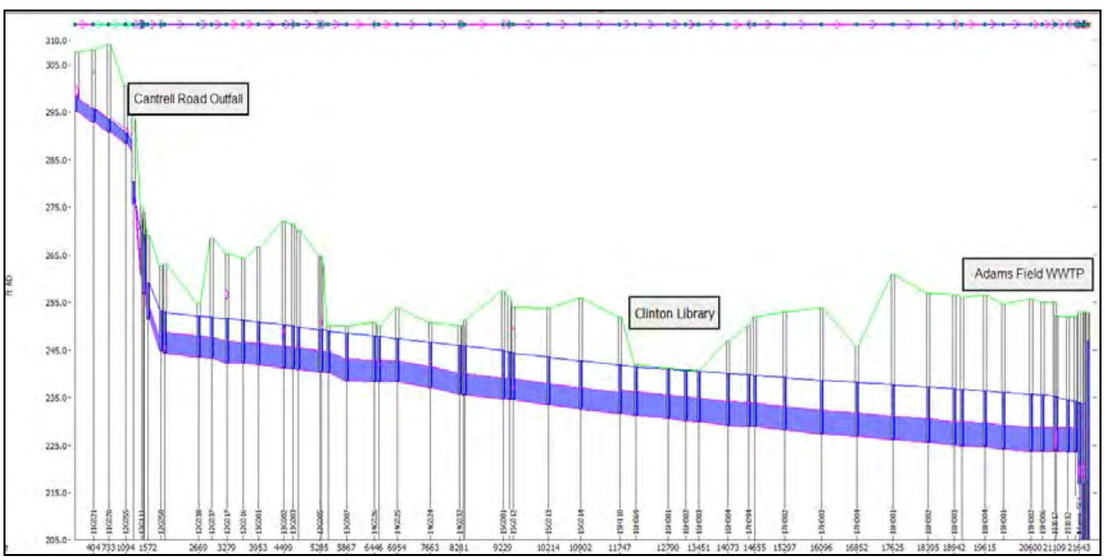


Figure 13: Levels of Riverfront Interceptor

ROCK CREEK

The Rock Creek system extends from the beginning of the North/South 60 interceptors to the northwest sections of Little Rock. The upper section, the Grassy Flat mains, contains two parallel sewer mains, an 18-inch and a 24-inch. This area generates a hydraulic choke point which creates overflows upstream.

Another restriction along Rock Creek is near Henderson Middle School. At this location, a 30-inch main and a 36-inch main merge into a single 42-inch main. This intersection of interceptors creates surcharging in both mains. Figure 14 outlines the location of the upper restriction and Henderson Middle School.

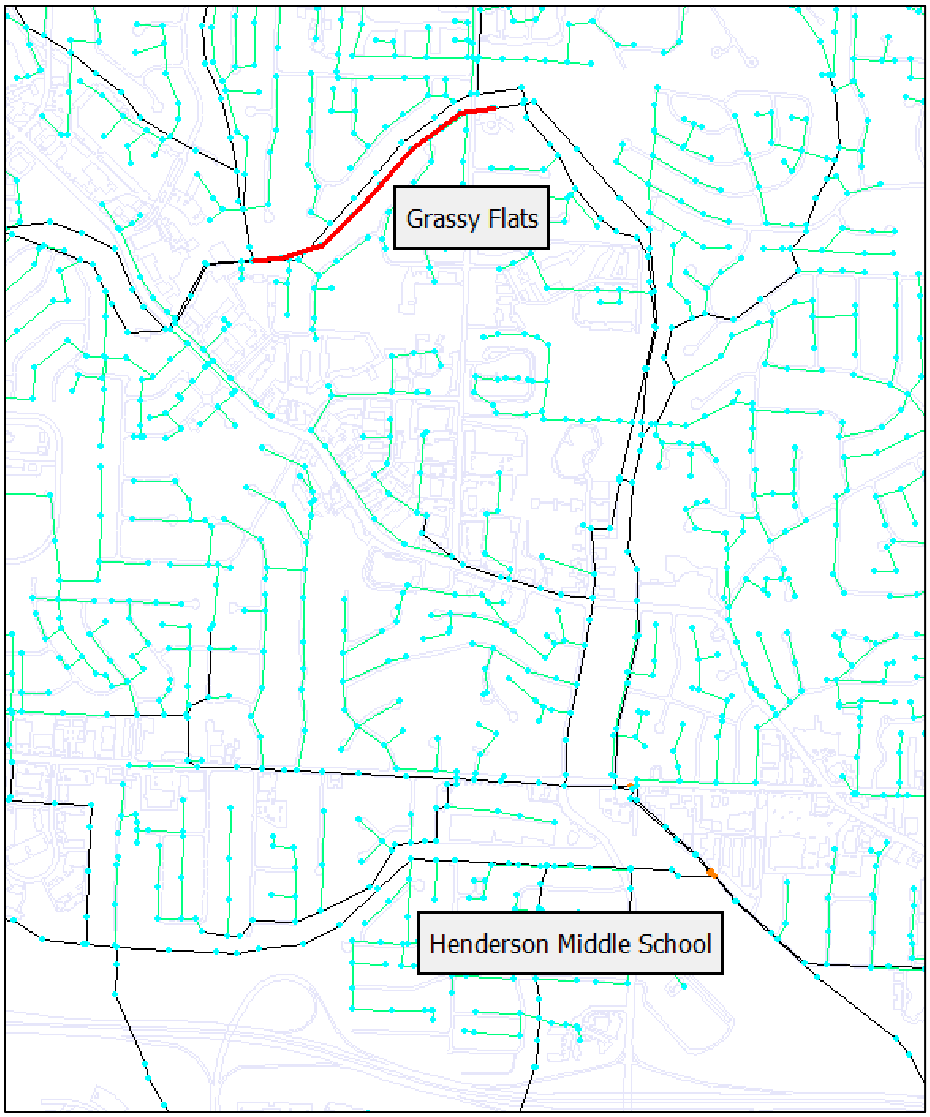


Figure 14: Rock Creek Hydraulic Restriction Locations

The primary cause of overflows in Rock Creek is due to surcharging and backup of flow from the North and South 60 interceptors. The outfall of Rock Creek is tempered due to the surcharging and large volumes of overflows that occur in Boyle Park.

BRODIE CREEK

As discussed previously, the interceptor from Brodie Creek converts to a box structure to connect to the North and South 60 interceptors. During wet-weather events, the flow in this main reverses and flows upstream until it discharges over a high level bypass into the Fourche Creek interceptor. The surcharge from the flow reversal causes large overflows to develop in Hindman Park. Figure 15 shows the hydraulic grade line from Adams Field WWTP to Hindman Park.

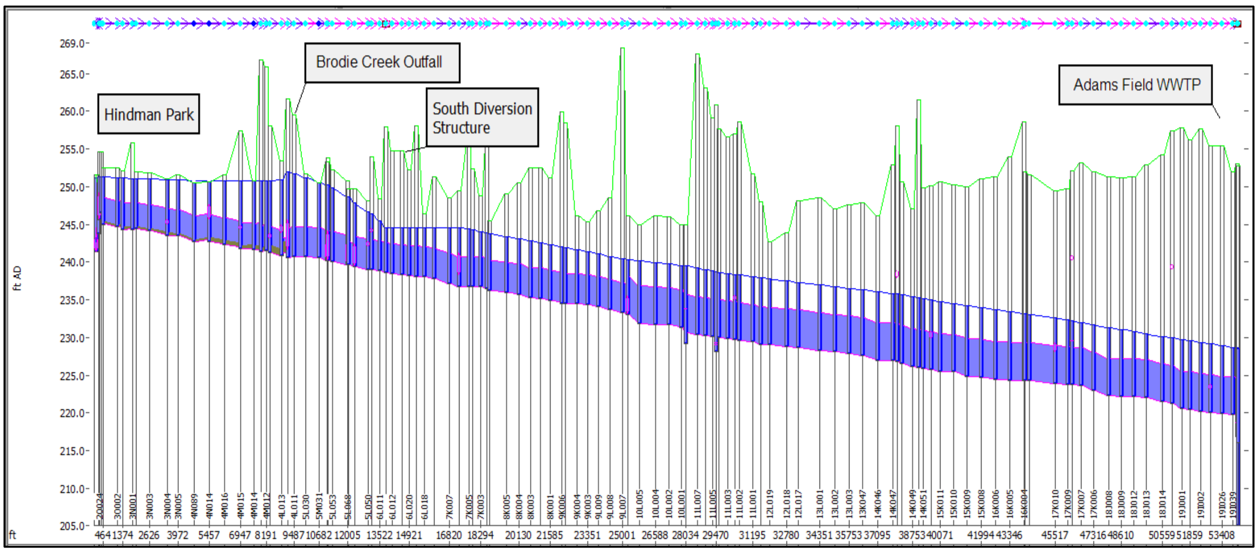


Figure 15: Reversal of Flow from Brodie Creek Outfall to Hindman Park

FOURCHE CREEK/NORTH 60/SOUTH 60 INTERCEPTORS

There are three primary interceptors in the south part of the City that convey flow to the Adams Field WWTP and the Fourche Creek WWTP. The North 60 and South 60 flow directly to the Adams Field WWTP and the Fourche Creek interceptor flows to the Arch Street PS which pumps all flow to the Fourche Creek WWTP. During the design storm, all three interceptors surcharge and are the primary restrictions of conveying flow to the plants.

The Peak Flow Attenuation System was designed to reduce the peak flow in these interceptors and provide offline storage of wastewater during a large rain event. The current Peak Flow system removes flow from the North 60 and South 60 interceptors and stores it. Eventually, the storage basins release back into the Fourche Creek interceptor. The system, as it currently exists, is undersized to properly alleviate the surcharge in the North 60 and South 60 interceptors. In addition, the Fourche Creek interceptor is overloaded and cannot receive additional flow draining from the storage basins.

ARCH STREET PUMP STATION AND INTERSTATE PARK GATE

Upstream of the Arch Street PS, the Interstate Park Gate can be opened to remove flow from the North 60 and South 60 interceptors and convey it to Arch Street PS. Opening the gate has a significant impact on the North and South 60 surcharge levels. However, additional flow to Arch Street PS restricts flow from the Fourche Creek interceptor causing surcharge levels to rise.

ADAMS FIELD WWTP

The overall system performance hinges on the Adams Field MPS and the storage capacity available at the Adams Field WWTP. The Adams Field MPS pump controls are set high which means that the pump station is not running at full capacity until after the interceptors are surcharged. Figure 16 shows the impact of Adams Field MPS on the surcharge levels in the system. In addition, the limited amount of storage available at the Adams Field WWTP prevents the Adams Field MPS from maintaining 94 mgd for more than 12 hours.

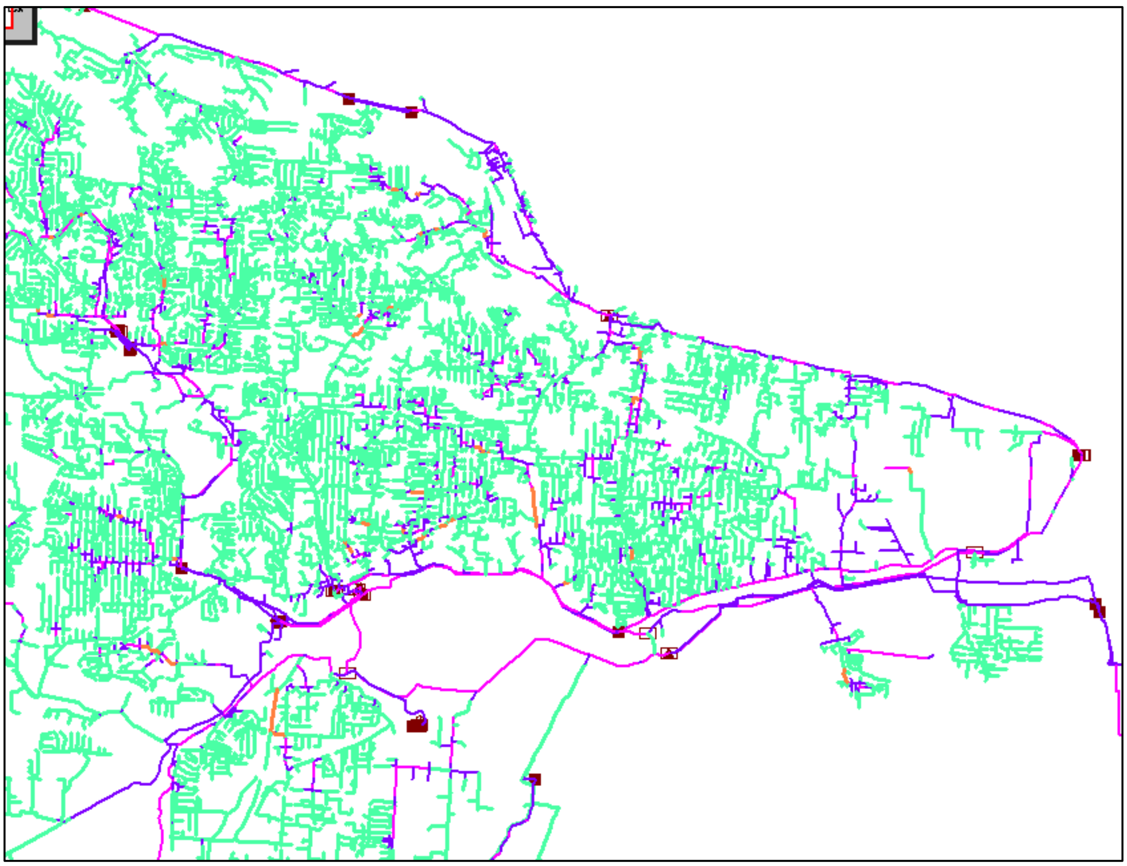


Figure 16: System Surcharge Levels (Darker means higher surcharge)

SYSTEM GROWTH

The City of Little Rock is projected to have significant growth to the west of the current city extensions. Maps were provided by Little Rock Wastewater showing the future city limits and proposed zoning. These maps were analyzed in combination with terrain maps to determine future development areas and their drainage paths.

Once the development areas were determined, this data was digitized into model subcatchments and assigned a population. Population was assumed to be 4 houses per acre in flatter areas, and 1 house per acre if located on a hillside that could be developed. The total population of the future growth areas is approximately 13,000 people. Commercial and industrial flows were also assigned to the subcatchments based on proposed zoning. Runoff and ground infiltration values for the future subcatchments were adjusted to produce a wet-weather peaking factor of 3.

Sewer mains were placed in the model following the natural terrain and drainage paths for the future areas. These mains were connected to the existing sewer system at logical connection points. The lines were then sized using the design storm to allow free flow conditions during peak wet-weather. A map showing the locations of the future areas is shown in Figure 17.

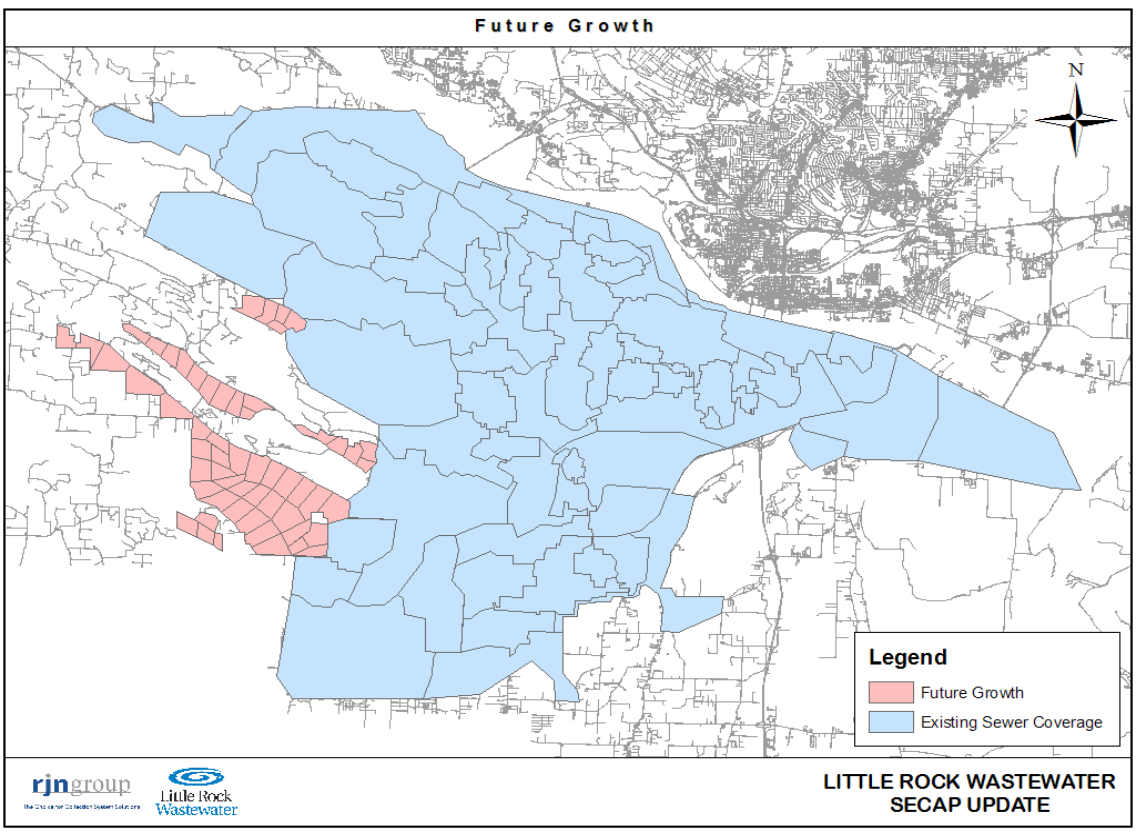


Figure 17: Future Growth Areas

IMPACT

The future growth areas produce an average dry-weather flow of 0.61 mgd. The total wet-weather peak for the areas is 7.37 mgd. The majority of this flow enters the Brodie Creek interceptor. Since the interceptor is limited in capacity due to the downstream restrictions, the additional flow causes an increase in overflows along the interceptor.

ALTERNATIVES

For each major sub-system, a series of alternative solutions were created and analyzed in the model. Each alternative was evaluated based on hydraulic performance, elimination of overflows, increased capacity and constructability. All alternatives were analyzed under future conditions and population.

CANTRELL ROAD PUMP STATION

The first option tested to relieve the Cantrell Road sewer line was to increase the capacity of the Cantrell Road Pump Station to a capacity of 40 mgd. This would be achieved by replacing the pumps at the station and performing rehabilitation of the Cantrell Road force main. While this option did eliminate some of the upstream overflows, it also increased the volume of overflow occurring downstream. This increase in overflow volume is caused by the limited capacity of the Riverfront interceptor. In some areas, the capacity of the sewer line is as low 30 mgd. Due to the increase in overflow volume, the increase of capacity at Cantrell Road Pump Station was ruled out.

Second, a storage option was analyzed that would be located underneath the soccer fields by Verizon. This storage would be able to be filled and drained by gravity due to the depth of the Riverfront interceptor. The storage was able to eliminate all overflows along the Riverfront except for those near the Jimmerson outfall. The storage would be located too far downstream to reduce the hydraulic grade line in this area. In addition, constructability was a concern due to land acquisition issues and the possible presence of large optical cable from the Verizon complex.

Next, the system was studied with various combinations of I/I reduction. Based on the recorded flow data, Basin 112 was recorded as having a peaking factor of 15.7 with a volume of 3535 mgd of inflow and infiltration. Through an I/I reduction program, the amount of runoff entering the sewer system could be greatly reduced. The model was tested with I/I reduction of 10, 15, and 20 percent in Basin 112. Based on historical projects, a reduction of 40 percent could be realistically achieved. Although the overflows occurring in Basin 112 could be eliminated by this method, there was no impact on the overflows occurring along the Riverfront interceptor. The level of I/I reduction required to affect those overflows is well beyond what could be achieved.

Then, a combination option was analyzed. This option would consist of a smaller storage at the soccer field by the Verizon complex and an I/I reduction program in Basin 112. Like the previous analysis involving these options, they did not eliminate the overflows farthest upstream near the Jimmerson outfall. In addition, the constructability of the storage remains a concern.

Another option that was researched was the possibility of using a wet-weather treatment facility along the Riverfront interceptor. During wet-weather events, the system would treat the increased flow and discharge into the Arkansas River. This option was never tested in the hydraulic model because the Arkansas DEQ stated that such a system would not meet treatment requirements.

Next, another storage option was analyzed. This storage would be located upstream of Rebsamen Park. Like the previous storage tested, the depth of the Riverfront interceptor allows the storage to fill and drain by gravity. The storage was able to eliminate all the overflows along the Riverfront interceptor except for those closest to the Cantrell Road Pump Station. A major benefit of this location is the availability of an existing right of way that can be utilized for construction.

The Cantrell Road Pump Station is currently programmed to not activate all pumps until the interceptor has already reached a surcharged state. By modifying the pump activation levels in the model, the pre-wet-weather surcharge was able to be eliminated. These reduced levels were tested with all the proposed alternatives for the Cantrell Road Pump Station. They were most successful combined with the storage at Rebsamen Park. Since the storage at this location eliminated the majority of overflows, the reduced pump levels were able to eliminate the remaining overflows and reduce the height of surcharge in the Riverfront interceptor.

ROCK CREEK

The first option considered for the Rock Creek interceptor was to increase the capacity of the main by re-constructing it over its entire length. A similar option of adding another parallel main was also considered and tested in the model. Both options performed similarly and were able to eliminate the overflows along the Rock Creek interceptor. By increasing the capacity of the interceptor, however, the increased flow places additional burden on the downstream system.

Second, an option was input into the model that would include limited capacity improvements along the interceptor as well as a storage facility in the Rock Creek/ Markham area. This option was successful in eliminating the overflows along the Rock Creek interceptor without causing overloading of the mains downstream.

Next, the storage and limited capacity improvements were analyzed with a reduction in I/I in several contributing basins. As observed in the Cantrell area, the I/I reduction required to impact the size of the required storage was well beyond what could be realistically achieved.

An option was tested that would require multiple inline storage facilities to be placed along the Rock Creek interceptor. These included sites near Rock Creek/Markham area, Rodney Parham/I-630, and two locations east of Reservoir Road. There were multiple issues determined with this solution. The first was that the upstream storages east of Reservoir Road. did not detain enough flow to make an impact downstream. This was due to the limited size of the sites at this location. Second, the storage basins could not be emptied by gravity and would require pump stations to be installed. Also, the storage east of Reservoir Road would be difficult to construct due to access issues. The storage near Rodney Parham/I-630 was also affected by possible land acquisition issues and small available land.

Another option analyzed was the construction of a new 72-inch interceptor main from the end of Rock Creek to the Peak Flow Pump Station. This line would provide relief during wet-weather events and would tie into an existing 72-inch stub at the South Diversion Structure. Unfortunately, while this line eliminated the overflows in Boyle Park, it did not have an impact of the overflows occurring at the upper end of the Rock Creek interceptor.

Finally, the last alternative analyzed for the Rock Creek interceptor was the construction of a new pump station and force main from Henderson Middle School to the Peak Flow Pump Station.

FOURCHE/NORTH 60/SOUTH 60 INTERCEPTORS

The region where the North 60, South 60, Rock Creek and Brodie Creek interceptors all meet is considered the heart of the sewer system. All options considered in this area have a significant impact on the performance of the entire system.

The first option considered was increasing the capacity of the main from Rock Creek to the Peak Flow Pump Station. This option was tested in two configurations. The first was a parallel main at a similar elevation to the existing Twin 60. The second was a parallel main set approximately 20 feet below the surface elevation. After analyzing both options, the 20 foot deep main performed better than the main set to existing elevations. This is due to the elimination of flow reversal at the Brodie Creek outfall during wet-weather events. The outfall is able to flow freely into the deeper main instead of flowing into a surcharged main similar to existing conditions. This option provided relief of the overflows in the lower section of Rock Creek and Brodie Creek.

The second option analyzed for the system was the expansion of existing storage. Three storage alternatives were tested. The first was the expansion of storage at the existing Peak Flow Equalization Basins. Second, was construction of new storage along the Brodie Creek outfall behind the old Ford building. The last was construction of new storage near the Mabelvale Pike. Based on the hydraulic performance of the Brodie Creek outfall, and the elevations, the storage behind the Ford building was determined to be in the wrong location to adequately remove flow from the system. In addition, the existing Peak Flow Pump station would not be able to be used for filling of the storage.

The other two storage options would be able to utilize the exiting Peak Flow Pump System for filling. Both locations at Mabelvale Pike and the existing Peak Flow Equalization Basin perform similarly. In order to remove enough flow from the system to these storage basins, the Peak Flow Pump Station must be increased in capacity. Once the increase is complete, the system is able to eliminate the overflows occurring in the lower Rock Creek and Brodie Creek areas.

Again, the option of I/I reduction was analyzed for this area. An I/I reduction program would reduce the amount of contributing runoff from the upstream basins. As with previous analysis of I/I reduction, the required percentage of reduction is not realistically obtainable.

Similar to the Cantrell Road options, a wet-weather treatment facility was analyzed. During wet-weather events, the system would treat diluted flow and discharge into Fourche Creek. Like the Cantrell Road option, the Arkansas DEQ stated that the system would not meet treatment requirements.

Like the Cantrell Road Pump Station, the Arch Street Pump Station is currently programmed to not be at full capacity until after the Fourche Creek Interceptor has started to surcharge. Since the main is already surcharged, the additional flow from I/I causes the Fourche Creek Interceptor to overflow. The model was tested with various pump control levels to assess their impact on the Fourche Creek Interceptor. After several iterations, a set of levels was determined that successfully eliminated the overflows occurring on the Fourche Creek Interceptor.

RIVERFRONT AND ADAMS FIELD WWTP

Due to the density of development and the hydraulic restrictions from the flat interceptor, there are limited options available for system improvements. The two options tested in the model include expanded storage at the Adams Field WWTP and a reduction in the operating levels at the Adams Field MPS. Both were successful in reducing the surcharge levels in the sewer system. By adjusting the operation levels of the Adams Field MPS alone, the predicted overflows at the William Clinton Presidential Library were eliminated. In addition, the modified pump controls produced a system wide reduction in surcharge levels.

RECOMMENDATIONS

PHILOSOPHY

The primary criteria for choosing alternatives for recommendation were to eliminate overflow and to maximize the use of existing structures. The sewer system is well equipped in many places to handle large flows from excessive I/I, however a few system bottlenecks cause major hydraulic throughput issues. By eliminating these bottlenecks, the system can perform to its maximum ability during a wet-weather event.

REQUIRED PROJECTS

The following is a list of all projects that must be completed at a minimum and are common to all the recommended options.

- Complete SSES recommended improvements
- Complete construction of all mains designed but not constructed
- Increase capacity of 24,111 linear feet of sewer main based on local capacity and overflow identification
- Raise elevation of 24 remote manholes
- Continue inflow/infiltration reduction program
- Investigate model predicted overflows that are not in the vicinity of reported overflows
- Re-program Adams Field MPS, Arch Street and Cantrell Road Pump Stations with recommend control levels

CANTRELL ROAD

The first stage in solution development involves lowering pumping station operating levels at Cantrell Road Pump Station prior to a wet-weather event to maximize availability of in-line storage. All four pumps need to be operating when the level in wet well reaches 223 ft, with the "off" level for the pumps lowered to 221 ft. This change in operational setting is only necessary when it is known that a significant wet-weather event is due and should not result in excessive pump cycling.

Given the relationship between the pump rate from Cantrell Road and the overflows at the William Clinton Presidential Library downstream, the flow from Cantrell Road Pump Station should be restricted when the interceptor begins to surcharge. This solution can be implemented in the short term to reduce the frequency of overflow at one of the more sensitive sites in the system, independently of other works. This will require a depth sensor to be installed in a manhole near the William Clinton Presidential Library.

Recommended operational rules would be:

- If Clinton surcharged, cut back 4th pump;
- If 5mins pass and the Clinton manhole is still surcharged cut back 3rd pump;
- If 5mins pass and the Clinton manhole is still surcharged cut back 2nd pump;
- If Cantrell Road wet well level exceeds 240ft turn on extra pump.

In order to eliminate the overflows in the upper Riverfront interceptor, an in-line storage system is recommended. The storage facility should be located along Rebsamen Park Road between the road and railway line, opposite the golf course.

The proposed configuration of the storage is an approximate 2,700 ft long by 20 ft wide by 10 ft deep covered rectangular channel running parallel to the existing sewer. At either end of the storage, and potentially at a midpoint, the storage will connect into the existing sewers with filling weirs / pipes set at the level of the pipe crown. The storage should also have a low level invert-invert connection to drain the storage back into the interceptor.

There are no recommended controls for the storage system as the filling and draining mechanisms are passive. However, it may be worth considering making allowance for actuated valves/ sluices into the final design of this structure that could become part of a future system wide control scheme.

It is also recommend that Little Rock Wastewater continue with their current rehabilitation program in the area to reduce I/I. Final sizing of the storage facility can be determined following post rehabilitation flow monitoring and model recalibration.

ROCK CREEK

In Rock Creek, there are minimal capacity improvements recommended in order to eliminate some bottlenecks in the system. This line work will enable the recommended options to operate at maximum capacity. The capacity improvements are included in the recommended projects for the Linework to North 60 and the Grassy Flat Main.

A major confluence of sewer mains occurs in the vicinity of the Henderson Middle School area. The 36-inch sewer that serves the recent development to the west of the City combines with the parallel 30-inch and 21-inch sewers along Rock Creek. Following the connection of the two main sewers the 30-inch Rock Creek Main is increased to 42-inch. At the point of confluence, flows from the western branch make up approximately 40 percent of the total downstream flows with the remaining 60 percent coming from the northern Rock Creek sewers.

At this convergence point, underground storage is recommended to detain flow in order to allow the Rock Creek Interceptor to maintain flow without causing overflows. The storage system in this area would contain flows from the western branch during wet-weather events. The recommended layout for the storage is shown in Figure 18.

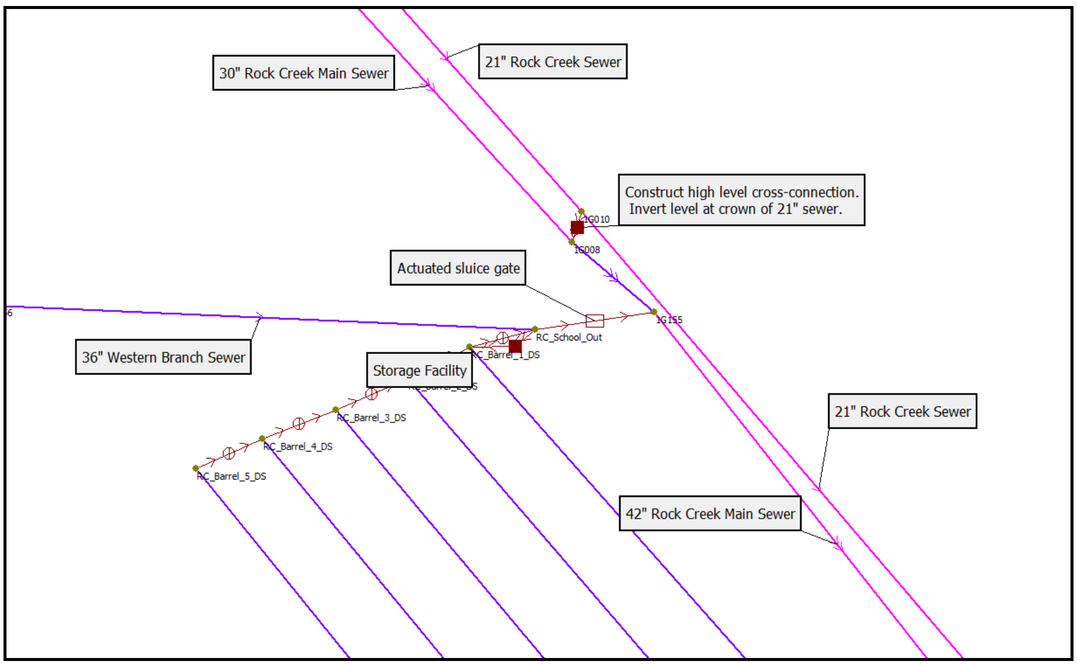


Figure 18: Proposed Storage Layout

The philosophy behind the storage is to maintain the 21-inch and 42-inch outfall sewers running at capacity with excess flows from the western branch sewer restricted by an actuated sluice gate and directed into the storage. By locating the storage in this area, it can fill and drain by gravity and will empty as and when there is capacity in the 42-inch Rock Creek Main sewer. This also eliminates the need for a pump station to be constructed for filling/draining.

The control system developed and tested on the model has two components; a level sensor in manhole 1G155 and a 3 ft wide actuated sluice valve that can restrict flows from the western branch sewer and the storage facility.

The gate position is modulated by an incremental controller every 2 minutes that compares the depth of flow in the outgoing 42-inch pipe with the full pipe depth .The change in sluice gate position dictated by the depth of flow can be found in Table 2.

Depth of flow - Pipe full depth (ft)	Incremental Change to Gate Position (ft)
-2.0	0.1
-1.0	0.05
-0.5	0
0	0
0.5	-0.1
1.0	-0.2

Table 2: Rock Creek/Markham Sluice Gate Controls

The success of this arrangement hinges on the ability for the storage facility to be on-line and capable of draining back whenever there is capacity in the 42-inch outfall sewer.

Figure 19 illustrates the modeled flows through the gate valve during the design storm. Other than a brief period of approximate 2 hours there is always some flow passing through the gate, with the storage drain back occurring late on day two of the design storm.

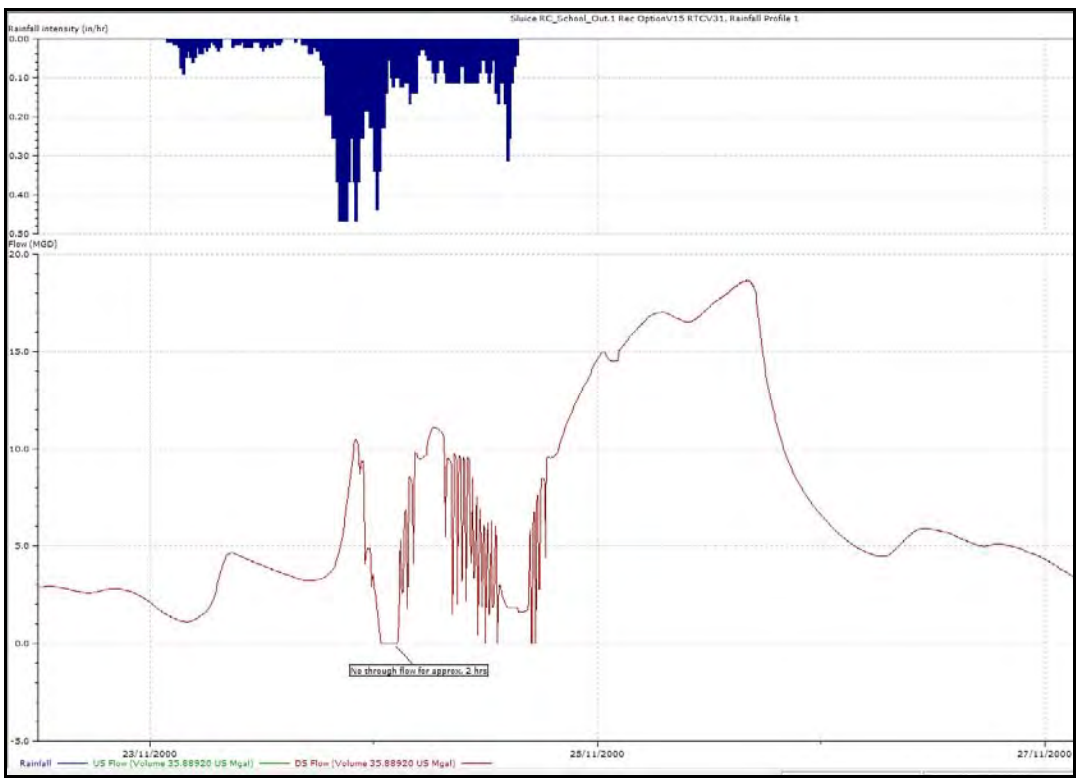


Figure 19: Flow Through Gate Valve

ROCK CREEK/BRODIE CREEK

To eliminate the hydraulic restrictions at the outfalls of Rock Creek and Brodie Creek, a new interceptor is recommended for construction. This project is the Peak Flow Interceptor from 36th Street to Mabelvale Pike. The proposed sewer main is a 42-inch diameter from the Rock Creek outfall to the Brodie Creek outfall then increases to 48-inches to the inlet chamber for the Peak Flow Pumping Station. Figure 20 shows the approximate extent and alignment of the proposed sewer.

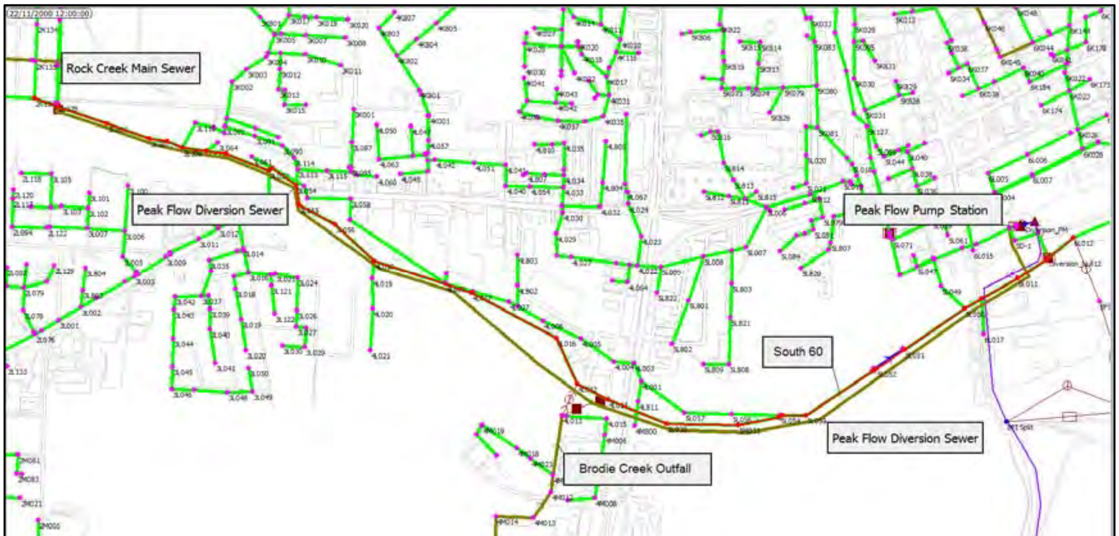


Figure 20: Proposed layout for Peak Flow Interceptor from 36th Street to Mabelvale Pike

The proposed sewer runs approximately parallel to the existing South 60, but should have a vertical alignment approximately 5 feet below the existing sewer to reduce conflicts with branch sewers and enable it to cross under the South 60 near the Peak Flow pumping station.

The primary function of the Peak Flow Interceptor is to convey wet-weather flows in excess of the capacity of the South 60 sewer, directly into the Peak Flow pumping station. Dry-weather flows will remain in the South 60 main. The proposed solution has a few key connections and control strategies.

The Peak Flow Interceptor will extend up to the outfall from Rock Creek as a 42-inch diameter sewer from the Brodie Creek outfall. A new chamber needs to be built to facilitate the diversion structure as illustrated in the following figure.

The diversion weir from the South 60 into the Peak Flow Interceptor should be adjustable to provide future flexibility with a default level slightly above the crown of the South 60. This will ensure that the Peak Flow Interceptor is only used when the South 60 is running above capacity. Figure 21 shows the connection of the Rock Creek Interceptor to the Peak Flow Interceptor.

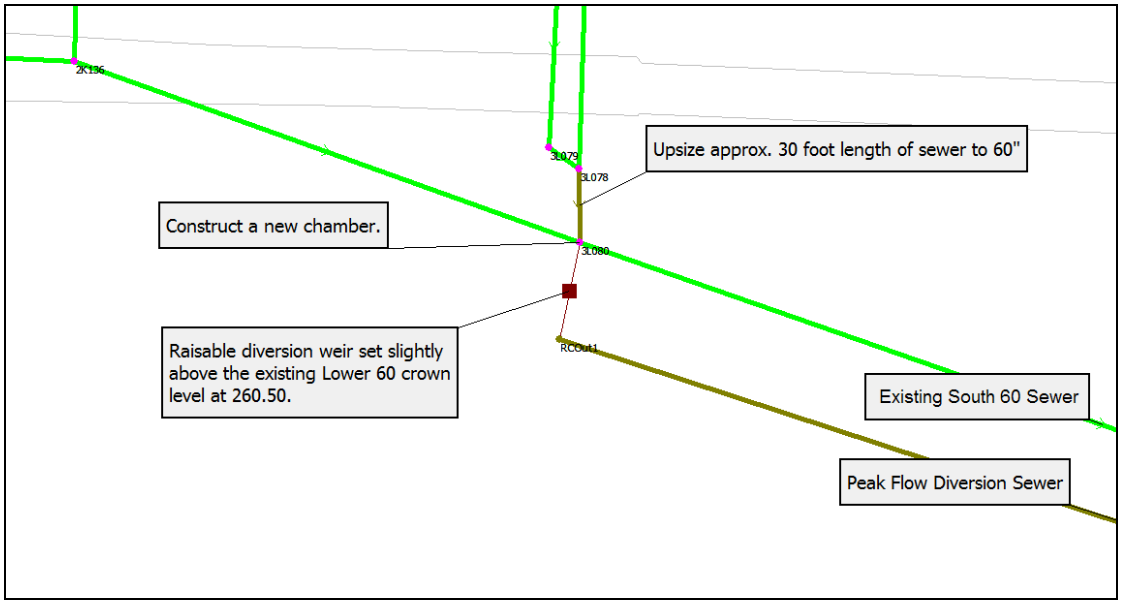


Figure 21: Connection of Rock Creek Interceptor

The Brodie Creek/Peak Flow Interceptor connection has a number of functional requirements and resolves a number of existing issues with the existing connection into the South 60. The modeled representation of the connection can be found in Figure 22 with the following key functional requirements.

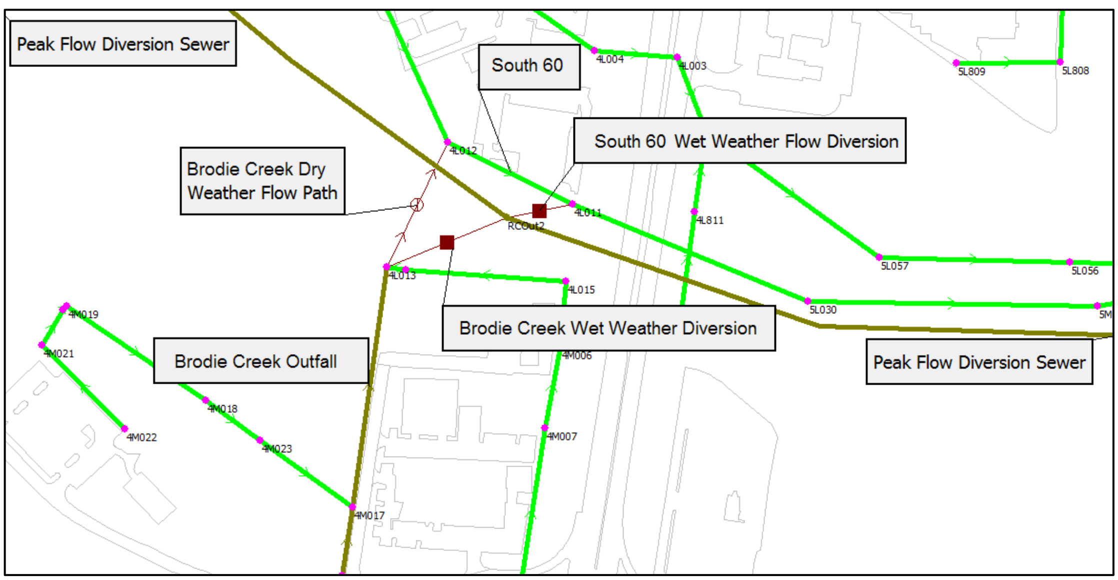


Figure 22: Connection of Brodie Creek Outfall

Brodie Creek Dry-Weather Flow Path

- Peak dry-weather flows up to around 5 mgd need to continue to be discharged from Brodie Creek into the South 60 sewer.

- Once the South 60 starts to surcharge, there needs to be a mechanism to prevent flows reversing back into the Brodie Creek sewer. This could be provided by an actuated sluice gate at either end of the pipe 4L012 to 4L013, triggered by a level sensor in MH 4L012 on the South 60.

- At present there is a box channel between MH 4L013 to MH 4L012 and the inlet chamber at 4L013 that are causing significant maintenance issues. A possible solution would be to slipline the existing channel with a new pipe and construct a new chamber at the site of 4L013 that appropriately directs the dry-weather flows into the new pipes.

Brodie Creek Wet-Weather Flow Diversion

- Once the South 60 starts to become surcharged and backflow prevention is enabled, flows will start to rise in the Brodie Creek outfall.

- A high level cross connection should be constructed from the Brodie Creek sewer into a chamber on the Peak Flow Interceptor, with an elevation approximately equal to the crown of the 42-inch sewer.

South 60 Wet-Weather Diversion

- Given the proximity of the South 60 to the Peak Flow Interceptor it is prudent to provide high level relief from the South 60 into the Peak Flow Interceptor.

- The South 60 wet-weather diversion should be located at an elevation of 249.0 ft from MH 4L011 to a chamber on the Peak Flow Interceptor.

PEAK FLOW ATTENUATION SYSTEM

The Peak Flow Attenuation System provides relief to the Brodie Creek, Rock Creek, and the North 60/South 60 sewer systems. Flows are diverted into the Peak Flow Pump Station, and then pumped through the Peak Flow force main from which flows can be diverted into three directions.

In the first instance flows are diverted into the Fourche Interceptor and subsequently to Arch Street Pump Station via the Fourche Diversion valve. Flows in excess of available capacity in the Fourche Interceptor can be diverted into the proposed Mabelvale Pike storage facility. Once the proposed Mabelvale Pike facility is filled, any additional flows are directed to the existing Peak Flow Equalization Storage.

In order to facilitate the removal of flows from the North/South 60 and the Peak Flow Interceptor, it is recommended that the Peak Flow Pump Station be expanded with a fourth pump to a capacity of 68 mgd. The current station configuration contains an empty seat for this pump.

The Peak Flow Pump Station primarily receives flow from the South Diversion structure and eventually through the Peak Flow Interceptor. The South Diversion structure consists of a chamber on the South 60 interceptor with an actuated diversion weir. Under normal conditions the weir is set at 242.6 ft, i.e. the crown level for the outgoing pipe. Thus ensuring maximum flows are transferred through the South 60 to the Adams Field WWTP.

During major wet-weather events it is necessary to drop the weir to divert flow away from the Adams Field WWTP and into the Fourche Interceptor and/or peak flow storage facilities. Lowering of the weir is also necessary if the surcharge levels get too high in the South 60 upstream of the diversion structure. Figure 23 shows the layout of the South Diversion Structure and its connection to the Peak Flow Pump Station.

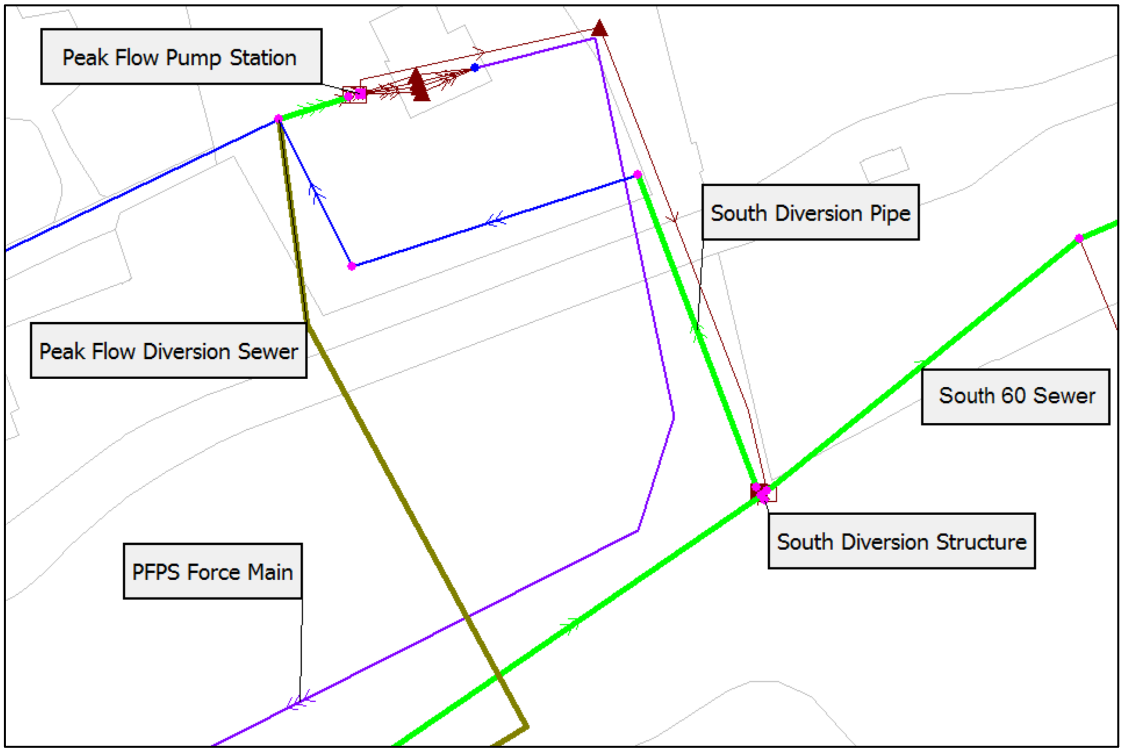


Figure 23: South Diversion Structure Connection Layout

The rules and triggers governing the position of the diversion weir are:

- Default position at 242.6 ft, outgoing pipe crown
- If Adams Field 27 mg Storage reaches 15 percent full drop weir to 240.0 ft
- If Adams Field 27 mg Storage reaches 20 percent full drop weir to 239.3 ft
- If Adams Field 27 mg Storage reaches 25 percent full drop weir to 238.6 ft
- If the surcharge level at MH 5L050 is 247.0 ft or above, drop weir level to 241.1 ft

All flows that have been diverted into the storage facilities drain by gravity to the Fourche Diversion Valve, the Fourche Interceptor, Arch Street PS and the onto Fourche Creek WWTP or into the South 60 sewer.

The operation of the Fourche Diversion Valve is a key facility in the operation of the system during and after wet-weather events. The underlying operational philosophy is to maximize the amount of flow that can be diverted into the Fourche Interceptor during and following a major storm event. The valve has been modeled to operate with incremental controls that are updated every 120 seconds. The controls will require depth/pressure sensors to be located upstream of the Fourche Diversion Valve, in the manhole that the Fourche Diversion Valve discharges into, and in MH 2O007.

The position of the valve varies constantly throughout a storm event based upon the following conditions:

- *Pressure upstream of the Fourche Diversion Valve Vault*: If pressure is sensed upstream of the Fourche Diversion Valve Vault, such as when pumping commences at the Peak Flow Pump Station, the valve opens to 50 percent opening to enable the first flush, which may contain some septic sewage left in the force main, to be diverted into the Fourche Interceptor (and not to storage).

- *High surcharge levels at MH 2O007*: the surcharge levels in the Fourche Interceptor translate all the way upstream to the Hindman Park area during the peak of a storm event. When the surcharge level in MH 2O007 is above 244.2 ft, the position of the Fourche Diversion Valve is governed and modulated by this level. The Fourche Diversion Valve position modulates in 0.1ft increments to try and maintain a surcharge level of 244.0 ft.

- *Level in the Fourche Diversion Valve Vault Discharge Manhole*: If the surcharge level in MH 2O007 is 244 ft or below, the position of the Fourche Diversion Valve Vault gate is dictated by the level in the Fourche Diversion Valve Vault discharge manhole on the Fourche Interceptor. The Fourche Diversion Valve Vault gate will modulate its position to try and maintain a surcharge level of 241 ft in this manhole.

- *Alarm Conditions*: If the surcharge level exceeds 248 ft at MH 2O007 or 242.5 ft in the Fourche Diversion Valve discharge manhole the gate shall be closed.

The proposed Mabelvale Pike storage facility is conceived as the first of the storage facilities to be filled. This facility should be located to the north of the BFI landfill. The recommended size of the storage facility is 57 mg. Flows from the Peak Flow Pump Station in excess what can be discharged through the Fourche Diversion Valve will divert into the Mabelvale Pike storage. Once the storage is full, a valve will be shut on the inlet and this will in turn trigger the commencement of filling for the existing Peak Flow Equalization Storage.

A discharge line with check valve should also be connected back into the Peak Flow force main so that whenever there is capacity in the Fourche Interceptor the BFI storage will begin to drain.

The existing Peak Flow Equalization Storage will start to fill once the Mabelvale Pike storage is full. This will be triggered by the opening of a valve downstream of the FDV. The Peak Flow storage will drain back to the Fourche Diversion Valve Vault as and when capacity becomes available.

There is flexibility as to which storage fills and drains first. The final arrangement will have little effect on the system's hydraulic performance.

ARCH STREET PUMP STATION AND FORCE MAINS

The Arch Street Pump Station is currently being constructed to contain 5 pumps with a 4 pump capacity of 45 mgd.

As with the Cantrell Road and Adams Field MPS it will be necessary to invoke a wet-weather pumping scheme during and following wet-weather events to enable maximum conveyance of flow from the Fourche Interceptor into the Arch Street Pump Station. All four duty pumps need to be operating down to a level of approximately 220 ft to ensure that the hydraulic grade line remains steep enough to drive flow to the pumps.

A valve connection is proposed between the 42-inch Arch Street force main and MH 16K005 on the South 60. In addition to providing general operational flexibility and security, this connection will assist operators in determining the proportion of flows returned from storage that will go to each of the treatment plants.

The model predicts that up to 24 mgd could be diverted into the Adams Field WWTP system if an 18-inch valve was installed at this location. The final size of the valve should be determined during design based on required velocities.

ADAMS FIELD WWTP

The Adams Field WWTP currently contains 13 mg of equalization storage. It is recommended to expand this storage to a total of 27 mg. This will enable the Adams Field MPS to maintain its peak flow rate of 94 mgd for a longer period of time. By running the Adams Field MPS at peak capacity for longer, surcharge levels are able to be controlled system wide.

In addition to storage expansion, in order to prevent overflows from the low lying manholes near the William Clinton Presidential Library, the following operational protocols need to be met:

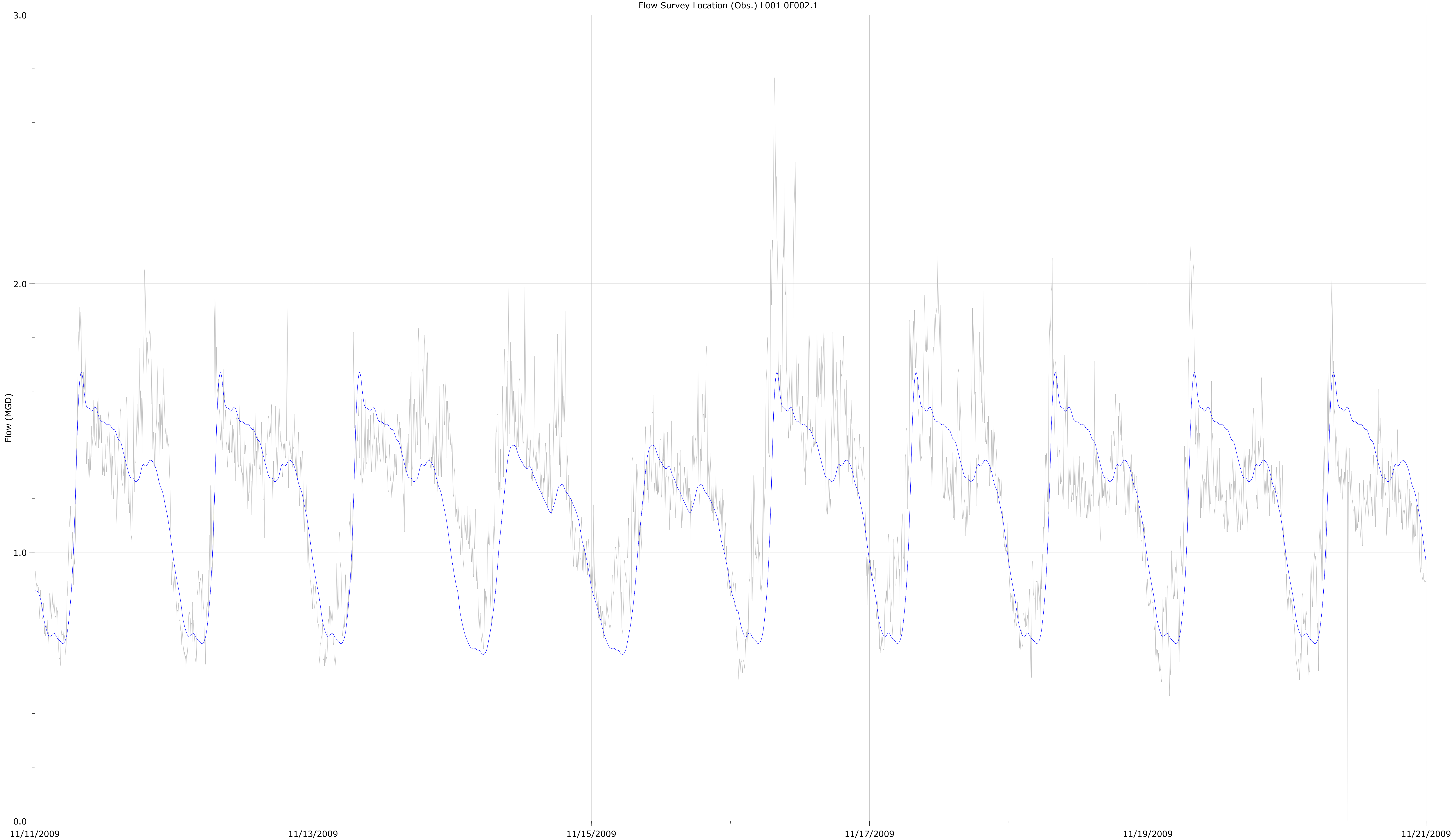
- The pump operation levels at the Adams Field MPS need to be adjusted prior to a wet-weather event to maintain a level of 223 ft in the wet well of the Adams Field MPS until all storage is filled at the plant. This requires the pumping station to be drawing 94 mgd prior to the storages being filled at which time it is necessary to cut back the pump station capacity to 60 mgd.

- Peak flow rate from the Cantrell Road Pump Station needs to be capped at around 32.6 mgd. The current pump configuration achieves this peak flow rate. Future engineering at this site needs to ensure that the peak flow rate is maintained at around the current rate, as any increase in flow rate will accelerate the likelihood and frequency of overflow from manholes near the William Clinton Presidential Library.

APPENDIX B

MODEL CALIBRATION GRAPHS
DRY WEATHER

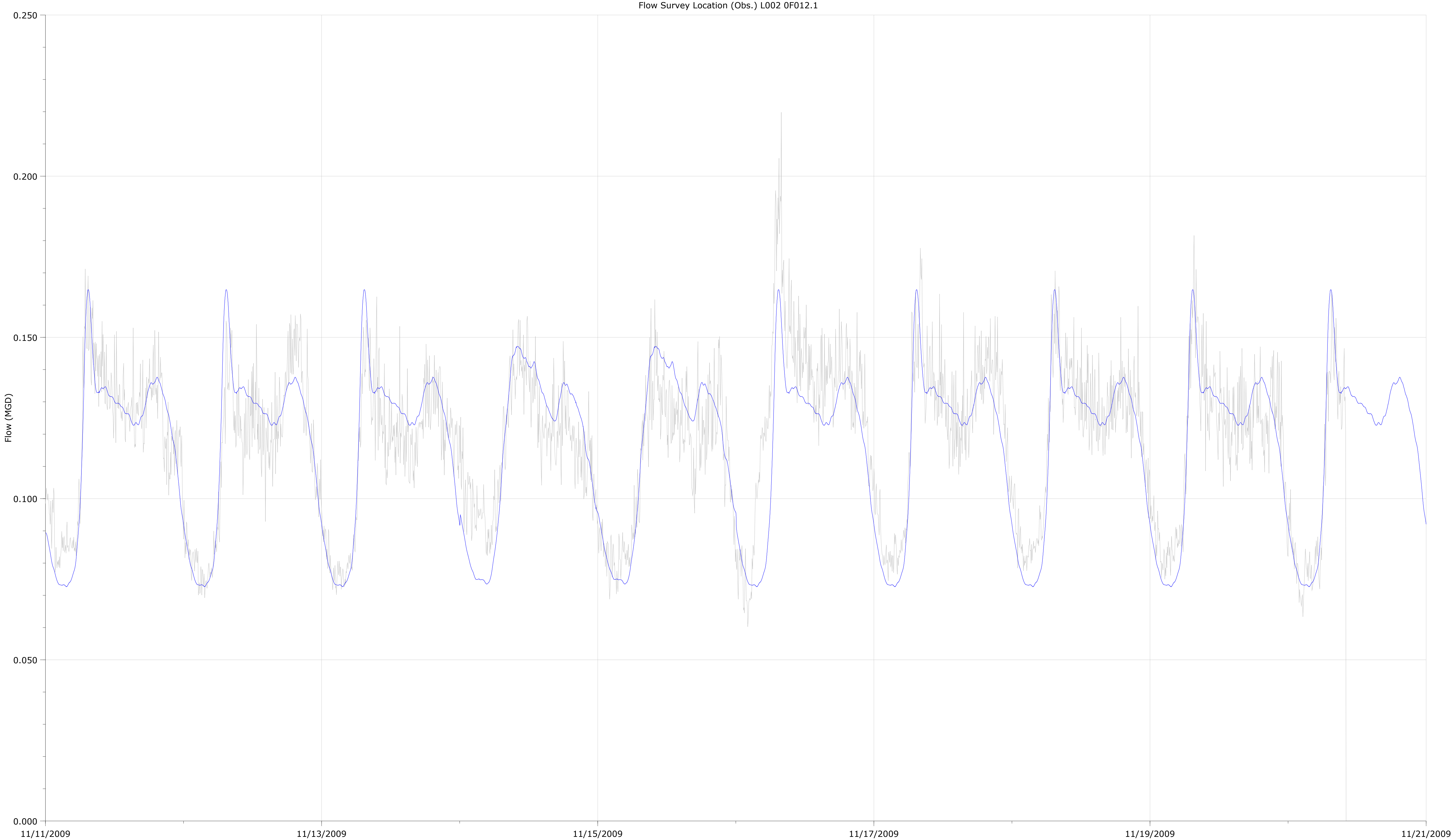
Flow Survey Location (Obs.) L001 0F002.1



		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.000	2.767	12.184
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		0.620	1.669	11.675

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 2 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

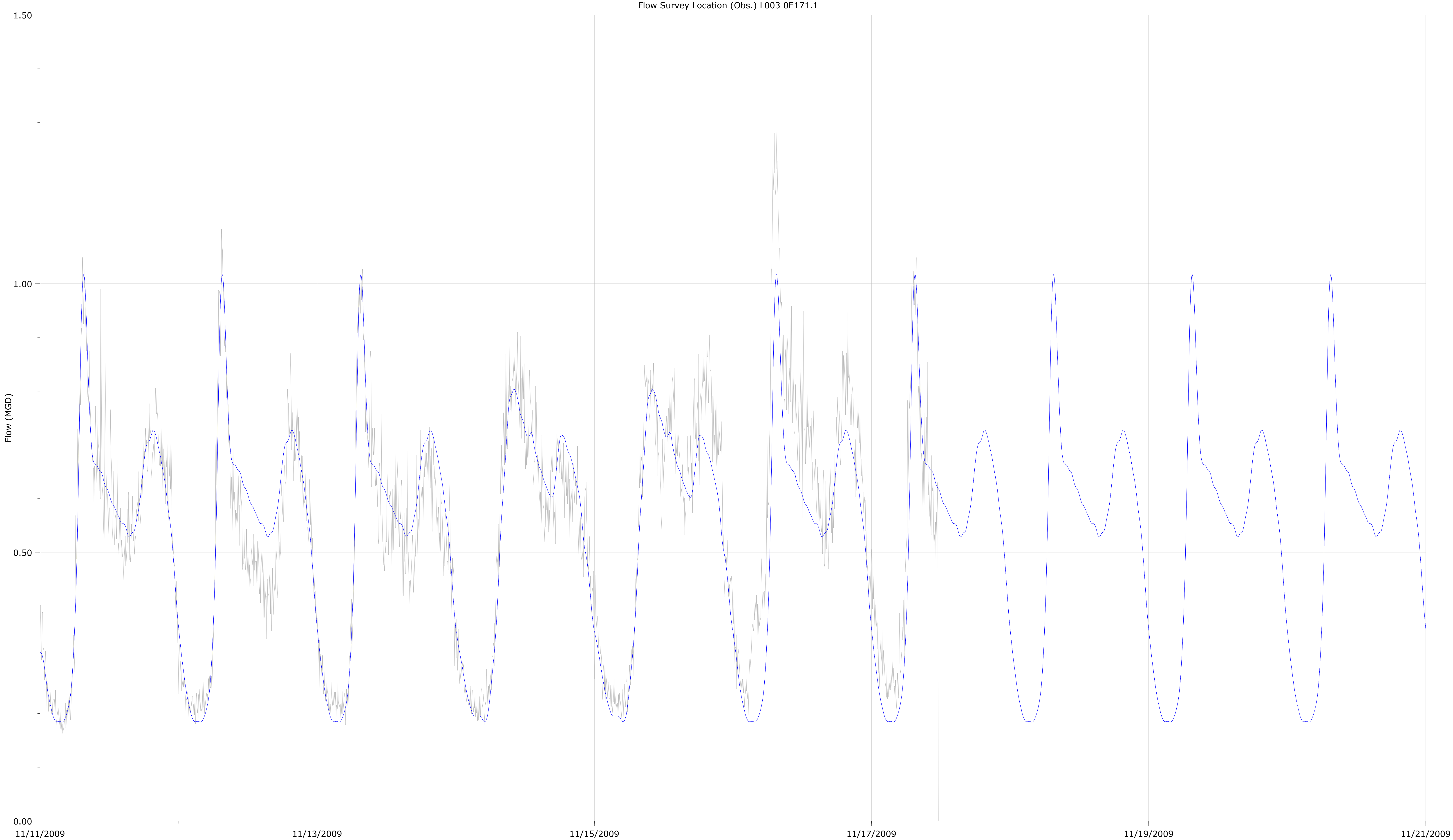
Flow Survey Location (Obs.) L002 0F012.1



		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.000	0.220	1.108
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		0.073	0.165	1.163

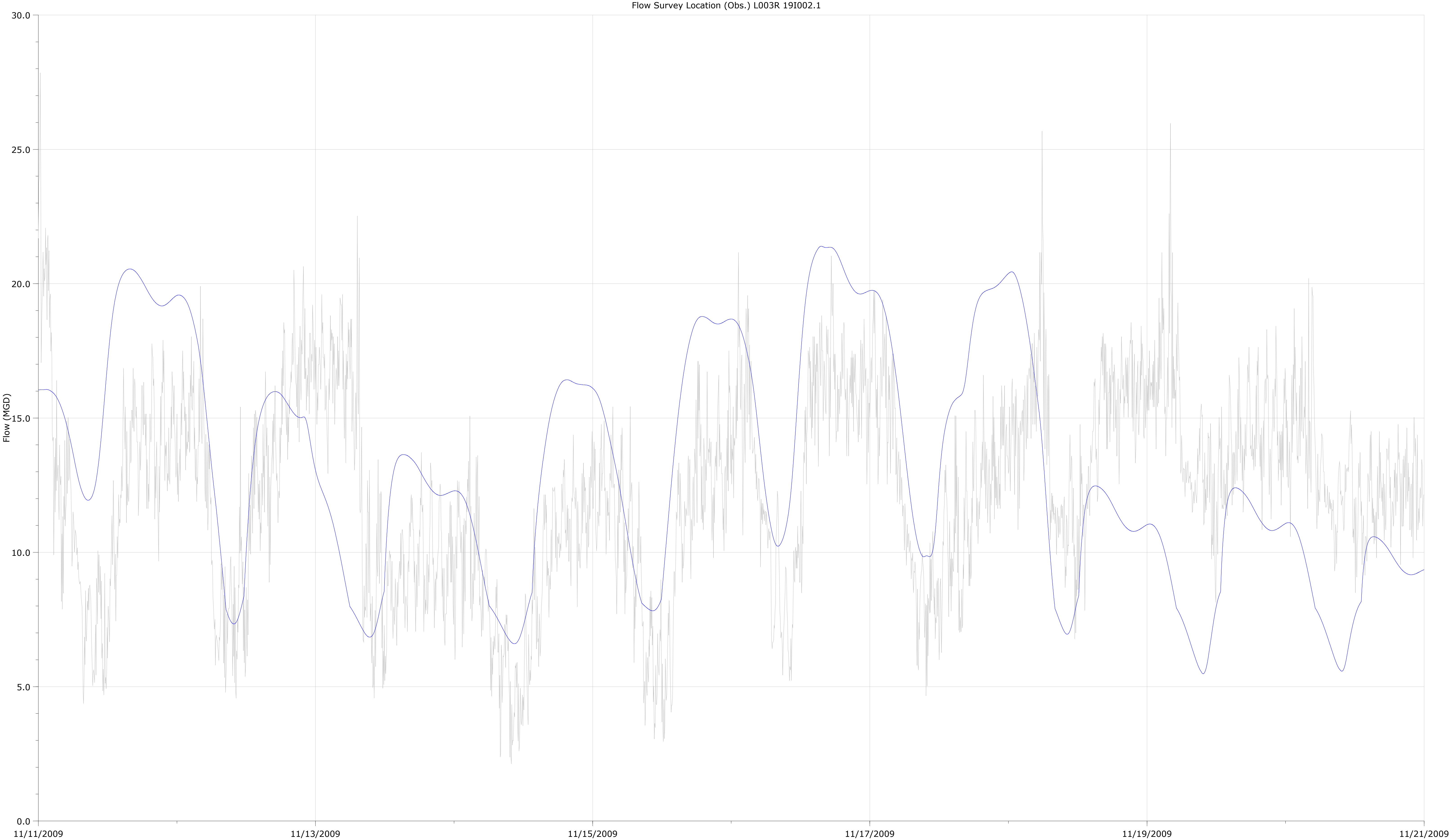
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L003 0E171.1



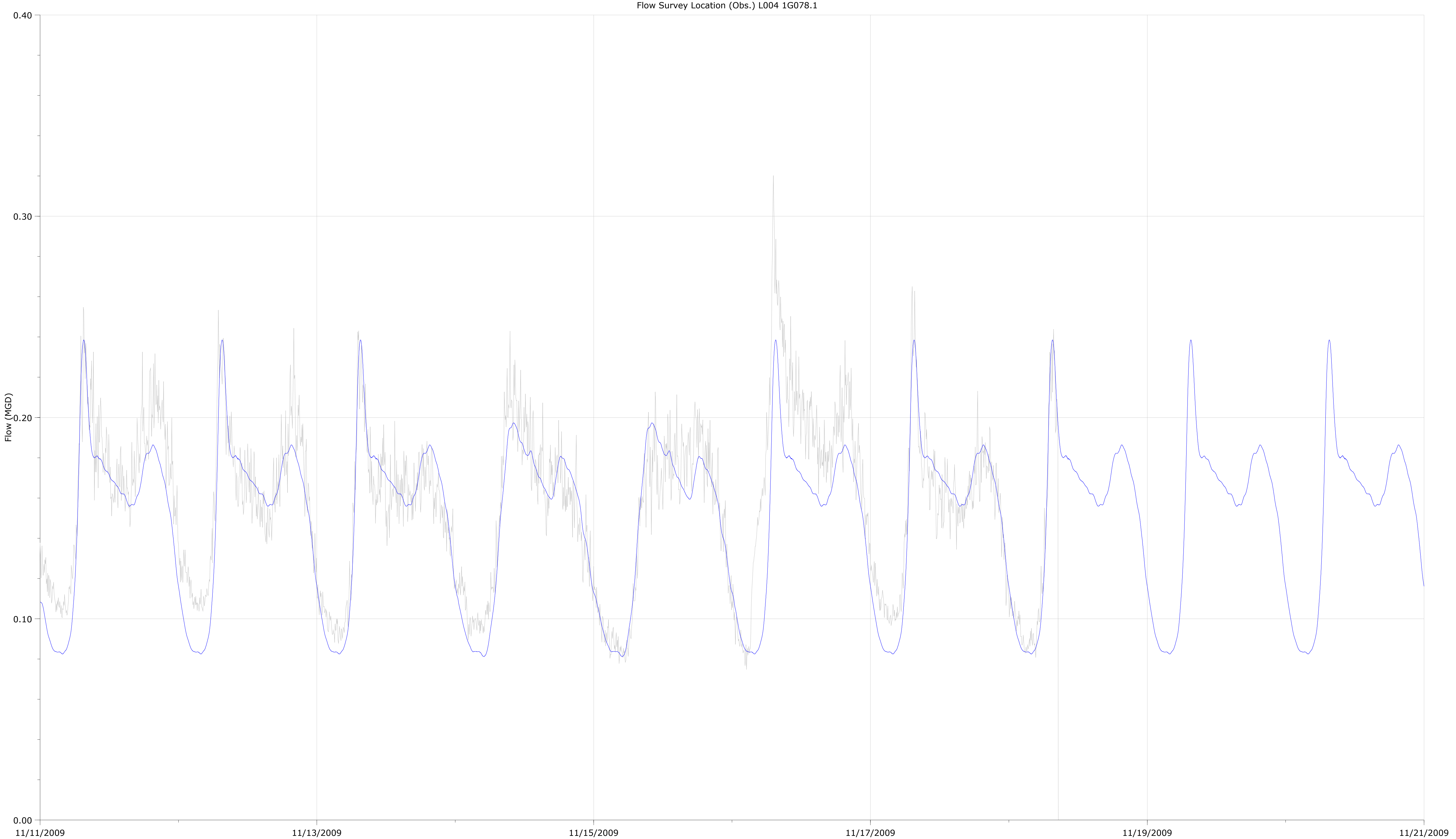
	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.000	1.284	3.536
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.184	1.017	5.324

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		2.124	27.847	123.610
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		5.481	21.393	131.874

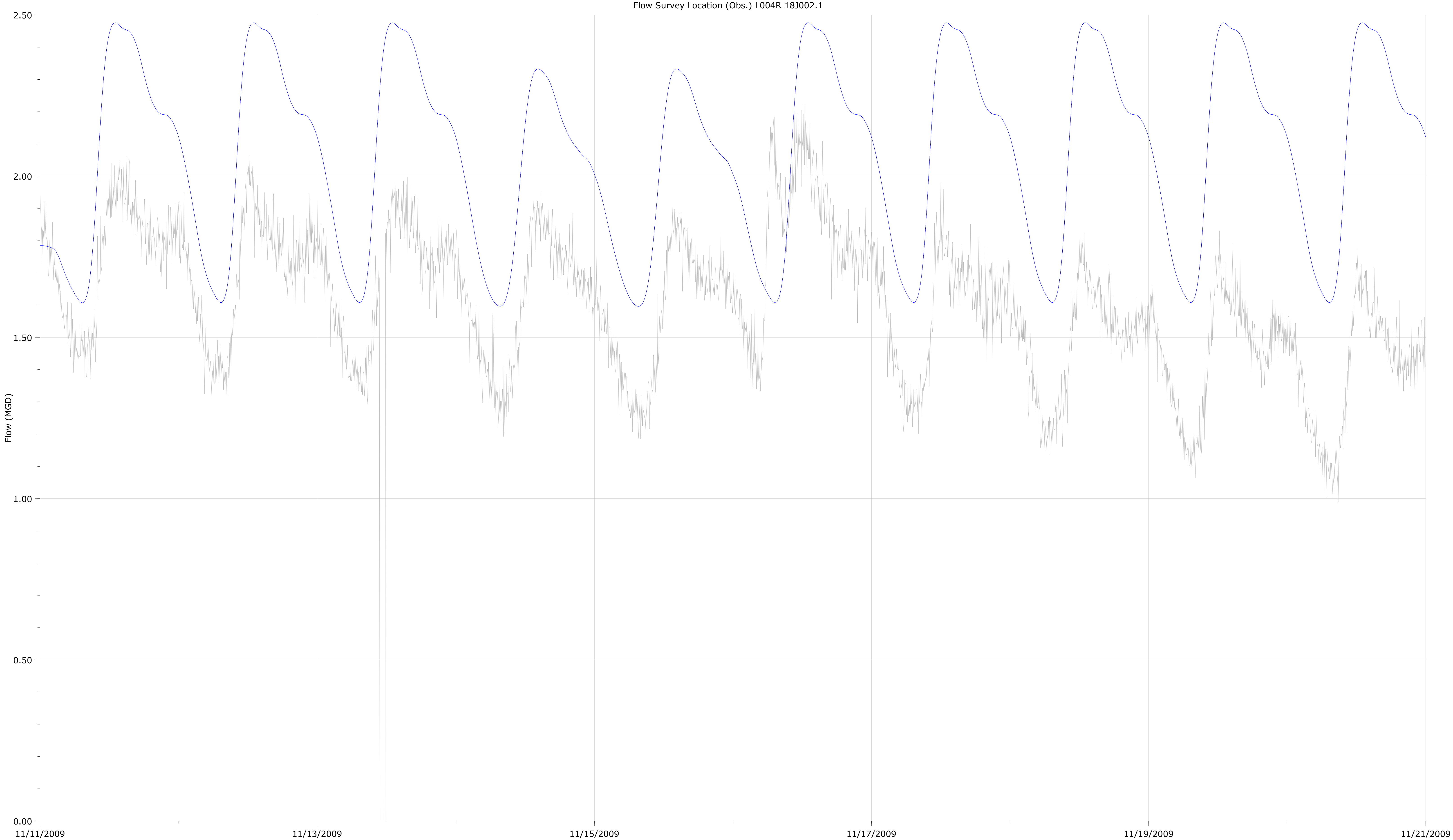
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 5 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.000	0.320	1.157
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.081	0.239	1.506

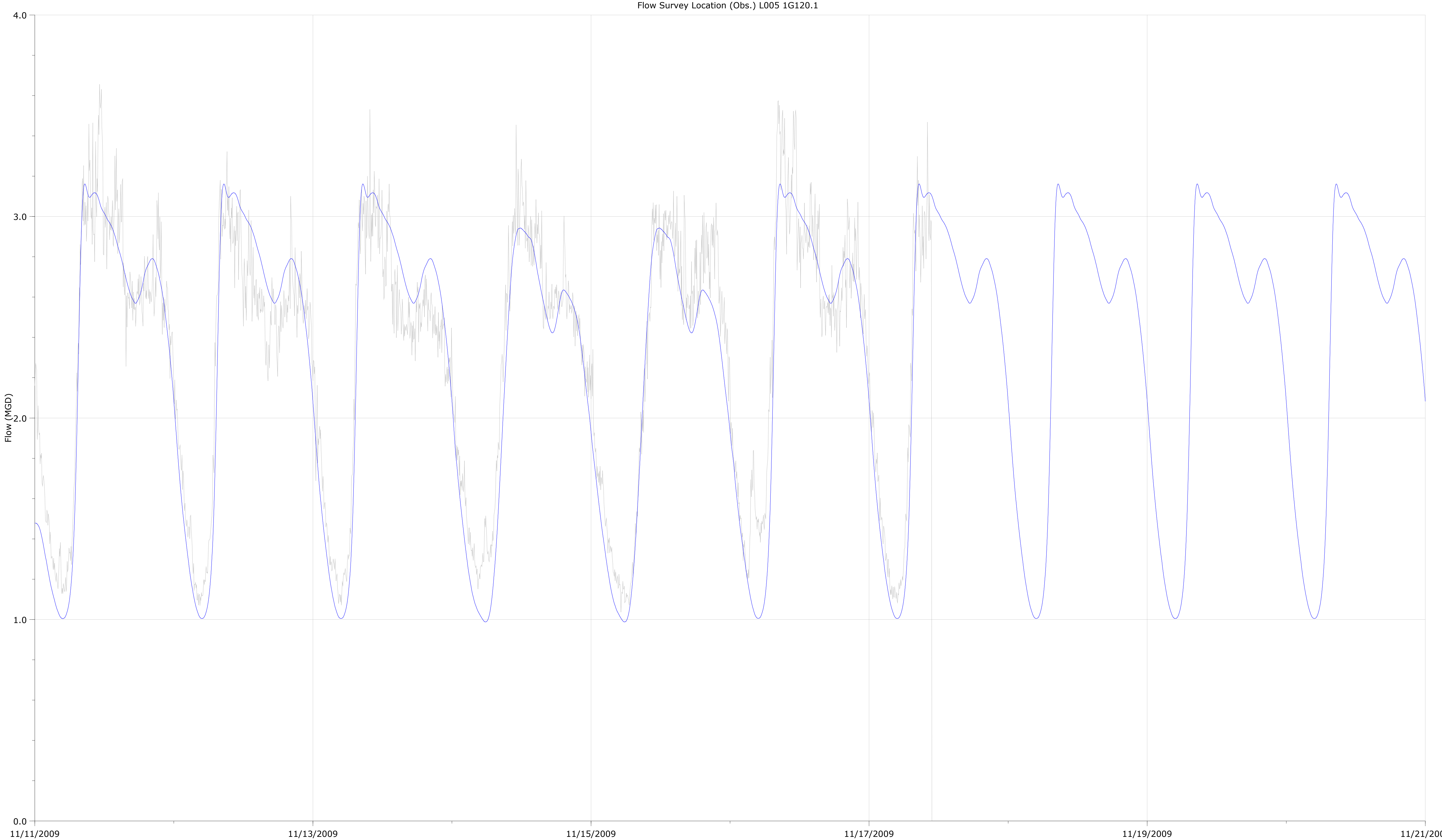
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 6 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L004R 18J002.1



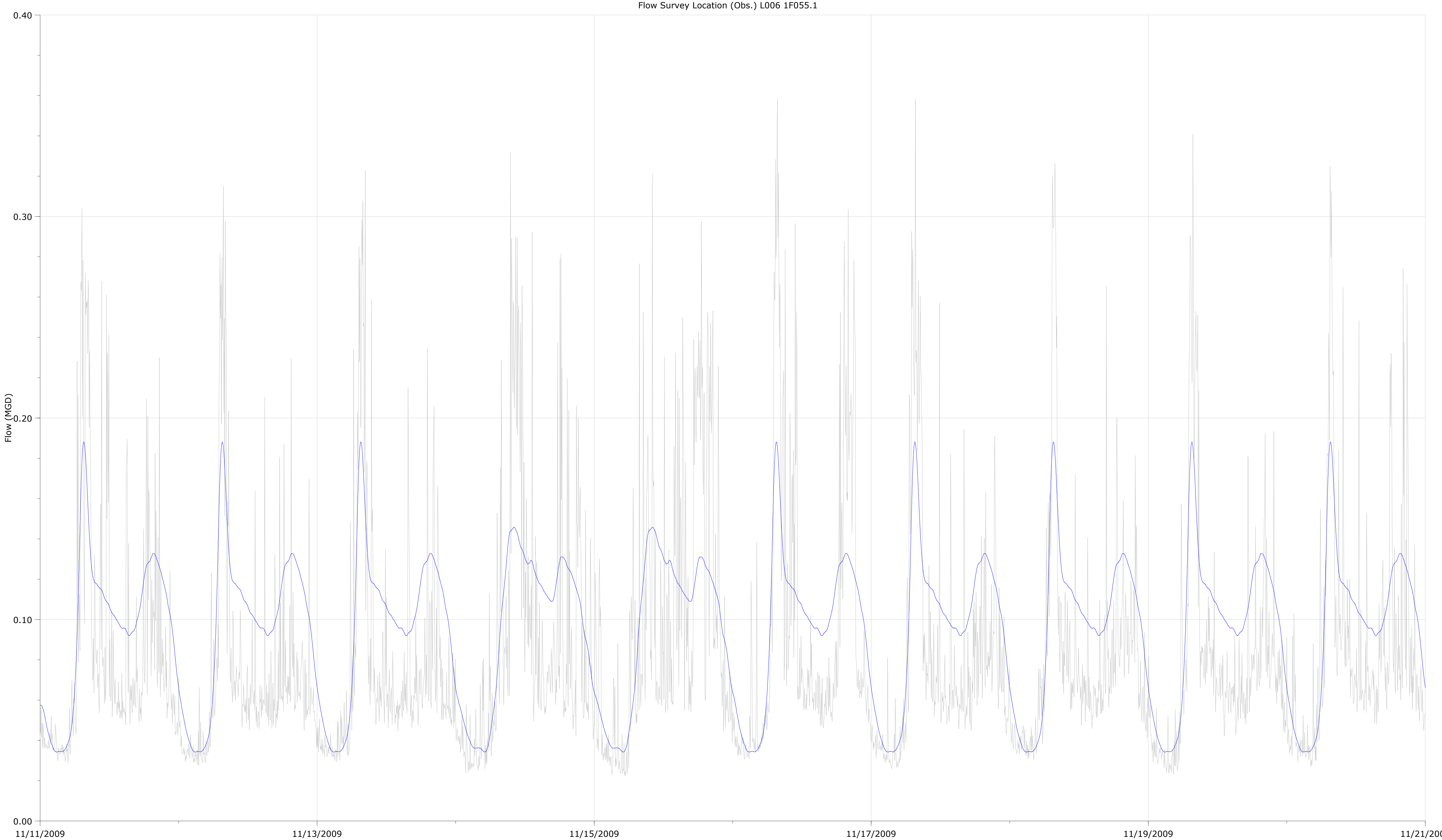
	Flow (MGD) Min	Flow (MGD) Max	Volume (US Mgal)
Obs.	0.000	2.243	15.946
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	1.596	2.476	20.714

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



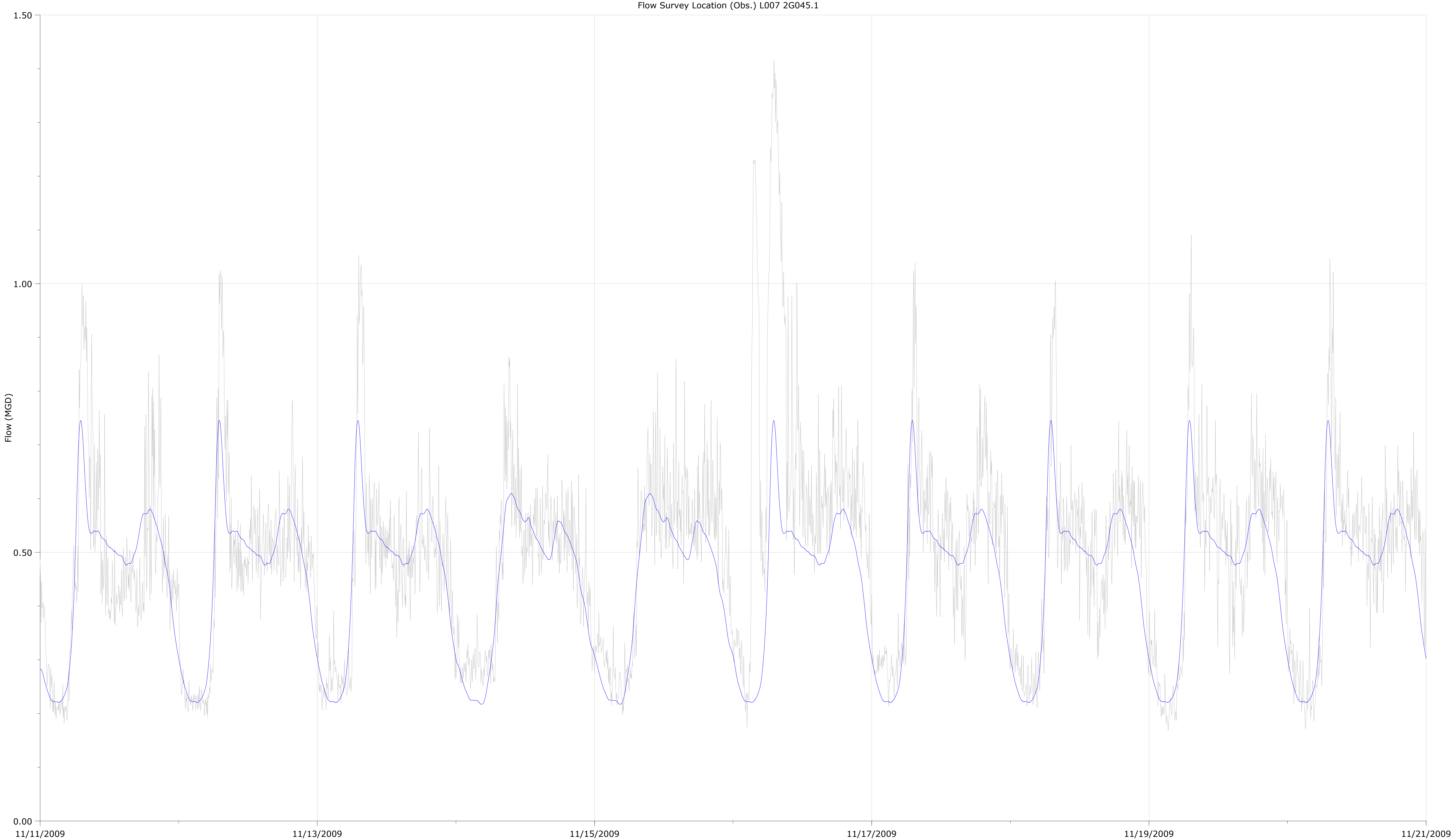
	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.000	3.657	14.891
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.988	3.162	22.924

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.022	0.358	0.859
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.034	0.188	0.961

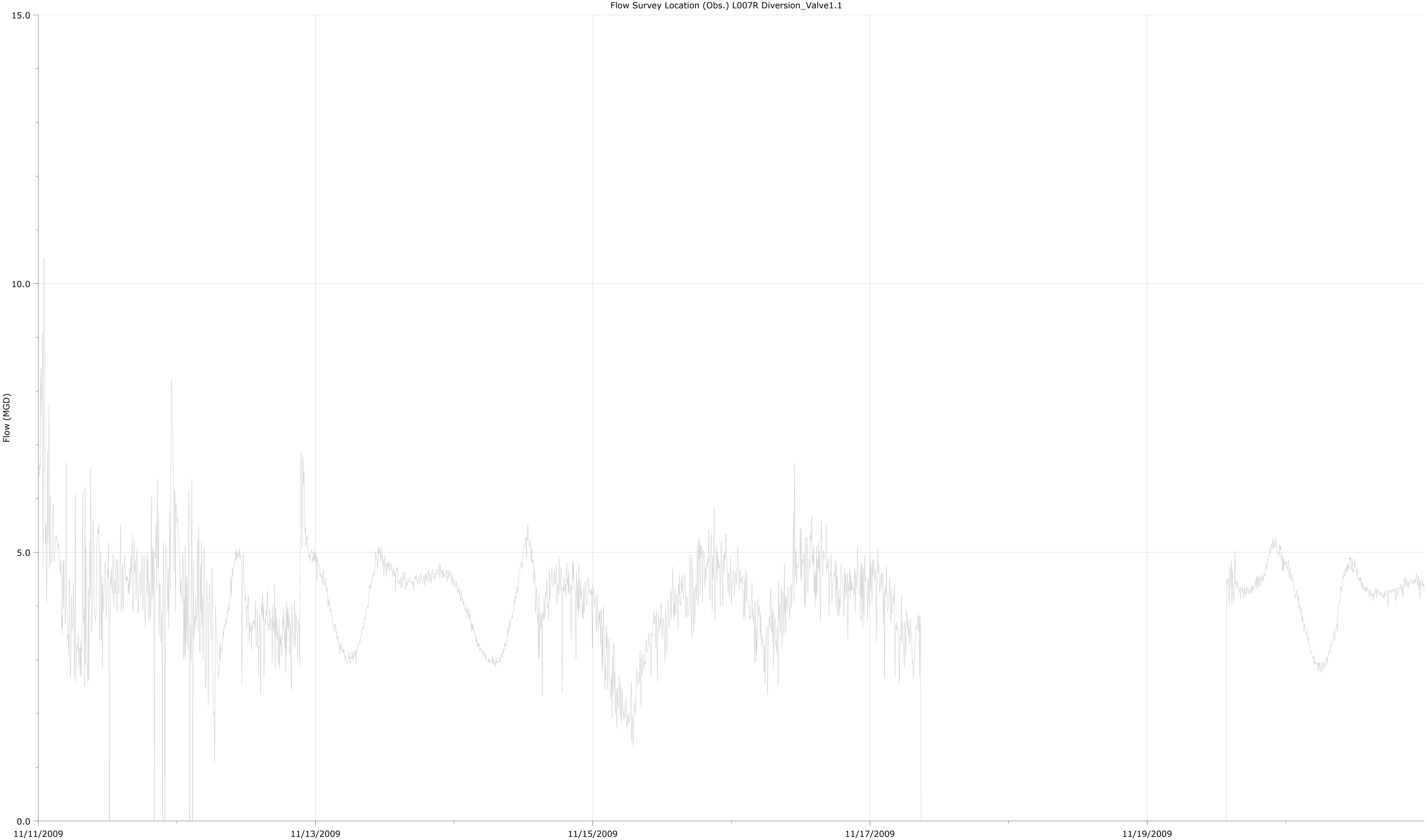
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 9 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.168	1.416	5.000
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.217	0.745	4.527

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

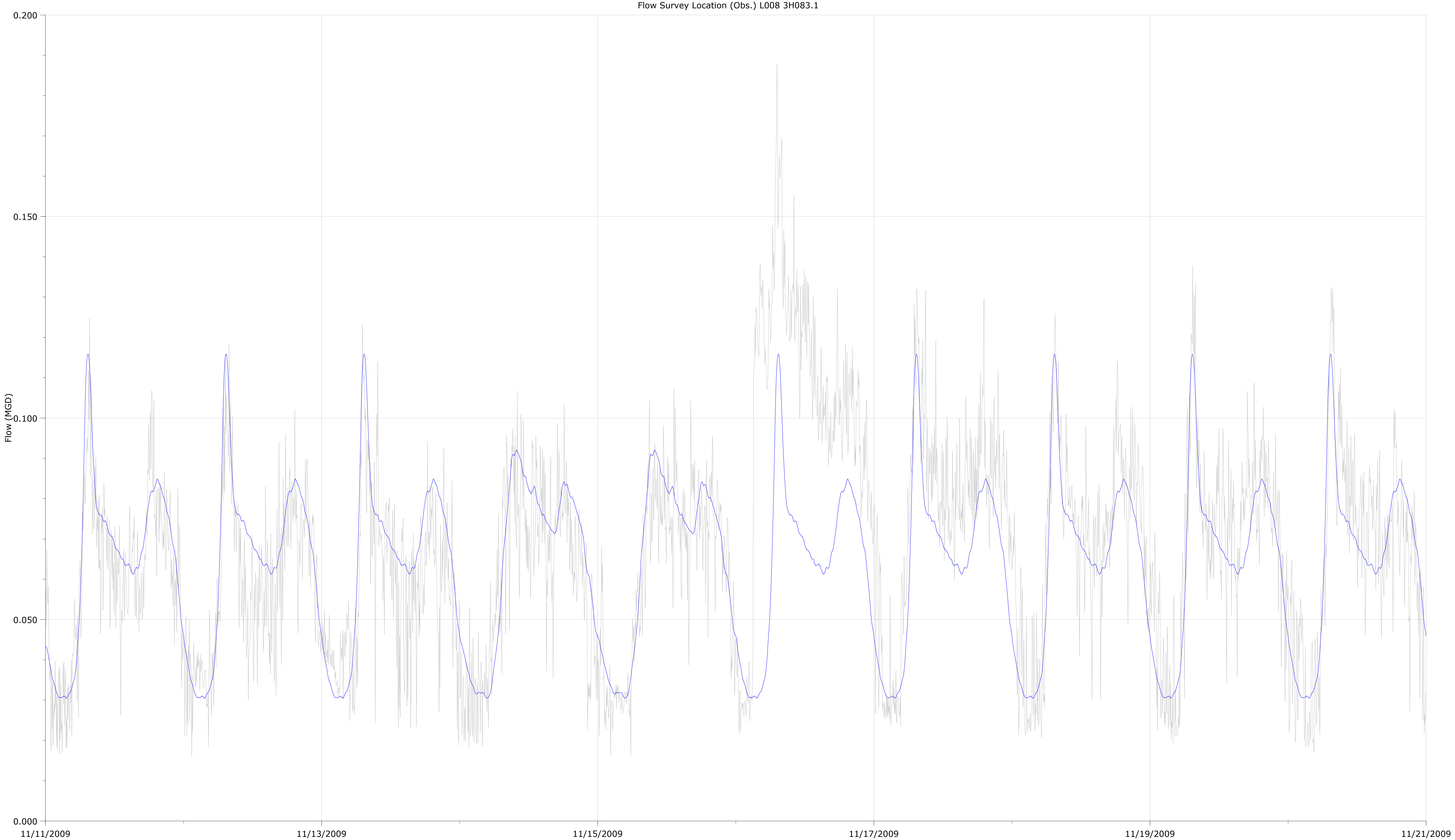
Flow Survey Location (Obs.) L007R Diversion_Valve1.1



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.000	10.479	32.125
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.000	0.000	0.000

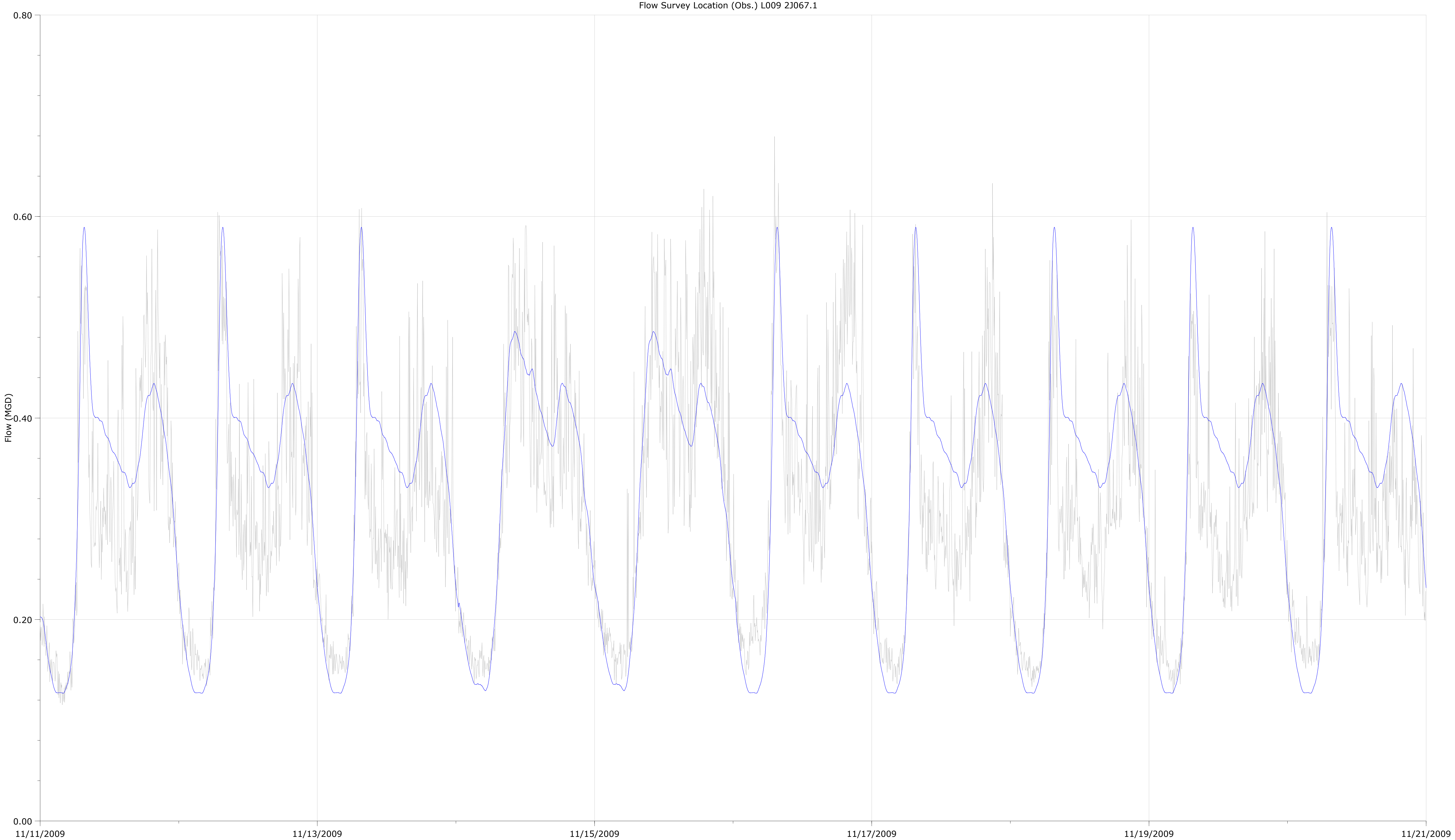
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L008 3H083.1



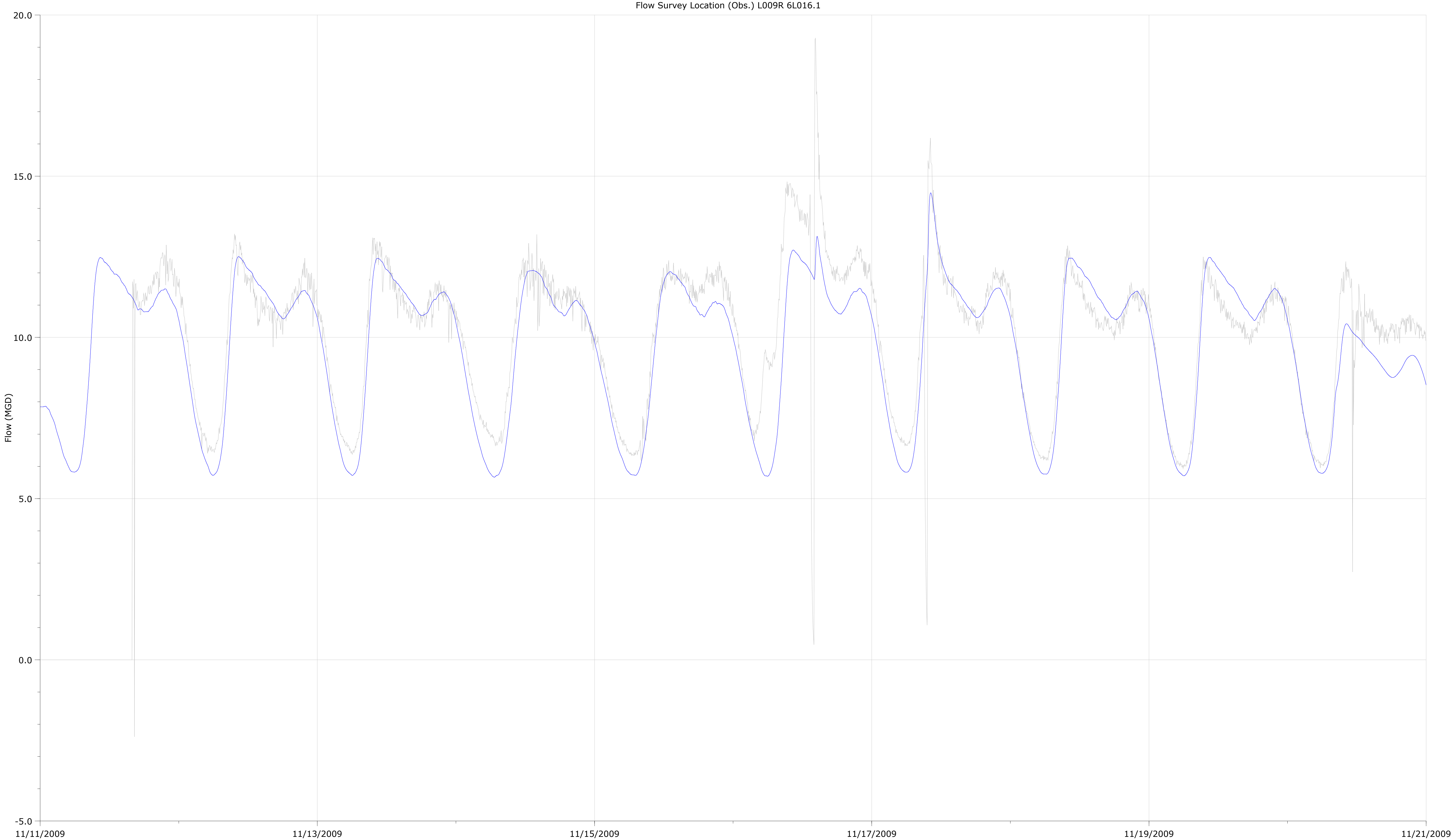
	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.016	0.188	0.683
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.030	0.116	0.643

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



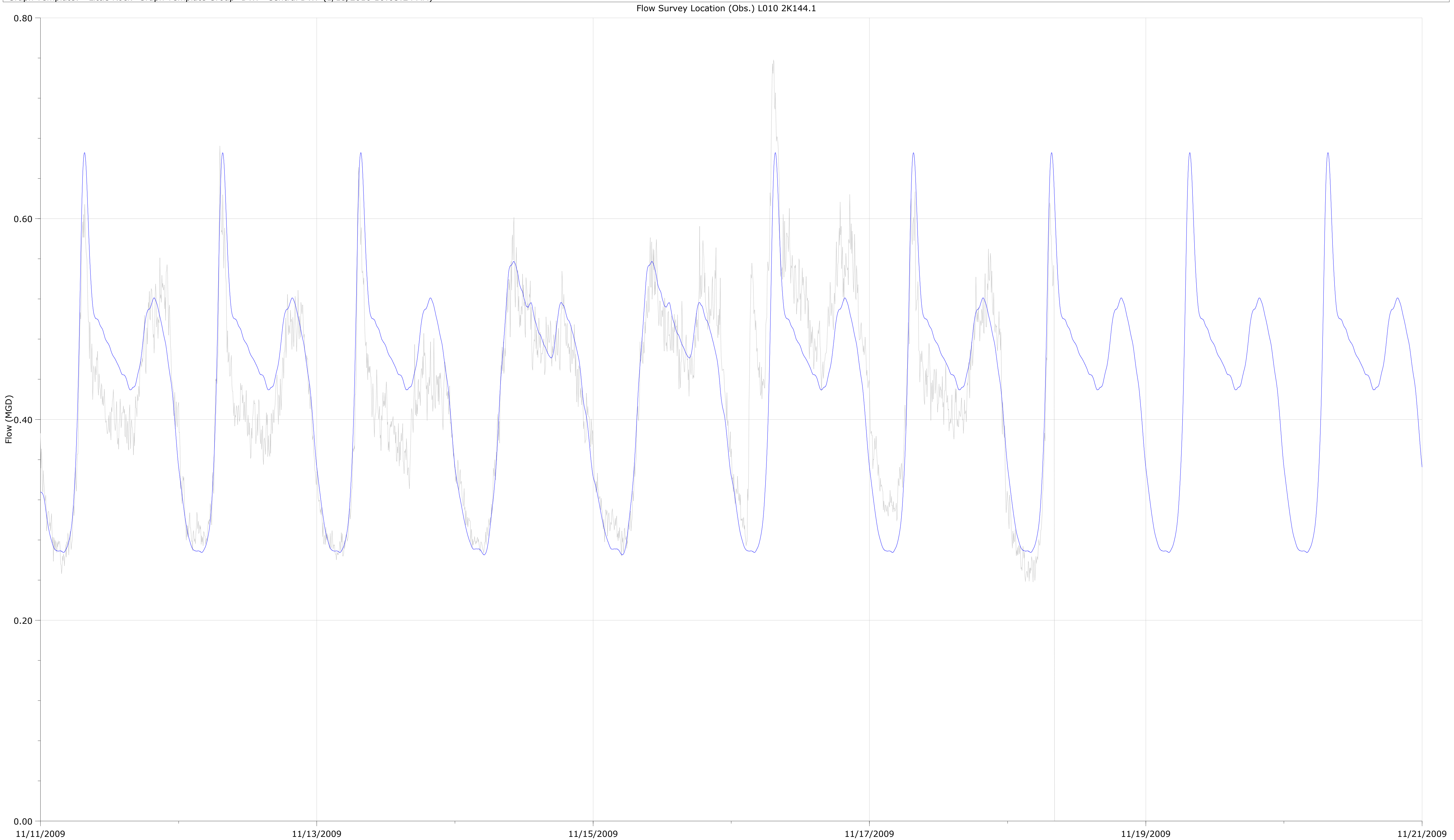
		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.115	0.679	3.079
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		0.127	0.589	3.271

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



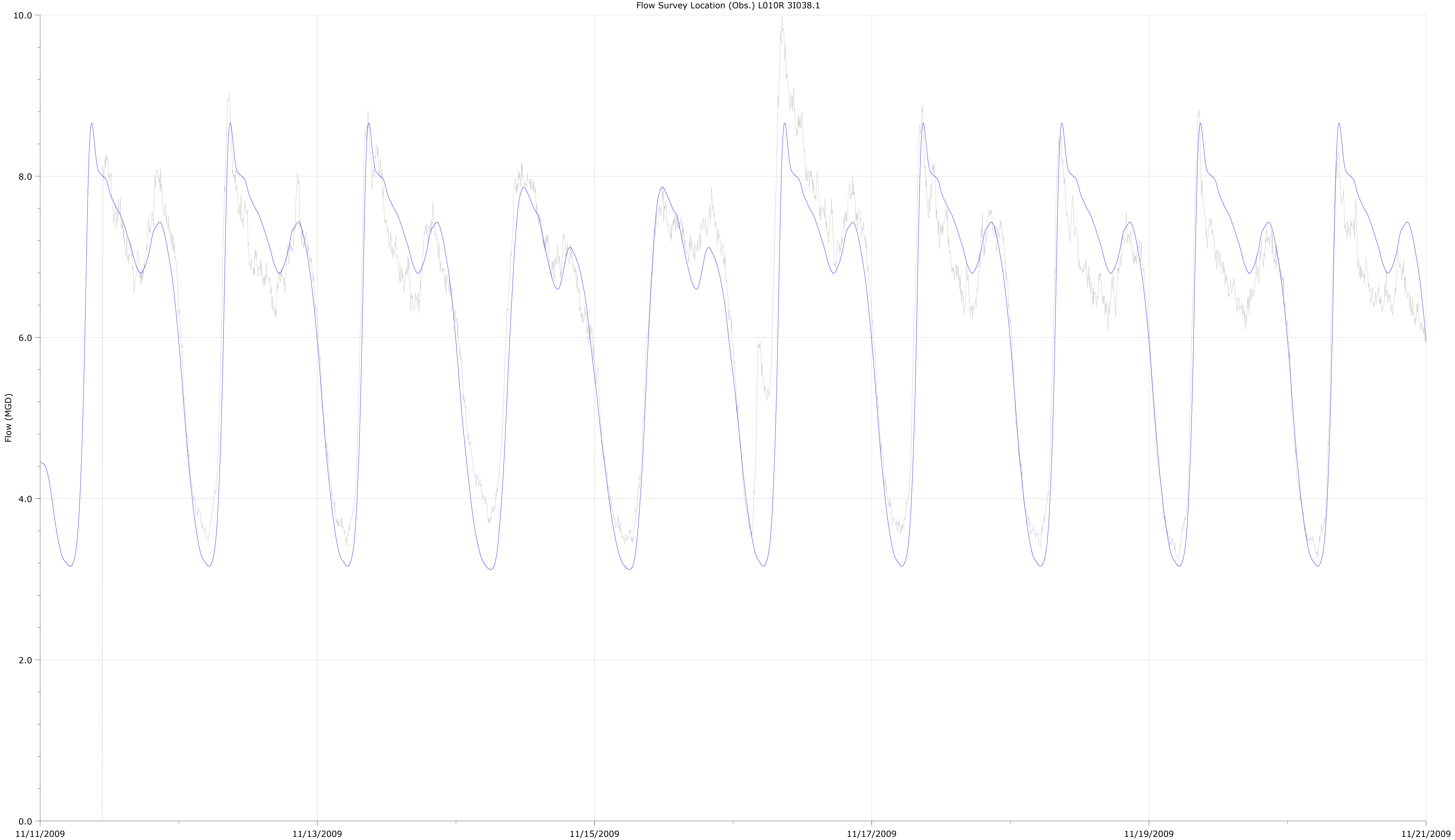
		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		-2.387	19.276	95.060
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		5.665	14.484	97.213

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.000	0.758	3.096
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		0.265	0.666	4.316

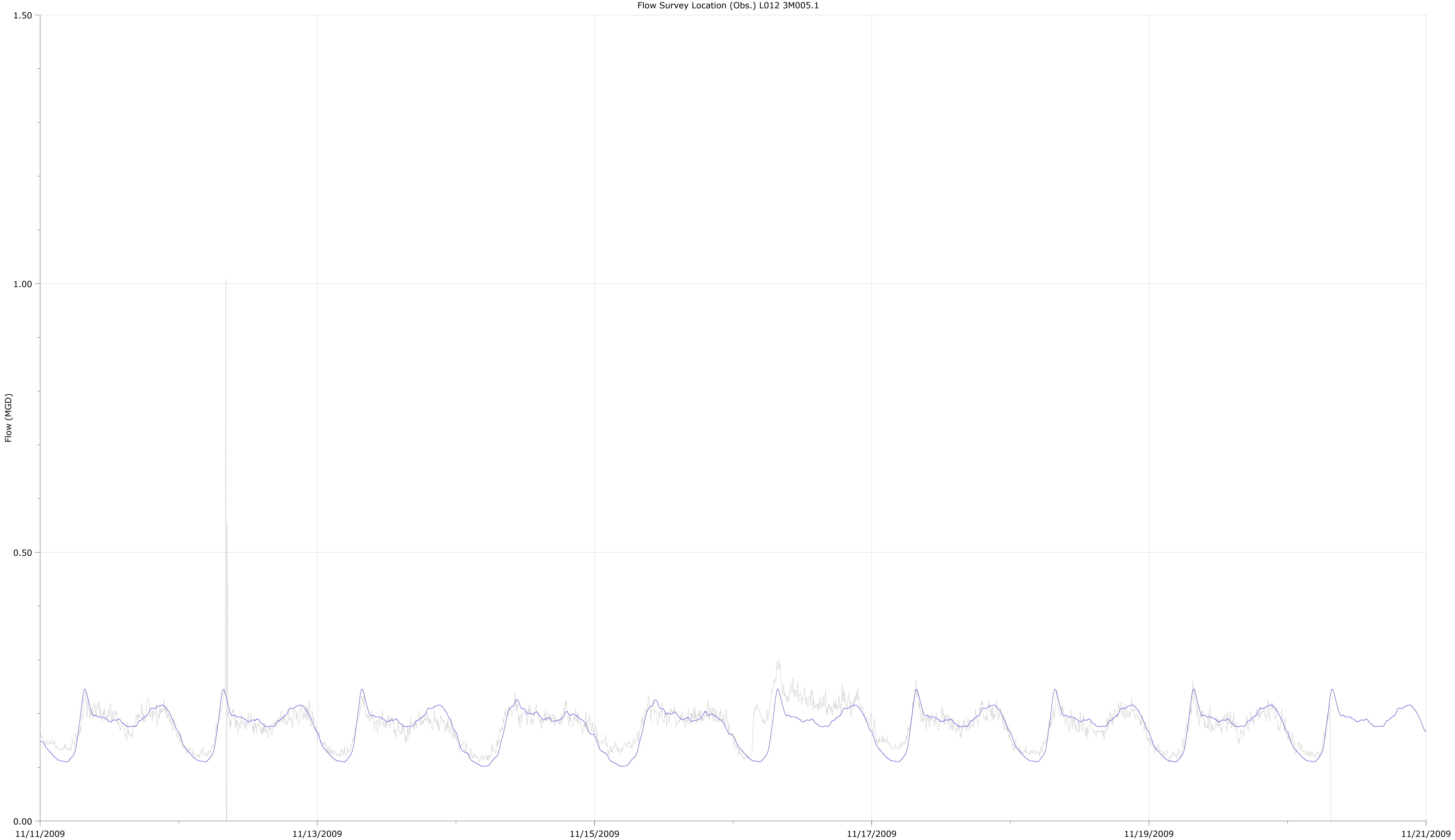
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 15 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.000	9.984	60.431
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	3.120	8.660	61.952

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 16 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

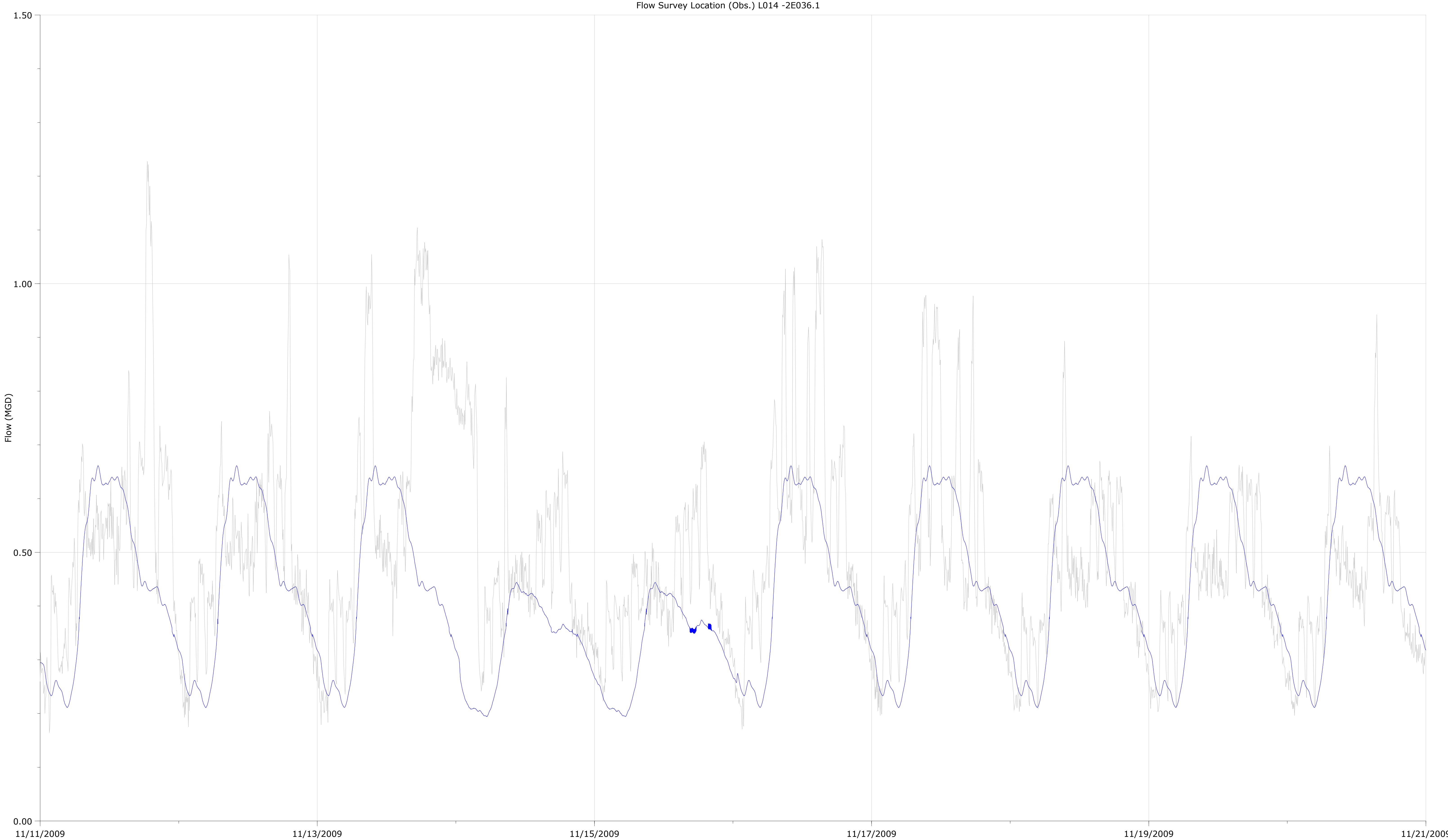
Flow Survey Location (Obs.) L012 3M005.1



	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.000	1.008	1.652
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.102	0.245	1.750

Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

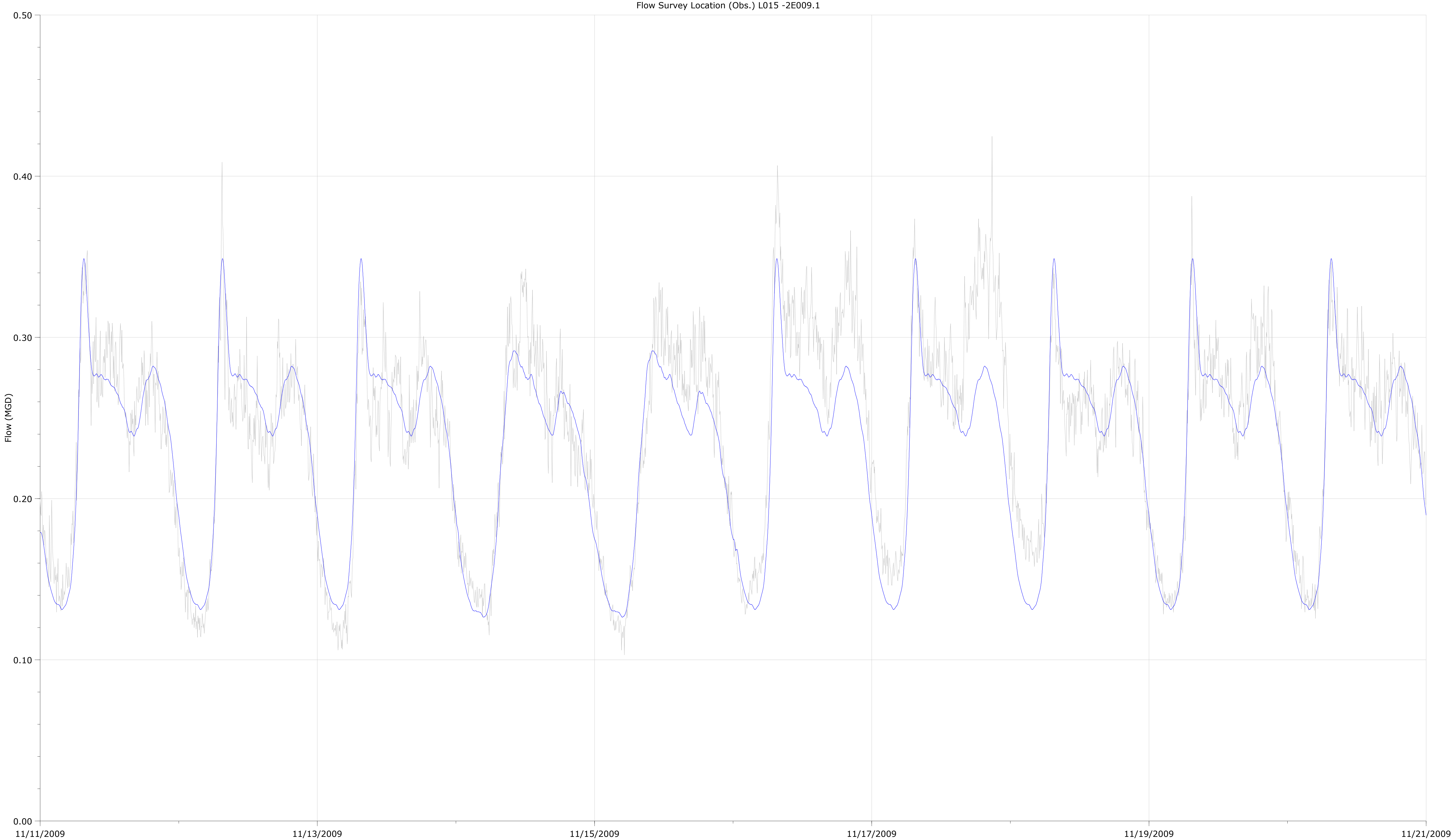
Flow Survey Location (Obs.) L014 -2E036.1



	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.164	1.228	4.954
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.194	0.661	4.192

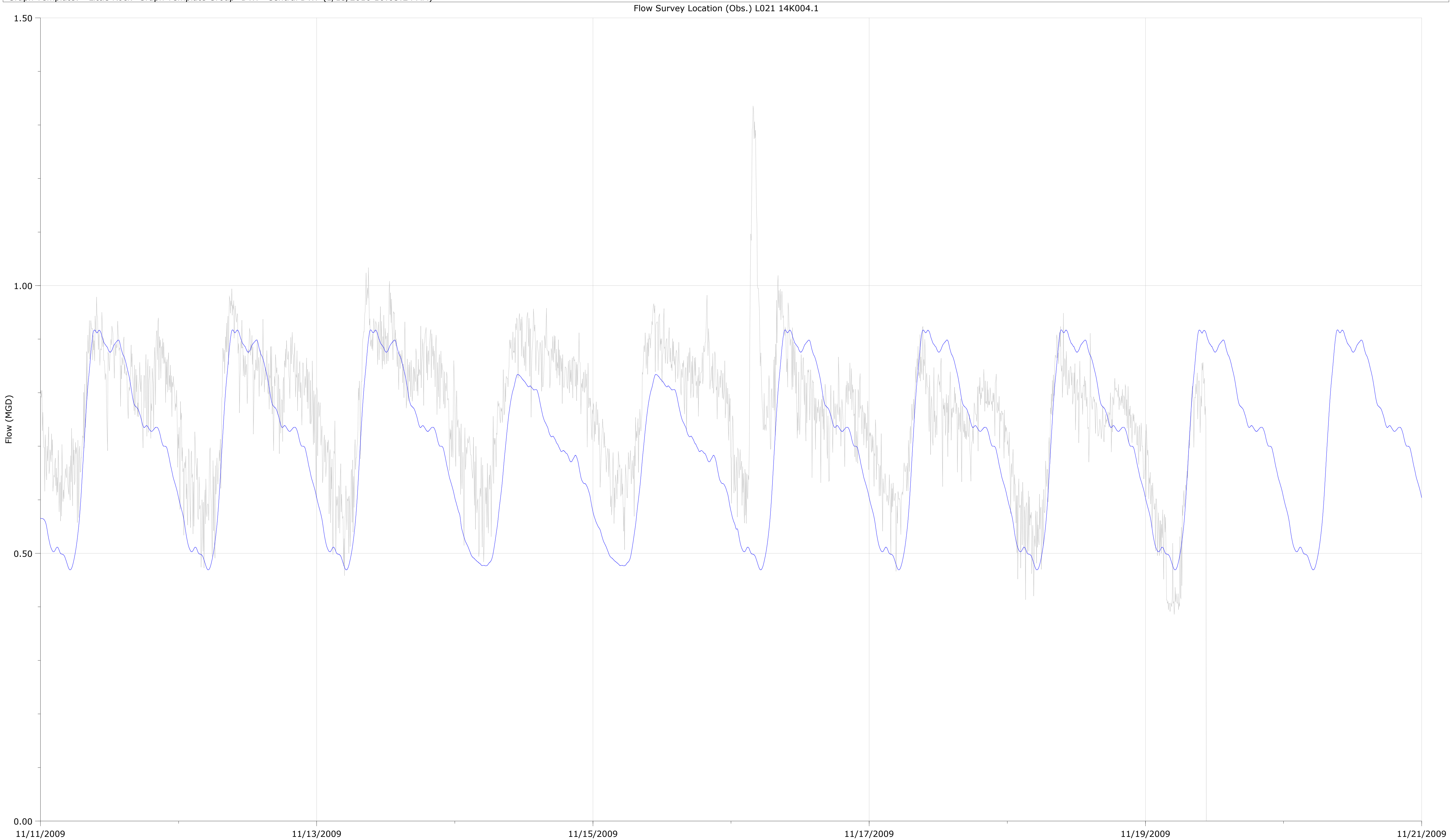
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 18 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L015 -2E009.1



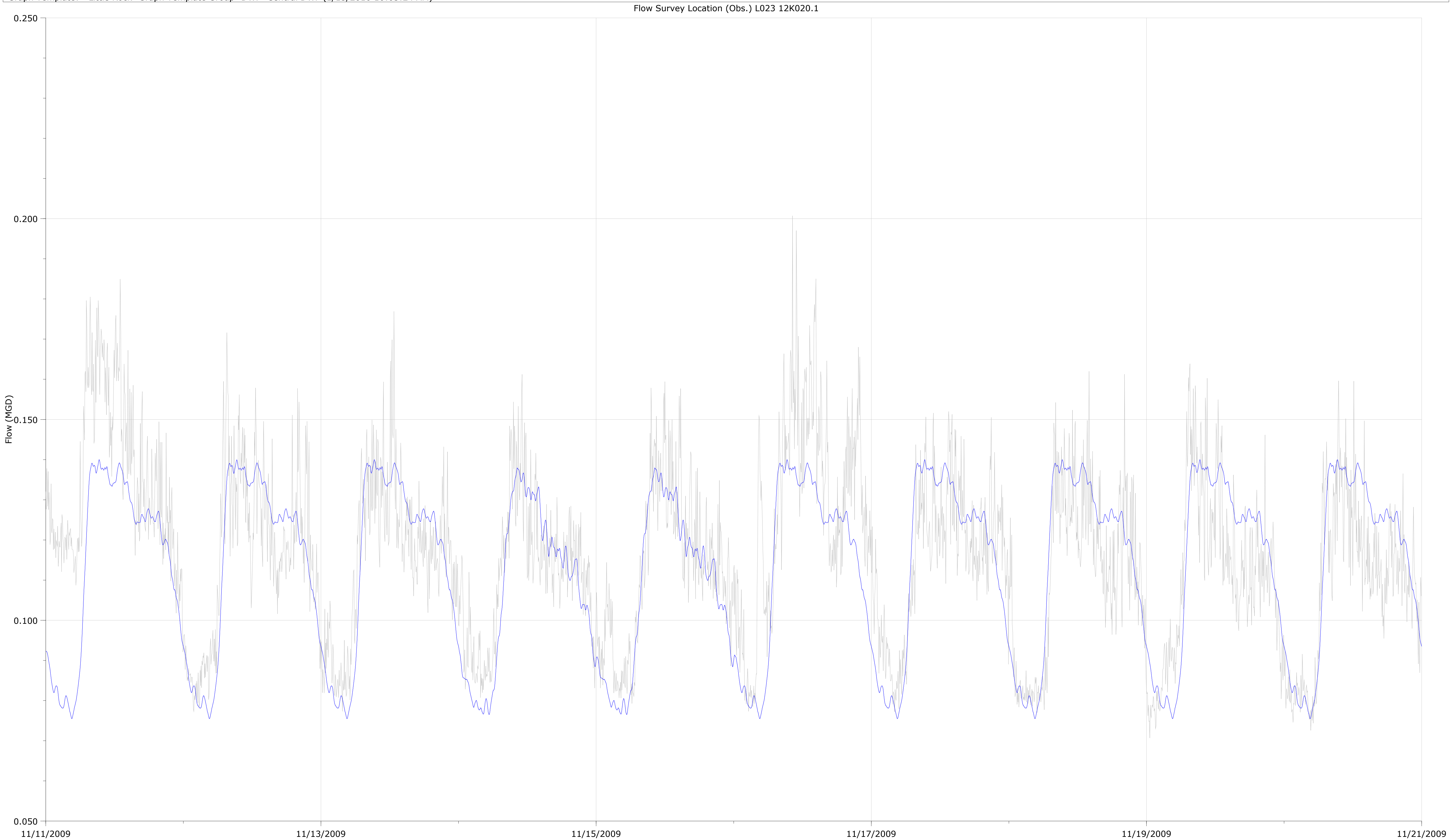
	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.103	0.425	2.409
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.126	0.349	2.321

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 19 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.000	1.336	6.455
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		0.469	0.917	6.993

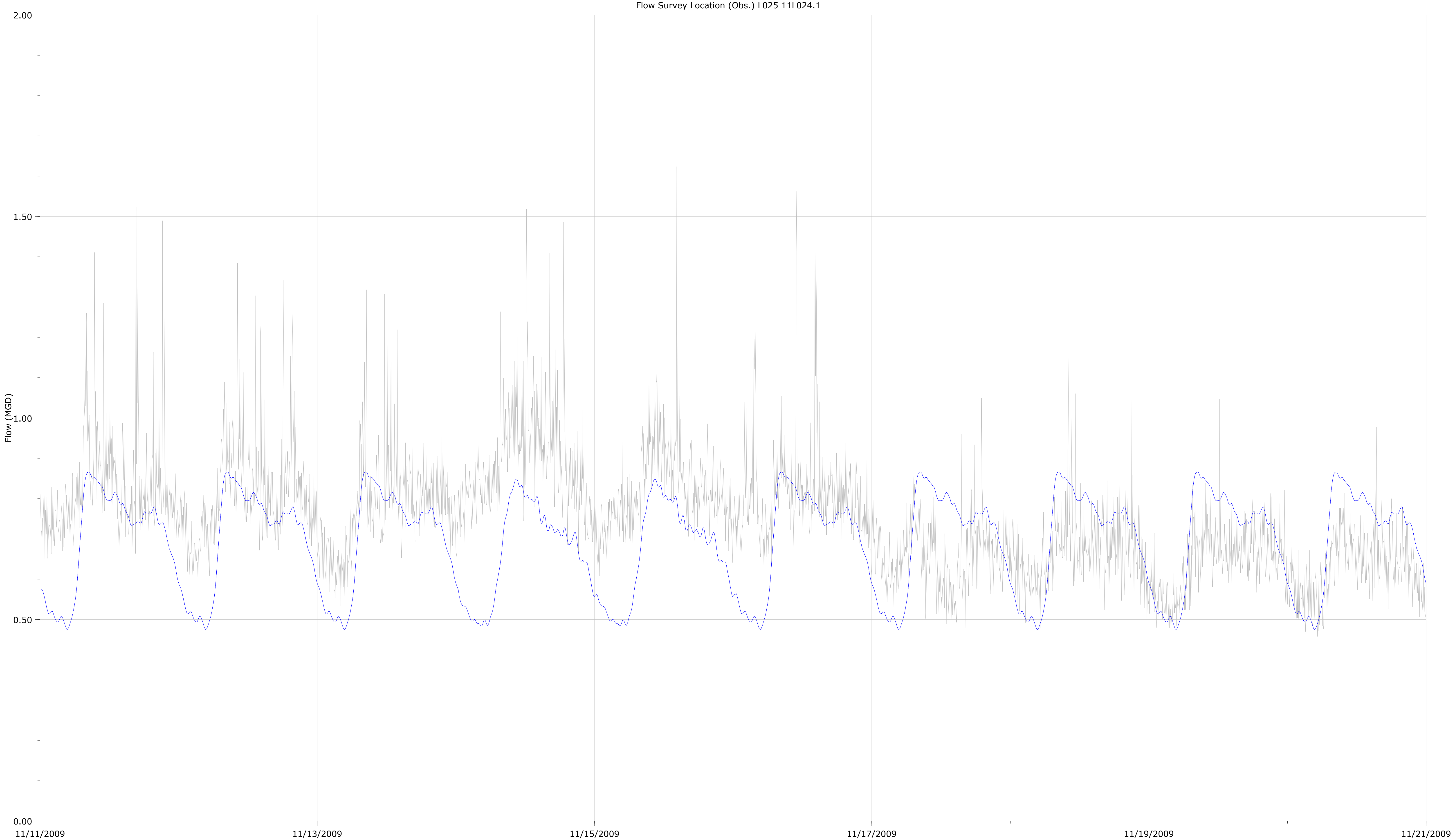
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 20 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.071	0.201	1.168
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.075	0.140	1.131

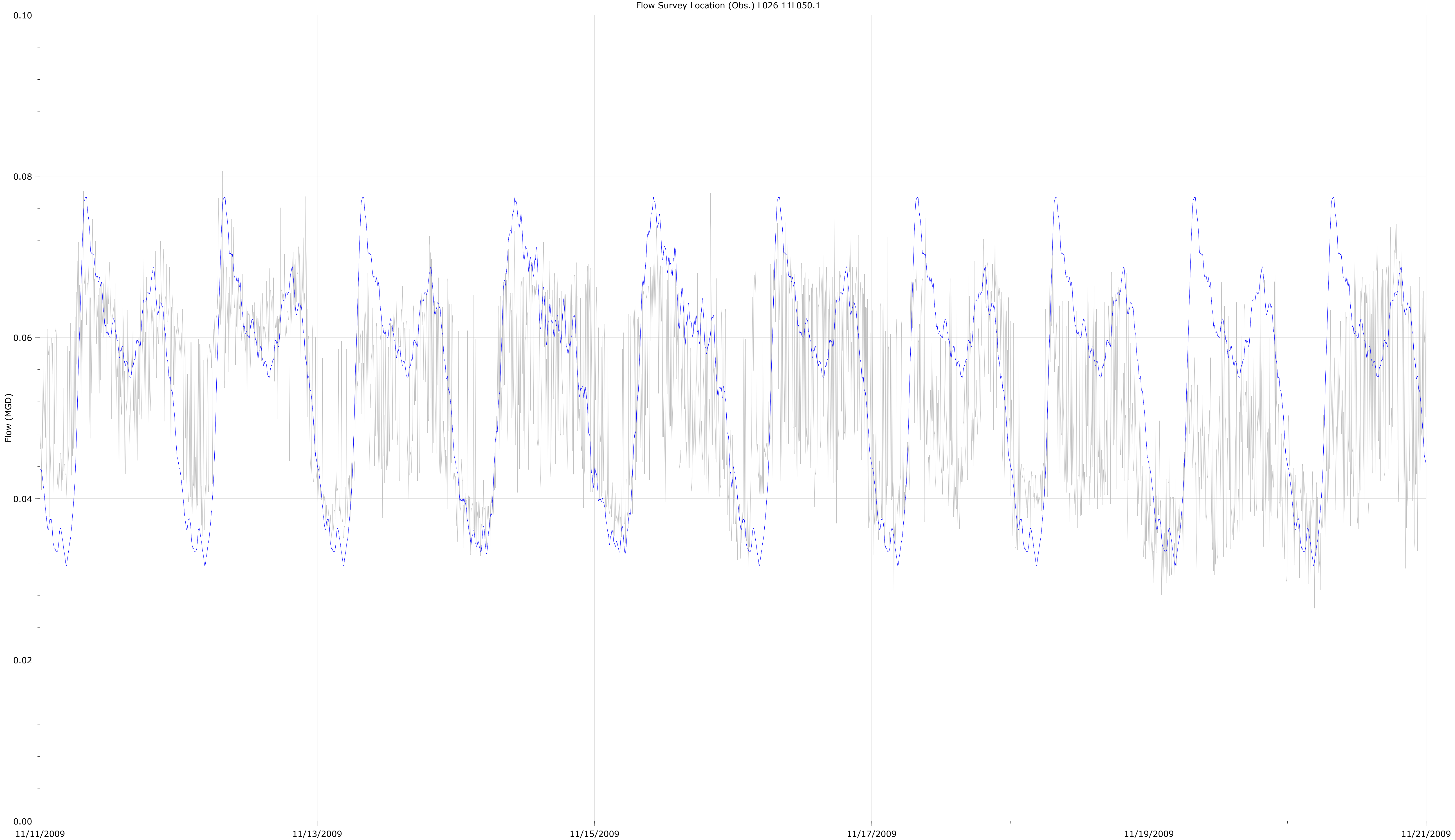
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L025 11L024.1



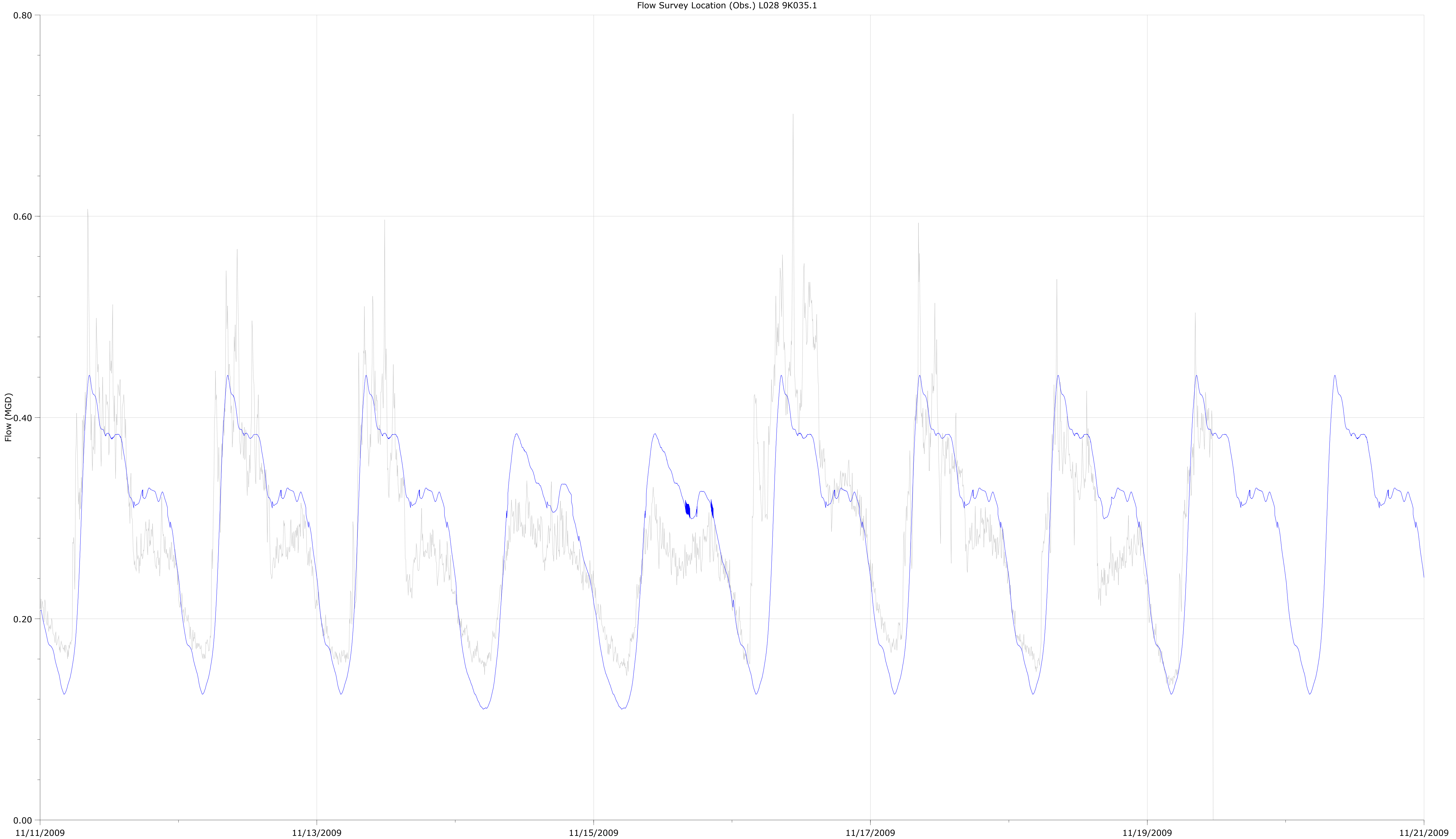
	Min	Max	Volume (US Mgal)
	Flow (MGD)		
Obs.	0.458	1.624	7.551
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.475	0.866	6.920

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 22 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.026	0.081	0.517
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.032	0.077	0.553

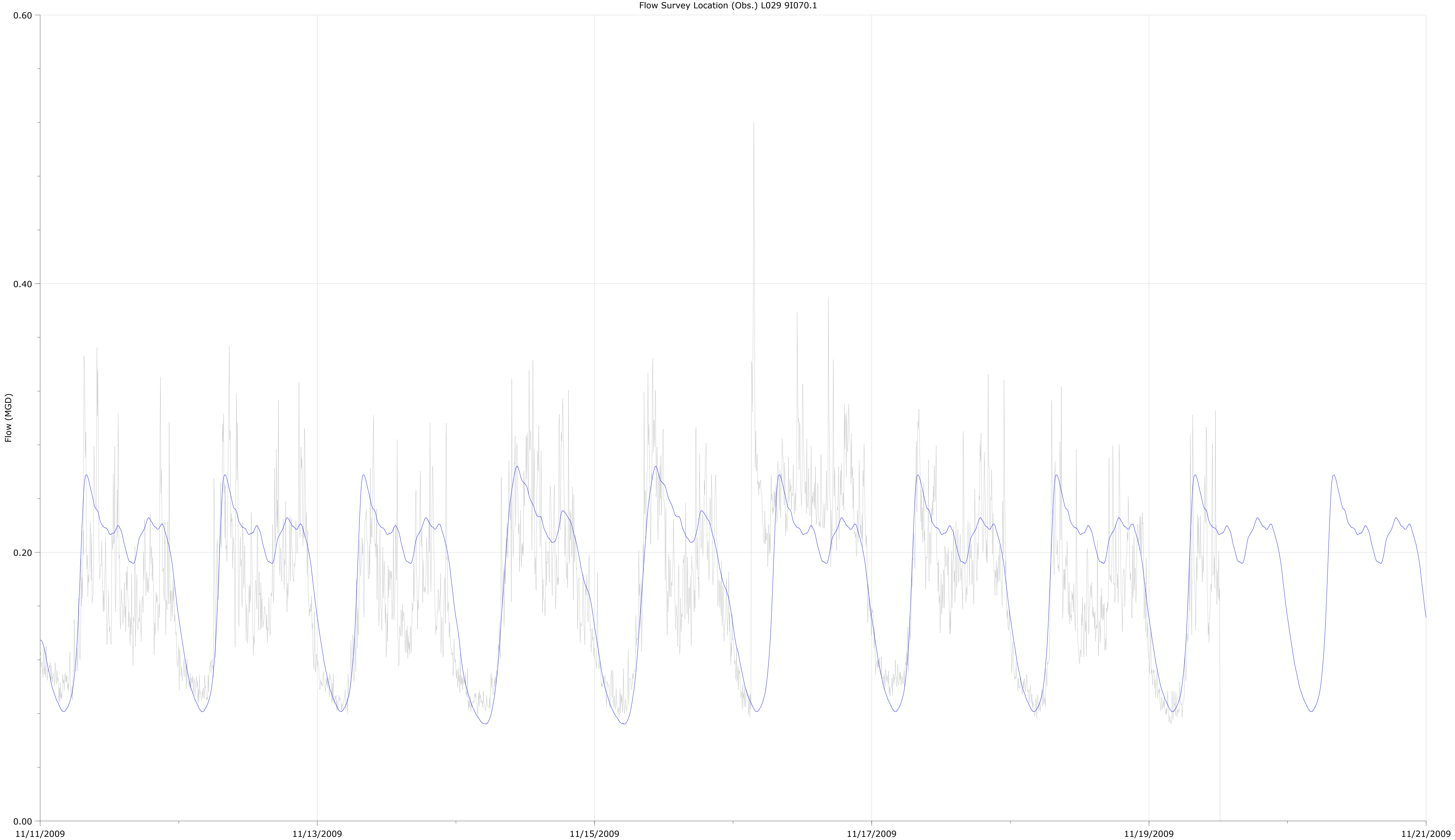
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 23 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.000	0.702	2.426
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.110	0.442	2.886

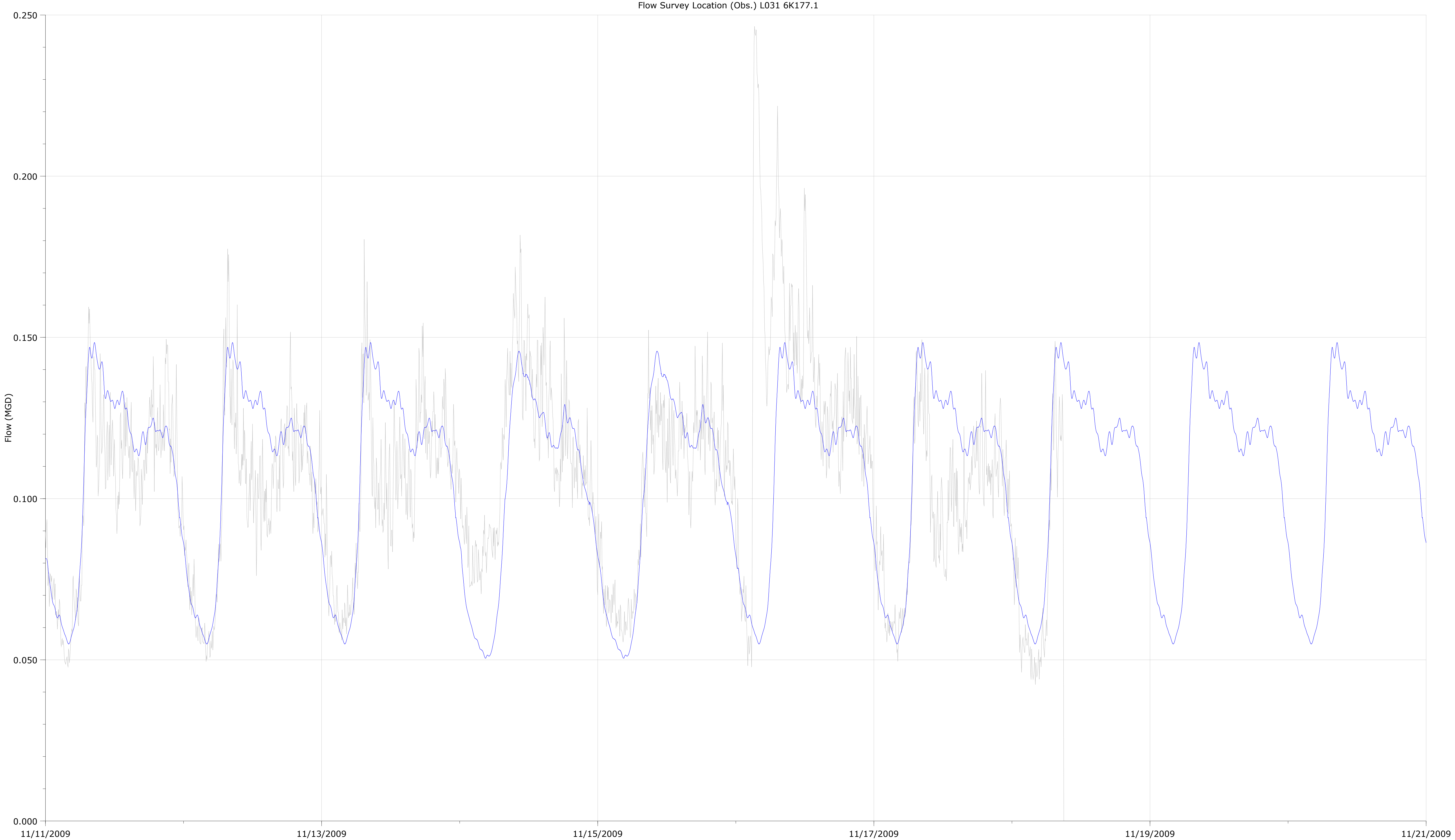
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 24 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L029 9I070.1



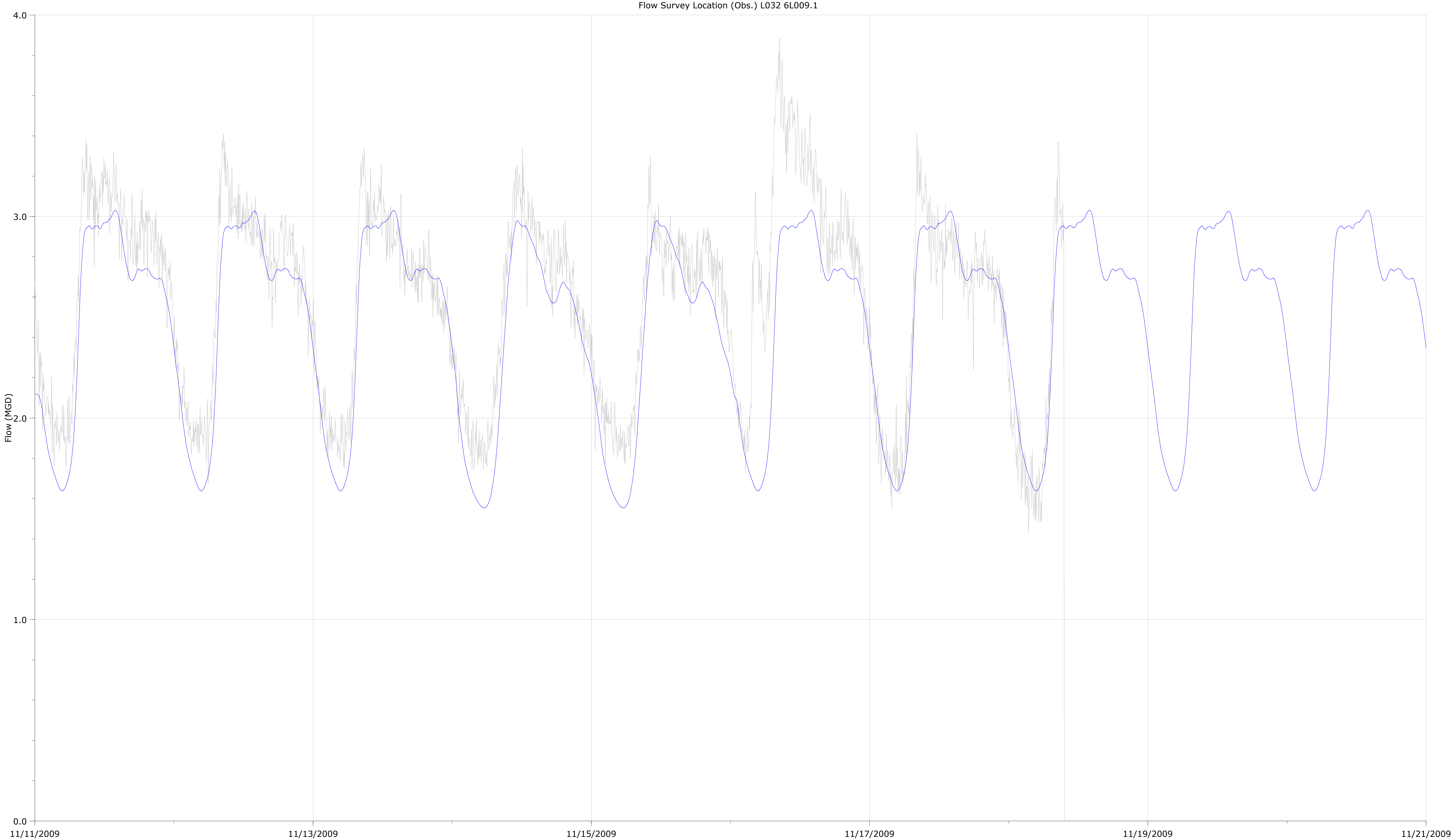
		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.000	0.520	1.468
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		0.072	0.264	1.823

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 25 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.000	0.246	0.785
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.050	0.148	1.070

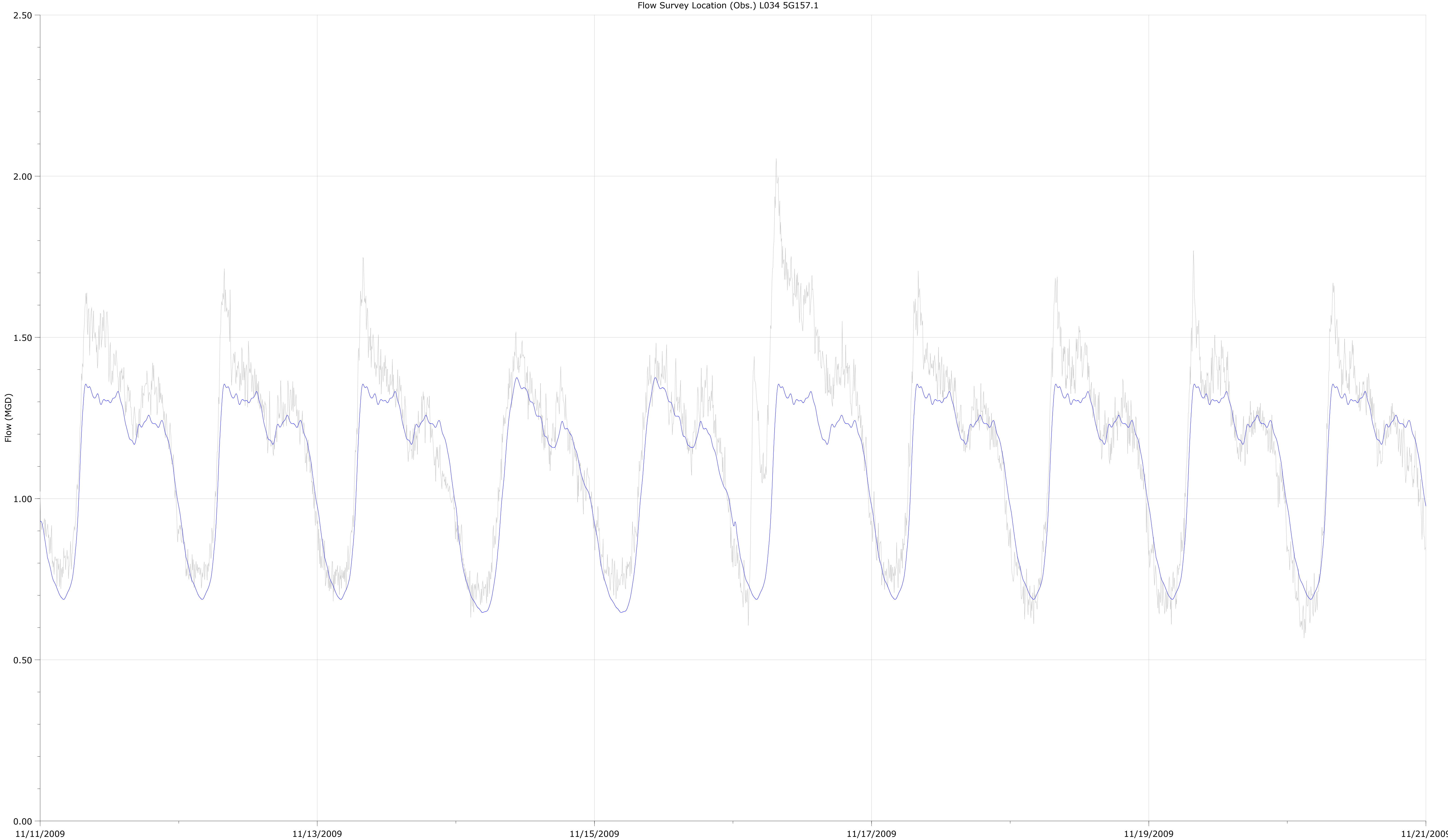
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 26 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.000	3.884	19.161
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		1.553	3.031	24.743

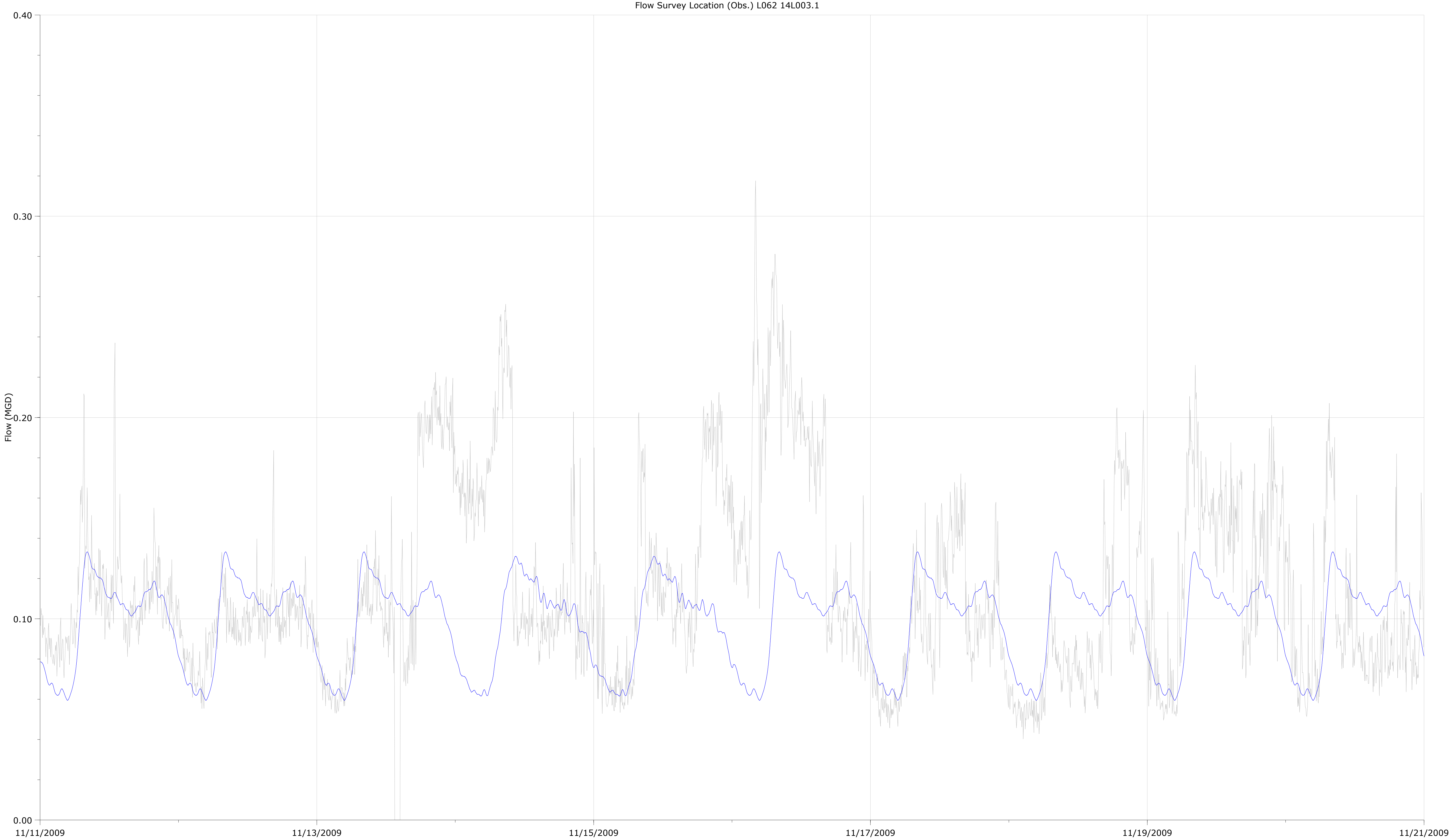
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 27 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L034 5G157.1



	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.568	2.055	11.653
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.647	1.375	11.001

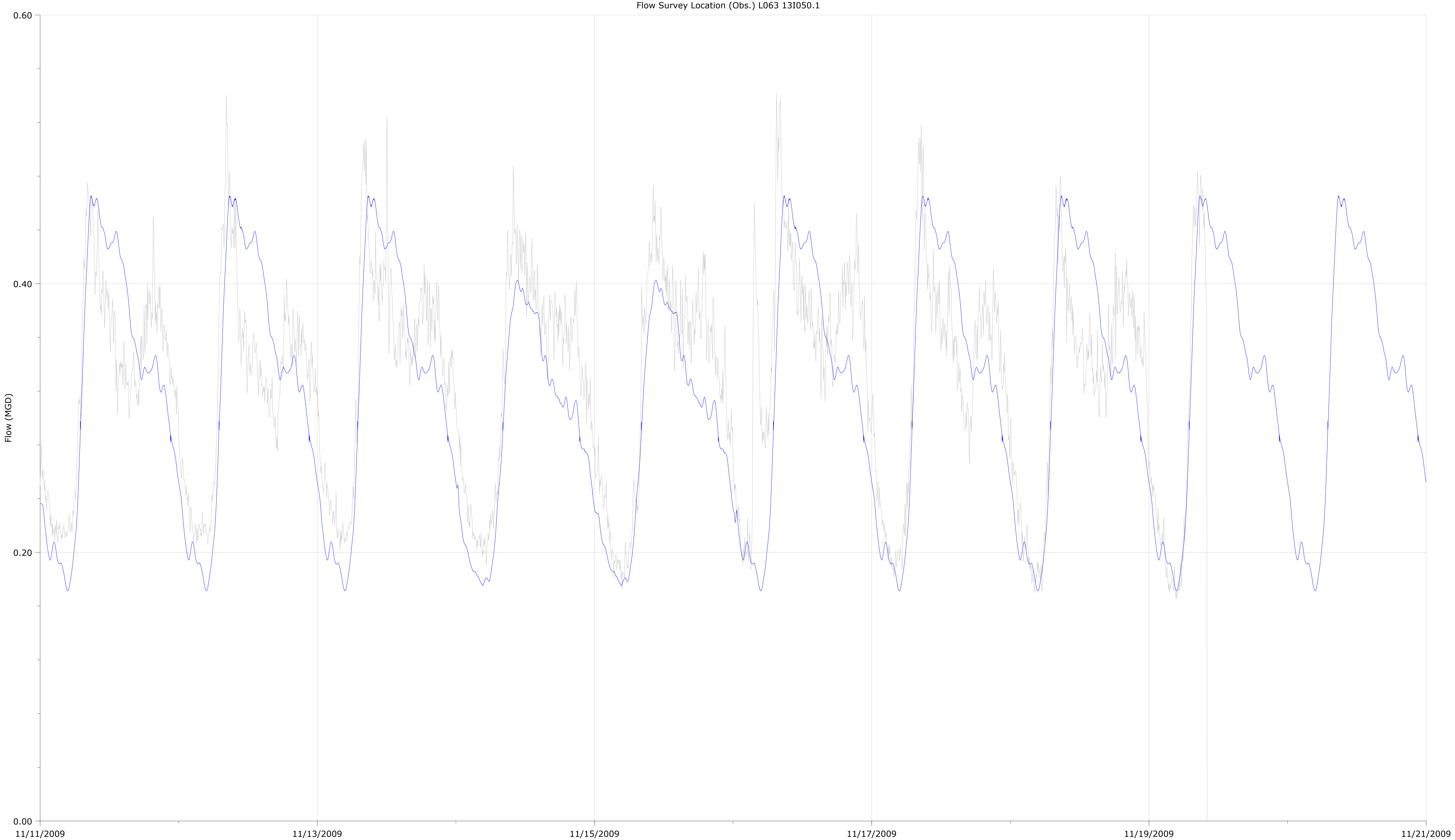
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.000	0.318	1.152
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.059	0.133	0.984

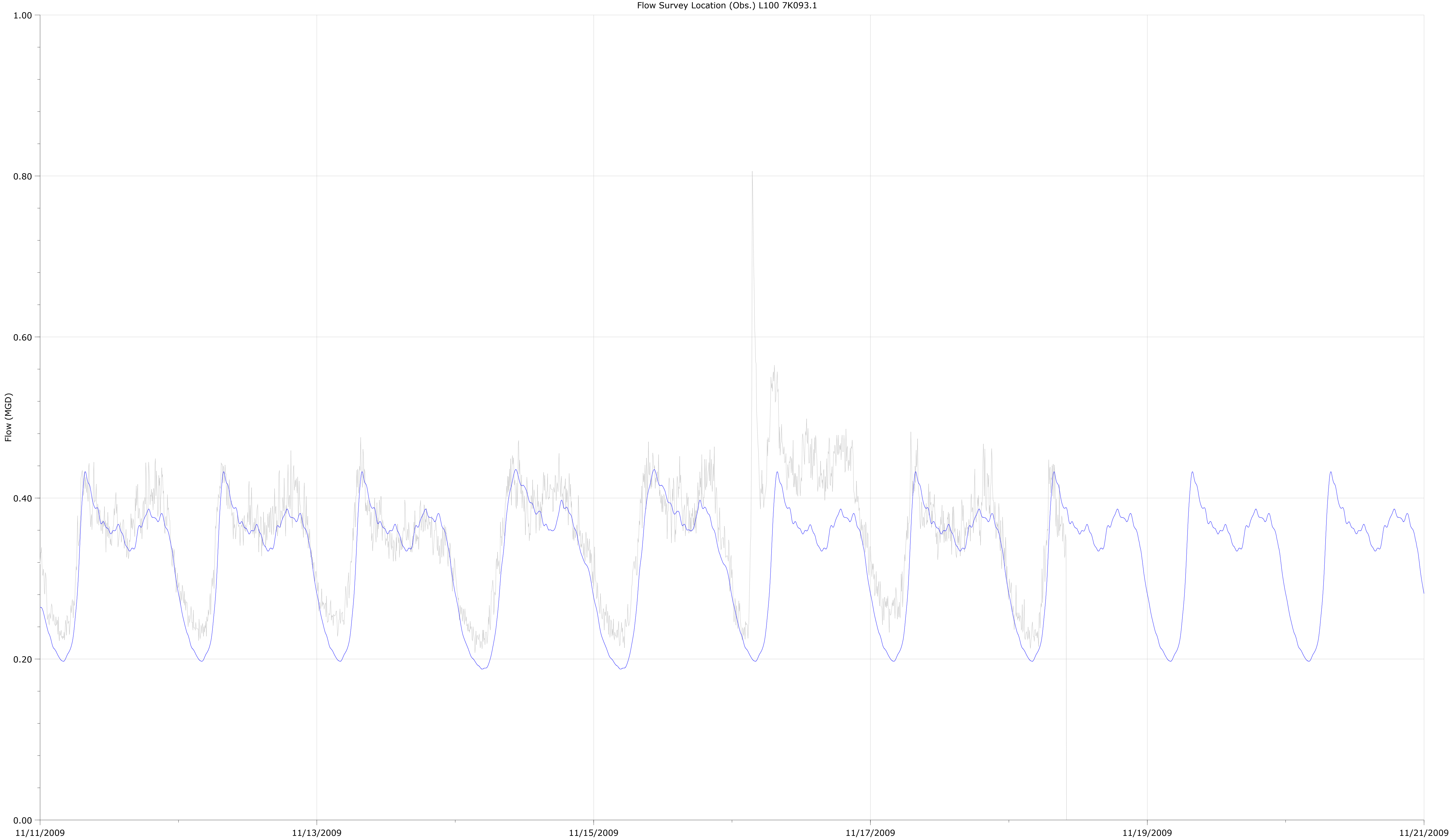
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 29 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L063 13I050.1



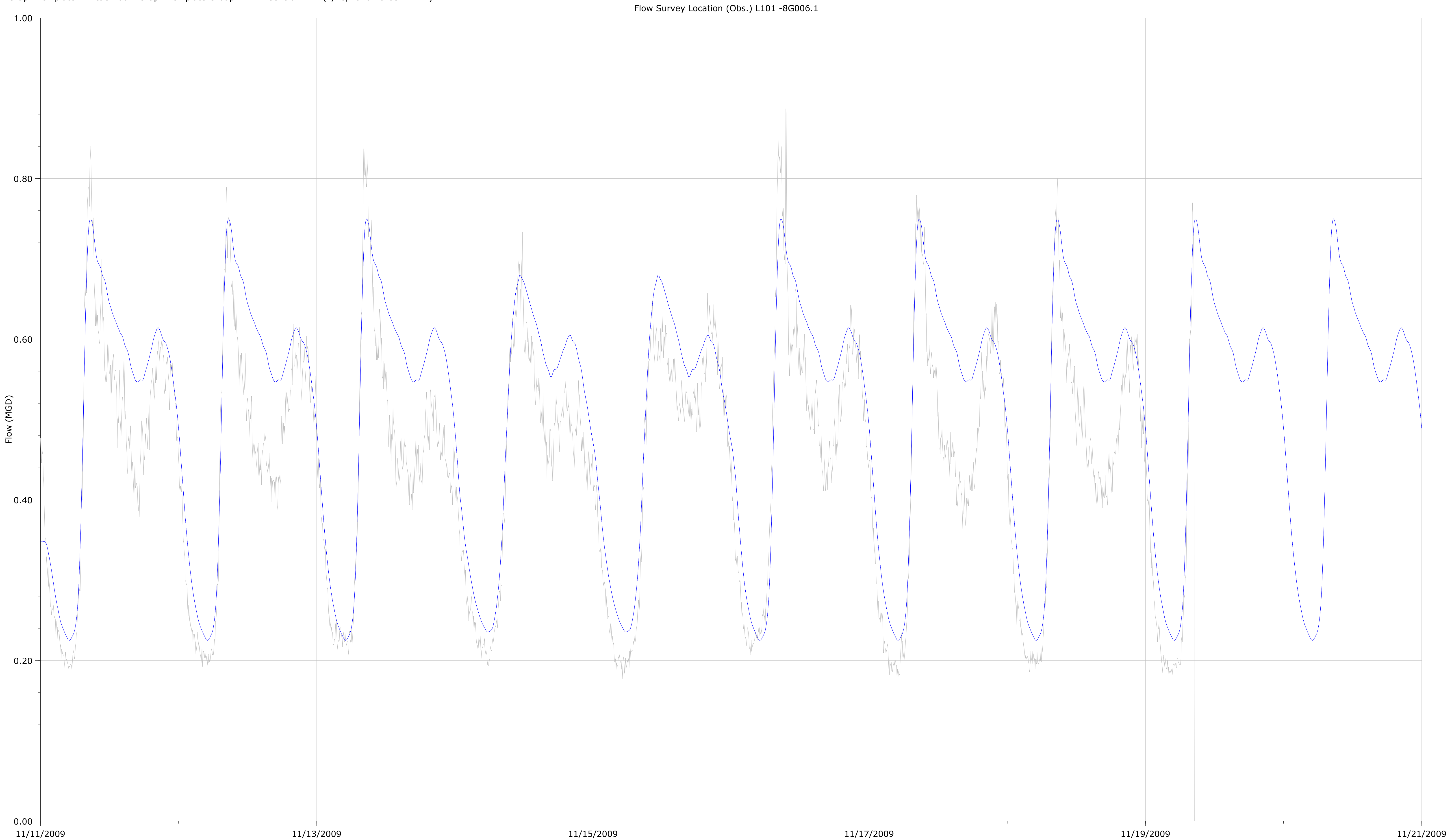
	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.000	0.541	2.773
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.171	0.465	3.176

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 30 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



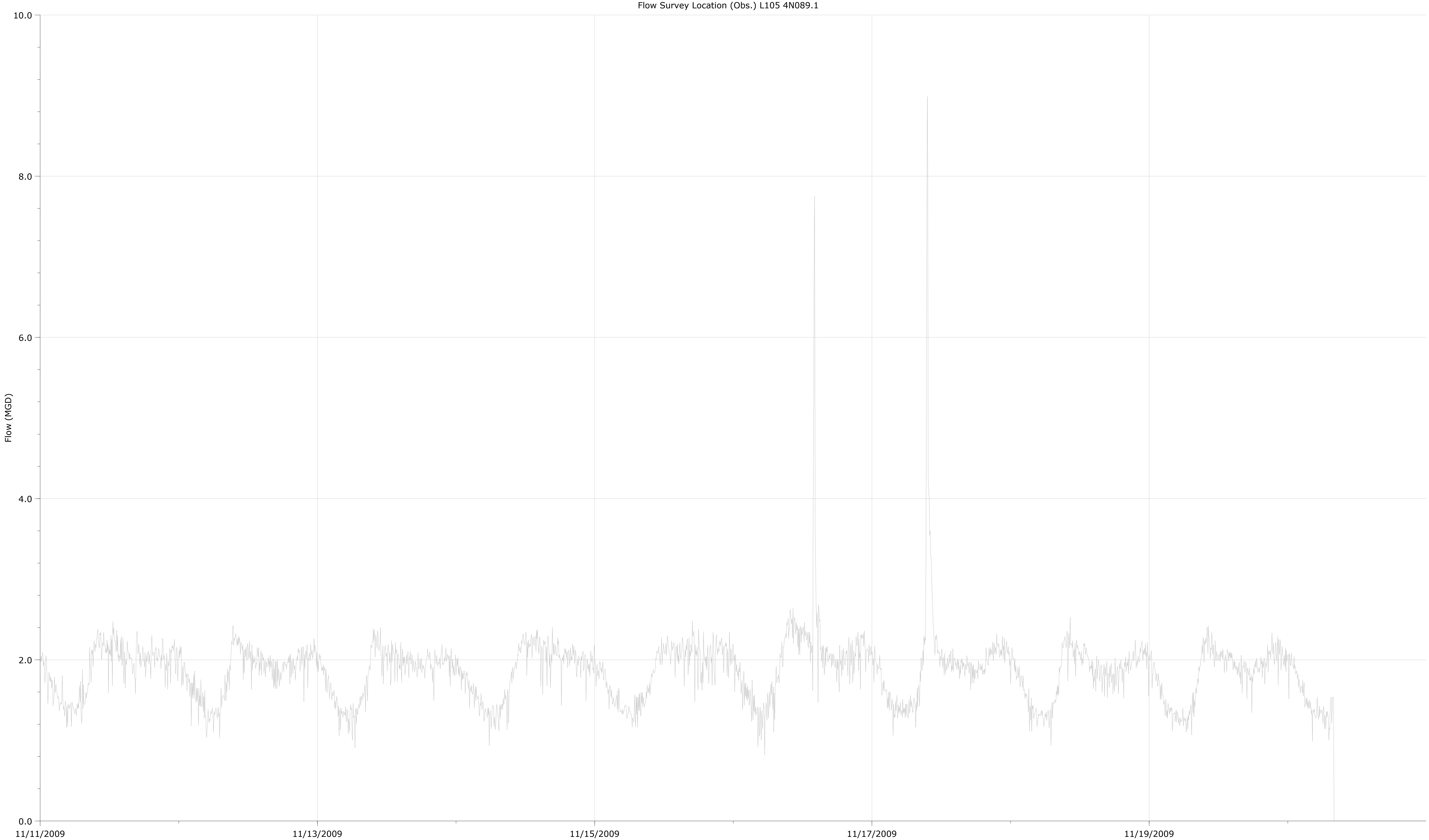
	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.000	0.806	2.625
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.187	0.435	3.261

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 31 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.000	0.887	3.713
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.225	0.750	5.096

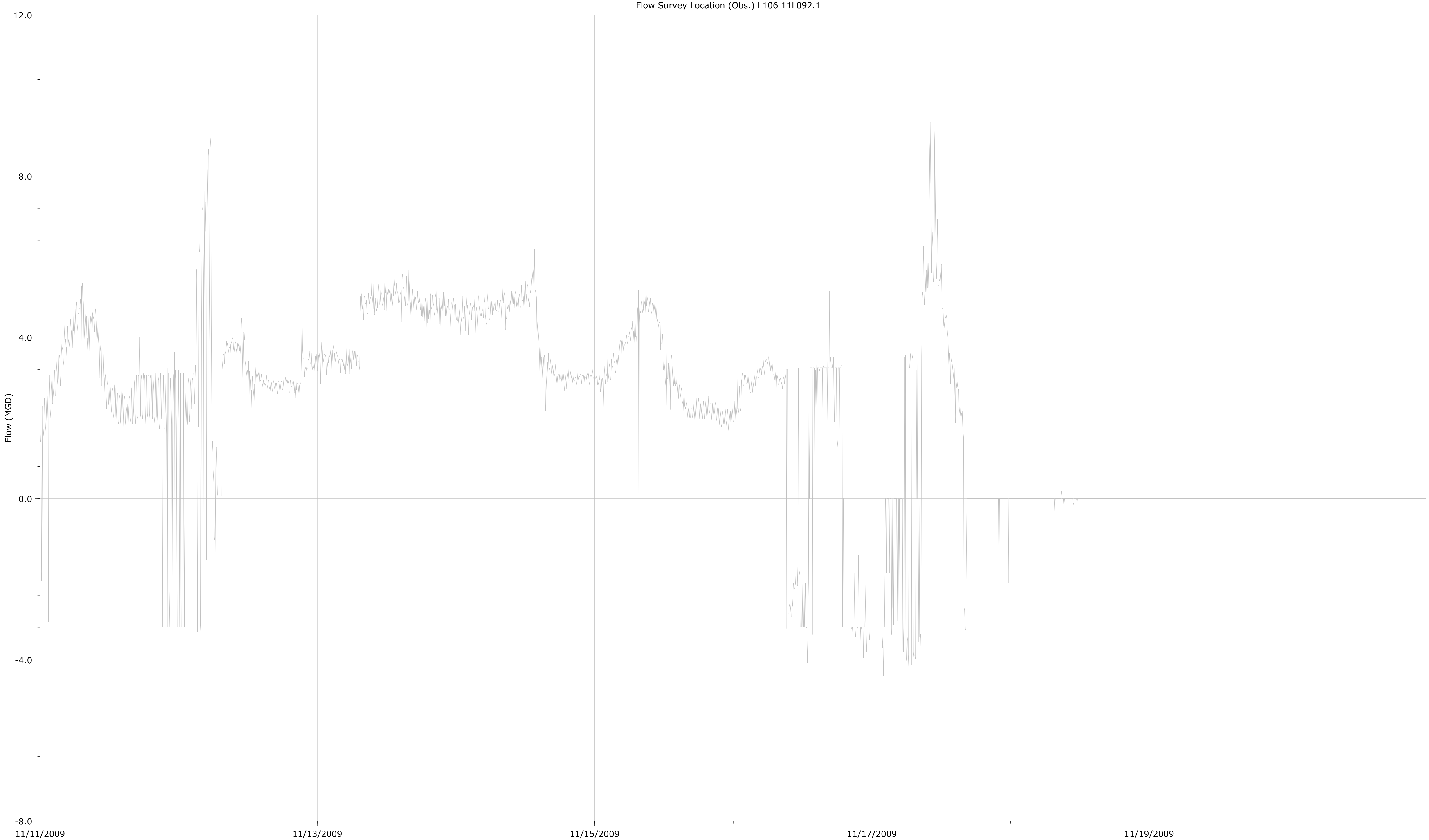
Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 32 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



	Flow (MGD) Min	Max	Volume (US Mgal)
Obs.	0.000	8.989	17.376
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.000	0.000	0.000

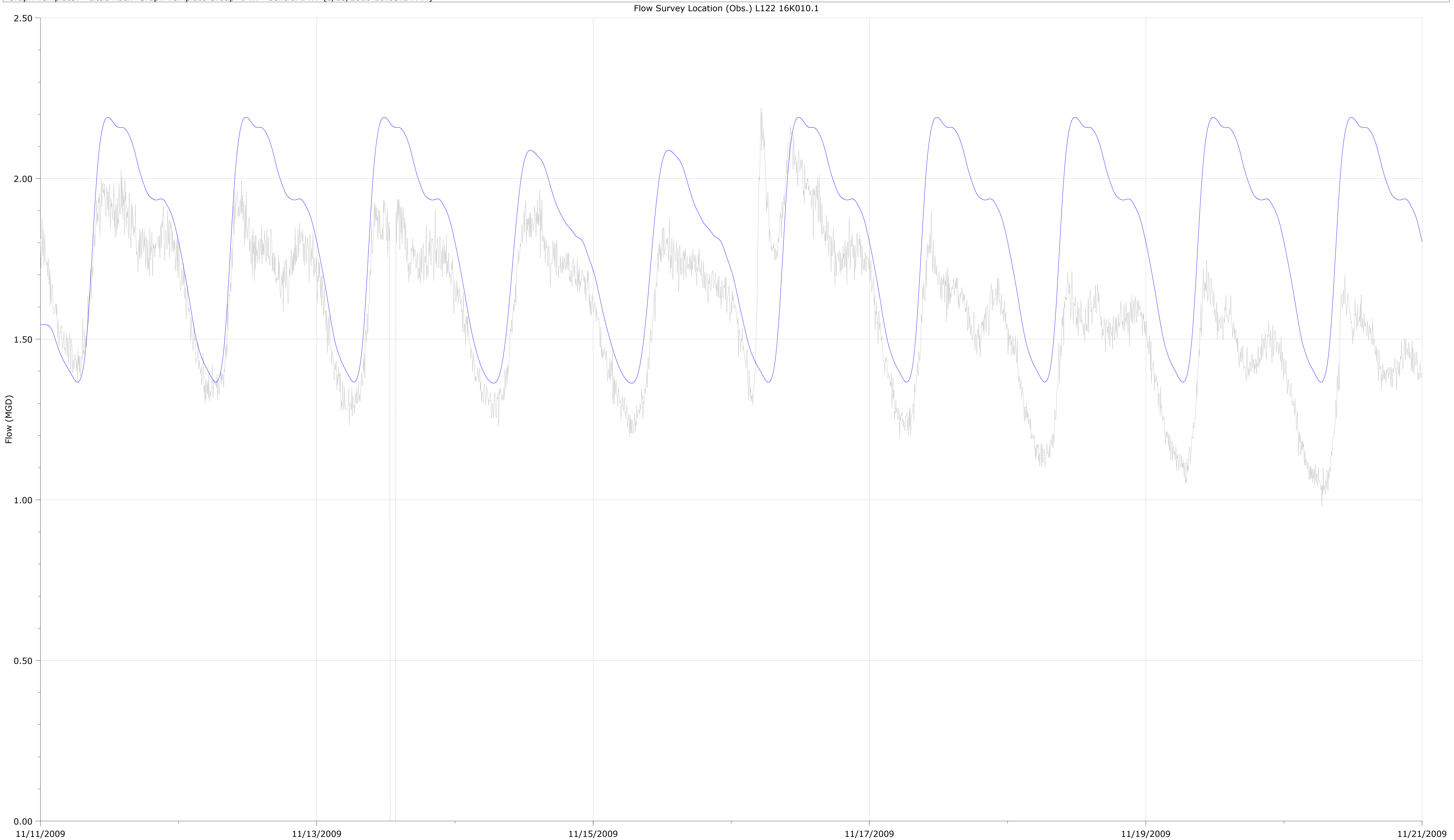
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)

Flow Survey Location (Obs.) L106 11L092.1



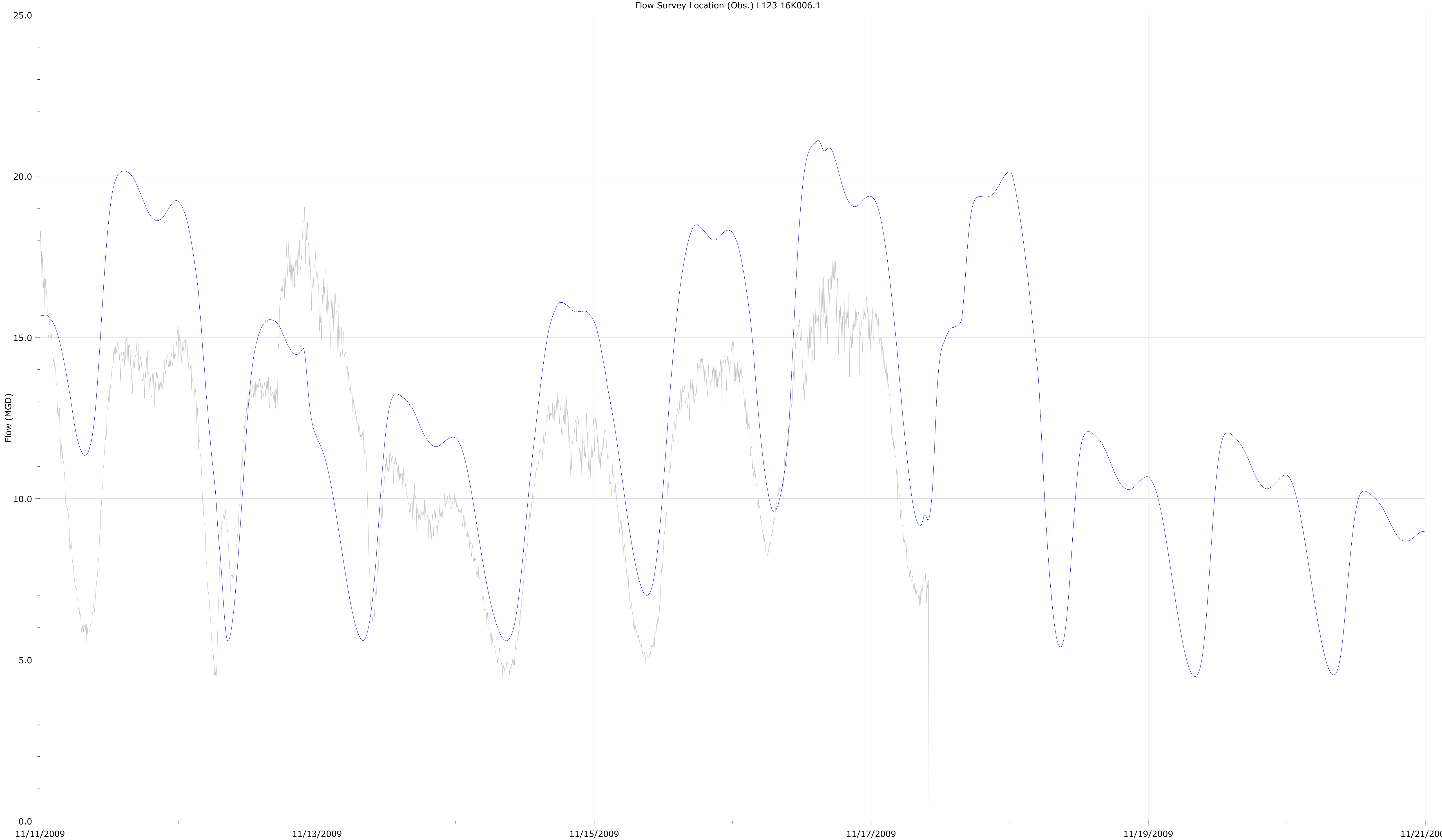
	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	-4.393	9.400	18.906
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	0.000	0.000	0.000

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 34 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



		Flow (MGD)		
		Min	Max	Volume (US Mgal)
Obs.		0.000	2.219	15.721
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF		1.363	2.190	18.176

Observed / Predicted Plot Produced by dgarcia (10/11/2010 3:06:37 PM) Page 35 of 35
Flow Survey: >Little Rock>Flow Survey Group>DWF>Central DWF (12/23/2009 3:15:38 AM)
Sim: >Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF (10/11/2010 8:16:38 AM)
Graph Template: >Little Rock>Graph Template Group>DWF>Central DWF (1/15/2010 10:05:24 AM)



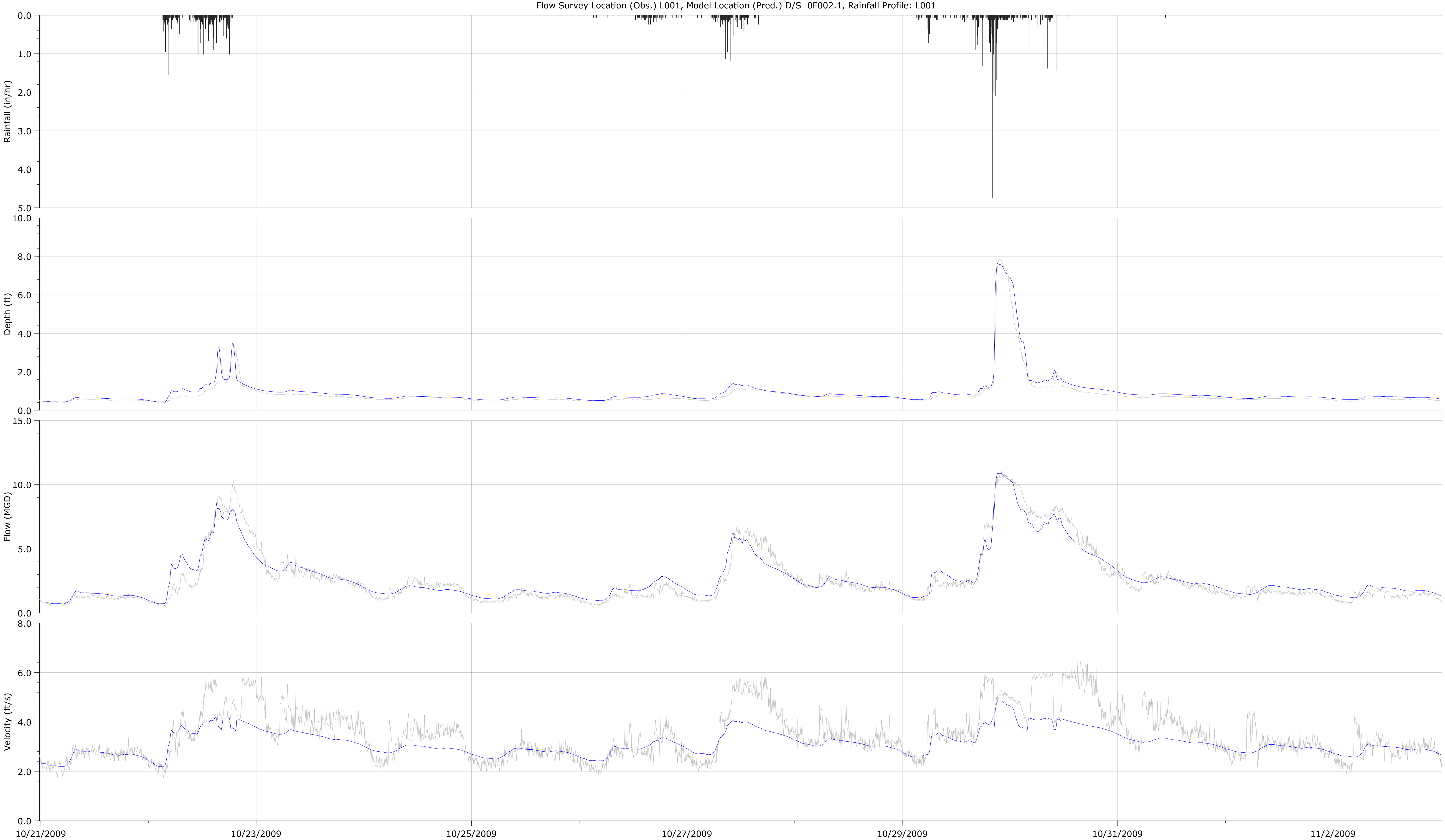
	Flow (MGD)		
	Min	Max	Volume (US Mgal)
Obs.	0.000	19.050	74.229
>Little Rock>DWF Calibration>Central DWF Calibration QA2>DWF	4.478	21.103	127.233

APPENDIX B

MODEL CALIBRATION GRAPHS
WET WEATHER A

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 1 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

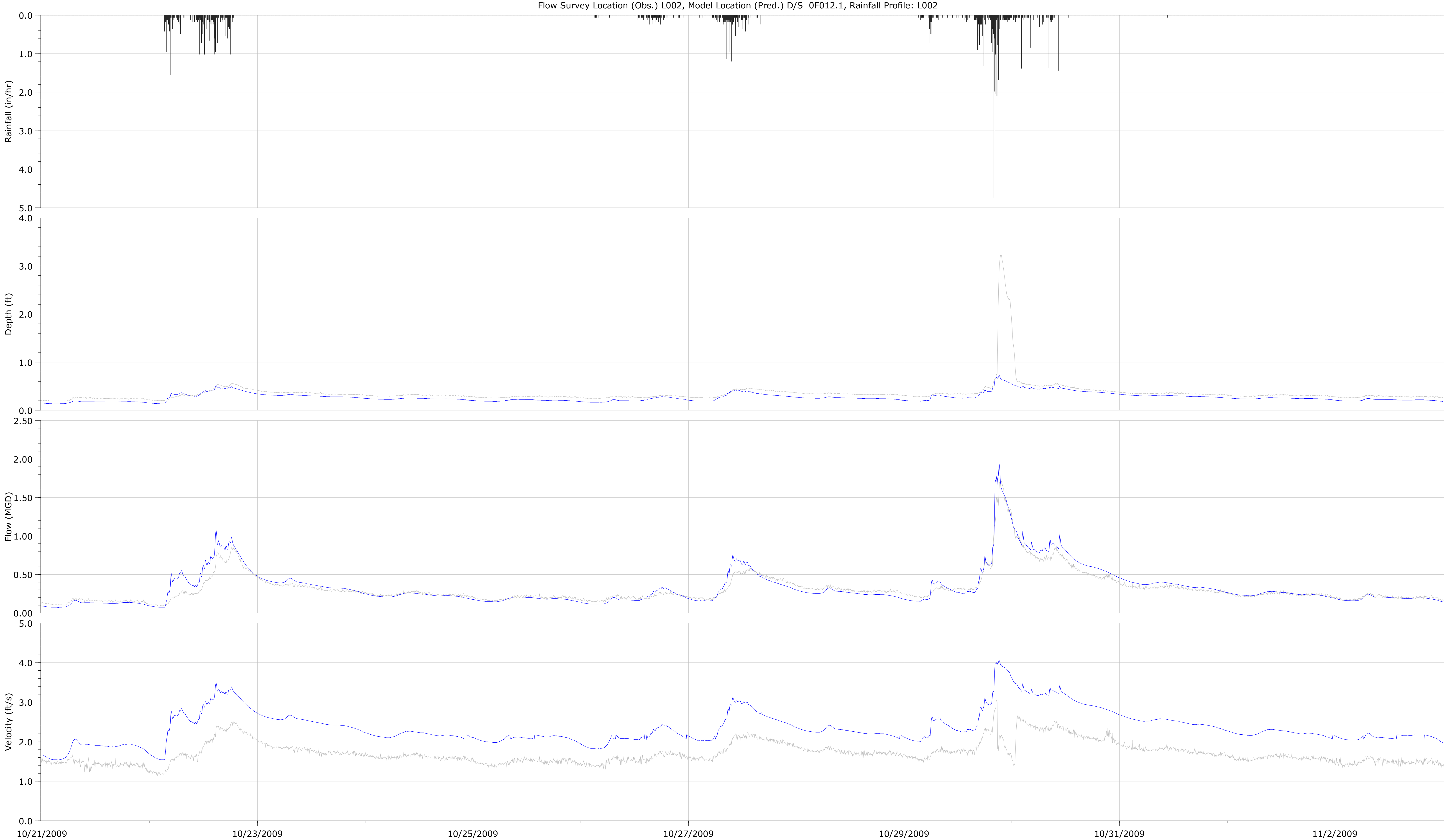
Flow Survey Location (Obs.) L001, Model Location (Pred.) D/S 0F002.1, Rainfall Profile: L001



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.450	4.740	0.024							
Obs.				0.390	7.869	0.513	11.016	34.520	1.740	6.440
...m A20>Final Rain Data 3-10-2010 Fixed				0.435	7.637	0.712	10.889	35.566	2.188	4.850

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 2 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

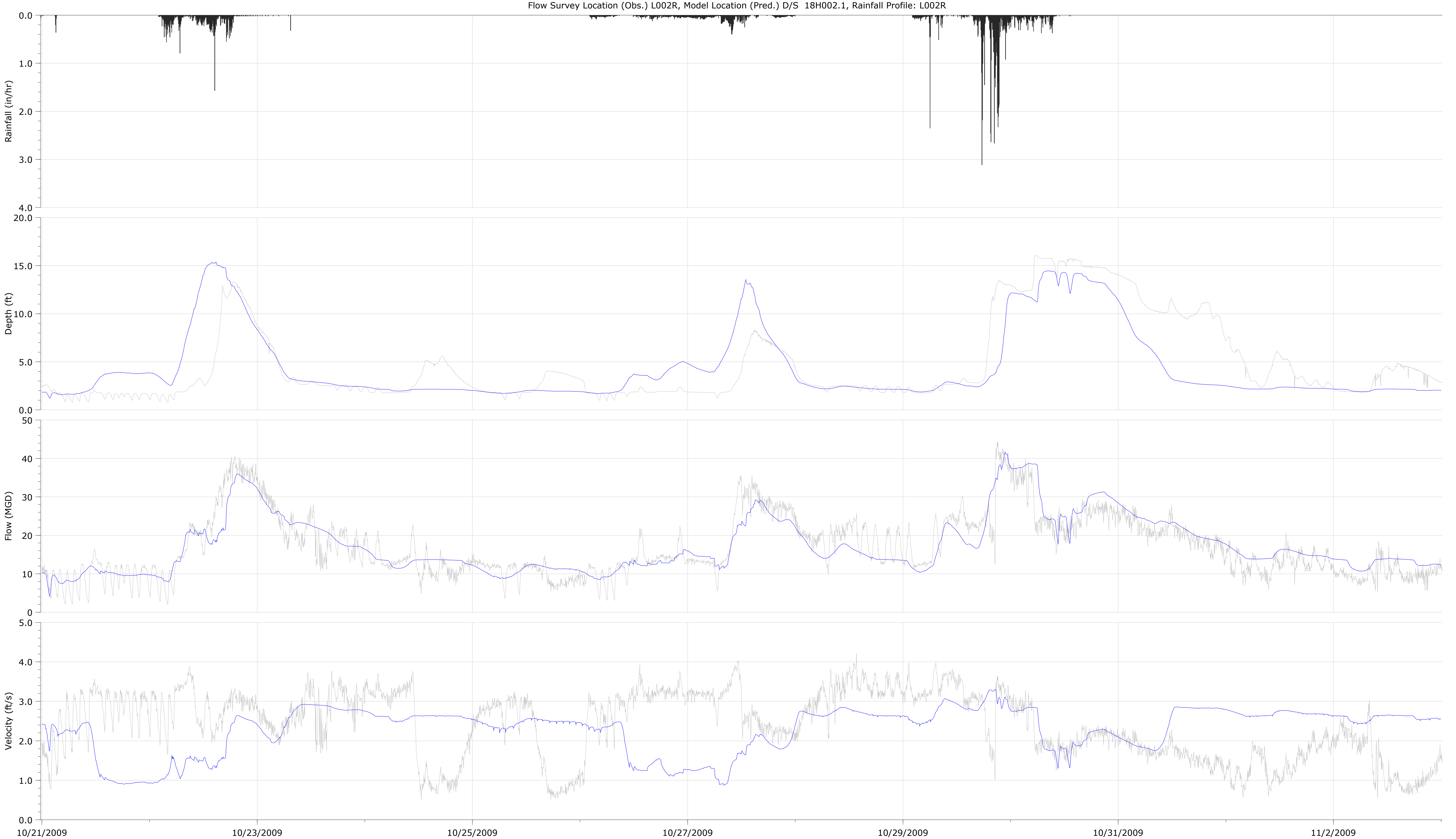
Flow Survey Location (Obs.) L002, Model Location (Pred.) D/S 0F012.1, Rainfall Profile: L002



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.450	4.740	0.024							
Obs.				0.191	3.250	0.095	1.712	4.139	1.147	3.043
...m A20>Final Rain Data 3-10-2010 Fixed				0.137	0.726	0.073	1.941	4.317	1.541	4.064

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L002R, Model Location (Pred.) D/S 18H002.1, Rainfall Profile: L002R



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		10.858	3.120	0.035							
Obs.					0.774	16.096	2.043	44.382	222.925	0.508	4.223
...m A20>Final Rain Data 3-10-2010 Fixed					1.209	15.342	4.130	41.618	225.684	0.872	3.304

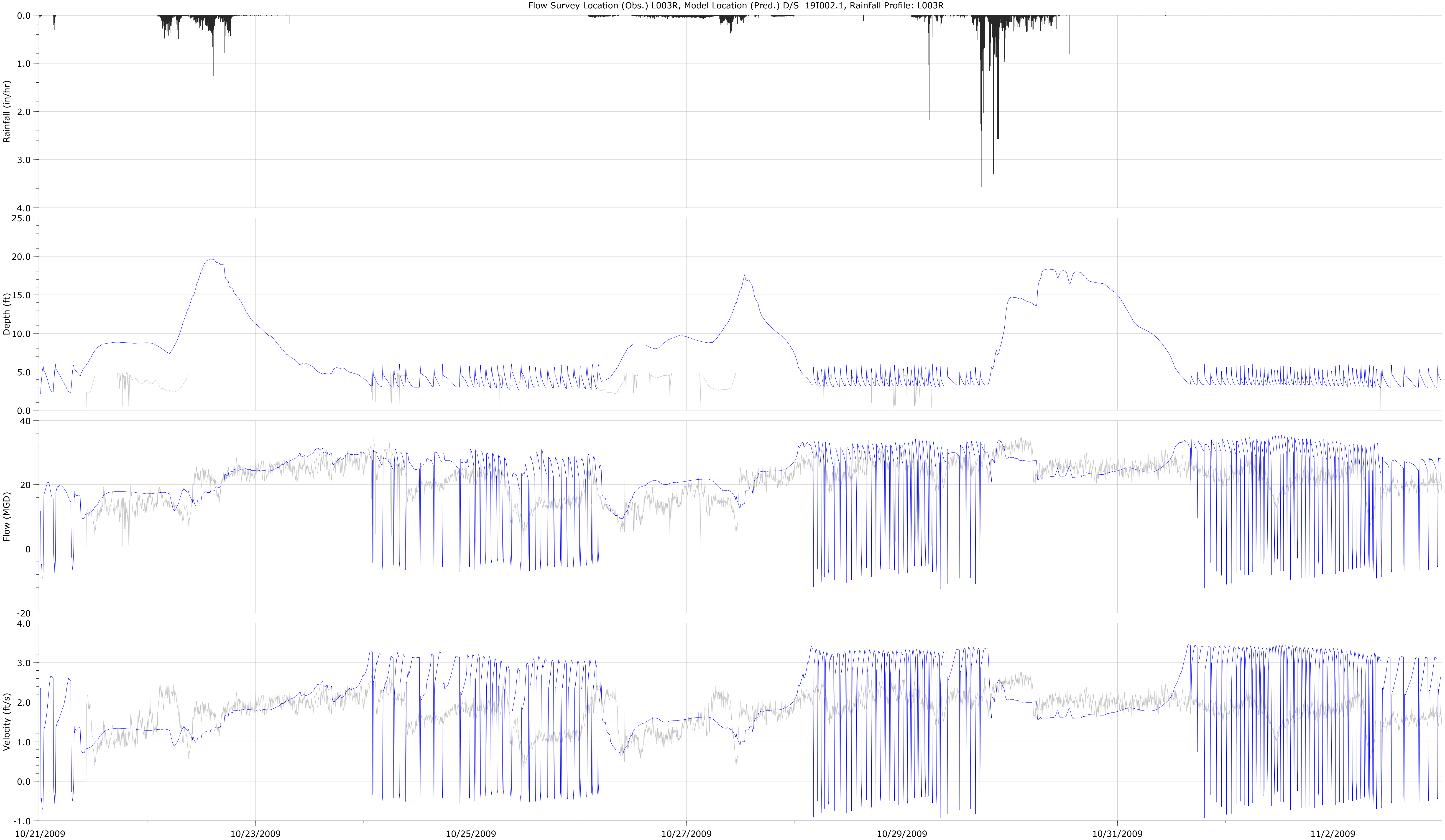
Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 4 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L003, Model Location (Pred.) D/S 0E171.1, Rainfall Profile: L003

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.450	4.740	0.024							
Obs.				0.293	6.946	0.230	6.621	23.804	1.377	6.916
...m A20>Final Rain Data 3-10-2010 Fixed				0.177	8.091	0.184	4.925	23.334	2.436	4.106

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 5 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

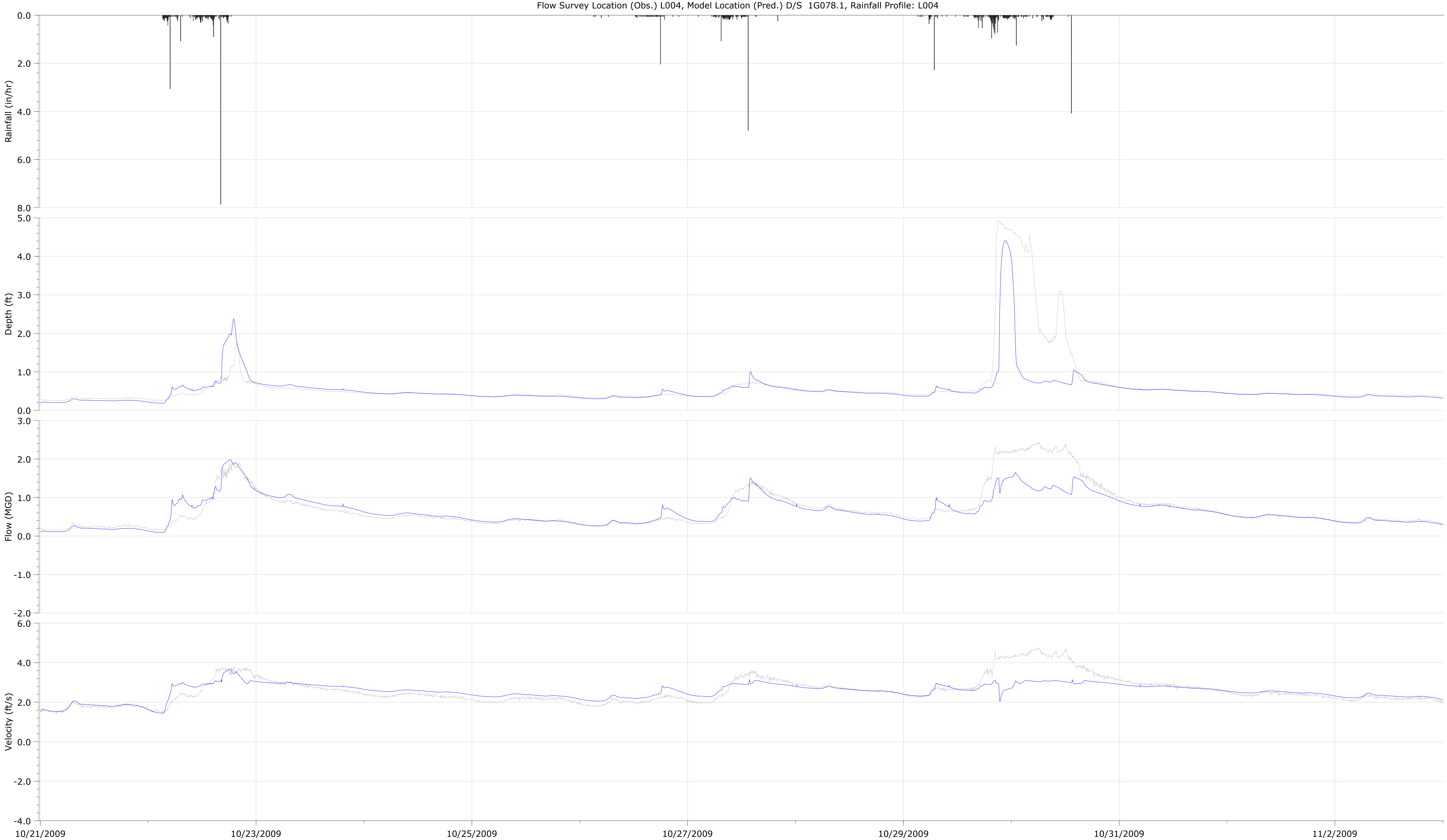
Flow Survey Location (Obs.) L003R, Model Location (Pred.) D/S 19I002.1, Rainfall Profile: L003R



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		10.693	3.576	0.034							
Obs.					0.000	4.862	0.000	35.497	268.313	0.000	2.927
...m A20>Final Rain Data 3-10-2010 Fixed					2.092	19.704	-12.411	35.517	300.814	-0.942	3.471

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 6 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

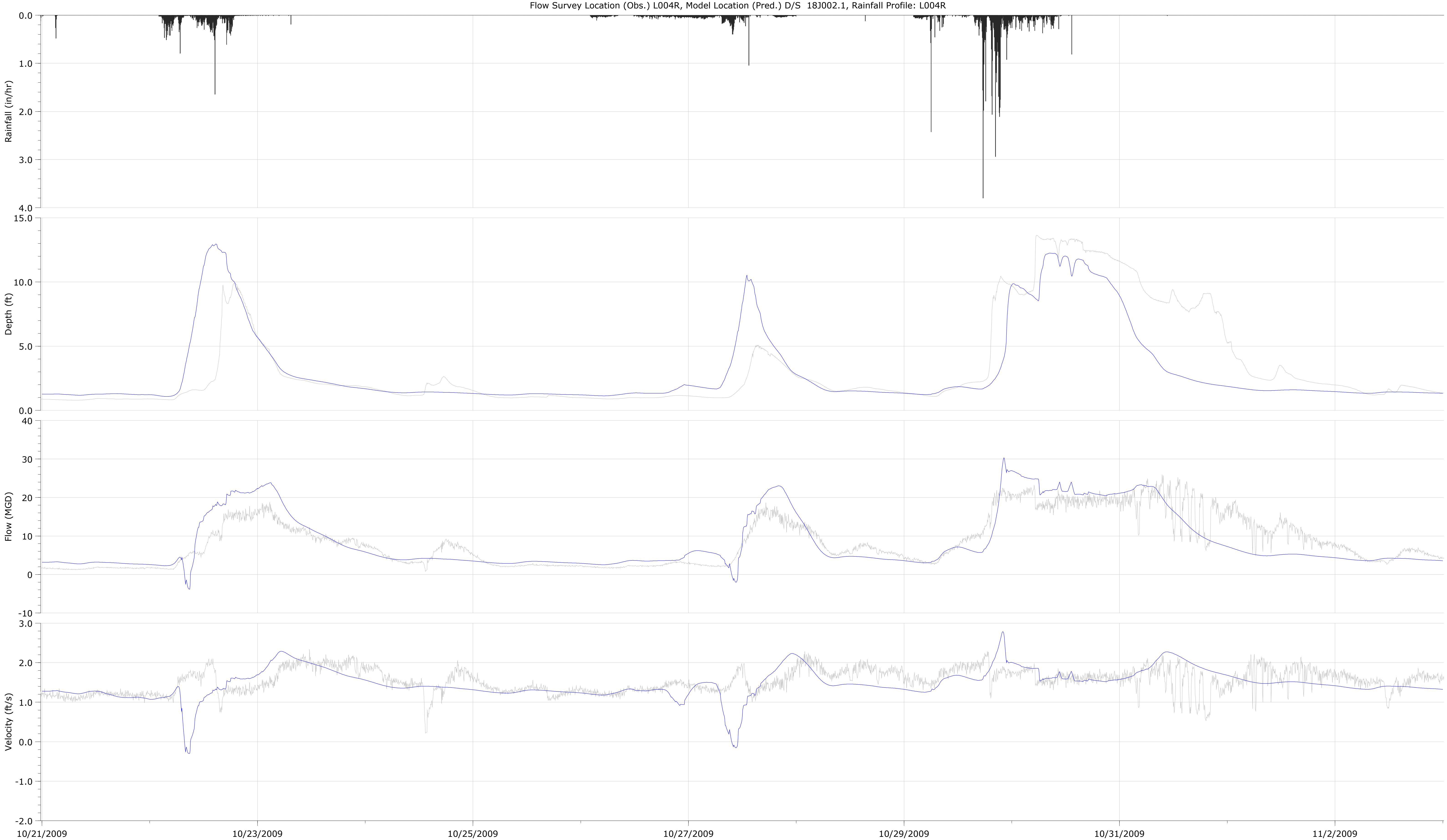
Flow Survey Location (Obs.) L004, Model Location (Pred.) D/S 1G078.1, Rainfall Profile: L004



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	5.845	7.860	0.019							
Obs.				0.250	4.933	0.143	2.434	9.143	1.430	4.771
...m A20>Final Rain Data 3-10-2010 Fixed				0.186	4.409	0.095	1.980	8.441	1.450	3.680

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 7 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

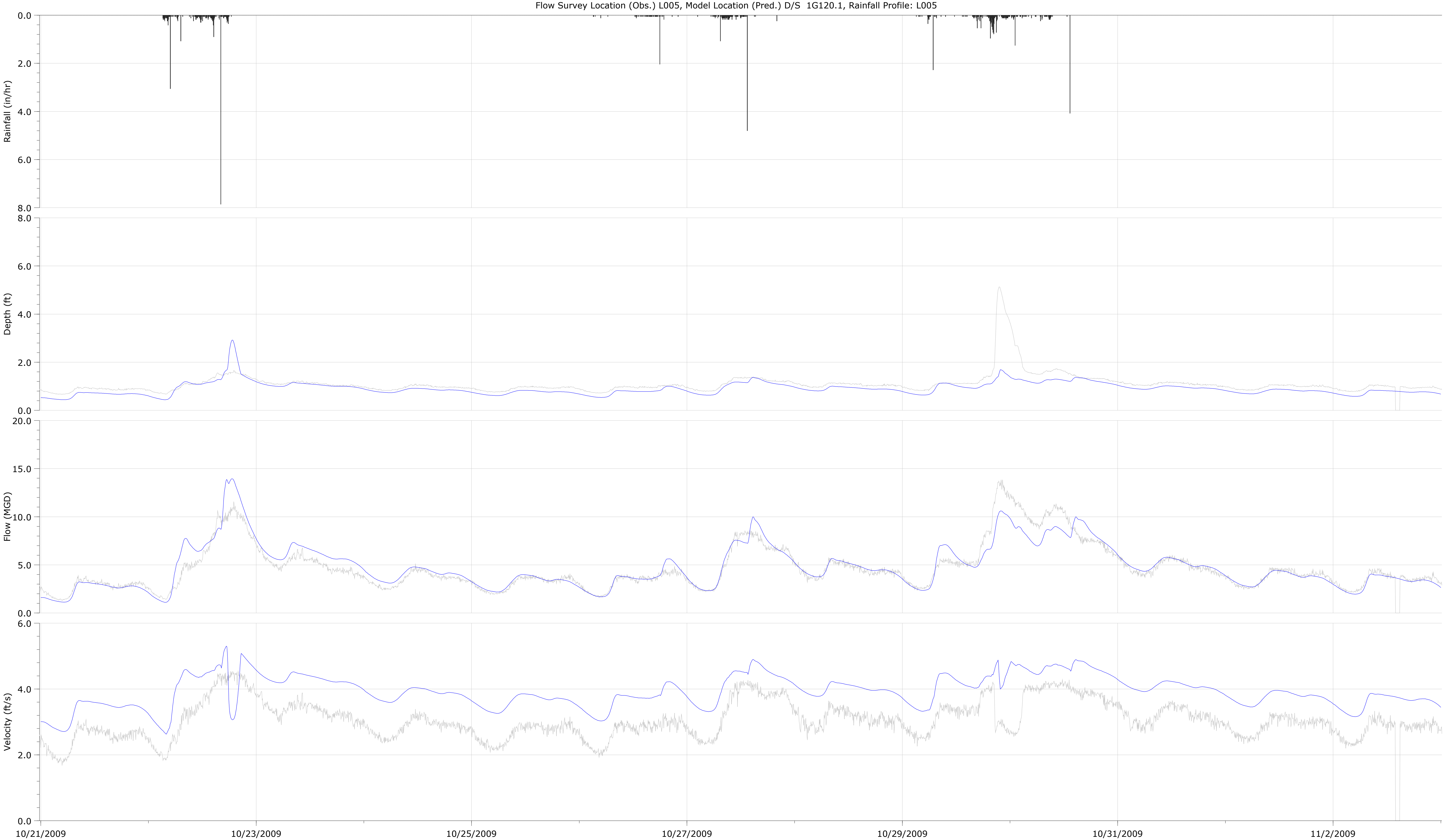
Flow Survey Location (Obs.) L004R, Model Location (Pred.) D/S 18J002.1, Rainfall Profile: L004R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.700	3.804	0.034							
Obs.				0.783	13.648	0.842	25.916	110.339	0.219	2.337
...m A20>Final Rain Data 3-10-2010 Fixed				1.078	12.956	-3.825	30.297	112.182	-0.300	2.785

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 8 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

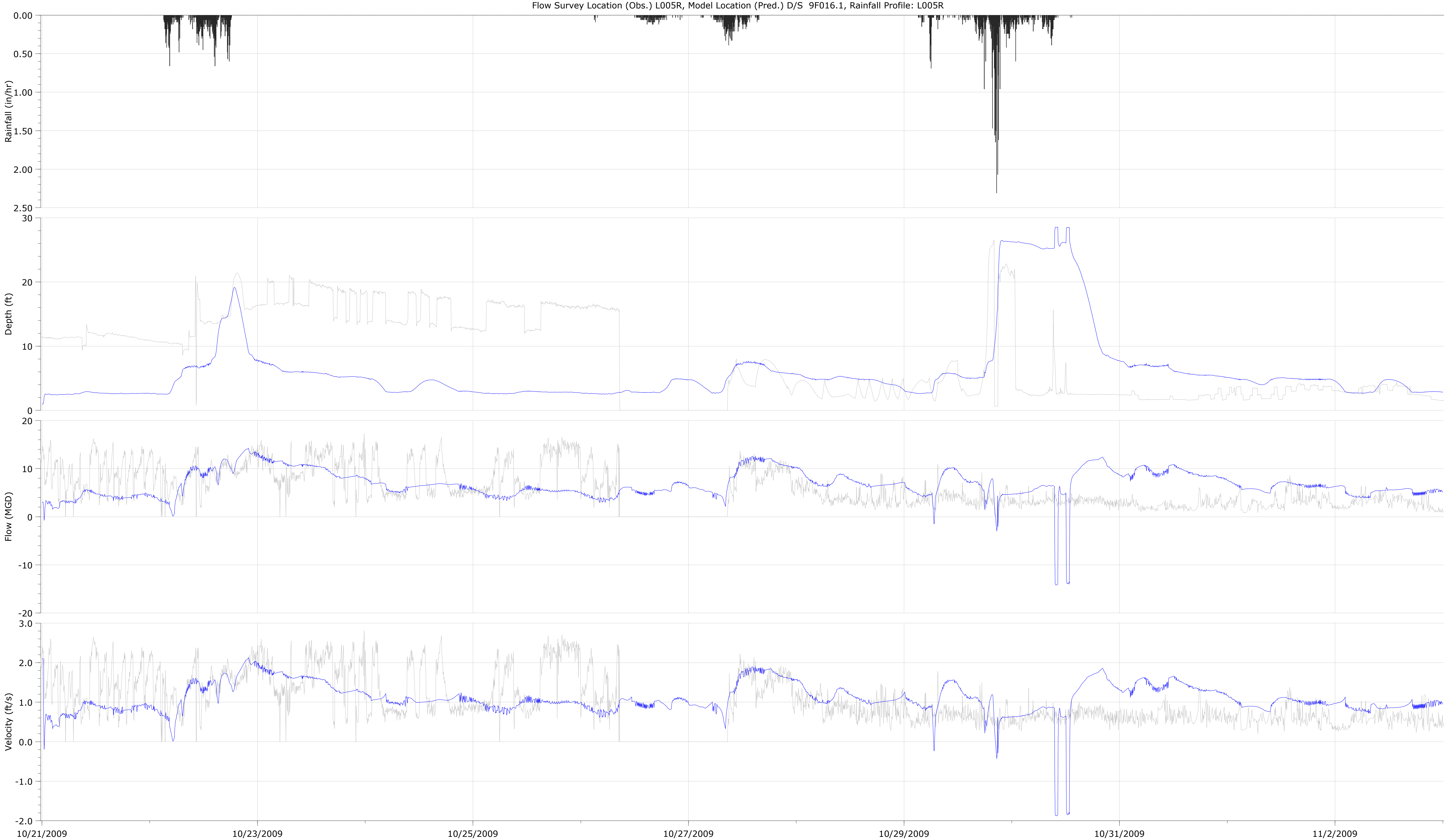
Flow Survey Location (Obs.) L005, Model Location (Pred.) D/S 1G120.1, Rainfall Profile: L005



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	5.845	7.860	0.019							
Obs.				0.000	5.133	0.000	13.831	60.745	0.000	4.540
...m A20>Final Rain Data 3-10-2010 Fixed				0.438	2.921	1.099	13.949	62.115	2.630	5.300

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 9 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

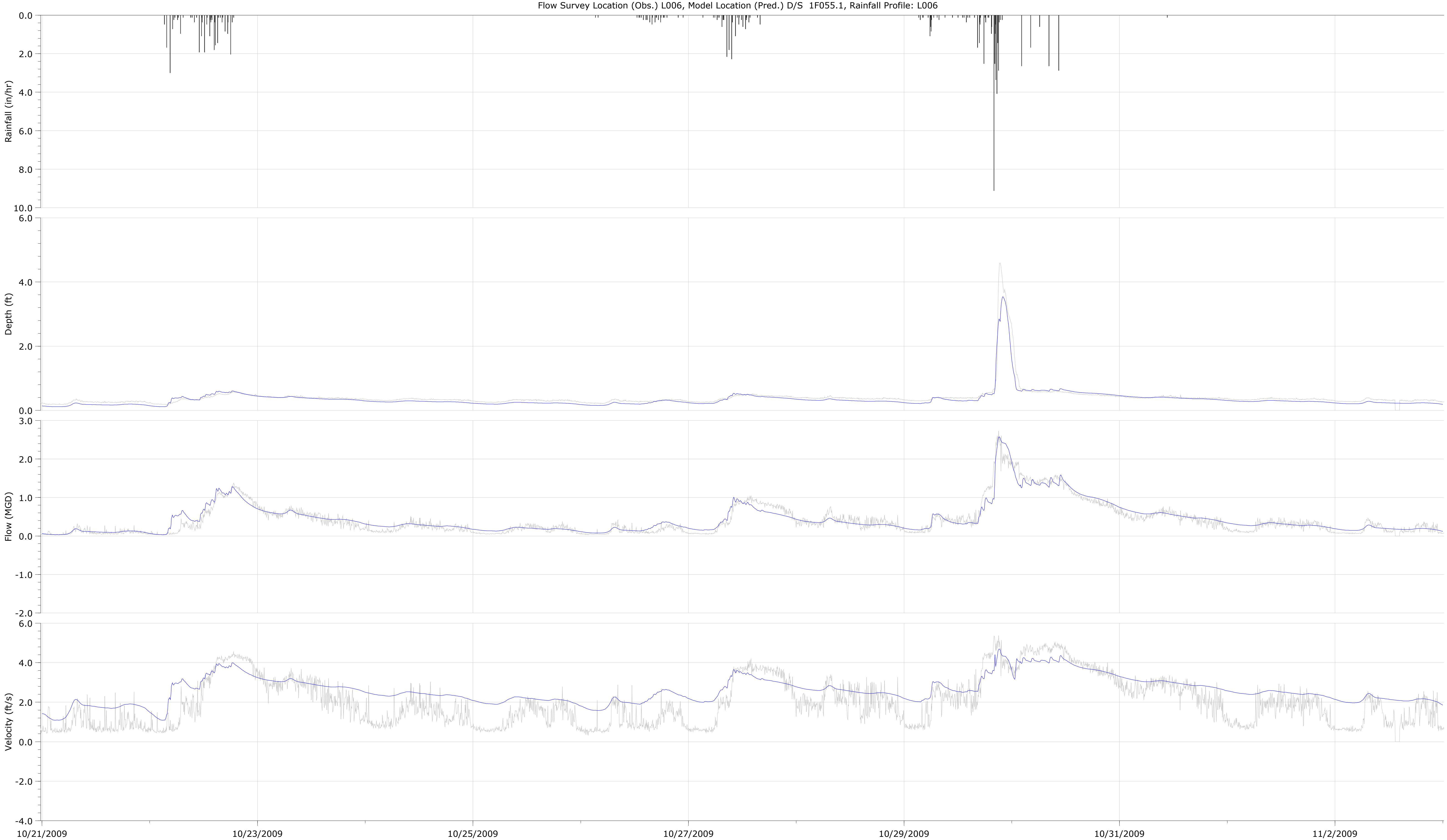
Flow Survey Location (Obs.) L005R, Model Location (Pred.) D/S 9F016.1, Rainfall Profile: L005R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.345	2.310	0.024							
Obs.				0.000	26.507	0.000	17.233	73.826	0.000	2.812
...m A20>Final Rain Data 3-10-2010 Fixed				0.984	28.557	-14.218	14.233	88.467	-1.879	2.128

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 10 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

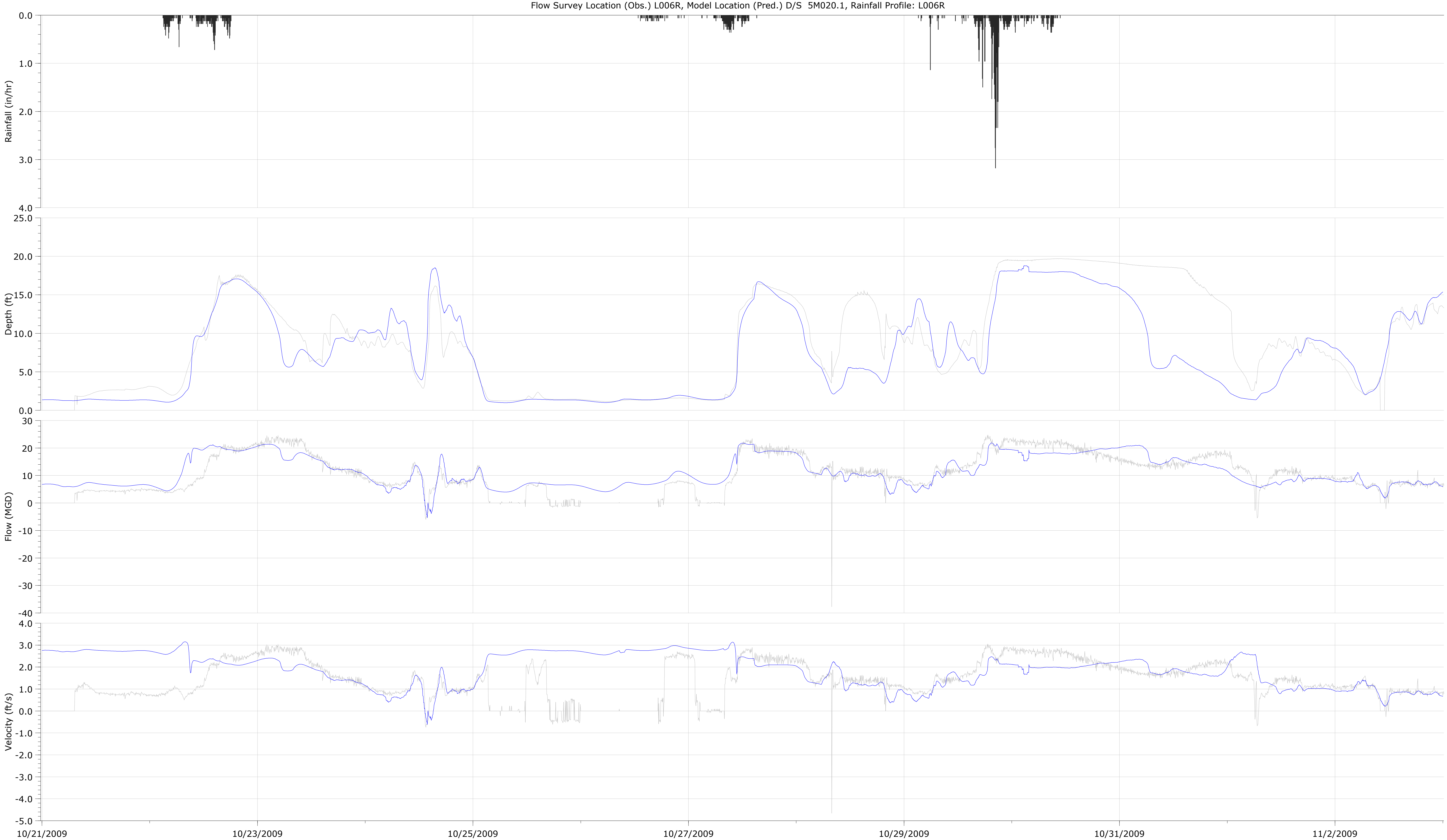
Flow Survey Location (Obs.) L006, Model Location (Pred.) D/S 1F055.1, Rainfall Profile: L006



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.950	9.120	0.025							
Obs.				0.000	4.592	0.000	2.729	5.370	0.000	5.376
...m A20>Final Rain Data 3-10-2010 Fixed				0.113	3.542	0.034	2.575	5.658	1.089	4.689

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 11 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

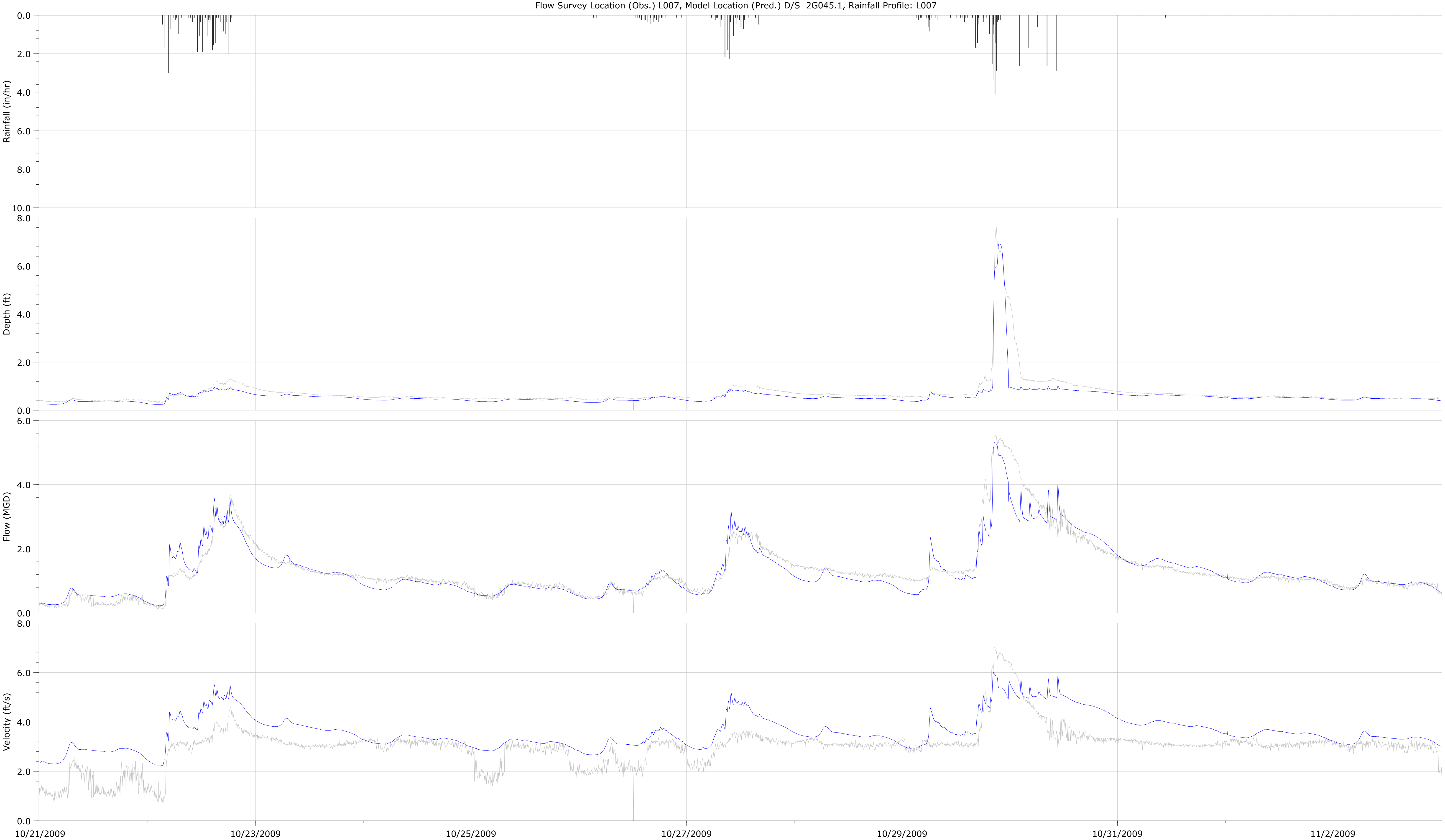
Flow Survey Location (Obs.) L006R, Model Location (Pred.) D/S 5M020.1, Rainfall Profile: L006R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.080	3.180	0.026							
Obs.				0.000	19.712	-37.753	24.548	134.069	-4.660	3.030
...m A20>Final Rain Data 3-10-2010 Fixed				0.990	18.795	-5.413	21.848	145.038	-0.622	3.152

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 12 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

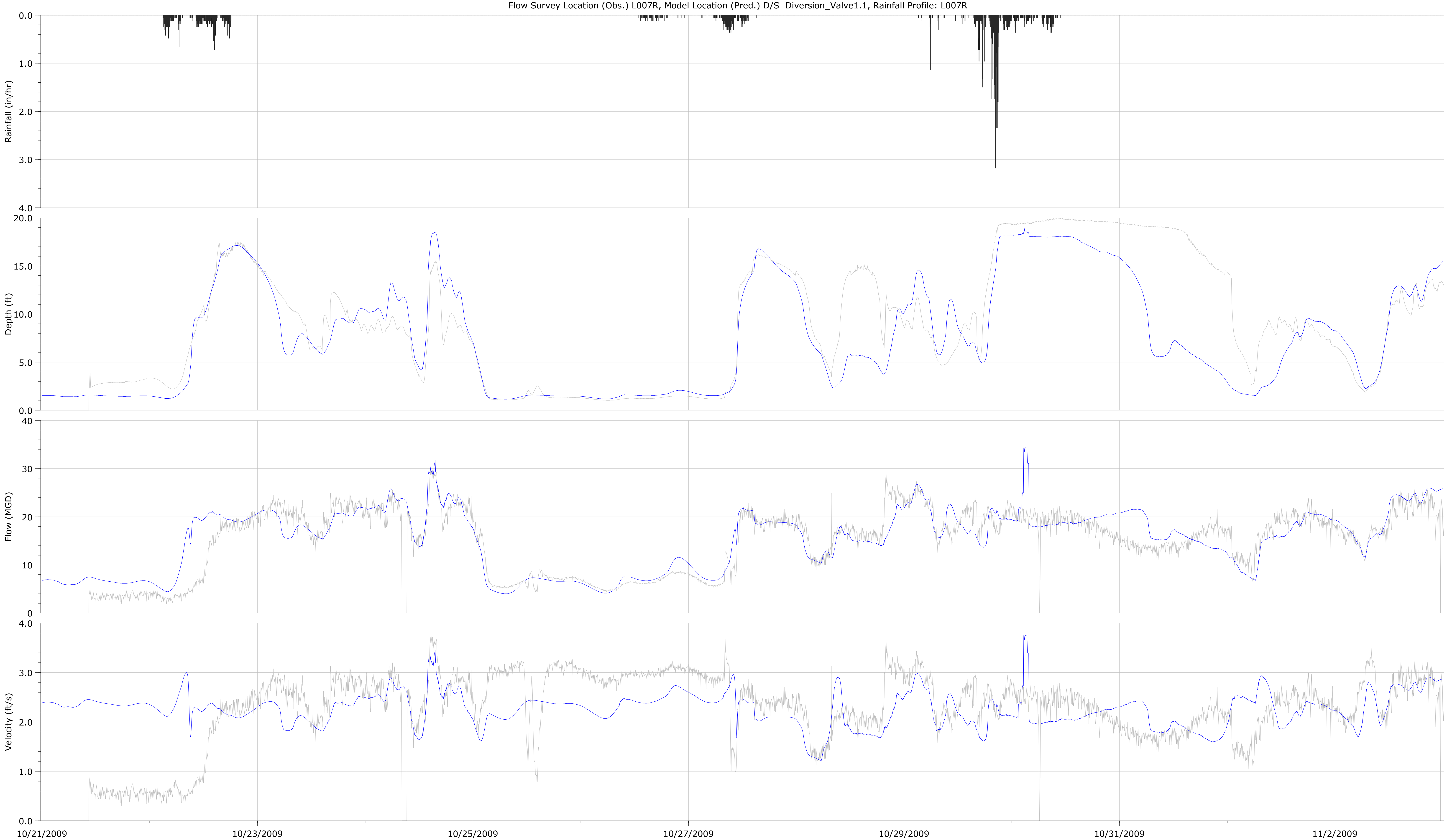
Flow Survey Location (Obs.) L007, Model Location (Pred.) D/S 2G045.1, Rainfall Profile: L007



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.950	9.120	0.025							
Obs.				0.000	7.602	0.000	5.616	17.373	0.000	7.015
...m A20>Final Rain Data 3-10-2010 Fixed				0.239	6.921	0.237	5.311	16.788	2.240	6.020

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 13 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

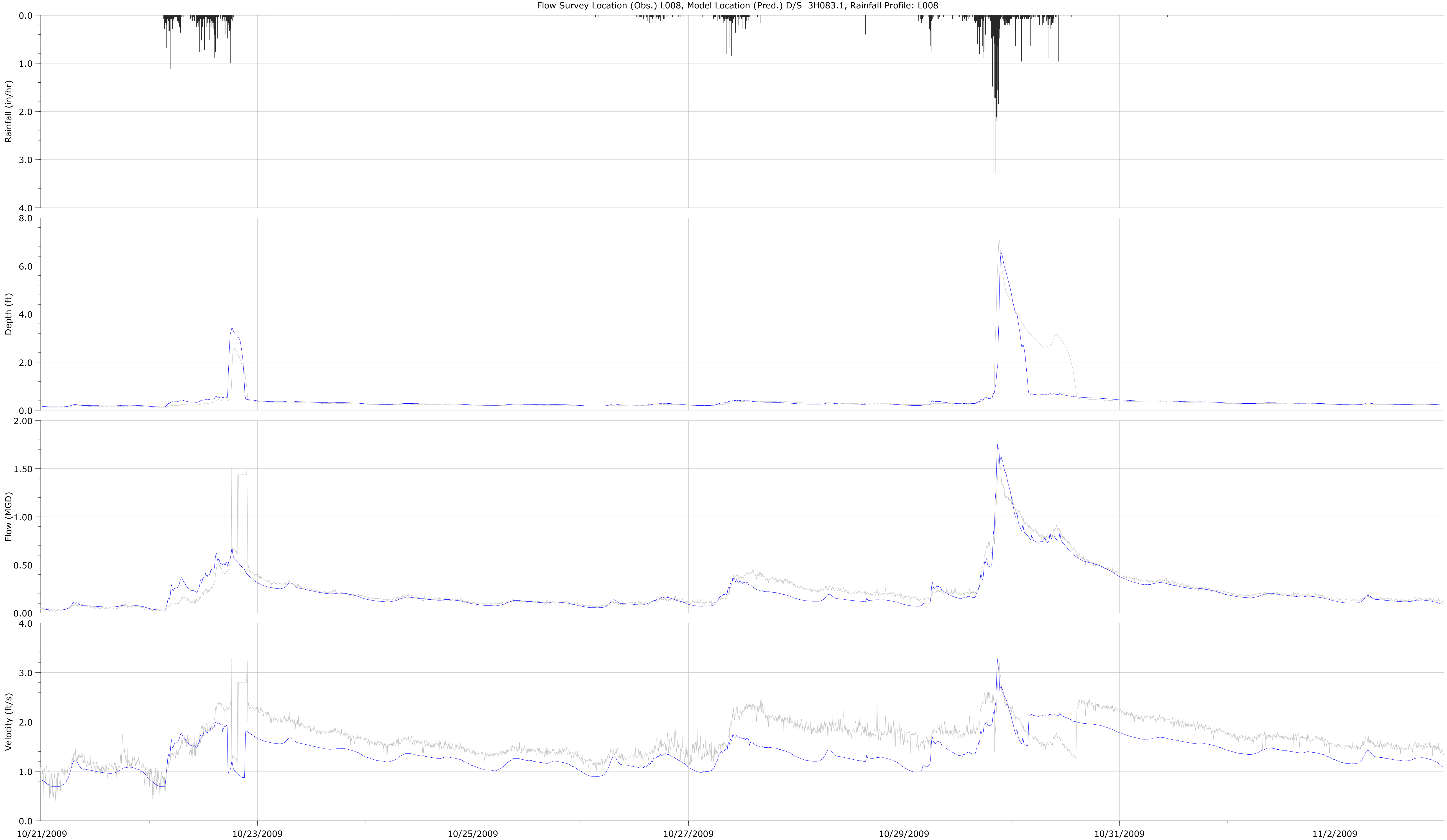
Flow Survey Location (Obs.) L007R, Model Location (Pred.) D/S Diversion_Valve1.1, Rainfall Profile: L007R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.080	3.180	0.026							
Obs.				0.000	19.950	0.000	29.943	188.536	0.000	3.760
...m A20>Final Rain Data 3-10-2010 Fixed				1.157	18.821	3.992	34.547	198.680	1.211	3.774

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 14 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

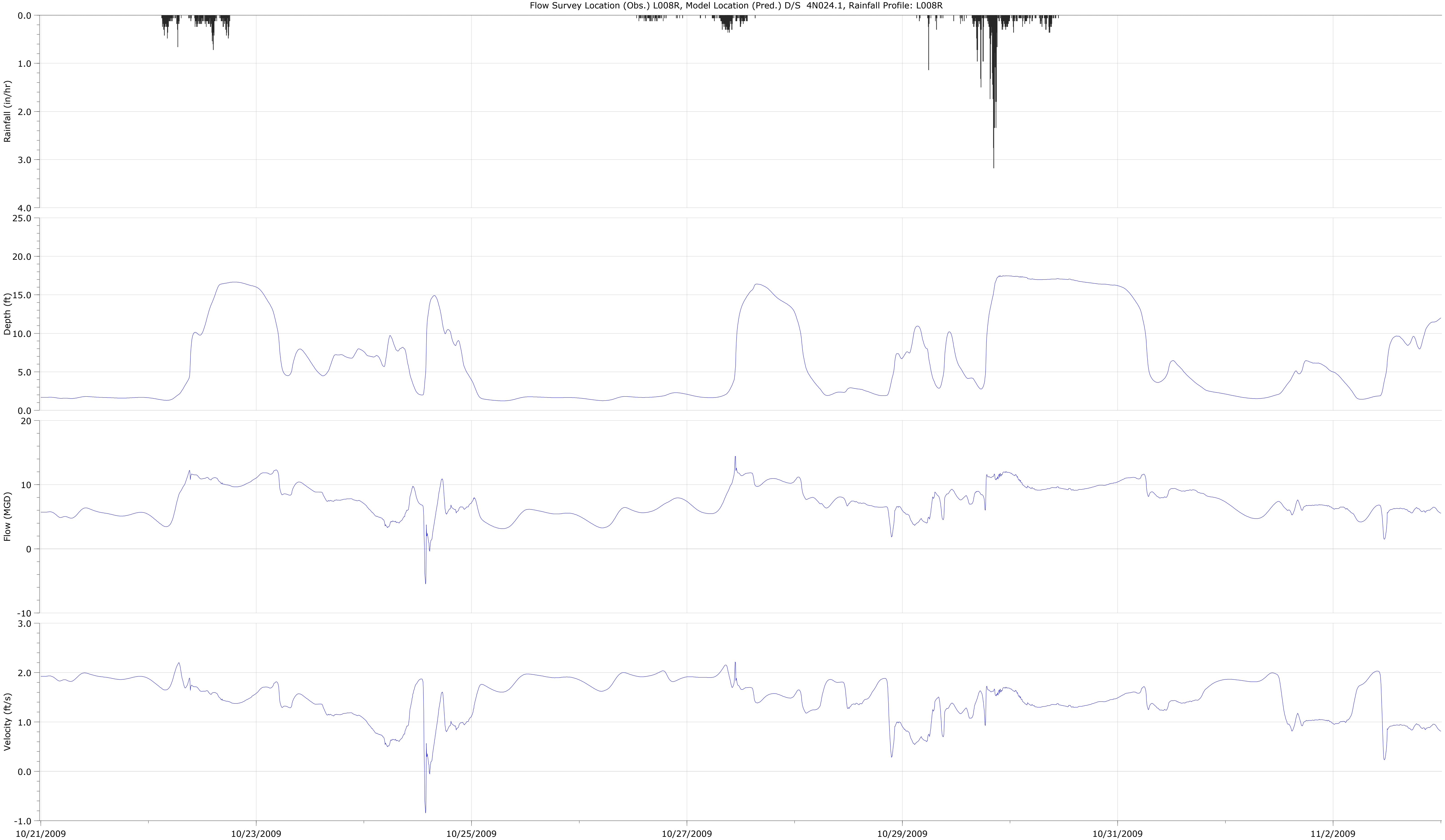
Flow Survey Location (Obs.) L008, Model Location (Pred.) D/S 3H083.1, Rainfall Profile: L008



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.640	3.280	0.024							
Obs.				0.122	7.057	0.015	1.641	3.290	0.409	3.299
...m A20>Final Rain Data 3-10-2010 Fixed				0.142	6.539	0.030	1.747	2.949	0.690	3.261

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

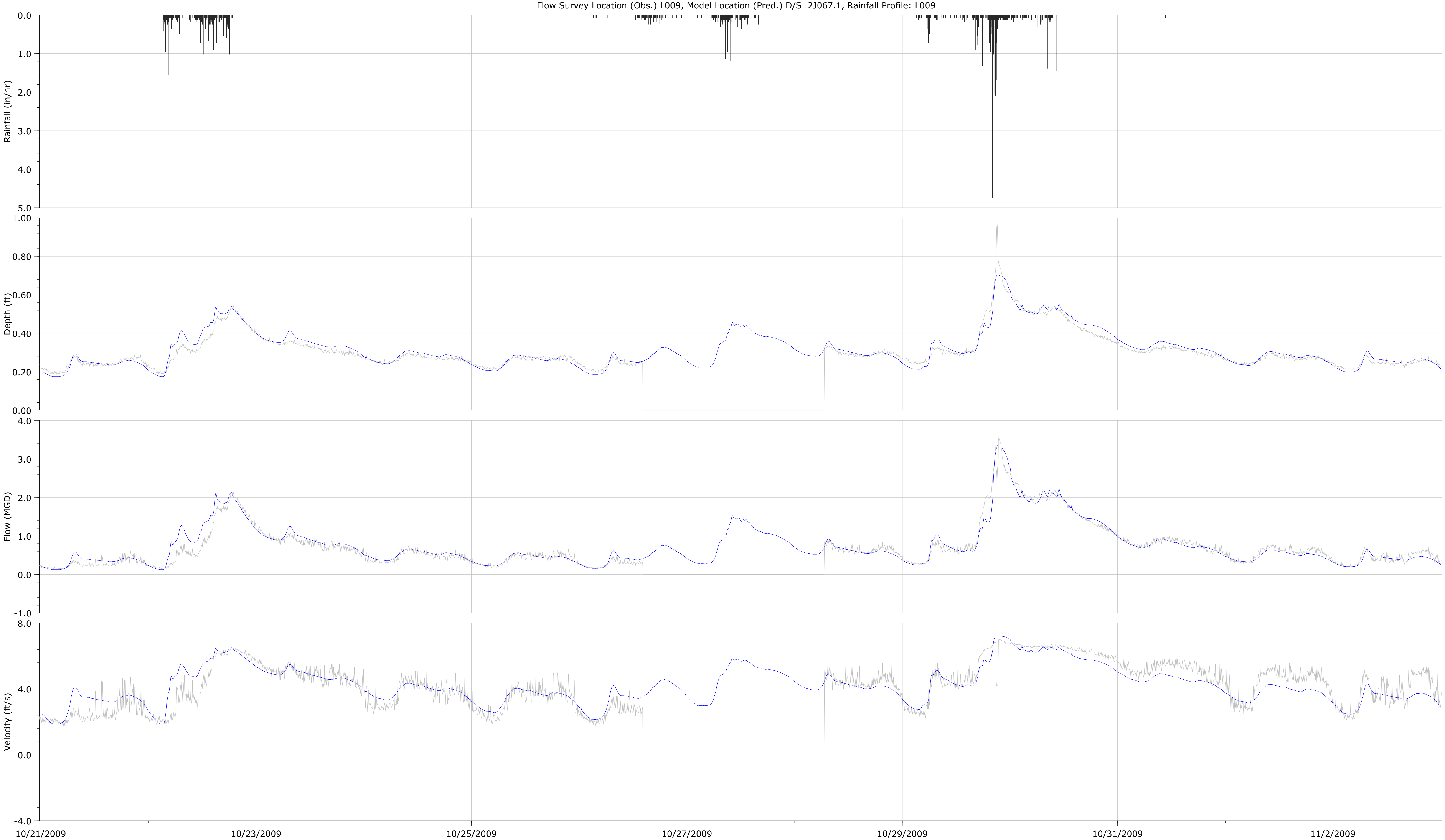
Flow Survey Location (Obs.) L008R, Model Location (Pred.) D/S 4N024.1, Rainfall Profile: L008R



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		8.080	3.180	0.026							
Obs.					0.000	0.000	0.000	0.000	0.000	0.000	0.000
...m A20>Final Rain Data 3-10-2010 Fixed					1.233	17.487	-5.481	14.405	94.890	-0.844	2.212

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L009, Model Location (Pred.) D/S 2J067.1, Rainfall Profile: L009



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.450	4.740	0.024							
Obs.				0.000	0.968	0.000	3.553	8.201	0.000	7.047
...m A20>Final Rain Data 3-10-2010 Fixed				0.176	0.708	0.127	3.346	9.694	1.867	7.219

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L009R, Model Location (Pred.) D/S 6L016.1, Rainfall Profile: L009R

		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		7.160	3.240	0.023							
Obs.					0.000	0.000	0.000	0.000	0.000	0.000	0.000
...m A20>Final Rain Data 3-10-2010 Fixed					1.904	9.361	7.340	34.515	245.343	1.879	4.048

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 18 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L010, Model Location (Pred.) D/S 2K144.1, Rainfall Profile: L010

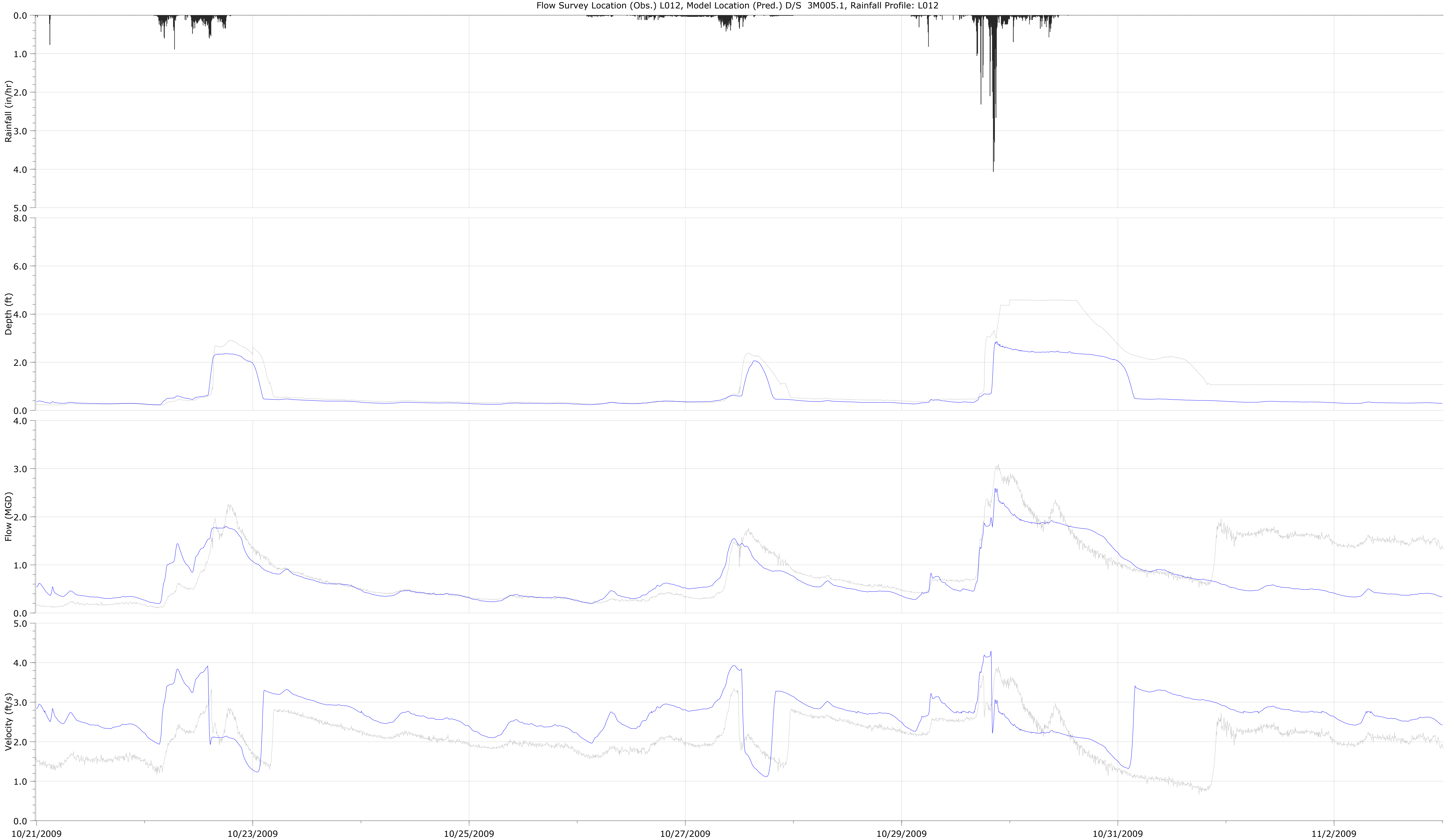
	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.317	3.360	0.030							
Obs.				0.336	4.532	0.300	7.951	20.714	1.530	6.750
...m A20>Final Rain Data 3-10-2010 Fixed				0.339	4.140	0.325	6.200	19.250	1.682	5.032

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 19 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	6.547	5.360	0.021							
Obs.				0.000	0.000	0.000	0.000	0.000	0.000	0.000
...m A20>Final Rain Data 3-10-2010 Fixed				0.703	12.816	3.447	40.367	210.769	3.866	5.895

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 20 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L012, Model Location (Pred.) D/S 3M005.1, Rainfall Profile: L012



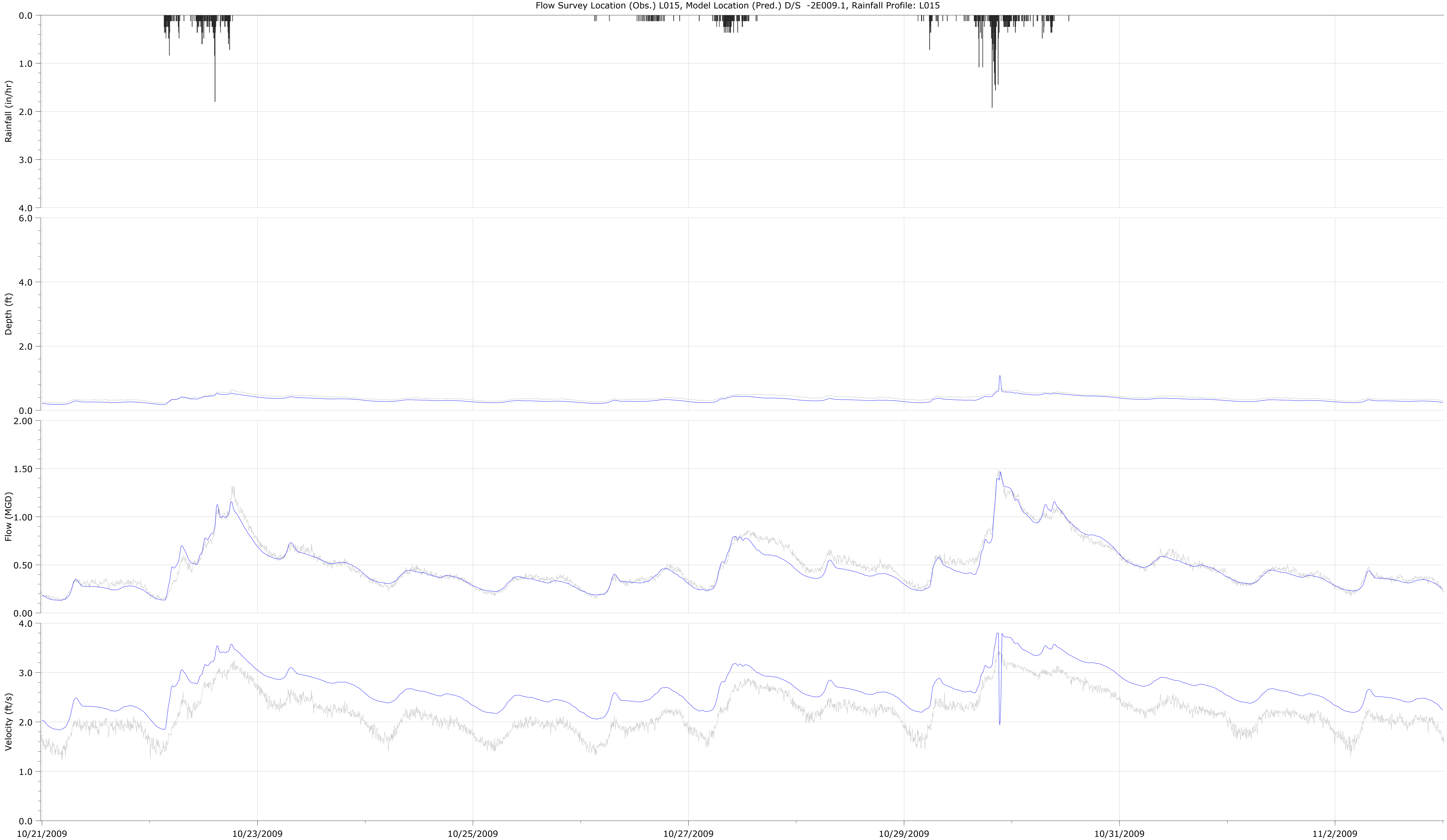
	Rainfall Depth (in)	Rainfall Peak (in/hr)	Rainfall Average (in/hr)	Depth (ft) Min	Depth (ft) Max	Flow (MGD) Min	Flow (MGD) Max	Flow Volume (US Mgal)	Velocity (ft/s) Min	Velocity (ft/s) Max
Rain	9.848	4.068	0.032							
Obs.				0.213	4.601	0.106	3.086	11.513	0.666	3.891
...m A20>Final Rain Data 3-10-2010 Fixed				0.229	2.859	0.193	2.590	9.237	1.113	4.284

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 21 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L014, Model Location (Pred.) D/S -2E036.1, Rainfall Profile: L014

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	6.950	1.920	0.022							
Obs.				0.293	6.436	0.355	4.581	17.062	1.520	4.810
...m A20>Final Rain Data 3-10-2010 Fixed				0.243	6.201	0.262	4.499	16.495	2.185	5.159

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	6.950	1.920	0.022							
Obs.				0.226	0.678	0.124	1.487	6.378	1.230	3.440
...m A20>Final Rain Data 3-10-2010 Fixed				0.182	1.087	0.131	1.467	6.112	1.839	3.800

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L018, Model Location (Pred.) D/S 2O004.1, Rainfall Profile: L018

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.364	3.588	0.030							
Obs.				0.352	6.011	0.418	14.161	47.181	0.520	6.340
...m A20>Final Rain Data 3-10-2010 Fixed				0.438	2.323	1.185	12.535	46.921	2.334	4.888

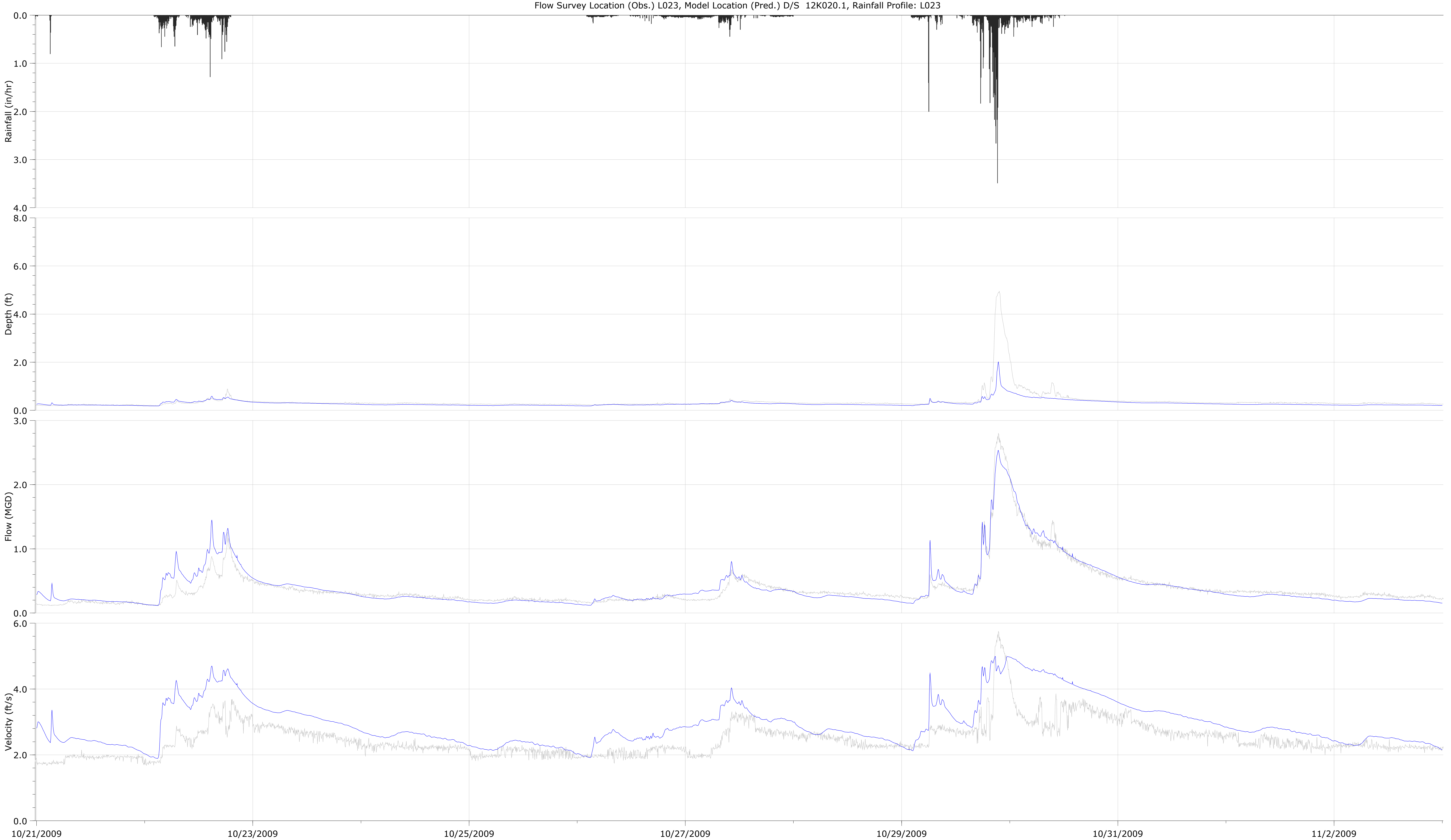
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L021, Model Location (Pred.) D/S 14K004.1, Rainfall Profile: L021

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.643	3.036	0.031							
Obs.				0.599	9.063	0.126	2.398	13.176	0.396	4.646
...m A20>Final Rain Data 3-10-2010 Fixed				0.368	6.451	0.552	6.046	19.746	1.159	4.324

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

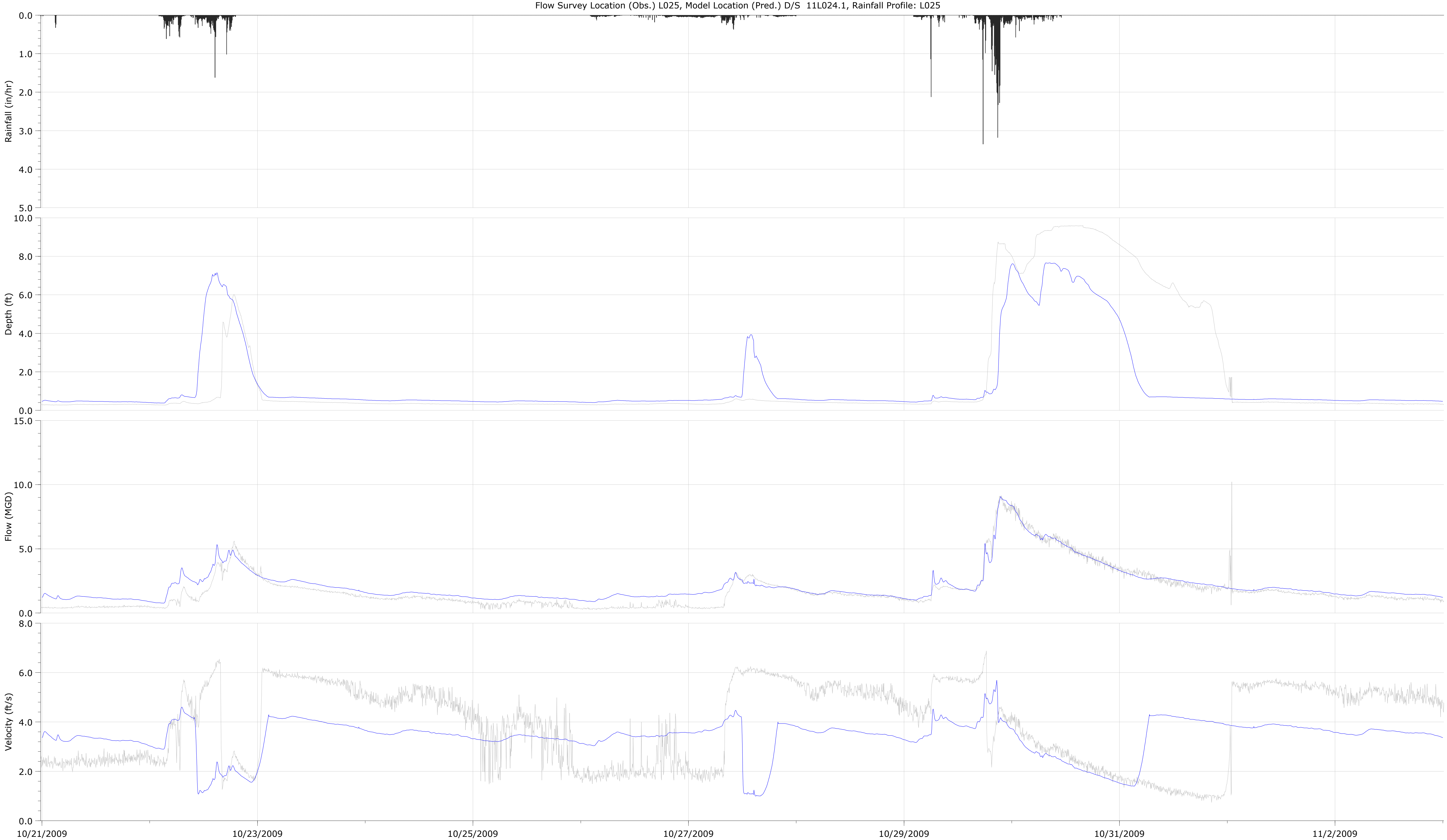
Flow Survey Location (Obs.) L023, Model Location (Pred.) D/S 12K020.1, Rainfall Profile: L023



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		9.399	3.492	0.030							
Obs.					0.183	4.947	0.112	2.798	5.089	1.680	5.750
...m A20>Final Rain Data 3-10-2010 Fixed					0.179	2.010	0.117	2.534	5.189	1.891	4.989

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 26 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L025, Model Location (Pred.) D/S 11L024.1, Rainfall Profile: L025



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		9.249	3.348	0.030							
Obs.					0.268	9.597	0.266	10.223	23.670	0.745	6.877
...m A20>Final Rain Data 3-10-2010 Fixed					0.376	7.665	0.766	9.060	27.929	0.998	5.685

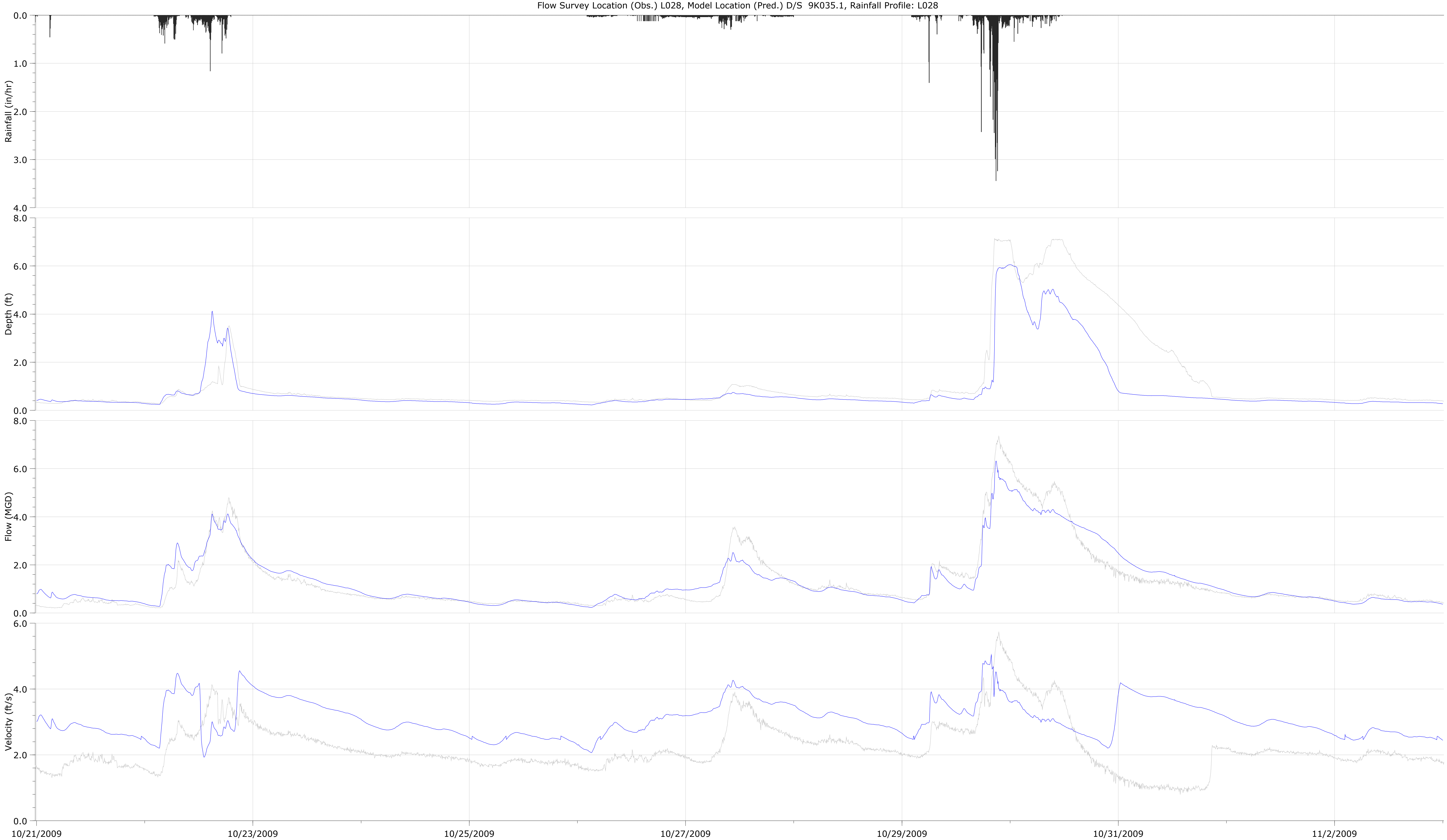
Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 27 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L026, Model Location (Pred.) D/S 11L050.1, Rainfall Profile: L026

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.498	3.348	0.030							
Obs.				0.000	7.338	0.000	1.220	2.589	0.000	2.614
...m A20>Final Rain Data 3-10-2010 Fixed				0.173	4.949	0.061	1.079	2.754	0.425	2.440

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 28 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

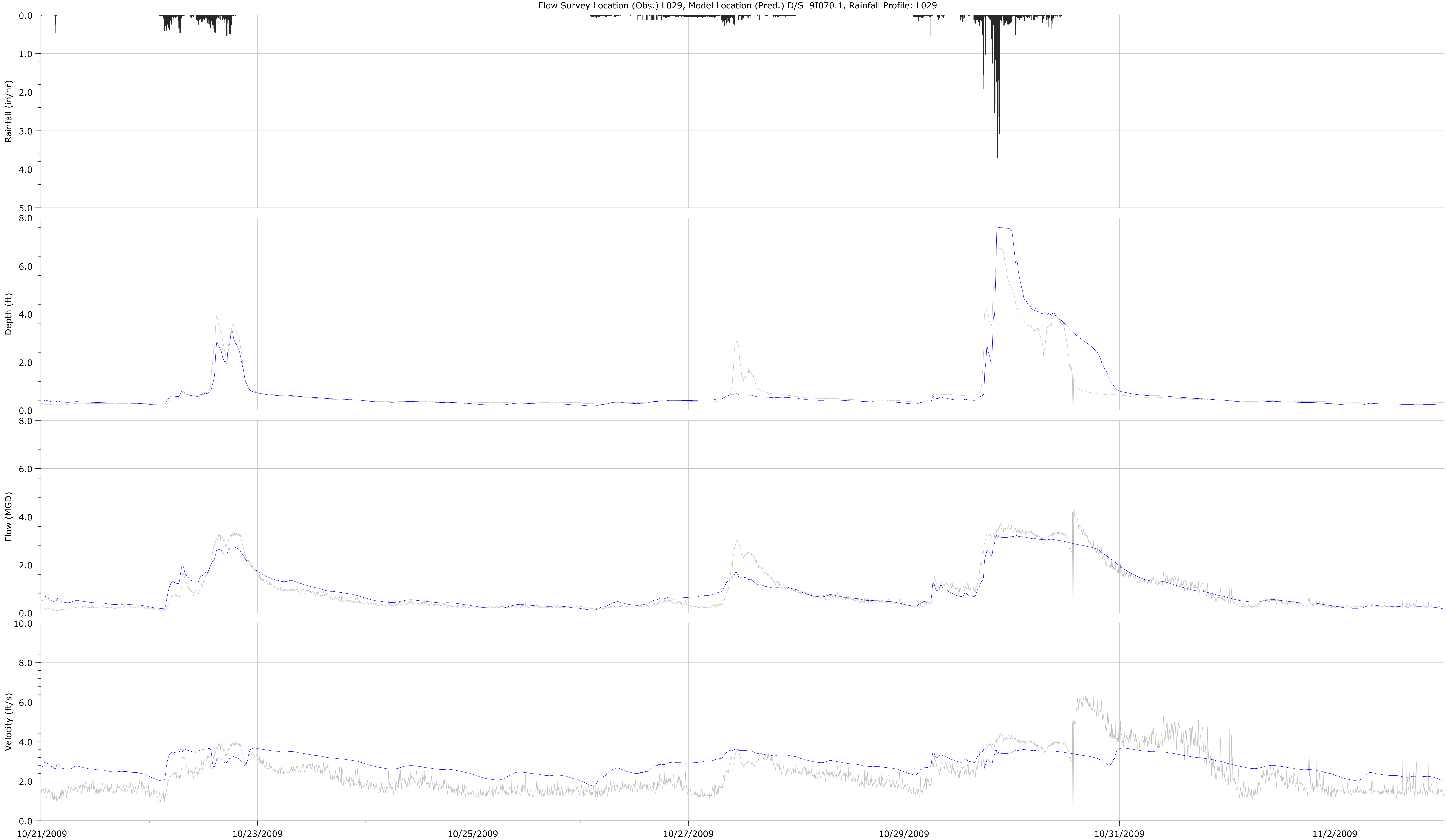
Flow Survey Location (Obs.) L028, Model Location (Pred.) D/S 9K035.1, Rainfall Profile: L028



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.395	3.444	0.030							
Obs.				0.283	7.142	0.209	7.345	16.801	0.798	5.727
...m A20>Final Rain Data 3-10-2010 Fixed				0.225	6.055	0.228	6.318	17.228	1.929	5.034

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 29 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

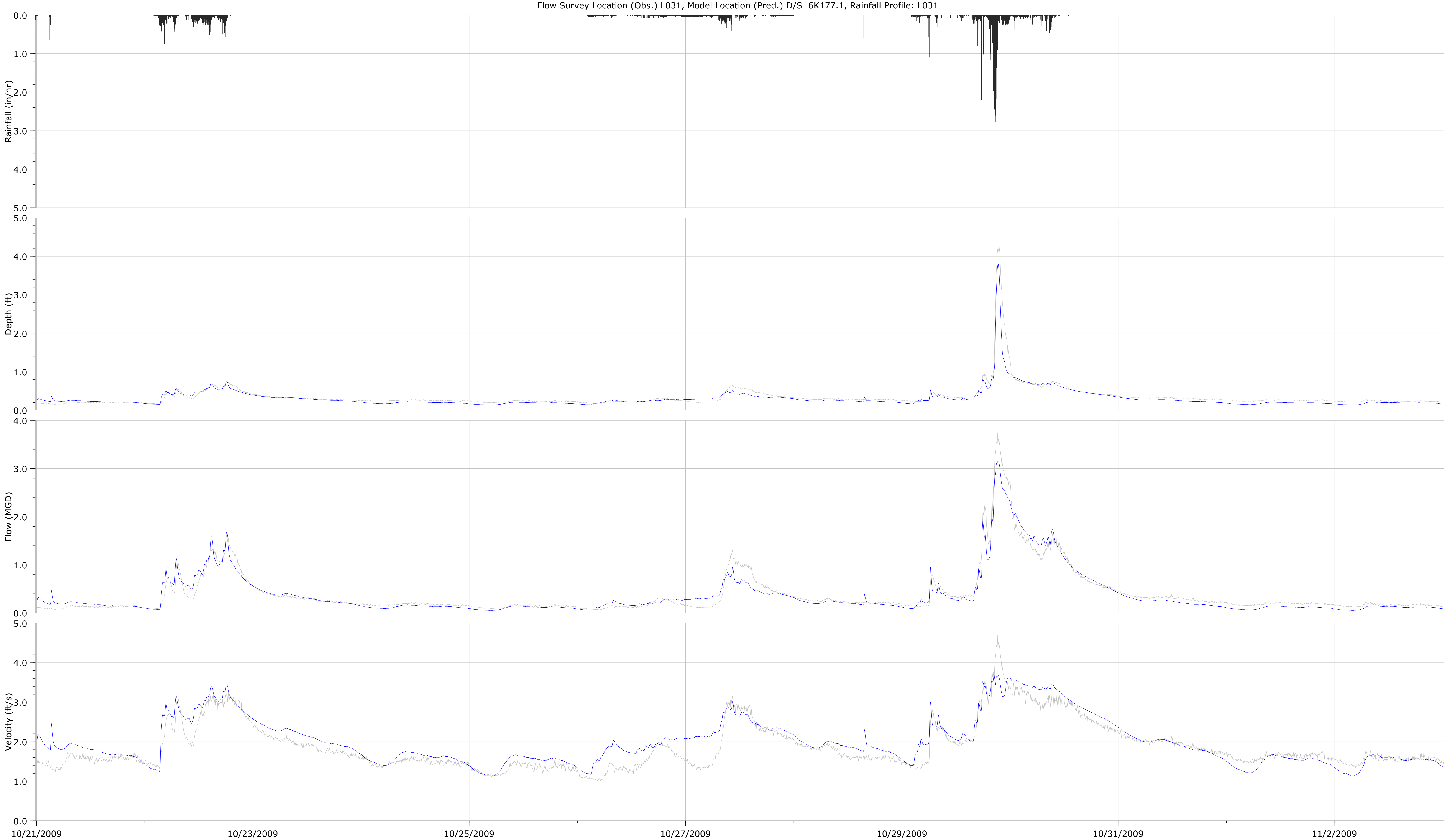
Flow Survey Location (Obs.) L029, Model Location (Pred.) D/S 9I070.1, Rainfall Profile: L029



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		9.074	3.696	0.029							
Obs.					0.000	6.728	0.000	4.300	11.837	0.000	6.335
...m A20>Final Rain Data 3-10-2010 Fixed					0.172	7.621	0.115	3.253	12.063	1.741	3.668

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 30 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

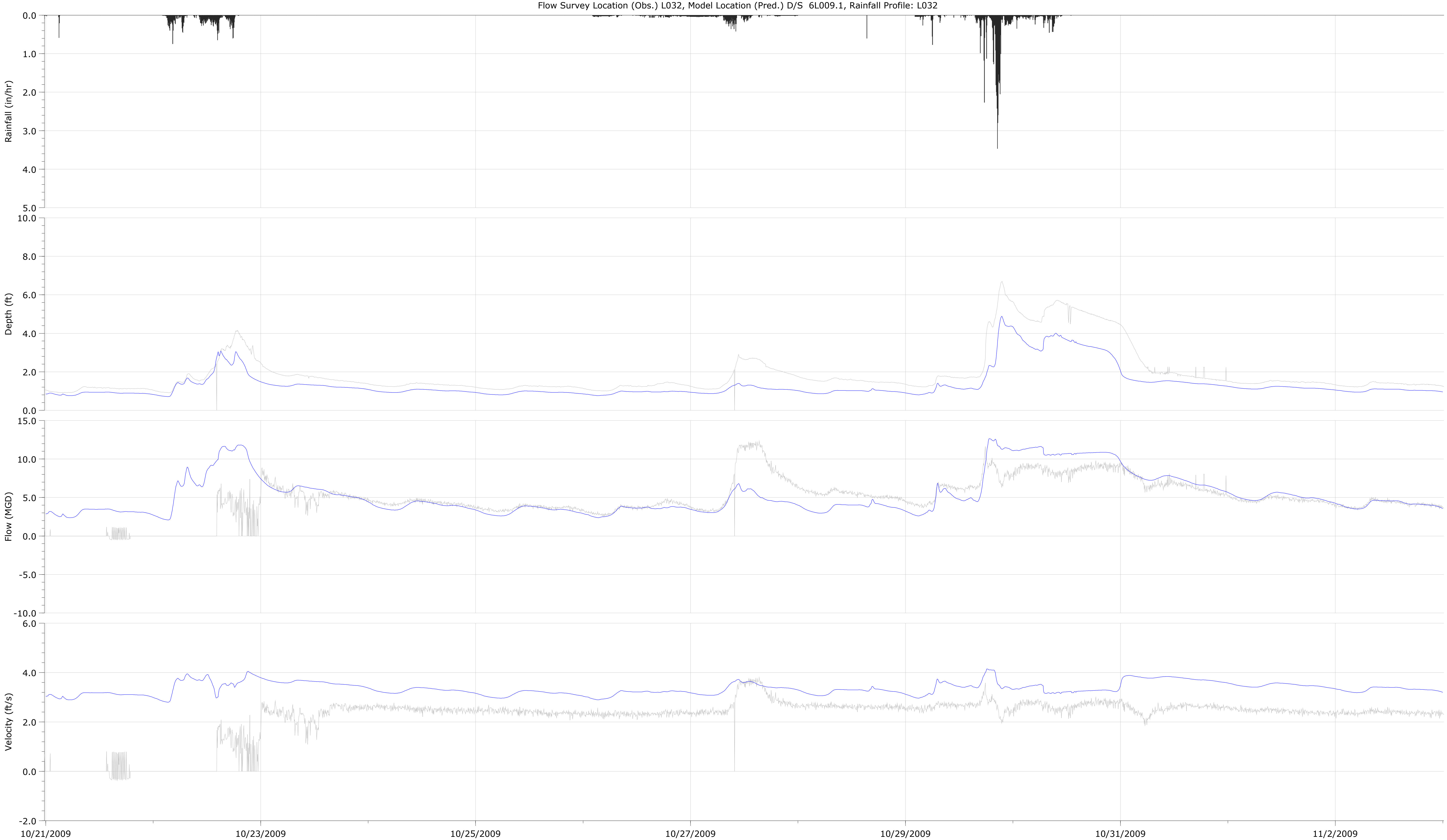
Flow Survey Location (Obs.) L031, Model Location (Pred.) D/S 6K177.1, Rainfall Profile: L031



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.865	2.772	0.028							
Obs.				0.153	4.236	0.069	3.752	5.046	0.997	4.693
...m A20>Final Rain Data 3-10-2010 Fixed				0.140	3.825	0.055	3.165	4.758	1.128	3.676

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 31 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

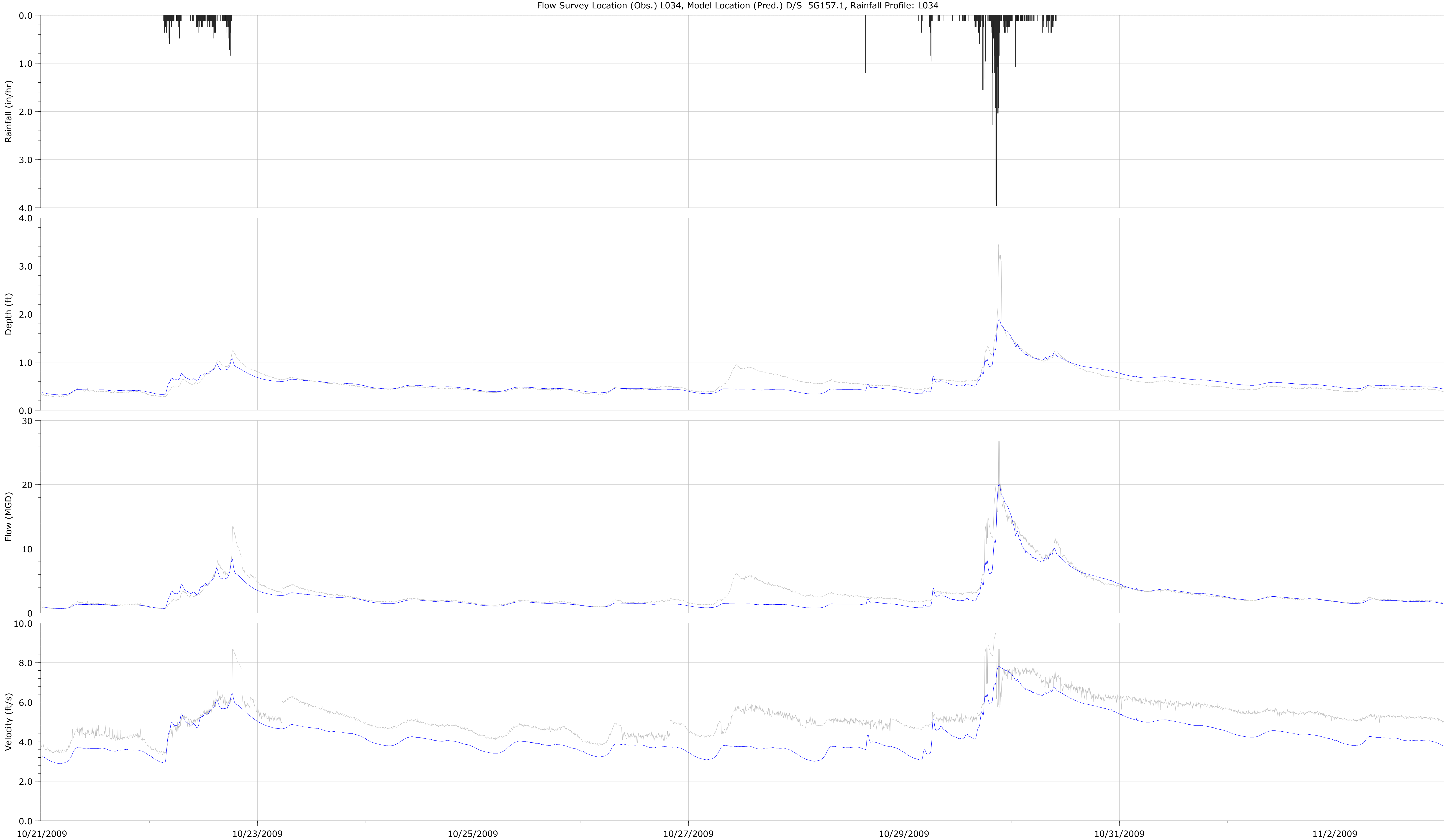
Flow Survey Location (Obs.) L032, Model Location (Pred.) D/S 6L009.1, Rainfall Profile: L032



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.033	3.468	0.029							
Obs.				0.000	6.698	-0.503	12.335	61.965	-0.360	3.800
...m A20>Final Rain Data 3-10-2010 Fixed				0.712	4.879	2.083	12.640	69.101	2.799	4.145

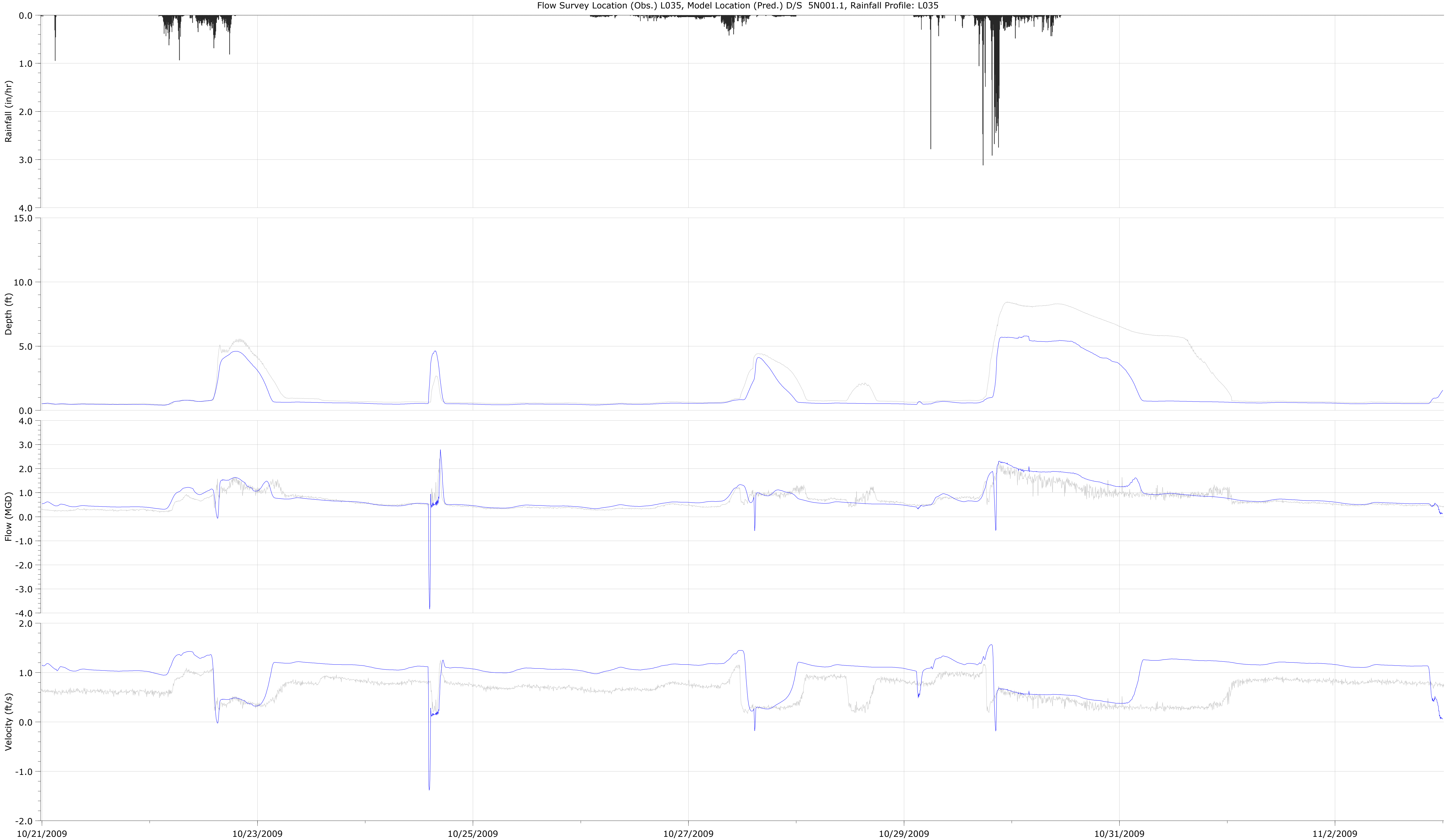
Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 32 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L034, Model Location (Pred.) D/S 5G157.1, Rainfall Profile: L034



	Rainfall Depth (in)	Rainfall Peak (in/hr)	Rainfall Average (in/hr)	Depth (ft) Min	Depth (ft) Max	Flow (MGD) Min	Flow (MGD) Max	Flow (MGD) Volume (US Mgal)	Velocity (ft/s) Min	Velocity (ft/s) Max
Rain	7.310	3.960	0.023							
Obs.				0.276	3.446	0.633	26.734	41.653	3.344	9.582
...m A20>Final Rain Data 3-10-2010 Fixed				0.321	1.886	0.687	20.051	34.620	2.887	7.807

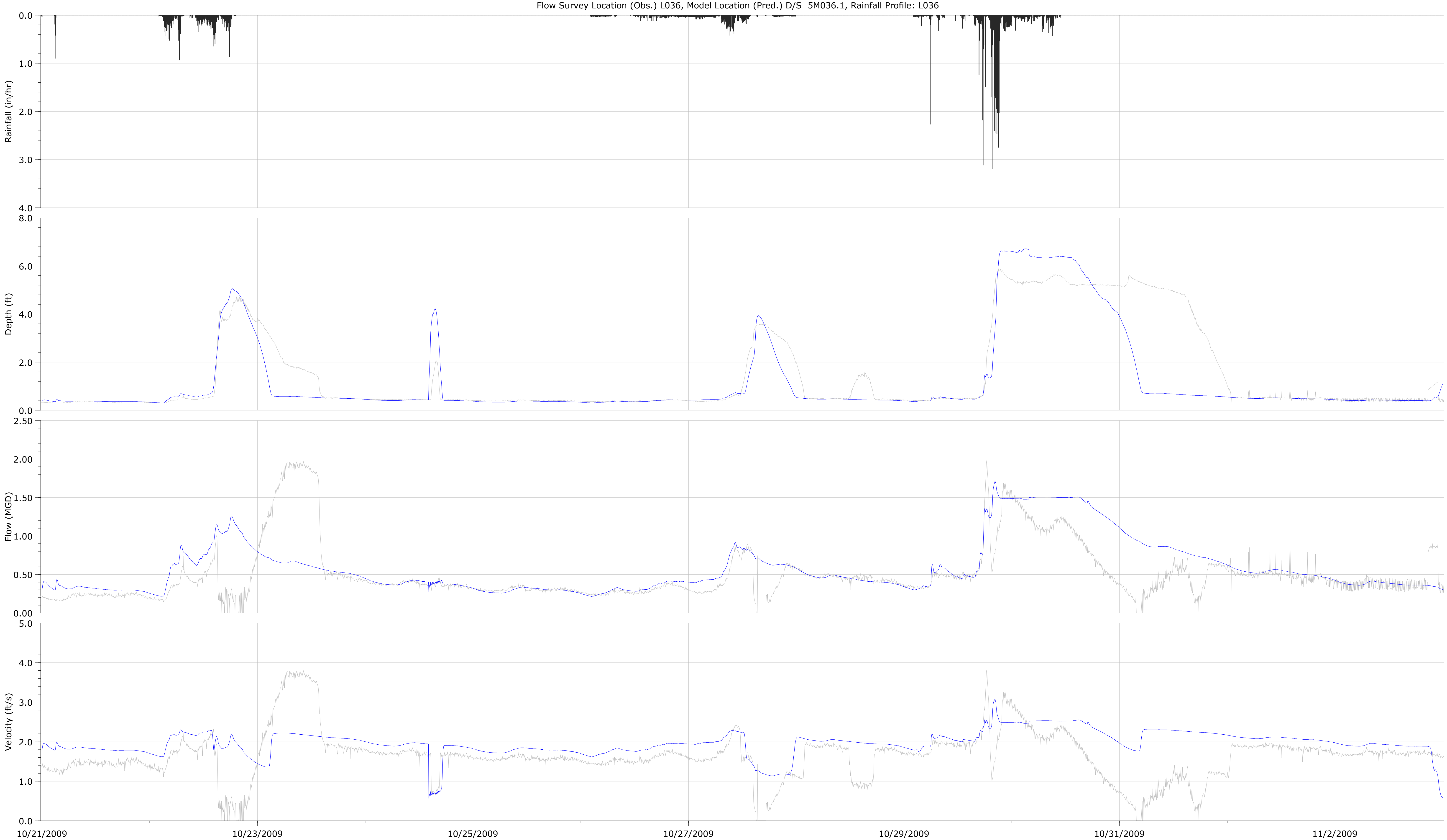
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.538	3.120	0.034							
Obs.				0.439	8.446	0.182	2.420	9.069	0.156	1.242
...m A20>Final Rain Data 3-10-2010 Fixed				0.400	5.796	-3.840	2.788	9.930	-1.377	1.566

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L036, Model Location (Pred.) D/S 5M036.1, Rainfall Profile: L036



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.378	3.192	0.033							
Obs.				0.208	5.869	0.000	1.980	6.536	0.000	3.820
...m A20>Final Rain Data 3-10-2010 Fixed				0.308	6.716	0.215	1.716	7.615	0.576	3.087

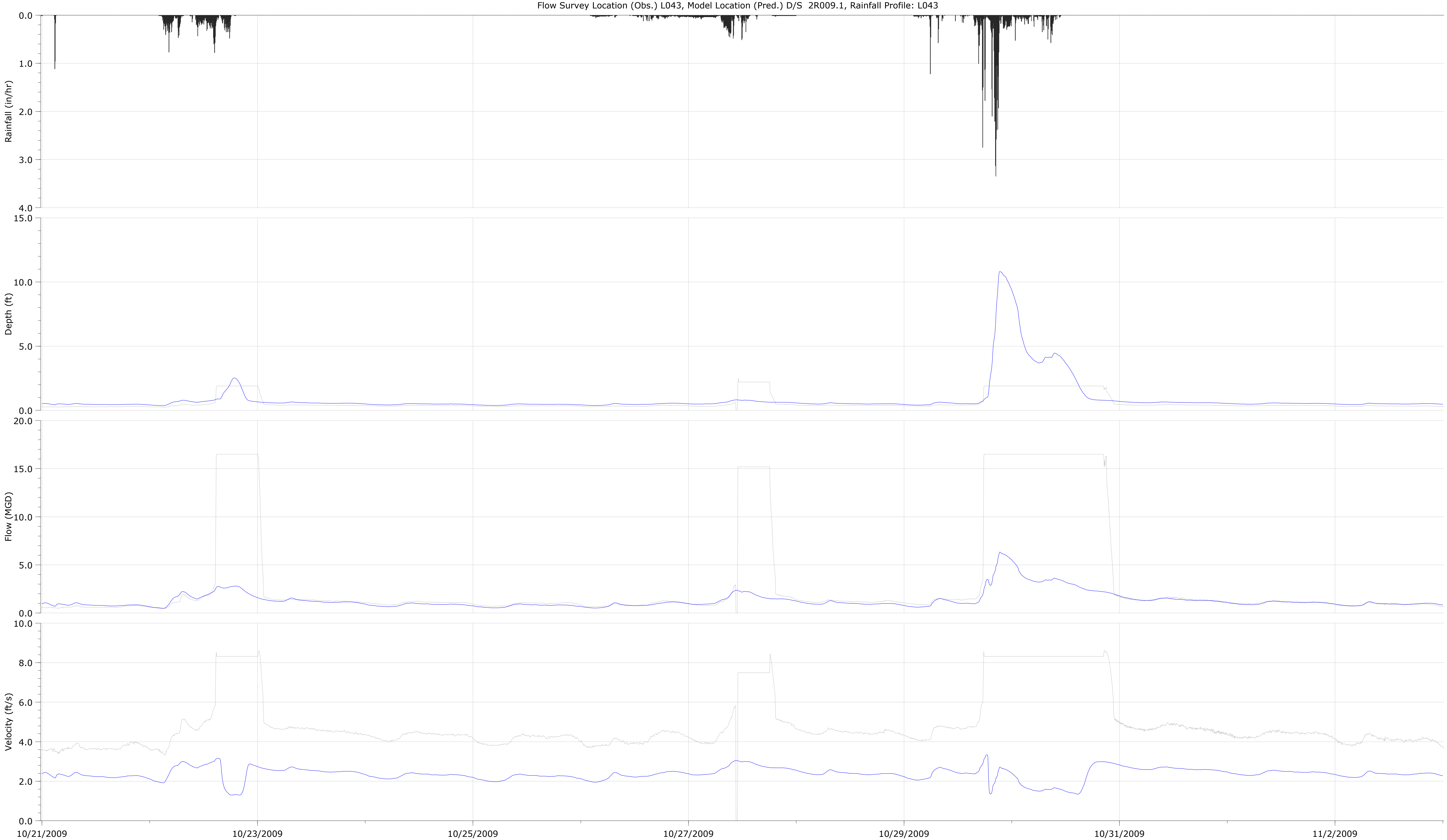
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L037, Model Location (Pred.) D/S 7O013.1, Rainfall Profile: L037

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.234	3.696	0.033							
Obs.				0.294	8.394	0.196	2.811	9.018	0.385	2.444
...m A20>Final Rain Data 3-10-2010 Fixed				0.278	6.015	0.184	3.136	8.865	1.267	2.567

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 36 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L043, Model Location (Pred.) D/S 2R009.1, Rainfall Profile: L043



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.295	3.348	0.033							
Obs.				0.000	2.454	0.000	16.507	43.301	0.000	8.604
...m A20>Final Rain Data 3-10-2010 Fixed				0.363	10.809	0.481	6.323	17.212	1.297	3.336

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Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.254	3.396	0.033							
Obs.				0.537	1.877	0.556	4.693	25.982	1.300	2.760
...m A20>Final Rain Data 3-10-2010 Fixed				0.638	7.318	0.874	6.555	28.366	1.567	2.929

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Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L050, Model Location (Pred.) D/S 15G014.1, Rainfall Profile: L050

	Rainfall Depth (in)	Rainfall Peak (in/hr)	Rainfall Average (in/hr)	Depth (ft) Min	Depth (ft) Max	Flow (MGD) Min	Flow (MGD) Max	Flow (MGD) Volume (US Mgal)	Velocity (ft/s) Min	Velocity (ft/s) Max
Rain	9.809	2.808	0.031							
Obs.				0.625	11.939	1.133	57.058	237.918	1.001	5.995
...m A20>Final Rain Data 3-10-2010 Fixed				0.814	10.664	2.499	42.216	227.711	1.509	4.462

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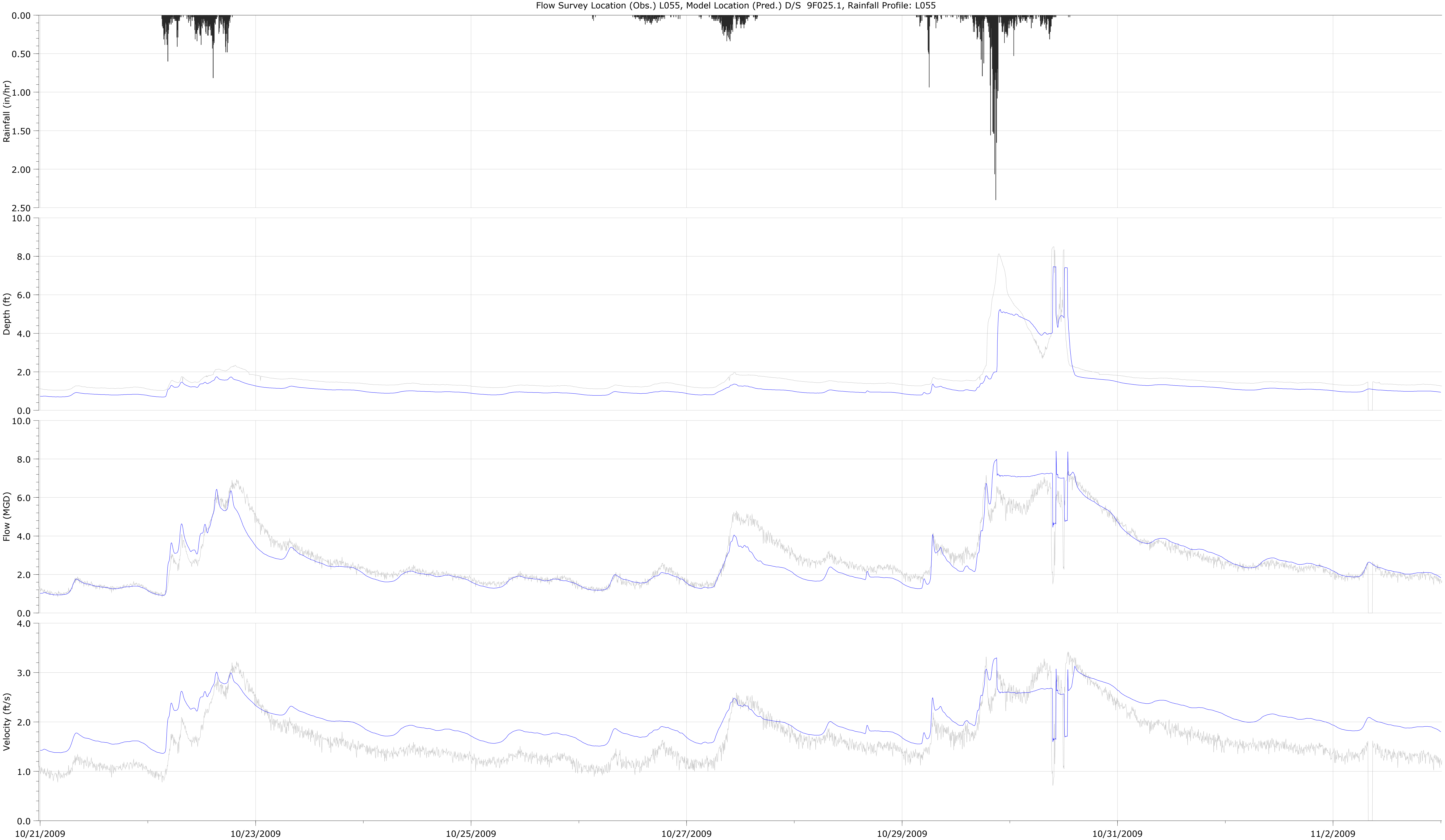
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L055, Model Location (Pred.) D/S 9F025.1, Rainfall Profile: L055



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.360	2.400	0.024							
Obs.				0.000	8.504	0.000	7.351	36.737	0.000	3.410
...m A20>Final Rain Data 3-10-2010 Fixed				0.690	7.472	0.911	8.412	35.307	1.363	3.298

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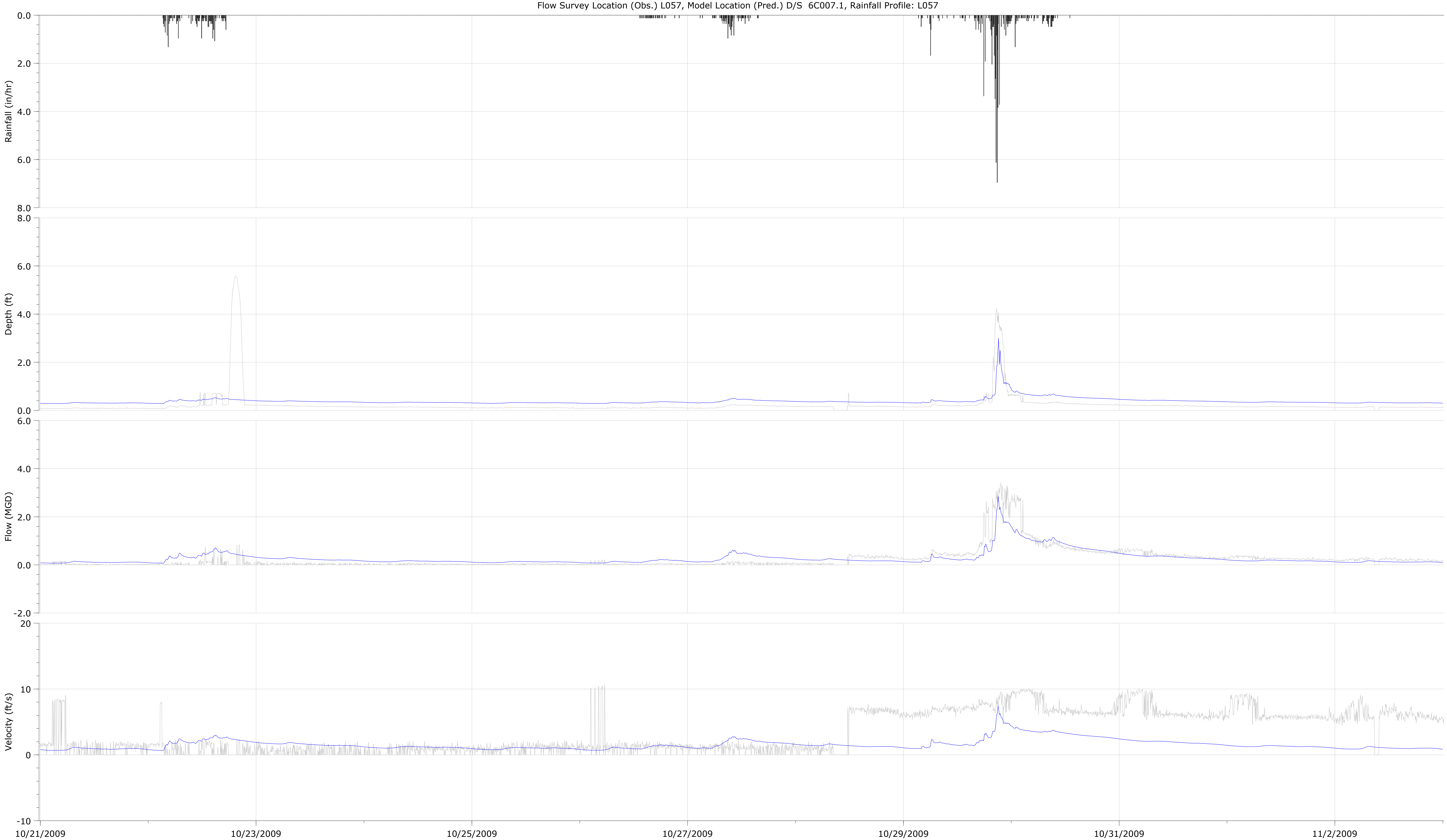
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L057, Model Location (Pred.) D/S 6C007.1, Rainfall Profile: L057



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.800	6.960	0.028							
Obs.				0.000	5.569	0.000	3.394	3.183	0.000	10.670
...m A20>Final Rain Data 3-10-2010 Fixed				0.283	2.995	0.072	2.823	3.620	0.685	7.343

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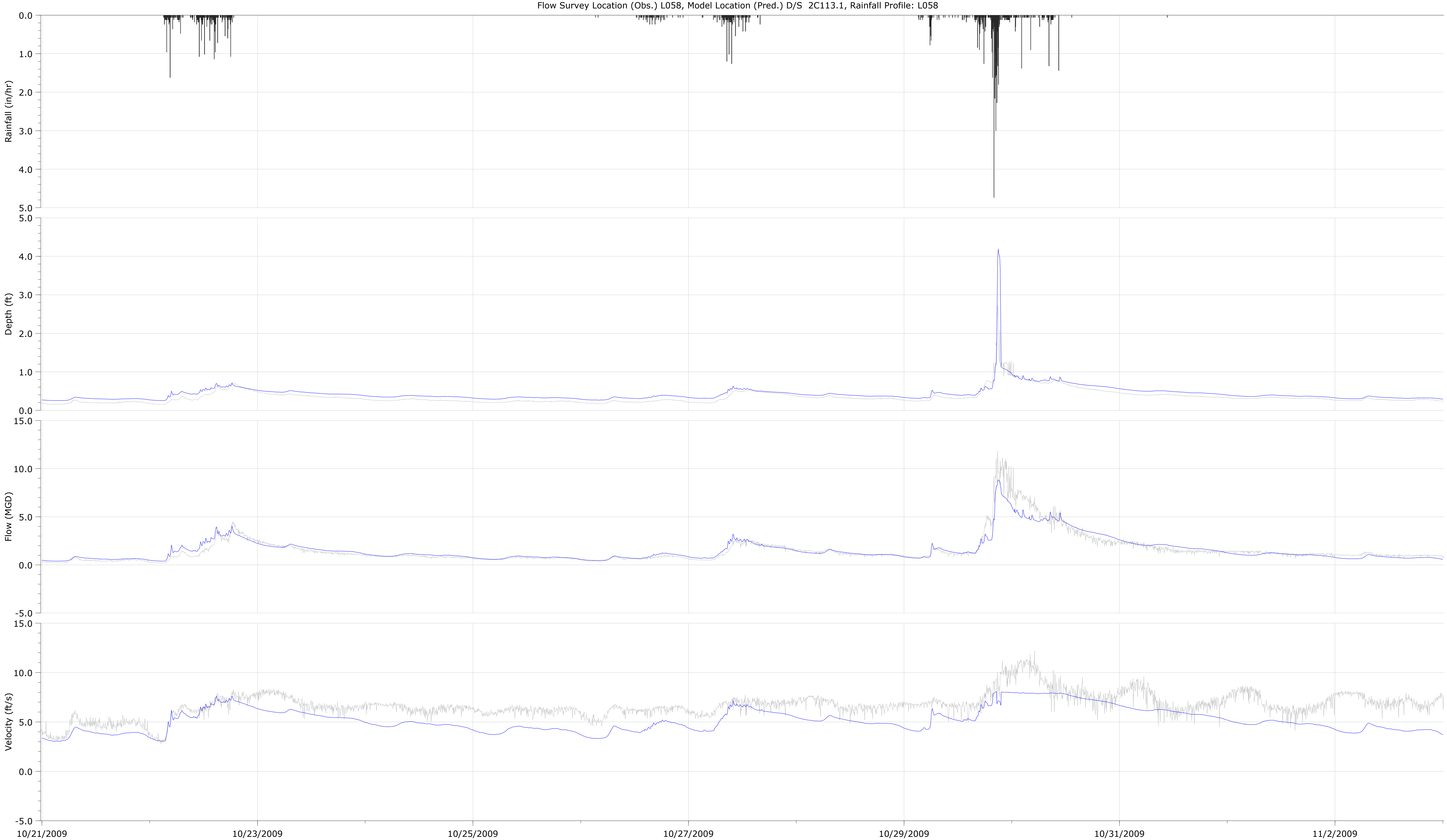
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L058, Model Location (Pred.) D/S 2C113.1, Rainfall Profile: L058



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.805	4.740	0.025							
Obs.				0.147	2.719	0.170	11.823	19.829	2.800	12.200
...m A20>Final Rain Data 3-10-2010 Fixed				0.252	4.177	0.386	8.834	20.006	3.045	8.061

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Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L059, Model Location (Pred.) D/S 2B006.1, Rainfall Profile: L059

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.805	4.740	0.025							
Obs.				0.348	3.406	0.410	6.453	28.325	1.377	3.444
...m A20>Final Rain Data 3-10-2010 Fixed				0.339	8.125	0.493	8.996	28.148	1.382	4.343

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L062, Model Location (Pred.) D/S 14L003.1, Rainfall Profile: L062

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.123	3.696	0.032							
Obs.				0.000	7.531	0.000	1.319	7.690	0.000	2.720
...m A20>Final Rain Data 3-10-2010 Fixed				0.321	4.867	0.162	1.306	8.095	1.381	2.430

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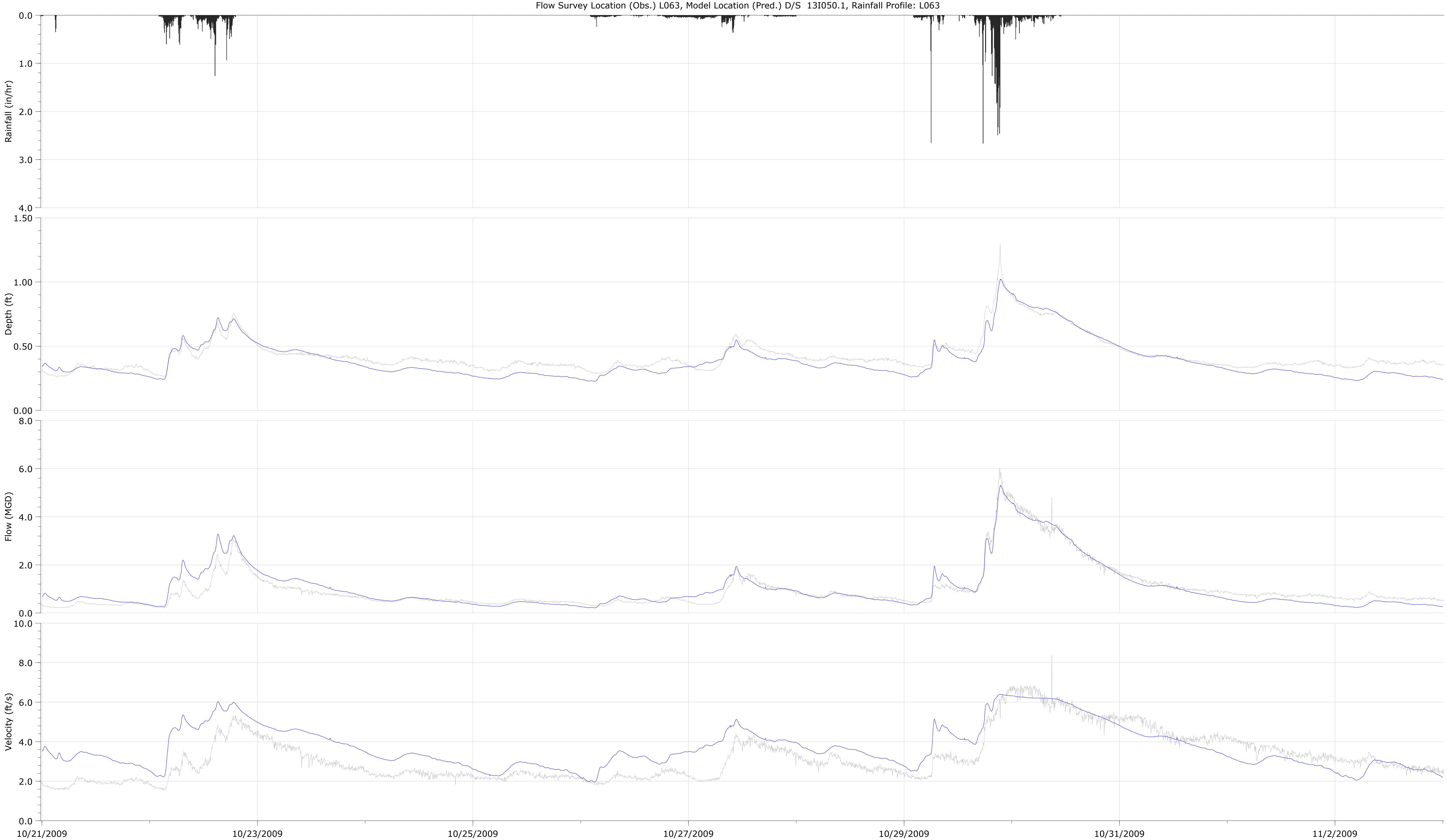
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

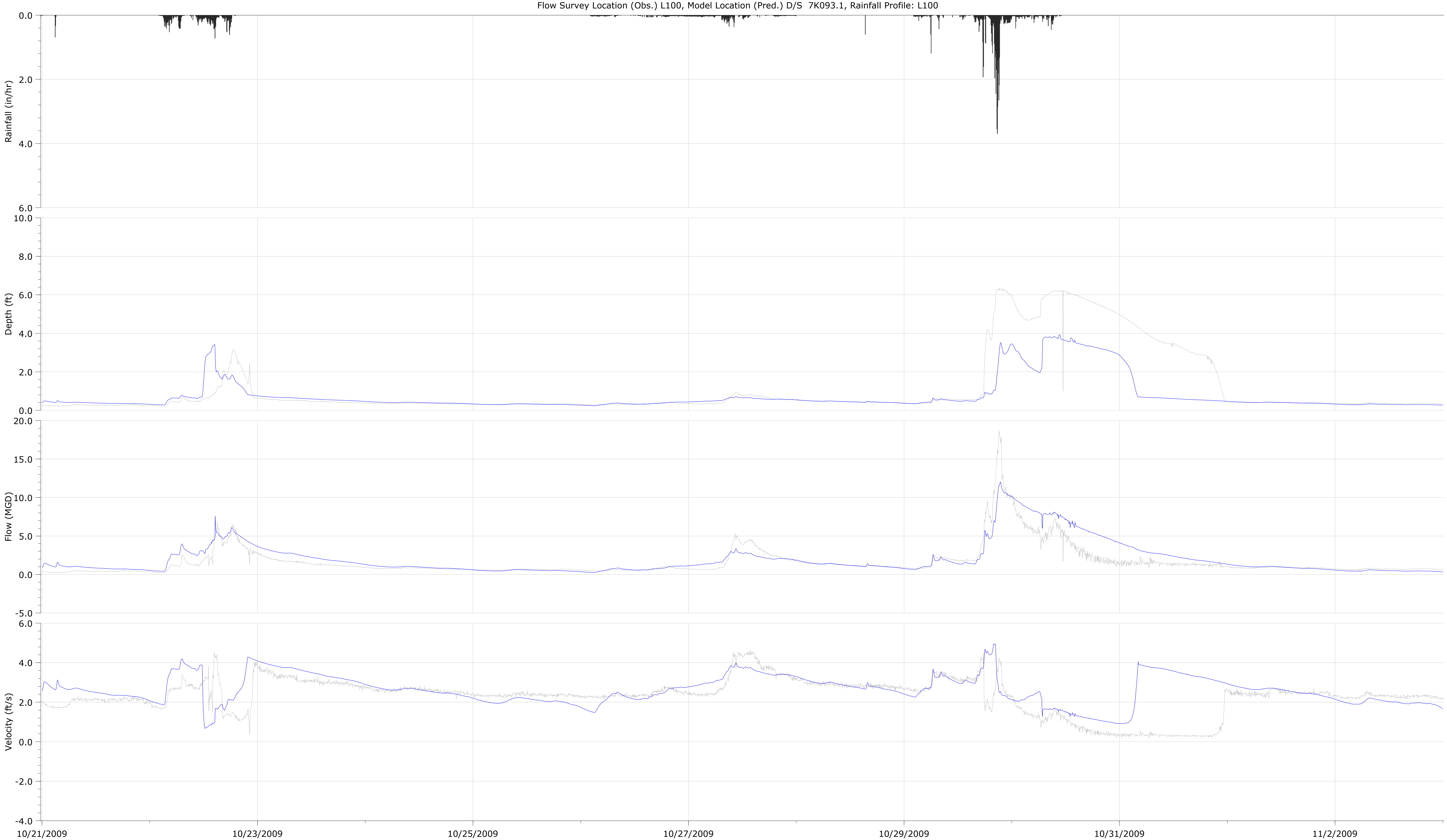
Flow Survey Location (Obs.) L063, Model Location (Pred.) D/S 13I050.1, Rainfall Profile: L063



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.831	2.664	0.028							
Obs.				0.259	1.297	0.208	6.003	12.948	1.549	8.360
...m A20>Final Rain Data 3-10-2010 Fixed				0.227	1.022	0.213	5.301	13.344	1.957	6.396

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L100, Model Location (Pred.) D/S 7K093.1, Rainfall Profile: L100



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.964	3.696	0.029							
Obs.				0.212	6.337	0.239	18.619	21.388	0.165	4.666
...m A20>Final Rain Data 3-10-2010 Fixed				0.244	3.926	0.259	12.014	25.902	0.665	4.956

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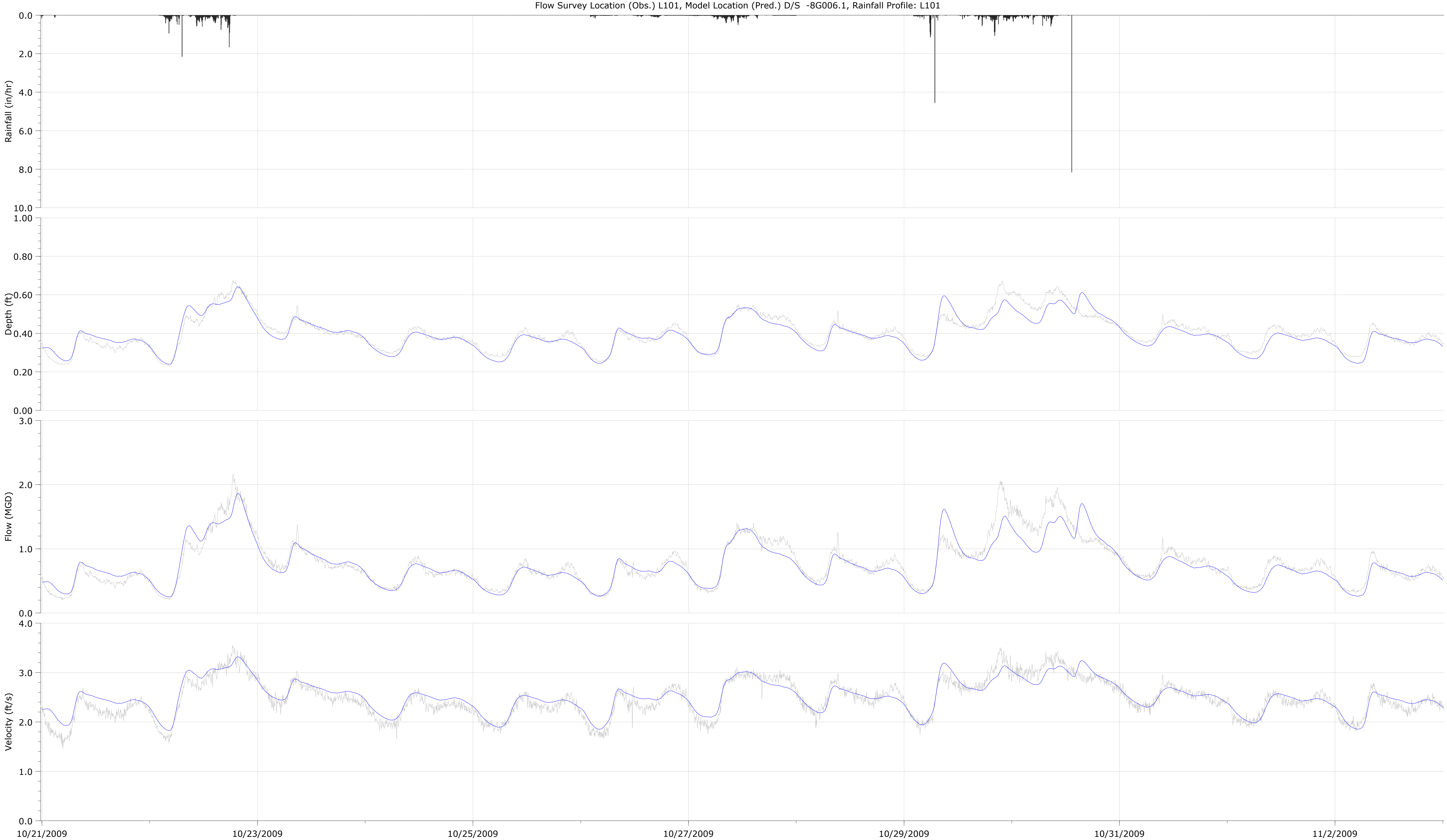
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L101, Model Location (Pred.) D/S -8G006.1, Rainfall Profile: L101



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.092	8.160	0.026							
Obs.				0.228	0.677	0.203	2.171	10.070	1.460	3.540
...m A20>Final Rain Data 3-10-2010 Fixed				0.240	0.641	0.251	1.864	9.677	1.826	3.318

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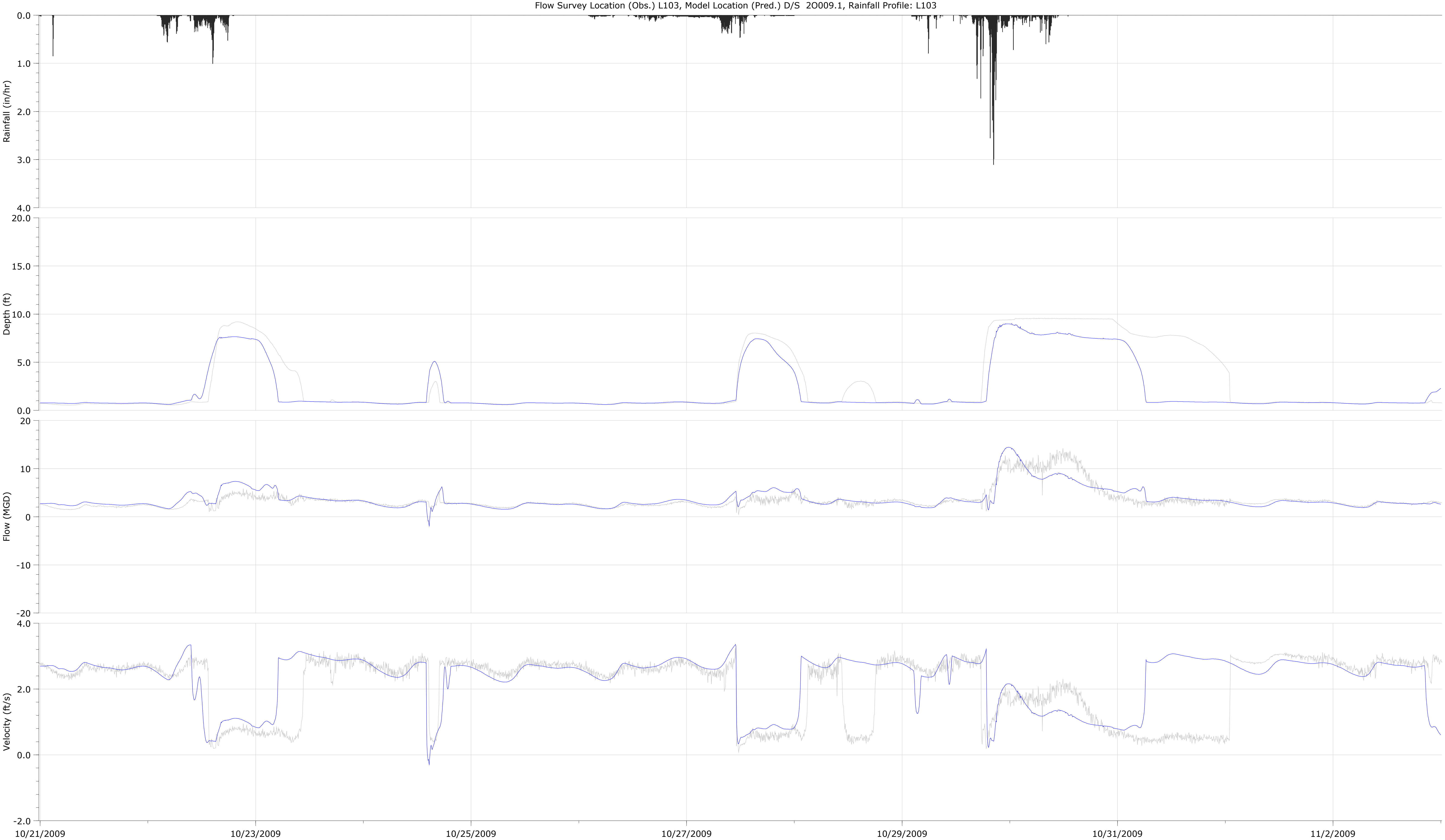
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L102, Model Location (Pred.) D/S -1L004.1, Rainfall Profile: L102

		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		8.078	2.148	0.026							
Obs.					0.351	7.767	0.151	9.693	39.372	0.627	5.463
...m A20>Final Rain Data 3-10-2010 Fixed					0.486	5.230	0.896	8.765	38.368	2.352	4.041

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

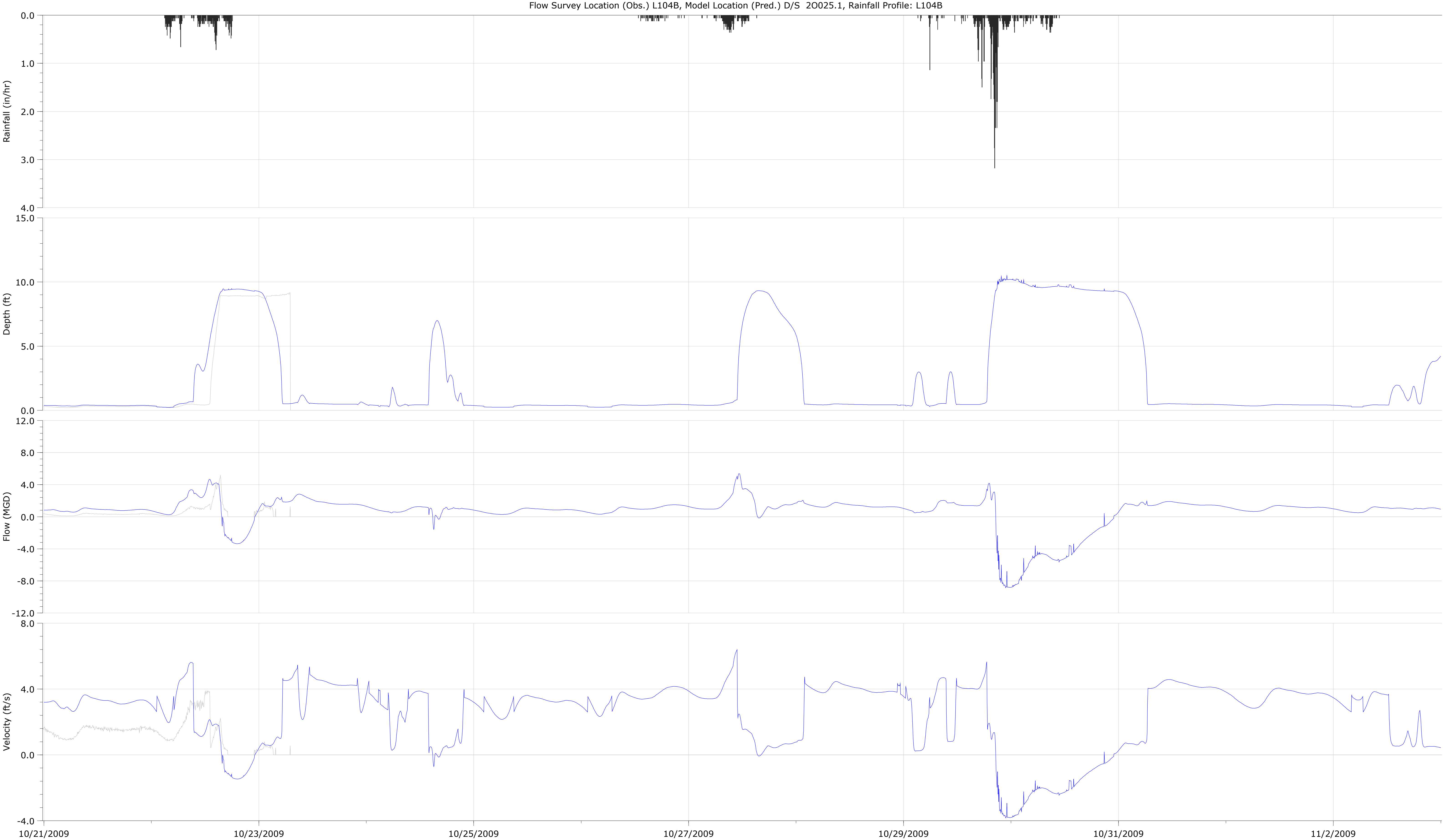
Flow Survey Location (Obs.) L103, Model Location (Pred.) D/S 2O009.1, Rainfall Profile: L103



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.637	3.108	0.031							
Obs.				0.545	9.562	0.508	14.221	45.309	0.082	3.234
...m A20>Final Rain Data 3-10-2010 Fixed				0.594	9.008	-1.880	14.434	47.756	-0.293	3.352

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

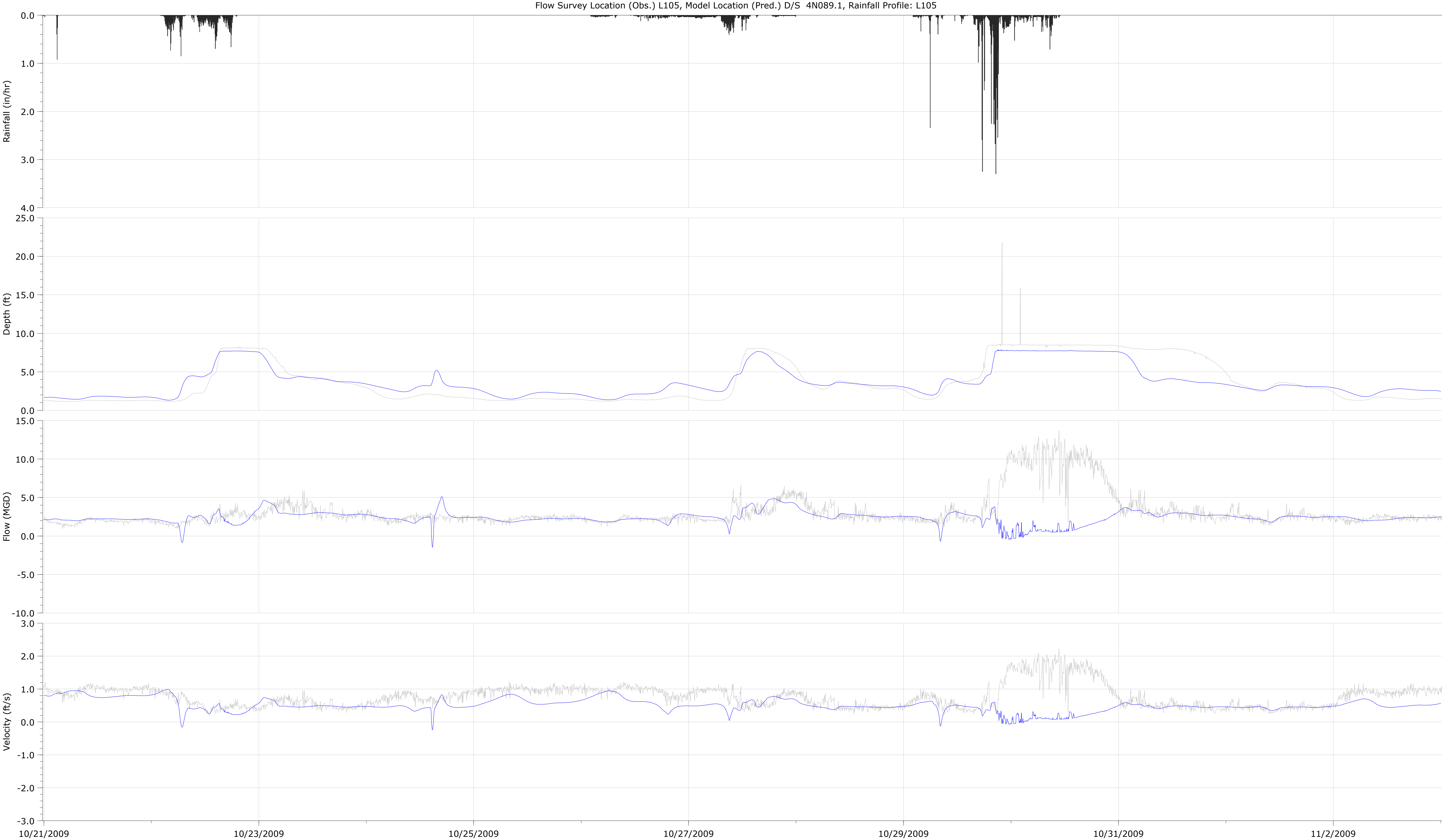
Flow Survey Location (Obs.) L104B, Model Location (Pred.) D/S 2O025.1, Rainfall Profile: L104B



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.080	3.180	0.026							
Obs.				0.000	9.187	0.000	5.141	1.213	0.000	3.892
...m A20>Final Rain Data 3-10-2010 Fixed				0.230	10.490	-8.858	5.384	8.580	-3.829	6.390

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L105, Model Location (Pred.) D/S 4N089.1, Rainfall Profile: L105



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.317	3.300	0.033							
Obs.				1.132	21.826	0.958	13.685	41.133	0.202	2.218
...m A20>Final Rain Data 3-10-2010 Fixed				1.311	7.885	-1.457	5.106	30.843	-0.240	0.990

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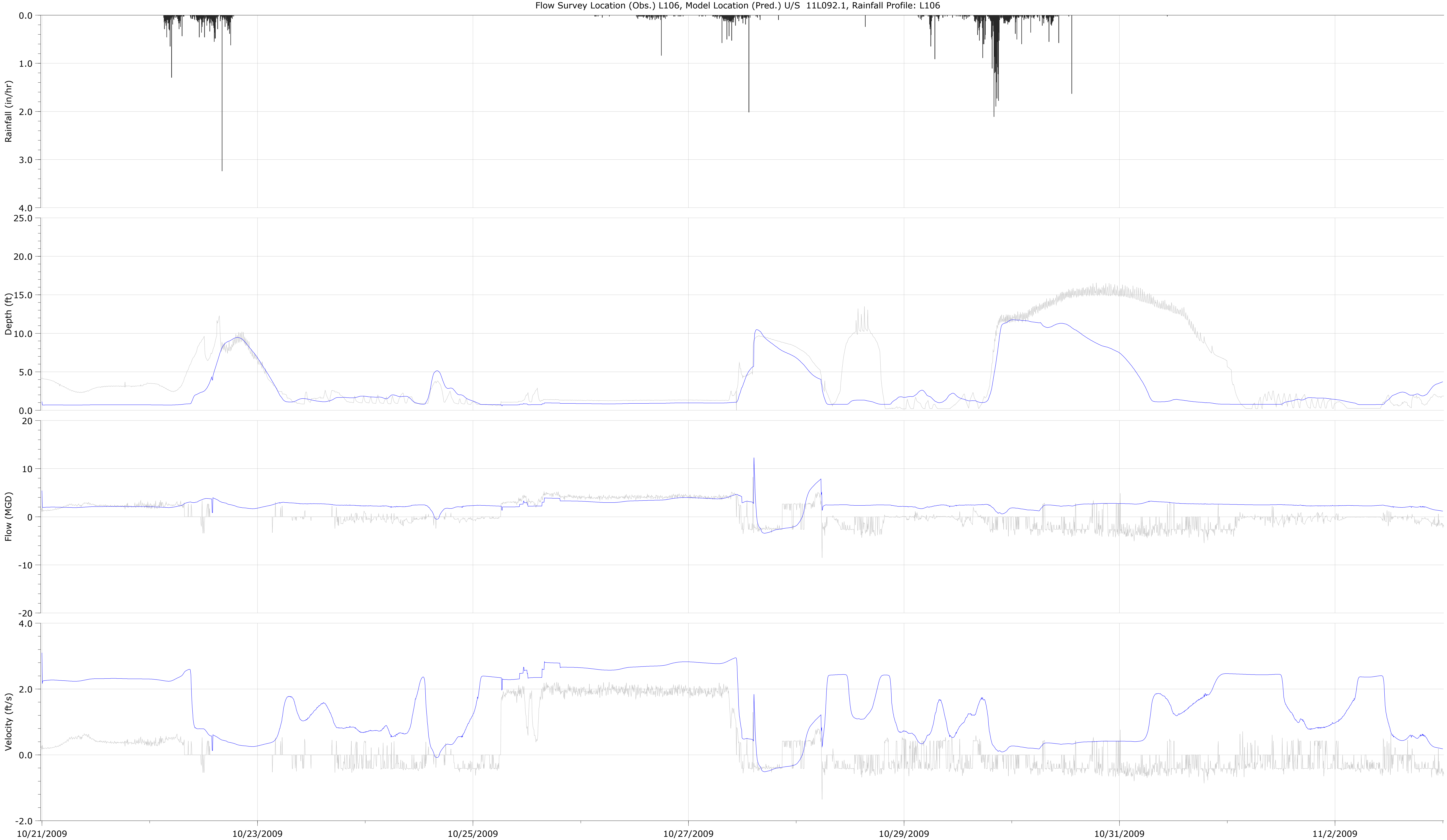
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L106, Model Location (Pred.) U/S 11L092.1, Rainfall Profile: L106



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	6.958	3.240	0.022							
Obs.				0.000	16.562	-8.529	8.245	5.173	-1.353	2.214
...m A20>Final Rain Data 3-10-2010 Fixed				0.584	11.762	-3.450	12.281	30.930	-0.515	3.103

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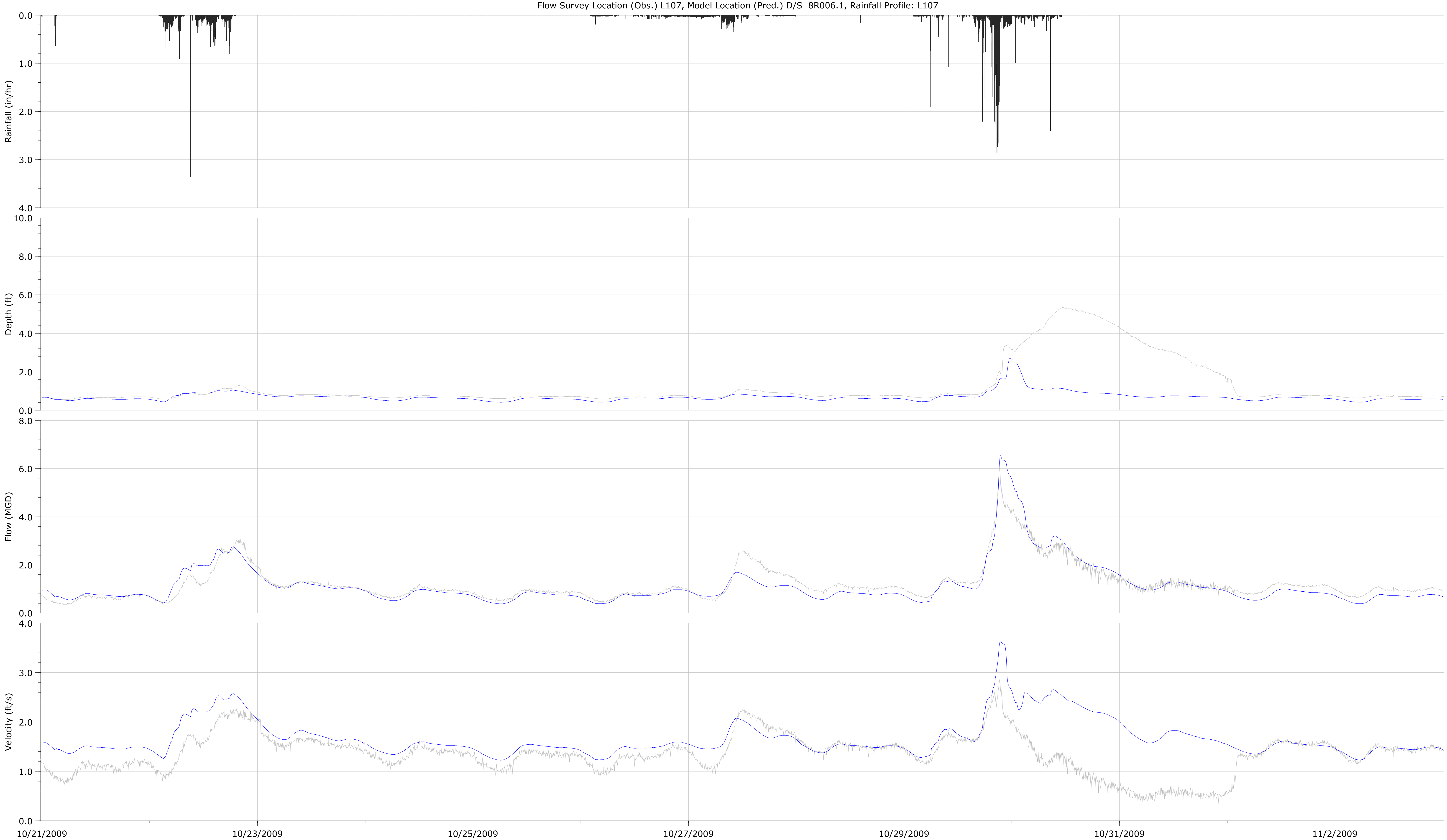
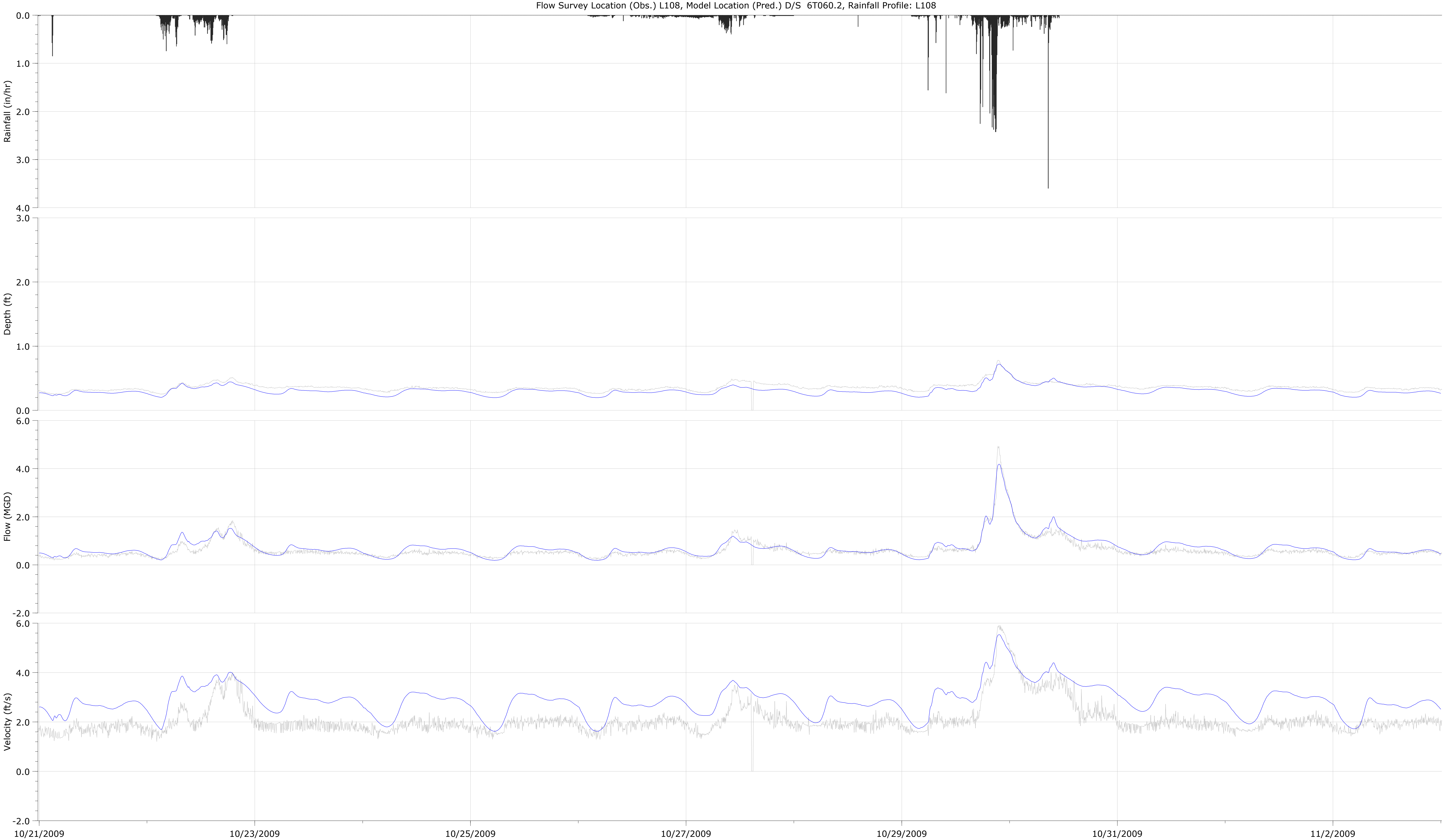
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.141	3.360	0.032							
Obs.				0.558	5.350	0.333	6.021	15.754	0.337	2.857
...m A20>Final Rain Data 3-10-2010 Fixed				0.420	2.693	0.379	6.566	14.787	1.224	3.638

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 53 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

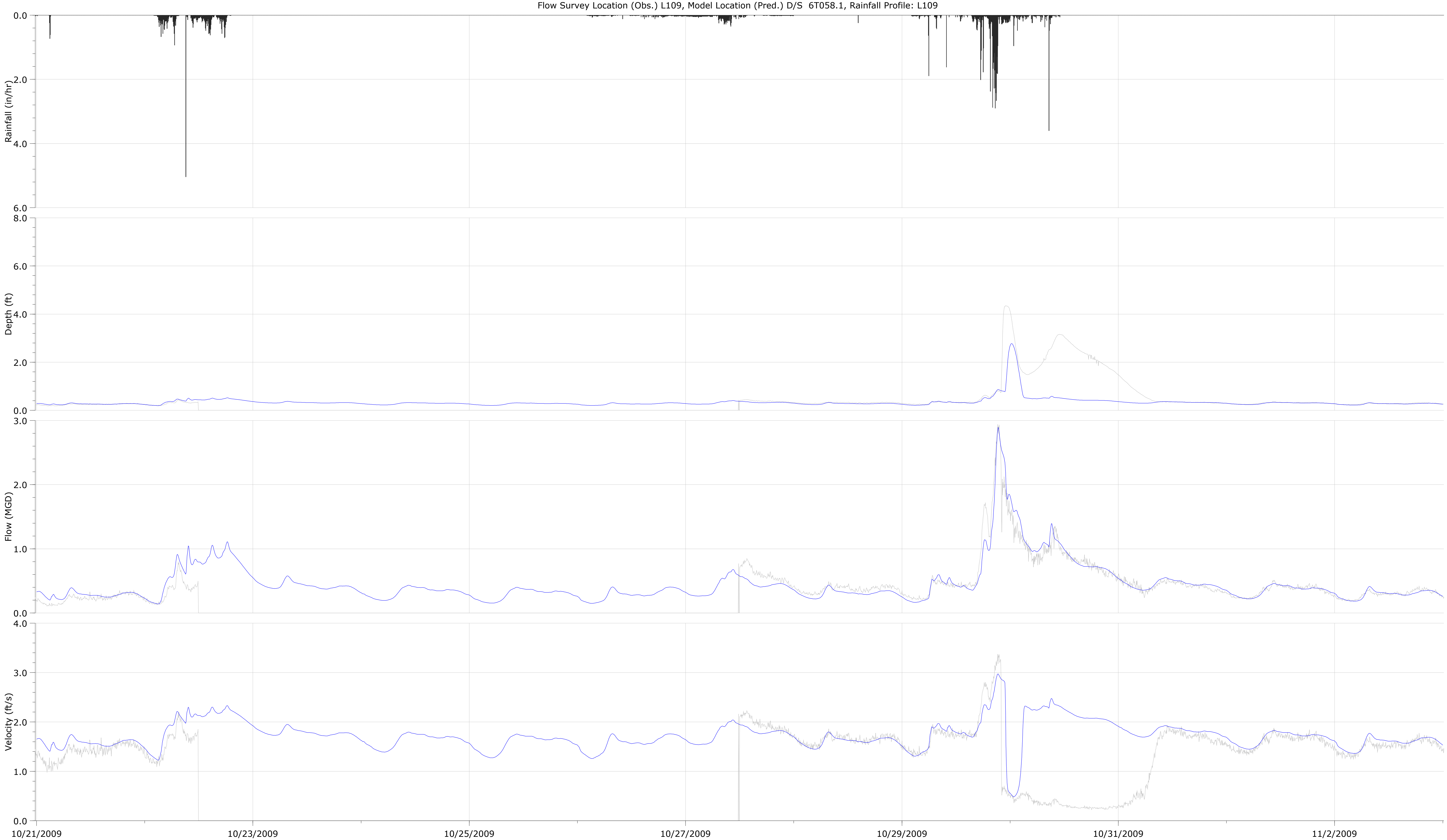
Flow Survey Location (Obs.) L108, Model Location (Pred.) D/S 6T060.2, Rainfall Profile: L108



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.482	3.600	0.034							
Obs.				0.000	0.782	0.000	4.919	8.081	0.000	5.913
...m A20>Final Rain Data 3-10-2010 Fixed				0.197	0.720	0.189	4.184	9.065	1.619	5.532

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 54 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

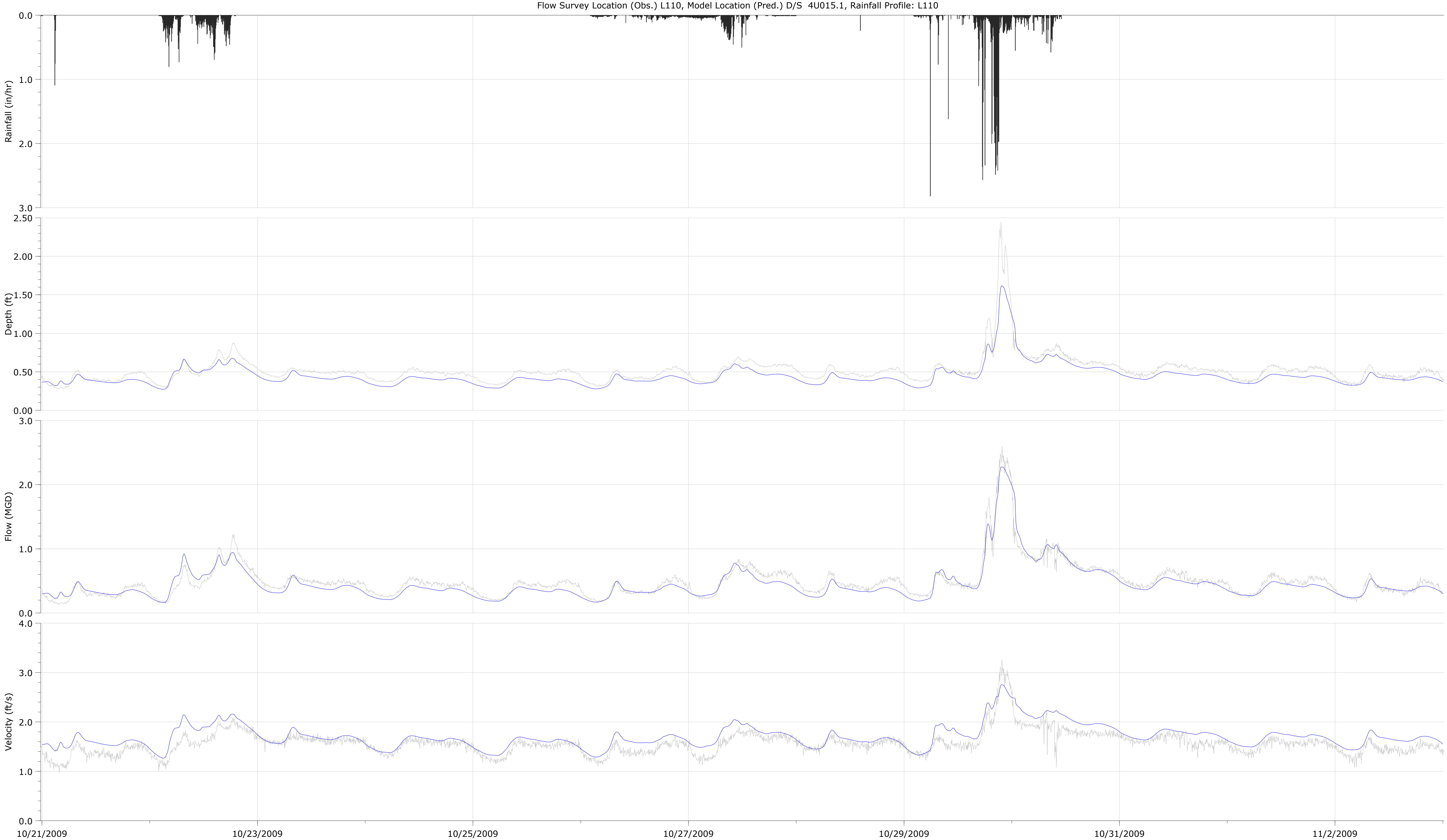
Flow Survey Location (Obs.) L109, Model Location (Pred.) D/S 6T058.1, Rainfall Profile: L109



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.521	5.040	0.034							
Obs.				0.000	4.348	0.000	2.940	3.824	0.000	3.375
...m A20>Final Rain Data 3-10-2010 Fixed				0.194	2.771	0.140	2.890	5.820	0.484	2.972

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 55 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L110, Model Location (Pred.) D/S 4U015.1, Rainfall Profile: L110



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.668	2.820	0.034							
Obs.				0.278	2.446	0.130	2.597	6.436	0.970	3.260
...m A20>Final Rain Data 3-10-2010 Fixed				0.271	1.617	0.161	2.277	5.884	1.266	2.755

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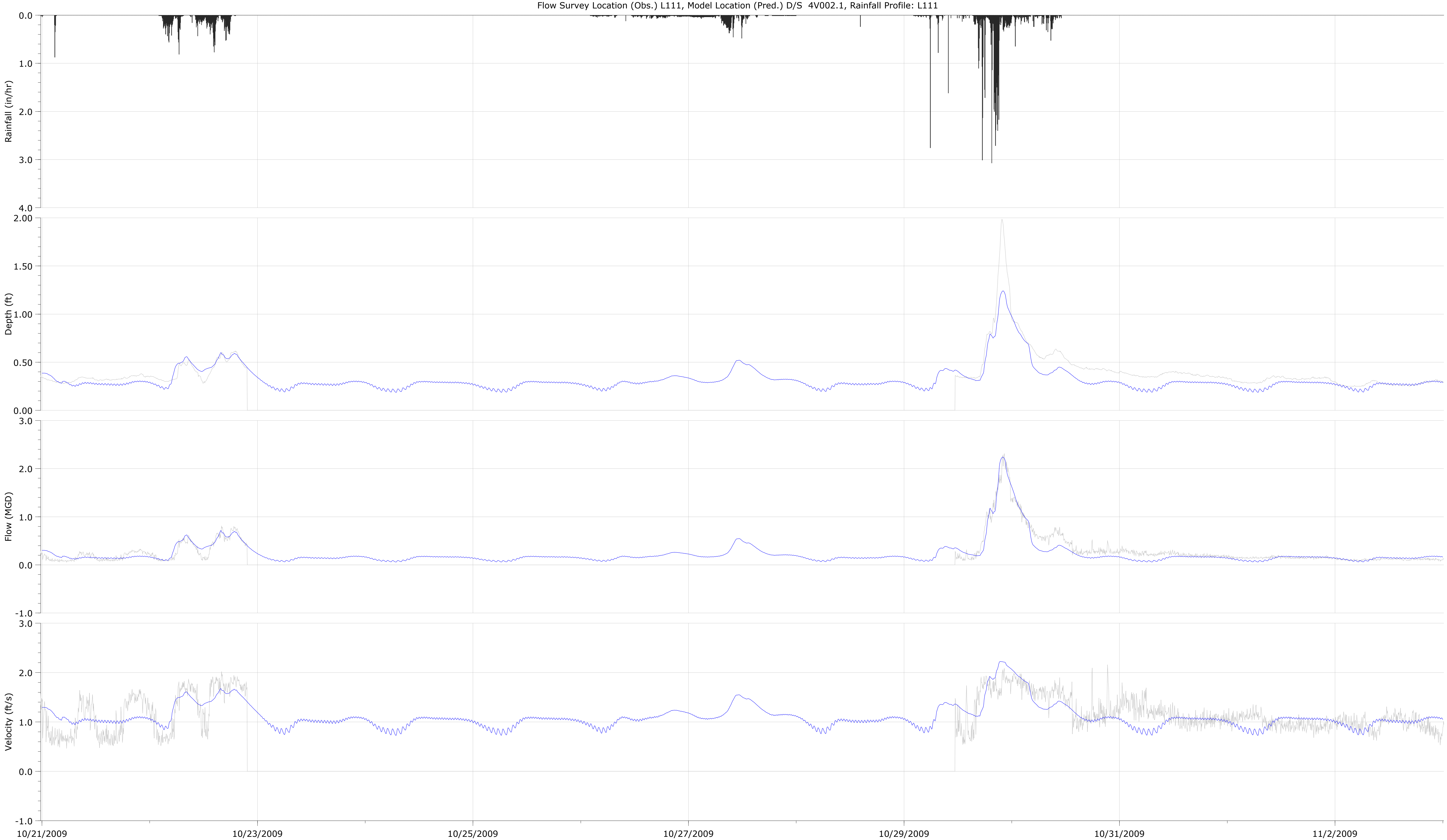
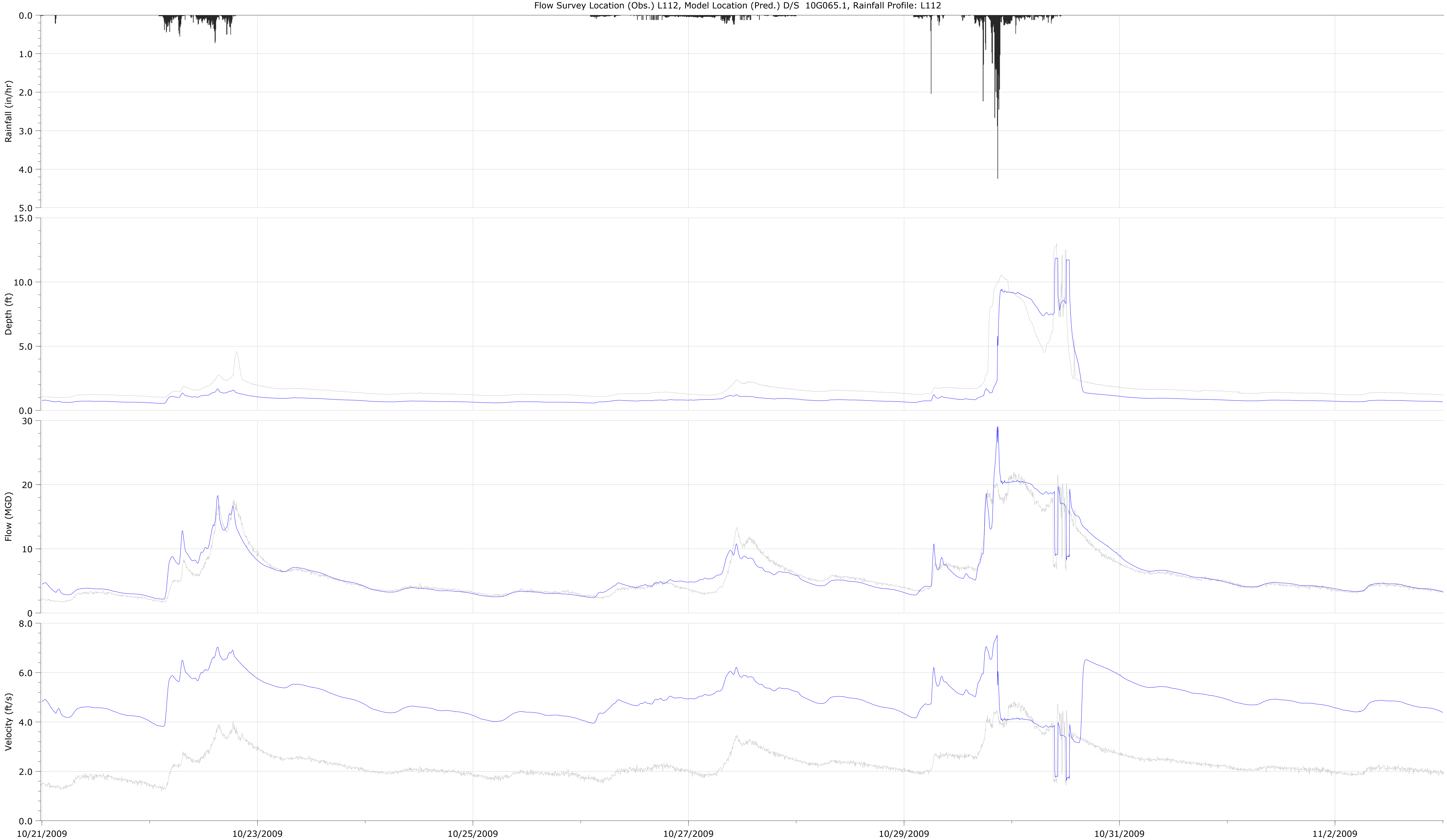
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.509	3.072	0.034							
Obs.				0.000	1.984	0.000	2.313	1.988	0.000	2.160
...m A20>Final Rain Data 3-10-2010 Fixed				0.186	1.241	0.059	2.239	2.922	0.726	2.223

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 57 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L112, Model Location (Pred.) D/S 10G065.1, Rainfall Profile: L112



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.973	4.248	0.029							
Obs.				0.996	13.028	1.598	21.850	77.554	1.187	4.816
...m A20>Final Rain Data 3-10-2010 Fixed				0.543	11.870	2.147	29.069	80.151	1.625	7.505

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 58 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L113, Model Location (Pred.) D/S -7-A004.1, Rainfall Profile: L113

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	6.460	1.380	0.021							
Obs.				0.317	2.043	0.320	5.299	16.920	1.822	5.189
...m A20>Final Rain Data 3-10-2010 Fixed				0.243	0.946	0.258	3.855	16.924	2.144	5.079

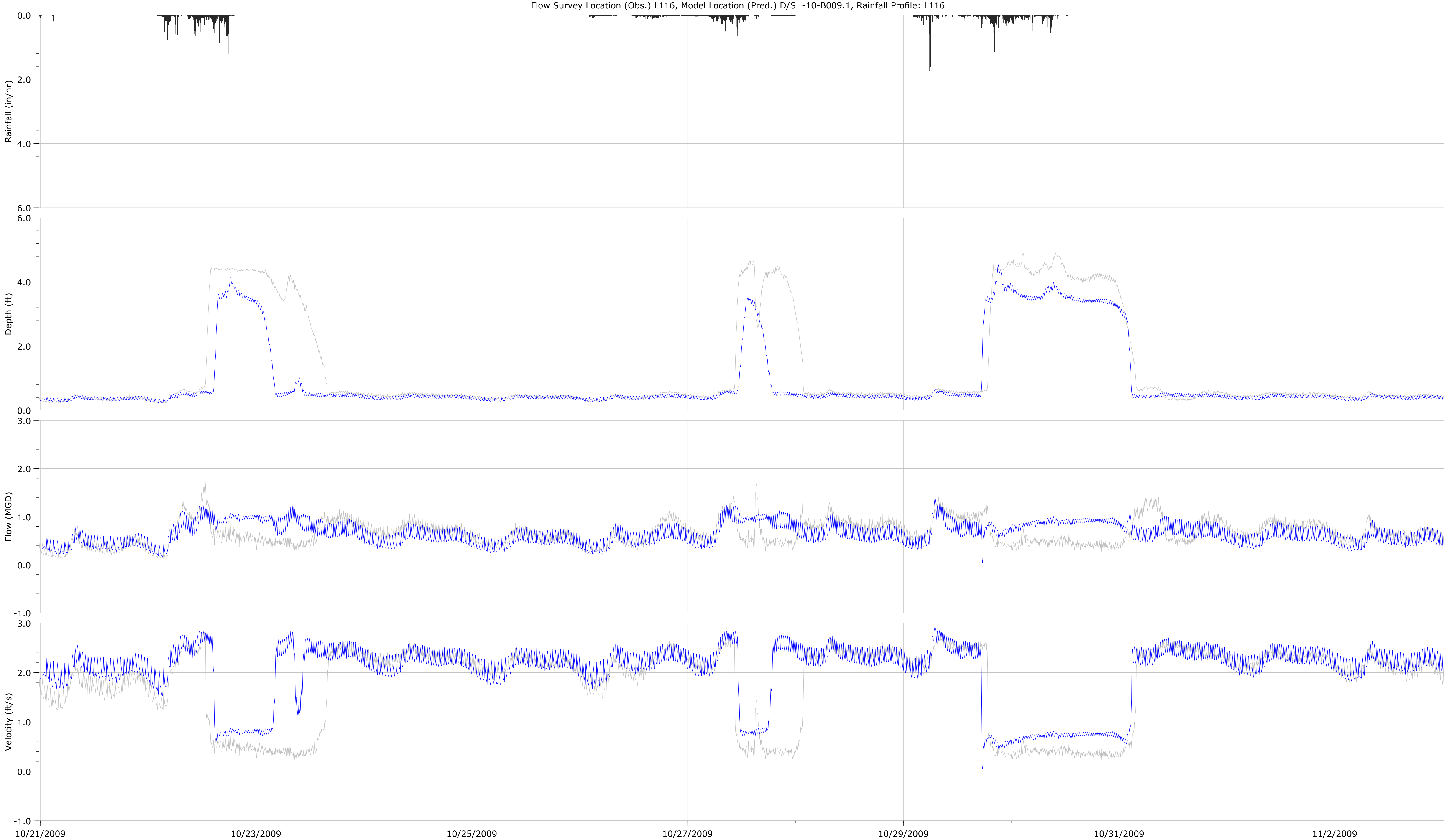
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L114, Model Location (Pred.) D/S -8-A001.1, Rainfall Profile: L114

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	6.804	1.680	0.022							
Obs.				0.352	9.128	0.516	14.156	50.740	2.209	8.977
...m A20>Final Rain Data 3-10-2010 Fixed				0.405	8.034	0.816	6.643	31.261	2.171	4.978

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 60 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

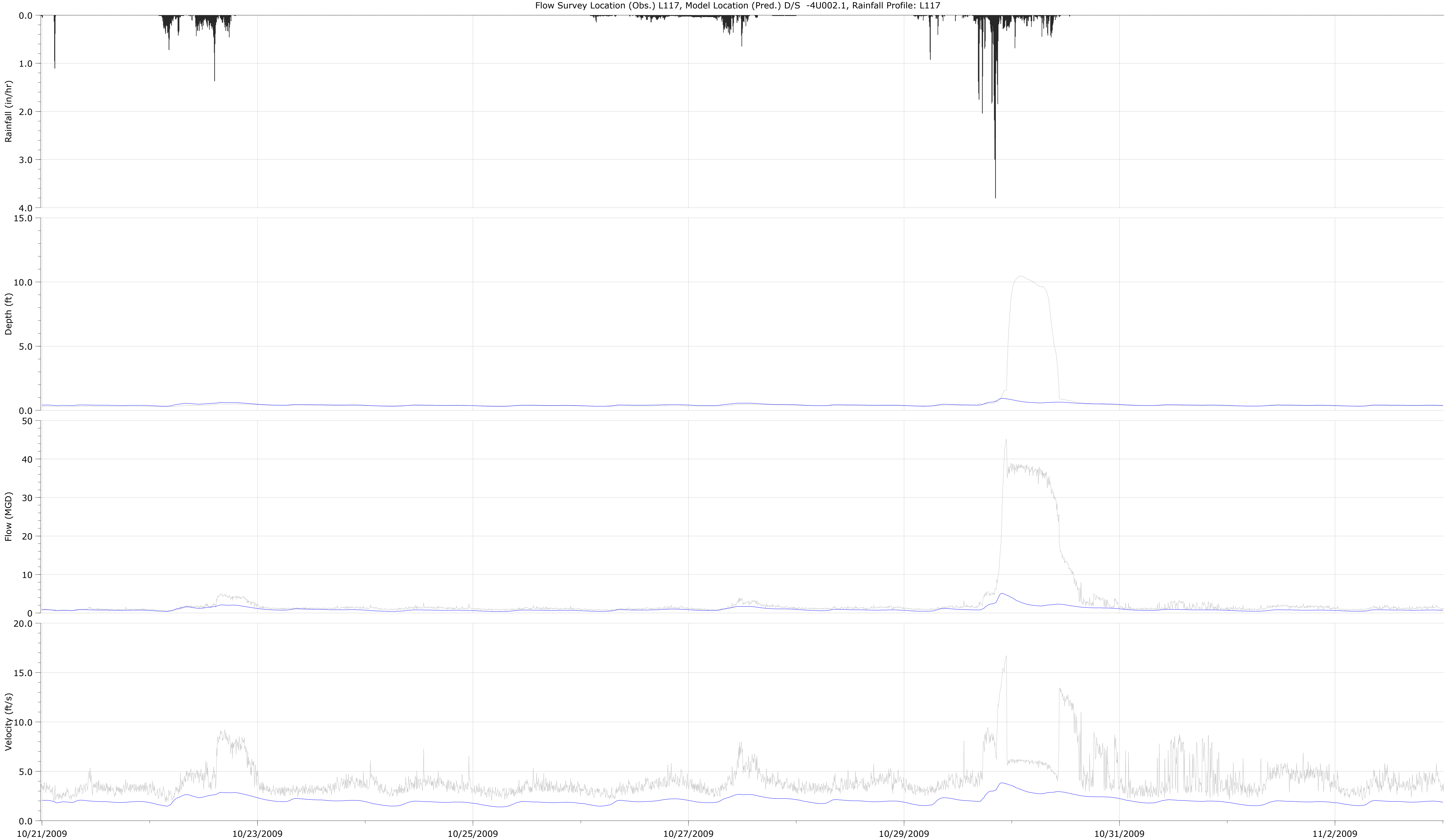
Flow Survey Location (Obs.) L116, Model Location (Pred.) D/S -10-B009.1, Rainfall Profile: L116



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.489	1.740	0.024							
Obs.				0.223	4.942	0.134	1.776	8.645	0.247	2.860
...m A20>Final Rain Data 3-10-2010 Fixed				0.233	4.562	0.049	1.376	8.573	0.041	2.922

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L117, Model Location (Pred.) D/S -4U002.1, Rainfall Profile: L117



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.789	3.804	0.031							
Obs.				0.269	10.478	0.417	45.148	39.447	1.880	16.700
...m A20>Final Rain Data 3-10-2010 Fixed				0.305	0.932	0.369	5.094	12.340	1.393	3.834

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L118, Model Location (Pred.) D/S -1R001.1, Rainfall Profile: L118

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	10.324	4.416	0.033							
Obs.				0.197	9.997	0.047	5.099	7.059	0.417	4.220
...m A20>Final Rain Data 3-10-2010 Fixed				0.218	1.053	0.162	4.224	7.155	1.354	3.902

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L119, Model Location (Pred.) D/S -3R034.1, Rainfall Profile: L119

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	9.367	3.060	0.030							
Obs.				0.000	10.268	0.000	1.092	3.084	0.000	3.780
...m A20>Final Rain Data 3-10-2010 Fixed				0.197	0.553	0.139	1.084	4.564	1.970	3.765

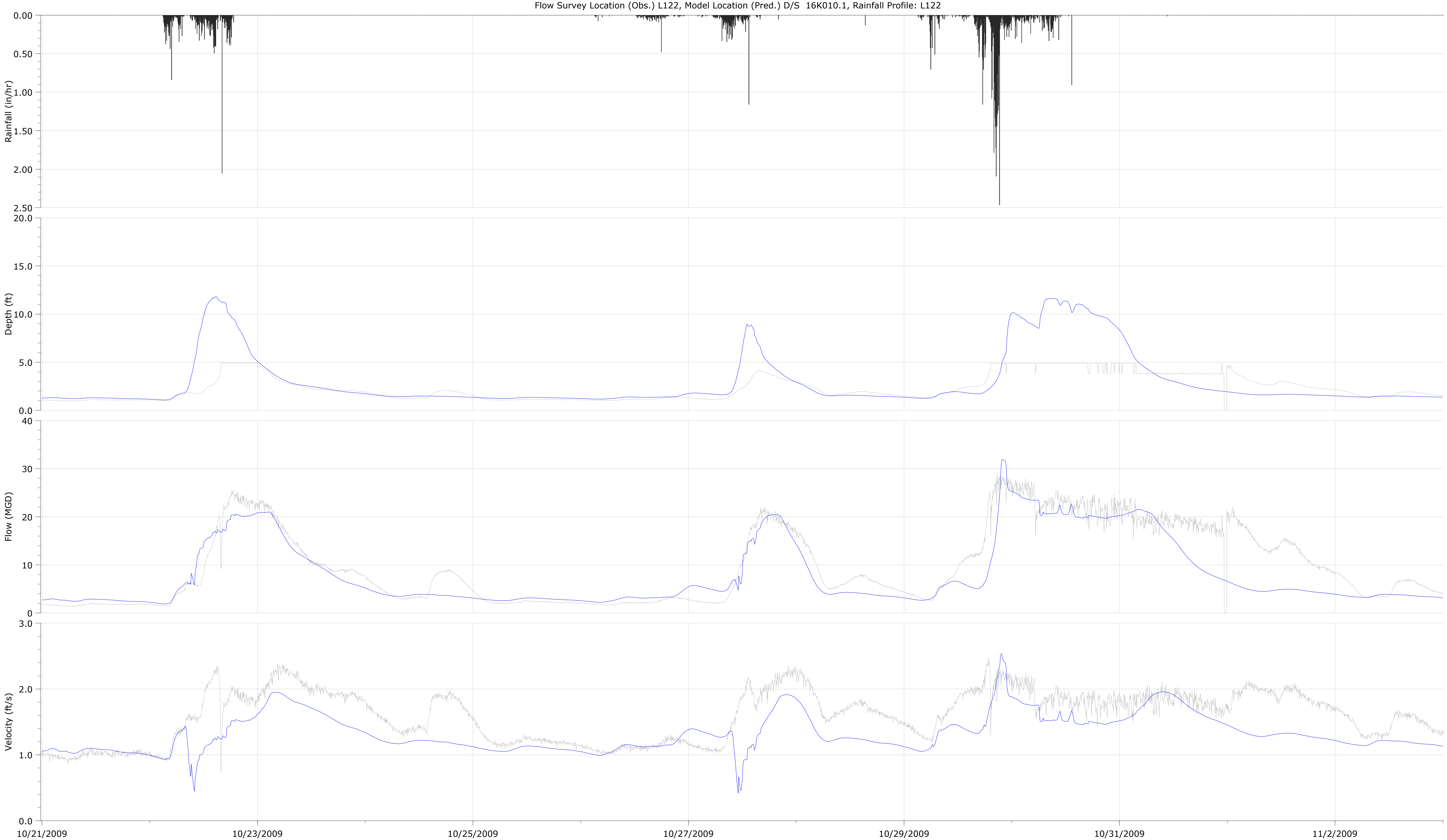
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L120, Model Location (Pred.) D/S -4T013.1, Rainfall Profile: L120

		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		9.334	2.796	0.030							
Obs.					0.000	10.683	0.000	3.284	9.295	0.000	4.840
...m A20>Final Rain Data 3-10-2010 Fixed					0.222	0.714	0.221	2.778	10.158	1.799	4.267

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 65 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

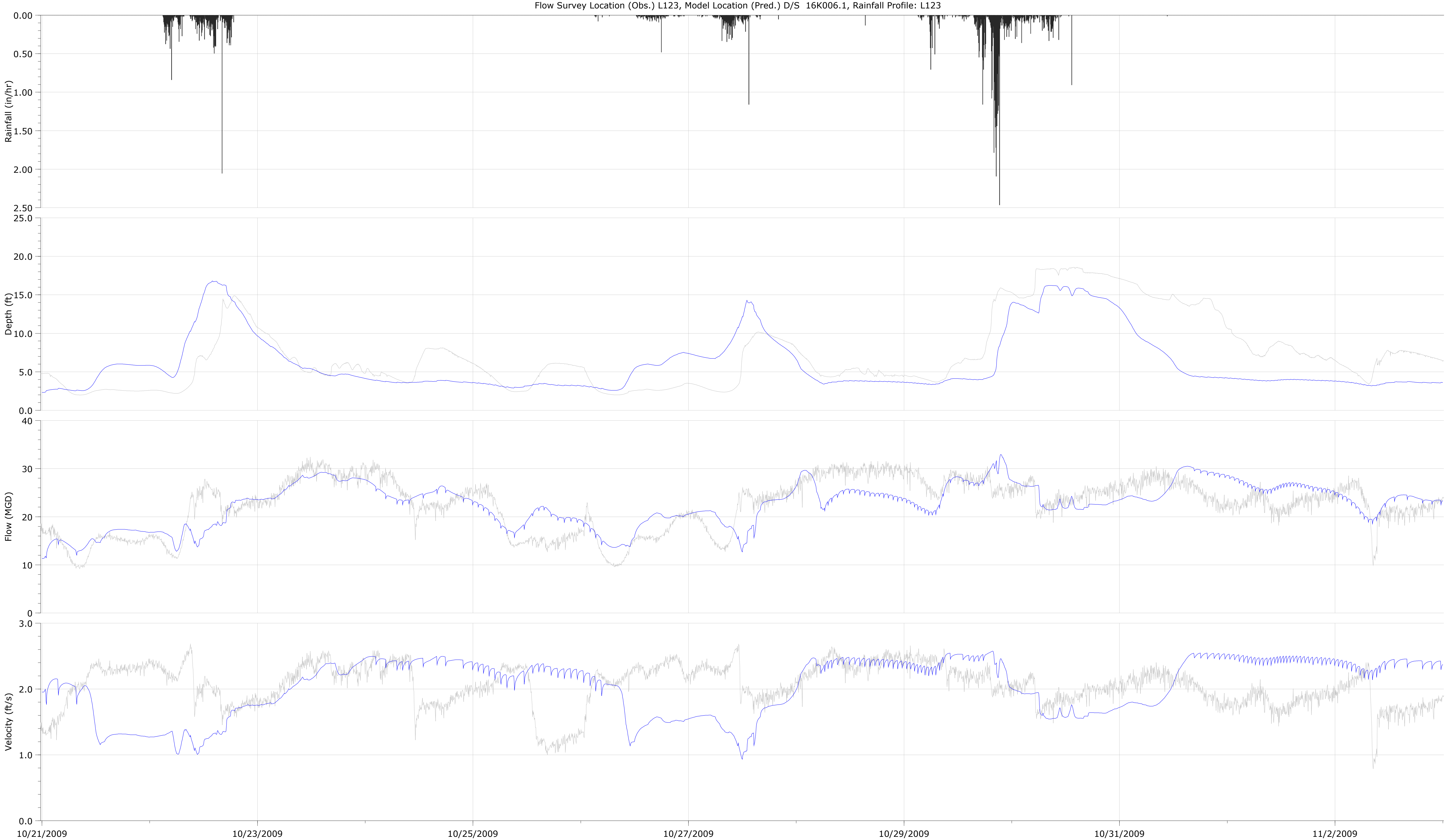
Flow Survey Location (Obs.) L122, Model Location (Pred.) D/S 16K010.1, Rainfall Profile: L122



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.355	2.467	0.024							
Obs.				0.000	4.916	0.000	28.920	127.582	0.742	2.475
...m A20>Final Rain Data 3-10-2010 Fixed				1.072	11.820	1.856	31.903	105.336	0.423	2.537

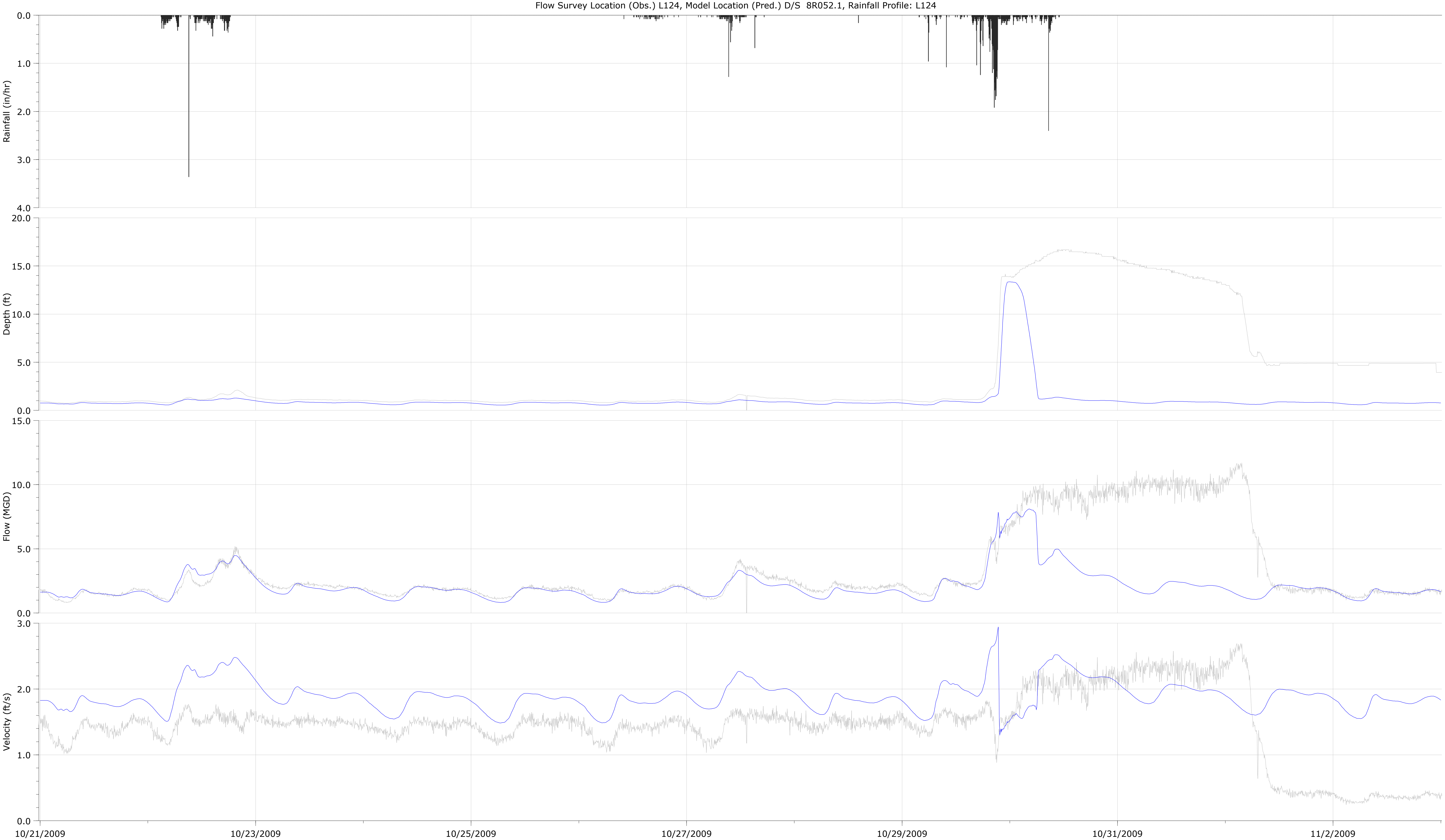
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L123, Model Location (Pred.) D/S 16K006.1, Rainfall Profile: L123



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	7.355	2.467	0.024							
Obs.				1.992	18.579	9.198	32.429	294.019	0.789	2.679
...m A20>Final Rain Data 3-10-2010 Fixed				2.332	16.801	11.337	32.934	294.572	0.934	2.576

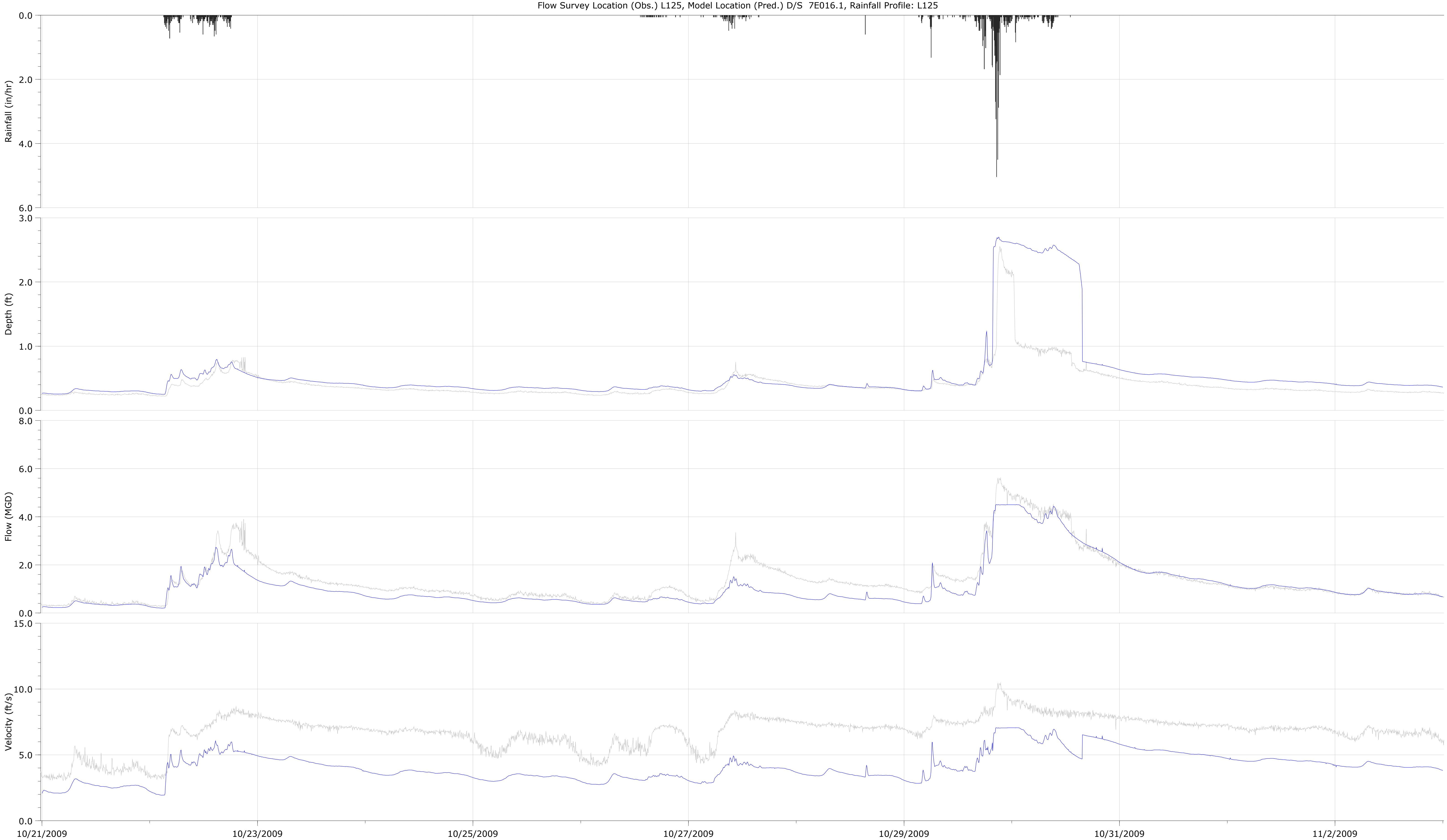
Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 67 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	6.353	3.360	0.020							
Obs.				0.000	16.690	0.000	11.656	43.489	0.244	2.688
...m A20>Final Rain Data 3-10-2010 Fixed				0.541	13.348	0.819	8.106	27.285	1.306	2.941

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L125, Model Location (Pred.) D/S 7E016.1, Rainfall Profile: L125



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.055	5.040	0.026							
Obs.				0.219	2.553	0.269	5.609	17.853	3.050	10.450
...m A20>Final Rain Data 3-10-2010 Fixed				0.250	2.699	0.202	4.507	14.396	1.938	7.060

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:43:17 AM) Page 69 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm A20>Final Rain Data 3-10-2010 Fixed (10/5/2010 7:28:36 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L126, Model Location (Pred.) D/S 8E091.1, Rainfall Profile: L126

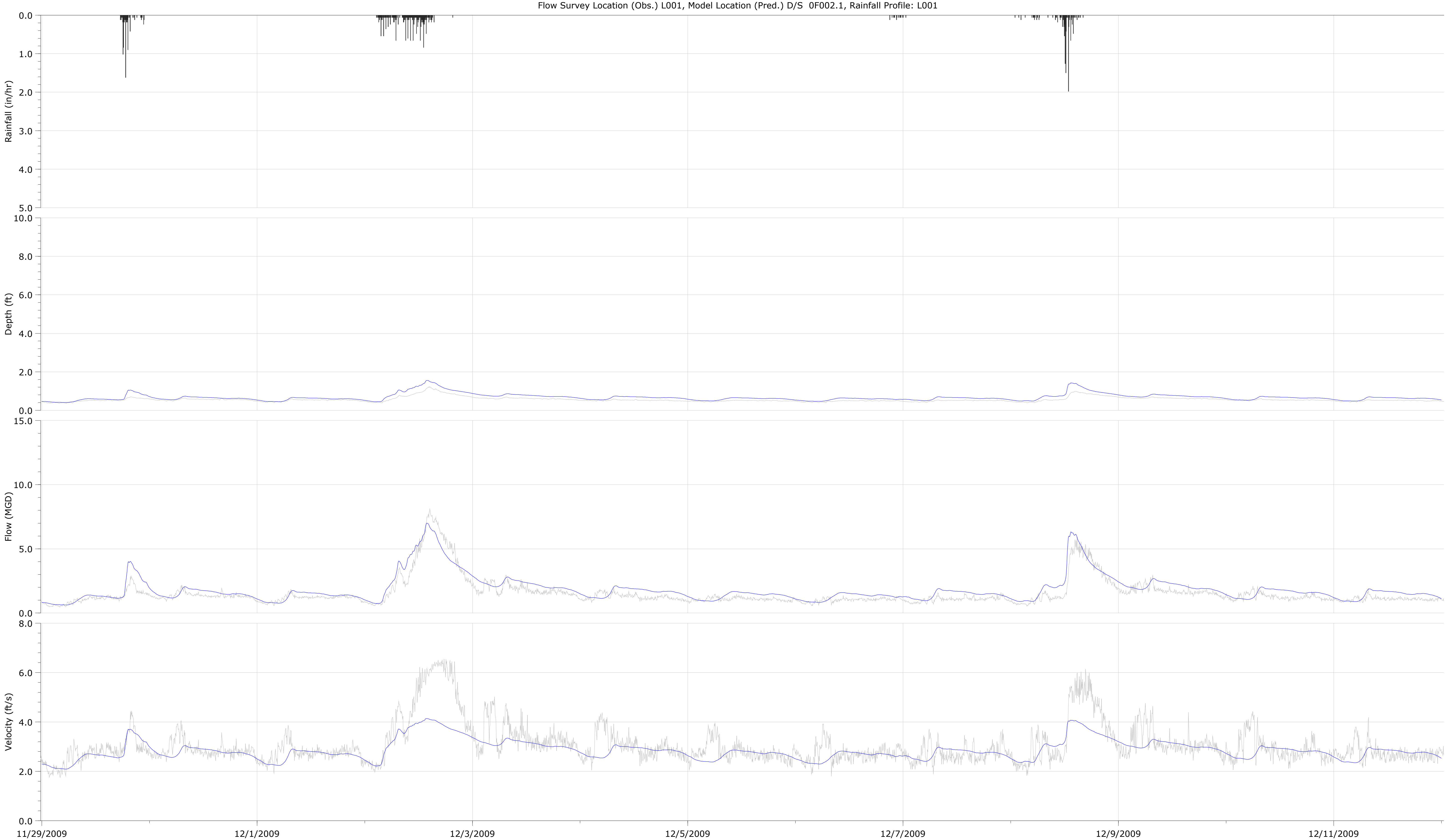
	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	8.055	5.040	0.026							
Obs.				0.200	0.544	0.304	3.961	12.580	3.085	10.747
...m A20>Final Rain Data 3-10-2010 Fixed				0.206	0.618	0.216	3.624	10.935	2.282	8.163

APPENDIX B

MODEL CALIBRATION GRAPHS
WET WEATHER B

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

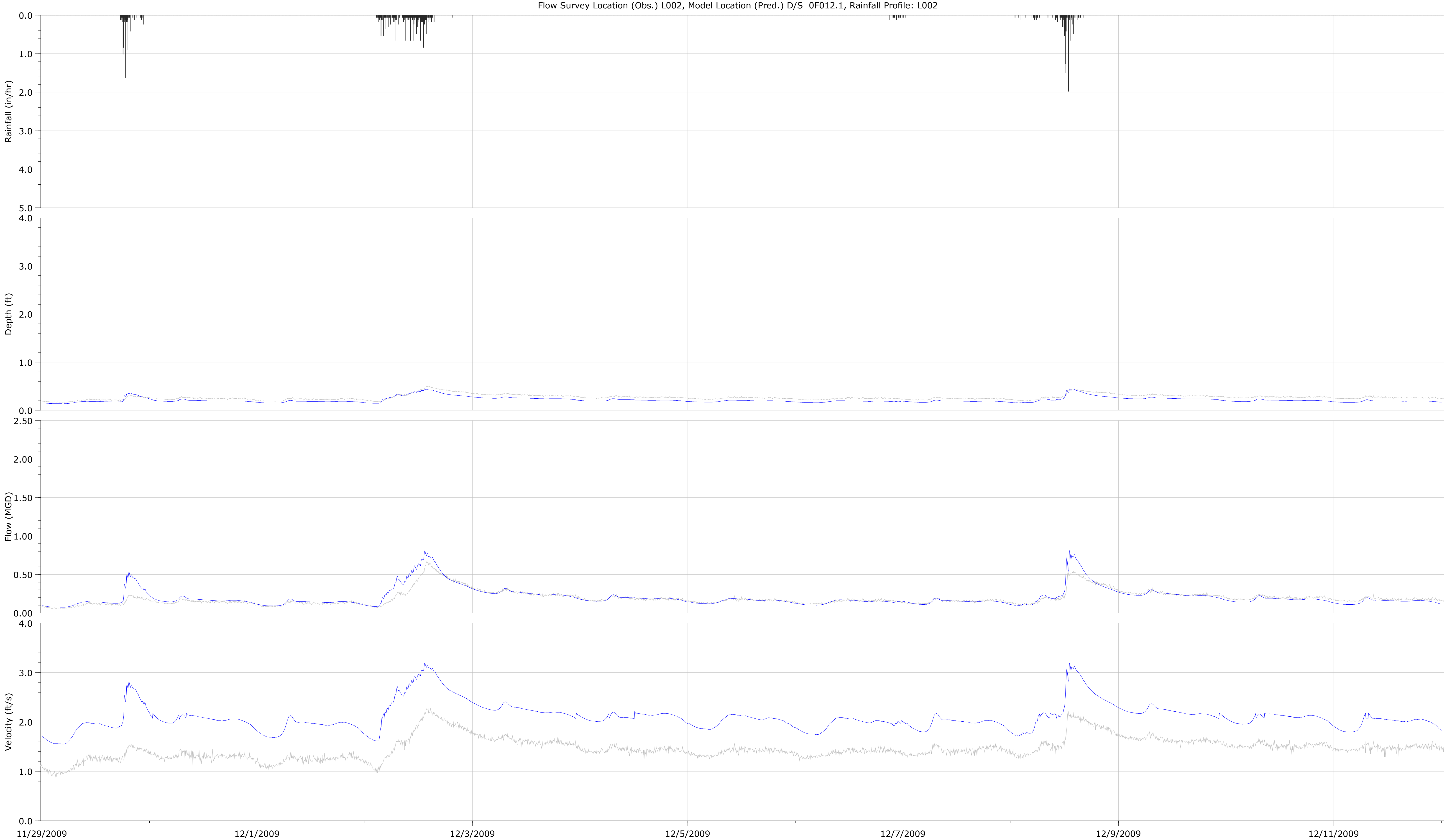
Flow Survey Location (Obs.) L001, Model Location (Pred.) D/S 0F002.1, Rainfall Profile: L001



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.275	1.980	0.010							
Obs.				0.361	1.230	0.457	8.113	19.875	1.750	6.550
...m B20>Final Rain Data 3-10-2010 Fixed				0.407	1.554	0.621	7.000	23.579	2.091	4.136

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 2 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

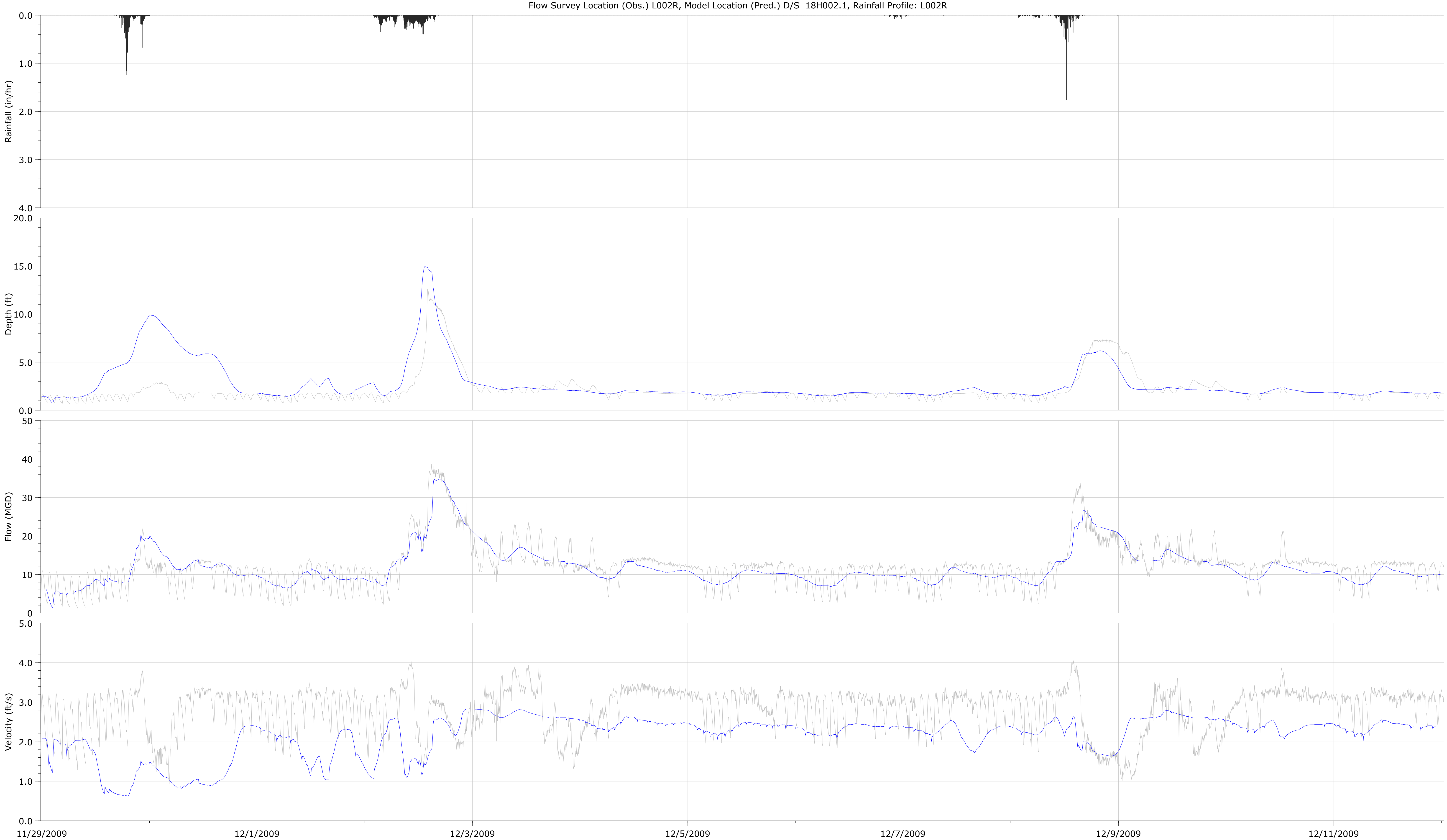
Flow Survey Location (Obs.) L002, Model Location (Pred.) D/S 0F012.1, Rainfall Profile: L002



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.275	1.980	0.010							
Obs.				0.168	0.507	0.057	0.673	2.509	0.875	2.278
...m B20>Final Rain Data 3-10-2010 Fixed				0.138	0.447	0.073	0.814	2.635	1.548	3.196

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 3 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

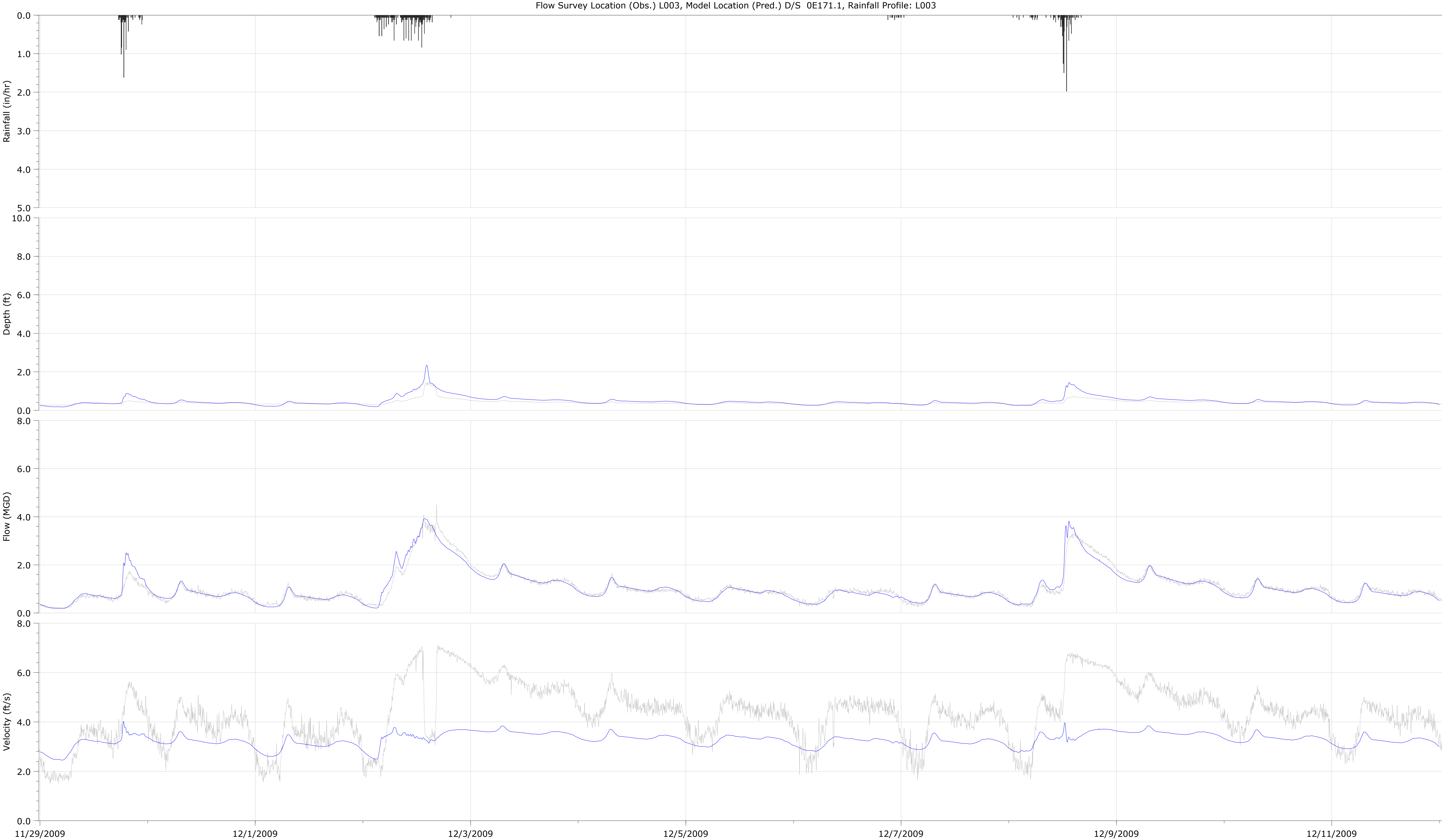
Flow Survey Location (Obs.) L002R, Model Location (Pred.) D/S 18H002.1, Rainfall Profile: L002R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.548	1.764	0.011							
Obs.				0.641	12.613	1.266	38.719	160.031	0.929	4.093
...m B20>Final Rain Data 3-10-2010 Fixed				0.739	14.993	1.448	34.778	154.278	0.631	2.826

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 4 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

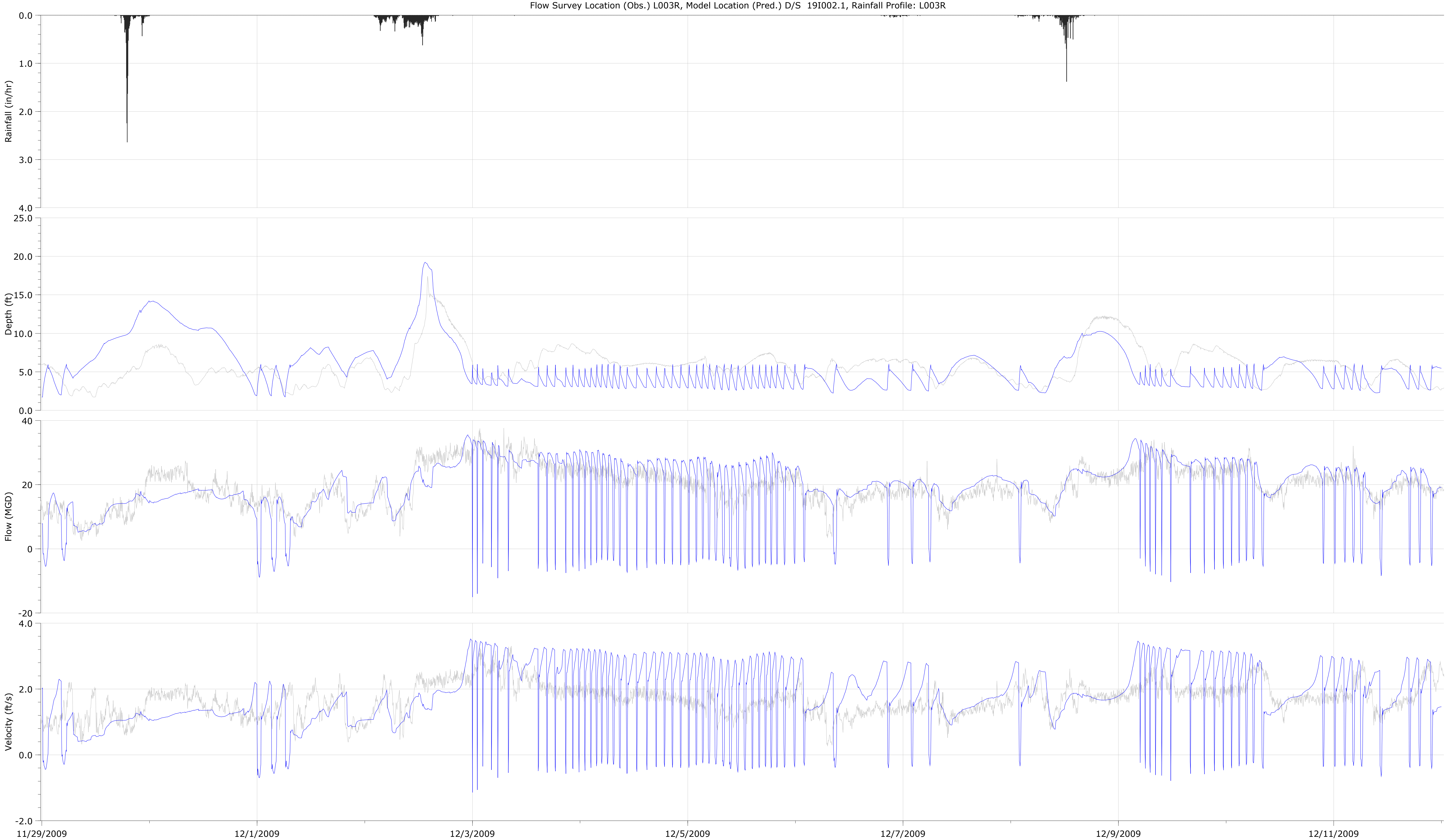
Flow Survey Location (Obs.) L003, Model Location (Pred.) D/S 0E171.1, Rainfall Profile: L003



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.275	1.980	0.010							
Obs.				0.262	1.422	0.189	4.495	13.683	1.499	7.120
...m B20>Final Rain Data 3-10-2010 Fixed				0.176	2.350	0.185	3.918	13.546	2.455	4.017

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 5 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

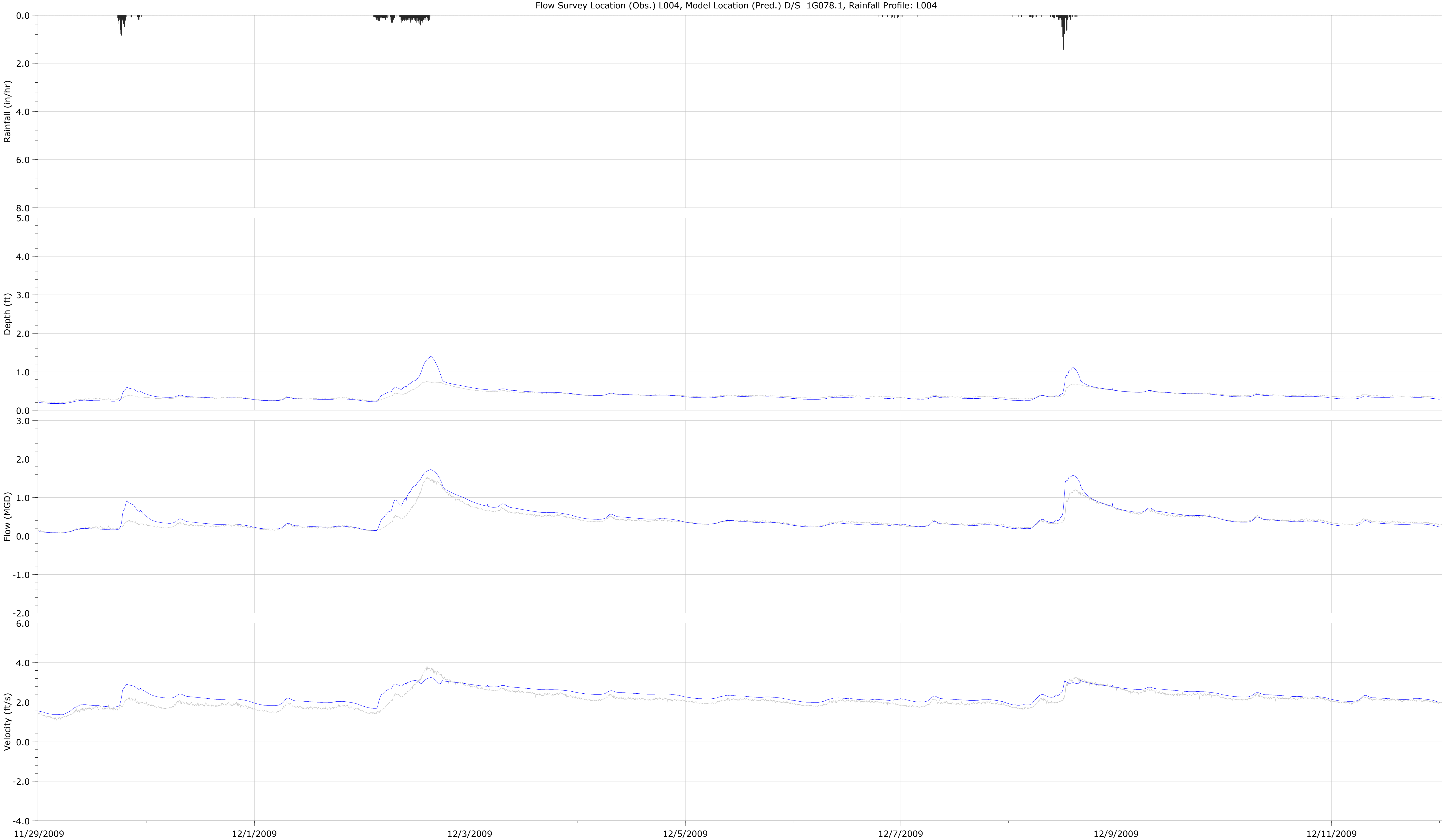
Flow Survey Location (Obs.) L003R, Model Location (Pred.) D/S 19I002.1, Rainfall Profile: L003R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.986	2.640	0.013							
Obs.				1.721	17.403	2.548	37.657	255.354	0.281	3.305
...m B20>Final Rain Data 3-10-2010 Fixed				1.719	19.229	-15.043	35.515	248.150	-1.140	3.521

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 6 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

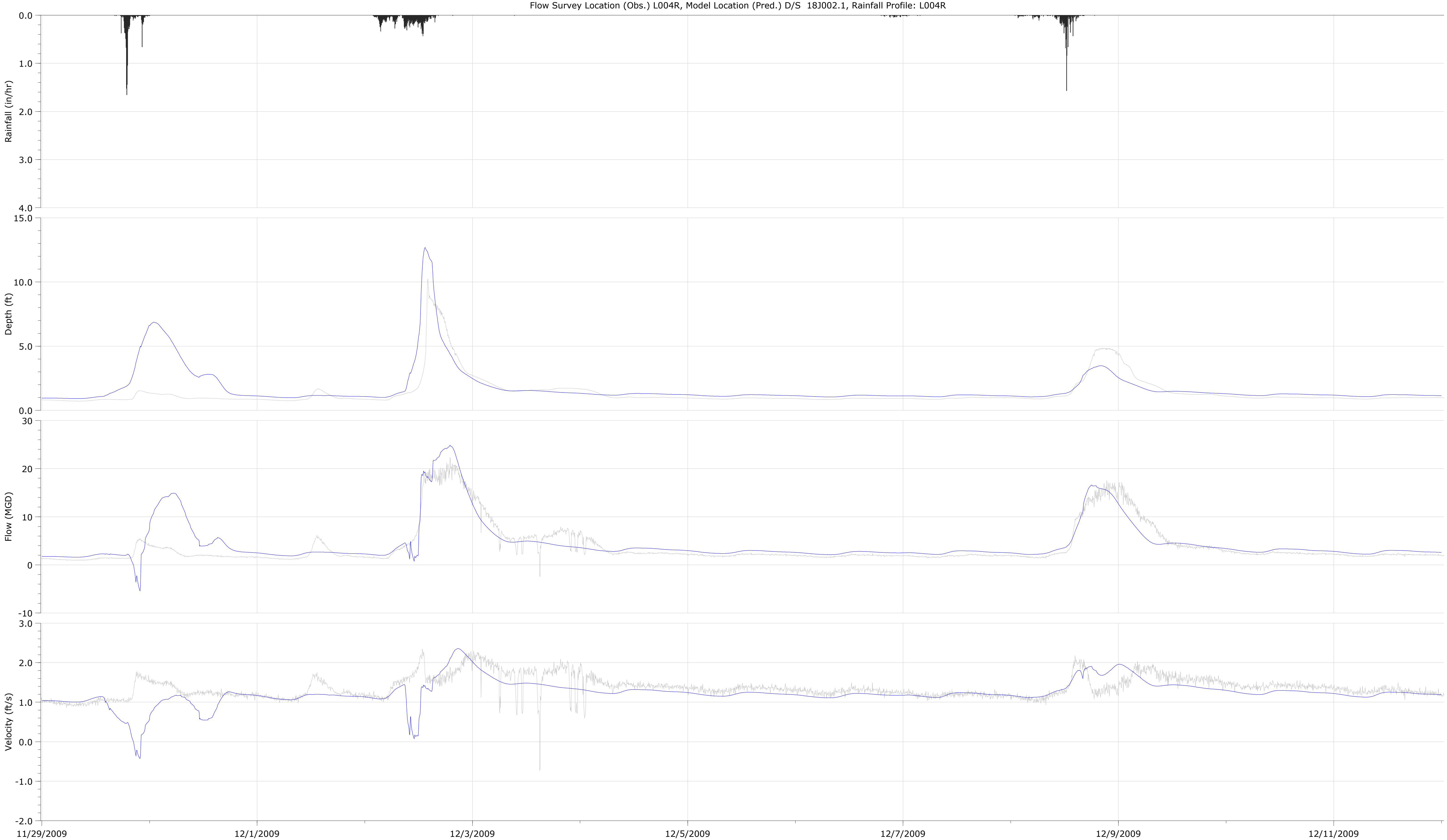
Flow Survey Location (Obs.) L004, Model Location (Pred.) D/S 1G078.1, Rainfall Profile: L004



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		3.715	1.440	0.012							
Obs.					0.193	0.751	0.075	1.537	5.334	1.085	3.811
...m B20>Final Rain Data 3-10-2010 Fixed					0.175	1.399	0.081	1.723	5.853	1.367	3.249

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 7 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

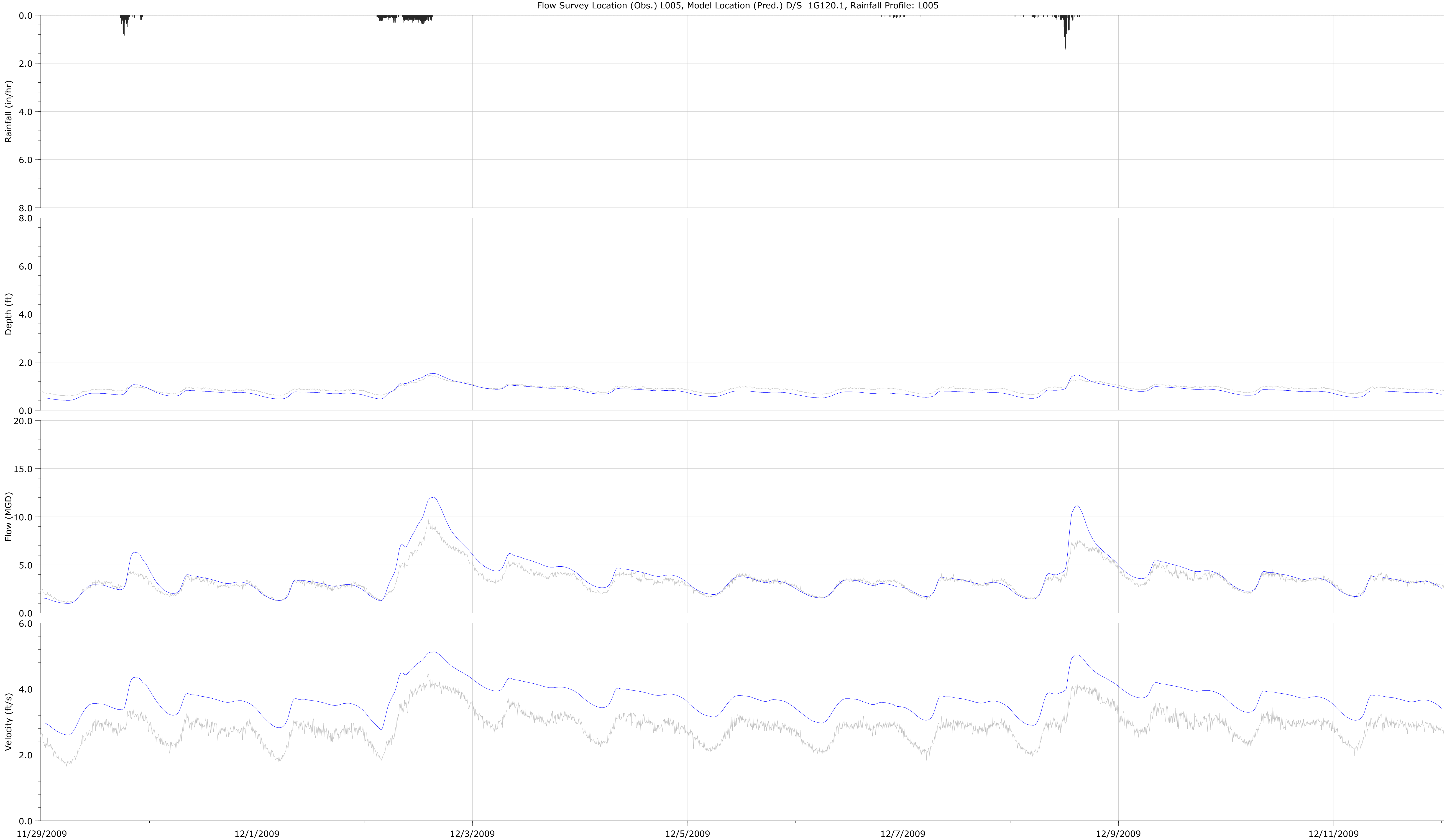
Flow Survey Location (Obs.) L004R, Model Location (Pred.) D/S 18J002.1, Rainfall Profile: L004R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.729	1.656	0.012							
Obs.				0.718	10.227	-2.418	22.326	50.042	-0.722	2.346
...m B20>Final Rain Data 3-10-2010 Fixed				0.914	12.684	-5.384	24.842	57.415	-0.424	2.357

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 8 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

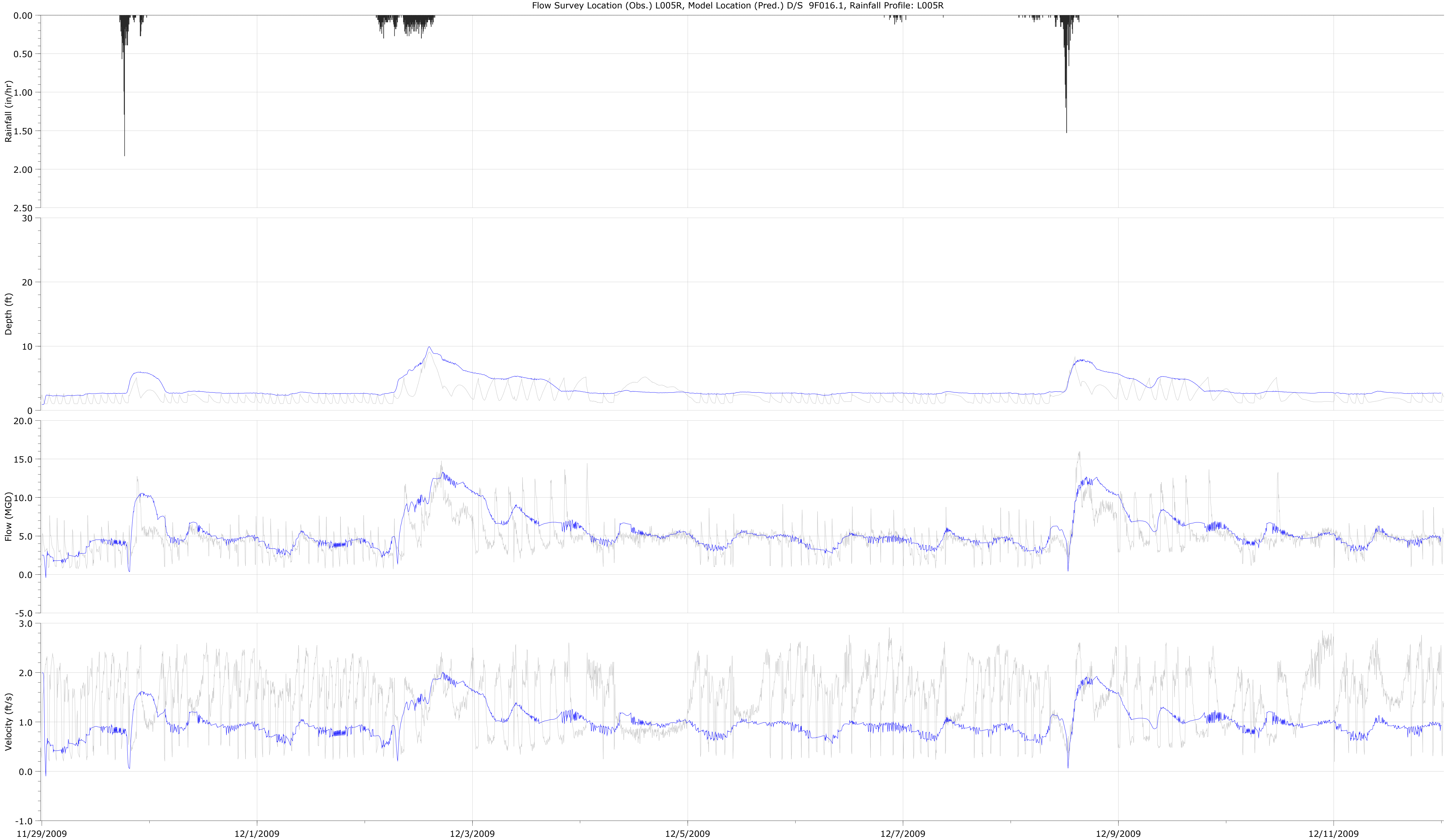
Flow Survey Location (Obs.) L005, Model Location (Pred.) D/S 1G120.1, Rainfall Profile: L005



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.715	1.440	0.012							
Obs.				0.601	1.467	1.091	9.814	43.848	1.670	4.480
...m B20>Final Rain Data 3-10-2010 Fixed				0.413	1.532	0.988	12.031	48.640	2.603	5.130

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

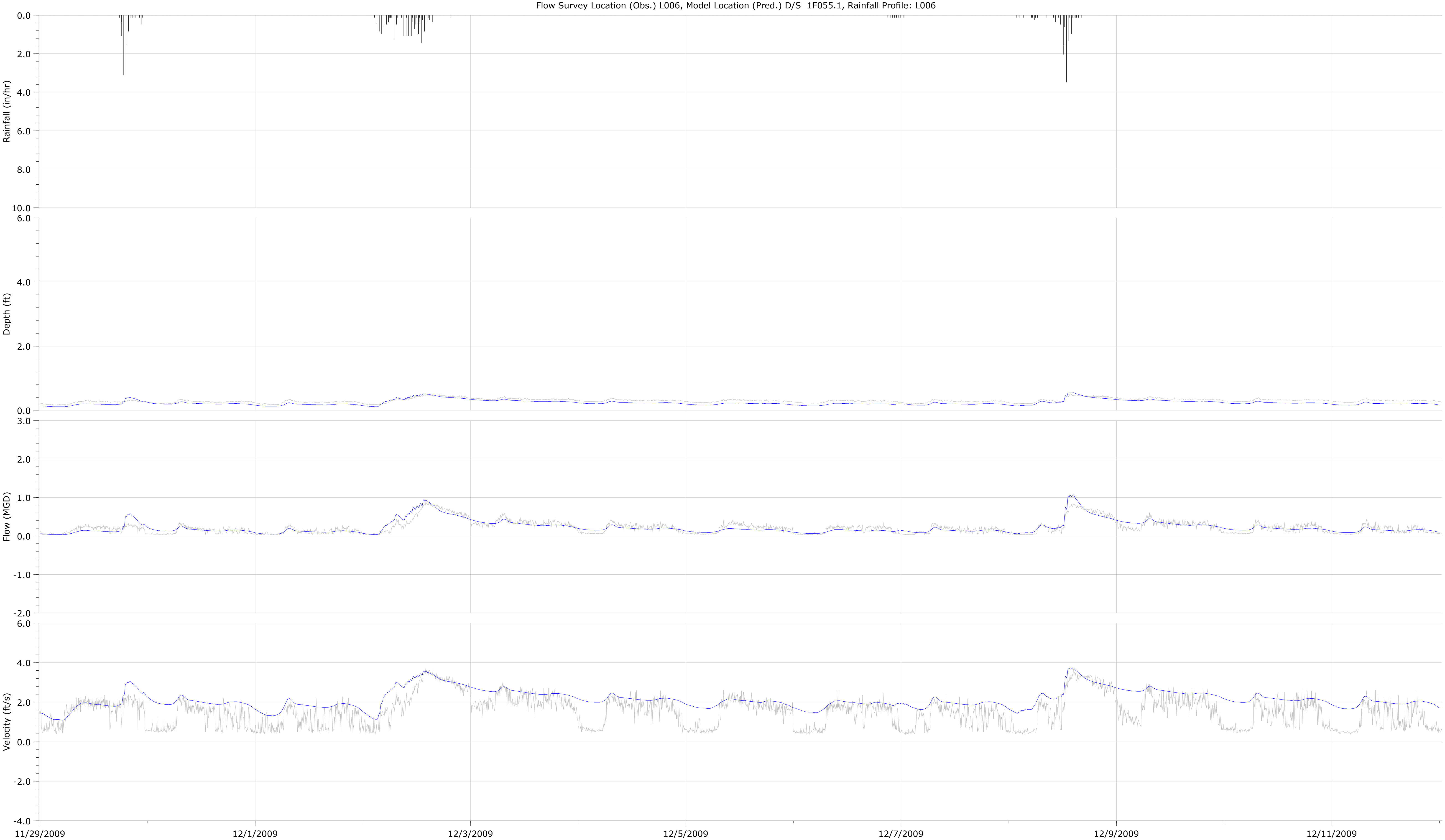
Flow Survey Location (Obs.) L005R, Model Location (Pred.) D/S 9F016.1, Rainfall Profile: L005R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.480	1.830	0.011							
Obs.				0.996	9.081	0.690	15.971	63.202	0.196	2.915
...m B20>Final Rain Data 3-10-2010 Fixed				0.899	9.923	-0.421	13.297	71.733	-0.099	2.005

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 10 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

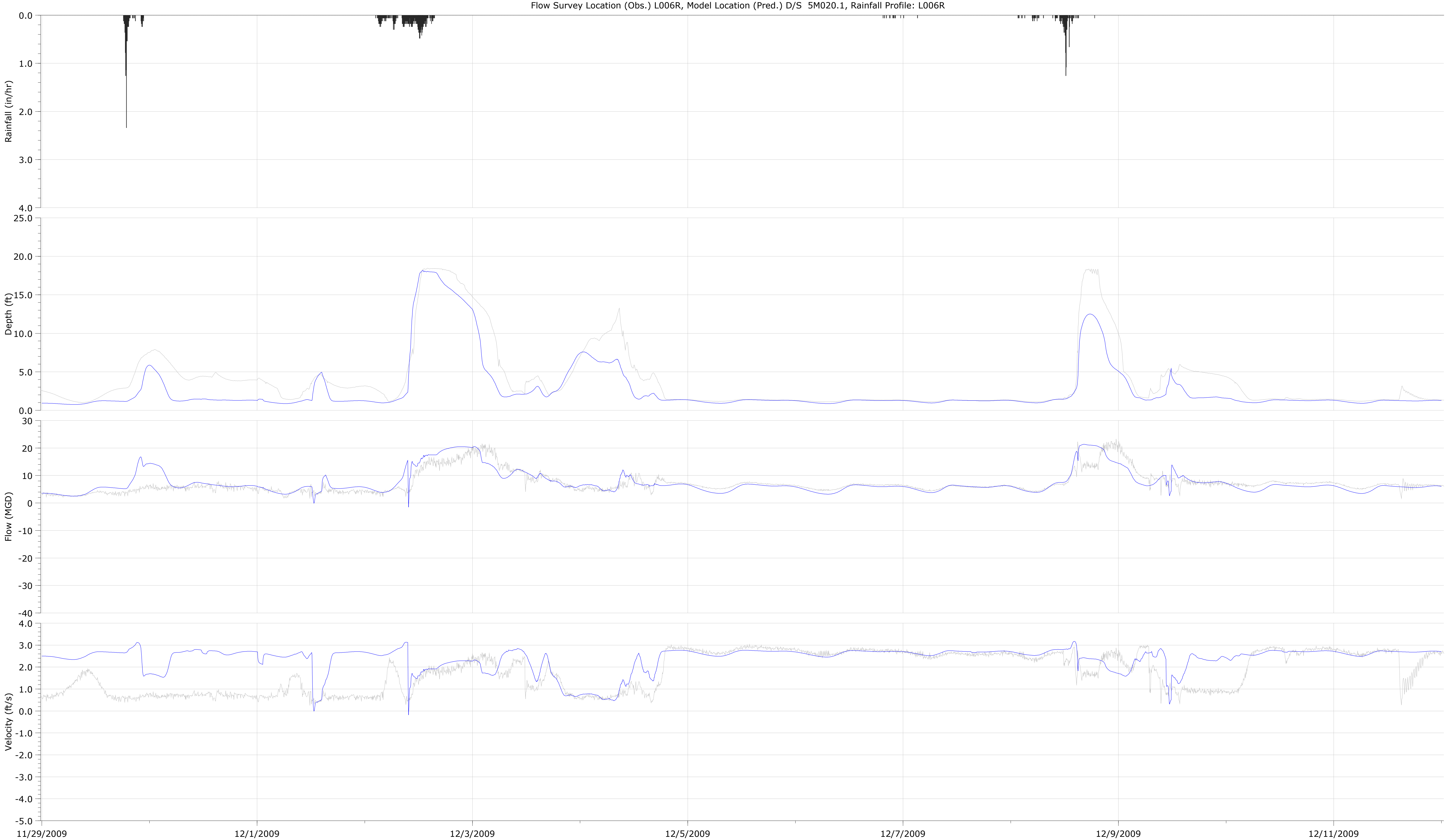
Flow Survey Location (Obs.) L006, Model Location (Pred.) D/S 1F055.1, Rainfall Profile: L006



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.340	3.480	0.011							
Obs.				0.164	0.503	0.022	0.872	2.858	0.384	3.684
...m B20>Final Rain Data 3-10-2010 Fixed				0.113	0.551	0.034	1.073	2.868	1.089	3.744

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 11 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

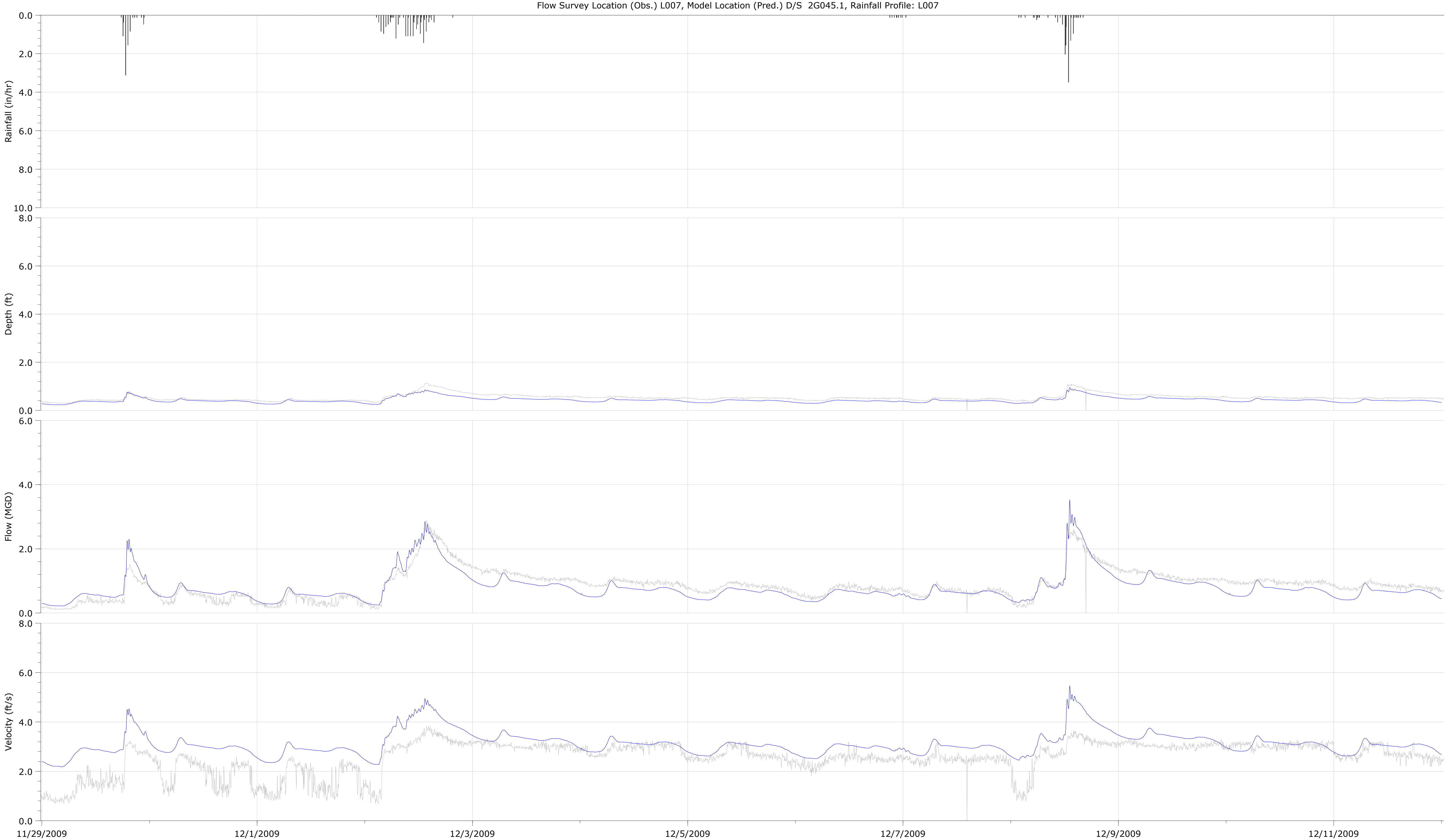
Flow Survey Location (Obs.) L006R, Model Location (Pred.) D/S 5M020.1, Rainfall Profile: L006R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.560	2.340	0.011							
Obs.				1.009	18.458	1.656	23.252	93.449	0.250	3.030
...m B20>Final Rain Data 3-10-2010 Fixed				0.754	18.179	-1.512	21.360	96.120	-0.180	3.173

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 12 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

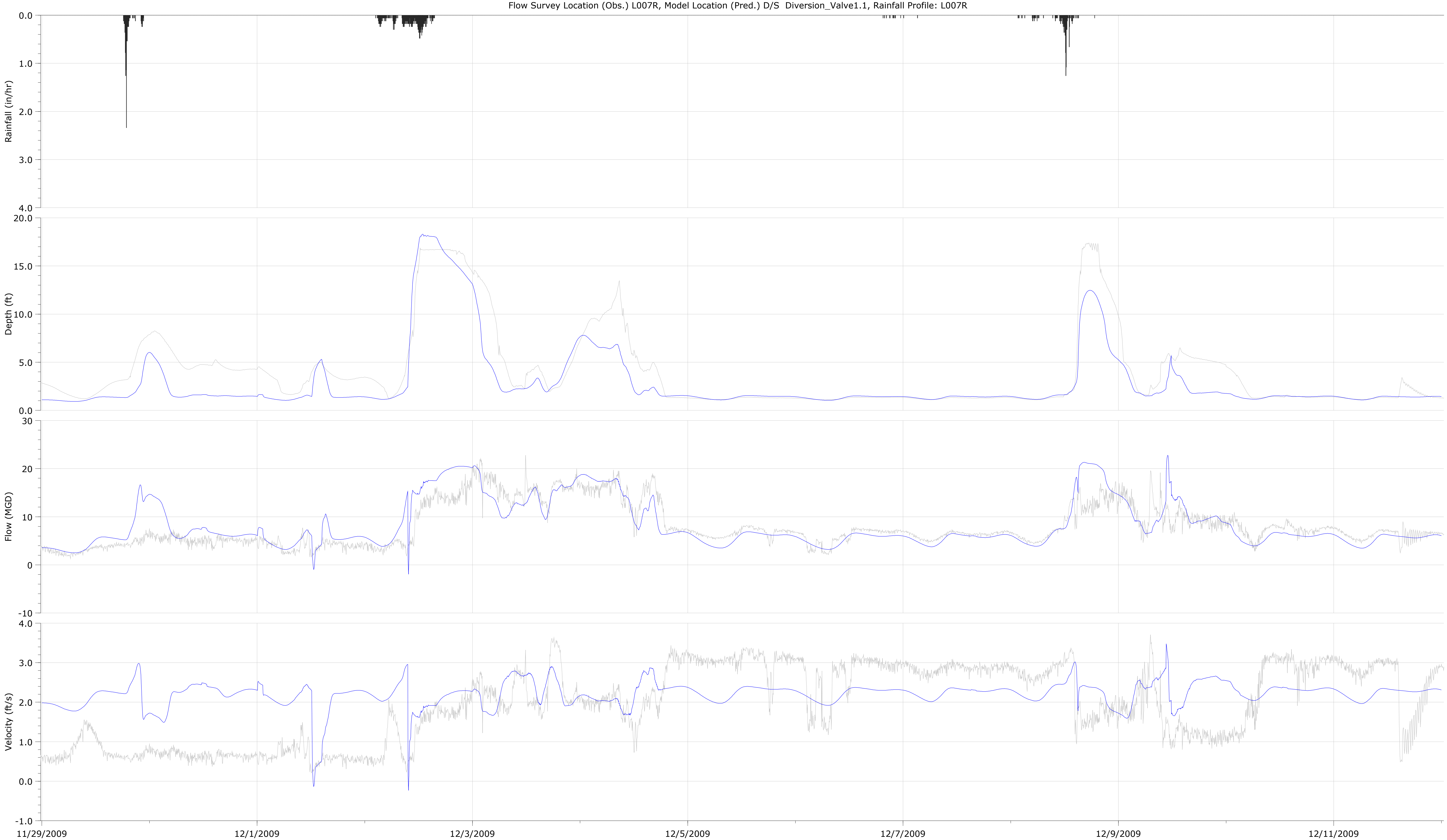
Flow Survey Location (Obs.) L007, Model Location (Pred.) D/S 2G045.1, Rainfall Profile: L007



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		3.340	3.480	0.011							
Obs.					0.000	1.134	0.000	2.900	11.255	0.000	3.811
...m B20>Final Rain Data 3-10-2010 Fixed					0.229	0.948	0.217	3.528	10.187	2.185	5.467

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 13 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

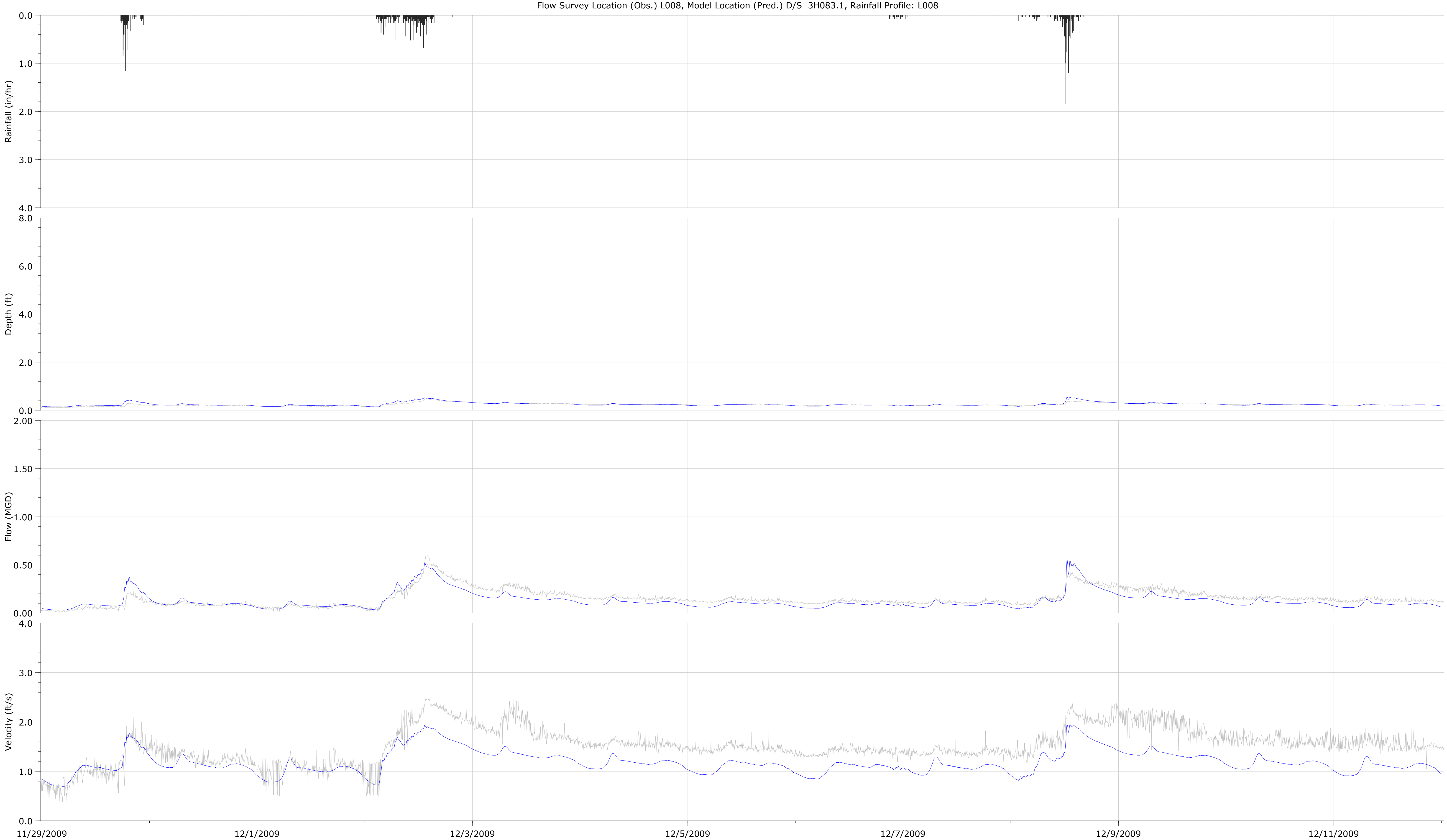
Flow Survey Location (Obs.) L007R, Model Location (Pred.) D/S Diversion_Valve1.1, Rainfall Profile: L007R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.560	2.340	0.011							
Obs.				1.076	17.394	1.297	22.802	103.929	0.210	3.710
...m B20>Final Rain Data 3-10-2010 Fixed				0.918	18.309	-1.959	22.778	108.241	-0.232	3.476

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

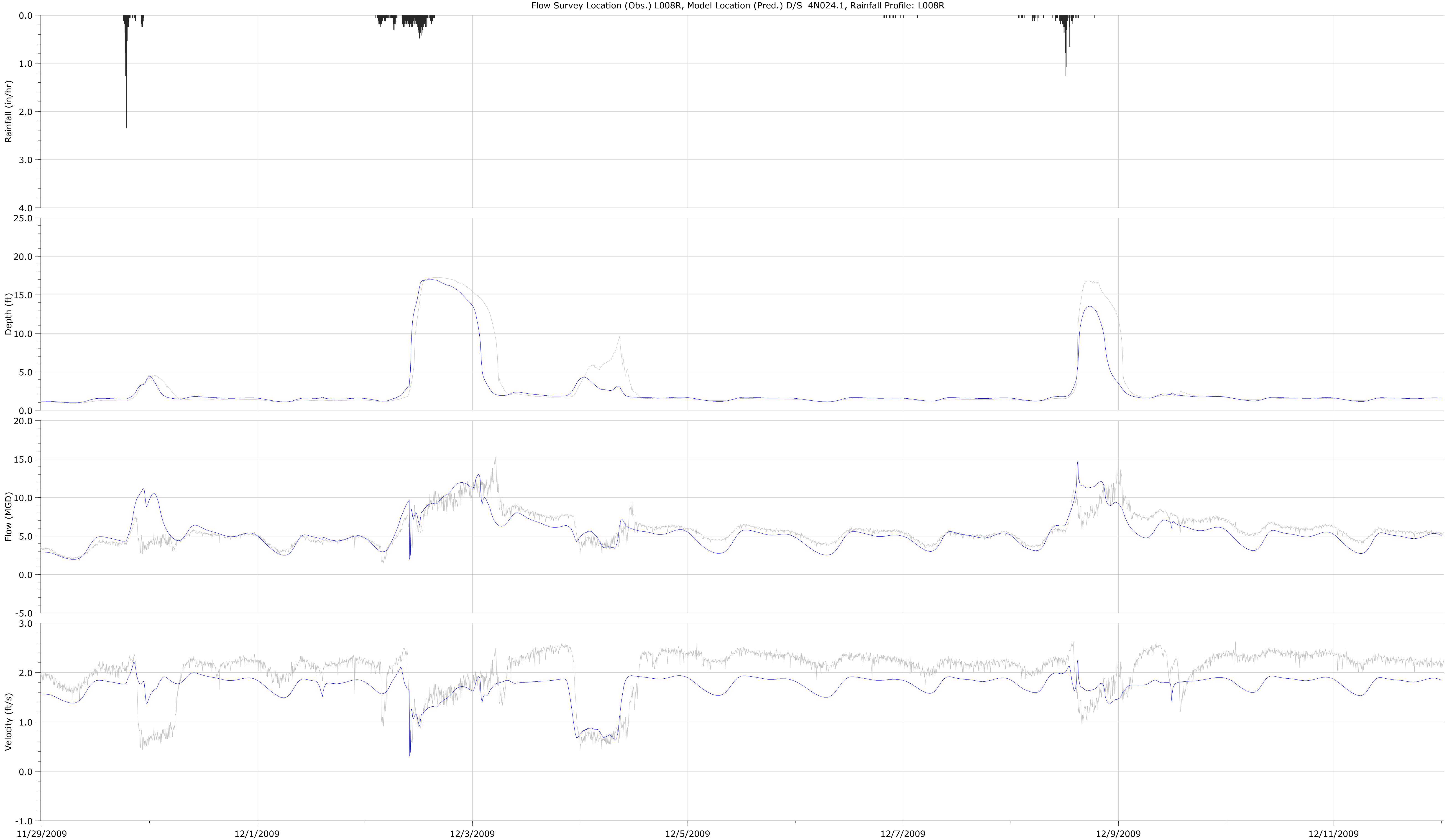
Flow Survey Location (Obs.) L008, Model Location (Pred.) D/S 3H083.1, Rainfall Profile: L008



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.213	1.840	0.010							
Obs.				0.107	0.482	0.011	0.602	1.971	0.374	2.497
...m B20>Final Rain Data 3-10-2010 Fixed				0.142	0.553	0.030	0.562	1.621	0.691	1.952

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

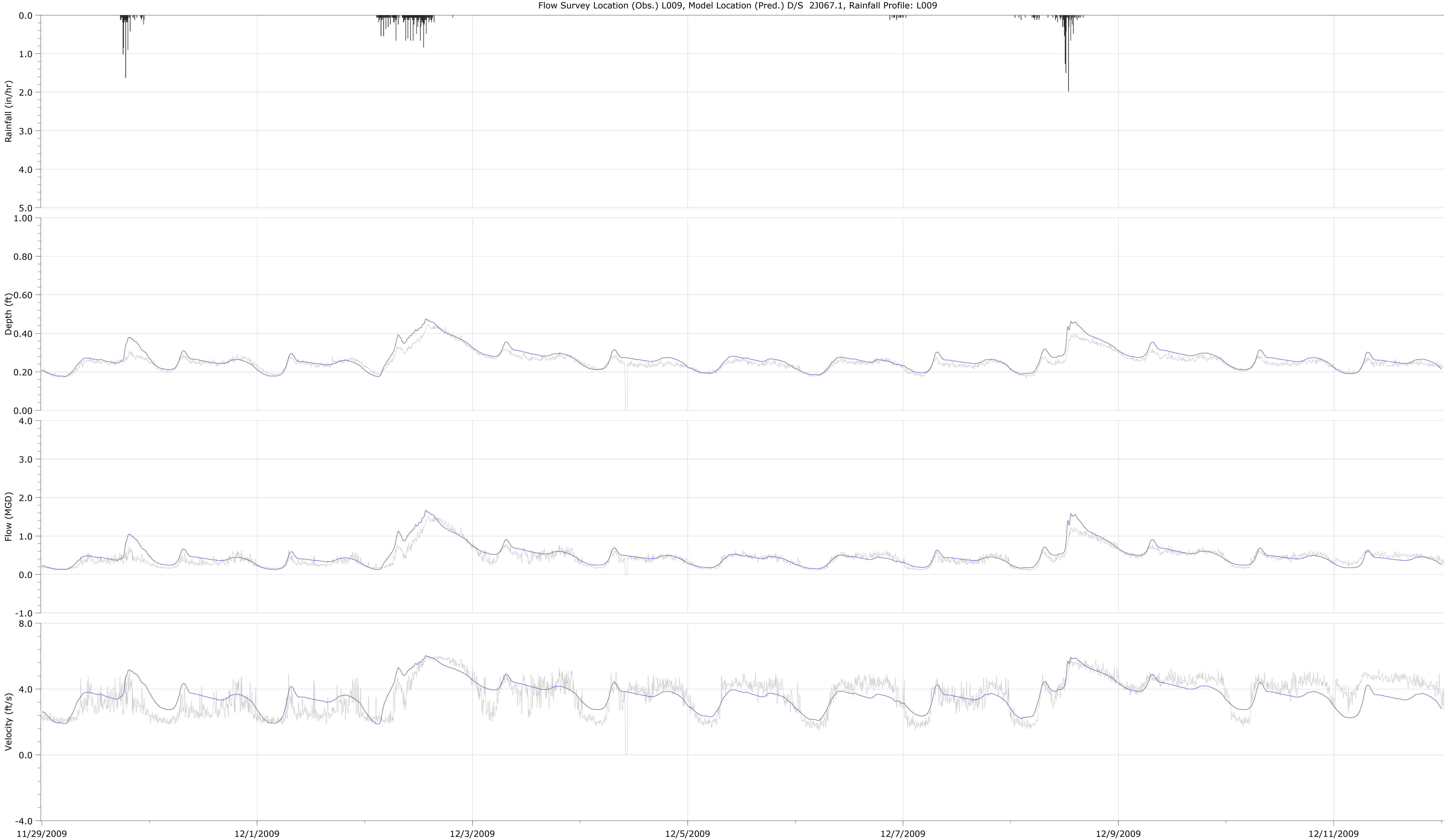
Flow Survey Location (Obs.) L008R, Model Location (Pred.) D/S 4N024.1, Rainfall Profile: L008R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.560	2.340	0.011							
Obs.				0.913	17.278	1.533	15.283	75.785	0.412	2.626
...m B20>Final Rain Data 3-10-2010 Fixed				0.975	16.985	1.955	14.760	71.546	0.304	2.255

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 16 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L009, Model Location (Pred.) D/S 2J067.1, Rainfall Profile: L009



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.275	1.980	0.010							
Obs.				0.000	0.447	0.000	1.520	5.755	0.000	6.003
...m B20>Final Rain Data 3-10-2010 Fixed				0.176	0.475	0.128	1.670	6.286	1.874	6.029

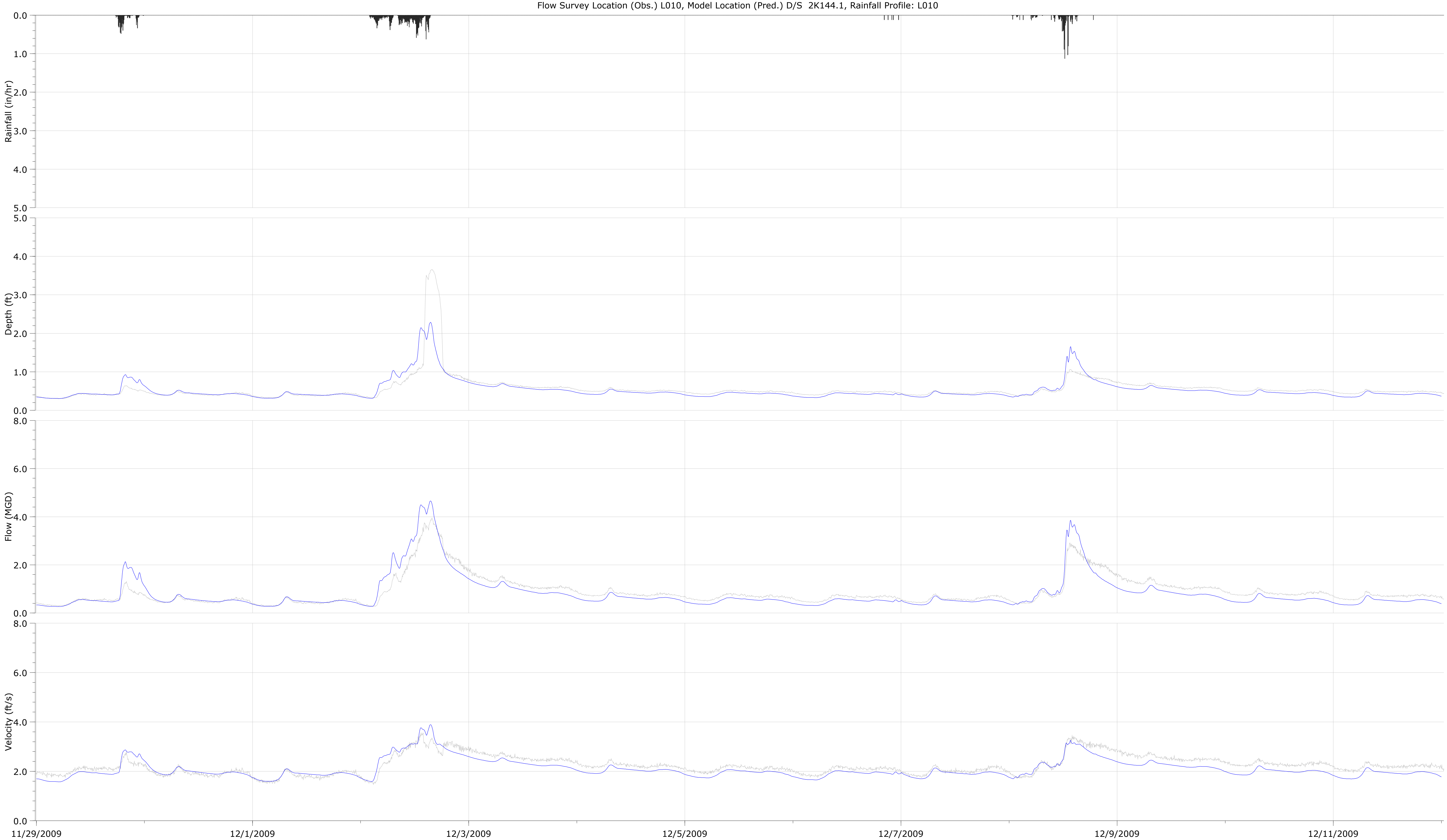
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L009R, Model Location (Pred.) D/S 6L016.1, Rainfall Profile: L009R

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.578	1.392	0.011							
Obs.				1.107	7.456	5.434	26.885	187.391	1.265	3.523
...m B20>Final Rain Data 3-10-2010 Fixed				1.644	9.175	5.917	34.508	194.541	1.810	4.050

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 18 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

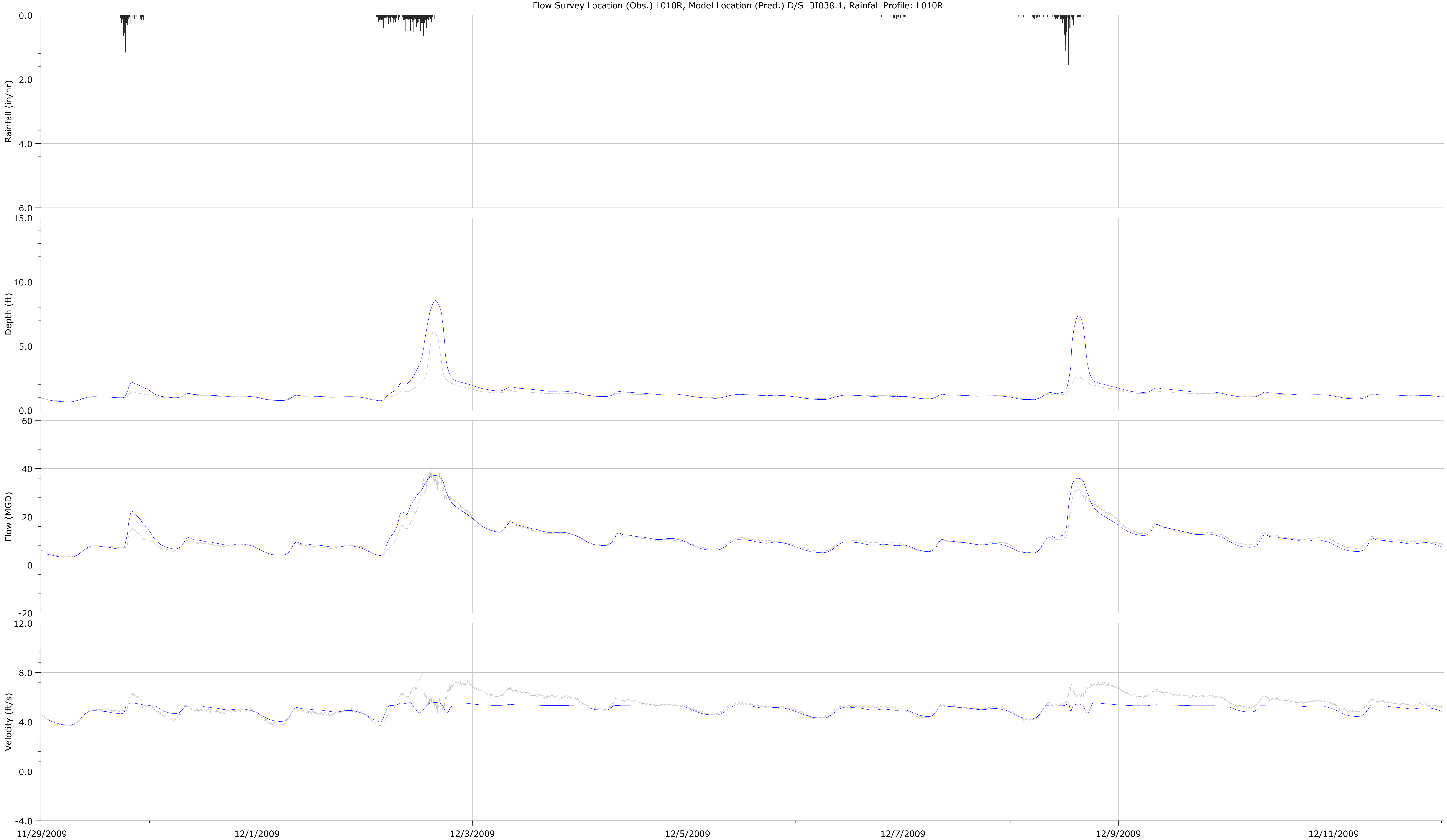
Flow Survey Location (Obs.) L010, Model Location (Pred.) D/S 2K144.1, Rainfall Profile: L010



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.395	1.128	0.011							
Obs.				0.300	3.656	0.270	3.946	11.374	1.470	3.560
...m B20>Final Rain Data 3-10-2010 Fixed				0.307	2.284	0.265	4.656	10.240	1.574	3.889

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

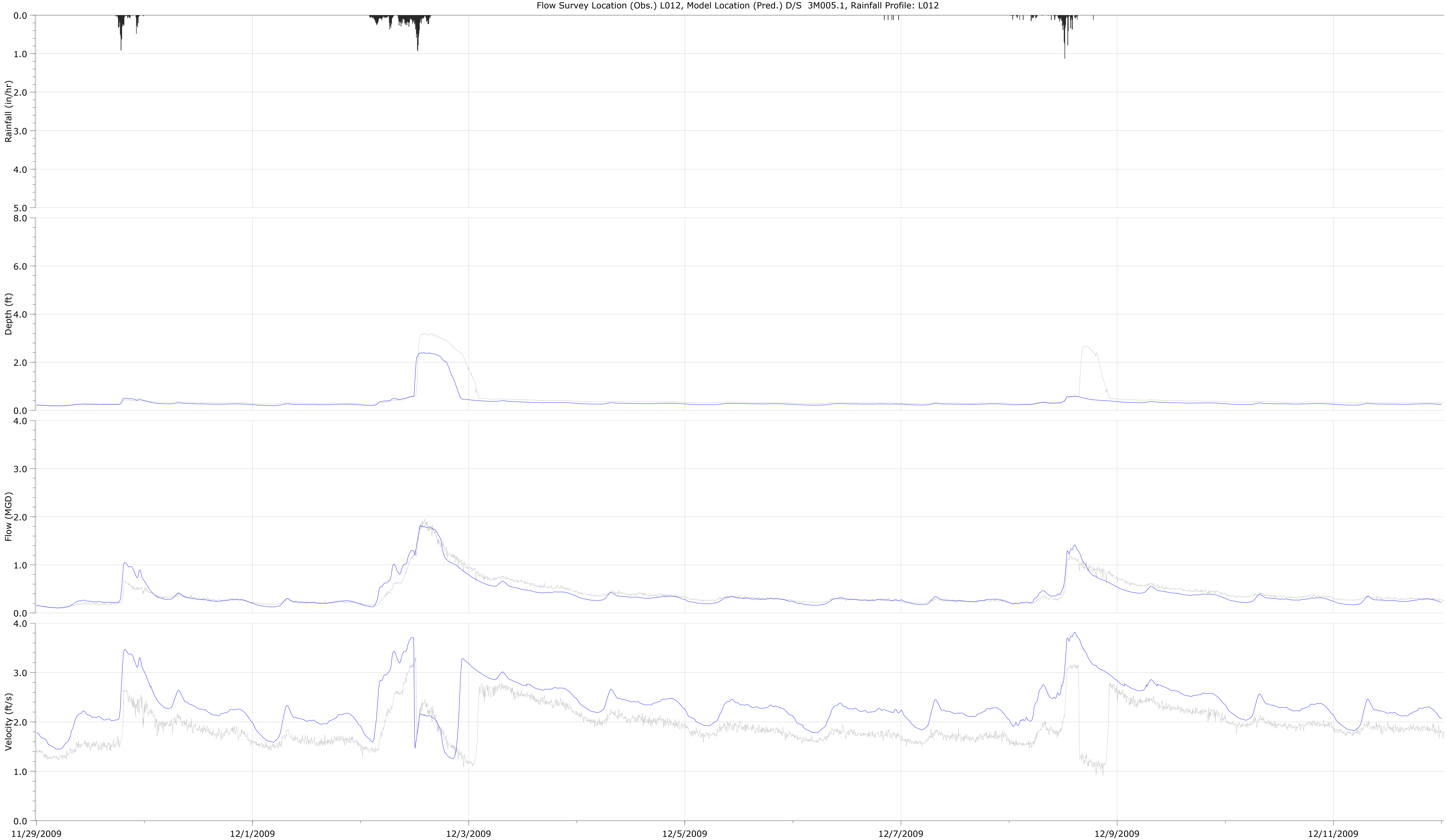
Flow Survey Location (Obs.) L010R, Model Location (Pred.) D/S 3I038.1, Rainfall Profile: L010R



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.590	1.560	0.011							
Obs.				0.705	6.207	3.285	39.325	143.763	3.619	8.070
...m B20>Final Rain Data 3-10-2010 Fixed				0.669	8.549	3.119	37.203	143.926	3.755	5.606

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 20 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

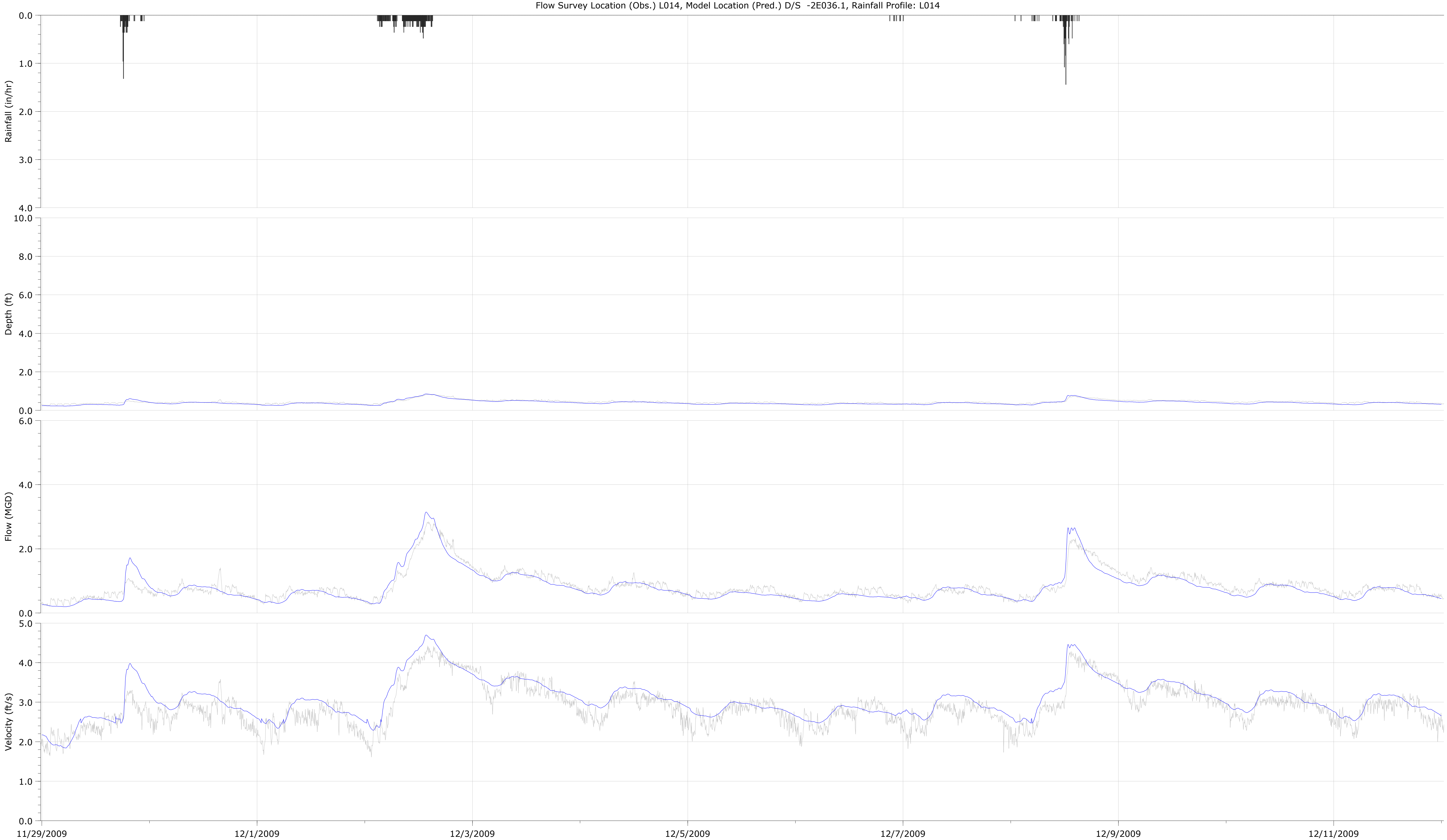
Flow Survey Location (Obs.) L012, Model Location (Pred.) D/S 3M005.1, Rainfall Profile: L012



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.604	1.128	0.012							
Obs.				0.205	3.198	0.105	1.951	5.299	0.911	3.312
...m B20>Final Rain Data 3-10-2010 Fixed				0.183	2.401	0.104	1.820	5.001	1.254	3.814

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 21 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

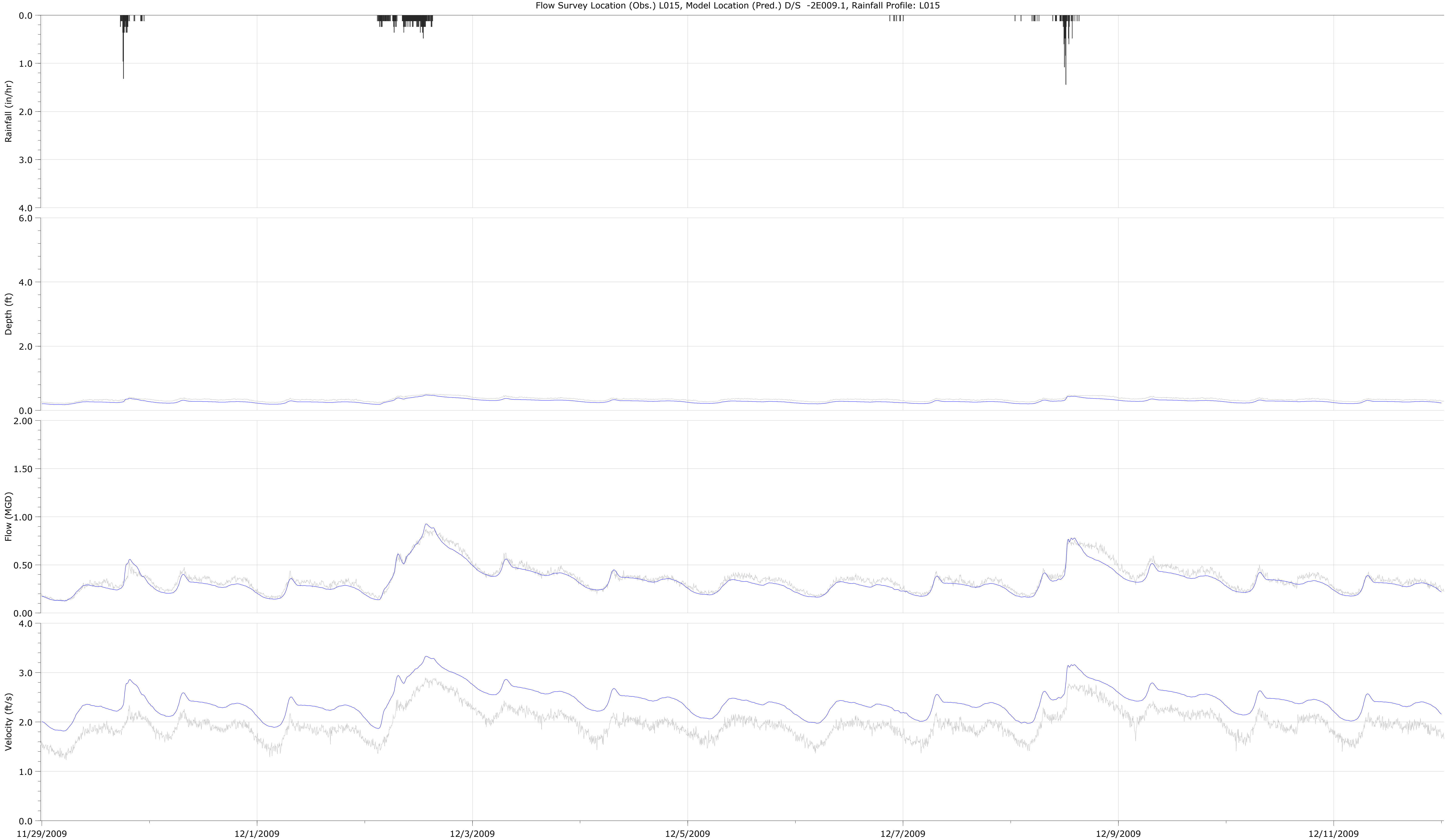
Flow Survey Location (Obs.) L014, Model Location (Pred.) D/S -2E036.1, Rainfall Profile: L014



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.210	1.440	0.010							
Obs.				0.250	0.831	0.215	2.837	10.917	1.610	4.410
...m B20>Final Rain Data 3-10-2010 Fixed				0.223	0.852	0.194	3.147	10.165	1.839	4.700

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 22 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

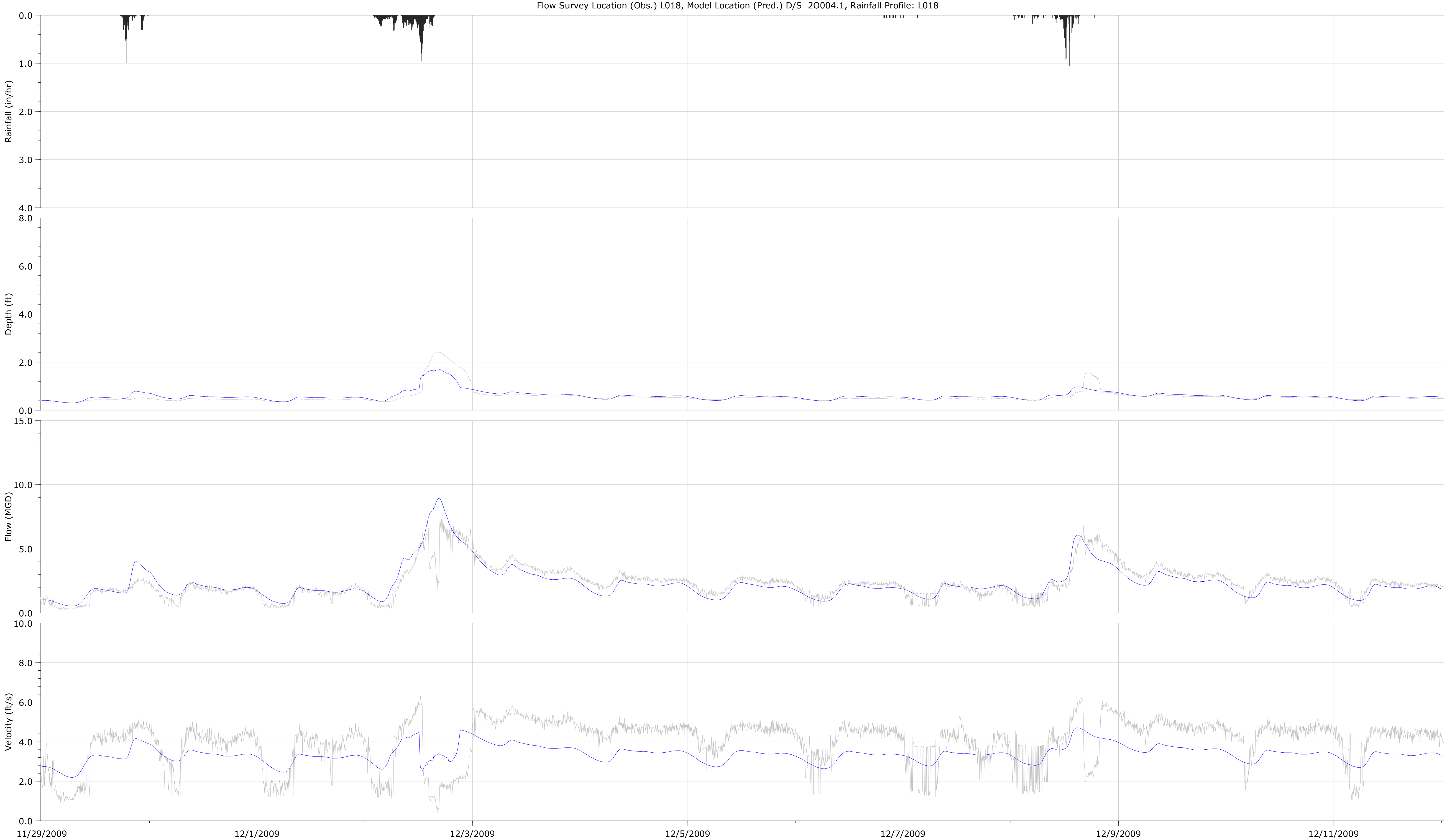
Flow Survey Location (Obs.) L015, Model Location (Pred.) D/S -2E009.1, Rainfall Profile: L015



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.210	1.440	0.010							
Obs.				0.218	0.508	0.118	0.870	4.671	1.230	2.890
...m B20>Final Rain Data 3-10-2010 Fixed				0.179	0.476	0.126	0.925	4.271	1.817	3.331

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 23 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

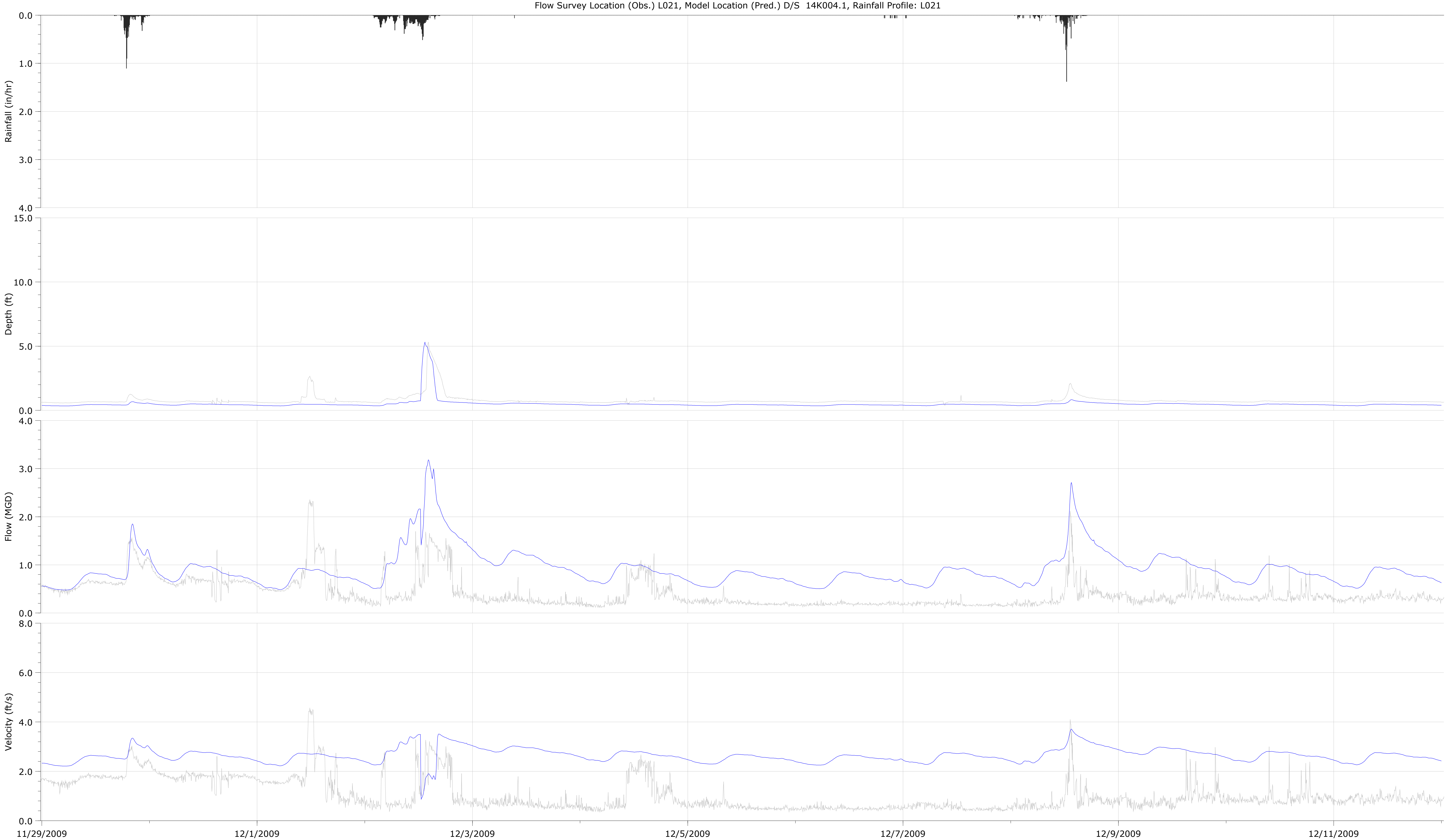
Flow Survey Location (Obs.) L018, Model Location (Pred.) D/S 2O004.1, Rainfall Profile: L018



	Rainfall Depth (in)	Rainfall Peak (in/hr)	Rainfall Average (in/hr)	Depth (ft) Min	Depth (ft) Max	Flow (MGD) Min	Flow (MGD) Max	Flow (MGD) Volume (US Mgal)	Velocity (ft/s) Min	Velocity (ft/s) Max
Rain	3.630	1.056	0.012							
Obs.				0.330	2.417	0.260	7.442	30.748	0.470	6.310
...m B20>Final Rain Data 3-10-2010 Fixed				0.308	1.695	0.540	8.946	29.720	2.190	4.702

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 24 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

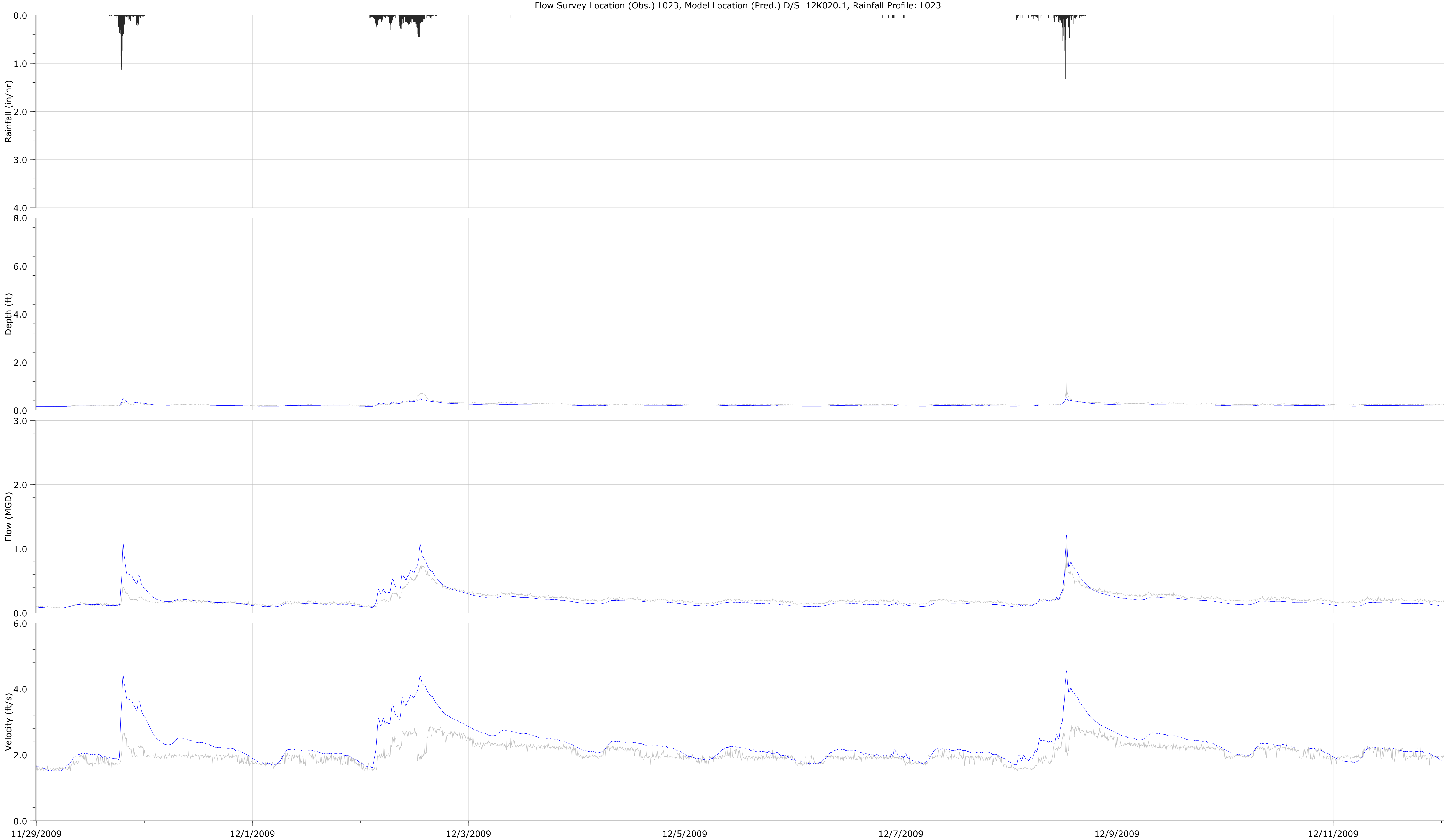
Flow Survey Location (Obs.) L021, Model Location (Pred.) D/S 14K004.1, Rainfall Profile: L021



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.148	1.380	0.010							
Obs.				0.389	5.302	0.103	2.360	5.337	0.359	4.572
...m B20>Final Rain Data 3-10-2010 Fixed				0.344	5.302	0.477	3.183	11.707	0.873	3.708

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

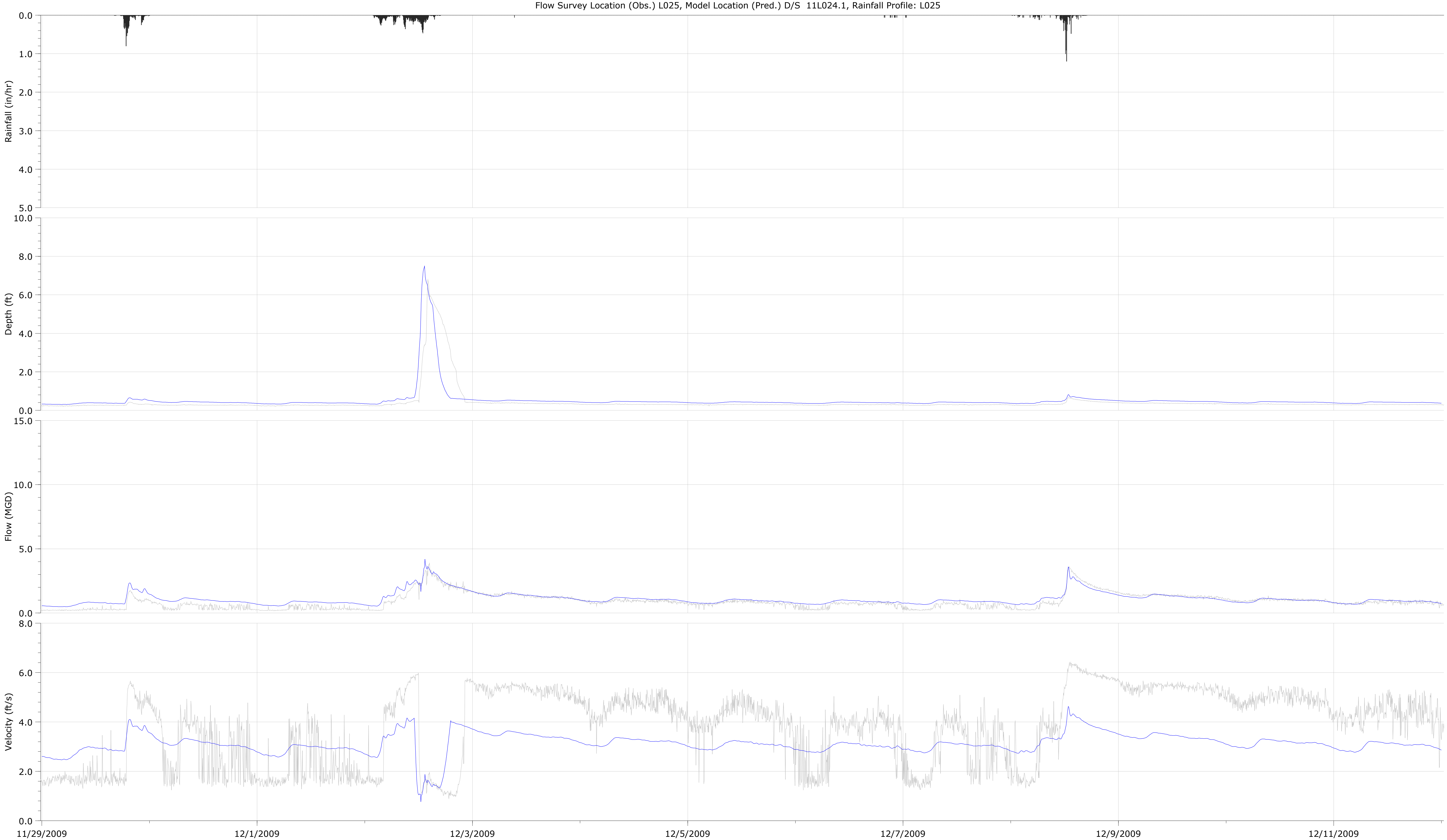
Flow Survey Location (Obs.) L023, Model Location (Pred.) D/S 12K020.1, Rainfall Profile: L023



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.256	1.320	0.010							
Obs.				0.161	1.180	0.079	1.105	2.784	1.510	2.910
...m B20>Final Rain Data 3-10-2010 Fixed				0.157	0.521	0.077	1.215	2.592	1.504	4.541

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

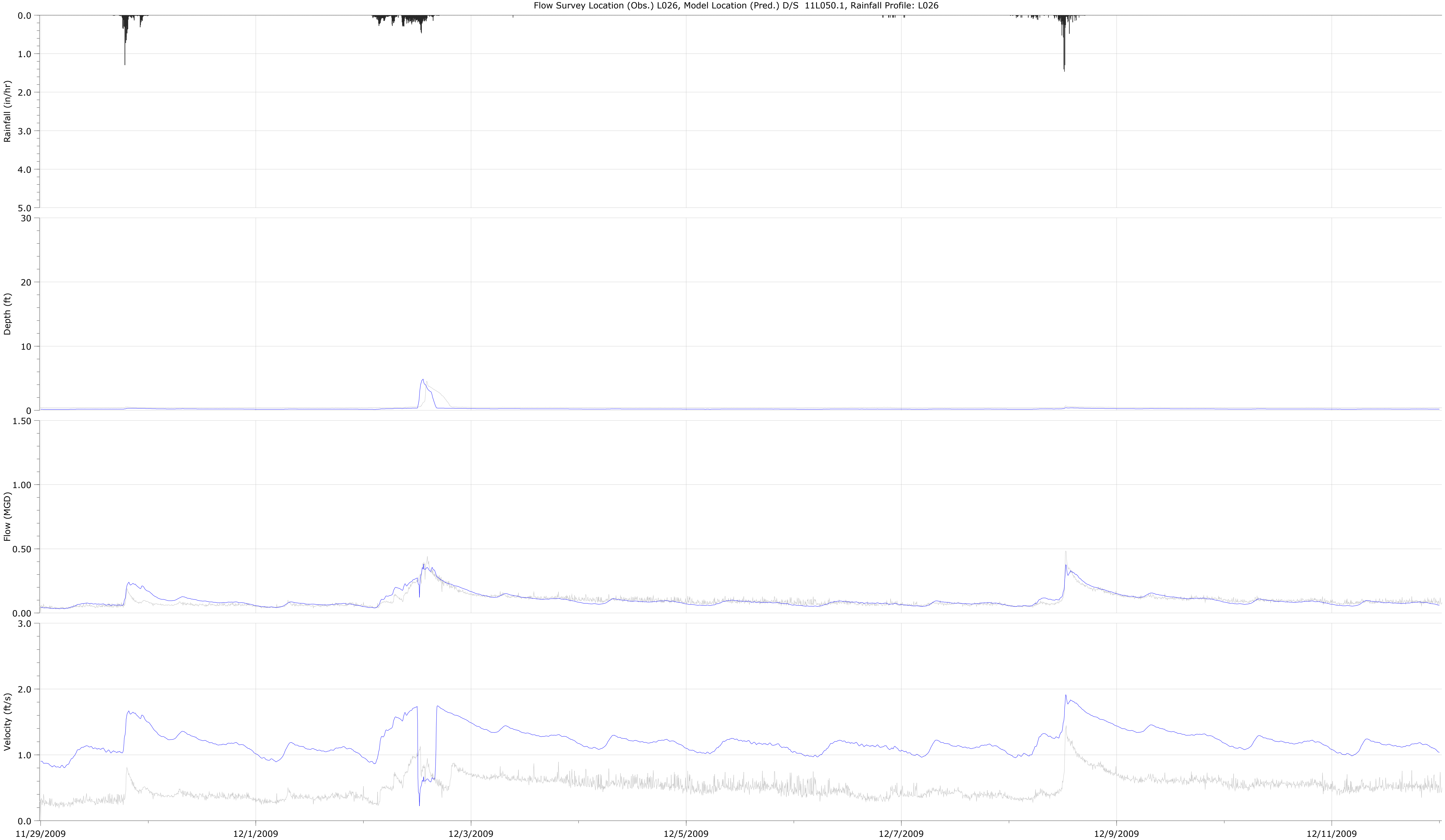
Flow Survey Location (Obs.) L025, Model Location (Pred.) D/S 11L024.1, Rainfall Profile: L025



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.027	1.200	0.010							
Obs.				0.204	6.783	0.174	3.874	11.591	0.903	6.415
...m B20>Final Rain Data 3-10-2010 Fixed				0.306	7.490	0.484	4.189	14.157	0.767	4.623

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L026, Model Location (Pred.) D/S 11L050.1, Rainfall Profile: L026



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		3.306	1.464	0.011							
Obs.					0.371	4.528	0.000	0.483	1.266	0.000	1.445
...m B20>Final Rain Data 3-10-2010 Fixed					0.136	4.860	0.033	0.381	1.315	0.224	1.913

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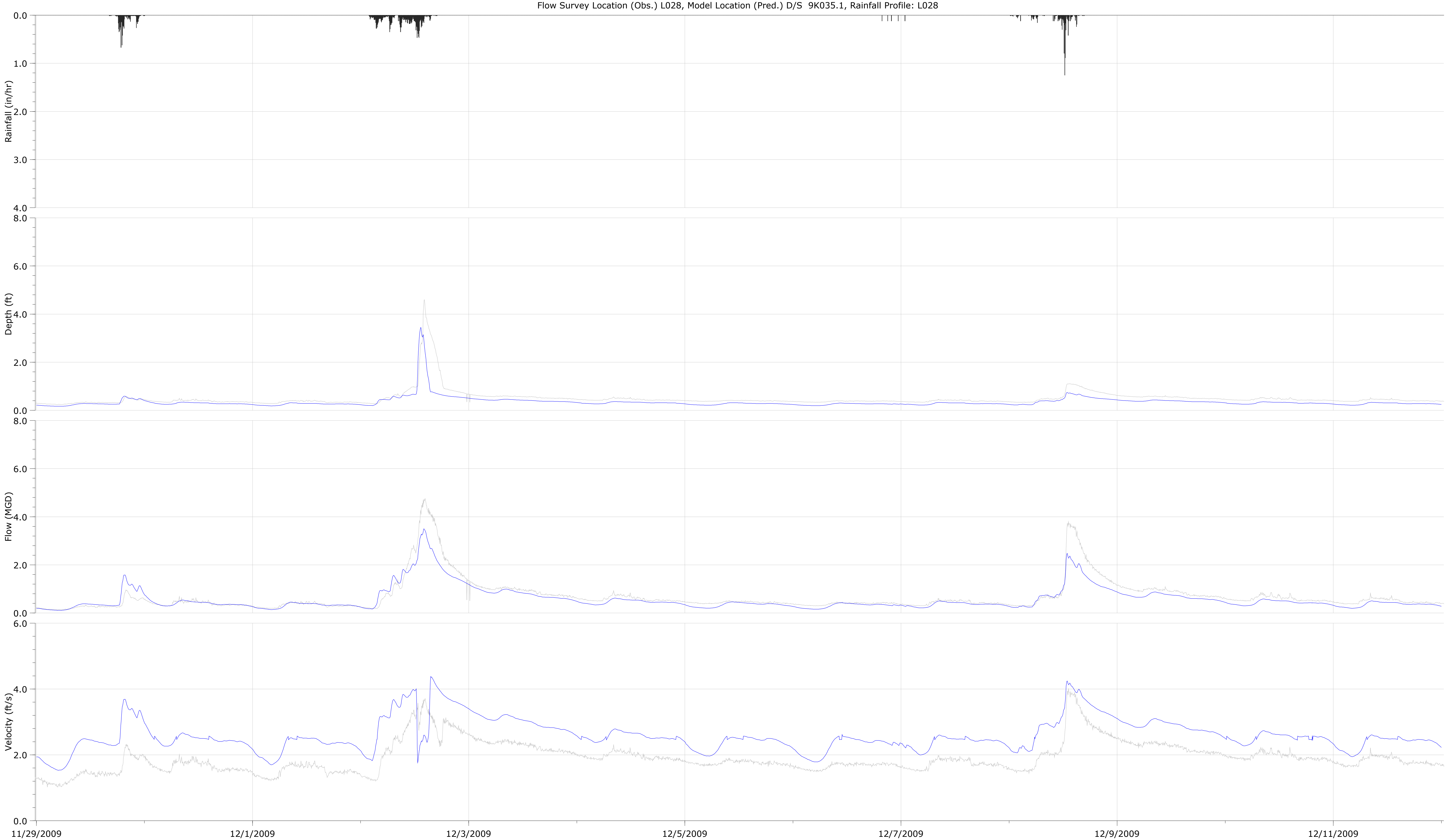
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

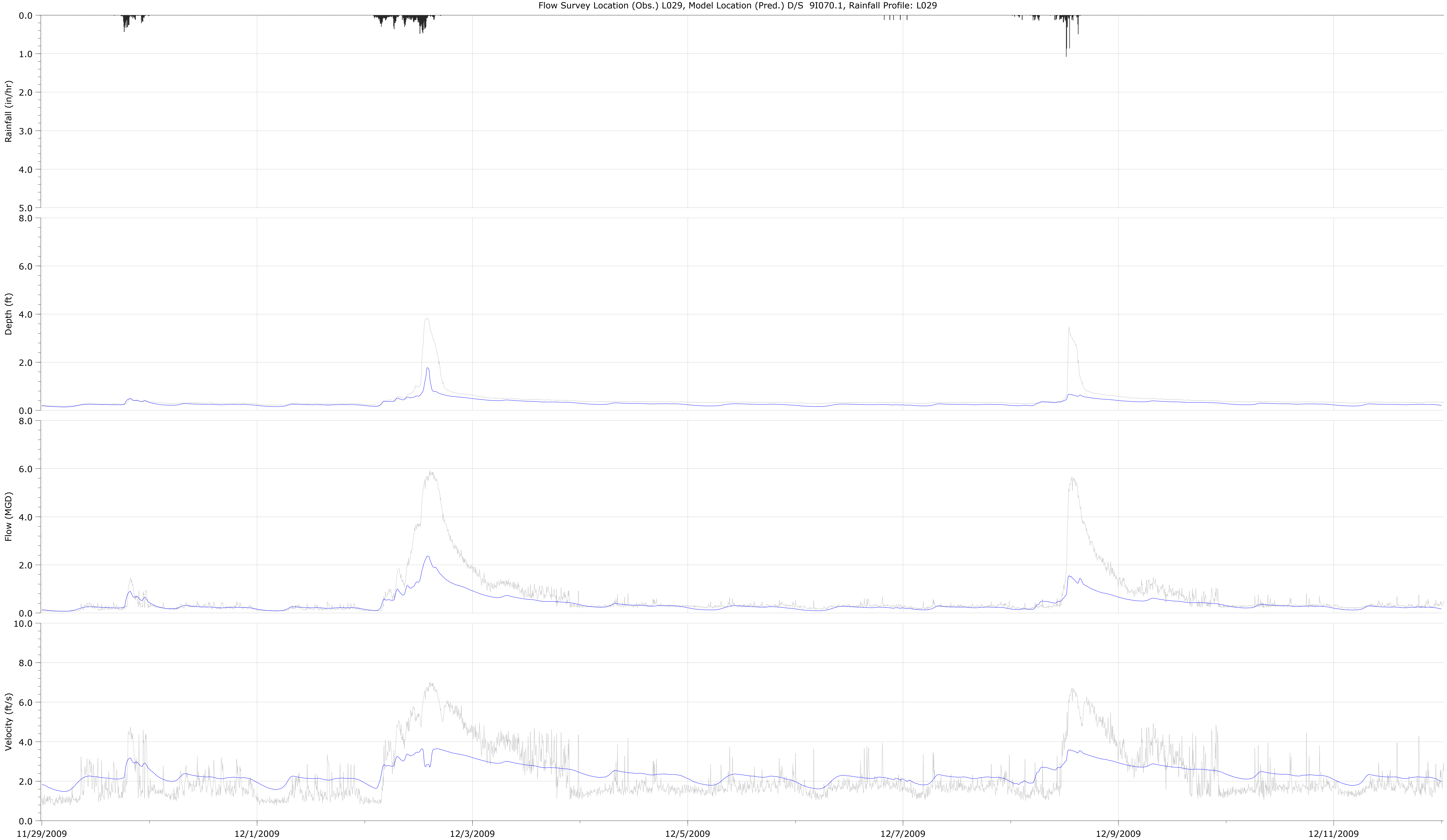
Flow Survey Location (Obs.) L028, Model Location (Pred.) D/S 9K035.1, Rainfall Profile: L028



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	2.879	1.248	0.009							
Obs.				0.240	4.598	0.124	4.754	8.907	1.020	4.020
...m B20>Final Rain Data 3-10-2010 Fixed				0.167	3.442	0.110	3.493	7.380	1.533	4.379

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

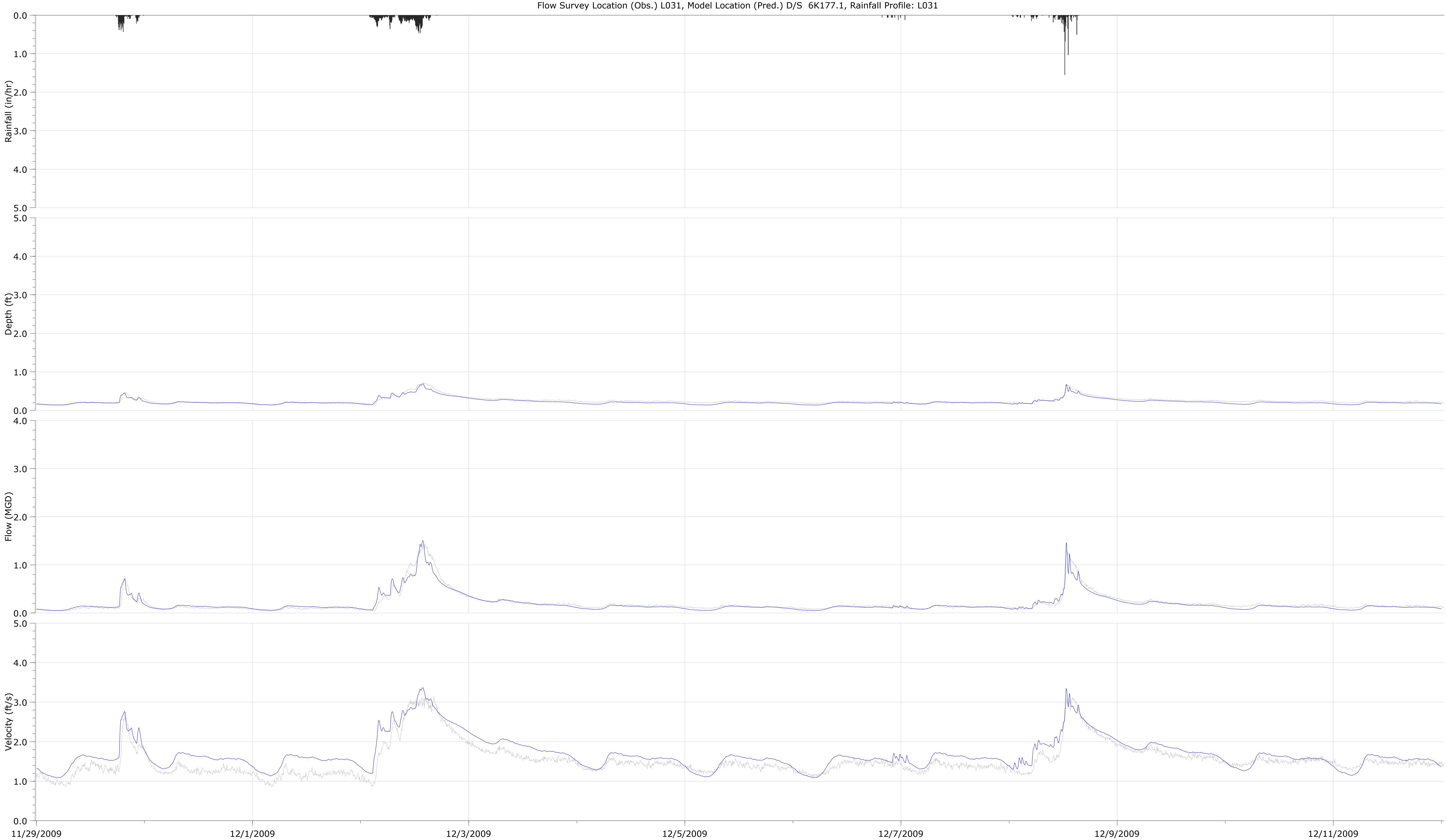
Flow Survey Location (Obs.) L029, Model Location (Pred.) D/S 9I070.1, Rainfall Profile: L029



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	2.742	1.080	0.009							
Obs.				0.161	3.841	0.054	5.890	8.395	0.770	7.000
...m B20>Final Rain Data 3-10-2010 Fixed				0.140	1.773	0.072	2.366	4.927	1.479	3.647

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 30 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

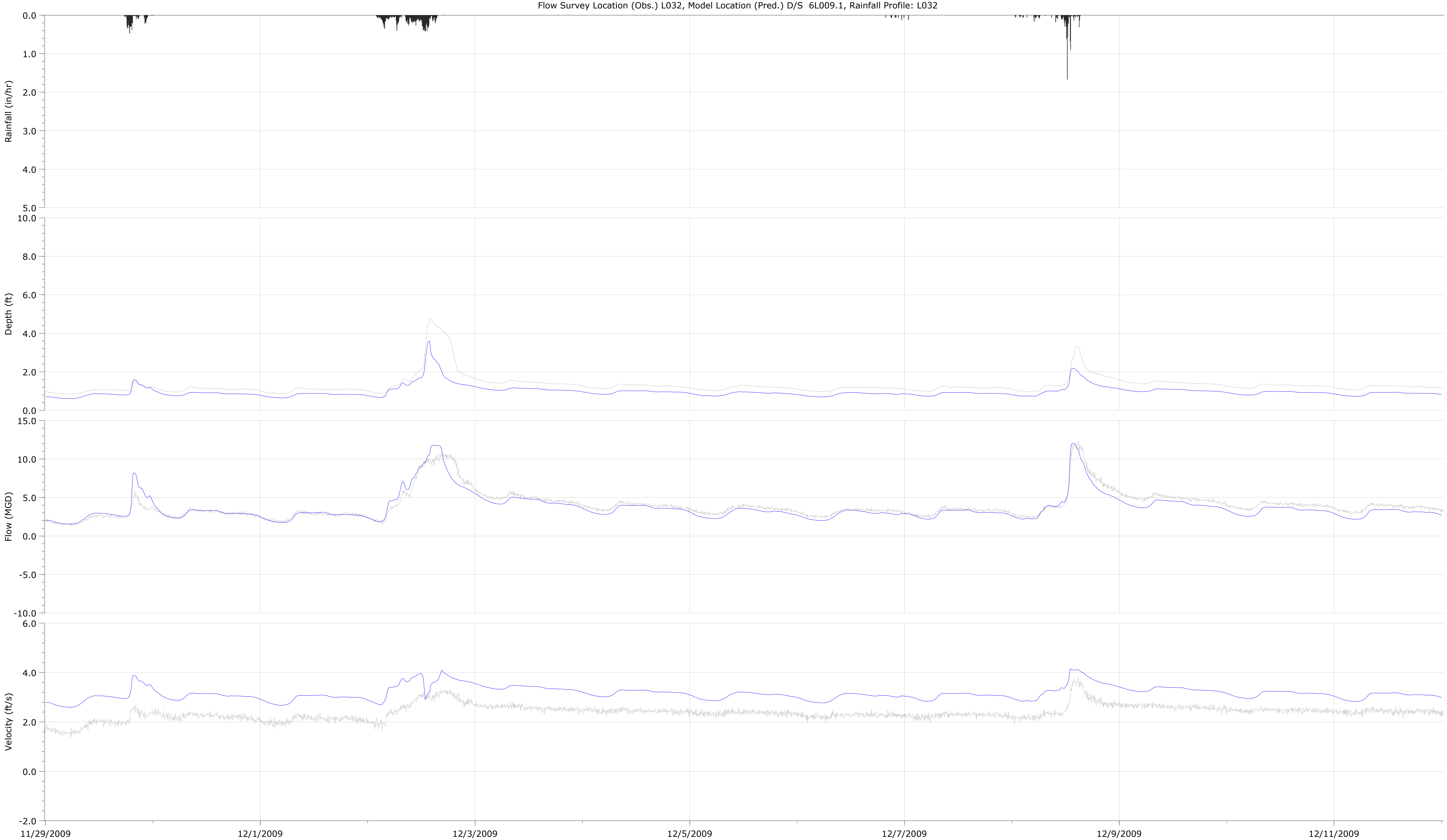
Flow Survey Location (Obs.) L031, Model Location (Pred.) D/S 6K177.1, Rainfall Profile: L031



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.016	1.548	0.010							
Obs.				0.130	0.717	0.038	1.437	2.566	0.865	3.145
...m B20>Final Rain Data 3-10-2010 Fixed				0.136	0.688	0.050	1.506	2.414	1.085	3.365

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

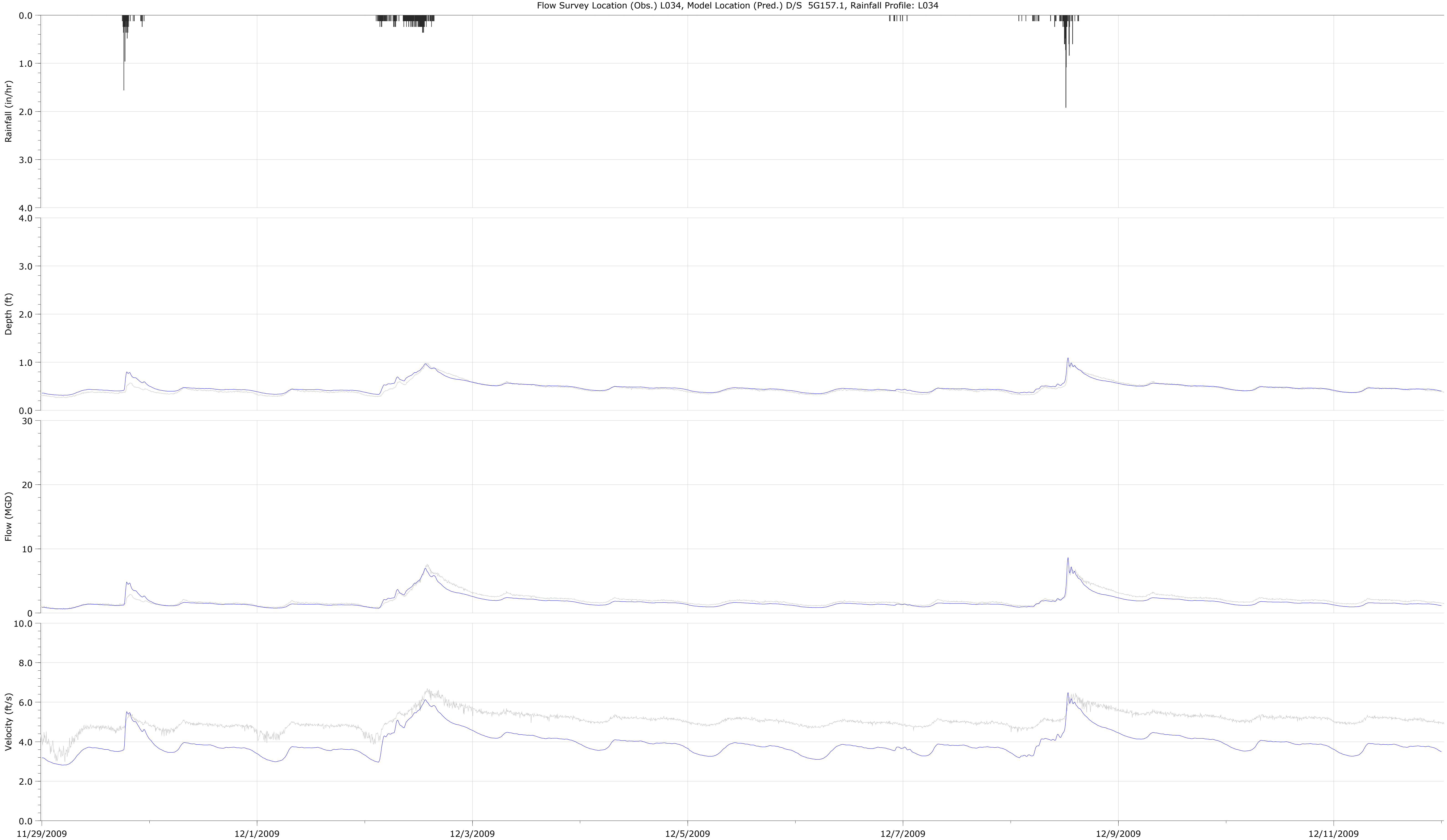
Flow Survey Location (Obs.) L032, Model Location (Pred.) D/S 6L009.1, Rainfall Profile: L032



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.177	1.668	0.010							
Obs.				0.846	4.748	1.280	12.291	51.444	1.360	3.800
...m B20>Final Rain Data 3-10-2010 Fixed				0.609	3.591	1.553	12.001	47.606	2.595	4.156

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 32 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L034, Model Location (Pred.) D/S 5G157.1, Rainfall Profile: L034



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.230	1.920	0.010							
Obs.				0.262	0.978	0.532	7.601	26.522	2.980	6.692
...m B20>Final Rain Data 3-10-2010 Fixed				0.313	1.090	0.647	8.615	22.543	2.818	6.486

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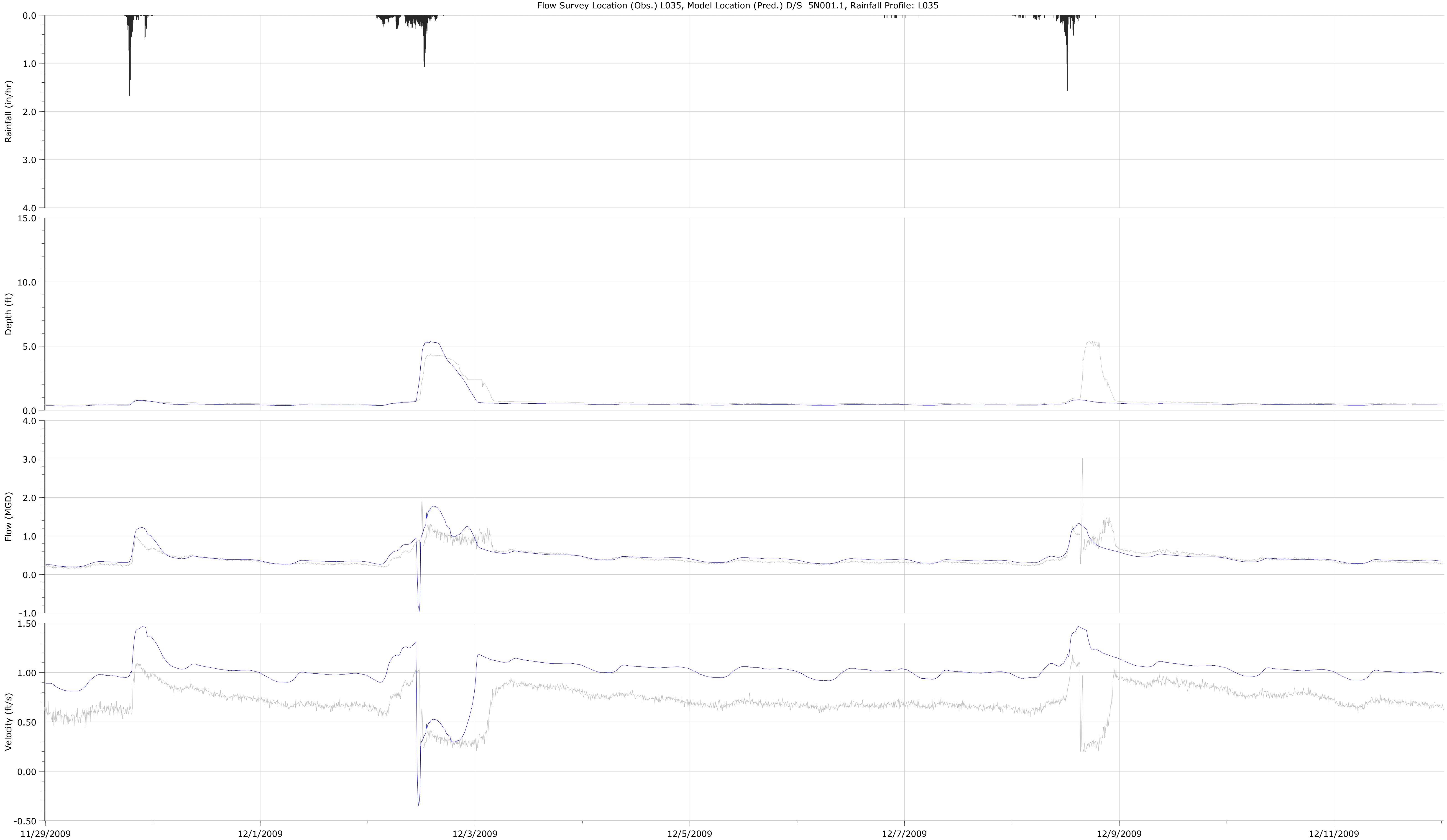
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

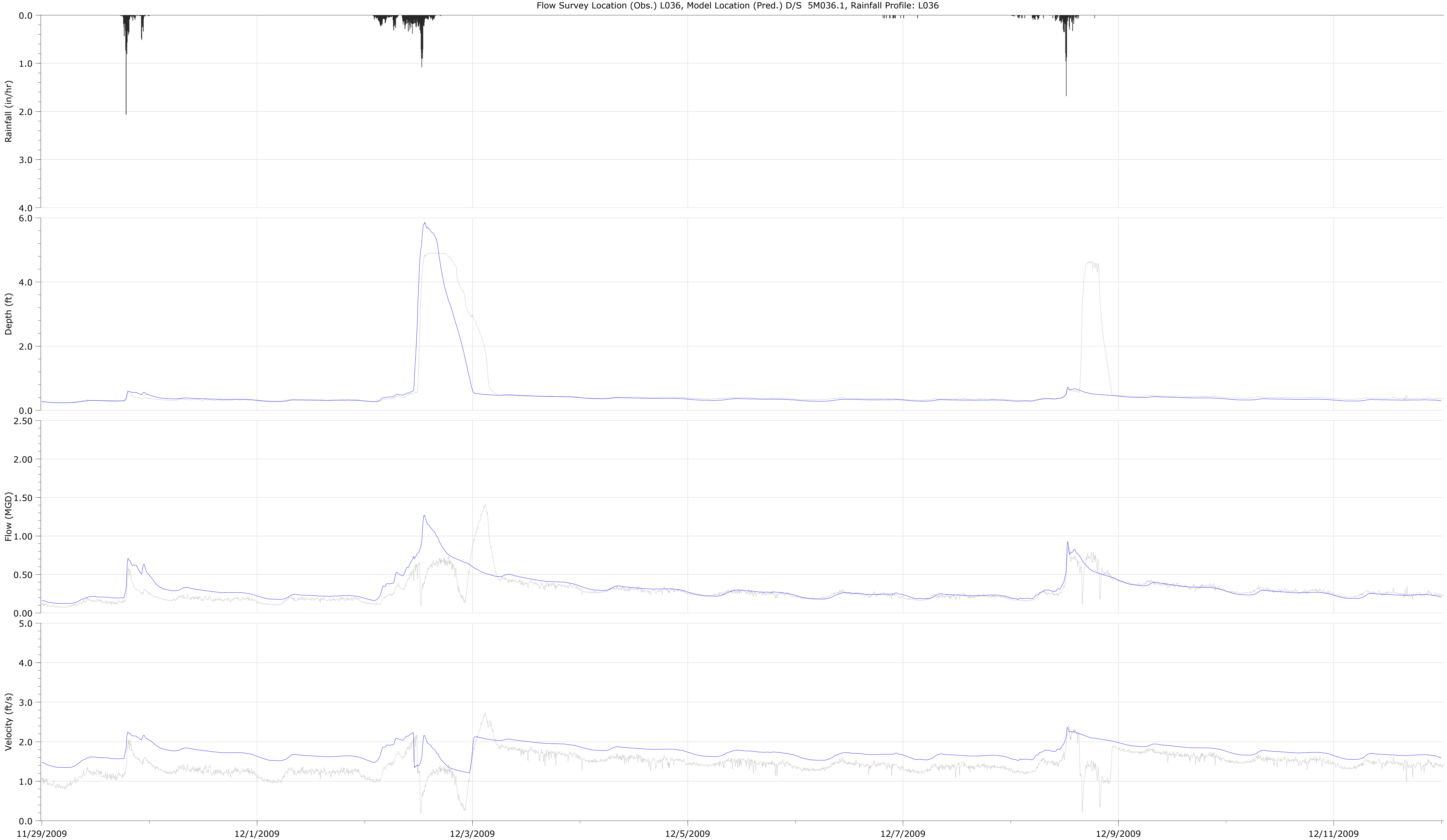
Flow Survey Location (Obs.) L035, Model Location (Pred.) D/S 5N001.1, Rainfall Profile: L035



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.045	1.680	0.013							
Obs.				0.386	5.398	0.145	3.015	5.637	0.192	1.180
...m B20>Final Rain Data 3-10-2010 Fixed				0.327	5.358	-0.965	1.775	6.024	-0.351	1.467

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 34 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

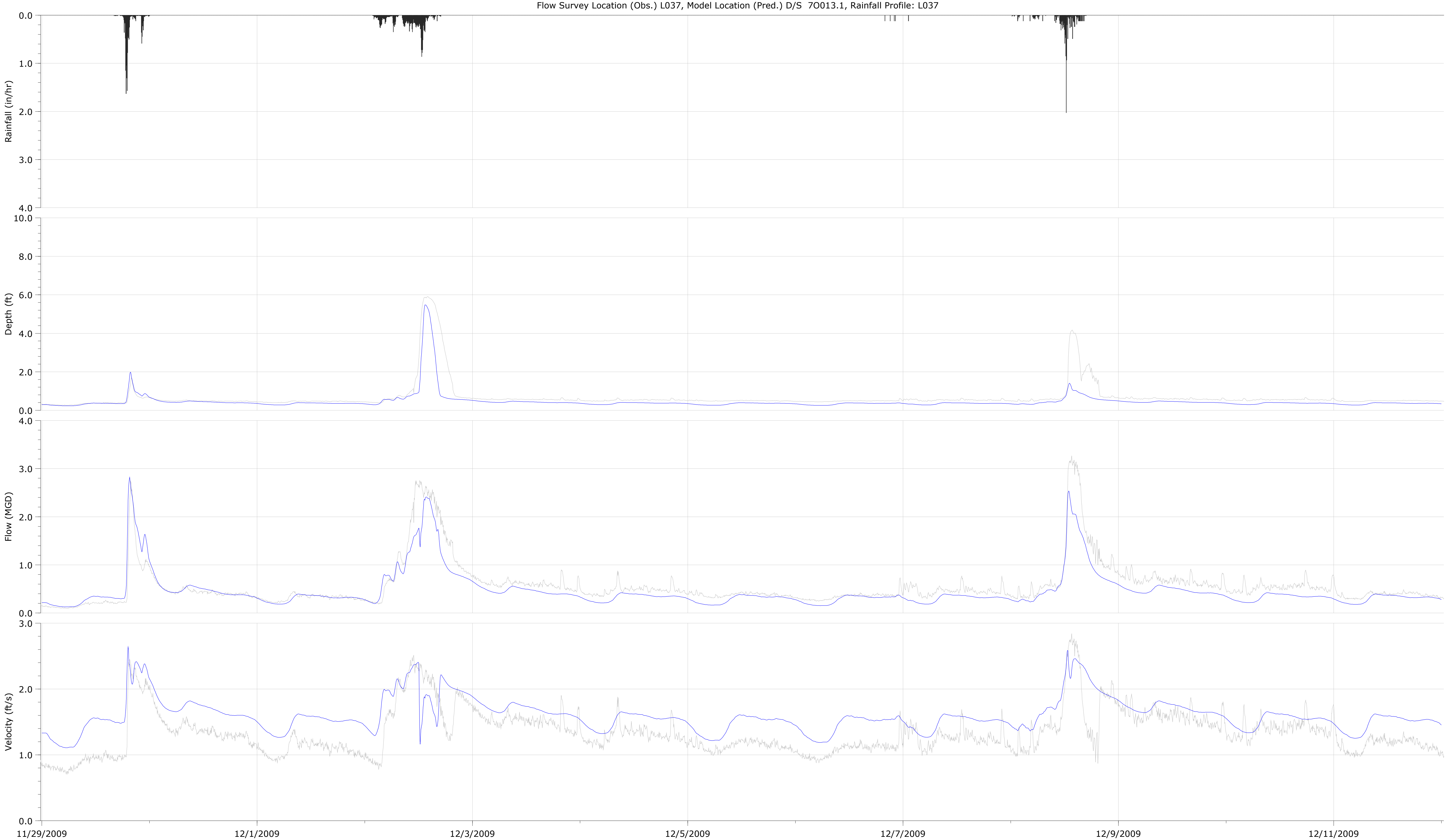
Flow Survey Location (Obs.) L036, Model Location (Pred.) D/S 5M036.1, Rainfall Profile: L036



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.868	2.064	0.012							
Obs.				0.226	4.911	0.069	1.415	3.714	0.170	2.730
...m B20>Final Rain Data 3-10-2010 Fixed				0.235	5.858	0.122	1.272	4.147	1.210	2.359

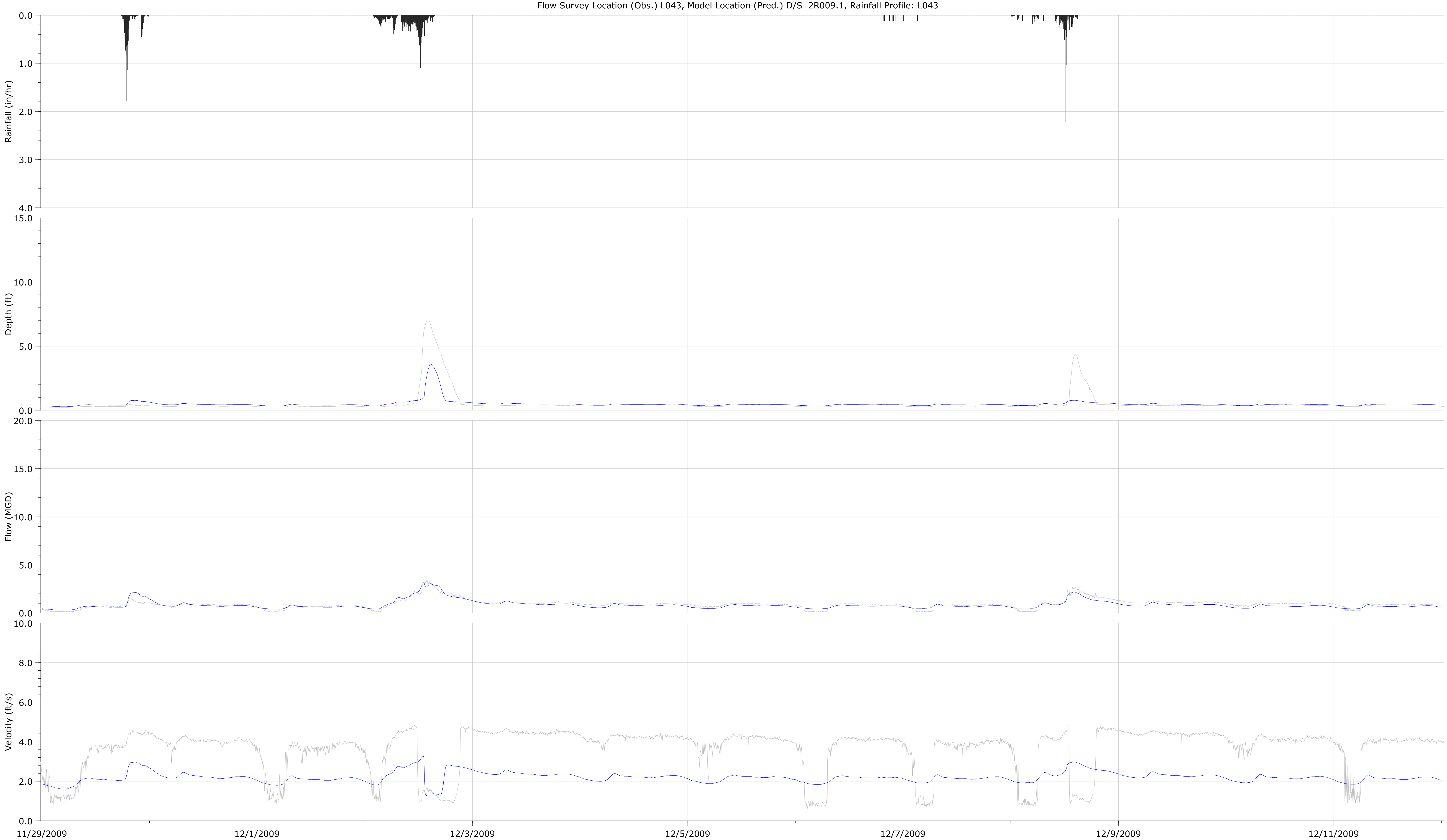
Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 35 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L037, Model Location (Pred.) D/S 7O013.1, Rainfall Profile: L037



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.381	2.028	0.014							
Obs.				0.261	5.908	0.093	3.267	7.466	0.710	2.840
...m B20>Final Rain Data 3-10-2010 Fixed				0.234	5.478	0.126	2.818	5.954	1.108	2.639

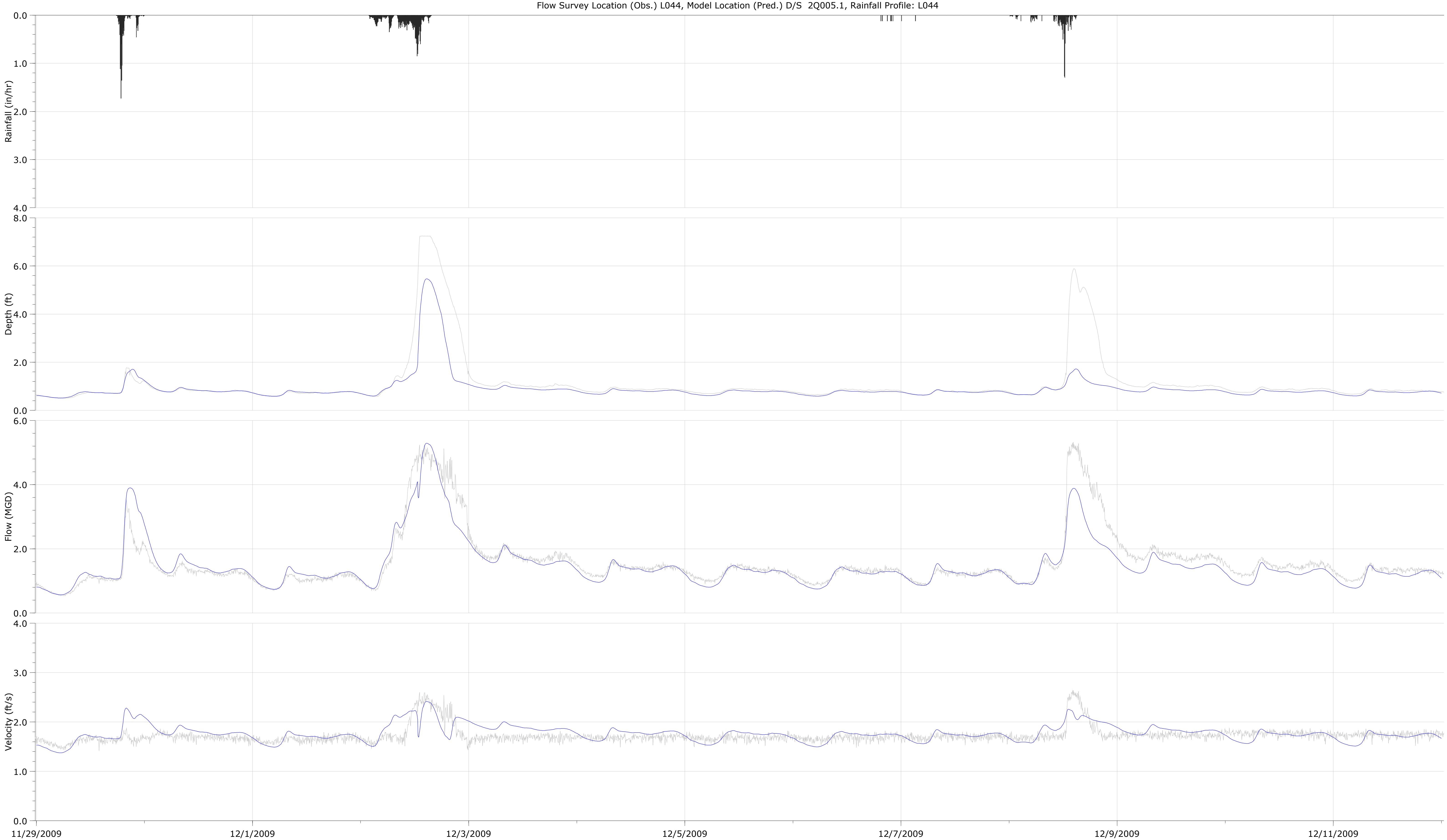
Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 36 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.229	2.220	0.014							
Obs.				0.225	7.038	0.102	3.365	11.962	0.640	4.840
...m B20>Final Rain Data 3-10-2010 Fixed				0.286	3.597	0.286	3.147	10.827	1.277	3.263

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L044, Model Location (Pred.) D/S 2Q005.1, Rainfall Profile: L044



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.184	1.728	0.013							
Obs.				0.493	7.248	0.537	5.324	20.525	1.420	2.640
...m B20>Final Rain Data 3-10-2010 Fixed				0.514	5.467	0.567	5.291	19.175	1.375	2.415

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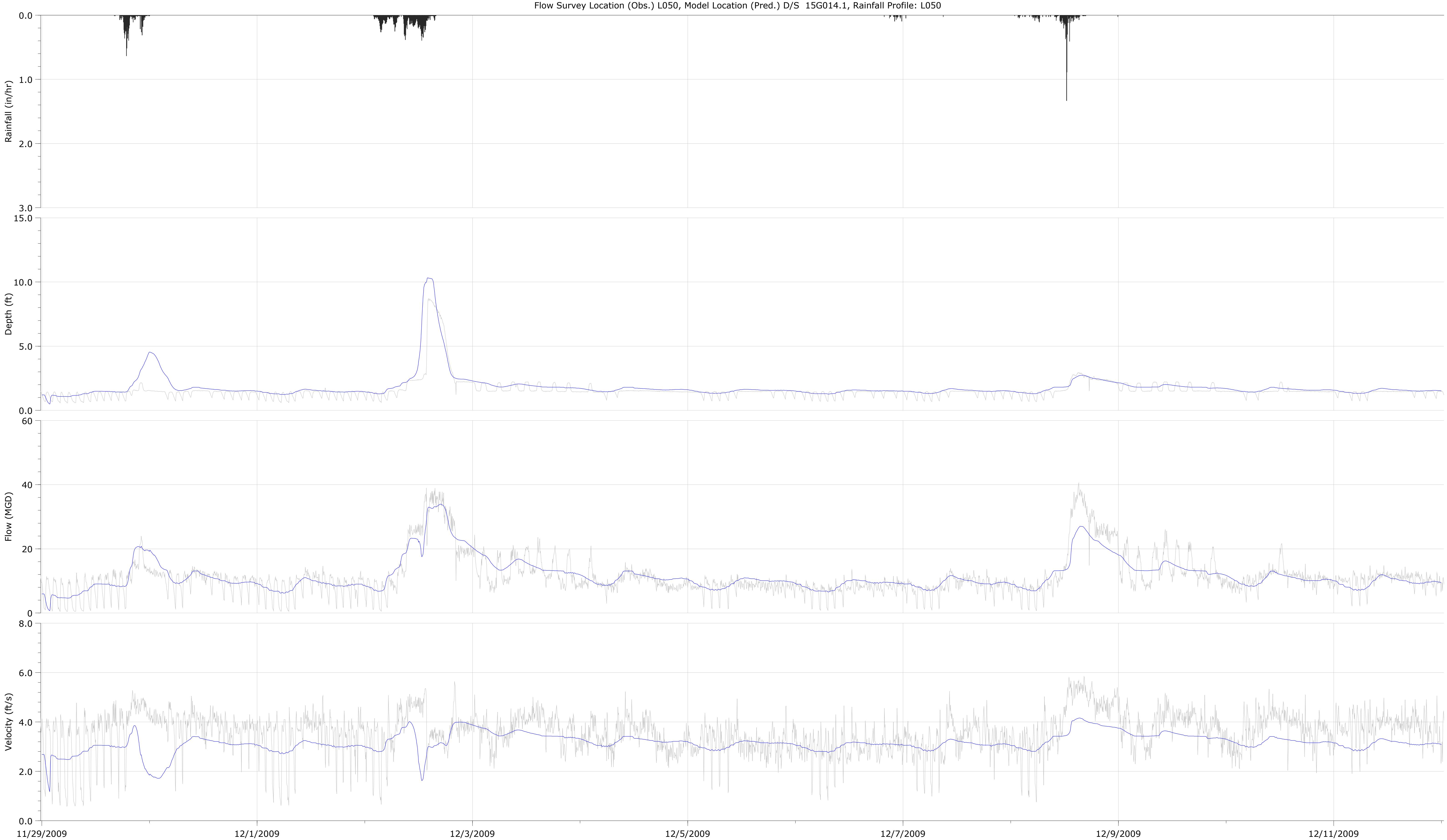
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

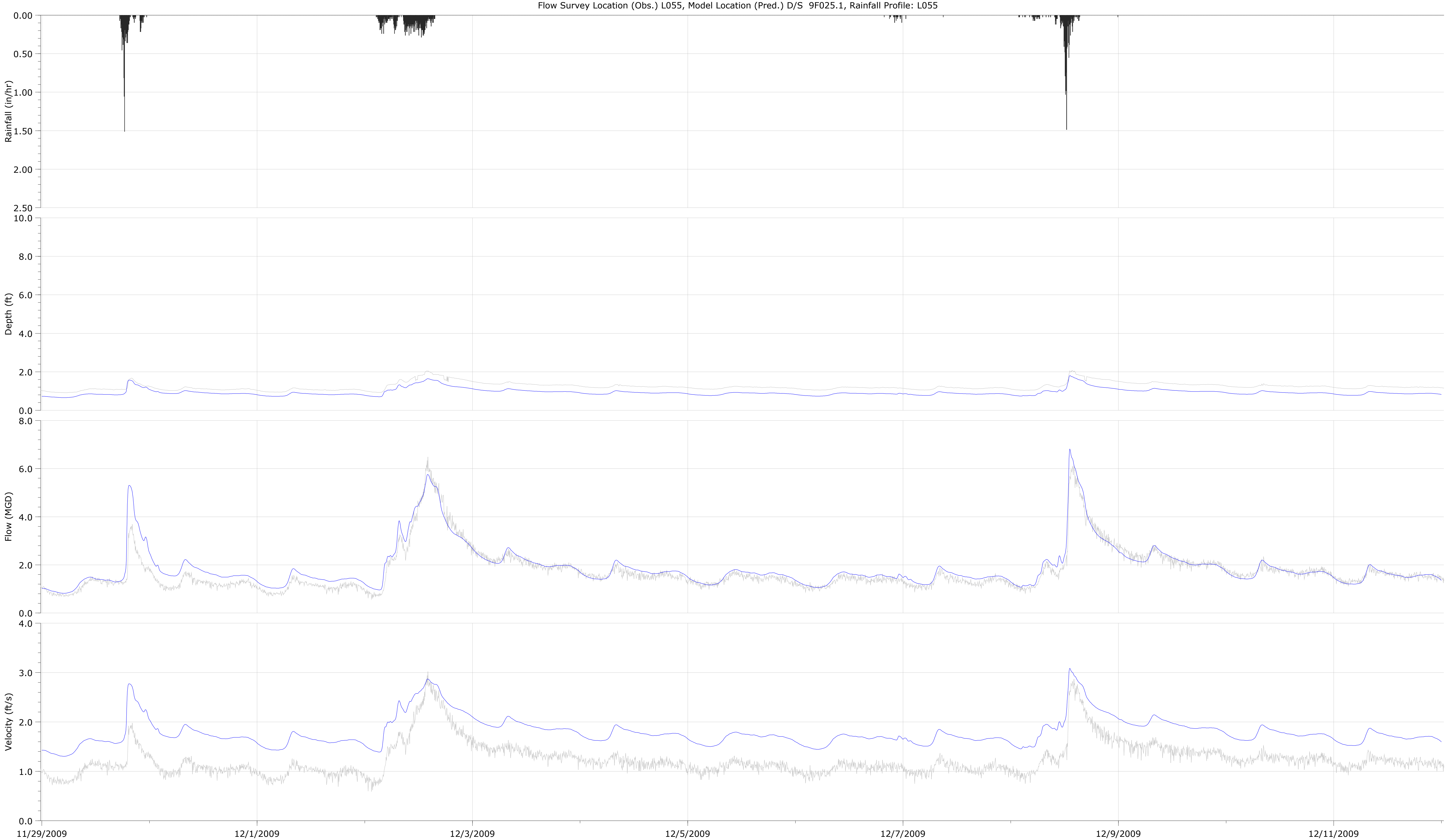
Flow Survey Location (Obs.) L050, Model Location (Pred.) D/S 15G014.1, Rainfall Profile: L050



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		2.889	1.332	0.009							
Obs.					0.577	8.698	0.458	40.454	148.639	0.583	5.841
...m B20>Final Rain Data 3-10-2010 Fixed					0.493	10.329	0.724	33.927	151.351	1.186	4.159

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 39 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

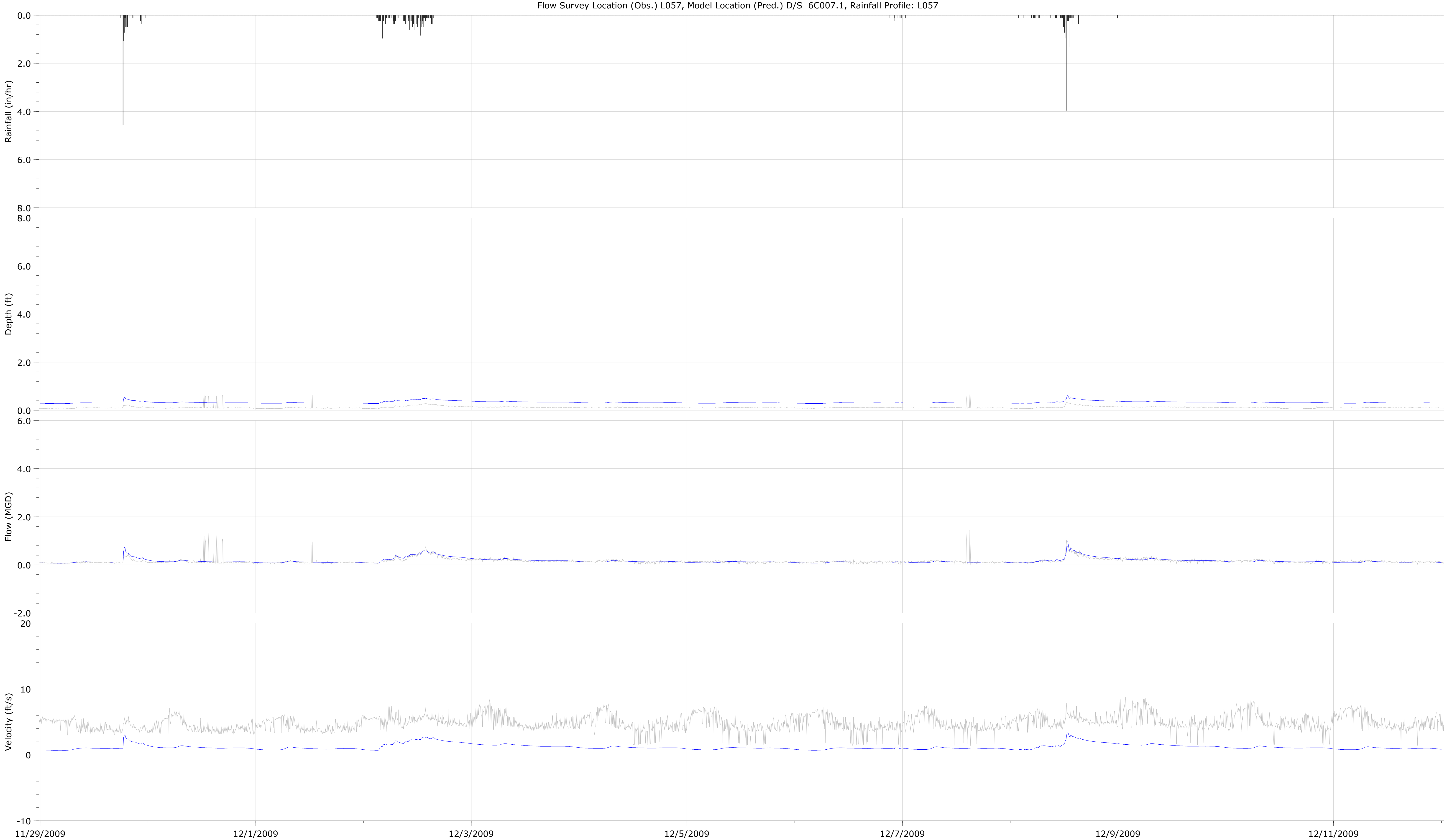
Flow Survey Location (Obs.) L055, Model Location (Pred.) D/S 9F025.1, Rainfall Profile: L055



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.394	1.512	0.011							
Obs.				0.917	2.073	0.580	6.489	22.679	0.590	3.020
...m B20>Final Rain Data 3-10-2010 Fixed				0.659	1.803	0.818	6.813	24.559	1.304	3.086

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 40 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

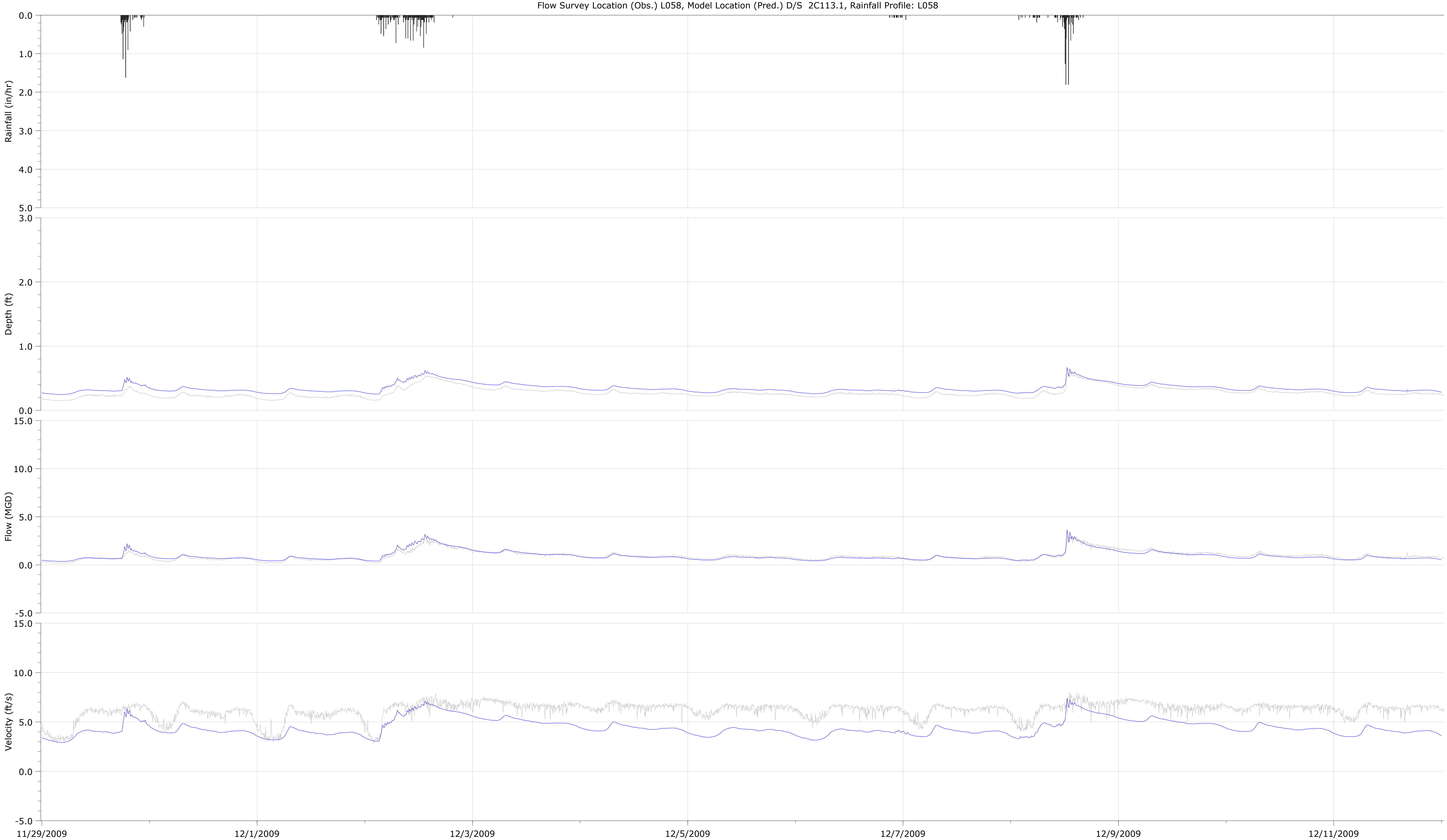
Flow Survey Location (Obs.) L057, Model Location (Pred.) D/S 6C007.1, Rainfall Profile: L057



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.560	4.560	0.011							
Obs.				0.059	0.628	0.024	1.439	2.022	1.210	8.750
...m B20>Final Rain Data 3-10-2010 Fixed				0.279	0.611	0.067	0.959	2.133	0.648	3.462

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 41 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L058, Model Location (Pred.) D/S 2C113.1, Rainfall Profile: L058



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.205	1.800	0.010							
Obs.				0.147	0.568	0.178	3.001	12.198	2.870	7.980
...m B20>Final Rain Data 3-10-2010 Fixed				0.246	0.663	0.356	3.587	11.920	2.917	7.372

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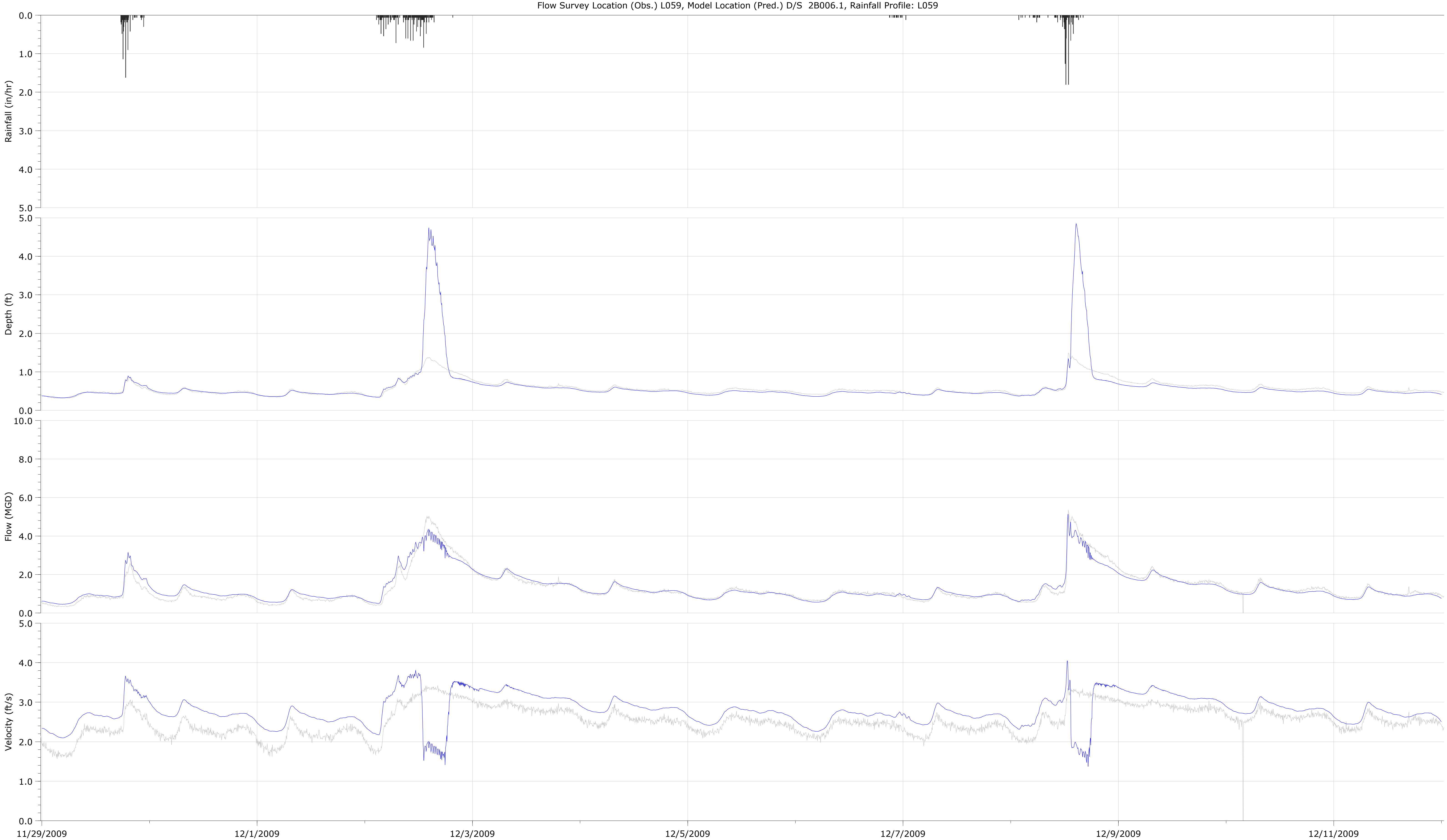
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

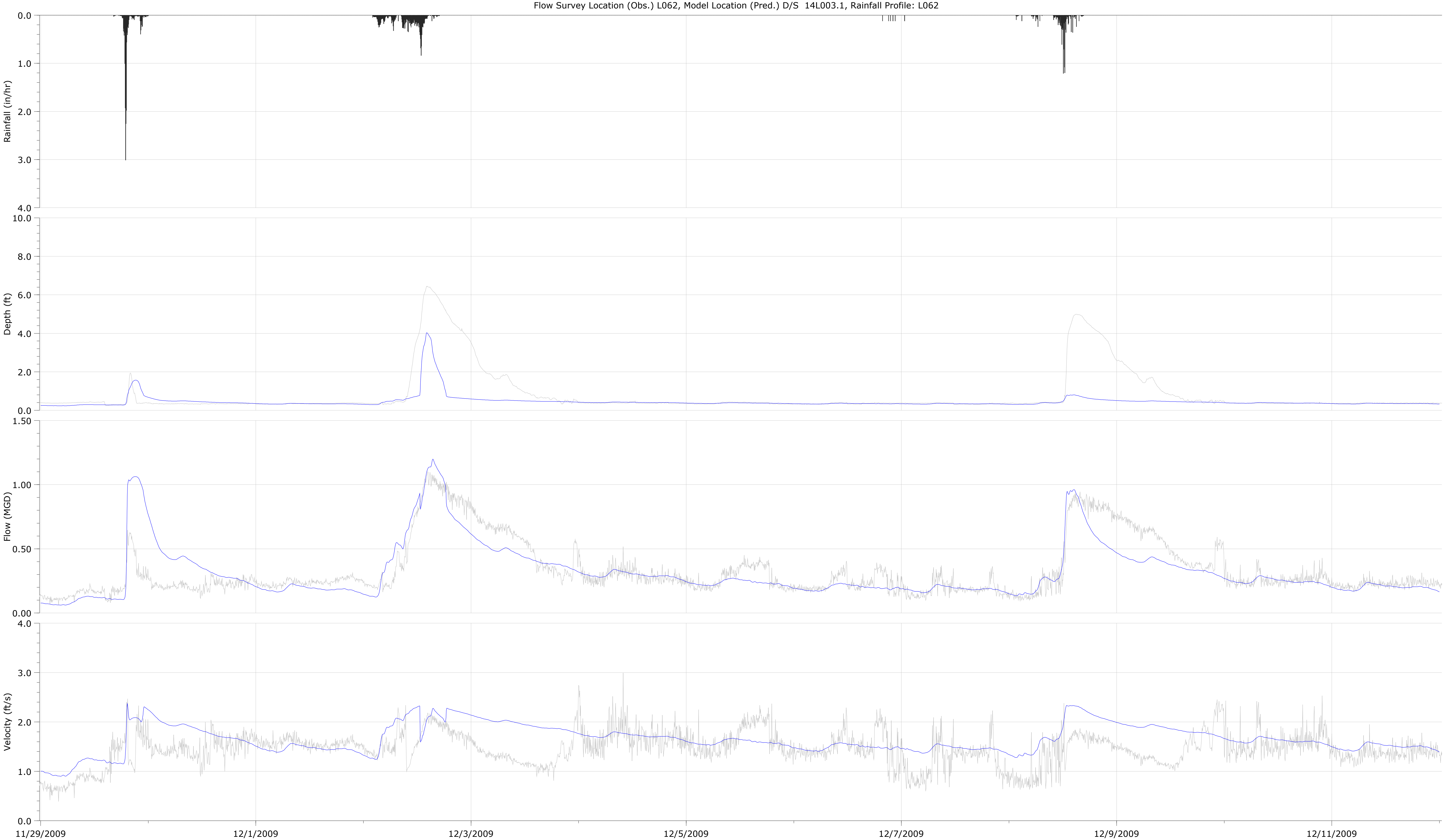
Flow Survey Location (Obs.) L059, Model Location (Pred.) D/S 2B006.1, Rainfall Profile: L059



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.205	1.800	0.010							
Obs.				0.315	1.485	0.000	5.326	16.729	0.000	3.414
...m B20>Final Rain Data 3-10-2010 Fixed				0.325	4.850	0.450	5.141	16.887	1.371	4.045

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 43 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

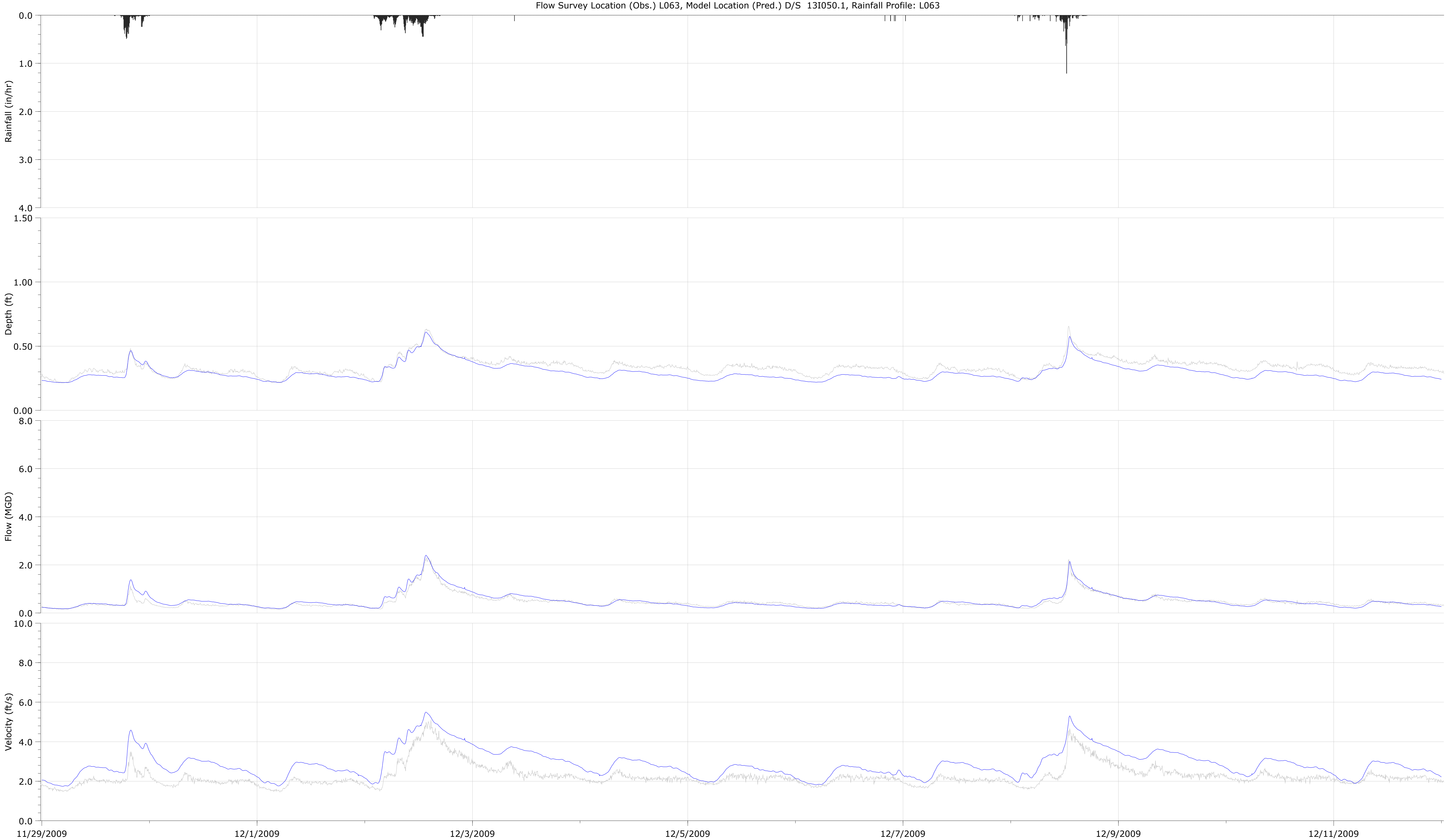
Flow Survey Location (Obs.) L062, Model Location (Pred.) D/S 14L003.1, Rainfall Profile: L062



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.202	3.012	0.013							
Obs.				0.247	6.450	0.065	1.102	4.332	0.390	2.990
...m B20>Final Rain Data 3-10-2010 Fixed				0.236	4.029	0.062	1.199	4.108	0.900	2.373

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 44 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

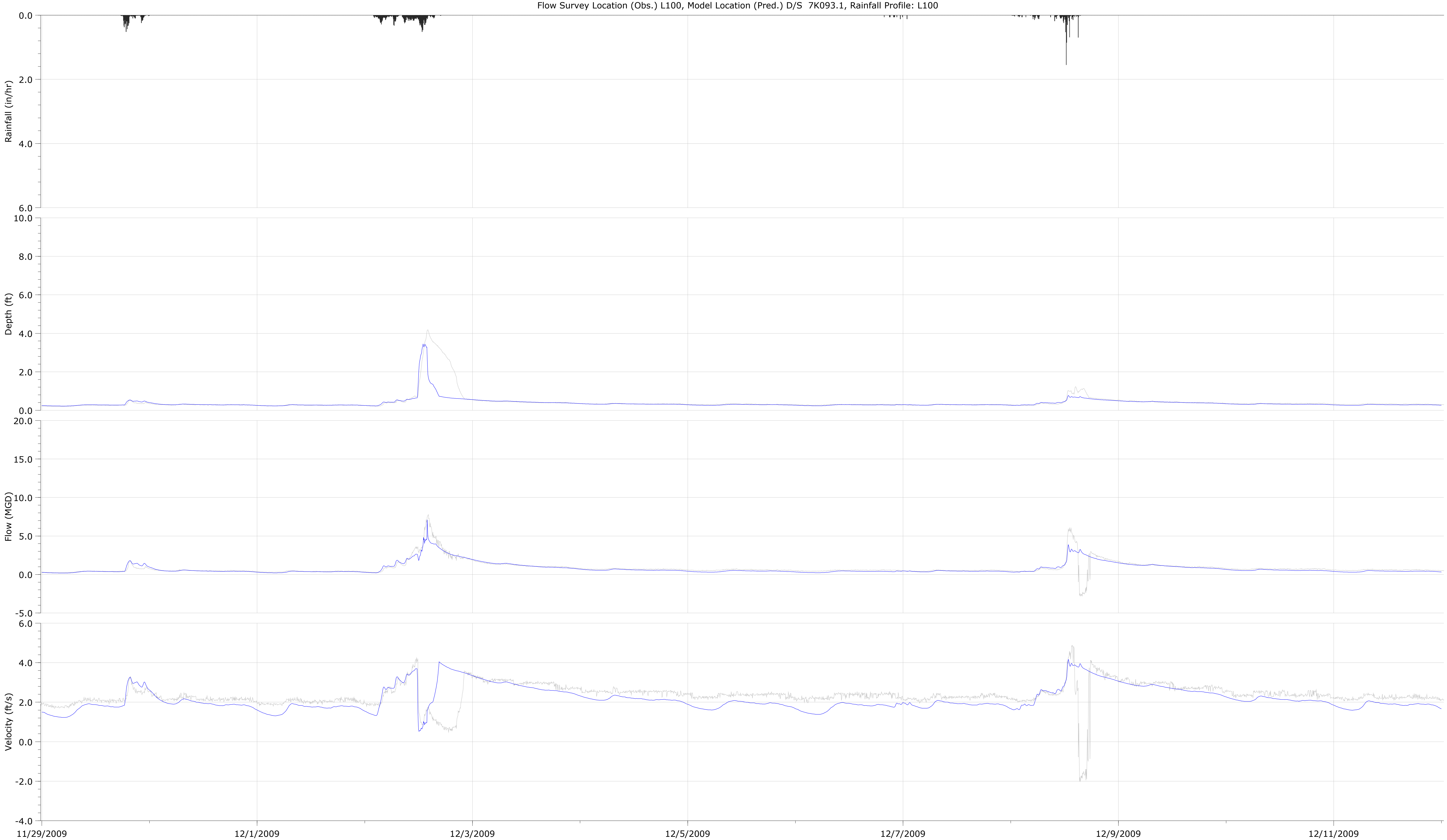
Flow Survey Location (Obs.) L063, Model Location (Pred.) D/S 13I050.1, Rainfall Profile: L063



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	2.796	1.212	0.009							
Obs.				0.213	0.655	0.149	2.291	6.000	1.454	5.092
...m B20>Final Rain Data 3-10-2010 Fixed				0.215	0.610	0.175	2.397	6.358	1.739	5.493

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 45 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L100, Model Location (Pred.) D/S 7K093.1, Rainfall Profile: L100



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	2.930	1.548	0.009							
Obs.				0.195	4.184	-2.806	7.772	10.882	-2.018	4.869
...m B20>Final Rain Data 3-10-2010 Fixed				0.222	3.435	0.187	7.089	9.920	0.524	4.161

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 46 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L101, Model Location (Pred.) D/S -8G006.1, Rainfall Profile: L101

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.674	2.028	0.015							
Obs.				0.198	0.565	0.151	1.537	7.315	1.400	3.210
...m B20>Final Rain Data 3-10-2010 Fixed				0.233	0.672	0.235	2.033	8.218	1.785	3.395

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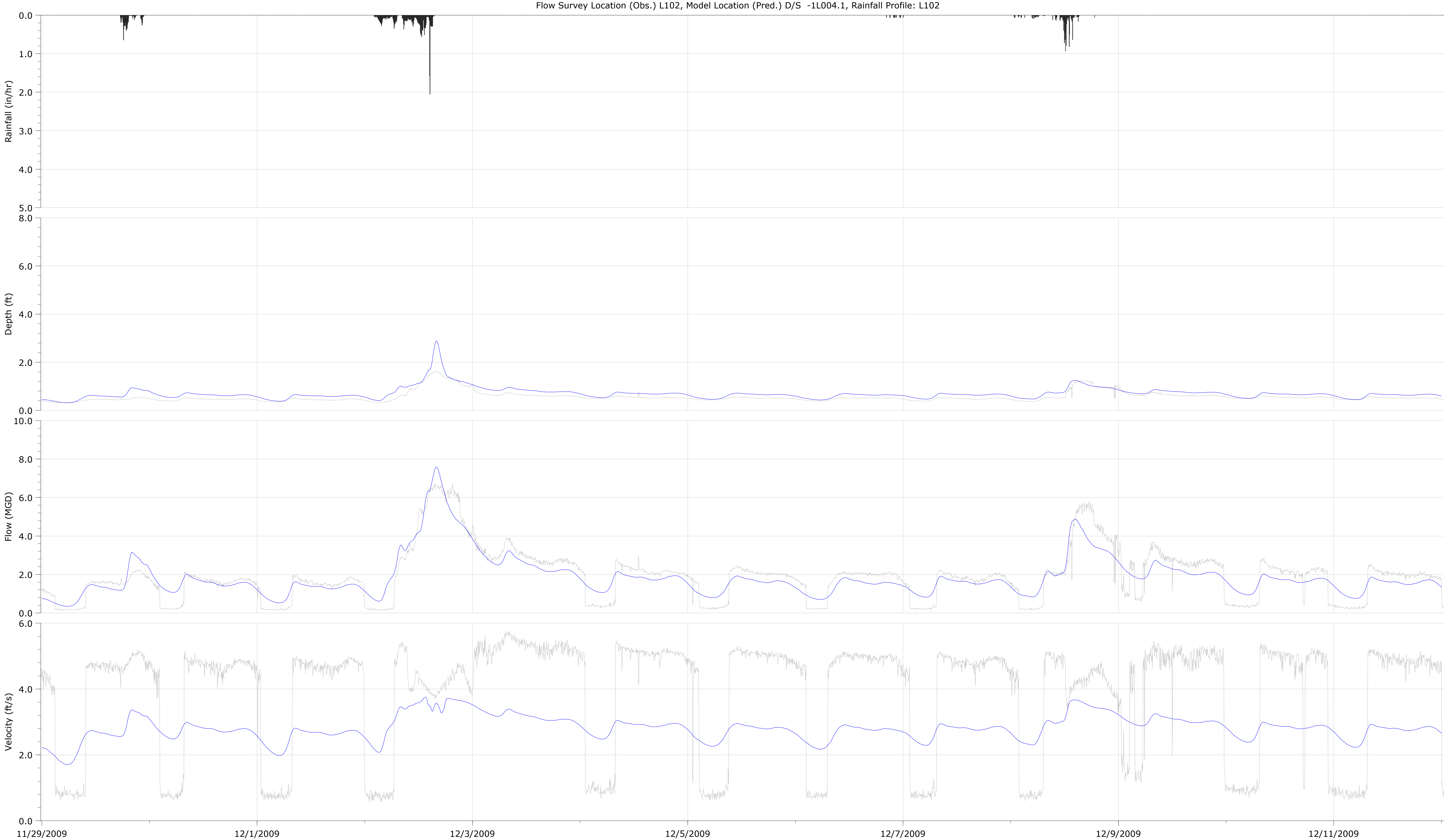
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L102, Model Location (Pred.) D/S -1L004.1, Rainfall Profile: L102



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.772	2.052	0.012							
Obs.				0.316	1.636	0.129	6.692	24.790	0.560	5.747
...m B20>Final Rain Data 3-10-2010 Fixed				0.310	2.881	0.341	7.585	24.034	1.699	3.754

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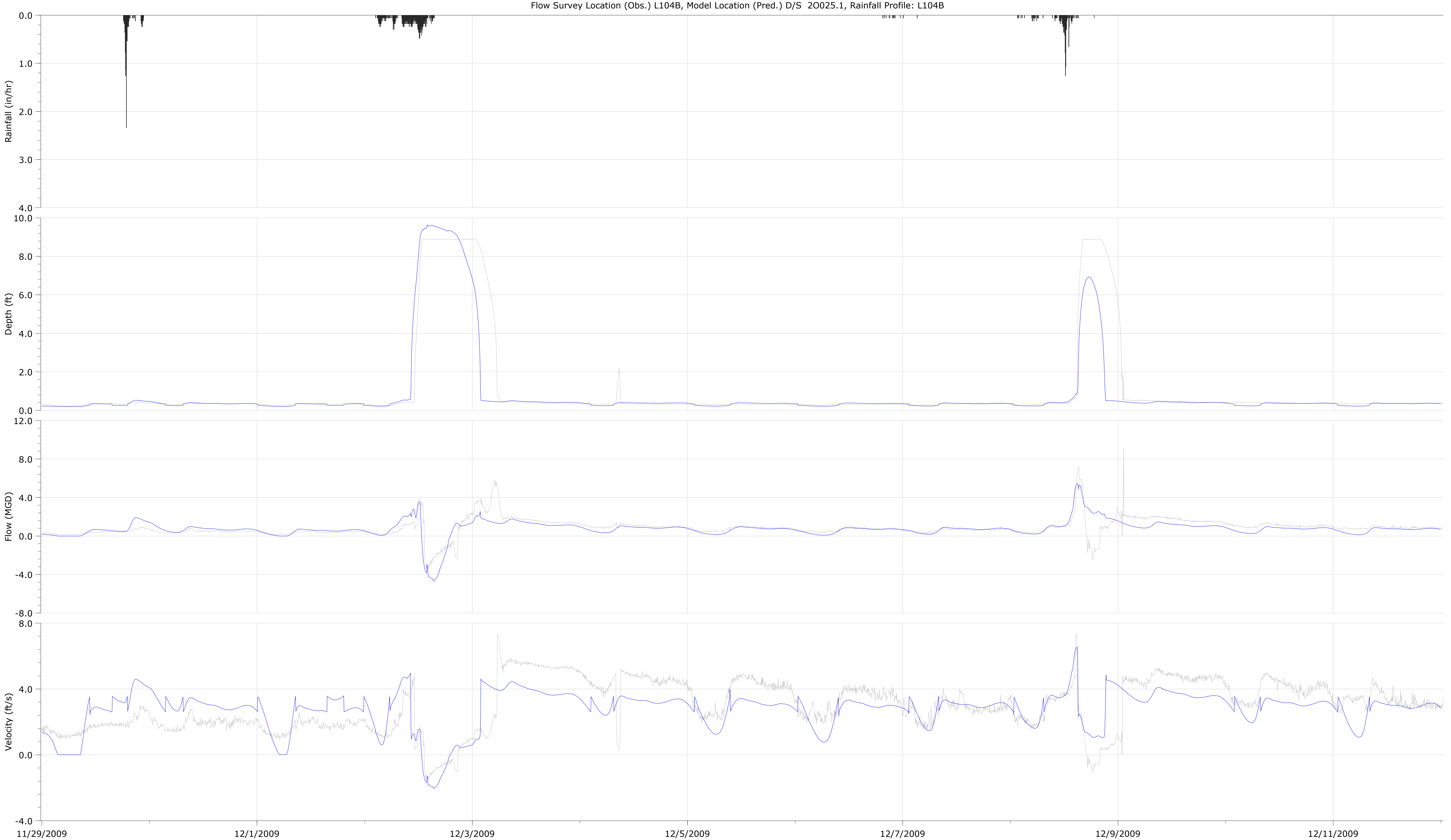
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.937	1.764	0.013							
Obs.				0.477	8.809	-4.952	5.904	31.577	-0.803	3.131
...m B20>Final Rain Data 3-10-2010 Fixed				0.508	7.879	-0.152	8.135	33.680	-0.023	3.256

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

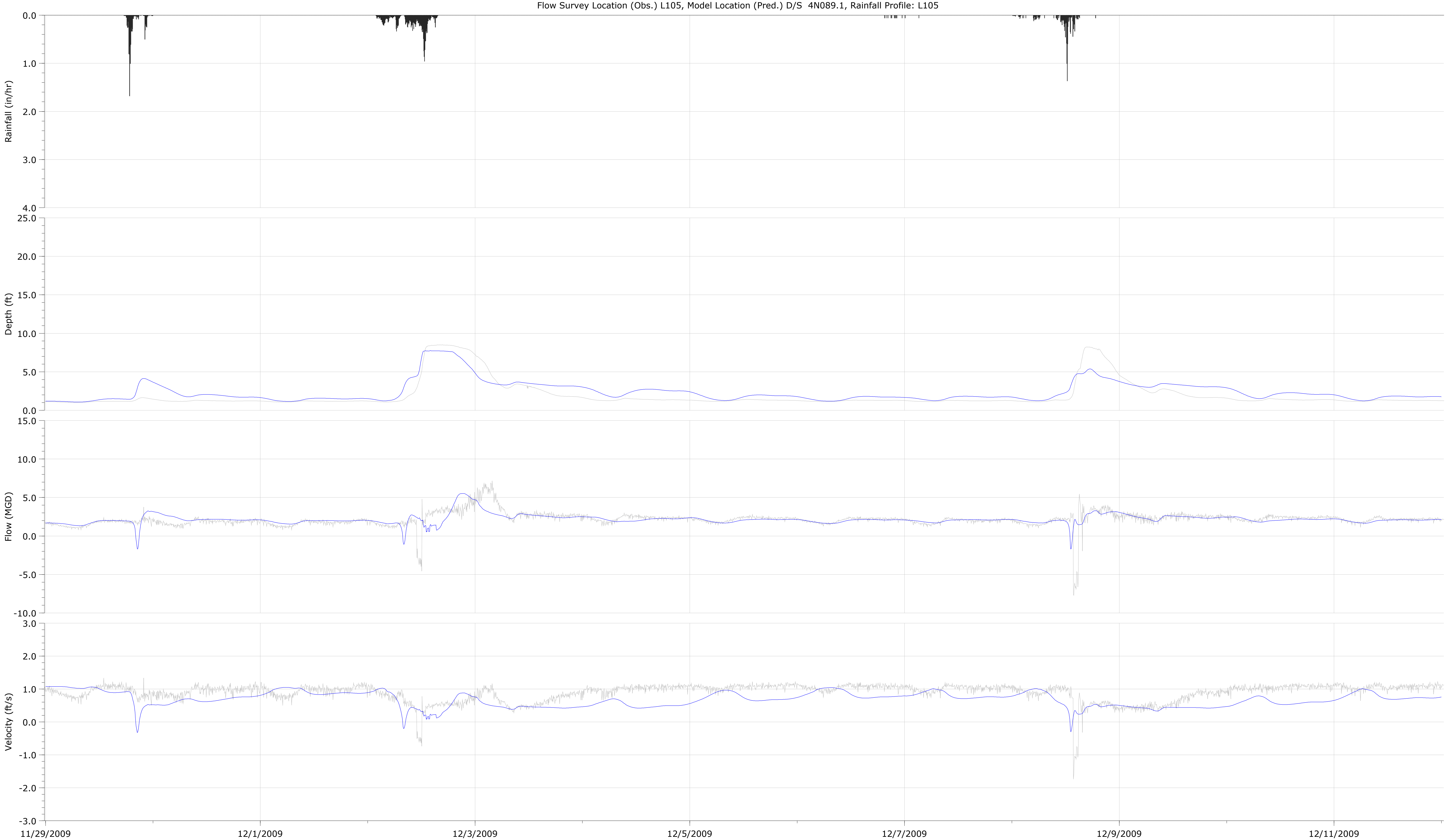
Flow Survey Location (Obs.) L104B, Model Location (Pred.) D/S 2O025.1, Rainfall Profile: L104B



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.560	2.340	0.011							
Obs.				0.214	8.914	-3.384	9.117	11.226	-1.448	7.341
...m B20>Final Rain Data 3-10-2010 Fixed				0.200	9.633	-4.684	5.464	9.734	-2.039	6.546

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L105, Model Location (Pred.) D/S 4N089.1, Rainfall Profile: L105



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.969	1.680	0.013							
Obs.				1.022	8.508	-7.714	7.168	28.211	-1.738	1.336
...m B20>Final Rain Data 3-10-2010 Fixed				1.072	7.758	-1.693	5.523	28.009	-0.322	1.077

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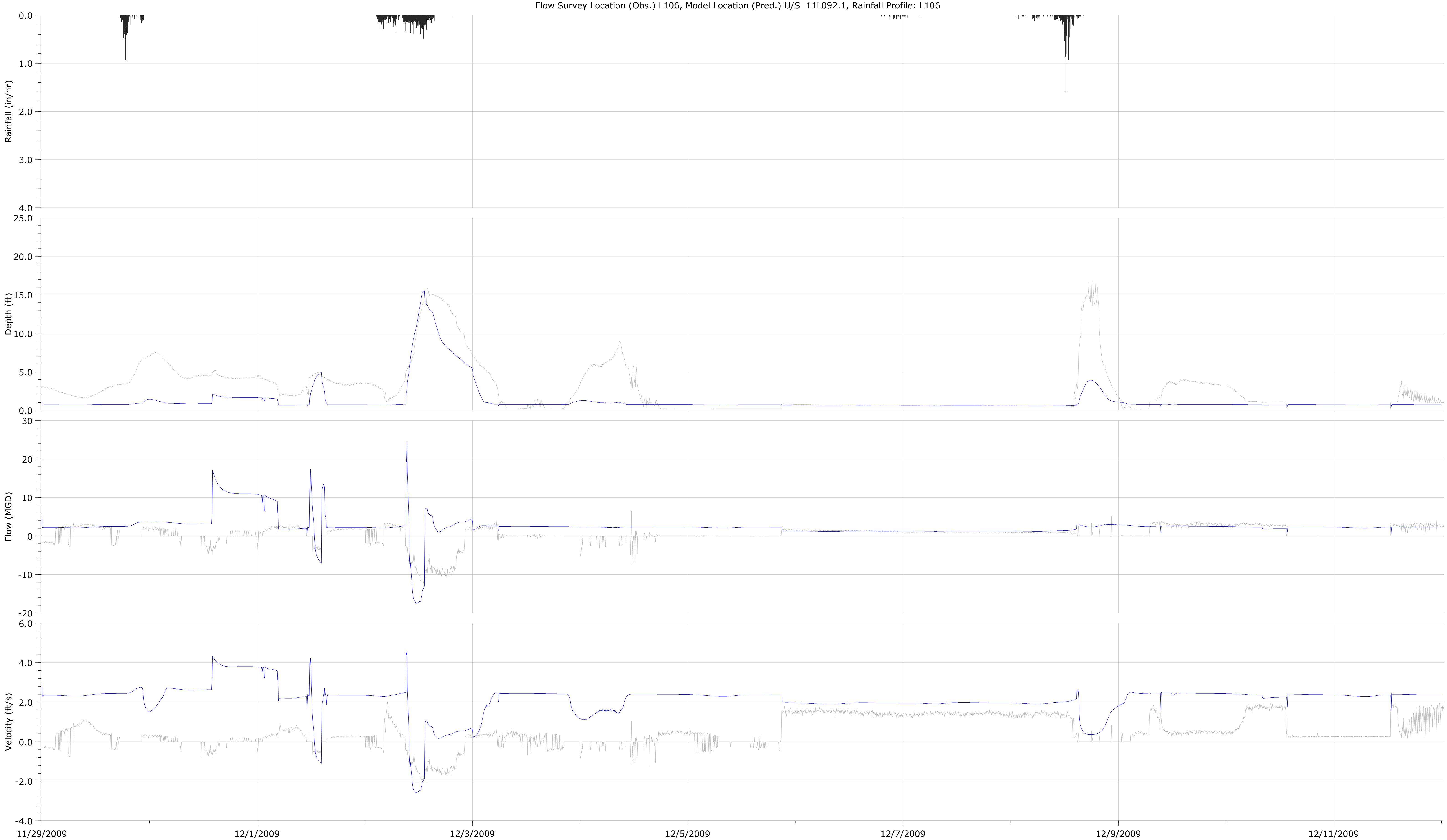
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

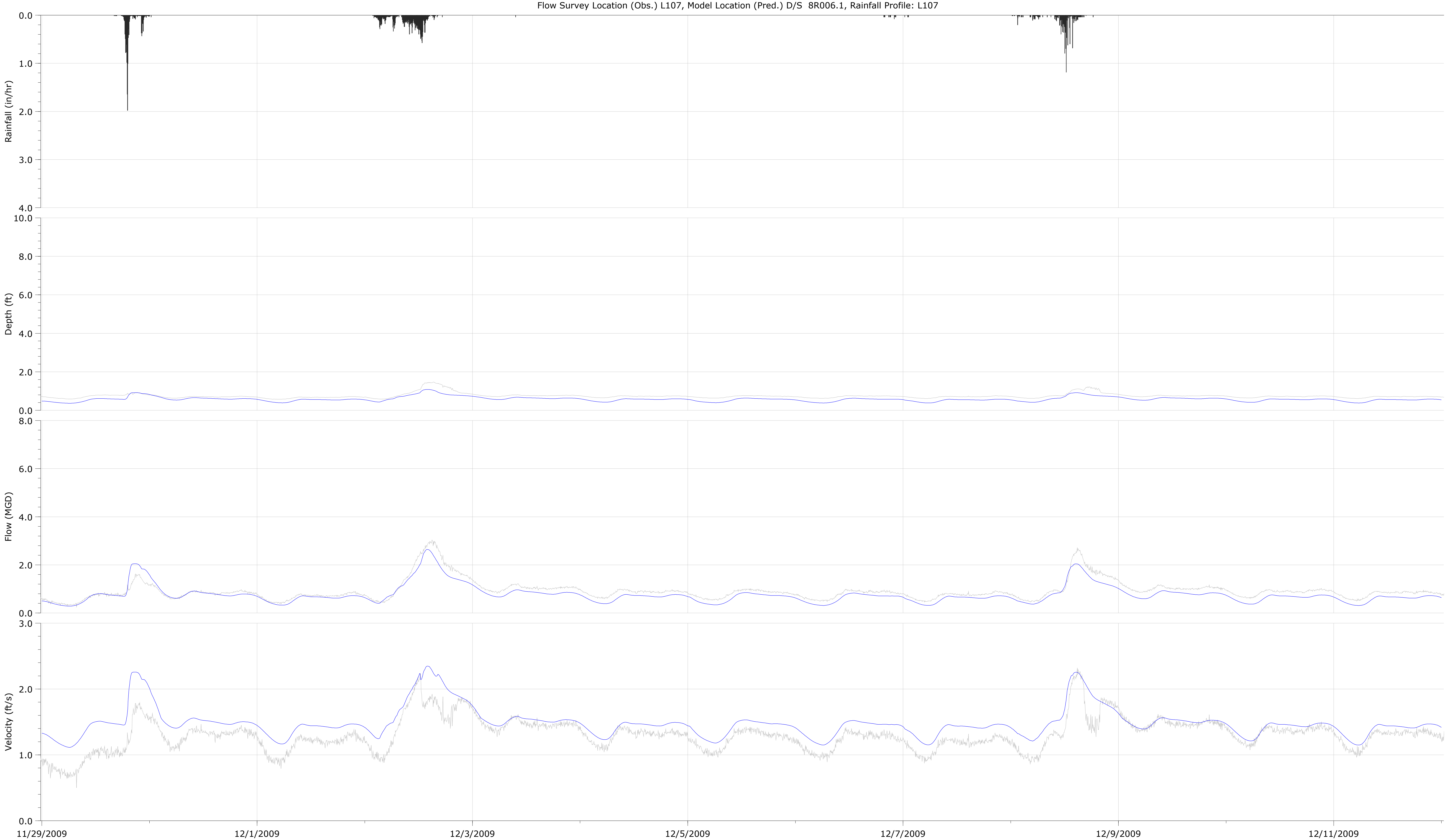
Flow Survey Location (Obs.) L106, Model Location (Pred.) U/S 11L092.1, Rainfall Profile: L106



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.406	1.584	0.011							
Obs.				0.167	16.763	-12.211	6.575	6.719	-1.919	2.042
...m B20>Final Rain Data 3-10-2010 Fixed				0.447	15.508	-17.492	24.385	32.030	-2.588	4.589

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L107, Model Location (Pred.) D/S 8R006.1, Rainfall Profile: L107



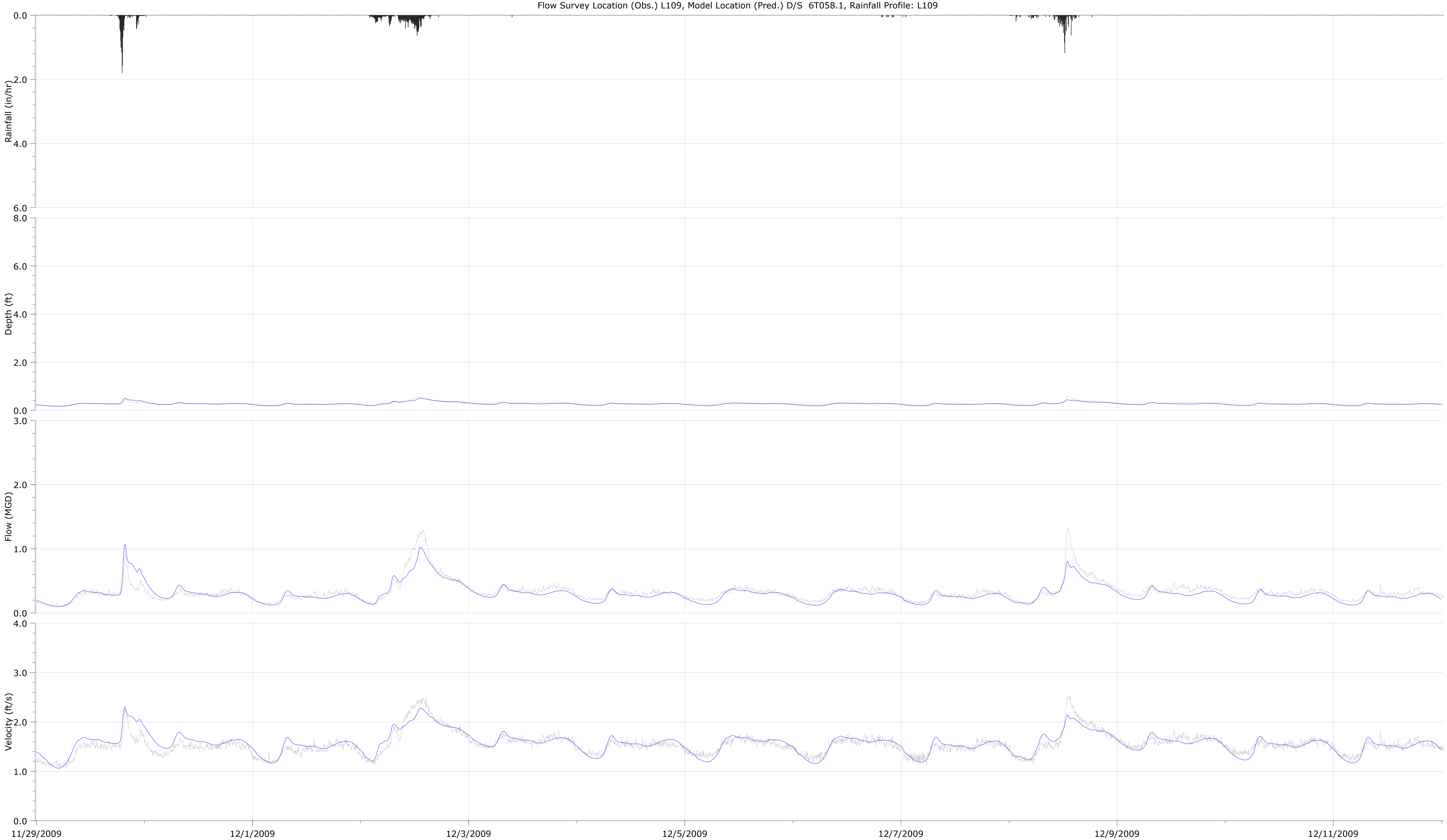
	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.124	1.980	0.013							
Obs.				0.574	1.468	0.261	3.031	11.942	0.500	2.320
...m B20>Final Rain Data 3-10-2010 Fixed				0.365	1.085	0.282	2.639	9.909	1.113	2.347

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 53 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L108, Model Location (Pred.) D/S 6T060.2, Rainfall Profile: L108

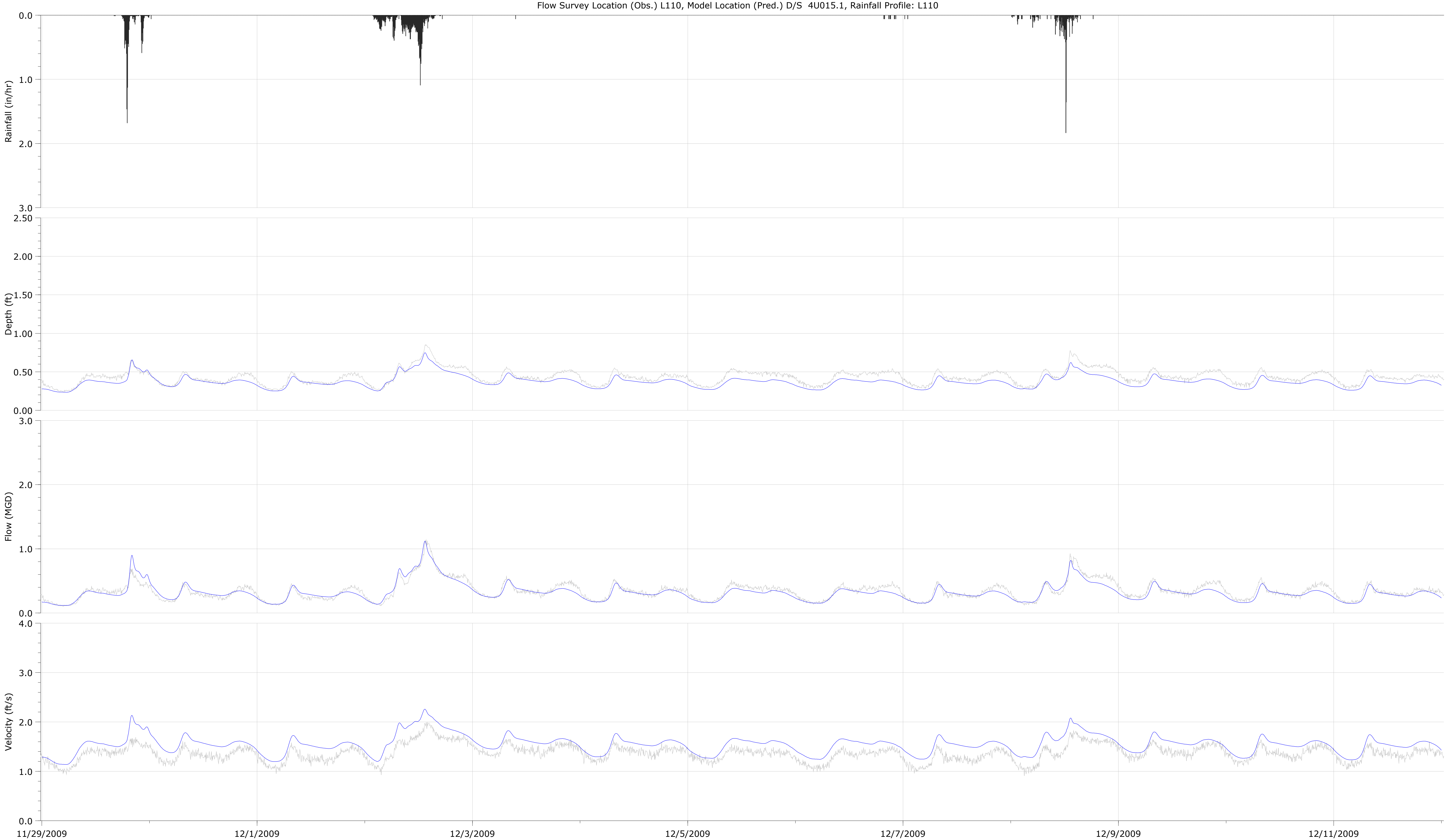
	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.157	1.668	0.013							
Obs.				0.209	0.530	0.170	1.741	7.174	1.323	3.627
...m B20>Final Rain Data 3-10-2010 Fixed				0.143	0.472	0.148	1.751	6.858	1.491	4.208

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 54 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.056	1.800	0.013							
Obs.				0.178	0.563	0.109	1.312	4.261	1.072	2.538
...m B20>Final Rain Data 3-10-2010 Fixed				0.169	0.508	0.099	1.066	3.902	1.063	2.306

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 55 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.294	1.836	0.014							
Obs.				0.245	0.853	0.103	1.137	4.442	0.910	2.000
...m B20>Final Rain Data 3-10-2010 Fixed				0.235	0.748	0.117	1.119	4.148	1.138	2.259

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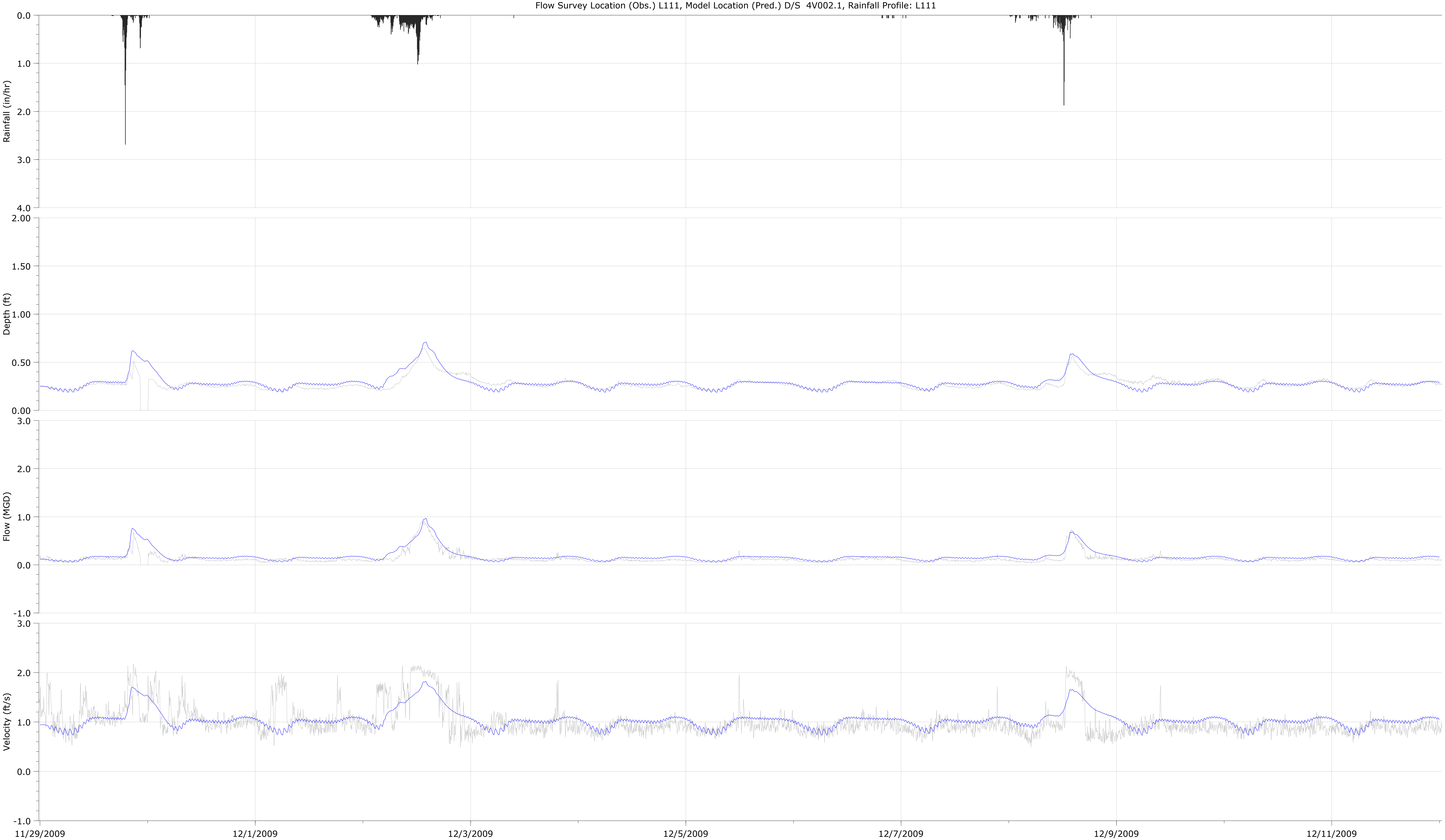
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

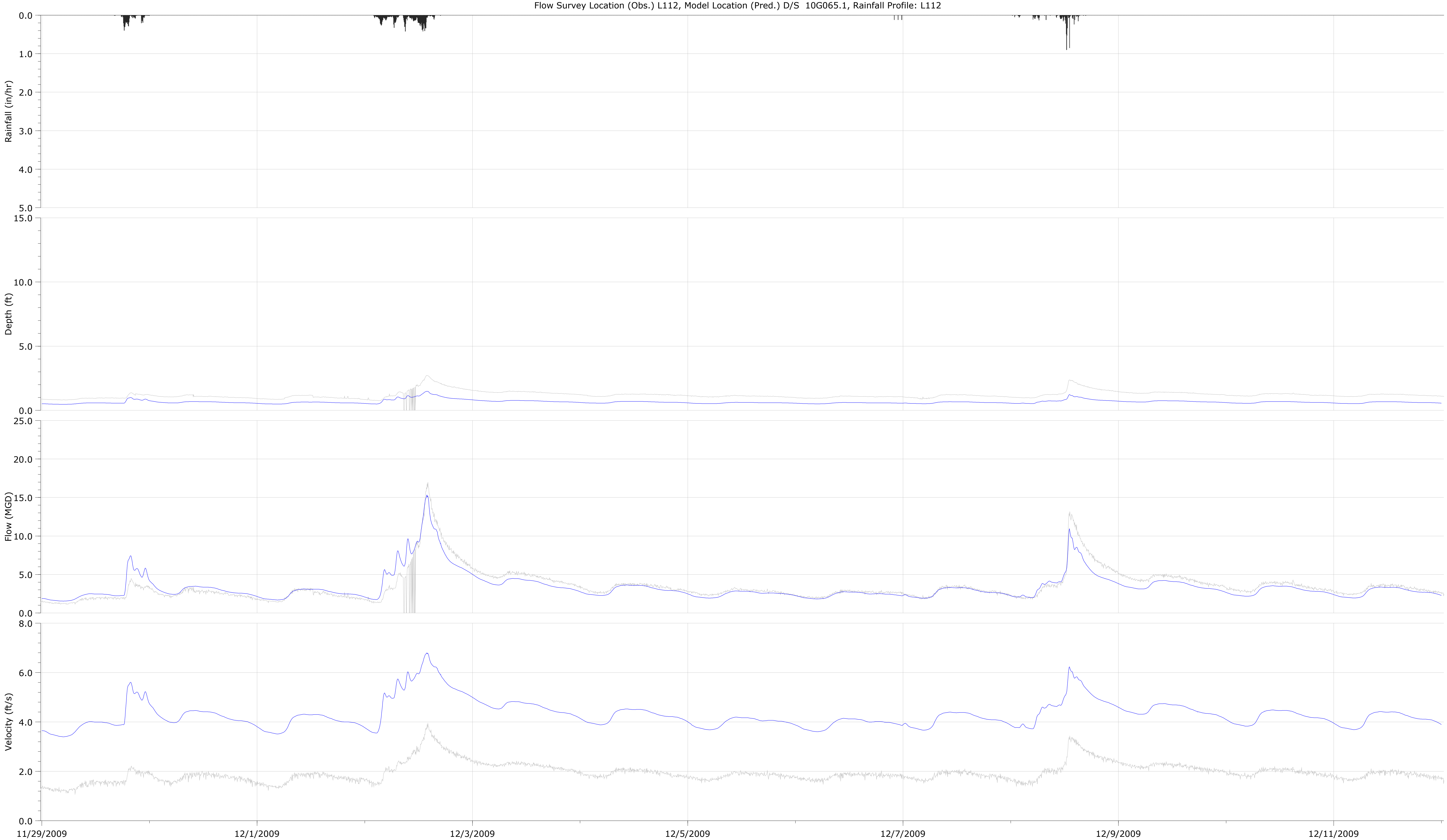
Flow Survey Location (Obs.) L111, Model Location (Pred.) D/S 4V002.1, Rainfall Profile: L111



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.470	2.688	0.014							
Obs.				0.000	0.644	0.000	0.905	1.674	0.486	2.182
...m B20>Final Rain Data 3-10-2010 Fixed				0.186	0.711	0.059	0.970	2.236	0.725	1.822

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 57 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

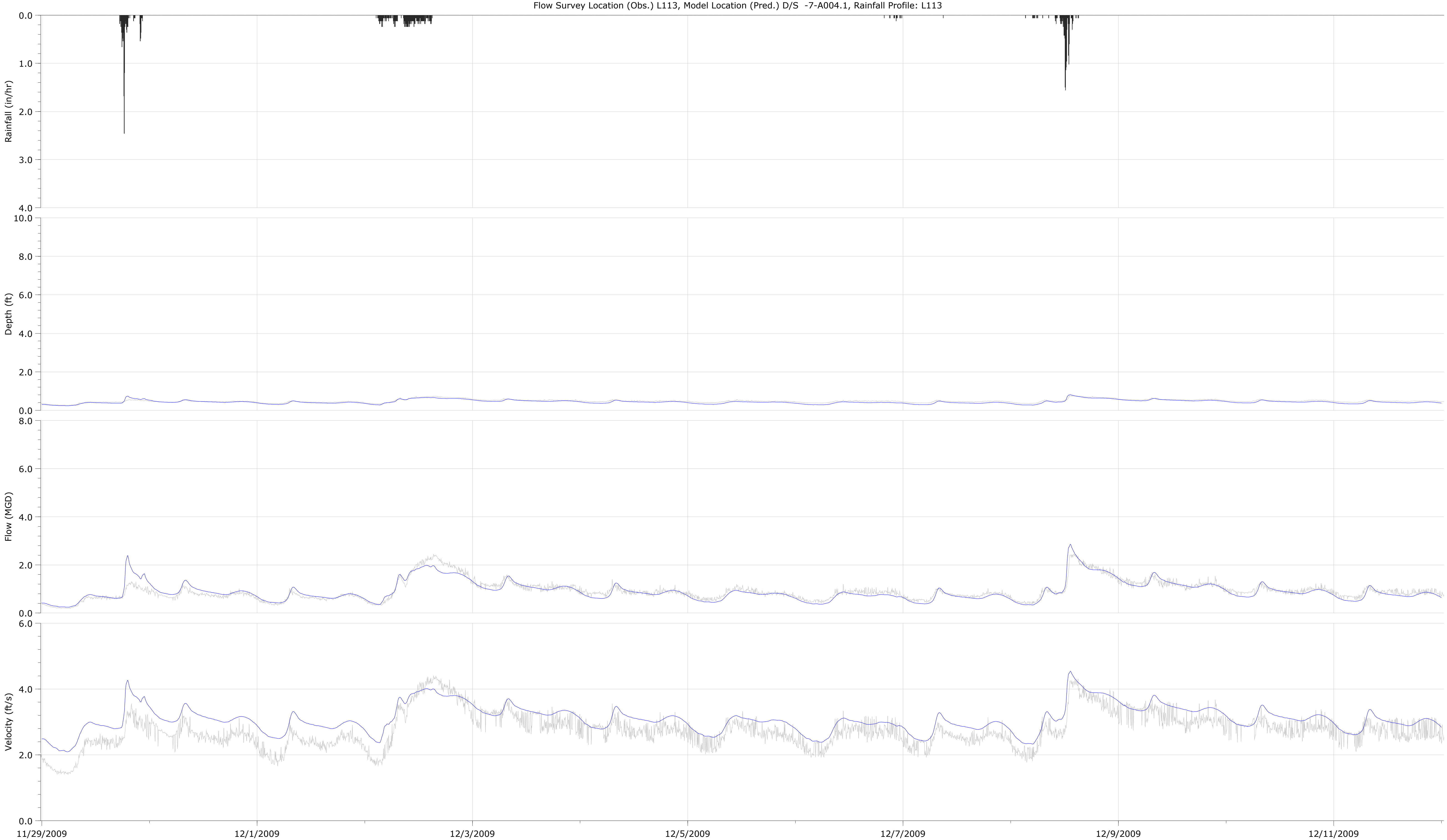
Flow Survey Location (Obs.) L112, Model Location (Pred.) D/S 10G065.1, Rainfall Profile: L112



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	2.569	0.900	0.008							
Obs.				0.000	2.709	0.000	16.953	45.373	1.084	3.930
...m B20>Final Rain Data 3-10-2010 Fixed				0.467	1.484	1.542	15.313	43.210	3.399	6.796

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 58 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L113, Model Location (Pred.) D/S -7-A004.1, Rainfall Profile: L113



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.645	2.460	0.012							
Obs.				0.259	0.760	0.186	2.447	11.974	1.408	4.398
...m B20>Final Rain Data 3-10-2010 Fixed				0.235	0.809	0.240	2.852	11.713	2.094	4.539

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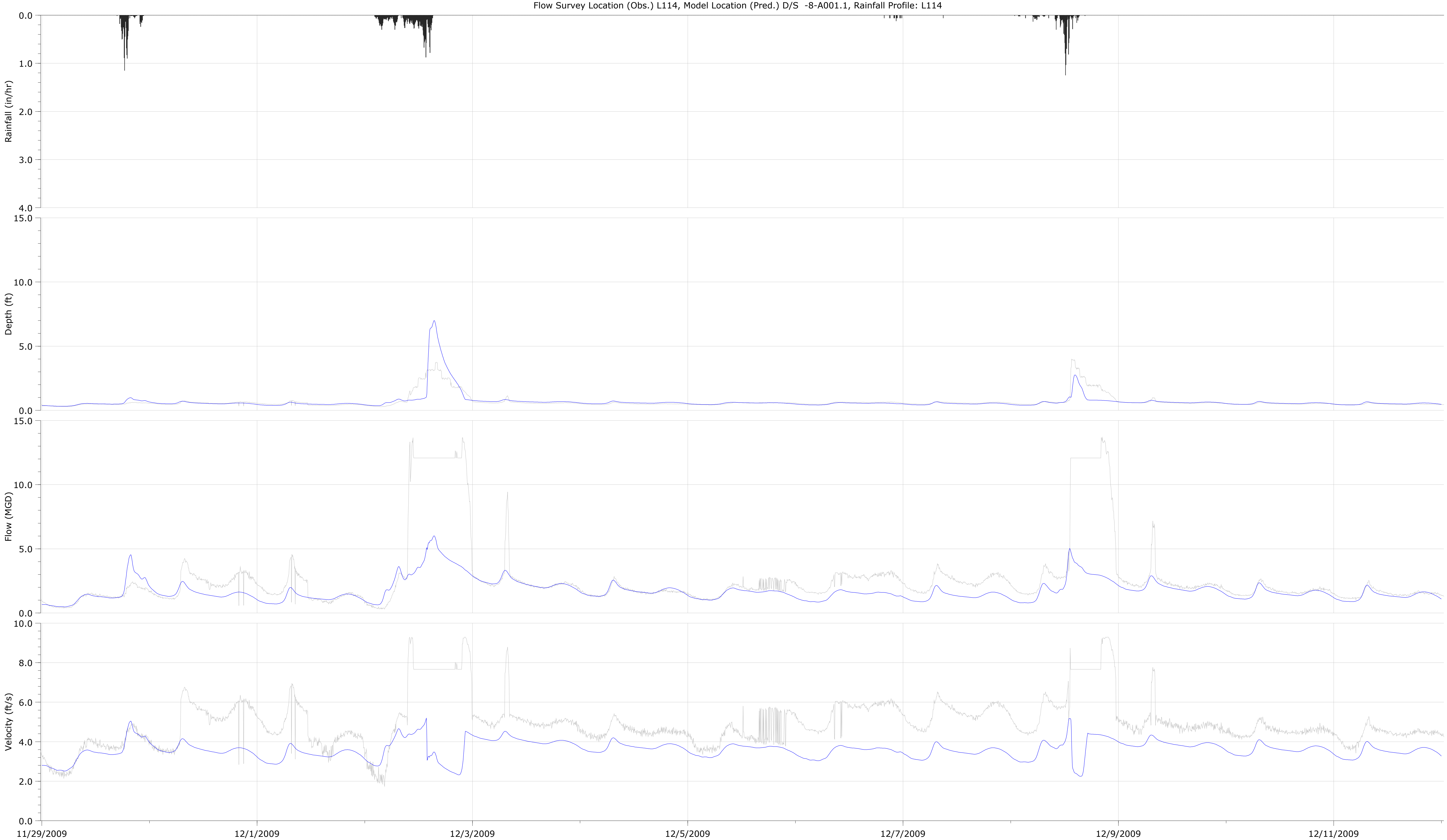
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

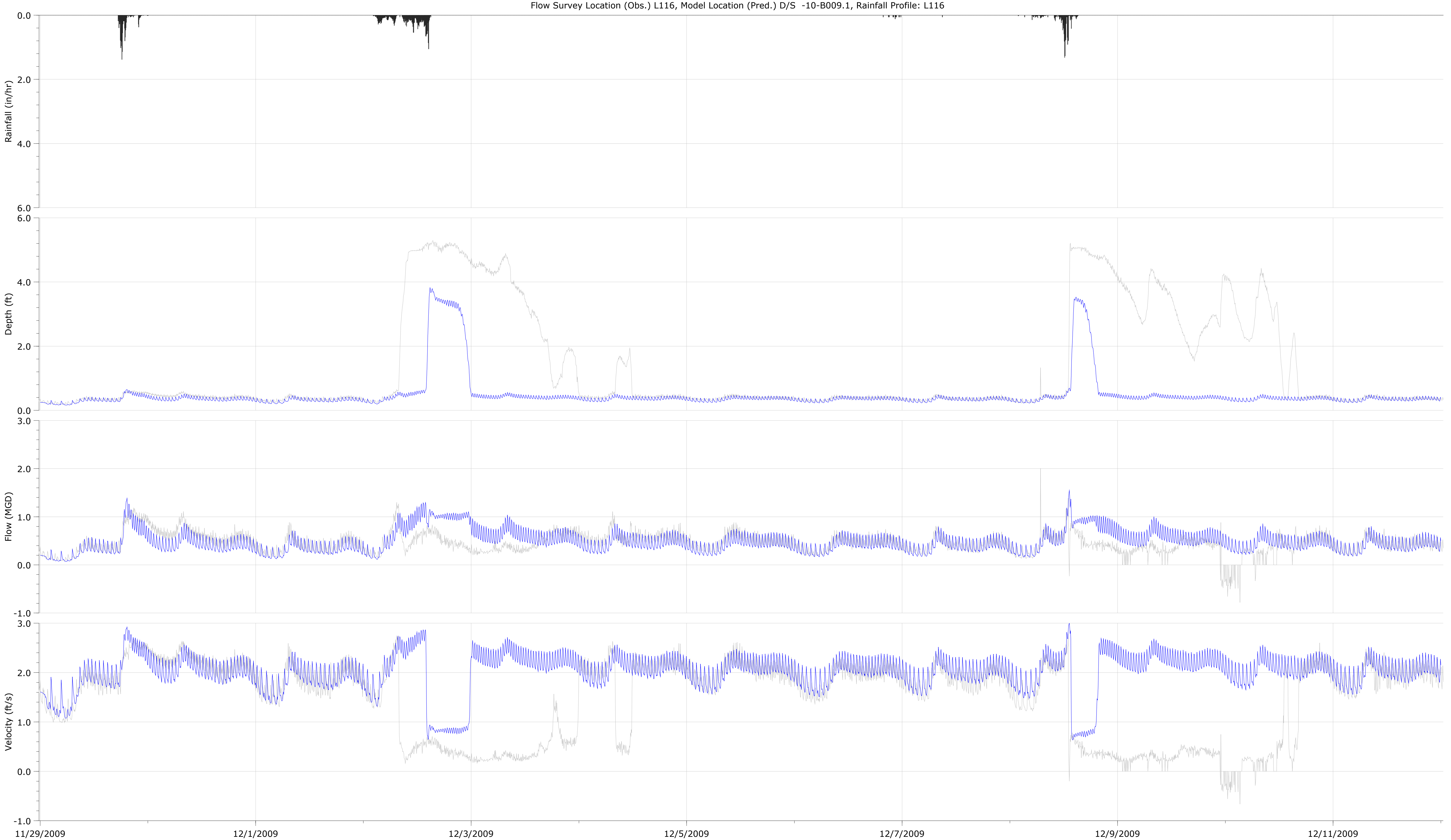
Flow Survey Location (Obs.) L114, Model Location (Pred.) D/S -8-A001.1, Rainfall Profile: L114



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.167	1.248	0.013							
Obs.				0.283	3.982	0.304	13.660	35.745	1.750	9.293
...m B20>Final Rain Data 3-10-2010 Fixed				0.315	6.991	0.478	6.006	22.605	2.248	5.183

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L116, Model Location (Pred.) D/S -10-B009.1, Rainfall Profile: L116



		Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
		Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain		4.730	1.380	0.015							
Obs.					0.189	5.290	-0.781	2.007	5.852	-0.665	2.784
...m B20>Final Rain Data 3-10-2010 Fixed					0.162	3.819	0.072	1.547	6.283	0.634	2.998

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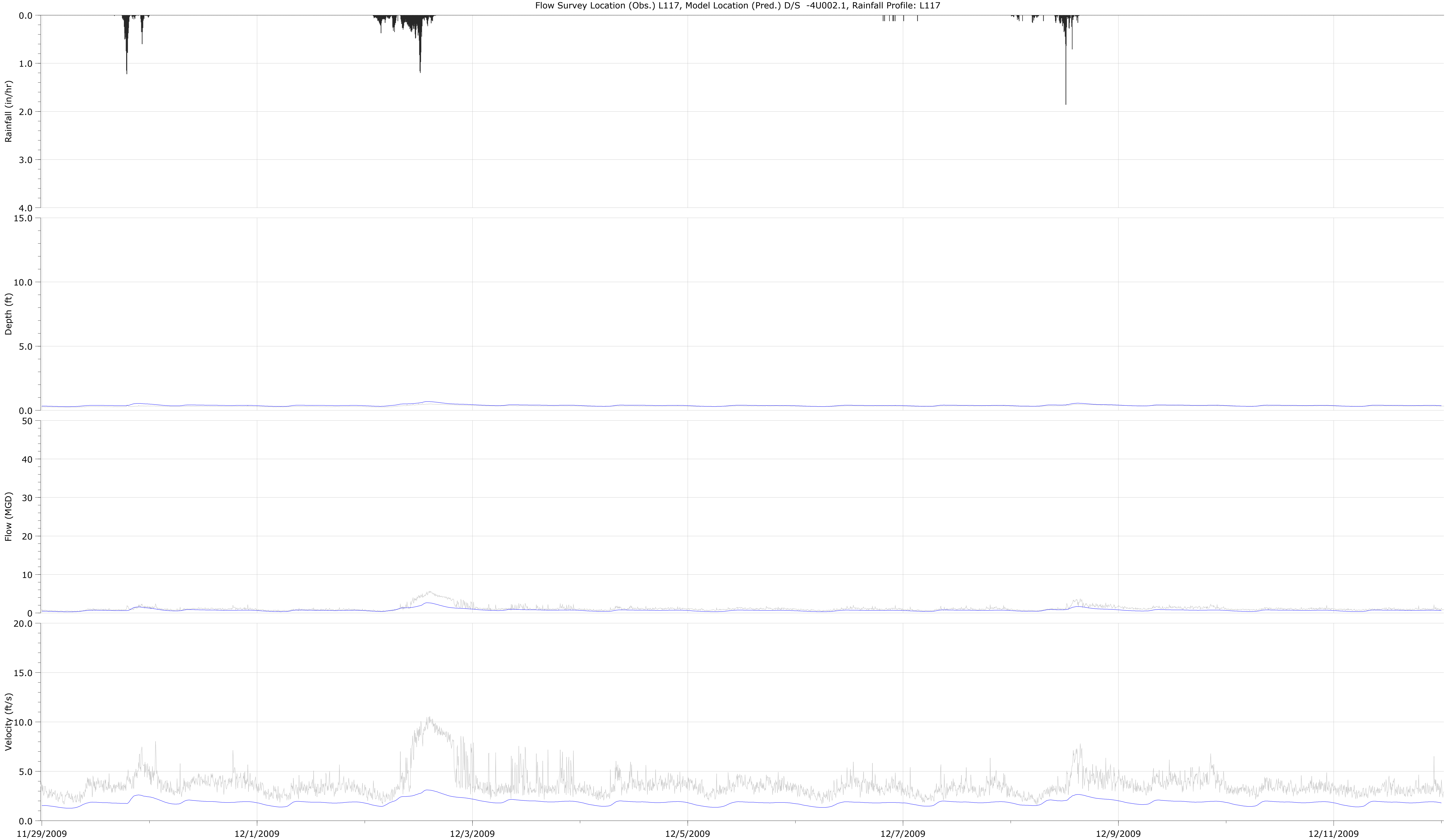
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L117, Model Location (Pred.) D/S -4U002.1, Rainfall Profile: L117



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.271	1.860	0.014							
Obs.				0.241	0.527	0.326	5.630	15.060	1.640	10.580
...m B20>Final Rain Data 3-10-2010 Fixed				0.287	0.683	0.306	2.661	9.437	1.262	3.115

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 62 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L118, Model Location (Pred.) D/S -1R001.1, Rainfall Profile: L118

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	4.196	2.424	0.013							
Obs.				0.188	0.595	0.158	1.841	5.413	1.533	3.754
...m B20>Final Rain Data 3-10-2010 Fixed				0.166	0.636	0.074	1.722	4.144	0.924	3.100

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L119, Model Location (Pred.) D/S -3R034.1, Rainfall Profile: L119

	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.976	2.064	0.013							
Obs.				0.206	0.447	0.081	0.586	3.479	1.060	2.700
...m B20>Final Rain Data 3-10-2010 Fixed				0.158	0.401	0.087	0.581	3.418	1.692	3.058

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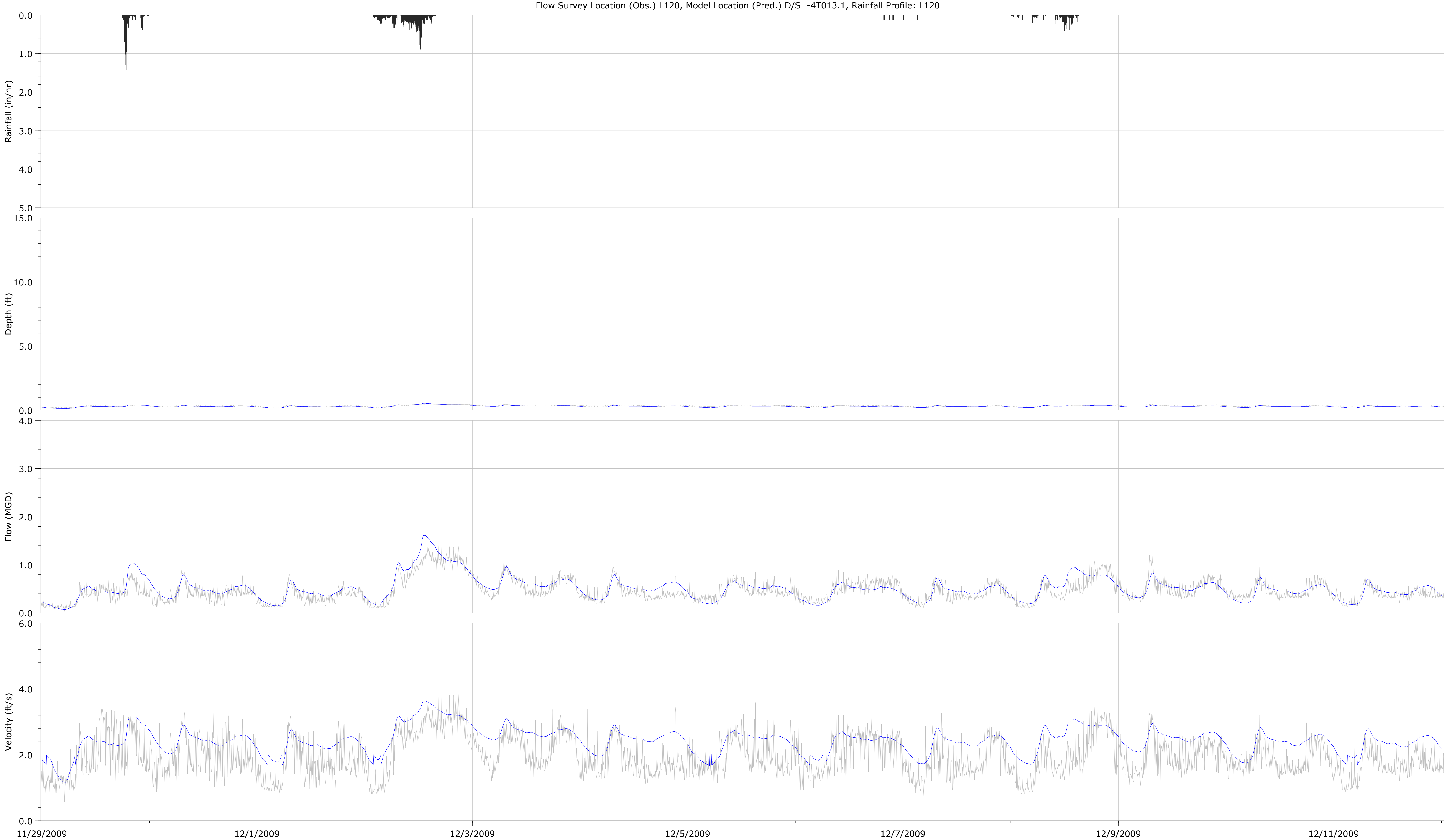
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

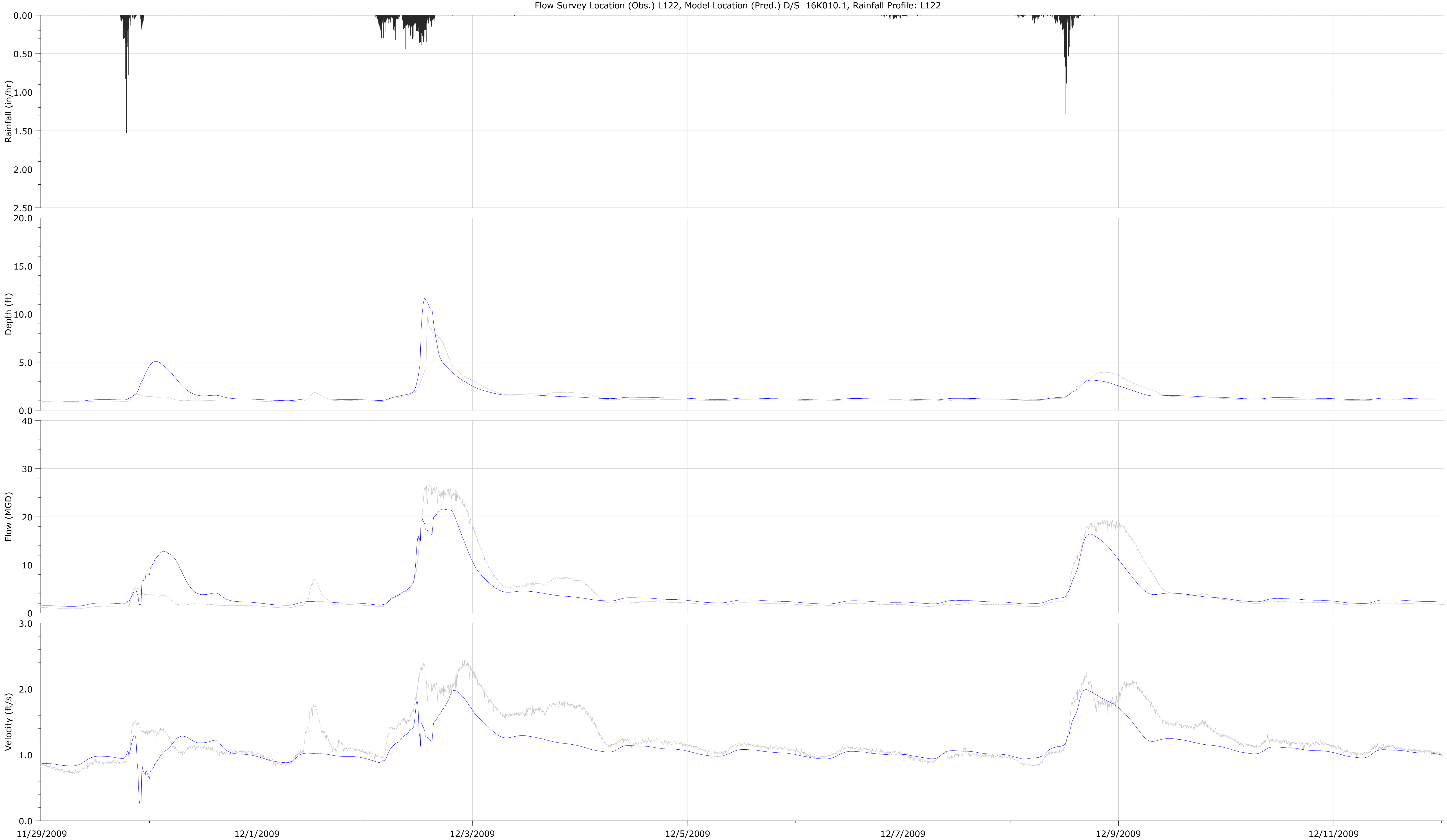
Flow Survey Location (Obs.) L120, Model Location (Pred.) D/S -4T013.1, Rainfall Profile: L120



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.968	1.524	0.013							
Obs.				0.166	0.498	0.050	1.557	6.027	0.582	4.253
...m B20>Final Rain Data 3-10-2010 Fixed				0.140	0.541	0.071	1.615	6.613	1.146	3.641

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 65 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L122, Model Location (Pred.) D/S 16K010.1, Rainfall Profile: L122



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.507	1.533	0.011							
Obs.				0.843	9.880	0.839	26.495	54.807	0.713	2.475
...m B20>Final Rain Data 3-10-2010 Fixed				0.933	11.737	1.361	21.593	52.926	0.238	1.992

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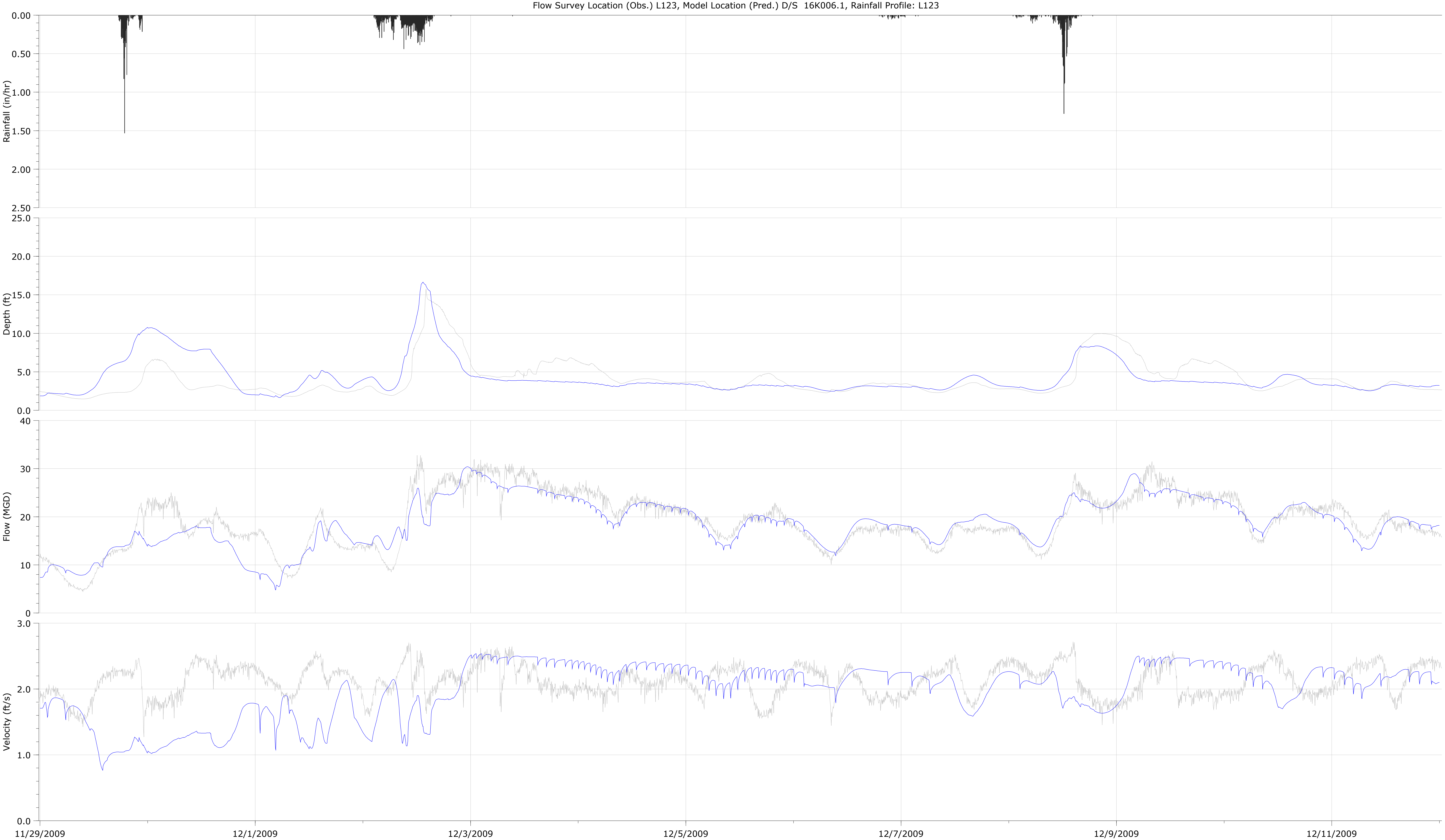
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

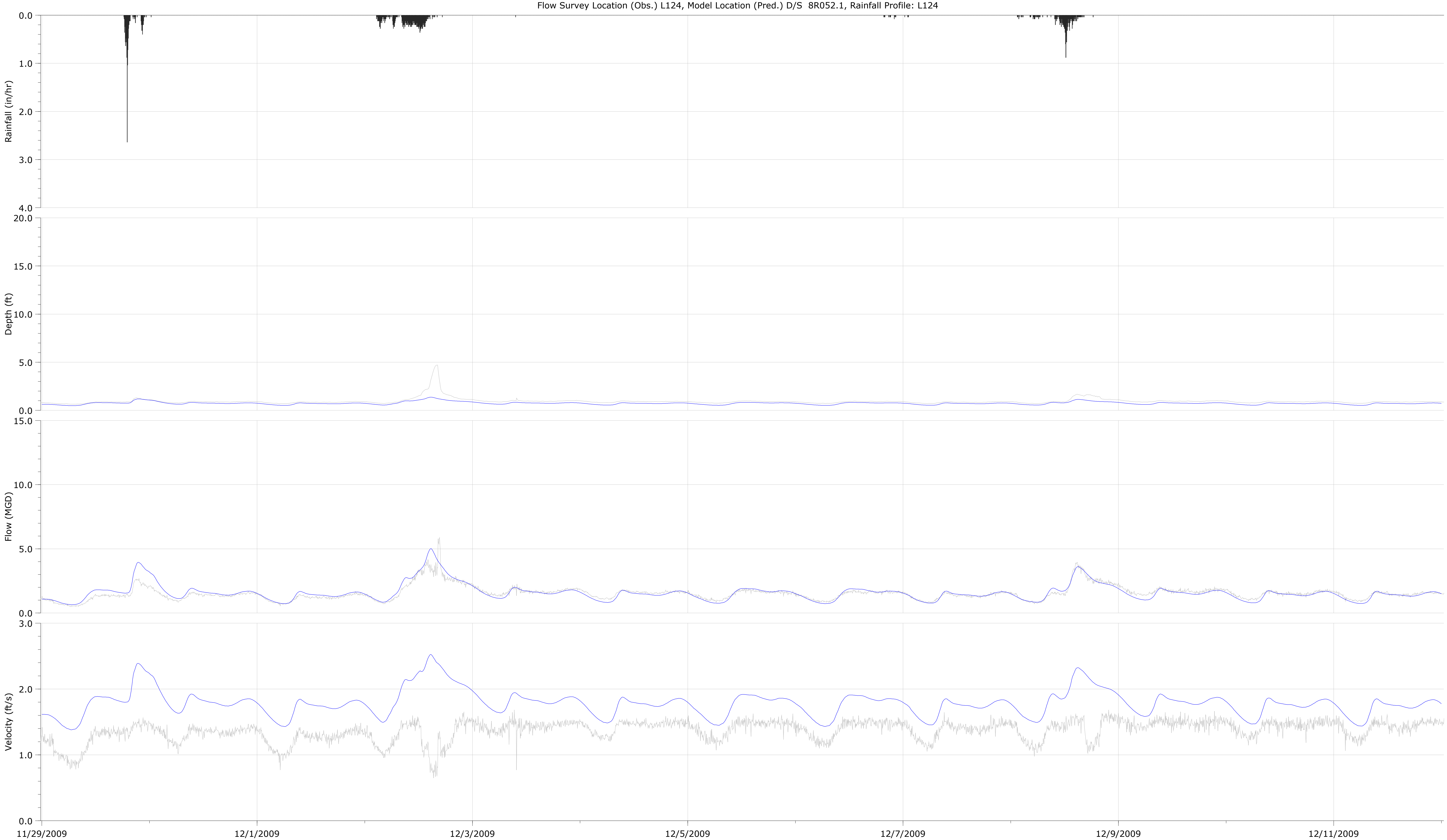
Flow Survey Location (Obs.) L123, Model Location (Pred.) D/S 16K006.1, Rainfall Profile: L123



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.507	1.533	0.011							
Obs.				1.481	15.758	4.459	32.750	250.150	1.273	2.717
...m B20>Final Rain Data 3-10-2010 Fixed				1.652	16.649	4.780	30.392	242.991	0.766	2.537

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 67 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

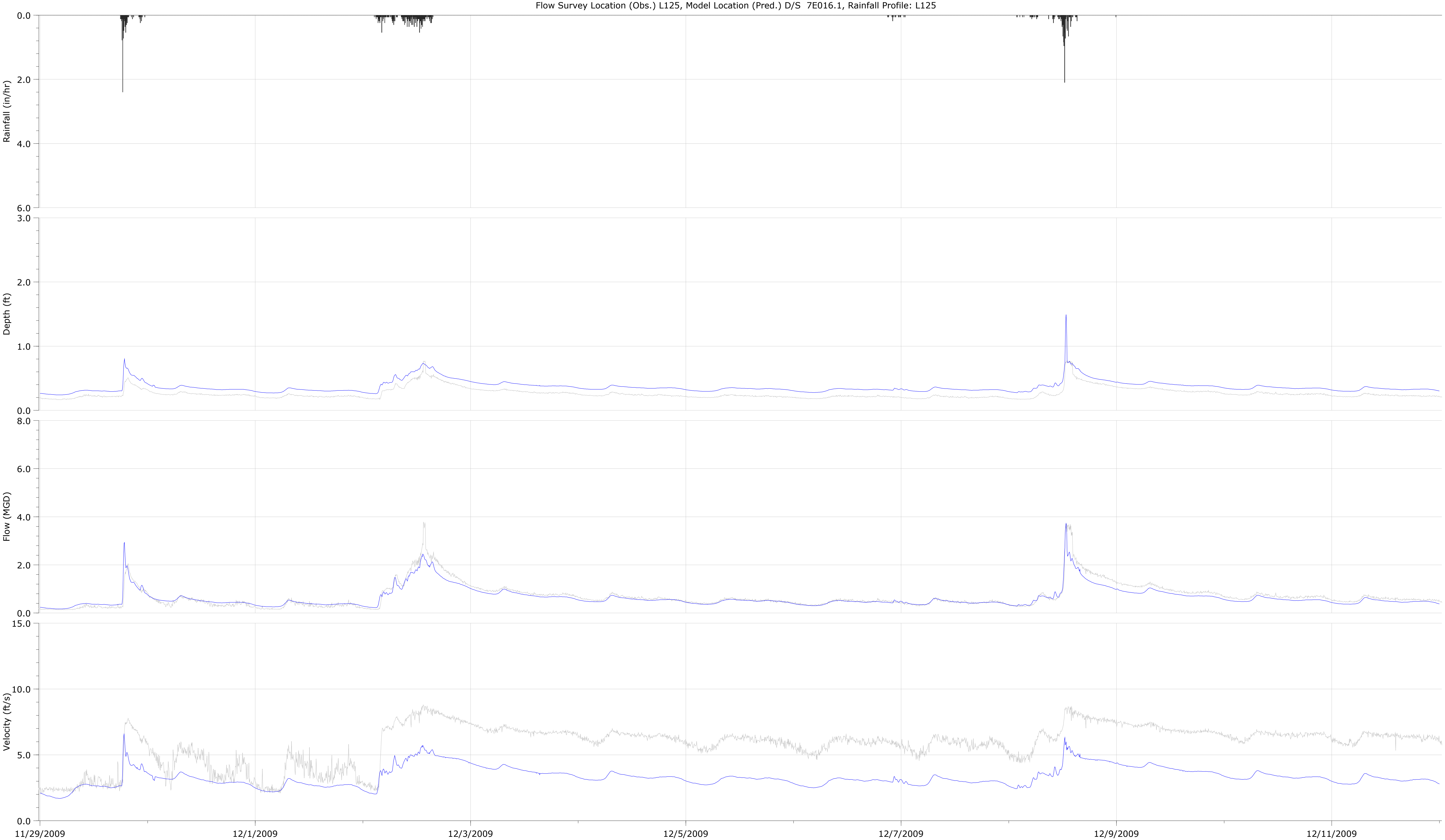
Flow Survey Location (Obs.) L124, Model Location (Pred.) D/S 8R052.1, Rainfall Profile: L124



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.707	2.640	0.012							
Obs.				0.634	4.702	0.493	5.869	19.976	0.649	1.683
...m B20>Final Rain Data 3-10-2010 Fixed				0.483	1.367	0.648	5.012	20.443	1.381	2.523

Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

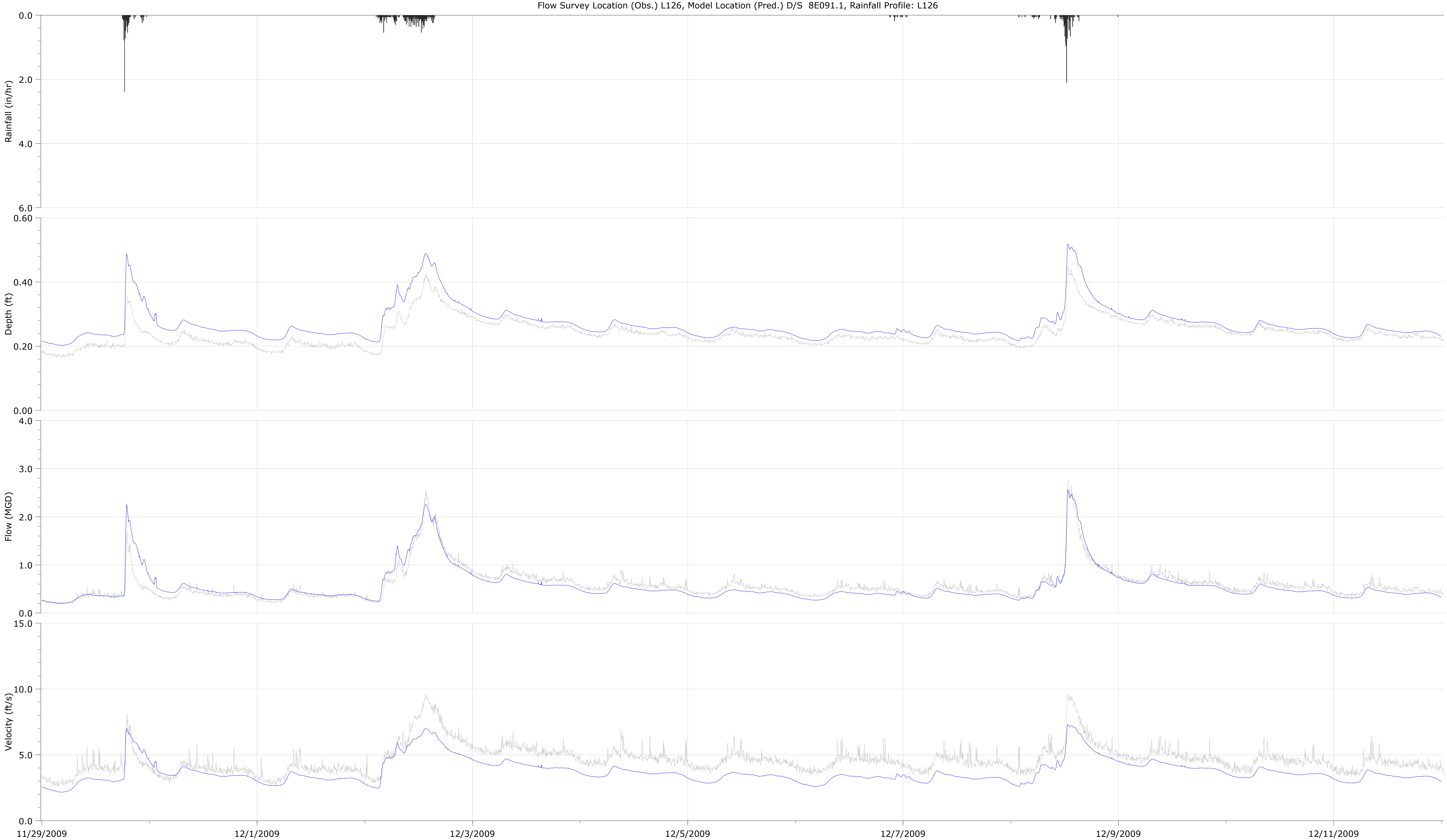
Flow Survey Location (Obs.) L125, Model Location (Pred.) D/S 7E016.1, Rainfall Profile: L125



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.395	2.400	0.011							
Obs.				0.165	0.773	0.129	3.775	8.915	2.044	8.795
...m B20>Final Rain Data 3-10-2010 Fixed				0.240	1.492	0.167	3.718	8.136	1.696	6.575

Observed / Predicted Plot Produced by dgarcia (10/11/2010 7:55:44 AM) Page 69 of 69
Flow Survey: >Little Rock>Flow Survey Group>Final WWF Flows>Complete Flow Survey Modified (3/10/2010 1:40:04 PM)
Sim: >Little Rock>WWF Calibration>Storm B20>Final Rain Data 3-10-2010 Fixed (10/5/2010 11:50:33 PM)
Graph Template: >Little Rock>Graph Template Group>Complete Flow Survey (3/12/2010 4:06:27 PM)

Flow Survey Location (Obs.) L126, Model Location (Pred.) D/S 8E091.1, Rainfall Profile: L126



	Rainfall			Depth (ft)		Flow (MGD)			Velocity (ft/s)	
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min	Max	Min	Max	Volume (US Mgal)	Min	Max
Rain	3.395	2.400	0.011							
Obs.				0.165	0.446	0.184	2.761	7.663	2.616	9.657
...m B20>Final Rain Data 3-10-2010 Fixed				0.203	0.519	0.200	2.563	7.199	2.167	7.310