## Section 4

Mono Basin Tributaries:<br>Lee Vining, Rush, Walker, and Parker Creeks<br>Monitoring Results and Analysis<br>For Runoff Season 2011-12



Mono Basin Tributaries:
Lee Vining, Rush, Walker, and Parker Creeks

FINAL ANNUAL REPORT<br>Monitoring Results for<br>Runoff Year 2011-12

Prepared by
Los Angeles Department of Water and Power

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## 1. INTRODUCTION

During the Runoff Year (RY) 2011, synoptic discharge measurements, groundwater elevation monitoring, tributary water temperature monitoring, ice monitoring and Grant Lake Reservoir water temperature monitoring continued. Those data are summarized and reported in this RY 2011-12 Annual Report. The Parker and Walker creeks sediment bypass operation was also conducted in June and July, 2011. Los Angeles Department of Water and Power (LADWP) was operating under the one year flow variance approved from State Water Resources Control Board (SWRCB) during the RY2011. Hereon the Runoff Year 2011 or period starting on April 1, 2011, and ending on March 31, 2012 is referred to as RY 2011.

## 2. HyDROlOGY

### 2.1 Hypothetical SEF Hydrographs

The Mono Basin Synthesis Report recommended Stream Ecosystem Flows (SEFs) replace the current Order 98-05 SRFs. LADWP attempted to follow the Synthesis Report recommendation in RY 2011 after the one year flow variance approved from SWRCB. LADWP was able to closely follow the recommended SEF, but the condition of GLR on April 1 prevented LADWP from fully implementing the Rush Creek SEF. Hydrographs for four tributaries and Grant Lake Reservoir Spill are presented in Figures 1 through 5, and daily average flows are available in the tabular format in Appedices 5-1 through 5-7. Hypothetical Rush Creek and Lee Vining Creek SEF hydrographs were constructed for RY2011 and compared to the actual RY2011 flow releases. The comparison showed very little difference between SRF and SEF hydrographs in Lee Vining Creek except in September, when the actual release was lower than the SEF (Figure 6). The comparison for the period April 1 to January 31 indicated that similar flow volumes would be released below the Conduit: 62,245 AF for the RY2011 actual release and 63,748 AF for SEF flows.
The actual Rush Creek flows were much higher throughout the peak snowmelt period due to high GRL level throughout the summer (Figure 7). GLR began spilling on March 28, 2011, and the spill continued until August 16. The peak spill (224 cfs on June 17) did not coincide with the peak MGORD release ( 377 cfs between July 9 and 12) and the peak flow of Rush Creek at Damsite ( 395 cfs ) was below the recommended SEF peak flow of 650 cfs. Therefore, achieving the peak release for both MGORD and GLR spill was not possible in RY2011. The fall and winter baseflows were higher than the SEF recommended baseflows because the variance ended and Mono Basin operations returned to Order 98-05 flow regimes.


Figure 1. Rush Creek hydrographs for Runoff Year 2011.


Figure 2. Grant Lake Reservoir Spill hydrographs for Runoff Year 2011.


Figure 3. Lee Vining Creek hydrographs for Runoff Year 2011.


Figure 4. Parker Creek hydrographs for Runoff Year 2011.


Figure 5. Walker Creek hydrographs for Runoff Year 2011.


Figure 6. Comparison of RY2011 SRF and SEF hydrographs for Lee Vining Creek at Intake.


Figure 7. Comparison of RY2011 SRF and SEF hydrographs for Rush Creek below the Return Ditch.

### 2.2 Winter Baseflow

The winter baseflow for Rush Creek was maintained approximately at 70 cfs until the end of January and lowered to approximately 50 cfs at the beginning of February (Figure 8). For Lee Vining Creek, the flow through condition was maintained throughout winter months.


Figure 8. Winter baseflow during RY2011 for Rush and Lee Vining creeks.

LADWP staff began monitoring the ice condition in Lee Vining Creek on December 16 with three time-lapse cameras and in Rush Creek on December 27 with one time-lapse camera. Three cameras were installed at transects which had been previously monitored (Lee Vining Creek DR and DP, Rush Creek P5-8). One camera was set up in a riffle section upstream of Lee Vining DR (LV R2) (Figures 9 and 10). Average temperature in December was $1^{\circ} \mathrm{F}$ lower than the 24 -year average, but was $5^{\circ} \mathrm{F}$ higher than in 2009, the first winter of ice monitoring. The coldest period during the monitoring was observed between December 20 and 26. The daily minimum air temperature remained below $5^{\circ} \mathrm{F}$, and the daily average air temperatures remained below $32^{\circ} \mathrm{F}$ (Figure 11).
During the monitoring period, daily formation and breakup of anchor ice was observed at LV R2 (see photos in Appendix B-1). At Lee Vining DR anchor ice formed on December 22 and remained in place until December 24 (see photos in Appendix B-2). The anchor ice, then, was converted into shelf ice on December 24 and persisted until December 28. A similar pattern of ice formation may have occurred during the first two weeks of December because of a similar temperature regime. Photos taken at LV R2 showed anchor ice formation more clearly than the one at DR because of a better angle relative to the sun and a higher vantage point. At the monitoring sites, the longest duration of anchor ice was three days.

There were 28 days with anchor ice formation based on photos at LV R2 between December 19 and March 9. All but two of the 28 days were days when the daily minimum temperature was at or below $0^{\circ} \mathrm{F}$ (Figure 12). Based on this close relationship, anchor ice may have formed daily during the first half of December in Lee Vining Creek.
At LV DP (pool section), the most extensive surface ice cover was observed during the period between December 23 and 28, but the surface ice disappeared on December 29. The extensive surface ice cover was also found on January 16 and 17, when the daily minimum air temperature decreased to $1^{\circ} \mathrm{F}$ and $0^{\circ} \mathrm{F}$, respectively. No other extensive surface ice cover was observed (see photos in Appendix B-3).
The Rush Creek pool section, 5P-8, remained ice-free throughout the monitoring period (December 27 and March 9). The ice condition during the cold period in December was not monitored. However, ice formation would have been less extensive during the period than that found at LV DP because water temperature was higher in Rush Creek than in Lee Vining Creek and no extensive ice formation was observed at 5P-8 on January 16 and 17 (see photos in Appendix B-4).
The winter of RY2011 had the second lowest netAFDD (net or maximum Accumulated Freezing Degree Days) (166) since 1991 based on Cain Ranch temperature data (Table 1). The average netAFDD since RY1991 (the 21 year average*) was 419 . The netAFDDs from past two winters, 400 and 281 for RY2009 and RY2010 respectively, were also below the 21 year average, but both values were higher than what was recorded during RY2011. There was only one day with the daily maximum air temperature below $32^{\circ} \mathrm{F}\left(\theta<32^{\circ} \mathrm{F}\right)$, the second lowest number of days since RY1991. The daily average air temperature was below $32^{\circ} \mathrm{F}\left(\mu<32^{\circ} \mathrm{F}\right.$ ) for 61 days, the fourth lowest number of days since RY1991.
Extensive ice formation was found only during the month of December in Lee Vining Creek. Occurrence of anchor ice would have been less in Rush Creek, and its extent would have been much smaller than in Lee Vining Creek due to higher water temperature. Pool sections in both creeks remained relatively ice free through out the winter.

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Figure 9. Overview of Lee Vining Creek Ice Monitoring Sites since RY2009.


Figure 10. Overview of Rush Creek Ice Monitoring Sites since RY2010.

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Figure 11. Air Temperature measured at Cain Ranch between October 1 and March 31 in RY2011.

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Figure 12. Relationship between anchor ice formation and daily maximum air temperature at Riffle 2 (R2) of Lee Vining Creek in RY2011. One along the second $y$-axis indicates presence of anchor ice. Zero indicates absence of anchor ice.

Table 1. Historical netAFDD (net or maximum accumulated freezing degree days), date of the maximum AFDD, and numbers of days during which daily maximum air temperature ( $\theta$ ) and daily average air temperature ( $\mu$ ) were below $32^{\circ} \mathrm{F}$ since the winter of 1991-92 (RY1991) based on Cain Ranch weather station data.

|  |  | Date of maximum <br> Year | netAFDD | No.days $\theta<32^{\circ} \mathrm{F}$ |
| :--- | :---: | :---: | :---: | :---: |$\quad$ No.days $\mu<32^{\circ} \mathrm{F}$.

## Average

| Overall | 419 | 7 | 75 |
| :--- | :---: | :---: | :---: |
| RY1991-2000 | 490 | 10 | 80 |
| RY2001-2011 | 360 | 4 | 71 |

$\theta=$ Daily Maximum Air Temperature
$\mu=$ Daily Average Air Temperature

* Data are missing after February 23, 2007 in RY2006-2007, so the actual daily maximum and minimum air temperatures may have been slightly higher


### 2.3 Synoptic Streamflow Gaging

### 2.3.1 Mono Basin Tributaries

Instantaneous measurements of streamflow along the Rush and Lee Vining creek corridors (referred to as synoptic measurements) were conducted once for Parker, Walker, and Lee Vining creeks and twice for Rush Creek during RY2011. The past two years of monitoring have provided LADWP with flow loss rates under a wide range of flow conditions. There was a gap in data for Rush Creek at the flow range over 70 cfs. Thus, a synoptic flow measurement at Rush Creek was conducted to fill the data gap. Because of prolonged spill from Grant Lake Reservoir throughout the summer and flow ramping in the fall, the target flow range was only achieved between the end of August and beginning of September. Synoptic flow measurements were conducted in Parker, Waker and Lee Vining creeks during the same period as Rush Creek.
The measurement locations and methods are summarized in Table 2. Rush Creek measurements were conducted at MGORD releases of 50.3 cfs and 73.4 cfs on August 30 and September 7, respectively. Due to time constraints, a complete measurement of Rush Creek with all stations plus Parker Creek and Walker Creek synoptic measurements was not performed. On August 30, no measurements were taken at Old Hwy 395 Bridge, Parker Creek at Mouth, and Walker Creek at Mouth. Rush Creek at County Road and Parker and Walker creeks at Mouth were not measured on September 7. Parker and Walker creeks synoptic measurements were conducted on September 14. Lee Vining Creek synoptic measurement was conducted on September 19. The following discussion highlights the summary data presented in Table 3.

Upper Rush Creek. Upper Rush Creek from the MGORD to the Narrows had two subreaches for which flow losses were computed: from the MGORD footbridge to Old Hwy 395 and Old Hwy 395 to the Parker Confluence. The upper sub-reach (MGORD footbridge to Old Hwy 395) had streamflow losses of 6.5 cfs or $9.1 \%$ loss relative to MGORD on August 31 and 2.1 cfs or $4.0 \%$ on September 7. Daily average flows at the MGORD footbridge were 72.4 cfs and 50.3 cfs on August 31 and September 7. The flow loss percentage on August 31 was similar to the flow losses observed in RY2009 and 2010 during summer months. The flow loss percent of $4.0 \%$ was lower than the previously observed values. Only one flow loss value was calculated for the lower subreach because no flow measurement was taken at the Old Hwy 395 Bridge on August 30. The flow at Parker Confluence was higher by 1.5 cfs than that at the Old Hwy 395 Bridge. This flow gain is most likely due to measurement error because flow gain through the lower sub-reach has never been observed in the past two runoff years, and 1.5 cfs flow difference between the two stations is within the $5 \%$ error of the measurement.

Table 2. Location of synoptic flow measurement sites and distance from the diversion point upstream.

Distance from Mono Gate One or Conduit (mile)

Measurement Method

| MGORD Current Meter Bridge | 1.4 | Rating table 3 |
| :--- | :---: | :---: |
| Rush Creek at Old Highway 395 Bridge | 3.4 | Current Meter |
| Rush Creek above Parker Creek | 4.9 | Current Meter |
| Rush Creek below the Narrows | 5.6 | Sum of Flows |
| Rush Creek below 10 Channel Falls | 7.6 | Current Meter |
| Rush Creek at County Road | 9.1 | Current Meter |
|  |  |  |
| Parker Creek below Conduit | 0 | Parshall Flume |
| Parker Creek at Mouth | 3.0 | 4ft Cip Weir |
| Walker Creek below Conduit | 0 | Parshall Flume |
| Walker Creek at Mouth | 2.9 | 2ft Cip Weir |
| Lee Vining Creek at Langemann Gate | 0 |  |
| Lee Vining Creek below County Road | 3.6 | Adjustable Weir |
|  |  |  |

Lower Rush Creek. Lower Rush Creek from the Narrows to the County Road also had two sub-reaches in which flow losses were computed, with intermediate boundary defined by the lower Rush Creek gage located at XS-9+82 below the 10-Channel confluence. The flow measurement at County Road was not conducted on September 7. The flow loss for the upper sub-reach in the Rush Creek bottomlands (Narrows to 10 Channel Fall) was 5.9 cfs or $6 \%$ on August 30 and 6.7 cfs or $11 \%$ on September 7 with the calculated flow below the Narrows was 104.1 cfs and 62.2 cfs on those respective dates. The flow below the Narrows on August 30 was highest since the measurement started in RY2009 ( 104.1 cfs). The flow loss was $6 \%$, lower than two other flow losses previously recorded during summer months ( $11 \%$ and $9 \%$ ). This suggests that at higher flows (>104 cfs) flow losses may become less than 5\%, not discernible from the error rate. For the lower sub-reach (10 Channel to County Road), the flow loss on August 30 was 3.4 cfs or $3 \%$. This flow loss percent was similar to values observed during summer months in the past.

Parker and Walker Creeks. LADWP installed Cipolletti weirs at the mouth of Parker and Walker creeks in October 2009 to more accurately estimate streamflow. These flow estimates were compared to flow release estimates below the Conduit on each tributary, to determine flow losses along the two tributary corridors. However, the weirs were washed away during the peak flow period in RY2011, and re-installed in the same locations on September 14. The flow loss for Parker Creek on September 14 was 2.58 cfs or $24 \%$ of the flow below the Conduit of 10.8 cfs. The flow loss was higher than two observations during summer months at similar flows in past (19\% and 11\%). No flow
loss was observed for Walker Creek on September 14, 0.02 cfs or $0.3 \%$. Two past measurements during summer months showed much higher flow loss rates of $29 \%$ and $66 \%$. The small flow loss on September 14 could be attributable to an increased contribution of Bohler Creek.

Lee Vining Creek. LADWP hydrographers began collecting synoptic flow measurements on Lee Vining Creek at the County Road in RY2010. These measurements were compared to the 'Lee Vining Creek at Conduit' gaged flow estimates to compute flow gains/losses in Lee Vining Creek. Only one synoptic measurement was conducted in RY2011. Lee Vining Creek had a flow loss of 6.6 cfs or $6.1 \%$ with 30 cfs released through the Langemann Gate on September 19. There have been two measurements in the past with flows similar to the observed flow of 30 cfs. Both measurements showed much greater flow loss rates (18\% and 21\%) even though these measurements were taken either before or after the growing season.

Table 3. Summary of synoptic streamflow measurements during RY2011 (expressed in cfs), with computations of streamflow gains and losses for sub-reaches of Rush, Lee Vining, Parker, and Walker creeks.

|  | RY 2011 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stream Miles | Aug 30 | Aug 31 | Sep 7 | Sep 14 | Sep 19 |
| MGORD Current Meter Bridge 1.4 | 73.4 | 72.4 | 50.3 |  |  |
| Rush Creek at Old Highway 395 Bridge 3.4 |  | 65.9 | 48.3 |  |  |
| Rush Creek above Parker Creek 4.9 | 70.1 |  | 49.7 |  |  |
| Rush Creek below the Narrows 5.6 | 104.2 |  | 62.2 |  |  |
| Rush Creek below 10 Channel Falls 7.6 | 98.3 |  | 55.5 |  |  |
| Rush Creek at County Road 9.1 | 94.9 |  |  |  |  |
| Parker Creek below Conduit 0 | 23.9 |  | 6.8 | 10.8 |  |
| Parker Creek above Rush 3.0 |  |  |  | 8.2 |  |
| Walker Creek below Conduit 0 | 10.2 |  | 5.7 | 6.7 |  |
| Walker Creek above Rush 2.9 |  |  |  | 6.7 |  |
| Lee Vining Creek at Langemann Gate 0 |  |  |  |  | 30.0 |
| Lee Vining Creek below County Road 3.6 |  |  |  |  | 23.4 |
| Flow Gain/Loss between MGORD and Hwy 395 |  | -6.5 | -2.1 |  |  |
| Rate of Flow Gain/Loss (cfs/mile) |  | -1.9 | -0.6 |  |  |
| Percent Gain/Loss |  | -9.0\% | -4.1\% |  |  |
| Flow Gain/Loss between MGORD and Parker | -3.3 |  | -0.6 |  |  |
| Rate of Flow Gain/Loss (cfs/mile) | -0.7 |  | -0.1 |  |  |
| Percent Gain/Loss | -4.5\% |  | -1.2\% |  |  |
| Flow Gain/Loss between MGORD and Narrows | 30.8 |  | 11.9 |  |  |
| Rate of Flow Gain/Loss (cfs/mile) | 5.5 |  | 2.1 |  |  |
| Percent Gain/Loss | 31.3\% |  | 21.3\% |  |  |
| Flow Gain/Loss between Narrows and 10 Falls | -5.9 |  | -6.7 |  |  |
| Rate of Flow Gain/Loss (cfs/mile) | -2.9 |  | -3.3 |  |  |
| Percent Gain/Loss | -5.7\% |  | -10.7\% |  |  |
| Flow Gain/Loss between 10 Falls and Country Road | -3.4 |  |  |  |  |
| Rate of Flow Gain/Loss (cfs/mile) | -2.3 |  |  |  |  |
| Percent Gain/Loss | -3.5\% |  |  |  |  |
| Flow Gain/Loss between Narrows and County Road | -9.3 |  |  |  |  |
| Rate of Flow Gain/Loss (cfs/mile) | -2.7 |  |  |  |  |
| Percent Gain/Loss | -8.9\% |  |  |  |  |
| Flow Gain/Loss between Parker at Conduit and Rush Creek |  |  |  | -2.6 |  |
| Rate of Flow Gain/Loss (cfs/mile) |  |  |  | -0.9 |  |
| Percent Gain/Loss |  |  |  | -8.0\% |  |
| Flow Gain/Loss between Walker at Conduit and Rush Creek |  |  |  | 0.0 |  |
| Rate of Flow Gain/Loss (cfs/mile) |  |  |  | 0.0 |  |
| Percent Gain/Loss |  |  |  | -0.1\% |  |
| Flow Gain/Loss between Lee Vining Conduit and County Road |  |  |  |  | -6.6 |
| Rate of Flow Gain/Loss (cfs/mile) |  |  |  |  | -1.8 |
| Percent Gain/Loss |  |  |  |  | -6.1\% |

### 2.3.2 Lee Vining Conduit Flow Loss

The Lee Vining Conduit flow loss study was conducted in RY2011. Based on readings of the installed flow measuring instruments, flows in the Conduit were higher at Grant Lake Reservoir than below the Intake. However, flow verification at two locations showed that the Venturi meter at Grant Lake Reservoir was constantly reading higher than the current meter. As a result, there should have been no flow gain through the Conduit. It would be difficult to detect flow gain or loss through the Conduit because flow differences would be small due to the concrete lining of the Conduit. In addition, the difference in flow measurements at the two locations also could have arisen due to natural variability of Lee Vining Creek flow and the level of Grant Lake Reservoir. The summary of Conduit flows is presented in Figure 13.

Currently flows in the Lee Vining Conduit are being measured at two different locations; below the Intake and at Grant Lake Reservoir. Below the Intake, three different methods have been used; a rating curve based on stilling well measuring stage readings, SonTeck S/W flow meter readings, and a calculation subtracting the Lee Vining Langemann Gate flow from the Lee Vining Creek above Intake Flume flow. Above Grant Lake, a Venturi meter that has two flow range tables (1-100 cfs for low flow conditions and 1-400 cfs for high flow conditions) was used to measure flows.
Current meters were used to verify three existing methods below the Intake and one exiting method at Grant Lake Reservoir. Because of high irregularity of the bottom geometry of Conduit and no access, flow was not current metered at the site where the stilling well and SonTek S/W were installed. Instead, a series of flow measurements were performed at Lee Vining Creek above Intake flume and below the Langemann Gate with a Sontek Flowtracker and River Surveyor. Results were in close agreement with the readings of the above Intake flume and Langemann Gate. Thus, the calculated values yield the most reliable flow data of the Lee Vining Conduit. The calculated values also agreed with the rating curve based on the still well and flow readings of SonTek S/W.

Flow verification of the Lee Vining Conduit flow at Grant Lake showed current meter readings were consistently lower than Venturi meter readings. Therefore, flow gains observed were due to the overestimation of the Lee Vining Conduit flow at Grant Lake Reservoir. Instrument technicians will periodically recalibrate the Venturi meter at Lee Vining Conduit at Grant Lake.
The travel time between the Lee Vining Intake and Grant Lake reduces the accuracy of flow loss calculations through the Lee Vining Conduit. Even though the operation of the Langemann Gate was switched from the flow control of Lee Vining Creek below Intake to the level control of the forebay, flow into the Conduit still experiences small natural flow variation of Lee Vining Creek above Intake. Because of this natural flow variability, a timing of flow measurement above Grant Lake must be timed to the travel time through Conduit. This, in turn, requires knowledge of exact traveling time at varying flow rates.

Existing facility, allows a specified flow to pass down Lee Vining Creek and excess to go to the conduit. Manually doing diversion operation as done this past year is labor intensive and not very accurate. Diversion was adjusted only once a day in the morning
even though inflows change continuously throughout the day. A second Langemann gate or similar equipment will need to be installed at the entrance of the Lee Vining conduit to follow the diversion table continuously and more precisely.


Figure 13.Hydrographs for Lee Vining Creek above Intake (5008) and at Intake (5009) and Lee Vining Conduit.

### 2.3.3 5-Siphons Bypass Flow Loss

The flow loss study through the 5-Siphons Bypass was not conducted in RY2011 because there was not enough water in Lee Vining Conduit to conduct the study except in the beginning of September.

### 2.3.4 Grant Lake Spillway Flow Loss

The flow loss between the Grant Lake Spillway and Rush Creek was not conducted because flow conditions were judged unsafe for wading.

### 2.4 Groundwater Monitoring

Groundwater monitoring continued in RY2011. Data were collected by LADWP at seven piezometers surrounding the Lower Rush Creek 8-Channel, and by the Mono Lake Committee at six piezometers in lower Rush Creek and at ten piezometers in upper Lee Vining Creek. Data from the 8-Floodplain piezometers during RY2011 are presented in this report.
Seven piezometers (8C-2 through 8C-8) are all located in the west side of the Rush Creek main channel. Peak groundwater elevation was recorded by all piezometers between July 6 and 9, during which the peak flow of Rush Creek below the Narrows was observed (565 cfs on July 7). Groundwater elevations closely follow Rush Creek flow throughout RY2011 (Figure 14 through 20, raw daily readings are presented in Appendix B in the tabular format). Changes of groundwater elevations were more pronounced for the piezometers which were located further away from the channel (8C$3,8 \mathrm{C}-6$ though $8 \mathrm{C}-8$ ) than those located closer to the channel ( $8 \mathrm{C}-2,8 \mathrm{C}-5$, and $8 \mathrm{C}-5$ ).


Figure 14.Relative groundwater elevation at Piezometer 8C-2 and daily average flow at Rush Creek below the Narrows during RY2011.


Figure 15.Relative groundwater elevation at Piezometer 8C-3 and daily average flow at Rush Creek below the Narrows during RY2011.


Figure 16.Relative groundwater elevation at Piezometer 8C-4 and daily average flow at Rush Creek below the Narrows during RY2011.


Figure 17.Relative groundwater elevation at Piezometer 8C-5 and daily average flow at Rush Creek below the Narrows during RY2011.


Figure 18.Relative groundwater elevation at Piezometer 8C-6 and daily average flow at Rush Creek below the Narrows during RY2011.


Figure 19.Relative groundwater elevation at Piezometer 8C-7 and daily average flow at Rush Creek below the Narrows during RY2011.


Figure 20.Relative groundwater elevation at Piezometer 8C-8 and daily average flow at Rush Creek below the Narrows during RY2011.

The rapid response of groundwater elevations were best observed during the pulse of 350 cfs MGORD release in October. The MGORD release was augmented to 350 cfs from 53 cfs with the average ramping rate of $20 \%$ between October 7 and October 17. By the beginning of the sustained 350 cfs release in October 17, groundwater elevations of all piezometers reached within 0.3 ft of the elevation recorded during the second snowmelt peak of July 31 (472 cfs at Rush Creek below the Narrows) (Table 4). By the end of the sustained 350cfs release, groundwater elevations of two (8C-3 and 8C-6) of five piezometers surpassed that recorded during the second snowmelt peak. The MGORD release was reduced to 60 cfs in November 2 after the $20 \%$ ramping down from 350 cfs in 10 days. The groundwater elevations after the 350 cfs peak remained elevated until the MGORD release was reduced to 45 cfs in February 1.

Table 4. Groundwater elevations of the 8-Floodplain piezometers during the October's 350 cfs MGORD release.

|  | Rush Below |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date |  | $8 \mathrm{C}-2$ | $8 \mathrm{C}-3$ | $8 \mathrm{C}-4$ | $8 \mathrm{C}-5$ | $8 \mathrm{C}-6$ | $8 \mathrm{C}-7$ |
| $7 / 21 / 11$ |  | 7.74 | 4.99 | 8.66 | 9.37 | 8.44 | 5.56 |
|  |  |  |  |  |  |  |  |
| $10 / 17 / 11$ |  | 7.53 | 4.93 | 8.46 | 9.28 | 8.55 | 5.23 |
| $10 / 18 / 11$ |  | 7.60 | 5.03 | 8.54 | 9.30 | 8.61 | 5.43 |
| $10 / 19 / 11$ |  | 7.62 | 5.06 | 8.57 | 9.30 | 8.62 | 5.48 |
| $10 / 20 / 11$ | 366 | 7.64 | 5.08 | 8.59 | 9.31 | 8.63 | 5.49 |
| $10 / 21 / 11$ | 369 | 7.66 | 5.10 | 8.61 | 9.31 | 8.63 | 5.52 |
| $10 / 22 / 11$ | 367 | 7.66 | 5.11 | 8.61 | 9.31 | 8.64 | 5.54 |
| $10 / 23 / 11$ | 366 | 7.67 | 5.12 | 8.62 | 9.30 | 8.63 | 5.53 |
| $10 / 24 / 11$ | 347 | 7.61 | 5.09 | 8.56 | 9.26 | 8.55 | 5.43 |

### 2.5 Tributary Water Temperature Monitoring

Water temperature monitoring continued in RY2011 at sixteen sites in Rush, Lee Vining, Parker, and Walker creeks (Table 5). Water temperature data for RY 2011 are in Appendix C. At four of fifteen sites (Parker above Confluence, Walker below Conduit, Lee Vining at County Road, and Lee Vining Conduit), a temperature logger was found missing when LADWP staff went to download data on November 29. At Lee Vining Creek at County Road, a new temperature logger was installed on December 16. Given the wet runoff conditions in RY2011 and Grant Lake Reservoir being at the spill elevation for 135 days since April 1, water temperature conditions were good in Rush Creek during the summer. The highest annual maximum temperature among four tributaries was found at Walker Creek above Conduit (62.8 ) (Table 6).

Between July 1 and September 30 in RY2011, a longitudinal water temperature profile along Rush Creek shows a very complex pattern due to the extended period of Grant Lake Reservoir spill and Parker/Walker flow augmentation (Figure 21). Water temperature below MGORD (Upper Rush to County Road) rose as much as $5.7^{\circ} \mathrm{F}$ due to the spill. The highest water temperature alternated between County Road, Rush above Parker, and MGORD stations. The typical warming trend along Rush Creek was not observed until September.

During winter months (November 1 and February 29), a cooling trend along Rush Creek was generally observed (Figure 22). However, the cooling trend was interrupted by periodic warm-up events.

Table 5. Location of water temperature monitoring sites.

|  | UTM |  |  |
| :--- | :--- | :--- | :--- |
| Site | Northing | Easting | Status |
| Rush Creek at Damsite | 4186089 | 314256 |  |
| Rush Creek at MGORD TOP | 4192452 | 316024 |  |
| Rush Creek at MGORD BOTTOM <br> Rush Creek at 5-Siphons Confluence <br> Rush Creek at Old Hwy 395 | 4193278 | 314922 |  |
| Rush Creek above Parker Confluence <br> Rush Creek below the Narrows <br> Rush Creek below 10 Channel Fall <br> Rush Creek at County Road | 4195347 | 314798 | 316030 |
|  | 4198166 | 316878 | 317285 |
|  | 4200480 | 318323 |  |
| Parker Creek below Conduit | 4201796 | 319259 |  |
| Parker Creek above Confluence | 4193986 | 313684 |  |
| Walker Creek below Conduit | 4197264 | 316872 | Missing |
| Walker Creek above Confluence | 4198043 | 313478 | Missing |
| Lee Vining below Intake | 4200708 | 312561 |  |
| Lee Vining at County Road | 4204791 | 314735 | Missing |
| Lee Vining Conduit | 4192857 | 314411 | Missing |

Table 6. Summary of water temperature data during RY2011. n indicates a number of days during RY2011 daily statistics have been obtained. All daily statistics (Daily Mean, Daily Max, Daily Min, and Max Daily Flux) are in ${ }^{\circ} \mathrm{F}$.

| Location | n | Annual |  |  |  | Summer |  |  | Winter |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Daily <br> Mean | Daily Max | Daily Min | Max Daily Flux | Daily <br> Mean | Daily <br> Max | Daily <br> Min | Daily <br> Mean | Daily <br> Max | Daily <br> Min |
| Rush Creek at Damsite | 348 | 45.2 | 61.2 | 32.8 | 2.5 | 56.7 | 61.2 | 52.3 | 37.0 | 46.5 | 32.8 |
| Rush Creek at MGORD TOP | 348 | 47.6 | 61.4 | 36.0 | 9.0 | 57.3 | 61.4 | 51.8 | 40.0 | 52.8 | 36.0 |
| Rush Creek at MGORD BOTTOM | 348 | 47.6 | 61.3 | 35.9 | 10.6 | 57.5 | 61.3 | 52.3 | 39.7 | 52.2 | 35.9 |
| Rush Creek at Old Hwy 395 | 348 | 48.1 | 61.1 | 35.6 | 10.2 | 58.7 | 61.1 | 54.6 | 39.2 | 51.0 | 35.6 |
| Rush Creek above Parker Confluence | 348 | 48.0 | 61.1 | 34.9 | 13.3 | 58.6 | 61.1 | 54.8 | 38.8 | 50.3 | 34.9 |
| Rush Creek below the Narrows | 343 | 47.6 | 60.4 | 34.3 | 13.2 | 58.0 | 60.4 | 54.9 | 38.0 | 48.7 | 34.3 |
| Rush Creek below 10 Channel Fall | 343 | 47.3 | 60.8 | 33.5 | 15.0 | 57.6 | 60.8 | 53.5 | 37.7 | 48.3 | 33.5 |
| Rush Creek at County Road | 343 | 47.6 | 61.4 | 33.0 | 16.0 | 58.3 | 61.4 | 55.5 | 37.5 | 48.0 | 33.0 |
| Parker Creek below Conduit | 348 | 42.3 | 55.4 | 32.1 | 12.5 | 51.1 | 55.4 | 47.2 | 33.9 | 41.2 | 32.1 |
| Parker Creek above Confluence | na | na | na | na | na | na | na | na | na | na | na |
| Walker Creek below Conduit | na | na | na | na | na | na | na | na | na | na | na |
| Walker Creek above Confluence | 348 | 45.3 | 62.8 | 32.1 | 19.8 | 58.7 | 62.8 | 52.8 | 33.7 | 41.9 | 32.1 |
| Lee Vining below Intake | 309 | 41.3 | 53.7 | 32.0 | 13.5 | 49.7 | 53.7 | 43.7 | 35.2 | 42.6 | 32.0 |
| Lee Vining at County Road | 83 | 34.3 | 38.7 | 32.0 | 10.4 | na | na | na | 34.2 | 37.9 | 32.0 |
| Lee Vining Conduit | na | na | na | na | na | na | na | na | na | na | na |

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Figure 21.Water temperature data for Rush Creek between July 1 and September 30.

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Figure 22. Water temperature data for Rush Creek between December 1 and February 29.

### 2.6 Grant Lake Reservoir Water Temperature Monitoring

Grant Lake Reservoir temperature and dissolved oxygen (DO) profiles were monitored monthly from April to December. Grant Lake Reservoir water surface elevation remained above the spill level through the summer until August 16, and dropped down to $7,120 \mathrm{ft}$ in March. The lake elevation was well above the minimum storage level (11,500 AF) of 7,090 ft throughout RY2011.

In general, Grant Lake Reservoir water from April and December of RY2011 was wellmixed (Figure 23). In July and August, water temperature at the surface was $12^{\circ} \mathrm{F}$ higher than that of the bottom, but no stratification of the lake or thermocline was observed. From July to August the entire temperature profile shifted approximately $2^{\circ} \mathrm{F}$, suggesting the whole lake was warming up. In September, the profile became uniform again. The highest water temperature at the bottom of the lake occurred in September $\left(58.2^{\circ} \mathrm{F}\right.$ on September 15$)$. MGORD water temperature monitoring showed the daily maximum water temperature of $61.4^{\circ} \mathrm{F}$ on September 15.
The dissolved oxygen level was highest in April at $9 \mathrm{mg} / \mathrm{L}$ and declined to the lowest level of approximately $4.5 \mathrm{mg} / \mathrm{L}$ in November and December (Figure 24). The profile of dissolved oxygen was fairly uniform except July, August, and September. At the bottom of the lake, the dissolved oxygen level was below $5 \mathrm{mg} / \mathrm{L}$ for these three months. The lowest dissolved oxygen level was found in August at $4 \mathrm{mg} / \mathrm{L}$.

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Figure 23.Grant Lake Reservoir temperature profile during RY2011.


Figure 24.Grant Lake Reservoir dissolved oxygen (DO) profile during RY2011.

## 3. Geomorphology

### 3.1 Side Channel Maintenance

On September 29, the mouth of 8 Channel, the adjacent thalweg in Rush Creek, and the riffle crest thalweg were surveyed by LADWP staff and Steve Parmenter from the California Department of Fish and Game with Mono Lake Committee representatives present. The lowest-lying points were at the entrance when surveying the mouth of the side channel. There was uncertainty about what streambed feature constituted the crest because Rush Creek was a continuous riffle for more than 300 ft downstream of the side channel entrance. After considerable observation and discussion, the thalweg approximately 50 ' downstream of the side channel and on the left side of the stream was surveyed at multiple points. This point was chosen to represent the riffle crest thalweg (RCT) because of a slight increase in downstream gradient denoted by an increase in white water. Yellow flagging was placed along the left bank noting the location. Finally, the thalweg at multiple locations adjacent to the boulder weir was surveyed.
Results are presented in Table 7. The lowest point of the side channel opening among multiple surveyed points was 99.33 ft . The highest RCT elevation was 97.19 ft . The difference between the lowest side channel opening and the highest RCT elevation was 2.14 ft . The difference, therefore, was greater than the termination criterion for the 8 Channel mouth maintenance proposed by the Stream Scientists.

Table 7. Summary of the riffle crest thalweg survey at the mouth of 8 Channel in September 29, 2011.

| Station | Elevation (ft) | Station Description |
| :--- | :---: | :--- |
| SC1 | 99.33 | SC furthest US |
| SC2 | 99.53 | SC middle |
| SC3 | 99.46 | SC downstream |
| SC4 | 99.37 | SC furthest DS |
| RCT1 | 96.54 | RCT closest to LB |
| RCT2 | 96.54 | RCT middle |
| RCT3 | 96.86 | RCT right |
| RCT4 | 97.19 | RCT furthest right |

### 3.2 Parker and Walker Creeks Bypass Operation

The sluice pipe was opened in Parker and Walker creeks in April 20 in order to move coarse sediments which were deposited in the delta section. Coarse sediments were manually pushed downstream toward the opening of the sluice pipe by LADWP staff. The sluice pipe was closed in both creeks on April 21. The pipe was again opened on

June 13 prior to the snowmelt peak. The sluice pipe in Walker Creek was closed on July 19, and the sluice pipe in Parker Creek was closed on July 20.

## 4. SUMMARY

Runoff Year (RY) 2011 was classified as Wet Runoff Year Type. Lee Vining and Parker creeks, respectively, recorded the largest and second largest snowmelt peak since 1991. The snowmely peak at Rush Creek below the Narrows was also fourth largest since 1991. This above average runoff resulted in cooler water temperatures and higher groundwater elevations through out the summer months. The prolonged Grant Lake Reservoir (GLR) spill, the October's Rush Creek pulse, and elevated winter baseflow in Rush Creek, however, lead to unique observations in Rush Creek longitudinal water temperature profile, groundwater elevations at the 8 Channel Section, and winter ice formations in Rush Creek.

The prolonged Grant Lake Reservoir (GLR) spill, however, resulted in complex longitudinal water temperature profiles. Water temperatures below MGORD were much higher than those observed in MGORD due to warmer water at the surface of GRL being added to Rush Creek below MGORD. Addition of the warmer surface water to Rush Creek could offset a benefit of the cooler water at the bottom of GLR being released through Mono Gate One.
The pulse in October showed that groundwater elevations of the 8-Floodplain piezometers responded almost instantaneously to the high flows of Rush Creek below the Narrows. Subsequently groundwater elevations quickly reached similar elevations recorded during the second snowmelt peak of July 31 (472 cfs at Rush Creek below the Narrows). The pulse supports that "priming the system" or flow augmentation prior to the peak may not be necessary to achieve desirable groundwater elevations during peak flow.

Higher winter baseflow was observed in Rush Creek than the SEF winter baseflow during the winter of 2011-12. The ice monitoring section in Rush Creek remained icefree throughout the monitoring period. The longitudinal water temperature profile during winter months also provides insights into anchor ice formations in Rush Creek. The warmer water released by GLR had prevented water temperatures in Rush Creek from approaching $32^{\circ} \mathrm{F}$. After GRL cooled down, Rush Creek experienced periodic warming due to the fact the winter of 2011-12 was one of the warmest winters since 1991. These warming events also prevented water temperature from approaching $32^{\circ} \mathrm{F}$. These two factors, GLR heat storage and air temperature influence, would have resulted less development of anchor ice in Rush Creek.

## 5. Appendix A: Daily Average Flow

5.1 Daily Average Flow at Rush Creek at Damsite (5013)

| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/2011 | 114 | 6/1/2011 | 158 | 8/1/2011 | 373 | 10/1/2011 | 110 | 12/1/2011 | 60.7 | 2/1/2012 | 18.5 |
| 4/2/2011 | 123 | 6/2/2011 | 156 | 8/2/2011 | 301 | 10/2/2011 | 110 | 12/2/2011 | 61.5 | 2/2/2012 | 17.9 |
| 4/3/2011 | 128 | 6/3/2011 | 154 | 8/3/2011 | 243 | 10/3/2011 | 110 | 12/3/2011 | 63.5 | 2/3/2012 | 17.9 |
| 4/4/2011 | 124 | 6/4/2011 | 154 | 8/4/2011 | 207 | 10/4/2011 | 111 | 12/4/2011 | 64 | 2/4/2012 | 17.5 |
| 4/5/2011 | 129 | 6/5/2011 | 174 | 8/5/2011 | 183 | 10/5/2011 | 123 | 12/5/2011 | 64.7 | 2/5/2012 | 17.3 |
| 4/6/2011 | 133 | 6/6/2011 | 176 | 8/6/2011 | 168 | 10/6/2011 | 116 | 12/6/2011 | 64.1 | 2/6/2012 | 17.2 |
| 4/7/2011 | 132 | 6/7/2011 | 176 | 8/7/2011 | 155 | 10/7/2011 | 116 | 12/7/2011 | 61.6 | 2/7/2012 | 17.3 |
| 4/8/2011 | 126 | 6/8/2011 | 191 | 8/8/2011 | 146 | 10/8/2011 | 114 | 12/8/2011 | 47.5 | 2/8/2012 | 17.3 |
| 4/9/2011 | 125 | 6/9/2011 | 202 | 8/9/2011 | 140 | 10/9/2011 | 114 | 12/9/2011 | 55.3 | 2/9/2012 | 17.3 |
| 4/10/2011 | 121 | 6/10/2011 | 201 | 8/10/2011 | 97.6 | 10/10/2011 | 114 | 12/10/2011 | 57.8 | 2/10/2012 | 16.9 |
| 4/11/2011 | 114 | 6/11/2011 | 205 | 8/11/2011 | 46.8 | 10/11/2011 | 115 | 12/11/2011 | 56.6 | 2/11/2012 | 16.7 |
| 4/12/2011 | 96.7 | 6/12/2011 | 210 | 8/12/2011 | 60.5 | 10/12/2011 | 114 | 12/12/2011 | 55.2 | 2/12/2012 | 17.1 |
| 4/13/2011 | 93.6 | 6/13/2011 | 240 | 8/13/2011 | 65.7 | 10/13/2011 | 114 | 12/13/2011 | 53.6 | 2/13/2012 | 17.1 |
| 4/14/2011 | 93.9 | 6/14/2011 | 295 | 8/14/2011 | 60.2 | 10/14/2011 | 113 | 12/14/2011 | 53 | 2/14/2012 |  |
| 4/15/2011 | 117 | 6/15/2011 | 320 | 8/15/2011 | 81.4 | 10/15/2011 | 112 | 12/15/2011 | 56.5 | 2/15/2012 |  |
| 4/16/2011 | 129 | 6/16/2011 | 340 | 8/16/2011 | 108 | 10/16/2011 | 112 | 12/16/2011 | 57.6 | 2/16/2012 |  |
| 4/17/2011 | 137 | 6/17/2011 | 330 | 8/17/2011 | 104 | 10/17/2011 | 112 | 12/17/2011 | 57.8 | 2/17/2012 |  |
| 4/18/2011 | 135 | 6/18/2011 | 325 | 8/18/2011 | 98.5 | 10/18/2011 | 112 | 12/18/2011 | 57.8 | 2/18/2012 |  |
| 4/19/2011 | 116 | 6/19/2011 | 325 | 8/19/2011 | 93.2 | 10/19/2011 | 112 | 12/19/2011 | 57.8 | 2/19/2012 |  |
| 4/20/2011 | 112 | 6/20/2011 | 332 | 8/20/2011 | 91.1 | 10/20/2011 | 112 | 12/20/2011 | 57.8 | 2/20/2012 |  |
| 4/21/2011 | 109 | 6/21/2011 | 306 | 8/21/2011 | 90 | 10/21/2011 | 111 | 12/21/2011 | 57.8 | 2/21/2012 |  |
| 4/22/2011 | 105 | 6/22/2011 | 319 | 8/22/2011 | 87.6 | 10/22/2011 | 111 | 12/22/2011 | 57.6 | 2/22/2012 |  |
| 4/23/2011 | 103 | 6/23/2011 | 335 | 8/23/2011 | 64.5 | 10/23/2011 | 111 | 12/23/2011 | 57.4 | 2/23/2012 |  |
| 4/24/2011 | 101 | 6/24/2011 | 336 | 8/24/2011 | 51.1 | 10/24/2011 | 110 | 12/24/2011 | 57.8 | 2/24/2012 |  |
| 4/25/2011 | 99.3 | 6/25/2011 | 325 | 8/25/2011 | 61.4 | 10/25/2011 | 109 | 12/25/2011 | 57.8 | 2/25/2012 |  |
| 4/26/2011 | 101 | 6/26/2011 | 312 | 8/26/2011 | 72.4 | 10/26/2011 | 109 | 12/26/2011 | 57.8 | 2/26/2012 |  |
| 4/27/2011 | 123 | 6/27/2011 | 302 | 8/27/2011 | 78.3 | 10/27/2011 | 109 | 12/27/2011 | 57.8 | 2/27/2012 |  |
| 4/28/2011 | 130 | 6/28/2011 | 303 | 8/28/2011 | 83.6 | 10/28/2011 | 109 | 12/28/2011 | 57.8 | 2/28/2012 |  |
| 4/29/2011 | 129 | 6/29/2011 | 326 | 8/29/2011 | 89.6 | 10/29/2011 | 109 | 12/29/2011 | 57.9 | 2/29/2012 |  |
| 4/30/2011 | 129 | 6/30/2011 | 320 | 8/30/2011 | 89 | 10/30/2011 | 109 | 12/30/2011 | 57.8 |  |  |
|  |  |  |  | 8/31/2011 | 81.8 | 10/31/2011 | 109 | 12/31/2011 | 57.9 | 3/1/2012 |  |
| 5/1/2011 | 128 | 7/1/2011 | 297 |  |  |  |  |  |  | 3/2/2012 |  |
| 5/2/2011 | 127 | 7/2/2011 | 300 | 9/1/2011 | 72.5 | 11/1/2011 | 108 | 1/1/2012 | 57.8 | 3/3/2012 |  |
| 5/3/2011 | 128 | 7/3/2011 | 321 | 9/2/2011 | 65.4 | 11/2/2011 | 108 | 1/2/2012 | 57.9 | 3/4/2012 |  |
| 5/4/2011 | 133 | 7/4/2011 | 340 | 9/3/2011 | 60 | 11/3/2011 | 110 | 1/3/2012 | 57.8 | 3/5/2012 |  |
| 5/5/2011 | 140 | 7/5/2011 | 365 | 9/4/2011 | 55.9 | 11/4/2011 | 110 | 1/4/2012 | 57.8 | 3/6/2012 |  |
| 5/6/2011 | 164 | 7/6/2011 | 242 | 9/5/2011 | 52.5 | 11/5/2011 | 111 | 1/5/2012 | 57.8 | 3/7/2012 |  |
| 5/7/2011 | 174 | 7/7/2011 | 374 | 9/6/2011 | 51.1 | 11/6/2011 | 111 | 1/6/2012 | 57.8 | 3/8/2012 |  |
| 5/8/2011 | 178 | 7/8/2011 | 389 | 9/7/2011 | 49.8 | 11/7/2011 | 111 | 1/7/2012 | 57.8 | 3/9/2012 |  |
| 5/9/2011 | 173 | 7/9/2011 | 395 | 9/8/2011 | 49.1 | 11/8/2011 | 107 | 1/8/2012 | 57.1 | 3/10/2012 |  |
| 5/10/2011 | 166 | 7/10/2011 | 382 | 9/9/2011 | 48.9 | 11/9/2011 | 77.8 | 1/9/2012 | 57 | 3/11/2012 |  |
| 5/11/2011 | 159 | 7/11/2011 | 368 | 9/10/2011 | 54.1 | 11/10/2011 | 68.4 | 1/10/2012 | 56.1 | 3/12/2012 |  |
| 5/12/2011 | 158 | 7/12/2011 | 329 | 9/11/2011 | 50.1 | 11/11/2011 | 68 | 1/11/2012 | 53.7 | 3/13/2012 |  |
| 5/13/2011 | 165 | 7/13/2011 | 188 | 9/12/2011 | 46.8 | 11/12/2011 | 67.2 | 1/12/2012 | 51.2 | 3/14/2012 |  |
| 5/14/2011 | 177 | 7/14/2011 | 199 | 9/13/2011 | 38.8 | 11/13/2011 | 68.7 | 1/13/2012 | 47.7 | 3/15/2012 |  |
| 5/15/2011 | 178 | 7/15/2011 | 285 | 9/14/2011 | 42 | 11/14/2011 | 64.3 | 1/14/2012 | 34.7 | 3/16/2012 |  |
| 5/16/2011 | 171 | 7/16/2011 | 318 | 9/15/2011 | 50 | 11/15/2011 | 43.2 | 1/15/2012 | 24.2 | 3/17/2012 |  |
| 5/17/2011 | 164 | 7/17/2011 | 314 | 9/16/2011 | 61 | 11/16/2011 | 36.9 | 1/16/2012 | 19.4 | 3/18/2012 |  |
| 5/18/2011 | 160 | 7/18/2011 | 294 | 9/17/2011 | 66 | 11/17/2011 | 35.6 | 1/17/2012 | 17.4 | 3/19/2012 |  |
| 5/19/2011 | 155 | 7/19/2011 | 276 | 9/18/2011 | 61 | 11/18/2011 | 36.8 | 1/18/2012 | 16.7 | 3/20/2012 |  |
| 5/20/2011 | 151 | 7/20/2011 | 264 | 9/19/2011 | 60 | 11/19/2011 | 33.9 | 1/19/2012 | 16.4 | 3/21/2012 |  |
| 5/21/2011 | 152 | 7/21/2011 | 260 | 9/20/2011 | 55.5 | 11/20/2011 | 31.2 | 1/20/2012 | 16.3 | 3/22/2012 |  |
| 5/22/2011 | 155 | 7/22/2011 | 261 | 9/21/2011 | 66.9 | 11/21/2011 | 31.7 | 1/21/2012 | 36.7 | 3/23/2012 |  |
| 5/23/2011 | 158 | 7/23/2011 | 269 | 9/22/2011 | 69.8 | 11/22/2011 | 32.8 | 1/22/2012 | 28.4 | 3/24/2012 |  |
| 5/24/2011 | 159 | 7/24/2011 | 288 | 9/23/2011 | 70 | 11/23/2011 | 35.9 | 1/23/2012 | 26.1 | 3/25/2012 |  |
| 5/25/2011 | 161 | 7/25/2011 | 296 | 9/24/2011 | 69.8 | 11/24/2011 | 33.4 | 1/24/2012 | 23 | 3/26/2012 |  |
| 5/26/2011 | 162 | 7/26/2011 | 273 | 9/25/2011 | 69 | 11/25/2011 | 30.7 | 1/25/2012 | 21.4 | 3/27/2012 |  |
| 5/27/2011 | 169 | 7/27/2011 | 243 | 9/26/2011 | 69 | 11/26/2011 | 31.8 | 1/26/2012 | 20.4 | 3/28/2012 |  |
| 5/28/2011 | 179 | 7/28/2011 | 230 | 9/27/2011 | 69 | 11/27/2011 | 33.3 | 1/27/2012 | 20.2 | 3/29/2012 |  |
| 5/29/2011 | 179 | 7/29/2011 | 230 | 9/28/2011 | 67 | 11/28/2011 | 32.7 | 1/28/2012 | 19.2 | 3/30/2012 |  |
| 5/30/2011 | 171 | 7/30/2011 | 249 | 9/29/2011 | 87.7 | 11/29/2011 | 33 | 1/29/2012 | 19.1 |  |  |
| 5/31/2011 | 164 | 7/31/2011 | 361 | 9/30/2011 | 109 | 11/30/2011 | 51.5 | 1/30/2012 | 19.1 |  |  |
|  |  |  |  |  |  |  |  | 1/31/2012 | 19.1 |  |  |

5.2 Daily Average Flow at MGORD (5007)

| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/2011 | 37.2 | 6/1/2011 | 83.7 | 8/1/2011 | 189 | 10/1/2011 | 44.1 | 12/1/2011 | 61.1 | 2/1/2012 | 45.4 |
| 4/2/2011 | 40.6 | 6/2/2011 | 83.7 | 8/2/2011 | 142 | 10/2/2011 | 50.6 | 12/2/2011 | 65.1 | 2/2/2012 | 42.2 |
| 4/3/2011 | 40.6 | 6/3/2011 | 83.5 | 8/3/2011 | 142 | 10/3/2011 | 54.4 | 12/3/2011 | 68.7 | 2/3/2012 | 43.3 |
| 4/4/2011 | 41.8 | 6/4/2011 | 83.9 | 8/4/2011 | 142 | 10/4/2011 | 51.3 | 12/4/2011 | 51.4 | 2/4/2012 | 43.5 |
| 4/5/2011 | 44 | 6/5/2011 | 85.2 | 8/5/2011 | 136 | 10/5/2011 | 47.8 | 12/5/2011 | 61.2 | 2/5/2012 | 43.5 |
| 4/6/2011 | 43.9 | 6/6/2011 | 85.3 | 8/6/2011 | 129 | 10/6/2011 | 47.9 | 12/6/2011 | 62.4 | 2/6/2012 | 43.5 |
| 4/7/2011 | 44 | 6/7/2011 | 82.3 | 8/7/2011 | 129 | 10/7/2011 | 53.6 | 12/7/2011 | 61.7 | 2/7/2012 | 43.5 |
| 4/8/2011 | 44 | 6/8/2011 | 78.4 | 8/8/2011 | 121 | 10/8/2011 | 66.8 | 12/8/2011 | 61.2 | 2/8/2012 | 43.5 |
| 4/9/2011 | 44 | 6/9/2011 | 78.4 | 8/9/2011 | 113 | 10/9/2011 | 84.7 | 12/9/2011 | 62 | 2/9/2012 | 43.5 |
| 4/10/2011 | 44 | 6/10/2011 | 78.4 | 8/10/2011 | 114 | 10/10/2011 | 98.5 | 12/10/2011 | 62 | 2/10/2012 | 43.5 |
| 4/11/2011 | 44 | 6/11/2011 | 78.4 | 8/11/2011 | 111 | 10/11/2011 | 117 | 12/11/2011 | 62 | 2/11/2012 | 43.5 |
| 4/12/2011 | 43.9 | 6/12/2011 | 84.6 | 8/12/2011 | 108 | 10/12/2011 | 148 | 12/12/2011 | 62 | 2/12/2012 | 43.5 |
| 4/13/2011 | 43.8 | 6/13/2011 | 94.6 | 8/13/2011 | 108 | 10/13/2011 | 171 | 12/13/2011 | 62 | 2/13/2012 | 43.5 |
| 4/14/2011 | 43.6 | 6/14/2011 | 103 | 8/14/2011 | 108 | 10/14/2011 | 200 | 12/14/2011 | 62.1 | 2/14/2012 |  |
| 4/15/2011 | 43.5 | 6/15/2011 | 112 | 8/15/2011 | 105 | 10/15/2011 | 243 | 12/15/2011 | 62.5 | 2/15/2012 |  |
| 4/16/2011 | 43.2 | 6/16/2011 | 122 | 8/16/2011 | 103 | 10/16/2011 | 299 | 12/16/2011 | 62.5 | 2/16/2012 |  |
| 4/17/2011 | 43.2 | 6/17/2011 | 137 | 8/17/2011 | 103 | 10/17/2011 | 339 | 12/17/2011 | 62.5 | 2/17/2012 |  |
| 4/18/2011 | 43.4 | 6/18/2011 | 152 | 8/18/2011 | 102 | 10/18/2011 | 349 | 12/18/2011 | 62.5 | 2/18/2012 |  |
| 4/19/2011 | 43.2 | 6/19/2011 | 169 | 8/19/2011 | 102 | 10/19/2011 | 346 | 12/19/2011 | 62.5 | 2/19/2012 |  |
| 4/20/2011 | 43.3 | 6/20/2011 | 182 | 8/20/2011 | 91.1 | 10/20/2011 | 351 | 12/20/2011 | 62.5 | 2/20/2012 |  |
| 4/21/2011 | 43.6 | 6/21/2011 | 182 | 8/21/2011 | 79.6 | 10/21/2011 | 355 | 12/21/2011 | 102 | 2/21/2012 |  |
| 4/22/2011 | 43.5 | 6/22/2011 | 182 | 8/22/2011 | 79.2 | 10/22/2011 | 353 | 12/22/2011 | 61.2 | 2/22/2012 |  |
| 4/23/2011 | 44 | 6/23/2011 | 181 | 8/23/2011 | 73.1 | 10/23/2011 | 353 | 12/23/2011 | 61.2 | 2/23/2012 |  |
| 4/24/2011 | 43.6 | 6/24/2011 | 181 | 8/24/2011 | 68.5 | 10/24/2011 | 334 | 12/24/2011 | 61.2 | 2/24/2012 |  |
| 4/25/2011 | 43.6 | 6/25/2011 | 182 | 8/25/2011 | 68.5 | 10/25/2011 | 284 | 12/25/2011 | 61.2 | 2/25/2012 |  |
| 4/26/2011 | 43.2 | 6/26/2011 | 182 | 8/26/2011 | 68.4 | 10/26/2011 | 229 | 12/26/2011 | 61.2 | 2/26/2012 |  |
| 4/27/2011 | 43.1 | 6/27/2011 | 182 | 8/27/2011 | 66 | 10/27/2011 | 171 | 12/27/2011 | 61.2 | 2/27/2012 |  |
| 4/28/2011 | 43.2 | 6/28/2011 | 181 | 8/28/2011 | 63.3 | 10/28/2011 | 146 | 12/28/2011 | 61.2 | 2/28/2012 |  |
| 4/29/2011 | 43.3 | 6/29/2011 | 182 | 8/29/2011 | 63.4 | 10/29/2011 | 124 | 12/29/2011 | 61.2 | 2/29/2012 |  |
| 4/30/2011 | 42.9 | 6/30/2011 | 182 | 8/30/2011 | 63.3 | 10/30/2011 | 108 | 12/30/2011 | 61.1 |  |  |
|  |  |  |  | 8/31/2011 | 62.6 | 10/31/2011 | 98.5 | 12/31/2011 | 61 | 3/1/2012 |  |
| 5/1/2011 | 47.8 | 7/1/2011 | 182 |  |  |  |  |  |  | 3/2/2012 |  |
| 5/2/2011 | 56.6 | 7/2/2011 | 182 | 9/1/2011 | 62.2 | 11/1/2011 | 76.3 | 1/1/2012 | 60.4 | 3/3/2012 |  |
| 5/3/2011 | 64.8 | 7/3/2011 | 197 | 9/2/2011 | 59.4 | 11/2/2011 | 57.4 | 1/2/2012 | 60.4 | 3/4/2012 |  |
| 5/4/2011 | 75.2 | 7/4/2011 | 239 | 9/3/2011 | 55.2 | 11/3/2011 | 56.2 | 1/3/2012 | 60.4 | 3/5/2012 |  |
| 5/5/2011 | 83 | 7/5/2011 | 286 | 9/4/2011 | 55 | 11/4/2011 | 55.9 | 1/4/2012 | 60.4 | 3/6/2012 |  |
| 5/6/2011 | 82.6 | 7/6/2011 | 346 | 9/5/2011 | 54.8 | 11/5/2011 | 58.2 | 1/5/2012 | 60.5 | 3/7/2012 |  |
| 5/7/2011 | 83.5 | 7/7/2011 | 374 | 9/6/2011 | 51.3 | 11/6/2011 | 58.8 | 1/6/2012 | 60.4 | 3/8/2012 |  |
| 5/8/2011 | 83.8 | 7/8/2011 | 376 | 9/7/2011 | 50.4 | 11/7/2011 | 59 | 1/7/2012 | 60.4 | 3/9/2012 |  |
| 5/9/2011 | 84.3 | 7/9/2011 | 375 | 9/8/2011 | 49.6 | 11/8/2011 | 59 | 1/8/2012 | 60.4 | 3/10/2012 |  |
| 5/10/2011 | 84.8 | 7/10/2011 | 375 | 9/9/2011 | 46.1 | 11/9/2011 | 58.9 | 1/9/2012 | 60.8 | 3/11/2012 |  |
| 5/11/2011 | 84.6 | 7/11/2011 | 376 | 9/10/2011 | 40.8 | 11/10/2011 | 58.9 | 1/10/2012 | 61.2 | 3/12/2012 |  |
| 5/12/2011 | 83.5 | 7/12/2011 | 377 | 9/11/2011 | 39.4 | 11/11/2011 | 58.8 | 1/11/2012 | 61.2 | 3/13/2012 |  |
| 5/13/2011 | 83.5 | 7/13/2011 | 340 | 9/12/2011 | 39.3 | 11/12/2011 | 59.3 | 1/12/2012 | 60.9 | 3/14/2012 |  |
| 5/14/2011 | 83.5 | 7/14/2011 | 281 | 9/13/2011 | 39.2 | 11/13/2011 | 59.6 | 1/13/2012 | 60.4 | 3/15/2012 |  |
| 5/15/2011 | 83.5 | 7/15/2011 | 235 | 9/14/2011 | 39.3 | 11/14/2011 | 59.4 | 1/14/2012 | 60.4 | 3/16/2012 |  |
| 5/16/2011 | 83.7 | 7/16/2011 | 205 | 9/15/2011 | 39.3 | 11/15/2011 | 58.8 | 1/15/2012 | 60.4 | 3/17/2012 |  |
| 5/17/2011 | 85 | 7/17/2011 | 191 | 9/16/2011 | 39.2 | 11/16/2011 | 57.6 | 1/16/2012 | 60.4 | 3/18/2012 |  |
| 5/18/2011 | 85.3 | 7/18/2011 | 186 | 9/17/2011 | 39.2 | 11/17/2011 | 56.9 | 1/17/2012 | 60.7 | 3/19/2012 |  |
| 5/19/2011 | 85.3 | 7/19/2011 | 181 | 9/18/2011 | 39.2 | 11/18/2011 | 58.7 | 1/18/2012 | 61.2 | 3/20/2012 |  |
| 5/20/2011 | 85.4 | 7/20/2011 | 177 | 9/19/2011 | 39.2 | 11/19/2011 | 61.2 | 1/19/2012 | 61.1 | 3/21/2012 |  |
| 5/21/2011 | 85.3 | 7/21/2011 | 173 | 9/20/2011 | 39 | 11/20/2011 | 61.1 | 1/20/2012 | 61.2 | 3/22/2012 |  |
| 5/22/2011 | 85.3 | 7/22/2011 | 168 | 9/21/2011 | 38.8 | 11/21/2011 | 61.2 | 1/21/2012 | 61.4 | 3/23/2012 |  |
| 5/23/2011 | 85.3 | 7/23/2011 | 164 | 9/22/2011 | 38.5 | 11/22/2011 | 61.1 | 1/22/2012 | 61.2 | 3/24/2012 |  |
| 5/24/2011 | 85 | 7/24/2011 | 161 | 9/23/2011 | 39.7 | 11/23/2011 | 60.4 | 1/23/2012 | 61.2 | 3/25/2012 |  |
| 5/25/2011 | 83.9 | 7/25/2011 | 160 | 9/24/2011 | 41.3 | 11/24/2011 | 60.4 | 1/24/2012 | 61.2 | 3/26/2012 |  |
| 5/26/2011 | 85 | 7/26/2011 | 160 | 9/25/2011 | 41.1 | 11/25/2011 | 60.4 | 1/25/2012 | 61.2 | 3/27/2012 |  |
| 5/27/2011 | 85.3 | 7/27/2011 | 160 | 9/26/2011 | 40.4 | 11/26/2011 | 60.4 | 1/26/2012 | 61.2 | 3/28/2012 |  |
| 5/28/2011 | 85.3 | 7/28/2011 | 166 | 9/27/2011 | 40.5 | 11/27/2011 | 60.2 | 1/27/2012 | 61.2 | 3/29/2012 |  |
| 5/29/2011 | 85.3 | 7/29/2011 | 167 | 9/28/2011 | 40.7 | 11/28/2011 | 60 | 1/28/2012 | 61.2 | 3/30/2012 |  |
| 5/30/2011 | 85.3 | 7/30/2011 | 196 | 9/29/2011 | 40.2 | 11/29/2011 | 60 | 1/29/2012 | 54.4 |  |  |
| 5/31/2011 | 85.2 | 7/31/2011 | 238 | 9/30/2011 | 40.1 | 11/30/2011 | 60.2 | 1/30/2012 | 54.4 |  |  |
|  |  |  |  |  |  |  |  | 1/31/2012 | 51.6 |  |  |

### 5.3 Daily Average Flow at Upper Rush

| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/2011 | 76 | 6/1/2011 | 184 | 8/1/2011 | 360 | 10/1/2011 | 44 | 12/1/2011 | 61 | 2/1/2012 | 45 |
| 4/2/2011 | 84 | 6/2/2011 | 184 | 8/2/2011 | 300 | 10/2/2011 | 51 | 12/2/2011 | 65 | 2/2/2012 | 42 |
| 4/3/2011 | 96 | 6/3/2011 | 195 | 8/3/2011 | 287 | 10/3/2011 | 54 | 12/3/2011 | 69 | 2/3/2012 | 43 |
| 4/4/2011 | 105 | 6/4/2011 | 194 | 8/4/2011 | 275 | 10/4/2011 | 51 | 12/4/2011 | 51 | 2/4/2012 | 44 |
| 4/5/2011 | 107 | 6/5/2011 | 185 | 8/5/2011 | 246 | 10/5/2011 | 48 | 12/5/2011 | 61 | 2/5/2012 | 44 |
| 4/6/2011 | 116 | 6/6/2011 | 196 | 8/6/2011 | 220 | 10/6/2011 | 48 | 12/6/2011 | 62 | 2/6/2012 | 44 |
| 4/7/2011 | 131 | 6/7/2011 | 203 | 8/7/2011 | 201 | 10/7/2011 | 54 | 12/7/2011 | 62 | 2/7/2012 | 44 |
| 4/8/2011 | 140 | 6/8/2011 | 199 | 8/8/2011 | 176 | 10/8/2011 | 67 | 12/8/2011 | 61 | 2/8/2012 | 44 |
| 4/9/2011 | 144 | 6/9/2011 | 211 | 8/9/2011 | 160 | 10/9/2011 | 85 | 12/9/2011 | 62 | 2/9/2012 | 44 |
| 4/10/2011 | 140 | 6/10/2011 | 223 | 8/10/2011 | 161 | 10/10/2011 | 99 | 12/10/2011 | 62 | 2/10/2012 | 44 |
| 4/11/2011 | 131 | 6/11/2011 | 223 | 8/11/2011 | 151 | 10/11/2011 | 117 | 12/11/2011 | 62 | 2/11/2012 | 44 |
| 4/12/2011 | 125 | 6/12/2011 | 243 | 8/12/2011 | 141 | 10/12/2011 | 148 | 12/12/2011 | 62 | 2/12/2012 | 44 |
| 4/13/2011 | 125 | 6/13/2011 | 266 | 8/13/2011 | 135 | 10/13/2011 | 171 | 12/13/2011 | 62 | 2/13/2012 | 44 |
| 4/14/2011 | 116 | 6/14/2011 | 288 | 8/14/2011 | 124 | 10/14/2011 | 200 | 12/14/2011 | 62 | 2/14/2012 |  |
| 4/15/2011 | 107 | 6/15/2011 | 310 | 8/15/2011 | 112 | 10/15/2011 | 243 | 12/15/2011 | 63 | 2/15/2012 |  |
| 4/16/2011 | 115 | 6/16/2011 | 333 | 8/16/2011 | 105 | 10/16/2011 | 299 | 12/16/2011 | 63 | 2/16/2012 |  |
| 4/17/2011 | 124 | 6/17/2011 | 361 | 8/17/2011 | 103 | 10/17/2011 | 339 | 12/17/2011 | 63 | 2/17/2012 |  |
| 4/18/2011 | 130 | 6/18/2011 | 363 | 8/18/2011 | 102 | 10/18/2011 | 349 | 12/18/2011 | 63 | 2/18/2012 |  |
| 4/19/2011 | 130 | 6/19/2011 | 367 | 8/19/2011 | 102 | 10/19/2011 | 346 | 12/19/2011 | 63 | 2/19/2012 |  |
| 4/20/2011 | 124 | 6/20/2011 | 366 | 8/20/2011 | 91 | 10/20/2011 | 351 | 12/20/2011 | 63 | 2/20/2012 |  |
| 4/21/2011 | 125 | 6/21/2011 | 353 | 8/21/2011 | 80 | 10/21/2011 | 355 | 12/21/2011 | 102 | 2/21/2012 |  |
| 4/22/2011 | 125 | 6/22/2011 | 340 | 8/22/2011 | 79 | 10/22/2011 | 353 | 12/22/2011 | 61 | 2/22/2012 |  |
| 4/23/2011 | 121 | 6/23/2011 | 339 | 8/23/2011 | 73 | 10/23/2011 | 353 | 12/23/2011 | 61 | 2/23/2012 |  |
| 4/24/2011 | 126 | 6/24/2011 | 352 | 8/24/2011 | 69 | 10/24/2011 | 334 | 12/24/2011 | 61 | 2/24/2012 |  |
| 4/25/2011 | 121 | 6/25/2011 | 353 | 8/25/2011 | 69 | 10/25/2011 | 284 | 12/25/2011 | 61 | 2/25/2012 |  |
| 4/26/2011 | 115 | 6/26/2011 | 340 | 8/26/2011 | 68 | 10/26/2011 | 229 | 12/26/2011 | 61 | 2/26/2012 |  |
| 4/27/2011 | 120 | 6/27/2011 | 340 | 8/27/2011 | 66 | 10/27/2011 | 171 | 12/27/2011 | 61 | 2/27/2012 |  |
| 4/28/2011 | 116 | 6/28/2011 | 339 | 8/28/2011 | 63 | 10/28/2011 | 146 | 12/28/2011 | 61 | 2/28/2012 |  |
| 4/29/2011 | 120 | 6/29/2011 | 340 | 8/29/2011 | 63 | 10/29/2011 | 124 | 12/29/2011 | 61 | 2/29/2012 |  |
| 4/30/2011 | 124 | 6/30/2011 | 340 | 8/30/2011 | 63 | 10/30/2011 | 108 | 12/30/2011 | 61 |  |  |
|  |  |  |  | 8/31/2011 | 63 | 10/31/2011 | 99 | 12/31/2011 | 61 | 3/1/2012 |  |
| 5/1/2011 | 129 | 7/1/2011 | 327 |  |  |  |  |  |  | 3/2/2012 |  |
| 5/2/2011 | 134 | 7/2/2011 | 327 | 9/1/2011 | 62 | 11/1/2011 | 76 | 1/1/2012 | 60 | 3/3/2012 |  |
| 5/3/2011 | 142 | 7/3/2011 | 330 | 9/2/2011 | 59 | 11/2/2011 | 57 | 1/2/2012 | 60 | 3/4/2012 |  |
| 5/4/2011 | 151 | 7/4/2011 | 360 | 9/3/2011 | 55 | 11/3/2011 | 56 | 1/3/2012 | 60 | 3/5/2012 |  |
| 5/5/2011 | 159 | 7/5/2011 | 396 | 9/4/2011 | 55 | 11/4/2011 | 56 | 1/4/2012 | 60 | 3/6/2012 |  |
| 5/6/2011 | 164 | 7/6/2011 | 437 | 9/5/2011 | 55 | 11/5/2011 | 58 | 1/5/2012 | 61 | 3/7/2012 |  |
| 5/7/2011 | 174 | 7/7/2011 | 446 | 9/6/2011 | 51 | 11/6/2011 | 59 | 1/6/2012 | 60 | 3/8/2012 |  |
| 5/8/2011 | 180 | 7/8/2011 | 439 | 977/2011 | 50 | 11/7/2011 | 59 | 1/7/2012 | 60 | 3/9/2012 |  |
| 5/9/2011 | 180 | 7/9/2011 | 438 | 9/8/2011 | 50 | 11/8/2011 | 59 | 1/8/2012 | 60 | 3/10/2012 |  |
| 5/10/2011 | 185 | 7/10/2011 | 438 | 9/9/2011 | 46 | 11/9/2011 | 59 | 1/9/2012 | 61 | 3/11/2012 |  |
| 5/11/2011 | 185 | 7/11/2011 | 413 | 9/10/2011 | 41 | 11/10/2011 | 59 | 1/10/2012 | 61 | 3/12/2012 |  |
| 5/12/2011 | 184 | 7/12/2011 | 384 | 9/11/2011 | 39 | 11/11/2011 | 59 | 1/11/2012 | 61 | 3/13/2012 |  |
| 5/13/2011 | 184 | 7/13/2011 | 342 | 9/12/2011 | 39 | 11/12/2011 | 59 | 1/12/2012 | 61 | 3/14/2012 |  |
| 5/14/2011 | 184 | 7/14/2011 | 281 | 9/13/2011 | 39 | 11/13/2011 | 60 | 1/13/2012 | 60 | 3/15/2012 |  |
| 5/15/2011 | 195 | 7/15/2011 | 235 | 9/14/2011 | 39 | 11/14/2011 | 59 | 1/14/2012 | 60 | 3/16/2012 |  |
| 5/16/2011 | 205 | 7/16/2011 | 207 | 9/15/2011 | 39 | 11/15/2011 | 59 | 1/15/2012 | 60 | 3/17/2012 |  |
| 5/17/2011 | 195 | 7/17/2011 | 209 | 9/16/2011 | 39 | 11/16/2011 | 58 | 1/16/2012 | 60 | 3/18/2012 |  |
| 5/18/2011 | 185 | 7/18/2011 | 219 | 9/17/2011 | 39 | 11/17/2011 | 57 | 1/17/2012 | 61 | 3/19/2012 |  |
| 5/19/2011 | 181 | 7/19/2011 | 221 | 9/18/2011 | 39 | 11/18/2011 | 59 | 1/18/2012 | 61 | 3/20/2012 |  |
| 5/20/2011 | 177 | 7/20/2011 | 232 | 9/19/2011 | 39 | 11/19/2011 | 61 | 1/19/2012 | 61 | 3/21/2012 |  |
| 5/21/2011 | 177 | 7/21/2011 | 236 | 9/20/2011 | 39 | 11/20/2011 | 61 | 1/20/2012 | 61 | 3/22/2012 |  |
| 5/22/2011 | 177 | 7/22/2011 | 240 | 9/21/2011 | 39 | 11/21/2011 | 61 | 1/21/2012 | 61 | 3/23/2012 |  |
| 5/23/2011 | 177 | 7/23/2011 | 245 | 9/22/2011 | 39 | 11/22/2011 | 61 | 1/22/2012 | 61 | 3/24/2012 |  |
| 5/24/2011 | 177 | 7/24/2011 | 252 | 9/23/2011 | 40 | 11/23/2011 | 60 | 1/23/2012 | 61 | 3/25/2012 |  |
| 5/25/2011 | 176 | 7/25/2011 | 260 | 9/24/2011 | 41 | 11/24/2011 | 60 | 1/24/2012 | 61 | 3/26/2012 |  |
| 5/26/2011 | 172 | 7/26/2011 | 260 | 9/25/2011 | 41 | 11/25/2011 | 60 | 1/25/2012 | 61 | 3/27/2012 |  |
| 5/27/2011 | 176 | 7/27/2011 | 271 | 9/26/2011 | 40 | 11/26/2011 | 60 | 1/26/2012 | 61 | 3/28/2012 |  |
| 5/28/2011 | 190 | 7/28/2011 | 287 | 9/27/2011 | 41 | 11/27/2011 | 60 | 1/27/2012 | 61 | 3/29/2012 |  |
| 5/29/2011 | 195 | 7/29/2011 | 295 | 9/28/2011 | 41 | 11/28/2011 | 60 | 1/28/2012 | 61 | 3/30/2012 |  |
| 5/30/2011 | 186 | 7/30/2011 | 336 | 9/29/2011 | 40 | 11/29/2011 | 60 | 1/29/2012 | 54 | 3/31/2012 |  |
| 5/31/2011 | 181 | 7/31/2011 | 396 | 9/30/2011 | 40 | 11/30/2011 | 60 | 1/30/2012 | 54 |  |  |
|  |  |  |  |  |  |  |  | 1/31/2012 | 52 |  |  |

### 5.4 Daily Average Flow at Parker Creek below Conduit (5017)

| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/2011 | 7.87 | 6/1/2011 | 13.5 | 8/1/2011 | 47.3 | 10/1/2011 | 8.9 | 12/1/2011 | 4.39 | 2/1/2012 | 3.86 |
| 4/2/2011 | 10.4 | 6/2/2011 | 13.2 | 8/2/2011 | 42.1 | 10/2/2011 | 9.64 | 12/2/2011 | 4.52 | 2/2/2012 | 8 |
| 4/3/2011 | 9.66 | 6/3/2011 | 12.6 | 8/3/2011 | 38.2 | 10/3/2011 | 9.59 | 12/3/2011 | 3.76 | 2/3/2012 | 8 |
| 4/4/2011 | 10.5 | 6/4/2011 | 12 | 8/4/2011 | 35.3 | 10/4/2011 | 9.5 | 12/4/2011 | 4.65 | 2/4/2012 | 5.04 |
| 4/5/2011 | 12.1 | 6/5/2011 | 13.5 | 8/5/2011 | 33.1 | 10/5/2011 | 10.4 | 12/5/2011 | 4.62 | 2/5/2012 | 7.32 |
| 4/6/2011 | 9.81 | 6/6/2011 | 12.4 | 8/6/2011 | 31.4 | 10/6/2011 | 9.38 | 12/6/2011 | 4.64 | 2/6/2012 | 8.86 |
| 4/7/2011 | 7.68 | 6/7/2011 | 13.5 | 8/7/2011 | 29.9 | 10/7/2011 | 9.42 | 12/7/2011 | 5.19 | 2/7/2012 | 4.37 |
| 4/8/2011 | 7.4 | 6/8/2011 | 14.2 | 8/8/2011 | 28.8 | 10/8/2011 | 9.6 | 12/8/2011 | 5.58 | 2/8/2012 | 4.2 |
| 4/9/2011 | 7.36 | 6/9/2011 | 15.6 | 8/9/2011 | 28 | 10/9/2011 | 9.46 | 12/9/2011 | 5.34 | 2/9/2012 | 4.16 |
| 4/10/2011 | 6.86 | 6/10/2011 | 18.7 | 8/10/2011 | 27.4 | 10/10/2011 | 9.06 | 12/10/2011 | 5.16 | 2/10/2012 | 4.13 |
| 4/11/2011 | 6.82 | 6/11/2011 | 22 | 8/11/2011 | 27 | 10/11/2011 | 9.02 | 12/11/2011 | 5.13 | 2/11/2012 | 4.05 |
| 4/12/2011 | 6.7 | 6/12/2011 | 24.3 | 8/12/2011 | 26.5 | 10/12/2011 | 9.88 | 12/12/2011 | 4.95 | 2/12/2012 | 4.12 |
| 4/13/2011 | 6.32 | 6/13/2011 | 26.8 | 8/13/2011 | 25.9 | 10/13/2011 | 10.2 | 12/13/2011 | 4.99 | 2/13/2012 | 3.97 |
| 4/14/2011 | 6.05 | 6/14/2011 | 31.6 | 8/14/2011 | 25.6 | 10/14/2011 | 10 | 12/14/2011 | 4.9 | 2/14/2012 |  |
| 4/15/2011 | 6.44 | 6/15/2011 | 36.5 | 8/15/2011 | 27.5 | 10/15/2011 | 9.65 | 12/15/2011 | 5.02 | 2/15/2012 |  |
| 4/16/2011 | 10.6 | 6/16/2011 | 43.9 | 8/16/2011 | 26.2 | 10/16/2011 | 9.31 | 12/16/2011 | 4.94 | 2/16/2012 |  |
| 4/17/2011 | 11.1 | 6/17/2011 | 41.8 | 8/17/2011 | 23.9 | 10/17/2011 | 9.01 | 12/17/2011 | 4.74 | 2/17/2012 |  |
| 4/18/2011 | 11.8 | 6/18/2011 | 40.2 | 8/18/2011 | 22.3 | 10/18/2011 | 8.76 | 12/18/2011 | 4.6 | 2/18/2012 |  |
| 4/19/2011 | 13.1 | 6/19/2011 | 43.8 | 8/19/2011 | 22.8 | 10/19/2011 | 8.33 | 12/19/2011 | 4.83 | 2/19/2012 |  |
| 4/20/2011 | 14.7 | 6/20/2011 | 45.9 | 8/20/2011 | 24.1 | 10/20/2011 | 8.2 | 12/20/2011 | 4.63 | 2/20/2012 |  |
| 4/21/2011 | 14.6 | 6/21/2011 | 46.6 | 8/21/2011 | 23 | 10/21/2011 | 7.84 | 12/21/2011 | 4.49 | 2/21/2012 |  |
| 4/22/2011 | 14.4 | 6/22/2011 | 53.5 | 8/22/2011 | 21 | 10/22/2011 | 7.67 | 12/22/2011 | 5.05 | 2/22/2012 |  |
| 4/23/2011 | 14.5 | 6/23/2011 | 60.1 | 8/23/2011 | 20.2 | 10/23/2011 | 7.51 | 12/23/2011 | 4.96 | 2/23/2012 |  |
| 4/24/2011 | 13.1 | 6/24/2011 | 59 | 8/24/2011 | 21.7 | 10/24/2011 | 6.87 | 12/24/2011 | 4.31 | 2/24/2012 |  |
| 4/25/2011 | 12.4 | 6/25/2011 | 53.7 | 8/25/2011 | 23.3 | 10/25/2011 | 6.72 | 12/25/2011 | 3.76 | 2/25/2012 |  |
| 4/26/2011 | 11.8 | 6/26/2011 | 49.4 | 8/26/2011 | 23 | 10/26/2011 | 6.95 | 12/26/2011 | 3.74 | 2/26/2012 |  |
| 4/27/2011 | 12 | 6/27/2011 | 47.1 | 8/27/2011 | 24.2 | 10/27/2011 | 6.87 | 12/27/2011 | 4.24 | 2/27/2012 |  |
| 4/28/2011 | 12.2 | 6/28/2011 | 48.7 | 8/28/2011 | 27.9 | 10/28/2011 | 6.72 | 12/28/2011 | 4.4 | 2/28/2012 |  |
| 4/29/2011 | 11.6 | 6/29/2011 | 52.7 | 8/29/2011 | 26.7 | 10/29/2011 | 6.57 | 12/29/2011 | 4.39 | 2/29/2012 |  |
| 4/30/2011 | 12.2 | 6/30/2011 | 45 | 8/30/2011 | 23.6 | 10/30/2011 | 6.45 | 12/30/2011 | 4.28 |  |  |
|  |  |  |  | 8/31/2011 | 20.6 | 10/31/2011 | 6.2 | 12/31/2011 | 3.98 | 3/1/2012 |  |
| 5/1/2011 | 12.1 | 7/1/2011 | 40.5 |  |  |  |  |  |  | 3/2/2012 |  |
| 5/2/2011 | 12 | 7/2/2011 | 44.1 | 9/1/2011 | 18.7 | 11/1/2011 | 6.11 | 1/1/2012 | 4.21 | 3/3/2012 |  |
| 5/3/2011 | 11.9 | 7/3/2011 | 54.3 | 9/2/2011 | 17.4 | 11/2/2011 | 6.31 | 1/2/2012 | 4.23 | 3/4/2012 |  |
| 5/4/2011 | 12.1 | 7/4/2011 | 62.5 | 9/3/2011 | 16.7 | 11/3/2011 | 6.34 | 1/3/2012 | 4.14 | 3/5/2012 |  |
| 5/5/2011 | 12.9 | 7/5/2011 | 80.4 | 9/4/2011 | 16.1 | 11/4/2011 | 6.31 | 1/4/2012 | 4.05 | 3/6/2012 |  |
| 5/6/2011 | 14.5 | 7/6/2011 | 72.4 | 9/5/2011 | 15.5 | 11/5/2011 | 6.29 | 1/5/2012 | 4.19 | 3/7/2012 |  |
| 5/7/2011 | 17.1 | 7/7/2011 | 72 | 9/6/2011 | 14.9 | 11/6/2011 | 6.27 | 1/6/2012 | 4.15 | 3/8/2012 |  |
| 5/8/2011 | 18.2 | 7/8/2011 | 75.1 | 9/7/2011 | 14.4 | 11/7/2011 | 6.21 | 1/7/2012 | 4.12 | 3/9/2012 |  |
| 5/9/2011 | 18.7 | 7/9/2011 | 66.8 | 9/8/2011 | 14.4 | 11/8/2011 | 6.07 | 1/8/2012 | 4.12 | 3/10/2012 |  |
| 5/10/2011 | 18 | 7/10/2011 | 59 | 9/9/2011 | 14.8 | 11/9/2011 | 6.09 | 1/9/2012 | 4.12 | 3/11/2012 |  |
| 5/11/2011 | 16.1 | 7/11/2011 | 51.4 | 9/10/2011 | 14.9 | 11/10/2011 | 6.04 | 1/10/2012 | 4.17 | 3/12/2012 |  |
| 5/12/2011 | 14.8 | 7/12/2011 | 48.6 | 9/11/2011 | 15.3 | 11/11/2011 | 6.12 | 1/11/2012 | 4.23 | 3/13/2012 |  |
| 5/13/2011 | 14.6 | 7/13/2011 | 48.2 | 9/12/2011 | 16.7 | 11/12/2011 | 6.1 | 1/12/2012 | 4.23 | 3/14/2012 |  |
| 5/14/2011 | 16 | 7/14/2011 | 46.2 | 9/13/2011 | 16.4 | 11/13/2011 | 6.06 | 1/13/2012 | 4.23 | 3/15/2012 |  |
| 5/15/2011 | 18 | 7/15/2011 | 43 | 9/14/2011 | 15.5 | 11/14/2011 | 5.93 | 1/14/2012 | 4.23 | 3/16/2012 |  |
| 5/16/2011 | 17.5 | 7/16/2011 | 42.1 | 9/15/2011 | 14.4 | 11/15/2011 | 5.79 | 1/15/2012 | 4.26 | 3/17/2012 |  |
| 5/17/2011 | 16.2 | 7/17/2011 | 39.6 | 9/16/2011 | 13.7 | 11/16/2011 | 5 | 1/16/2012 | 4.35 | 3/18/2012 |  |
| 5/18/2011 | 15.7 | 7/18/2011 | 37.5 | 9/17/2011 | 13.3 | 11/17/2011 | 5.84 | 1/17/2012 | 4.35 | 3/19/2012 |  |
| 5/19/2011 | 14.3 | 7/19/2011 | 35.6 | 9/18/2011 | 12.7 | 11/18/2011 | 5.46 | 1/18/2012 | 4.21 | 3/20/2012 |  |
| 5/20/2011 | 13.4 | 7/20/2011 | 35.1 | 9/19/2011 | 12.1 | 11/19/2011 | 5.48 | 1/19/2012 | 3.79 | 3/21/2012 |  |
| 5/21/2011 | 12.9 | 7/21/2011 | 35.7 | 9/20/2011 | 11.8 | 11/20/2011 | 5.87 | 1/20/2012 | 3.94 | 3/22/2012 |  |
| 5/22/2011 | 13.1 | 7/22/2011 | 37.2 | 9/21/2011 | 11.6 | 11/21/2011 | 5.7 | 1/21/2012 | 4.53 | 3/23/2012 |  |
| 5/23/2011 | 13.7 | 7/23/2011 | 40.1 | 9/22/2011 | 11.5 | 11/22/2011 | 5.33 | 1/22/2012 | 5.02 | 3/24/2012 |  |
| 5/24/2011 | 14 | 7/24/2011 | 43.5 | 9/23/2011 | 11.4 | 11/23/2011 | 5.16 | 1/23/2012 | 4.8 | 3/25/2012 |  |
| 5/25/2011 | 14 | 7/25/2011 | 42.1 | 9/24/2011 | 11.1 | 11/24/2011 | 5.03 | 1/24/2012 | 4.29 | 3/26/2012 |  |
| 5/26/2011 | 13 | 7/26/2011 | 38.3 | 9/25/2011 | 10.7 | 11/25/2011 | 4.98 | 1/25/2012 | 3.98 | 3/27/2012 |  |
| 5/27/2011 | 14.1 | 7/27/2011 | 35.9 | 9/26/2011 | 10.7 | 11/26/2011 | 4.99 | 1/26/2012 | 3.95 | 3/28/2012 |  |
| 5/28/2011 | 15.2 | 7/28/2011 | 36.4 | 9/27/2011 | 10.5 | 11/27/2011 | 4.94 | 1/27/2012 | 3.79 | 3/29/2012 |  |
| 5/29/2011 | 17.3 | 7/29/2011 | 40.2 | 9/28/2011 | 10.5 | 11/28/2011 | 4.92 | 1/28/2012 | 3.67 | 3/30/2012 |  |
| 5/30/2011 | 16.7 | 7/30/2011 | 51.6 | 9/29/2011 | 10.4 | 11/29/2011 | 4.82 | 1/29/2012 | 4.12 | 3/31/2012 |  |
| 5/31/2011 | 15.2 | 7/31/2011 | 53.5 | 9/30/2011 | 10.3 | 11/30/2011 | 4.83 | 1/30/2012 | 3.79 |  |  |
|  |  |  |  |  |  |  |  | 1/31/2012 | 3.81 |  |  |

### 5.5 Daily Average Flow at Walker Creek below Conduit (5016)

| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/2011 | 5.64 | 6/1/2011 | 10.5 | 8/1/2011 | 21.9 | 10/1/2011 | 5.28 | 12/1/2011 | 3.18 | 2/1/2012 | 2.62 |
| 4/2/2011 | 7.14 | 6/2/2011 | 9.99 | 8/2/2011 | 22 | 10/2/2011 | 5.1 | 12/2/2011 | 3.18 | 2/2/2012 | 2.66 |
| 4/3/2011 | 7.17 | 6/3/2011 | 9.45 | 8/3/2011 | 22.3 | 10/3/2011 | 4.65 | 12/3/2011 | 3.18 | 2/3/2012 | 2.47 |
| 4/4/2011 | 7.09 | 6/4/2011 | 9.63 | 8/4/2011 | 20.8 | 10/4/2011 | 4.82 | 12/4/2011 | 3.18 | 2/4/2012 | 2.57 |
| 4/5/2011 | 7.45 | 6/5/2011 | 12 | 8/5/2011 | 19.7 | 10/5/2011 | 7.37 | 12/5/2011 | 3.18 | 2/5/2012 | 2.5 |
| 4/6/2011 | 5.51 | 6/6/2011 | 12.5 | 8/6/2011 | 19 | 10/6/2011 | 6.5 | 12/6/2011 | 3.18 | 2/6/2012 | 2.64 |
| 4/7/2011 | 3.52 | 6/7/2011 | 12.1 | 8/7/2011 | 18.1 | 10/7/2011 | 6.4 | 12/7/2011 | 3.57 | 2/7/2012 | 2.58 |
| 4/8/2011 | 3.87 | 6/8/2011 | 13.3 | 8/8/2011 | 17.4 | 10/8/2011 | 6.06 | 12/8/2011 | 3.83 | 2/8/2012 | 2.63 |
| 4/9/2011 | 3.16 | 6/9/2011 | 14.9 | 8/9/2011 | 16.6 | 10/9/2011 | 6.04 | 12/9/2011 | 3.82 | 2/9/2012 | 2.62 |
| 4/10/2011 | 2.96 | 6/10/2011 | 18.1 | 8/10/2011 | 15.9 | 10/10/2011 | 6.18 | 12/10/2011 | 3.73 | 2/10/2012 | 2.73 |
| 4/11/2011 | 2.95 | 6/11/2011 | 21.9 | 8/11/2011 | 15.6 | 10/11/2011 | 6.81 | 12/11/2011 | 3.69 | 2/11/2012 | 2.4 |
| 4/12/2011 | 2.86 | 6/12/2011 | 23.6 | 8/12/2011 | 14.8 | 10/12/2011 | 6.47 | 12/12/2011 | 3.66 | 2/12/2012 | 2.54 |
| 4/13/2011 | 2.66 | 6/13/2011 | 26.5 | 8/13/2011 | 10.4 | 10/13/2011 | 7.04 | 12/13/2011 | 3.68 | 2/13/2012 | 2.71 |
| 4/14/2011 | 2.55 | 6/14/2011 | 31.1 | 8/14/2011 | 11.4 | 10/14/2011 | 7.23 | 12/14/2011 | 3.58 | 2/14/2012 |  |
| 4/15/2011 | 2.74 | 6/15/2011 | 35.1 | 8/15/2011 | 17.3 | 10/15/2011 | 7.29 | 12/15/2011 | 3.54 | 2/15/2012 |  |
| 4/16/2011 | 6.79 | 6/16/2011 | 39.3 | 8/16/2011 | 14.5 | 10/16/2011 | 7.14 | 12/16/2011 | 3.53 | 2/16/2012 |  |
| 4/17/2011 | 7.4 | 6/17/2011 | 38.2 | 8/17/2011 | 13.7 | 10/17/2011 | 7.11 | 12/17/2011 | 3.5 | 2/17/2012 |  |
| 4/18/2011 | 9.2 | 6/18/2011 | 35.3 | 8/18/2011 | 13.2 | 10/18/2011 | 7 | 12/18/2011 | 3.47 | 2/18/2012 |  |
| 4/19/2011 | 9.18 | 6/19/2011 | 35.9 | 8/19/2011 | 12.7 | 10/19/2011 | 6.7 | 12/19/2011 | 3.48 | 2/19/2012 |  |
| 4/20/2011 | 9.23 | 6/20/2011 | 38.4 | 8/20/2011 | 12.3 | 10/20/2011 | 6.39 | 12/20/2011 | 3.45 | 2/20/2012 |  |
| 4/21/2011 | 8.81 | 6/21/2011 | 38.4 | 8/21/2011 | 11.9 | 10/21/2011 | 6.05 | 12/21/2011 | 3.42 | 2/21/2012 |  |
| 4/22/2011 | 8.43 | 6/22/2011 | 41.6 | 8/22/2011 | 11.4 | 10/22/2011 | 5.87 | 12/22/2011 | 3.02 | 2/22/2012 |  |
| 4/23/2011 | 8.72 | 6/23/2011 | 46.7 | 8/23/2011 | 11.1 | 10/23/2011 | 5.77 | 12/23/2011 | 2.75 | 2/23/2012 |  |
| 4/24/2011 | 8.07 | 6/24/2011 | 47.6 | 8/24/2011 | 10.9 | 10/24/2011 | 5.69 | 12/24/2011 | 1.75 | 2/24/2012 |  |
| 4/25/2011 | 7.93 | 6/25/2011 | 43.5 | 8/25/2011 | 10.6 | 10/25/2011 | 4.94 | 12/25/2011 | 1.36 | 2/25/2012 |  |
| 4/26/2011 | 6.54 | 6/26/2011 | 39.6 | 8/26/2011 | 10.5 | 10/26/2011 | 5.06 | 12/26/2011 | 2.83 | 2/26/2012 |  |
| 4/27/2011 | 6.1 | 6/27/2011 | 37 | 8/27/2011 | 10.4 | 10/27/2011 | 3.64 | 12/27/2011 | 3.21 | 2/27/2012 |  |
| 4/28/2011 | 7.55 | 6/28/2011 | 36.5 | 8/28/2011 | 10.5 | 10/28/2011 | 5.05 | 12/28/2011 | 3.25 | 2/28/2012 |  |
| 4/29/2011 | 5.37 | 6/29/2011 | 42 | 8/29/2011 | 10.3 | 10/29/2011 | 5.02 | 12/29/2011 | 3.38 | 2/29/2012 |  |
| 4/30/2011 | 5.91 | 6/30/2011 | 38.4 | 8/30/2011 | 10.1 | 10/30/2011 | 4.97 | 12/30/2011 | 3.21 |  |  |
|  |  |  |  | 8/31/2011 | 9.89 | 10/31/2011 | 4.89 | 12/31/2011 | 3.04 | 3/1/2012 |  |
| 5/1/2011 | 6.23 | 7/1/2011 | 32.5 |  |  |  |  |  |  | 3/2/2012 |  |
| 5/2/2011 | 6.64 | 7/2/2011 | 32 | 9/1/2011 | 9.22 | 11/1/2011 | 4.74 | 1/1/2012 | 3.11 | 3/3/2012 |  |
| 5/3/2011 | 6.64 | 7/3/2011 | 35.3 | 9/2/2011 | 9.02 | 11/2/2011 | 4.58 | 1/2/2012 | 3.13 | 3/4/2012 |  |
| 5/4/2011 | 6.91 | 7/4/2011 | 39.2 | 9/3/2011 | 8.74 | 11/3/2011 | 4.85 | 1/3/2012 | 3.12 | 3/5/2012 |  |
| 5/5/2011 | 8.78 | 7/5/2011 | 43.8 | 9/4/2011 | 8.37 | 11/4/2011 | 4.36 | 1/4/2012 | 3.21 | 3/6/2012 |  |
| 5/6/2011 | 9.89 | 7/6/2011 | 46.2 | 9/5/2011 | 7.83 | 11/5/2011 | 4.63 | 1/5/2012 | 3.19 | 3/7/2012 |  |
| 5/7/2011 | 12.2 | 7/7/2011 | 46.7 | 9/6/2011 | 7.7 | 11/6/2011 | 4.56 | 1/6/2012 | 3.14 | 3/8/2012 |  |
| 5/8/2011 | 14.4 | 7/8/2011 | 50.1 | 9/7/2011 | 7.64 | 11/7/2011 | 4.57 | 1/7/2012 | 3.14 | 3/9/2012 |  |
| 5/9/2011 | 13.4 | 7/9/2011 | 47.4 | 9/8/2011 | 7.49 | 11/8/2011 | 4.56 | 1/8/2012 | 2.87 | 3/10/2012 |  |
| 5/10/2011 | 13.2 | 7/10/2011 | 42.4 | 9/9/2011 | 7.44 | 11/9/2011 | 4.42 | 1/9/2012 | 2.34 | 3/11/2012 |  |
| 5/11/2011 | 11.8 | 7/11/2011 | 38.3 | 9/10/2011 | 7.39 | 11/10/2011 | 4.37 | 1/10/2012 | 2.36 | 3/12/2012 |  |
| 5/12/2011 | 10.7 | 7/12/2011 | 34.1 | 9/11/2011 | 8.06 | 11/11/2011 | 4.44 | 1/11/2012 | 2.43 | 3/13/2012 |  |
| 5/13/2011 | 11.1 | 7/13/2011 | 31.3 | 9/12/2011 | 9.32 | 11/12/2011 | 4.58 | 1/12/2012 | 3.04 | 3/14/2012 |  |
| 5/14/2011 | 12.8 | 7/14/2011 | 29.9 | 9/13/2011 | 9.09 | 11/13/2011 | 4.4 | 1/13/2012 | 2.77 | 3/15/2012 |  |
| 5/15/2011 | 14.5 | 7/15/2011 | 29.2 | 9/14/2011 | 8.82 | 11/14/2011 | 4.27 | 1/14/2012 | 2.31 | 3/16/2012 |  |
| 5/16/2011 | 14 | 7/16/2011 | 28.4 | 9/15/2011 | 8.66 | 11/15/2011 | 4.2 | 1/15/2012 | 1.89 | 3/17/2012 |  |
| 5/17/2011 | 12.6 | 7/17/2011 | 27.8 | 9/16/2011 | 7.9 | 11/16/2011 | 4.02 | 1/16/2012 | 3.68 | 3/18/2012 |  |
| 5/18/2011 | 12.3 | 7/18/2011 | 26.7 | 9/17/2011 | 7.43 | 11/17/2011 | 4.58 | 1/17/2012 | 2.45 | 3/19/2012 |  |
| 5/19/2011 | 11.2 | 7/19/2011 | 25.6 | 9/18/2011 | 7.3 | 11/18/2011 | 4.88 | 1/18/2012 | 1.93 | 3/20/2012 |  |
| 5/20/2011 | 10.2 | 7/20/2011 | 24.8 | 9/19/2011 | 7.1 | 11/19/2011 | 3.23 | 1/19/2012 | 3.38 | 3/21/2012 |  |
| 5/21/2011 | 9.76 | 7/21/2011 | 23.5 | 9/20/2011 | 7.11 | 11/20/2011 | 3.33 | 1/20/2012 | 2.65 | 3/22/2012 |  |
| 5/22/2011 | 10.3 | 7/22/2011 | 21.9 | 9/21/2011 | 7.23 | 11/21/2011 | 3.71 | 1/21/2012 | 2.52 | 3/23/2012 |  |
| 5/23/2011 | 11.5 | 7/23/2011 | 21.3 | 9/22/2011 | 6.6 | 11/22/2011 | 3.92 | 1/22/2012 | 2.53 | 3/24/2012 |  |
| 5/24/2011 | 11.6 | 7/24/2011 | 21 | 9/23/2011 | 6.36 | 11/23/2011 | 3.76 | 1/23/2012 | 2.54 | 3/25/2012 |  |
| 5/25/2011 | 12 | 7/25/2011 | 21.2 | 9/24/2011 | 6.32 | 11/24/2011 | 3.72 | 1/24/2012 | 2.07 | 3/26/2012 |  |
| 5/26/2011 | 11.8 | 7/26/2011 | 21.9 | 9/25/2011 | 6.04 | 11/25/2011 | 3.68 | 1/25/2012 | 1.35 | 3/27/2012 |  |
| 5/27/2011 | 11.7 | 7/27/2011 | 23.3 | 9/26/2011 | 5.78 | 11/26/2011 | 3.69 | 1/26/2012 | 3.3 | 3/28/2012 |  |
| 5/28/2011 | 13 | 7/28/2011 | 24.3 | 9/27/2011 | 5.82 | 11/27/2011 | 3.69 | 1/27/2012 | 1.73 | 3/29/2012 |  |
| 5/29/2011 | 14.2 | 7/29/2011 | 24.5 | 9/28/2011 | 5.74 | 11/28/2011 | 3.69 | 1/28/2012 | 1.05 | 3/30/2012 |  |
| 5/30/2011 | 13.8 | 7/30/2011 | 23.6 | 9/29/2011 | 5.6 | 11/29/2011 | 3.62 | 1/29/2012 | 3.64 | 3/31/2012 |  |
| 5/31/2011 | 13.2 | 7/31/2011 | 22.7 | 9/30/2011 | 5.21 | 11/30/2011 | 3.48 | 1/30/2012 | 2.86 |  |  |
|  |  |  |  |  |  |  |  | 1/31/2012 | 2.44 |  |  |

5.6 Daily Average Flow at Rush Creek below the Narrows

| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/2011 | 89.71 | 6/1/2011 | 207.7 | 8/1/2011 | 429.2 | 10/1/2011 | 58.28 | 12/1/2011 | 68.67 | 2/1/2012 | 51.88 |
| 4/2/2011 | 101.14 | 6/2/2011 | 206.89 | 8/2/2011 | 364.1 | 10/2/2011 | 65.34 | 12/2/2011 | 72.8 | 2/2/2012 | 52.86 |
| 4/3/2011 | 112.43 | 6/3/2011 | 216.55 | 8/3/2011 | 347.5 | 10/3/2011 | 68.64 | 12/3/2011 | 75.64 | 2/3/2012 | 53.77 |
| 4/4/2011 | 122.39 | 6/4/2011 | 215.53 | 8/4/2011 | 331.1 | 10/4/2011 | 65.62 | 12/4/2011 | 59.23 | 2/4/2012 | 51.11 |
| 4/5/2011 | 126.55 | 6/5/2011 | 210.7 | 8/5/2011 | 298.8 | 10/5/2011 | 65.57 | 12/5/2011 | 69 | 2/5/2012 | 53.32 |
| 4/6/2011 | 131.22 | 6/6/2011 | 221.2 | 8/6/2011 | 269.9 | 10/6/2011 | 63.78 | 12/6/2011 | 70.22 | 2/6/2012 | 55 |
| 4/7/2011 | 141.7 | 6/7/2011 | 228.9 | 8/7/2011 | 249 | 10/7/2011 | 69.42 | 12/7/2011 | 70.46 | 2/7/2012 | 50.45 |
| 4/8/2011 | 151.27 | 6/8/2011 | 226.9 | 8/8/2011 | 222.2 | 10/8/2011 | 82.46 | 12/8/2011 | 70.61 | 2/8/2012 | 50.33 |
| 4/9/2011 | 154.52 | 6/9/2011 | 241.9 | 8/9/2011 | 204.6 | 10/9/2011 | 100.2 | 12/9/2011 | 71.16 | 2/9/2012 | 50.28 |
| 4/10/2011 | 149.82 | 6/10/2011 | 260.2 | 8/10/2011 | 204.3 | 10/10/2011 | 113.74 | 12/10/2011 | 70.89 | 2/10/2012 | 50.36 |
| 4/11/2011 | 140.27 | 6/11/2011 | 267.3 | 8/11/2011 | 193.5 | 10/11/2011 | 132.83 | 12/11/2011 | 70.82 | 2/11/2012 | 49.95 |
| 4/12/2011 | 134.46 | 6/12/2011 | 290.5 | 8/12/2011 | 182.1 | 10/12/2011 | 164.35 | 12/12/2011 | 70.61 | 2/12/2012 | 50.16 |
| 4/13/2011 | 133.78 | 6/13/2011 | 318.9 | 8/13/2011 | 171 | 10/13/2011 | 188.24 | 12/13/2011 | 70.67 | 2/13/2012 | 50.18 |
| 4/14/2011 | 124.2 | 6/14/2011 | 350.7 | 8/14/2011 | 160.7 | 10/14/2011 | 217.23 | 12/14/2011 | 70.58 | 2/14/2012 |  |
| 4/15/2011 | 115.68 | 6/15/2011 | 381.6 | 8/15/2011 | 156.9 | 10/15/2011 | 259.94 | 12/15/2011 | 71.06 | 2/15/2012 |  |
| 4/16/2011 | 132.59 | 6/16/2011 | 416.2 | 8/16/2011 | 145.56 | 10/16/2011 | 315.45 | 12/16/2011 | 70.97 | 2/16/2012 |  |
| 4/17/2011 | 142.7 | 6/17/2011 | 441 | 8/17/2011 | 140.6 | 10/17/2011 | 355.12 | 12/17/2011 | 70.74 | 2/17/2012 |  |
| 4/18/2011 | 150.9 | 6/18/2011 | 438.5 | 8/18/2011 | 137.5 | 10/18/2011 | 364.76 | 12/18/2011 | 70.57 | 2/18/2012 |  |
| 4/19/2011 | 151.98 | 6/19/2011 | 446.7 | 8/19/2011 | 137.5 | 10/19/2011 | 361.03 | 12/19/2011 | 70.81 | 2/19/2012 |  |
| 4/20/2011 | 148.23 | 6/20/2011 | 450.3 | 8/20/2011 | 127.5 | 10/20/2011 | 365.59 | 12/20/2011 | 70.58 | 2/20/2012 |  |
| 4/21/2011 | 148.01 | 6/21/2011 | 438 | 8/21/2011 | 114.5 | 10/21/2011 | 368.89 | 12/21/2011 | 109.91 | 2/21/2012 |  |
| 4/22/2011 | 147.33 | 6/22/2011 | 435.1 | 8/22/2011 | 111.6 | 10/22/2011 | 366.54 | 12/22/2011 | 69.27 | 2/22/2012 |  |
| 4/23/2011 | 144.22 | 6/23/2011 | 445.8 | 8/23/2011 | 104.4 | 10/23/2011 | 366.28 | 12/23/2011 | 68.91 | 2/23/2012 |  |
| 4/24/2011 | 147.27 | 6/24/2011 | 458.6 | 8/24/2011 | 101.1 | 10/24/2011 | 346.56 | 12/24/2011 | 67.26 | 2/24/2012 |  |
| 4/25/2011 | 141.43 | 6/25/2011 | 450.2 | 8/25/2011 | 102.4 | 10/25/2011 | 295.66 | 12/25/2011 | 66.32 | 2/25/2012 |  |
| 4/26/2011 | 133.54 | 6/26/2011 | 429 | 8/26/2011 | 101.9 | 10/26/2011 | 241.01 | 12/26/2011 | 67.77 | 2/26/2012 |  |
| 4/27/2011 | 138.2 | 6/27/2011 | 424.1 | 8/27/2011 | 100.6 | 10/27/2011 | 181.51 | 12/27/2011 | 68.65 | 2/27/2012 |  |
| 4/28/2011 | 135.95 | 6/28/2011 | 424.2 | 8/28/2011 | 101.7 | 10/28/2011 | 157.77 | 12/28/2011 | 68.85 | 2/28/2012 |  |
| 4/29/2011 | 137.27 | 6/29/2011 | 434.7 | 8/29/2011 | 100.4 | 10/29/2011 | 135.59 | 12/29/2011 | 68.97 | 2/29/2012 |  |
| 4/30/2011 | 142.21 | 6/30/2011 | 423.4 | 8/30/2011 | 97 | 10/30/2011 | 119.42 | 12/30/2011 | 68.59 |  |  |
|  |  |  |  | 8/31/2011 | 93.09 | 10/31/2011 | 109.59 | 12/31/2011 | 68.02 | 3/1/2012 |  |
| 5/1/2011 | 147.13 | 7/1/2011 | 400 |  |  |  |  |  |  | 3/2/2012 |  |
| 5/2/2011 | 152.24 | 7/2/2011 | 403.1 | 9/1/2011 | 90.12 | 11/1/2011 | 87.15 | 1/1/2012 | 67.72 | 3/3/2012 |  |
| 5/3/2011 | 160.34 | 7/3/2011 | 419.6 | 9/2/2011 | 85.82 | 11/2/2011 | 68.29 | 1/2/2012 | 67.76 | 3/4/2012 |  |
| 5/4/2011 | 170.21 | 7/4/2011 | 461.7 | 9/3/2011 | 80.64 | 11/3/2011 | 67.39 | 1/3/2012 | 67.66 | 3/5/2012 |  |
| 5/5/2011 | 180.68 | 7/5/2011 | 520.2 | 9/4/2011 | 79.47 | 11/4/2011 | 66.57 | 1/4/2012 | 67.66 | 3/6/2012 |  |
| 5/6/2011 | 187.99 | 7/6/2011 | 555.1 | 9/5/2011 | 78.13 | 11/5/2011 | 69.12 | 1/5/2012 | 67.88 | 3/7/2012 |  |
| 5/7/2011 | 203.3 | 7/7/2011 | 564.7 | 9/6/2011 | 73.9 | 11/6/2011 | 69.63 | 1/6/2012 | 67.69 | 3/8/2012 |  |
| 5/8/2011 | 212.4 | 7/8/2011 | 564.2 | 977/2011 | 72.44 | 11/7/2011 | 69.78 | 1/7/2012 | 67.66 | 3/9/2012 |  |
| 5/9/2011 | 212.4 | 7/9/2011 | 552.2 | 9/8/2011 | 71.49 | 11/8/2011 | 69.63 | 1/8/2012 | 67.39 | 3/10/2012 |  |
| 5/10/2011 | 216 | 7/10/2011 | 539.4 | 9/9/2011 | 68.34 | 11/9/2011 | 69.41 | 1/9/2012 | 67.26 | 3/11/2012 |  |
| 5/11/2011 | 212.5 | 7/11/2011 | 502.5 | 9/10/2011 | 63.09 | 11/10/2011 | 69.31 | 1/10/2012 | 67.73 | 3/12/2012 |  |
| 5/12/2011 | 209 | 7/12/2011 | 466.8 | 9/11/2011 | 62.76 | 11/11/2011 | 69.36 | 1/11/2012 | 67.86 | 3/13/2012 |  |
| 5/13/2011 | 209.2 | 7/13/2011 | 421.25 | 9/12/2011 | 65.32 | 11/12/2011 | 69.98 | 1/12/2012 | 68.17 | 3/14/2012 |  |
| 5/14/2011 | 212.3 | 7/14/2011 | 357.1 | 9/13/2011 | 64.69 | 11/13/2011 | 70.06 | 1/13/2012 | 67.4 | 3/15/2012 |  |
| 5/15/2011 | 227 | 7/15/2011 | 307.2 | 9/14/2011 | 63.62 | 11/14/2011 | 69.6 | 1/14/2012 | 66.94 | 3/16/2012 |  |
| 5/16/2011 | 236.2 | 7/16/2011 | 277.25 | 9/15/2011 | 62.36 | 11/15/2011 | 68.79 | 1/15/2012 | 66.55 | 3/17/2012 |  |
| 5/17/2011 | 223.8 | 7/17/2011 | 276.6 | 9/16/2011 | 60.8 | 11/16/2011 | 66.62 | 1/16/2012 | 68.43 | 3/18/2012 |  |
| 5/18/2011 | 213.3 | 7/18/2011 | 283 | 9/17/2011 | 59.93 | 11/17/2011 | 67.32 | 1/17/2012 | 67.5 | 3/19/2012 |  |
| 5/19/2011 | 206.8 | 7/19/2011 | 282.1 | 9/18/2011 | 59.2 | 11/18/2011 | 69.04 | 1/18/2012 | 67.34 | 3/20/2012 |  |
| 5/20/2011 | 201 | 7/20/2011 | 291.9 | 9/19/2011 | 58.4 | 11/19/2011 | 69.91 | 1/19/2012 | 68.27 | 3/21/2012 |  |
| 5/21/2011 | 199.96 | 7/21/2011 | 295.2 | 9/20/2011 | 57.91 | 11/20/2011 | 70.3 | 1/20/2012 | 67.79 | 3/22/2012 |  |
| 5/22/2011 | 200.7 | 7/22/2011 | 299.1 | 9/21/2011 | 57.63 | 11/21/2011 | 70.61 | 1/21/2012 | 68.45 | 3/23/2012 |  |
| 5/23/2011 | 202.5 | 7/23/2011 | 306.4 | 9/22/2011 | 56.6 | 11/22/2011 | 70.35 | 1/22/2012 | 68.75 | 3/24/2012 |  |
| 5/24/2011 | 202.6 | 7/24/2011 | 316 | 9/23/2011 | 57.46 | 11/23/2011 | 69.32 | 1/23/2012 | 68.54 | 3/25/2012 |  |
| 5/25/2011 | 201.9 | 7/25/2011 | 323.3 | 9/24/2011 | 58.72 | 11/24/2011 | 69.15 | 1/24/2012 | 67.56 | 3/26/2012 |  |
| 5/26/2011 | 196.3 | 7/26/2011 | 320.2 | 9/25/2011 | 57.84 | 11/25/2011 | 69.06 | 1/25/2012 | 66.53 | 3/27/2012 |  |
| 5/27/2011 | 201.6 | 7/27/2011 | 330.2 | 9/26/2011 | 56.88 | 11/26/2011 | 69.08 | 1/26/2012 | 68.45 | 3/28/2012 |  |
| 5/28/2011 | 218.5 | 7/28/2011 | 347.7 | 9/27/2011 | 56.82 | 11/27/2011 | 68.83 | 1/27/2012 | 66.72 | 3/29/2012 |  |
| 5/29/2011 | 226.8 | 7/29/2011 | 359.7 | 9/28/2011 | 56.94 | 11/28/2011 | 68.61 | 1/28/2012 | 65.92 | 3/30/2012 |  |
| 5/30/2011 | 216.8 | 7/30/2011 | 411.2 | 9/29/2011 | 56.2 | 11/29/2011 | 68.44 | 1/29/2012 | 62.16 | 3/31/2012 |  |
| 5/31/2011 | 209.7 | 7/31/2011 | 472.2 | 9/30/2011 | 55.61 | 11/30/2011 | 68.51 | 1/30/2012 | 61.05 |  |  |
|  |  |  |  |  |  |  |  | 1/31/2012 | 57.85 |  |  |

### 5.7 Daily Average Flow at Lee Vining Creek above Intake (5008)

| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/2011 | 39 | 6/1/2011 | 152 | 8/1/2011 | 250 | 10/1/2011 | 44.3 | 12/1/2011 | 34.8 | 2/1/2012 | 16.7 |
| 4/2/2011 | 44.7 | 6/2/2011 | 123 | 8/2/2011 | 223 | 10/2/2011 | 42.5 | 12/2/2011 | 28.4 | 2/2/2012 | 17.3 |
| 4/3/2011 | 52.6 | 6/3/2011 | 105 | 8/3/2011 | 214 | 10/3/2011 | 41.3 | 12/3/2011 | 28.4 | 2/3/2012 | 20.5 |
| 4/4/2011 | 50.7 | 6/4/2011 | 103 | 8/4/2011 | 210 | 10/4/2011 | 56.2 | 12/4/2011 | 36 | 2/4/2012 | 22.2 |
| 4/5/2011 | 78.2 | 6/5/2011 | 97.3 | 8/5/2011 | 201 | 10/5/2011 | 79.1 | 12/5/2011 | 25 | 2/5/2012 | 20 |
| 4/6/2011 | 96.7 | 6/6/2011 | 94.4 | 8/6/2011 | 195 | 10/6/2011 | 90.7 | 12/6/2011 | 33.1 | 2/6/2012 | 19.7 |
| 4/7/2011 | 96.3 | 6/7/2011 | 130 | 8/7/2011 | 193 | 10/7/2011 | 119 | 12/7/2011 | 24.2 | 2/7/2012 | 17.2 |
| 4/8/2011 | 94.5 | 6/8/2011 | 159 | 8/8/2011 | 184 | 10/8/2011 | 99.7 | 12/8/2011 | 23.6 | 2/8/2012 | 16.7 |
| 4/9/2011 | 82.3 | 6/9/2011 | 167 | 8/9/2011 | 178 | 10/9/2011 | 84.2 | 12/9/2011 | 22.7 | 2/9/2012 | 16.3 |
| 4/10/2011 | 74.3 | 6/10/2011 | 197 | 8/10/2011 | 173 | 10/10/2011 | 82.1 | 12/10/2011 | 27.4 | 2/10/2012 | 16.5 |
| 4/11/2011 | 74.3 | 6/11/2011 | 240 | 8/11/2011 | 169 | 10/11/2011 | 82.5 | 12/11/2011 | 21.5 | 2/11/2012 | 16.4 |
| 4/12/2011 | 74.2 | 6/12/2011 | 243 | 8/12/2011 | 167 | 10/12/2011 | 81.2 | 12/12/2011 | 24.1 | 2/12/2012 | 16.3 |
| 4/13/2011 | 76.3 | 6/13/2011 | 285 | 8/13/2011 | 163 | 10/13/2011 | 85.7 | 12/13/2011 | 20.7 | 2/13/2012 | 16.2 |
| 4/14/2011 | 80.5 | 6/14/2011 | 319 | 8/14/2011 | 161 | 10/14/2011 | 90.9 | 12/14/2011 | 24.5 | 2/14/2012 |  |
| 4/15/2011 | 77.6 | 6/15/2011 | 352 | 8/15/2011 | 165 | 10/15/2011 | 90.8 | 12/15/2011 | 20.1 | 2/15/2012 |  |
| 4/16/2011 | 72.3 | 6/16/2011 | 399 | 8/16/2011 | 162 | 10/16/2011 | 89.5 | 12/16/2011 | 19.6 | 2/16/2012 |  |
| 4/17/2011 | 85.3 | 6/17/2011 | 369 | 8/17/2011 | 156 | 10/17/2011 | 86.4 | 12/17/2011 | 23.3 | 2/17/2012 |  |
| 4/18/2011 | 101 | 6/18/2011 | 352 | 8/18/2011 | 137 | 10/18/2011 | 75.7 | 12/18/2011 | 22.2 | 2/18/2012 |  |
| 4/19/2011 | 105 | 6/19/2011 | 377 | 8/19/2011 | 130 | 10/19/2011 | 67.4 | 12/19/2011 | 18.4 | 2/19/2012 |  |
| 4/20/2011 | 105 | 6/20/2011 | 385 | 8/20/2011 | 150 | 10/20/2011 | 63.7 | 12/20/2011 | 20.3 | 2/20/2012 |  |
| 4/21/2011 | 102 | 6/21/2011 | 390 | 8/21/2011 | 143 | 10/21/2011 | 44.9 | 12/21/2011 | 19.4 | 2/21/2012 |  |
| 4/22/2011 | 96.2 | 6/22/2011 | 434 | 8/22/2011 | 135 | 10/22/2011 | 33.6 | 12/22/2011 | 32.2 | 2/22/2012 |  |
| 4/23/2011 | 87.3 | 6/23/2011 | 483 | 8/23/2011 | 133 | 10/23/2011 | 33.1 | 12/23/2011 | 29.2 | 2/23/2012 |  |
| 4/24/2011 | 82 | 6/24/2011 | 485 | 8/24/2011 | 138 | 10/24/2011 | 32.3 | 12/24/2011 | 30.9 | 2/24/2012 |  |
| 4/25/2011 | 75.7 | 6/25/2011 | 423 | 8/25/2011 | 142 | 10/25/2011 | 34.6 | 12/25/2011 | 31.1 | 2/25/2012 |  |
| 4/26/2011 | 73.5 | 6/26/2011 | 405 | 8/26/2011 | 140 | 10/26/2011 | 35.7 | 12/26/2011 | 16.3 | 2/26/2012 |  |
| 4/27/2011 | 73.5 | 6/27/2011 | 388 | 8/27/2011 | 143 | 10/27/2011 | 40.4 | 12/27/2011 | 16.2 | 2/27/2012 |  |
| 4/28/2011 | 74.5 | 6/28/2011 | 398 | 8/28/2011 | 148 | 10/28/2011 | 40.3 | 12/28/2011 | 16.4 | 2/28/2012 |  |
| 4/29/2011 | 74.5 | 6/29/2011 | 399 | 8/29/2011 | 145 | 10/29/2011 | 39.8 | 12/29/2011 | 16.6 | 2/29/2012 |  |
| 4/30/2011 | 74.1 | 6/30/2011 | 310 | 8/30/2011 | 136 | 10/30/2011 | 39.6 | 12/30/2011 | 16.1 |  |  |
|  |  |  |  | 8/31/2011 | 128 | 10/31/2011 | 39.5 | 12/31/2011 | 15.9 | 3/1/2012 |  |
| 5/1/2011 | 73.6 | 7/1/2011 | 300 |  |  |  |  |  |  | 3/2/2012 |  |
| 5/2/2011 | 57.3 | 7/2/2011 | 370 | 9/1/2011 | 121 | 11/1/2011 | 39.4 | 1/1/2012 | 16 | 3/3/2012 |  |
| 5/3/2011 | 86.4 | 7/3/2011 | 427 | 9/2/2011 | 116 | 11/2/2011 | 39 | 1/2/2012 | 15.7 | 3/4/2012 |  |
| 5/4/2011 | 110 | 7/4/2011 | 446 | 9/3/2011 | 113 | 11/3/2011 | 38.8 | 1/3/2012 | 15.7 | 3/5/2012 |  |
| 5/5/2011 | 130 | 7/5/2011 | 488 | 9/4/2011 | 110 | 11/4/2011 | 38.9 | 1/4/2012 | 15.7 | 3/6/2012 |  |
| 5/6/2011 | 155 | 7/6/2011 | 439 | 9/5/2011 | 107 | 11/5/2011 | 38.4 | 1/5/2012 | 16 | 3/7/2012 |  |
| 5/7/2011 | 171 | 7/7/2011 | 451 | 9/6/2011 | 104 | 11/6/2011 | 39.2 | 1/6/2012 | 15.7 | 3/8/2012 |  |
| 5/8/2011 | 165 | 7/8/2011 | 454 | 9/7/2011 | 103 | 11/7/2011 | 38.5 | 1/7/2012 | 15.5 | 3/9/2012 |  |
| 5/9/2011 | 143 | 7/9/2011 | 398 | 9/8/2011 | 102 | 11/8/2011 | 37.1 | 1/8/2012 | 18.8 | 3/10/2012 |  |
| 5/10/2011 | 124 | 7/10/2011 | 361 | 9/9/2011 | 102 | 11/9/2011 | 35.1 | 1/9/2012 | 15.6 | 3/11/2012 |  |
| 5/11/2011 | 115 | 7/11/2011 | 323 | 9/10/2011 | 102 | 11/10/2011 | 35 | 1/10/2012 | 15.6 | 3/12/2012 |  |
| 5/12/2011 | 123 | 7/12/2011 | 311 | 9/11/2011 | 108 | 11/11/2011 | 34 | 1/11/2012 | 15.5 | 3/13/2012 |  |
| 5/13/2011 | 147 | 7/13/2011 | 305 | 9/12/2011 | 92.8 | 11/12/2011 | 30.7 | 1/12/2012 | 17.4 | 3/14/2012 |  |
| 5/14/2011 | 171 | 7/14/2011 | 287 | 9/13/2011 | 100 | 11/13/2011 | 30.5 | 1/13/2012 | 21 | 3/15/2012 |  |
| 5/15/2011 | 164 | 7/15/2011 | 276 | 9/14/2011 | 101 | 11/14/2011 | 30.3 | 1/14/2012 | 19.3 | 3/16/2012 |  |
| 5/16/2011 | 141 | 7/16/2011 | 267 | 9/15/2011 | 98.9 | 11/15/2011 | 29.7 | 1/15/2012 | 15.5 | 3/17/2012 |  |
| 5/17/2011 | 125 | 7/17/2011 | 251 | 9/16/2011 | 95.7 | 11/16/2011 | 29.7 | 1/16/2012 | 16.3 | 3/18/2012 |  |
| 5/18/2011 | 115 | 7/18/2011 | 234 | 9/17/2011 | 92 | 11/17/2011 | 29.5 | 1/17/2012 | 29.4 | 3/19/2012 |  |
| 5/19/2011 | 105 | 7/19/2011 | 223 | 9/18/2011 | 88.7 | 11/18/2011 | 29 | 1/18/2012 | 15.3 | 3/20/2012 |  |
| 5/20/2011 | 101 | 7/20/2011 | 223 | 9/19/2011 | 86.5 | 11/19/2011 | 28.8 | 1/19/2012 | 15.1 | 3/21/2012 |  |
| 5/21/2011 | 109 | 7/21/2011 | 232 | 9/20/2011 | 87.1 | 11/20/2011 | 29 | 1/20/2012 | 16.4 | 3/22/2012 |  |
| 5/22/2011 | 120 | 7/22/2011 | 234 | 9/21/2011 | 86.6 | 11/21/2011 | 28.6 | 1/21/2012 | 27.1 | 3/23/2012 |  |
| 5/23/2011 | 130 | 7/23/2011 | 241 | 9/22/2011 | 83.8 | 11/22/2011 | 28.4 | 1/22/2012 | 24.3 | 3/24/2012 |  |
| 5/24/2011 | 134 | 7/24/2011 | 251 | 9/23/2011 | 81.7 | 11/23/2011 | 28.3 | 1/23/2012 | 18 | 3/25/2012 |  |
| 5/25/2011 | 147 | 7/25/2011 | 238 | 9/24/2011 | 80.3 | 11/24/2011 | 28.3 | 1/24/2012 | 17.4 | 3/26/2012 |  |
| 5/26/2011 | 148 | 7/26/2011 | 214 | 9/25/2011 | 78.7 | 11/25/2011 | 28 | 1/25/2012 | 17.1 | 3/27/2012 |  |
| 5/27/2011 | 166 | 7/27/2011 | 207 | 9/26/2011 | 74.6 | 11/26/2011 | 27.6 | 1/26/2012 | 17.4 | 3/28/2012 |  |
| 5/28/2011 | 168 | 7/28/2011 | 212 | 9/27/2011 | 54.2 | 11/27/2011 | 27.6 | 1/27/2012 | 17.4 | 3/29/2012 |  |
| 5/29/2011 | 143 | 7/29/2011 | 221 | 9/28/2011 | 50.9 | 11/28/2011 | 27.6 | 1/28/2012 | 19.2 | 3/30/2012 |  |
| 5/30/2011 | 94.4 | 7/30/2011 | 255 | 9/29/2011 | 49.5 | 11/29/2011 | 27.6 | 1/29/2012 | 17.4 | 3/31/2012 |  |
| 5/31/2011 | 109 | 7/31/2011 | 271 | 9/30/2011 | 44.9 | 11/30/2011 | 27.3 | 1/30/2012 | 17.2 |  |  |
|  |  |  |  |  |  |  |  | 1/31/2012 | 17.1 |  |  |

5.8 Daily Average Flow at Lee Vining Creek at Intake (5009)

|  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date | Flow (cfs) | Date |
|  |  |  |  |  |  |  |  |  |  |  |

## 6. Appendix B: Time-LApSe Photos

### 6.1 Time-LApSe photos taken at Lee Vining Riffle 2 (R2)

Extensive anchor ice formation in December 22, 2011.


Ice free condition in March 6, 2012.

6.2 Time-LApSe photos taken at Lee Vining Section D Riffle (DR)

Anchor Ice formation in the morning of January 12, 2012.


Ice free condition in later that afternoon of January 12, 2012.


### 6.3 Time-Lapse photos taken at Lee Vining Section D Pool (DP)

Extensive surface Ice formation in December 23, 2011.


Ice free condition in January 7, 2012.


### 6.4 Time-Lapse photos taken at Rush Creek 5P-8

Surface Ice formation in the morning of February 3, 2012.


Ice free condition in later that afternoon of February 3, 2012.


## 7. Appendix B: Daily Groundwater Elevation

### 7.1 Daily Groundwater Elevation at 8C-2

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date |  |  |
| ---: | :---: | ---: | :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

7.2 Daily Groundwater Elevation at 8C-3

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth $(\mathrm{ft})$ | Date | Depth $(\mathrm{ft})$ | Date |  |  |
| :--- | :---: | ---: | :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

7.3 Daily Groundwater Elevation at 8C-4

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/11 | 3.267 | 6/1/11 | 2.293 | 8/1/11 | 1.318 | 10/1/11 | 3.984 | 12/1/11 | 2.939 | 2/1/12 | 3.162 |
| 4/2/11 | 2.904 | 6/2/11 | 2.376 | 8/2/11 | 1.337 | 10/2/11 | 3.789 | 12/2/11 | 2.950 | 2/2/12 | 3.369 |
| 4/3/11 | 2.790 | 6/3/11 | 2.390 | 8/3/11 | 1.376 | 10/3/11 | 3.697 | 12/3/11 | 2.929 | 2/3/12 | 3.510 |
| 4/4/11 | 2.708 | 6/4/11 | 2.394 | 8/4/11 | 1.433 | 10/4/11 | 3.720 | 12/4/11 | 2.956 | 2/4/12 | 3.549 |
| 4/5/11 | 2.619 | 6/5/11 | 2.308 | 8/5/11 | 1.510 | 10/5/11 | 3.774 | 12/5/11 | 2.905 | 2/5/12 | 3.606 |
| 4/6/11 | 2.558 | 6/6/11 | 2.307 | 8/6/11 | 1.586 | 10/6/11 | 3.847 | 12/6/11 | 2.931 | 2/6/12 | 3.646 |
| 4/7/11 | 2.516 | 6/7/11 | 2.305 | 8/7/11 | 1.649 | 10/7/11 | 3.855 | 12/7/11 | 2.902 | 2/7/12 | 3.651 |
| 4/8/11 | 2.503 | 6/8/11 | 2.260 | 8/8/11 | 1.719 | 10/8/11 | 3.690 | 12/8/11 | 2.896 | 2/8/12 | 3.685 |
| 4/9/11 | 2.463 | 6/9/11 | 2.205 | 8/9/11 | 1.795 | 10/9/11 | 3.472 | 12/9/11 | 2.886 | 2/9/12 | 3.709 |
| 4/10/11 | 2.482 | 6/10/11 | 2.134 | 8/10/11 | 1.839 | 10/10/11 | 3.301 | 12/10/11 | 2.889 | 2/10/12 | 3.732 |
| 4/11/11 | 2.496 | 6/11/11 | 2.080 | 8/11/11 | 1.887 | 10/11/11 | 3.109 | 12/11/11 | 2.887 | 2/11/12 | 3.762 |
| 4/12/11 | 2.524 | 6/12/11 | 2.021 | 8/12/11 | 1.956 | 10/12/11 | 2.661 | 12/12/11 | 2.898 | 2/12/12 | 3.780 |
| 4/13/11 | 2.589 | 6/13/11 | 1.949 | 8/13/11 | 2.020 | 10/13/11 | 2.271 | 12/13/11 | 2.885 | 2/13/12 | 3.801 |
| 4/14/11 | 2.653 | 6/14/11 | 1.824 | 8/14/11 | 2.106 | 10/14/11 | 2.034 | 12/14/11 | 2.910 | 2/14/12 | 3.814 |
| 4/15/11 | 2.664 | 6/15/11 | 1.688 | 8/15/11 | 2.151 | 10/15/11 | 1.867 | 12/15/11 | 2.890 | 2/15/12 | 3.837 |
| 4/16/11 | 2.625 | 6/16/11 | 1.568 | 8/16/11 | 2.254 | 10/16/11 | 1.697 | 12/16/11 | 2.898 | 2/16/12 | 3.838 |
| 4/17/11 | 2.573 | 6/17/11 | 1.485 | 8/17/11 | 2.324 | 10/17/11 | 1.544 | 12/17/11 | 2.907 | 2/17/12 | 3.832 |
| 4/18/11 | 2.497 | 6/18/11 | 1.465 | 8/18/11 | 2.370 | 10/18/11 | 1.460 | 12/18/11 | 2.908 | 2/18/12 | 3.757 |
| 4/19/11 | 2.520 | 6/19/11 | 1.448 | 8/19/11 | 2.396 | 10/19/11 | 1.432 | 12/19/11 | 2.892 | 2/19/12 | 3.788 |
| 4/20/11 | 2.510 | 6/20/11 | 1.426 | 8/20/11 | 2.430 | 10/20/11 | 1.411 | 12/20/11 | 2.892 | 2/20/12 | 3.809 |
| 4/21/11 | 2.522 | 6/21/11 | 1.438 | 8/21/11 | 2.511 | 10/21/11 | 1.392 | 12/21/11 | 2.888 | 2/21/12 | 3.828 |
| 4/22/11 | 2.579 | 6/22/11 | 1.451 | 8/22/11 | 2.579 | 10/22/11 | 1.387 | 12/22/11 | 2.940 | 2/22/12 | 3.841 |
| 4/23/11 | 2.571 | 6/23/11 | 1.437 | 8/23/11 | 2.651 | 10/23/11 | 1.385 | 12/23/11 | 2.949 | 2/23/12 | 3.847 |
| 4/24/11 | 2.608 | 6/24/11 | 1.426 | 8/24/11 | 2.729 | 10/24/11 | 1.436 | 12/24/11 | 2.945 | 2/24/12 | 3.846 |
| 4/25/11 | 2.648 | 6/25/11 | 1.439 | 8/25/11 | 2.767 | 10/25/11 | 1.595 | 12/25/11 | 2.940 | 2/25/12 | 3.845 |
| 4/26/11 | 2.703 | 6/26/11 | 1.472 | 8/26/11 | 2.803 | 10/26/11 | 1.755 | 12/26/11 | 2.932 | 2/26/12 | 3.866 |
| 4/27/11 | 2.715 | 6/27/11 | 1.505 | 8/27/11 | 2.822 | 10/27/11 | 1.947 | 12/27/11 | 2.933 | 2/27/12 | 3.860 |
| 4/28/11 | 2.664 | 6/28/11 | 1.527 | 8/28/11 | 2.848 | 10/28/11 | 2.104 | 12/28/11 | 2.927 | 2/28/12 | 3.852 |
| 4/29/11 | 2.669 | 6/29/11 | 1.502 | 8/29/11 | 2.871 | 10/29/11 | 2.332 | 12/29/11 | 2.910 | 2/29/12 | 3.830 |
| 4/30/11 | 2.664 | 6/30/11 | 1.507 | 8/30/11 | 2.905 | 10/30/11 | 2.458 | 12/30/11 | 2.911 |  |  |
|  |  |  |  | 8/31/11 | 2.959 | 10/31/11 | 2.574 | 12/31/11 | 2.922 | 3/1/12 | 3.863 |
| 5/1/11 | 2.601 | 7/1/11 | 1.548 |  |  |  |  |  |  | 3/2/12 | 3.874 |
| 5/2/11 | 2.515 | 7/2/11 | 1.578 | 9/1/11 | 3.000 | 11/1/11 | 2.767 | 1/1/12 | 2.918 | 3/3/12 | 3.870 |
| 5/3/11 | 2.462 | 7/3/11 | 1.542 | 9/2/11 | 3.038 | 11/2/11 | 2.917 | 1/2/12 | 2.917 | 3/4/12 | 3.863 |
| 5/4/11 | 2.420 | 7/4/11 | 1.433 | 9/3/11 | 3.127 | 11/3/11 | 2.846 | 1/3/12 | 2.910 | 3/5/12 | 3.895 |
| 5/5/11 | 2.383 | 7/5/11 | 1.326 | 9/4/11 | 3.114 | 11/4/11 | 2.809 | 1/4/12 | 2.920 | 3/6/12 | 3.919 |
| 5/6/11 | 2.365 | 7/6/11 | 1.182 | 9/5/11 | 3.156 | 11/5/11 | 2.815 | 1/5/12 | 2.914 | 3/7/12 | 3.930 |
| 5/7/11 | 2.304 | 7/7/11 | 1.112 | 9/6/11 | 3.215 | 11/6/11 | 2.822 | 1/6/12 | 2.907 | 3/8/12 | 3.862 |
| 5/8/11 | 2.241 | 7/8/11 | 1.079 | 9/7/11 | 3.305 | 11/7/11 | 2.844 | 1/7/12 | 2.907 | 3/9/12 | 3.792 |
| 5/9/11 | 2.225 | 7/9/11 | 1.070 | 9/8/11 | 3.362 | 11/8/11 | 2.856 | 1/8/12 | 2.960 | 3/10/12 | 3.777 |
| 5/10/11 | 2.195 | 7/10/11 | 1.086 | 9/9/11 | 3.403 | 11/9/11 | 2.867 | 1/9/12 | 2.858 | 3/11/12 | 3.668 |
| 5/11/11 | 2.219 | 7/11/11 | 1.106 | 9/10/11 | 3.503 | 11/10/11 | 2.871 | 1/10/12 | 2.856 | 3/12/12 | 3.591 |
| 5/12/11 | 2.241 | 7/12/11 | 1.128 | 9/11/11 | 3.580 | 11/11/11 | 2.869 | 1/11/12 | 2.872 | 3/13/12 |  |
| 5/13/11 | 2.247 | 7/13/11 | 1.207 | 9/12/11 | 3.569 | 11/12/11 | 2.857 | 1/12/12 | 2.903 | 3/14/12 |  |
| 5/14/11 | 2.234 | 7/14/11 | 1.361 | 9/13/11 | 3.587 | 11/13/11 | 2.862 | 1/13/12 | 2.925 | 3/15/12 |  |
| 5/15/11 | 2.191 | 7/15/11 | 1.508 | 9/14/11 | 3.612 | 11/14/11 | 2.860 | 1/14/12 | 2.904 | 3/16/12 |  |
| 5/16/11 | 2.170 | 7/16/11 | 1.617 | 9/15/11 | 3.665 | 11/15/11 | 2.868 | 1/15/12 | 2.889 | 3/17/12 |  |
| 5/17/11 | 2.177 | 7/17/11 | 1.648 | 9/16/11 | 3.716 | 11/16/11 | 2.882 | 1/16/12 | 2.927 | 3/18/12 |  |
| 5/18/11 | 2.214 | 7/18/11 | 1.627 | 9/17/11 | 3.773 | 11/17/11 | 2.888 | 1/17/12 | 2.968 | 3/19/12 |  |
| 5/19/11 | 2.239 | 7/19/11 | 1.606 | 9/18/11 | 3.817 | 11/18/11 | 2.881 | 1/18/12 | 2.937 | 3/20/12 |  |
| 5/20/11 | 2.261 | 7/20/11 | 1.576 | 9/19/11 | 3.848 | 11/19/11 | 2.877 | 1/19/12 | 2.918 | 3/21/12 |  |
| 5/21/11 | 2.280 | 7/21/11 | 1.553 | 9/20/11 | 3.879 | 11/20/11 | 2.891 | 1/20/12 | 2.916 | 3/22/12 |  |
| 5/22/11 | 2.300 | 7/22/11 | 1.532 | 9/21/11 | 3.914 | 11/21/11 | 2.891 | 1/21/12 | 2.742 | 3/23/12 |  |
| 5/23/11 | 2.300 | 7/23/11 | 1.500 | 9/22/11 | 3.898 | 11/22/11 | 2.877 | 1/22/12 | 2.852 | 3/24/12 |  |
| 5/24/11 | 2.304 | 7/24/11 | 1.460 | 9/23/11 | 3.890 | 11/23/11 | 2.896 | 1/23/12 | 2.802 | 3/25/12 |  |
| 5/25/11 | 2.280 | 7/25/11 | 1.443 | 9/24/11 | 3.883 | 11/24/11 | 2.912 | 1/24/12 | 2.846 | 3/26/12 |  |
| 5/26/11 | 2.326 | 7/26/11 | 1.428 | 9/25/11 | 3.927 | 11/25/11 | 2.920 | 1/25/12 | 2.884 | 3/27/12 |  |
| 5/27/11 | 2.316 | 7/27/11 | 1.436 | 9/26/11 | 3.972 | 11/26/11 | 2.922 | 1/26/12 | 2.905 | 3/28/12 |  |
| 5/28/11 | 2.278 | 7/28/11 | 1.463 | 9/27/11 | 3.997 | 11/27/11 | 2.915 | 1/27/12 | 2.917 | 3/29/12 |  |
| 5/29/11 | 2.236 | 7/29/11 | 1.426 | 9/28/11 | 3.930 | 11/28/11 | 2.919 | 1/28/12 | 2.960 | 3/30/12 |  |
| 5/30/11 | 2.229 | 7/30/11 | 1.404 | 9/29/11 | 3.946 | 11/29/11 | 2.921 | 1/29/12 | 2.942 | 3/31/12 |  |
| 5/31/11 | 2.225 | 7/31/11 | 1.343 | 9/30/11 | 3.973 | 11/30/11 | 2.915 | 1/30/12 | 2.921 |  |  |
|  |  |  |  |  |  |  |  | 1/31/12 | 2.989 |  |  |

### 7.4 Daily Groundwater Elevation at 8C-5

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |

### 7.5 Daily Groundwater Elevation at 8C-6

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/11 | 2.335 | 6/1/11 | 1.930 | 8/1/11 | 1.493 | 10/1/11 | 6.123 | 12/1/11 | 3.078 | 2/1/12 | 4.371 |
| 4/2/11 | 2.138 | 6/2/11 | 2.090 | 8/2/11 | 1.506 | 10/2/11 | 6.079 | 12/2/11 | 3.250 | 2/2/12 | 4.902 |
| 4/3/11 | 2.055 | 6/3/11 | 2.143 | 8/3/11 | 1.554 | 10/3/11 | 6.030 | 12/3/11 | 3.134 | 2/3/12 | 5.238 |
| 4/4/11 | 1.979 | 6/4/11 | 2.170 | 8/4/11 | 1.663 | 10/4/11 | 6.007 | 12/4/11 | 3.234 | 2/4/12 | 5.450 |
| 4/5/11 | 1.884 | 6/5/11 | 2.061 | 8/5/11 | 1.807 | 10/5/11 | 6.004 | 12/5/11 | 3.041 | 2/5/12 | 5.610 |
| 4/6/11 | 1.832 | 6/6/11 | 2.049 | 8/6/11 | 1.967 | 10/6/11 | 6.010 | 12/6/11 | 3.072 | 2/6/12 | 5.726 |
| 4/7/11 | 1.809 | 6/7/11 | 2.059 | 8/7/11 | 2.084 | 10/7/11 | 6.034 | 12/7/11 | 3.013 | 2/7/12 | 5.831 |
| 4/8/11 | 1.805 | 6/8/11 | 1.959 | 8/8/11 | 2.202 | 10/8/11 | 5.995 | 12/8/11 | 2.928 | 2/8/12 | 5.926 |
| 4/9/11 | 1.769 | 6/9/11 | 1.867 | 8/9/11 | 2.341 | 10/9/11 | 5.922 | 12/9/11 | 2.850 | 2/9/12 | 5.996 |
| 4/10/11 | 1.784 | 6/10/11 | 1.699 | 8/10/11 | 2.417 | 10/10/11 | 5.855 | 12/10/11 | 2.839 | 2/10/12 | 6.044 |
| 4/11/11 | 1.794 | 6/11/11 | 1.554 | 8/11/11 | 2.502 | 10/11/11 | 5.799 | 12/11/11 | 2.852 | 2/11/12 | 6.081 |
| 4/12/11 | 1.812 | 6/12/11 | 1.450 | 8/12/11 | 2.638 | 10/12/11 | 4.579 | 12/12/11 | 2.852 | 2/12/12 | 6.114 |
| 4/13/11 | 1.870 | 6/13/11 | 1.382 | 8/13/11 | 2.768 | 10/13/11 | 2.416 | 12/13/11 | 2.805 | 2/13/12 | 6.138 |
| 4/14/11 | 1.935 | 6/14/11 | 1.279 | 8/14/11 | 2.929 | 10/14/11 | 2.036 | 12/14/11 | 2.840 | 2/14/12 | 6.159 |
| 4/15/11 | 1.945 | 6/15/11 | 1.112 | 8/15/11 | 3.010 | 10/15/11 | 1.813 | 12/15/11 | 2.859 | 2/15/12 | 6.177 |
| 4/16/11 | 1.913 | 6/16/11 | 0.963 | 8/16/11 | 3.213 | 10/16/11 | 1.593 | 12/16/11 | 2.842 | 2/16/12 | 6.198 |
| 4/17/11 | 1.875 | 6/17/11 | 0.896 | 8/17/11 | 3.374 | 10/17/11 | 1.452 | 12/17/11 | 2.860 | 2/17/12 | 6.189 |
| 4/18/11 | 1.816 | 6/18/11 | 0.863 | 8/18/11 | 3.505 | 10/18/11 | 1.392 | 12/18/11 | 2.881 | 2/18/12 | 6.205 |
| 4/19/11 | 1.850 | 6/19/11 | 0.838 | 8/19/11 | 3.586 | 10/19/11 | 1.384 | 12/19/11 | 2.869 | 2/19/12 | 6.221 |
| 4/20/11 | 1.853 | 6/20/11 | 0.811 | 8/20/11 | 3.688 | 10/20/11 | 1.375 | 12/20/11 | 2.859 | 2/20/12 | 6.231 |
| 4/21/11 | 1.877 | 6/21/11 | 0.852 | 8/21/11 | 4.425 | 10/21/11 | 1.372 | 12/21/11 | 2.877 | 2/21/12 | 6.240 |
| 4/22/11 | 1.937 | 6/22/11 | 0.879 | 8/22/11 | 4.792 | 10/22/11 | 1.365 | 12/22/11 | 3.205 | 2/22/12 | 6.248 |
| 4/23/11 | 1.941 | 6/23/11 | 0.860 | 8/23/11 | 5.008 | 10/23/11 | 1.366 | 12/23/11 | 3.666 | 2/23/12 | 6.252 |
| 4/24/11 | 1.979 | 6/24/11 | 0.863 | 8/24/11 | 5.159 | 10/24/11 | 1.449 | 12/24/11 | 3.550 | 2/24/12 | 6.258 |
| 4/25/11 | 2.018 | 6/25/11 | 0.883 | 8/25/11 | 5.264 | 10/25/11 | 1.668 | 12/25/11 | 3.308 | 2/25/12 | 6.258 |
| 4/26/11 | 2.084 | 6/26/11 | 0.919 | 8/26/11 | 5.339 | 10/26/11 | 1.903 | 12/26/11 | 3.081 | 2/26/12 | 6.237 |
| 4/27/11 | 2.110 | 6/27/11 | 0.976 | 8/27/11 | 5.393 | 10/27/11 | 2.197 | 12/27/11 | 2.954 | 2/27/12 | 6.253 |
| 4/28/11 | 2.075 | 6/28/11 | 1.022 | 8/28/11 | 5.434 | 10/28/11 | 2.515 | 12/28/11 | 2.858 | 2/28/12 | 6.255 |
| 4/29/11 | 2.102 | 6/29/11 | 0.964 | 8/29/11 | 5.463 | 10/29/11 | 3.858 | 12/29/11 | 2.827 | 2/29/12 | 6.258 |
| 4/30/11 | 2.118 | 6/30/11 | 0.954 | 8/30/11 | 5.492 | 10/30/11 | 2.934 | 12/30/11 | 2.842 |  |  |
|  |  |  |  | 8/31/11 | 5.522 | 10/31/11 | 3.532 | 12/31/11 | 2.882 | 3/1/12 | 6.273 |
| 5/1/11 | 2.073 | 7/1/11 | 1.014 |  |  |  |  |  |  | 3/2/12 | 6.282 |
| 5/2/11 | 2.007 | 7/2/11 | 1.057 | 9/1/11 | 5.550 | 11/1/11 | 4.484 | 1/1/12 | 2.936 | 3/3/12 | 6.290 |
| 5/3/11 | 1.950 | 7/3/11 | 0.957 | 9/2/11 | 5.576 | 11/2/11 | 4.945 | 1/2/12 | 2.935 | 3/4/12 | 6.288 |
| 5/4/11 | 1.879 | 7/4/11 | 0.825 | 9/3/11 | 5.612 | 11/3/11 | 4.603 | 1/3/12 | 2.953 | 3/5/12 | 6.291 |
| 5/5/11 | 1.791 | 7/5/11 | 0.752 | 9/4/11 | 5.641 | 11/4/11 | 4.323 | 1/4/12 | 2.994 | 3/6/12 | 6.291 |
| 5/6/11 | 1.754 | 7/6/11 | 0.749 | 9/5/11 | 5.665 | 11/5/11 | 4.104 | 1/5/12 | 3.002 | 3/7/12 | 6.247 |
| 5/7/11 | 1.664 | 7/7/11 | 0.765 | 9/6/11 | 5.689 | 11/6/11 | 4.126 | 1/6/12 | 3.014 | 3/8/12 | 6.255 |
| 5/8/11 | 1.582 | 7/8/11 | 0.776 | 9/7/11 | 5.726 | 11/7/11 | 4.126 | 1/7/12 | 3.014 | 3/9/12 | 6.271 |
| 5/9/11 | 1.555 | 7/9/11 | 0.817 | 9/8/11 | 5.764 | 11/8/11 | 4.171 | 1/8/12 | 3.286 | 3/10/12 | 6.272 |
| 5/10/11 | 1.525 | 7/10/11 | 0.875 | 9/9/11 | 5.791 | 11/9/11 | 4.149 | 1/9/12 | 3.114 | 3/11/12 | 6.243 |
| 5/11/11 | 1.549 | 7/11/11 | 0.946 | 9/10/11 | 5.824 | 11/10/11 | 4.007 | 1/10/12 | 2.978 | 3/12/12 | 6.206 |
| 5/12/11 | 1.582 | 7/12/11 | 0.990 | 9/11/11 | 5.861 | 11/11/11 | 4.071 | 1/11/12 | 2.961 | 3/13/12 |  |
| 5/13/11 | 1.603 | 7/13/11 | 1.207 | 9/12/11 | 5.876 | 11/12/11 | 3.940 | 1/12/12 | 3.067 | 3/14/12 |  |
| 5/14/11 | 1.587 | 7/14/11 | 1.511 | 9/13/11 | 5.894 | 11/13/11 | 3.975 | 1/13/12 | 3.162 | 3/15/12 |  |
| 5/15/11 | 1.543 | 7/15/11 | 1.764 | 9/14/11 | 5.910 | 11/14/11 | 4.027 | 1/14/12 | 3.113 | 3/16/12 |  |
| 5/16/11 | 1.521 | 7/16/11 | 1.958 | 9/15/11 | 5.930 | 11/15/11 | 4.186 | 1/15/12 | 3.030 | 3/17/12 |  |
| 5/17/11 | 1.554 | 7/17/11 | 2.019 | 9/16/11 | 5.954 | 11/16/11 | 4.352 | 1/16/12 | 3.096 | 3/18/12 |  |
| 5/18/11 | 1.620 | 7/18/11 | 1.988 | 9/17/11 | 5.980 | 11/17/11 | 4.424 | 1/17/12 | 3.567 | 3/19/12 |  |
| 5/19/11 | 1.664 | 7/19/11 | 1.962 | 9/18/11 | 6.003 | 11/18/11 | 4.074 | 1/18/12 | 3.372 | 3/20/12 |  |
| 5/20/11 | 1.712 | 7/20/11 | 1.916 | 9/19/11 | 6.024 | 11/19/11 | 3.196 | 1/19/12 | 3.059 | 3/21/12 |  |
| 5/21/11 | 1.746 | 7/21/11 | 1.883 | 9/20/11 | 6.040 | 11/20/11 | 2.991 | 1/20/12 | 2.980 | 3/22/12 |  |
| 5/22/11 | 1.793 | 7/22/11 | 1.851 | 9/21/11 | 6.056 | 11/21/11 | 2.999 | 1/21/12 | 2.752 | 3/23/12 |  |
| 5/23/11 | 1.812 | 7/23/11 | 1.770 | 9/22/11 | 6.074 | 11/22/11 | 2.905 | 1/22/12 | 2.772 | 3/24/12 |  |
| 5/24/11 | 1.844 | 7/24/11 | 1.685 | 9/23/11 | 6.086 | 11/23/11 | 2.814 | 1/23/12 | 2.746 | 3/25/12 |  |
| 5/25/11 | 1.825 | 7/25/11 | 1.653 | 9/24/11 | 6.080 | 11/24/11 | 2.845 | 1/24/12 | 2.818 | 3/26/12 |  |
| 5/26/11 | 1.901 | 7/26/11 | 1.631 | 9/25/11 | 6.090 | 11/25/11 | 2.885 | 1/25/12 | 2.914 | 3/27/12 |  |
| 5/27/11 | 1.905 | 7/27/11 | 1.650 | 9/26/11 | 6.098 | 11/26/11 | 2.915 | 1/26/12 | 2.996 | 3/28/12 |  |
| 5/28/11 | 1.851 | 7/28/11 | 1.698 | 9/27/11 | 6.112 | 11/27/11 | 2.927 | 1/27/12 | 3.048 | 3/29/12 |  |
| 5/29/11 | 1.786 | 7/29/11 | 1.681 | 9/28/11 | 6.106 | 11/28/11 | 2.974 | 1/28/12 | 3.186 | 3/30/12 |  |
| 5/30/11 | 1.789 | 7/30/11 | 1.655 | 9/29/11 | 6.106 | 11/29/11 | 2.995 | 1/29/12 | 3.205 | 3/31/12 |  |
| 5/31/11 | 1.794 | 7/31/11 | 1.557 | 9/30/11 | 6.113 | 11/30/11 | 3.021 | 1/30/12 | 3.139 |  |  |
|  |  |  |  |  |  |  |  | 1/31/12 | 3.310 |  |  |

7.6 Daily Groundwater Elevation at 8C-7

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/11 | 5.837 | 6/1/11 | 4.876 | 8/1/11 | 4.403 | 10/1/11 | 8.156 | 12/1/11 | 6.919 | 2/1/12 | 7.170 |
| 4/2/11 | 5.542 | 6/2/11 | 5.090 | 8/2/11 | 4.423 | 10/2/11 | 8.123 | 12/2/11 | 7.062 | 2/2/12 | 7.467 |
| 4/3/11 | 5.426 | 6/3/11 | 5.132 | 8/3/11 | 4.486 | 10/3/11 | 8.087 | 12/3/11 | 7.055 | 2/3/12 | 7.622 |
| 4/4/11 | 5.333 | 6/4/11 | 5.154 | 8/4/11 | 4.629 | 10/4/11 | 8.073 | 12/4/11 | 7.151 | 2/4/12 | 7.732 |
| 4/5/11 | 5.227 | 6/5/11 | 4.979 | 8/5/11 | 4.819 | 10/5/11 | 8.066 | 12/5/11 | 7.081 | 2/5/12 | 7.822 |
| 4/6/11 | 5.159 | 6/6/11 | 4.965 | 8/6/11 | 4.966 | 10/6/11 | 8.067 | 12/6/11 | 7.097 | 2/6/12 | 7.881 |
| 4/7/11 | 5.128 | 6/7/11 | 4.975 | 8/7/11 | 5.053 | 10/7/11 | 8.082 | 12/7/11 | 7.052 | 2/7/12 | 7.968 |
| 4/8/11 | 5.116 | 6/8/11 | 4.809 | 8/8/11 | 5.140 | 10/8/11 | 8.050 | 12/8/11 | 7.000 | 2/8/12 | 8.036 |
| 4/9/11 | 5.079 | 6/9/11 | 4.679 | 8/9/11 | 5.252 | 10/9/11 | 7.998 | 12/9/11 | 6.900 | 2/9/12 | 8.083 |
| 4/10/11 | 5.083 | 6/10/11 | 4.504 | 8/10/11 | 5.323 | 10/10/11 | 7.953 | 12/10/11 | 6.871 | 2/10/12 | 8.116 |
| 4/11/11 | 5.081 | 6/11/11 | 4.387 | 8/11/11 | 5.389 | 10/11/11 | 7.910 | 12/11/11 | 6.809 | 2/11/12 | 8.141 |
| 4/12/11 | 5.088 | 6/12/11 | 4.317 | 8/12/11 | 5.487 | 10/12/11 | 7.304 | 12/12/11 | 6.774 | 2/12/12 | 8.163 |
| 4/13/11 | 5.136 | 6/13/11 | 4.285 | 8/13/11 | 5.579 | 10/13/11 | 5.885 | 12/13/11 | 6.710 | 2/13/12 | 8.179 |
| 4/14/11 | 5.194 | 6/14/11 | 4.202 | 8/14/11 | 5.705 | 10/14/11 | 5.415 | 12/14/11 | 6.790 | 2/14/12 | 8.194 |
| 4/15/11 | 5.197 | 6/15/11 | 4.120 | 8/15/11 | 5.766 | 10/15/11 | 5.174 | 12/15/11 | 6.754 | 2/15/12 | 8.207 |
| 4/16/11 | 5.164 | 6/16/11 | 4.044 | 8/16/11 | 5.932 | 10/16/11 | 4.981 | 12/16/11 | 6.773 | 2/16/12 | 8.222 |
| 4/17/11 | 5.125 | 6/17/11 | 3.994 | 8/17/11 | 6.079 | 10/17/11 | 4.771 | 12/17/11 | 6.795 | 2/17/12 | 8.210 |
| 4/18/11 | 5.067 | 6/18/11 | 3.970 | 8/18/11 | 6.227 | 10/18/11 | 4.573 | 12/18/11 | 6.780 | 2/18/12 | 8.226 |
| 4/19/11 | 5.075 | 6/19/11 | 3.952 | 8/19/11 | 6.344 | 10/19/11 | 4.525 | 12/19/11 | 6.782 | 2/19/12 | 8.240 |
| 4/20/11 | 5.068 | 6/20/11 | 3.932 | 8/20/11 | 6.426 | 10/20/11 | 4.509 | 12/20/11 | 6.788 | 2/20/12 | 8.247 |
| 4/21/11 | 5.087 | 6/21/11 | 3.951 | 8/21/11 | 6.865 | 10/21/11 | 4.480 | 12/21/11 | 6.740 | 2/21/12 | 8.255 |
| 4/22/11 | 5.138 | 6/22/11 | 3.974 | 8/22/11 | 7.116 | 10/22/11 | 4.465 | 12/22/11 | 6.927 | 2/22/12 | 8.258 |
| 4/23/11 | 5.127 | 6/23/11 | 3.957 | 8/23/11 | 7.277 | 10/23/11 | 4.467 | 12/23/11 | 7.027 | 2/23/12 | 8.262 |
| 4/24/11 | 5.163 | 6/24/11 | 3.958 | 8/24/11 | 7.401 | 10/24/11 | 4.575 | 12/24/11 | 6.995 | 2/24/12 | 8.264 |
| 4/25/11 | 5.196 | 6/25/11 | 3.973 | 8/25/11 | 7.489 | 10/25/11 | 4.880 | 12/25/11 | 6.872 | 2/25/12 | 8.264 |
| 4/26/11 | 5.251 | 6/26/11 | 4.006 | 8/26/11 | 7.553 | 10/26/11 | 5.080 | 12/26/11 | 6.786 | 2/26/12 | 8.243 |
| 4/27/11 | 5.273 | 6/27/11 | 4.055 | 8/27/11 | 7.601 | 10/27/11 | 5.382 | 12/27/11 | 6.803 | 2/27/12 | 8.256 |
| 4/28/11 | 5.237 | 6/28/11 | 4.087 | 8/28/11 | 7.638 | 10/28/11 | 5.699 | 12/28/11 | 6.833 | 2/28/12 | 8.258 |
| 4/29/11 | 5.252 | 6/29/11 | 4.045 | 8/29/11 | 7.666 | 10/29/11 | 6.500 | 12/29/11 | 6.898 | 2/29/12 | 8.261 |
| 4/30/11 | 5.264 | 6/30/11 | 4.040 | 8/30/11 | 7.693 | 10/30/11 | 6.127 | 12/30/11 | 6.901 |  |  |
|  |  |  |  | 8/31/11 | 7.718 | 10/31/11 | 6.722 | 12/31/11 | 6.934 | 3/1/12 | 8.271 |
| 5/1/11 | 5.223 | 7/1/11 | 4.089 |  |  |  |  |  |  | 3/2/12 | 8.277 |
| 5/2/11 | 5.154 | 7/2/11 | 4.131 | 9/1/11 | 7.743 | 11/1/11 | 7.045 | 1/1/12 | 6.961 | 3/3/12 | 8.281 |
| 5/3/11 | 5.100 | 7/3/11 | 4.053 | 9/2/11 | 7.765 | 11/2/11 | 7.294 | 1/2/12 | 6.933 | 3/4/12 | 8.281 |
| 5/4/11 | 5.059 | 7/4/11 | 3.955 | 9/3/11 | 7.795 | 11/3/11 | 7.385 | 1/3/12 | 6.946 | 3/5/12 | 8.281 |
| 5/5/11 | 5.016 | 7/5/11 | 3.902 | 9/4/11 | 7.818 | 11/4/11 | 7.362 | 1/4/12 | 6.960 | 3/6/12 | 8.278 |
| 5/6/11 | 4.988 | 7/6/11 | 3.905 | 9/5/11 | 7.839 | 11/5/11 | 7.365 | 1/5/12 | 6.961 | 3/7/12 | 8.226 |
| 5/7/11 | 4.891 | 7/7/11 | 3.912 | 9/6/11 | 7.857 | 11/6/11 | 7.368 | 1/6/12 | 6.950 | 3/8/12 | 8.244 |
| 5/8/11 | 4.765 | 7/8/11 | 3.919 | 9/7/11 | 7.887 | 11/7/11 | 7.400 | 1/7/12 | 6.952 | 3/9/12 | 8.261 |
| 5/9/11 | 4.701 | 7/9/11 | 3.945 | 9/8/11 | 7.917 | 11/8/11 | 7.415 | 1/8/12 | 7.081 | 3/10/12 | 8.264 |
| 5/10/11 | 4.632 | 7/10/11 | 3.993 | 9/9/11 | 7.934 | 11/9/11 | 7.396 | 1/9/12 | 6.889 | 3/11/12 | 8.249 |
| 5/11/11 | 4.682 | 7/11/11 | 4.052 | 9/10/11 | 7.960 | 11/10/11 | 7.424 | 1/10/12 | 6.822 | 3/12/12 | 8.235 |
| 5/12/11 | 4.745 | 7/12/11 | 4.106 | 9/11/11 | 7.986 | 11/11/11 | 7.450 | 1/11/12 | 6.835 | 3/13/12 |  |
| 5/13/11 | 4.768 | 7/13/11 | 4.271 | 9/12/11 | 7.997 | 11/12/11 | 7.444 | 1/12/12 | 6.904 | 3/14/12 |  |
| 5/14/11 | 4.713 | 7/14/11 | 4.578 | 9/13/11 | 8.010 | 11/13/11 | 7.450 | 1/13/12 | 6.931 | 3/15/12 |  |
| 5/15/11 | 4.606 | 7/15/11 | 4.844 | 9/14/11 | 8.021 | 11/14/11 | 7.478 | 1/14/12 | 6.890 | 3/16/12 |  |
| 5/16/11 | 4.554 | 7/16/11 | 4.982 | 9/15/11 | 8.035 | 11/15/11 | 7.524 | 1/15/12 | 6.774 | 3/17/12 |  |
| 5/17/11 | 4.594 | 7/17/11 | 5.035 | 9/16/11 | 8.052 | 11/16/11 | 7.557 | 1/16/12 | 6.904 | 3/18/12 |  |
| 5/18/11 | 4.696 | 7/18/11 | 5.024 | 9/17/11 | 8.069 | 11/17/11 | 7.587 | 1/17/12 | 7.013 | 3/19/12 |  |
| 5/19/11 | 4.765 | 7/19/11 | 5.014 | 9/18/11 | 8.087 | 11/18/11 | 7.559 | 1/18/12 | 6.751 | 3/20/12 |  |
| 5/20/11 | 4.853 | 7/20/11 | 4.982 | 9/19/11 | 8.100 | 11/19/11 | 7.273 | 1/19/12 | 6.592 | 3/21/12 |  |
| 5/21/11 | 4.893 | 7/21/11 | 4.953 | 9/20/11 | 8.109 | 11/20/11 | 7.161 | 1/20/12 | 6.516 | 3/22/12 |  |
| 5/22/11 | 4.932 | 7/22/11 | 4.924 | 9/21/11 | 8.121 | 11/21/11 | 6.998 | 1/21/12 | 6.131 | 3/23/12 |  |
| 5/23/11 | 4.936 | 7/23/11 | 4.826 | 9/22/11 | 8.132 | 11/22/11 | 6.801 | 1/22/12 | 6.362 | 3/24/12 |  |
| 5/24/11 | 4.953 | 7/24/11 | 4.686 | 9/23/11 | 8.141 | 11/23/11 | 6.815 | 1/23/12 | 5.985 | 3/25/12 |  |
| 5/25/11 | 4.893 | 7/25/11 | 4.623 | 9/24/11 | 8.135 | 11/24/11 | 6.868 | 1/24/12 | 5.922 | 3/26/12 |  |
| 5/26/11 | 4.975 | 7/26/11 | 4.583 | 9/25/11 | 8.142 | 11/25/11 | 6.863 | 1/25/12 | 6.076 | 3/27/12 |  |
| 5/27/11 | 4.963 | 7/27/11 | 4.615 | 9/26/11 | 8.149 | 11/26/11 | 6.877 | 1/26/12 | 6.250 | 3/28/12 |  |
| 5/28/11 | 4.856 | 7/28/11 | 4.690 | 9/27/11 | 8.158 | 11/27/11 | 6.924 | 1/27/12 | 6.370 | 3/29/12 |  |
| 5/29/11 | 4.707 | 7/29/11 | 4.687 | 9/28/11 | 8.151 | 11/28/11 | 6.944 | 1/28/12 | 6.591 | 3/30/12 |  |
| 5/30/11 | 4.690 | 7/30/11 | 4.578 | 9/29/11 | 8.150 | 11/29/11 | 6.949 | 1/29/12 | 6.579 | 3/31/12 |  |
| 5/31/11 | 4.692 | 7/31/11 | 4.444 | 9/30/11 | 8.151 | 11/30/11 | 6.941 | 1/30/12 | 6.433 |  |  |
|  |  |  |  |  |  |  |  | 1/31/12 | 6.622 |  |  |

7.7 Daily Groundwater Elevation at 8C-8

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| Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) | Date | Depth (ft) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/1/11 | 3.380 | 6/1/11 | 4.639 | 8/1/11 | 5.220 | 10/1/11 |  | 12/1/11 |  | 2/1/12 |  |
| 4/2/11 | 3.694 | 6/2/11 | 4.512 | 8/2/11 | 5.206 | 10/2/11 |  | 12/2/11 |  | 2/2/12 |  |
| 4/3/11 | 3.871 | 6/3/11 | 4.471 | 8/3/11 | 5.161 | 10/3/11 |  | 12/3/11 |  | 2/3/12 |  |
| 4/4/11 | 3.988 | 6/4/11 | 4.441 | 8/4/11 | 5.056 | 10/4/11 |  | 12/4/11 |  | 2/4/12 |  |
| 4/5/11 | 4.102 | 6/5/11 | 4.579 | 8/5/11 | 4.911 | 10/5/11 |  | 12/5/11 |  | 2/5/12 |  |
| 4/6/11 | 4.192 | 6/6/11 | 4.554 | 8/6/11 | 4.789 | 10/6/11 |  | 12/6/11 |  | 2/6/12 |  |
| 4/7/11 | 4.269 | 6/7/11 | 4.543 | 8/7/11 | 4.695 | 10/7/11 |  | 12/7/11 |  | 2/7/12 |  |
| 4/8/11 | 4.293 | 6/8/11 | 4.615 | 8/8/11 | 4.610 | 10/8/11 |  | 12/8/11 |  | 2/8/12 |  |
| 4/9/11 | 4.311 | 6/9/11 | 4.720 | 8/9/11 | 4.516 | 10/9/11 |  | 12/9/11 |  | 2/9/12 |  |
| 4/10/11 | 4.311 | 6/10/11 | 4.899 | 8/10/11 | 4.446 | 10/10/11 |  | 12/10/11 |  | 2/10/12 |  |
| 4/11/11 | 4.317 | 6/11/11 | 5.030 | 8/11/11 | 4.384 | 10/11/11 |  | 12/11/11 |  | 2/11/12 |  |
| 4/12/11 | 4.318 | 6/12/11 | 5.114 | 8/12/11 | 4.305 | 10/12/11 |  | 12/12/11 |  | 2/12/12 |  |
| 4/13/11 | 4.290 | 6/13/11 | 5.172 | 8/13/11 | 4.231 | 10/13/11 |  | 12/13/11 |  | 2/13/12 |  |
| 4/14/11 | 4.242 | 6/14/11 | 5.252 | 8/14/11 | 4.148 | 10/14/11 |  | 12/14/11 |  | 2/14/12 |  |
| 4/15/11 | 4.235 | 6/15/11 | 5.341 | 8/15/11 | 4.086 | 10/15/11 |  | 12/15/11 |  | 2/15/12 |  |
| 4/16/11 | 4.266 | 6/16/11 | 5.435 | 8/16/11 | 3.985 | 10/16/11 |  | 12/16/11 |  | 2/16/12 |  |
| 4/17/11 | 4.308 | 6/17/11 | 5.501 | 8/17/11 | 3.882 | 10/17/11 |  | 12/17/11 |  | 2/17/12 |  |
| 4/18/11 | 4.349 | 6/18/11 | 5.537 | 8/18/11 | 3.778 | 10/18/11 |  | 12/18/11 |  | 2/18/12 |  |
| 4/19/11 | 4.368 | 6/19/11 | 5.565 | 8/19/11 | 3.679 | 10/19/11 |  | 12/19/11 |  | 2/19/12 |  |
| 4/20/11 | 4.385 | 6/20/11 | 5.588 | 8/20/11 | 3.610 | 10/20/11 |  | 12/20/11 |  | 2/20/12 |  |
| 4/21/11 | 4.380 | 6/21/11 | 5.571 | 8/21/11 | 3.423 | 10/21/11 |  | 12/21/11 |  | 2/21/12 |  |
| 4/22/11 | 4.368 | 6/22/11 | 5.558 | 8/22/11 | 3.245 | 10/22/11 |  | 12/22/11 |  | 2/22/12 |  |
| 4/23/11 | 4.372 | 6/23/11 | 5.577 | 8/23/11 | 3.109 | 10/23/11 |  | 12/23/11 |  | 2/23/12 |  |
| 4/24/11 | 4.343 | 6/24/11 | 5.583 | 8/24/11 | 2.996 | 10/24/11 |  | 12/24/11 |  | 2/24/12 |  |
| 4/25/11 | 4.313 | 6/25/11 | 5.576 | 8/25/11 |  | 10/25/11 |  | 12/25/11 |  | 2/25/12 |  |
| 4/26/11 | 4.278 | 6/26/11 | 5.548 | 8/26/11 |  | 10/26/11 |  | 12/26/11 |  | 2/26/12 |  |
| 4/27/11 | 4.251 | 6/27/11 | 5.510 | 8/27/11 |  | 10/27/11 |  | 12/27/11 |  | 2/27/12 |  |
| 4/28/11 | 4.283 | 6/28/11 | 5.483 | 8/28/11 |  | 10/28/11 |  | 12/28/11 |  | 2/28/12 |  |
| 4/29/11 | 4.279 | 6/29/11 | 5.548 | 8/29/11 |  | 10/29/11 |  | 12/29/11 |  | 2/29/12 |  |
| 4/30/11 | 4.274 | 6/30/11 | 5.518 | 8/30/11 |  | 10/30/11 |  | 12/30/11 |  |  |  |
|  |  |  |  | 8/31/11 |  | 10/31/11 |  | 12/31/11 |  | 3/1/12 |  |
| 5/1/11 | 4.290 | 7/1/11 | 5.465 |  |  |  |  |  |  | 3/2/12 |  |
| 5/2/11 | 4.332 | 7/2/11 | 5.428 | 9/1/11 |  | 11/1/11 |  | 1/1/12 |  | 3/3/12 |  |
| 5/3/11 | 4.368 | 7/3/11 | 5.473 | 9/2/11 |  | 11/2/11 |  | 1/2/12 |  | 3/4/12 |  |
| 5/4/11 | 4.400 | 7/4/11 | 5.558 | 9/3/11 |  | 11/3/11 |  | 1/3/12 |  | 3/5/12 |  |
| 5/5/11 | 4.437 | 7/5/11 | 5.631 | 9/4/11 |  | 11/4/11 |  | 1/4/12 |  | 3/6/12 |  |
| 5/6/11 | 4.469 | 7/6/11 | 5.638 | 9/5/11 |  | 11/5/11 |  | 1/5/12 |  | 3/7/12 |  |
| 5/7/11 | 4.525 | 7/7/11 | 5.652 | 9/6/11 |  | 11/6/11 |  | 1/6/12 |  | 3/8/12 |  |
| 5/8/11 | 4.604 | 7/8/11 | 5.644 | 9/7/11 |  | 11/7/11 |  | 1/7/12 |  | 3/9/12 |  |
| 5/9/11 | 4.673 | 7/9/11 | 5.616 | 9/8/11 |  | 11/8/11 |  | 1/8/12 |  | 3/10/12 |  |
| 5/10/11 | 4.726 | 7/10/11 | 5.569 | 9/9/11 |  | 11/9/11 |  | 1/9/12 |  | 3/11/12 |  |
| 5/11/11 | 4.709 | 7/11/11 | 5.518 | 9/10/11 |  | 11/10/11 |  | 1/10/12 |  | 3/12/12 |  |
| 5/12/11 | 4.675 | 7/12/11 | 5.477 | 9/11/11 |  | 11/11/11 |  | 1/11/12 |  | 3/13/12 |  |
| 5/13/11 | 4.672 | 7/13/11 | 5.372 | 9/12/11 |  | 11/12/11 |  | 1/12/12 |  | 3/14/12 |  |
| 5/14/11 | 4.710 | 7/14/11 | 5.168 | 9/13/11 |  | 11/13/11 |  | 1/13/12 |  | 3/15/12 |  |
| 5/15/11 | 4.780 | 7/15/11 | 4.975 | 9/14/11 |  | 11/14/11 |  | 1/14/12 |  | 3/16/12 |  |
| 5/16/11 | 4.825 | 7/16/11 | 4.834 | 9/15/11 |  | 11/15/11 |  | 1/15/12 |  | 3/17/12 |  |
| 5/17/11 | 4.804 | 7/17/11 | 4.735 | 9/16/11 |  | 11/16/11 |  | 1/16/12 |  | 3/18/12 |  |
| 5/18/11 | 4.757 | 7/18/11 | 4.687 | 9/17/11 |  | 11/17/11 |  | 1/17/12 |  | 3/19/12 |  |
| 5/19/11 | 4.710 | 7/19/11 | 4.657 | 9/18/11 |  | 11/18/11 |  | 1/18/12 |  | 3/20/12 |  |
| 5/20/11 | 4.648 | 7/20/11 | 4.671 | 9/19/11 |  | 11/19/11 |  | 1/19/12 |  | 3/21/12 |  |
| 5/21/11 | 4.608 | 7/21/11 | 4.683 | 9/20/11 |  | 11/20/11 |  | 1/20/12 |  | 3/22/12 |  |
| 5/22/11 | 4.586 | 7/22/11 | 4.698 | 9/21/11 |  | 11/21/11 |  | 1/21/12 |  | 3/23/12 |  |
| 5/23/11 | 4.575 | 7/23/11 | 4.741 | 9/22/11 |  | 11/22/11 |  | 1/22/12 |  | 3/24/12 |  |
| 5/24/11 | 4.557 | 7/24/11 | 4.825 | 9/23/11 |  | 11/23/11 |  | 1/23/12 |  | 3/25/12 |  |
| 5/25/11 | 4.584 | 7/25/11 | 4.893 | 9/24/11 |  | 11/24/11 |  | 1/24/12 |  | 3/26/12 |  |
| 5/26/11 | 4.553 | 7/26/11 | 4.956 | 9/25/11 |  | 11/25/11 |  | 1/25/12 |  | 3/27/12 |  |
| 5/27/11 | 4.553 | 7/27/11 | 4.945 | 9/26/11 |  | 11/26/11 |  | 1/26/12 |  | 3/28/12 |  |
| 5/28/11 | 4.612 | 7/28/11 | 4.889 | 9/27/11 |  | 11/27/11 |  | 1/27/12 |  | 3/29/12 |  |
| 5/29/11 | 4.705 | 7/29/11 | 4.940 | 9/28/11 |  | 11/28/11 |  | 1/28/12 |  | 3/30/12 |  |
| 5/30/11 | 4.719 | 7/30/11 | 5.061 | 9/29/11 |  | 11/29/11 |  | 1/29/12 |  | 3/31/12 |  |
| 5/31/11 | 4.724 | 7/31/11 | 5.176 | 9/30/11 |  | 11/30/11 |  | 1/30/12 |  |  |  |
|  |  |  |  |  |  |  |  | 1/31/12 |  |  |  |

### 8.1 Daily Average, Maximum, and Minimum Water Temperature ( ${ }^{\circ}$ F) at Lee Vining Creek below Intake, Lee Vining Creek at County Road, Parker Creek below Conduit, and Walker Creek at Mouth.

| Date | LV Below Intake |  |  | LV County Road |  |  | Parker at Conduit |  |  | Walker at Mouth |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 4/1/2011 | 38.9 | 46.2 | 36.0 |  |  |  | 38.8 | 43.2 | 36.4 | 41.2 | 50.6 | 35.0 |
| 4/2/2011 | 39.0 | 43.9 | 37.1 |  |  |  | 38.8 | 41.2 | 37.5 | 41.5 | 49.2 | 37.3 |
| 4/3/2011 | 37.7 | 43.0 | 34.6 |  |  |  | 37.9 | 42.0 | 34.9 | 39.0 | 46.9 | 33.3 |
| 4/4/2011 | 36.7 | 44.8 | 34.4 |  |  |  | 38.9 | 44.1 | 34.9 | 39.9 | 49.7 | 33.0 |
| 4/5/2011 | 37.8 | 42.9 | 35.5 |  |  |  | 40.7 | 45.6 | 37.0 | 42.3 | 52.0 | 35.4 |
| 4/6/2011 | 36.2 | 41.2 | 34.5 |  |  |  | 39.8 | 43.9 | 36.9 | 41.4 | 49.6 | 35.6 |
| 4/7/2011 | 34.7 | 35.9 | 32.9 |  |  |  | 35.6 | 37.3 | 33.5 | 35.7 | 40.3 | 32.3 |
| 4/8/2011 | 32.6 | 37.5 | 31.9 |  |  |  | 33.7 | 35.9 | 32.1 | 33.5 | 37.7 | 32.0 |
| 4/9/2011 | 33.4 | 39.9 | 32.7 |  |  |  | 35.5 | 39.2 | 32.8 | 36.1 | 44.4 | 32.0 |
| 4/10/2011 | 33.9 | 41.9 | 32.7 |  |  |  | 36.9 | 41.8 | 32.7 | 38.0 | 47.6 | 32.0 |
| 4/11/2011 | 35.5 | 42.6 | 34.2 |  |  |  | 39.2 | 43.9 | 35.5 | 40.8 | 49.6 | 34.2 |
| 4/12/2011 | 35.8 | 42.7 | 34.0 |  |  |  | 39.4 | 44.2 | 35.3 | 40.9 | 50.3 | 33.6 |
| 4/13/2011 | 35.7 | 37.1 | 33.4 |  |  |  | 37.4 | 39.6 | 34.9 | 37.7 | 42.0 | 33.9 |
| 4/14/2011 | 33.2 | 40.5 | 32.5 |  |  |  | 36.9 | 42.4 | 32.7 | 37.9 | 47.4 | 32.0 |
| 4/15/2011 | 35.4 | 43.4 | 34.8 |  |  |  | 40.9 | 46.5 | 36.8 | 43.0 | 54.3 | 35.0 |
| 4/16/2011 | 37.0 | 44.5 | 35.5 |  |  |  | 42.7 | 47.7 | 38.6 | 45.3 | 53.9 | 37.8 |
| 4/17/2011 | 37.9 | 44.9 | 36.6 |  |  |  | 43.8 | 49.4 | 39.5 | 45.9 | 54.4 | 38.8 |
| 4/18/2011 | 37.5 | 43.4 | 36.5 |  |  |  | 42.8 | 47.3 | 39.3 | 44.7 | 52.2 | 40.4 |
| 4/19/2011 | 36.6 | 44.5 | 35.5 |  |  |  | 42.4 | 49.0 | 37.6 | 43.5 | 50.1 | 37.1 |
| 4/20/2011 | 36.8 | 40.3 | 35.7 |  |  |  | 42.1 | 45.7 | 39.4 | 44.0 | 51.5 | 39.3 |
| 4/21/2011 | 35.4 | 42.6 | 35.3 |  |  |  | 41.4 | 46.3 | 38.4 | 42.2 | 51.0 | 36.7 |
| 4/22/2011 | 35.6 | 40.2 | 34.3 |  |  |  | 40.5 | 44.0 | 37.1 | 40.3 | 46.8 | 35.0 |
| 4/23/2011 | 36.2 | 42.4 | 35.8 |  |  |  | 42.3 | 46.5 | 39.5 | 42.7 | 47.8 | 38.5 |
| 4/24/2011 | 36.7 | 42.9 | 35.3 |  |  |  | 41.8 | 46.4 | 38.6 | 42.9 | 50.8 | 37.7 |
| 4/25/2011 | 35.7 | 43.5 | 34.9 |  |  |  | 41.4 | 47.1 | 37.8 | 41.6 | 49.8 | 36.5 |
| 4/26/2011 | 35.3 | 44.2 | 34.0 |  |  |  | 40.8 | 46.8 | 35.9 | 41.6 | 52.2 | 33.1 |
| 4/27/2011 | 36.6 | 45.9 | 35.0 |  |  |  | 43.4 | 49.7 | 38.5 | 44.4 | 54.8 | 35.8 |
| 4/28/2011 | 38.0 | 45.5 | 36.1 |  |  |  | 43.6 | 48.9 | 40.4 | 44.7 | 54.3 | 39.1 |
| 4/29/2011 | 36.4 | 43.7 | 34.6 |  |  |  | 40.8 | 45.8 | 37.1 | 42.1 | 52.2 | 35.2 |
| 4/30/2011 | 35.6 | 43.4 | 33.4 |  |  |  | 40.2 | 45.6 | 35.6 | 40.5 | 50.5 | 32.3 |

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| Date | LV Below Intake |  |  | LV County Road |  |  | Parker at Conduit |  |  | Walker at Mouth |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 5/1/2011 | 35.9 | 44.8 | 33.9 |  |  |  | 41.6 | 47.6 | 36.6 | 42.2 | 53.1 | 33.3 |
| 5/2/2011 | 36.9 | 48.6 | 35.1 |  |  |  | 43.9 | 50.0 | 38.7 | 45.5 | 56.1 | 36.9 |
| 5/3/2011 | 43.4 | 45.8 | 36.7 |  |  |  | 46.2 | 51.8 | 41.4 | 49.2 | 59.1 | 40.9 |
| 5/4/2011 | 37.5 | 45.4 | 35.8 |  |  |  | 46.2 | 52.0 | 41.0 | 49.3 | 59.0 | 41.3 |
| 5/5/2011 | 38.0 | 45.8 | 36.7 |  |  |  | 47.7 | 53.7 | 42.7 | 50.6 | 60.3 | 42.3 |
| 5/6/2011 | 38.8 | 44.5 | 37.3 |  |  |  | 47.8 | 53.3 | 42.9 | 51.1 | 59.7 | 43.6 |
| 5/7/2011 | 38.5 | 42.9 | 37.5 |  |  |  | 47.5 | 52.1 | 44.0 | 49.8 | 55.6 | 45.4 |
| 5/8/2011 | 38.3 | 43.1 | 36.5 |  |  |  | 46.6 | 51.1 | 44.1 | 48.4 | 53.0 | 45.4 |
| 5/9/2011 | 36.1 | 37.4 | 34.9 |  |  |  | 41.2 | 43.2 | 39.8 | 41.4 | 44.4 | 39.0 |
| 5/10/2011 | 35.5 | 41.8 | 34.5 |  |  |  | 42.7 | 48.4 | 38.4 | 43.0 | 51.0 | 37.1 |
| 5/11/2011 | 37.5 | 44.9 | 36.1 |  |  |  | 45.7 | 51.1 | 41.0 | 47.1 | 54.9 | 40.0 |
| 5/12/2011 | 39.2 | 46.4 | 37.7 |  |  |  | 48.1 | 54.2 | 43.2 | 50.6 | 59.5 | 43.1 |
| 5/13/2011 | 39.4 | 45.9 | 37.7 |  |  |  | 48.9 | 54.8 | 44.3 | 51.8 | 60.4 | 44.9 |
| 5/14/2011 | 38.9 | 43.9 | 37.8 |  |  |  | 48.0 | 52.3 | 45.0 | 50.5 | 56.8 | 46.3 |
| 5/15/2011 | 37.6 | 38.5 | 35.2 |  |  |  | 42.7 | 44.9 | 40.3 | 45.6 | 49.7 | 42.2 |
| 5/16/2011 | 35.0 | 41.7 | 34.3 |  |  |  | 42.7 | 47.7 | 38.6 | 44.4 | 50.8 | 39.4 |
| 5/17/2011 | 36.7 | 40.2 | 35.8 |  |  |  | 43.3 | 45.5 | 41.2 | 45.8 | 51.0 | 42.6 |
| 5/18/2011 | 35.9 | 41.2 | 35.3 |  |  |  | 42.1 | 45.4 | 39.8 | 44.5 | 49.9 | 40.5 |
| 5/19/2011 | 36.7 | 41.6 | 36.1 |  |  |  | 43.6 | 47.4 | 40.4 | 45.7 | 51.0 | 41.7 |
| 5/20/2011 | 37.8 | 46.8 | 36.1 |  |  |  | 46.0 | 52.9 | 40.4 | 48.8 | 58.3 | 40.6 |
| 5/21/2011 | 39.5 | 46.1 | 38.0 |  |  |  | 47.8 | 51.5 | 44.0 | 51.8 | 60.3 | 45.7 |
| 5/22/2011 | 39.5 | 45.0 | 37.4 |  |  |  | 47.5 | 52.4 | 43.2 | 50.2 | 56.3 | 44.6 |
| 5/23/2011 | 39.1 | 44.7 | 36.9 |  |  |  | 47.0 | 51.9 | 42.8 | 49.9 | 57.2 | 43.9 |
| 5/24/2011 | 37.9 | 45.2 | 36.2 |  |  |  | 46.4 | 52.4 | 41.2 | 49.2 | 57.2 | 41.8 |
| 5/25/2011 | 39.0 | 44.2 | 37.8 |  |  |  | 46.9 | 50.7 | 43.6 | 49.6 | 57.0 | 44.7 |
| 5/26/2011 | 37.6 | 44.8 | 36.2 |  |  |  | 46.0 | 52.3 | 41.0 | 48.6 | 56.8 | 42.6 |
| 5/27/2011 | 37.8 | 44.6 | 37.3 |  |  |  | 48.1 | 54.1 | 43.5 | 49.9 | 59.3 | 44.3 |
| 5/28/2011 | 38.1 | 43.4 | 36.7 |  |  |  | 46.9 | 51.9 | 43.7 | 48.8 | 55.3 | 44.5 |
| 5/29/2011 | 36.3 | 40.9 | 35.2 |  |  |  | 43.7 | 46.7 | 41.0 | 44.9 | 49.4 | 40.7 |
| 5/30/2011 | 36.2 | 44.5 | 34.8 |  |  |  | 44.9 | 50.9 | 39.9 | 46.5 | 54.4 | 39.6 |
| 5/31/2011 | 37.9 | 46.5 | 36.3 |  |  |  | 45.3 | 50.6 | 41.4 | 47.5 | 54.5 | 42.7 |
| 6/1/2011 | 37.7 | 43.2 | 36.4 |  |  |  | 44.0 | 48.8 | 40.6 | 46.0 | 53.6 | 41.1 |
| 6/2/2011 | 36.0 | 43.7 | 35.2 |  |  |  | 43.2 | 49.1 | 38.6 | 44.7 | 53.0 | 38.2 |
| 6/3/2011 | 36.6 | 43.1 | 35.5 |  |  |  | 44.0 | 48.7 | 39.8 | 44.4 | 49.6 | 38.8 |
| 6/4/2011 | 38.4 | 40.7 | 38.0 |  |  |  | 45.3 | 46.9 | 43.5 | 47.3 | 50.8 | 44.5 |
| 6/5/2011 | 38.8 | 46.3 | 38.5 |  |  |  | 47.9 | 53.4 | 44.2 | 51.2 | 58.7 | 46.0 |
| 6/6/2011 | 39.7 | 46.1 | 38.3 |  |  |  | 46.9 | 50.0 | 44.5 | 51.2 | 56.3 | 47.6 |
| 6/7/2011 | 39.1 | 44.4 | 37.4 |  |  |  | 47.5 | 52.9 | 43.4 | 51.6 | 59.5 | 45.4 |
| 6/8/2011 | 38.9 | 45.9 | 38.1 |  |  |  | 49.2 | 55.2 | 44.3 | 53.1 | 60.6 | 46.4 |
| 6/9/2011 | 39.2 | 46.0 | 38.3 |  |  |  | 50.3 | 56.6 | 45.1 | 54.3 | 61.8 | 47.6 |
| 6/10/2011 | 39.3 | 45.4 | 38.8 |  |  |  | 51.7 | 57.3 | 47.2 | 55.8 | 62.3 | 49.8 |
| 6/11/2011 | 39.6 | 42.1 | 38.0 |  |  |  | 50.8 | 54.3 | 46.8 | 54.6 | 59.7 | 49.9 |
| 6/12/2011 | 39.5 | 45.1 | 38.6 |  |  |  | 52.5 | 57.1 | 49.0 | 57.5 | 63.3 | 52.6 |
| 6/13/2011 | 39.8 | 45.1 | 38.7 |  |  |  | 52.7 | 57.4 | 48.5 | 58.7 | 64.5 | 53.0 |
| 6/14/2011 | 39.8 | 45.6 | 38.9 |  |  |  | 52.7 | 57.3 | 49.1 | 59.9 | 66.4 | 54.3 |
| 6/15/2011 | 40.7 | 45.7 | 39.3 |  |  |  | 52.7 | 56.9 | 49.2 | 60.5 | 66.3 | 55.2 |
| 6/16/2011 | 41.1 | 44.9 | 39.0 |  |  |  | 50.7 | 54.5 | 47.6 | 58.2 | 63.2 | 53.5 |
| 6/17/2011 | 39.9 | 45.0 | 38.0 |  |  |  | 49.5 | 53.6 | 46.0 | 57.4 | 63.3 | 51.8 |
| 6/18/2011 | 40.5 | 44.8 | 38.9 |  |  |  | 50.0 | 53.5 | 46.3 | 58.3 | 63.9 | 53.1 |
| 6/19/2011 | 41.5 | 46.0 | 39.9 |  |  |  | 49.5 | 53.2 | 47.0 | 57.7 | 62.8 | 53.4 |
| 6/20/2011 | 40.6 | 46.3 | 38.9 |  |  |  | 49.1 | 53.6 | 45.5 | 57.4 | 64.7 | 51.3 |
| 6/21/2011 | 41.3 | 47.0 | 40.0 |  |  |  | 50.4 | 54.4 | 46.6 | 59.5 | 66.2 | 53.7 |
| 6/22/2011 | 42.6 | 47.2 | 40.7 |  |  |  | 50.7 | 54.4 | 47.1 | 61.2 | 67.1 | 56.0 |
| 6/23/2011 | 42.9 | 47.2 | 41.0 |  |  |  | 49.6 | 53.4 | 47.2 | 60.3 | 65.2 | 56.2 |
| 6/24/2011 | 42.1 | 46.4 | 40.1 |  |  |  | 48.2 | 52.5 | 45.2 | 58.7 | 64.5 | 53.6 |
| 6/25/2011 | 42.6 | 46.8 | 40.4 |  |  |  | 48.0 | 51.9 | 44.7 | 58.3 | 64.2 | 52.8 |
| 6/26/2011 | 42.9 | 47.2 | 41.0 |  |  |  | 48.0 | 51.9 | 44.4 | 58.6 | 64.5 | 53.3 |
| 6/27/2011 | 43.8 | 47.9 | 41.7 |  |  |  | 49.0 | 52.7 | 45.5 | 59.5 | 65.4 | 54.3 |
| 6/28/2011 | 44.4 | 47.9 | 42.7 |  |  |  | 48.6 | 52.2 | 46.4 | 58.7 | 63.0 | 55.2 |
| 6/29/2011 | 43.6 | 44.1 | 41.7 |  |  |  | 46.3 | 47.6 | 45.0 | 56.1 | 58.9 | 54.4 |
| 6/30/2011 | 41.4 | 47.2 | 40.2 |  |  |  | 47.0 | 51.7 | 43.2 | 57.1 | 64.3 | 51.3 |

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| Date | LV Below Intake |  |  | LV County Road |  |  | Parker at Conduit |  |  | Walker at Mouth |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 7/1/2011 | 43.7 | 48.8 | 42.3 |  |  |  | 48.9 | 53.1 | 45.4 | 59.7 | 66.0 | 54.3 |
| 7/2/2011 | 45.4 | 50.0 | 43.9 |  |  |  | 50.2 | 54.2 | 46.4 | 61.3 | 67.0 | 55.9 |
| 7/3/2011 | 46.3 | 49.2 | 43.5 |  |  |  | 50.5 | 54.6 | 46.5 | 62.0 | 67.6 | 56.8 |
| 7/4/2011 | 45.9 | 49.2 | 44.0 |  |  |  | 50.2 | 54.0 | 47.1 | 62.4 | 68.1 | 57.4 |
| 7/5/2011 | 46.6 | 47.1 | 44.7 |  |  |  | 48.1 | 49.8 | 46.5 | 61.9 | 64.8 | 58.9 |
| 7/6/2011 | 45.0 | 47.6 | 44.1 |  |  |  | 48.3 | 51.2 | 45.8 | 61.9 | 66.3 | 58.5 |
| 7/7/2011 | 45.9 | 49.0 | 44.4 |  |  |  | 48.0 | 51.7 | 45.0 | 61.9 | 67.0 | 57.9 |
| 7/8/2011 | 46.2 | 49.1 | 43.8 |  |  |  | 48.2 | 52.3 | 44.5 | 61.3 | 67.2 | 56.0 |
| 7/9/2011 | 46.1 | 49.8 | 44.2 |  |  |  | 47.8 | 51.4 | 44.2 | 61.3 | 66.3 | 56.6 |
| 7/10/2011 | 45.9 | 49.4 | 43.7 |  |  |  | 47.2 | 51.1 | 43.7 | 60.3 | 65.8 | 55.3 |
| 7/11/2011 | 45.9 | 49.7 | 44.0 |  |  |  | 47.8 | 51.9 | 44.4 | 59.6 | 64.9 | 54.7 |
| 7/12/2011 | 46.4 | 50.3 | 44.5 |  |  |  | 48.6 | 52.5 | 45.4 | 59.6 | 64.7 | 54.6 |
| 7/13/2011 | 47.1 | 50.0 | 44.9 |  |  |  | 48.7 | 52.5 | 45.9 | 59.6 | 64.5 | 54.9 |
| 7/14/2011 | 46.3 | 49.6 | 44.3 |  |  |  | 48.5 | 52.2 | 45.0 | 59.2 | 64.2 | 54.0 |
| 7/15/2011 | 47.3 | 50.0 | 45.5 |  |  |  | 49.1 | 52.3 | 46.2 | 59.9 | 64.2 | 56.0 |
| 7/16/2011 | 46.9 | 50.9 | 45.3 |  |  |  | 48.7 | 52.6 | 45.7 | 58.9 | 63.4 | 54.4 |
| 7/17/2011 | 47.4 | 50.7 | 45.0 |  |  |  | 49.0 | 53.2 | 45.9 | 58.7 | 63.3 | 54.1 |
| 7/18/2011 | 46.6 | 50.7 | 44.5 |  |  |  | 48.7 | 52.9 | 45.7 | 59.0 | 64.0 | 54.0 |
| 7/19/2011 | 46.4 | 50.4 | 44.5 |  |  |  | 48.9 | 53.4 | 45.4 | 58.9 | 63.7 | 54.9 |
| 7/20/2011 | 47.1 | 51.7 | 45.4 |  |  |  | 50.1 | 54.2 | 46.6 | 59.5 | 64.7 | 54.6 |
| 7/21/2011 | 48.5 | 52.2 | 46.2 |  |  |  | 50.6 | 54.6 | 46.9 | 60.3 | 65.5 | 55.2 |
| 7/22/2011 | 49.2 | 52.6 | 47.3 |  |  |  | 51.0 | 55.0 | 47.6 | 61.4 | 66.5 | 56.4 |
| 7/23/2011 | 49.8 | 52.9 | 47.7 |  |  |  | 51.5 | 55.4 | 48.3 | 62.3 | 67.5 | 57.3 |
| 7/24/2011 | 50.4 | 53.4 | 48.7 |  |  |  | 51.7 | 55.0 | 48.6 | 62.4 | 66.6 | 58.3 |
| 7/25/2011 | 49.6 | 52.4 | 47.4 |  |  |  | 51.0 | 54.6 | 47.7 | 61.0 | 65.4 | 56.6 |
| 7/26/2011 | 48.5 | 52.3 | 46.6 |  |  |  | 50.4 | 54.7 | 46.3 | 60.2 | 65.5 | 54.8 |
| 7/27/2011 | 49.4 | 52.9 | 47.5 |  |  |  | 51.3 | 55.1 | 47.7 | 61.2 | 66.3 | 56.3 |
| 7/28/2011 | 50.1 | 53.4 | 48.1 |  |  |  | 51.6 | 55.6 | 48.3 | 61.9 | 67.3 | 57.0 |
| 7/29/2011 | 51.1 | 53.8 | 49.5 |  |  |  | 51.6 | 54.3 | 49.0 | 61.9 | 66.9 | 58.2 |
| 7/30/2011 | 50.6 | 52.8 | 49.5 |  |  |  | 50.0 | 52.4 | 48.6 | 61.3 | 64.9 | 58.2 |
| 7/31/2011 | 49.6 | 50.3 | 48.3 |  |  |  | 49.4 | 50.8 | 47.8 | 60.5 | 62.9 | 57.8 |
| 8/1/2011 | 49.3 | 51.9 | 47.7 |  |  |  | 50.0 | 53.5 | 47.5 | 61.3 | 65.7 | 57.5 |
| 8/2/2011 | 49.2 | 52.9 | 47.7 |  |  |  | 50.8 | 54.6 | 48.0 | 61.1 | 65.5 | 57.1 |
| 8/3/2011 | 49.4 | 53.5 | 47.8 |  |  |  | 50.9 | 54.5 | 48.0 | 61.0 | 65.9 | 56.5 |
| 8/4/2011 | 50.6 | 53.6 | 48.4 |  |  |  | 50.9 | 54.7 | 47.4 | 60.6 | 65.5 | 55.7 |
| 8/5/2011 | 50.6 | 54.1 | 48.5 |  |  |  | 51.0 | 54.8 | 47.5 | 60.7 | 65.9 | 55.8 |
| 8/6/2011 | 51.6 | 54.8 | 49.6 |  |  |  | 51.7 | 55.4 | 48.2 | 61.2 | 65.8 | 56.8 |
| 8/7/2011 | 51.9 | 54.6 | 49.2 |  |  |  | 51.4 | 55.5 | 47.4 | 60.1 | 65.7 | 54.7 |
| 8/8/2011 | 51.5 | 54.4 | 48.9 |  |  |  | 51.7 | 55.8 | 47.7 | 60.3 | 66.1 | 54.7 |
| 8/9/2011 | 51.5 | 54.8 | 49.3 |  |  |  | 52.1 | 56.1 | 48.1 | 60.5 | 66.2 | 55.4 |
| 8/10/2011 | 51.5 | 55.4 | 49.7 |  |  |  | 52.4 | 56.3 | 48.7 | 60.8 | 66.6 | 55.5 |
| 8/11/2011 | 52.3 | 55.7 | 50.2 |  |  |  | 52.7 | 56.7 | 49.0 | 61.2 | 67.1 | 56.2 |
| 8/12/2011 | 52.3 | 55.6 | 50.1 |  |  |  | 53.1 | 57.0 | 49.2 | 60.5 | 66.3 | 55.6 |
| 8/13/2011 | 52.2 | 54.6 | 50.3 |  |  |  | 53.1 | 55.7 | 50.3 | 59.6 | 64.5 | 55.0 |
| 8/14/2011 | 52.2 | 55.9 | 50.4 |  |  |  | 52.9 | 56.9 | 49.3 | 59.0 | 66.0 | 52.6 |
| 8/15/2011 | 52.4 | 54.9 | 50.1 |  |  |  | 52.4 | 55.9 | 48.9 | 59.8 | 64.5 | 55.7 |
| 8/16/2011 | 51.2 | 55.3 | 49.6 |  |  |  | 52.0 | 56.0 | 48.3 | 58.5 | 64.5 | 53.6 |
| 8/17/2011 | 51.9 | 55.3 | 49.6 |  |  |  | 52.0 | 56.2 | 48.2 | 58.7 | 64.8 | 53.2 |
| 8/18/2011 | 52.6 | 56.2 | 50.5 |  |  |  | 52.8 | 57.2 | 48.9 | 60.0 | 66.3 | 54.3 |
| 8/19/2011 | 51.5 | 55.9 | 48.9 |  |  |  | 53.8 | 57.8 | 50.2 | 60.8 | 66.8 | 56.1 |
| 8/20/2011 | 52.5 | 55.7 | 50.2 |  |  |  | 53.1 | 56.9 | 49.7 | 60.1 | 66.0 | 55.2 |
| 8/21/2011 | 51.3 | 55.2 | 49.1 |  |  |  | 52.5 | 56.1 | 49.4 | 58.7 | 64.8 | 53.5 |
| 8/22/2011 | 50.5 | 54.9 | 48.6 |  |  |  | 52.3 | 56.3 | 49.0 | 58.6 | 64.3 | 53.0 |
| 8/23/2011 | 52.2 | 56.0 | 50.0 |  |  |  | 54.1 | 57.9 | 50.4 | 60.7 | 66.4 | 55.6 |
| 8/24/2011 | 52.8 | 56.5 | 51.1 |  |  |  | 54.9 | 58.3 | 51.8 | 61.4 | 67.3 | 56.9 |
| 8/25/2011 | 52.9 | 56.4 | 50.8 |  |  |  | 54.3 | 57.5 | 51.1 | 60.5 | 66.0 | 55.8 |
| 8/26/2011 | 52.5 | 56.1 | 50.5 |  |  |  | 53.8 | 57.3 | 50.2 | 59.5 | 64.3 | 54.4 |
| 8/27/2011 | 53.6 | 56.7 | 52.7 |  |  |  | 55.4 | 58.2 | 53.1 | 62.8 | 67.5 | 59.4 |
| 8/28/2011 | 53.7 | 56.9 | 51.9 |  |  |  | 54.5 | 57.2 | 51.8 | 61.6 | 66.3 | 57.2 |
| 8/29/2011 | 53.1 | 56.2 | 51.3 |  |  |  | 54.1 | 56.9 | 50.8 | 60.6 | 66.5 | 55.6 |
| 8/30/2011 | 53.1 | $56.3$ | 50.8 |  |  |  | $53.3$ | $56.8$ | 50.0 | $59.6$ | 65.2 | 55.0 |
| 8/31/2011 | 52.4 | 55.6 | 49.4 |  |  |  | 52.1 | 56.0 | 48.1 | 57.6 | 64.2 | 51.9 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | LV Below Intake |  |  | LV County Road |  |  | Parker at Conduit |  |  | Walker at Mouth |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 9/1/2011 | 51.9 | 55.3 | 49.6 |  |  |  | 52.2 | 55.8 | 48.8 | 57.4 | 63.8 | 52.4 |
| 9/2/2011 | 51.5 | 54.8 | 49.1 |  |  |  | 51.7 | 56.2 | 48.0 | 56.7 | 63.1 | 51.2 |
| 9/3/2011 | 51.5 | 56.1 | 49.7 |  |  |  | 52.3 | 56.6 | 48.8 | 57.2 | 63.6 | 51.8 |
| 9/4/2011 | 51.6 | 55.7 | 49.8 |  |  |  | 52.7 | 56.3 | 49.1 | 57.5 | 63.7 | 52.2 |
| 9/5/2011 | 52.3 | 54.2 | 50.9 |  |  |  | 52.8 | 54.6 | 50.6 | 57.4 | 61.8 | 54.0 |
| 9/6/2011 | 51.8 | 56.3 | 49.9 |  |  |  | 52.1 | 56.0 | 48.6 | 56.9 | 63.6 | 51.7 |
| 9/7/2011 | 51.4 | 55.2 | 50.0 |  |  |  | 52.6 | 55.6 | 49.3 | 57.3 | 64.5 | 52.0 |
| 9/8/2011 | 52.6 | 56.1 | 50.8 |  |  |  | 53.4 | 55.5 | 50.9 | 57.6 | 63.9 | 53.2 |
| 9/9/2011 | 51.7 | 54.3 | 49.9 |  |  |  | 52.1 | 53.8 | 49.9 | 55.4 | 59.1 | 52.2 |
| 9/10/2011 | 51.1 | 54.3 | 49.6 |  |  |  | 51.2 | 53.0 | 49.0 | 54.9 | 59.3 | 51.1 |
| 9/11/2011 | 51.1 | 53.0 | 49.8 |  |  |  | 50.8 | 52.2 | 49.6 | 55.0 | 58.9 | 52.6 |
| 9/12/2011 | 49.6 | 52.0 | 47.7 |  |  |  | 50.0 | 52.7 | 47.2 | 54.2 | 58.5 | 50.0 |
| 9/13/2011 | 49.6 | 51.6 | 48.7 |  |  |  | 51.0 | 52.8 | 49.0 | 56.0 | 59.6 | 52.9 |
| 9/14/2011 | 49.3 | 53.2 | 47.2 |  |  |  | 50.6 | 53.6 | 47.5 | 55.3 | 61.2 | 50.5 |
| 9/15/2011 | 49.6 | 51.9 | 47.7 |  |  |  | 50.6 | 53.5 | 47.7 | 54.9 | 59.4 | 50.8 |
| 9/16/2011 | 49.5 | 51.6 | 48.3 |  |  |  | 50.9 | 53.0 | 48.9 | 55.2 | 60.7 | 51.7 |
| 9/17/2011 | 48.5 | 51.9 | 45.9 |  |  |  | 49.2 | 52.7 | 45.6 | 52.8 | 59.0 | 47.7 |
| 9/18/2011 | 48.0 | 52.7 | 46.1 |  |  |  | 50.0 | 53.8 | 46.3 | 53.2 | 59.8 | 47.9 |
| 9/19/2011 | 48.6 | 52.3 | 46.8 |  |  |  | 50.7 | 54.0 | 47.4 | 54.1 | 60.4 | 49.0 |
| 9/20/2011 | 49.6 | 53.4 | 47.6 |  |  |  | 50.7 | 53.3 | 47.8 | 54.5 | 61.1 | 49.9 |
| 9/21/2011 | 49.3 | 52.6 | 47.5 |  |  |  | 50.5 | 53.3 | 47.4 | 54.6 | 60.8 | 49.7 |
| 9/22/2011 | 49.0 | 52.5 | 47.4 |  |  |  | 50.8 | 54.3 | 47.5 | 54.4 | 60.8 | 49.4 |
| 9/23/2011 | 49.3 | 52.4 | 47.4 |  |  |  | 50.7 | 53.6 | 47.7 | 54.1 | 58.6 | 50.0 |
| 9/24/2011 | 49.3 | 51.1 | 47.8 |  |  |  | 50.3 | 52.3 | 47.9 | 53.6 | 57.0 | 50.4 |
| 9/25/2011 | 48.8 | 52.1 | 47.8 |  |  |  | 50.0 | 52.4 | 47.3 | 53.3 | 58.0 | 49.4 |
| 9/26/2011 | 48.6 | 52.5 | 46.8 |  |  |  | 50.3 | 53.3 | 47.1 | 53.5 | 59.9 | 48.5 |
| 9/27/2011 | 48.5 | 52.8 | 46.0 |  |  |  | 50.9 | 54.1 | 47.5 | 53.9 | 60.4 | 48.9 |
| 9/28/2011 | 48.2 | 52.2 | 45.6 |  |  |  | 51.1 | 54.2 | 47.8 | 53.9 | 60.2 | 49.1 |
| 9/29/2011 | 48.3 | 52.6 | 46.4 |  |  |  | 51.4 | 54.4 | 48.2 | 54.3 | 60.9 | 49.4 |
| 9/30/2011 | 48.3 | 51.0 | 45.8 |  |  |  | 51.2 | 52.9 | 48.7 | 53.6 | 58.8 | 49.8 |
| 10/1/2011 | 47.4 | 51.1 | 44.6 |  |  |  | 50.0 | 51.9 | 48.1 | 53.1 | 57.8 | 49.5 |
| 10/2/2011 | 47.2 | 51.8 | 46.0 |  |  |  | 50.0 | 52.0 | 48.3 | 53.9 | 58.8 | 51.1 |
| 10/3/2011 | 46.5 | 49.3 | 43.9 |  |  |  | 48.3 | 49.9 | 46.9 | 51.6 | 56.2 | 48.6 |
| 10/4/2011 | 46.4 | 48.2 | 44.5 |  |  |  | 47.0 | 48.6 | 45.3 | 50.2 | 54.4 | 47.1 |
| 10/5/2011 | 44.7 | 44.7 | 40.2 |  |  |  | 43.6 | 46.3 | 41.0 | 46.7 | 49.8 | 42.9 |
| 10/6/2011 | 40.0 | 42.0 | 39.0 |  |  |  | 40.1 | 41.7 | 38.7 | 41.9 | 44.6 | 39.1 |
| 10/7/2011 | 39.5 | 43.3 | 38.8 |  |  |  | 40.2 | 43.5 | 36.9 | 41.2 | 47.2 | 36.6 |
| 10/8/2011 | 41.3 | 44.7 | 40.6 |  |  |  | 43.5 | 46.0 | 40.9 | 44.8 | 51.0 | 40.5 |
| 10/9/2011 | 42.1 | 45.7 | 41.0 |  |  |  | 44.2 | 46.8 | 41.2 | 45.7 | 51.5 | 41.4 |
| 10/10/2011 | 43.3 | 46.3 | 42.5 |  |  |  | 45.3 | 47.9 | 42.8 | 46.8 | 50.7 | 43.9 |
| 10/11/2011 | 44.5 | 47.5 | 43.5 |  |  |  | 46.4 | 48.9 | 44.1 | 49.0 | 54.7 | 45.2 |
| 10/12/2011 | 43.9 | 48.1 | 42.8 |  |  |  | 45.9 | 49.0 | 42.8 | 47.7 | 53.8 | 42.9 |
| 10/13/2011 | 45.0 | 48.5 | 44.0 |  |  |  | 46.8 | 49.6 | 43.9 | 48.9 | 54.7 | 44.5 |
| 10/14/2011 | 45.5 | 49.0 | 44.2 |  |  |  | 47.5 | 50.0 | 44.4 | 49.6 | 55.0 | 45.1 |
| 10/15/2011 | 46.5 | 48.8 | 45.0 |  |  |  | 47.5 | 50.1 | 44.5 | 49.6 | 52.6 | 46.2 |
| 10/16/2011 | 46.8 | 48.7 | 45.4 |  |  |  | 47.5 | 49.4 | 44.9 | 50.1 | 53.3 | 46.8 |
| 10/17/2011 | 46.3 | 48.9 | 44.8 |  |  |  | 47.0 | 49.1 | 44.5 | 49.7 | 54.6 | 46.1 |
| 10/18/2011 | 45.3 | 48.8 | 43.9 |  |  |  | 46.0 | 48.8 | 43.0 | 48.7 | 53.8 | 44.4 |
| 10/19/2011 | 45.5 | 48.5 | 44.3 |  |  |  | 46.1 | 48.4 | 43.7 | 48.5 | 53.6 | 44.7 |
| 10/20/2011 | 45.2 | 48.4 | 43.7 |  |  |  | 45.5 | 48.0 | 42.7 | 47.6 | 52.9 | 43.5 |
| 10/21/2011 | 46.1 | 47.7 | 43.0 |  |  |  | 44.8 | 47.1 | 42.0 | 46.9 | 52.0 | 42.9 |
| 10/22/2011 | 43.6 | 47.1 | 41.2 |  |  |  | 44.2 | 46.9 | 41.4 | 45.9 | 51.5 | 41.7 |
| 10/23/2011 | 43.3 | 47.1 | 40.8 |  |  |  | 44.1 | 46.8 | 41.0 | 45.6 | 51.1 | 41.0 |
| 10/24/2011 | 44.4 | 47.1 | 43.2 |  |  |  | 45.0 | 47.6 | 43.0 | 46.5 | 50.5 | 43.5 |
| 10/25/2011 | 43.7 | 46.2 | 42.2 |  |  |  | 43.4 | 45.4 | 41.3 | 44.8 | 49.8 | 41.1 |
| 10/26/2011 | 43.4 | 43.4 | 39.7 |  |  |  | 40.1 | 43.1 | 37.8 | 41.2 | 45.3 | 37.5 |
| 10/27/2011 | 40.3 | 43.6 | 38.8 |  |  |  | 38.8 | 41.7 | 35.9 | 39.2 | 44.8 | 35.1 |
| 10/28/2011 | 41.0 | 44.4 | 39.5 |  |  |  | 40.1 | 43.0 | 37.2 | 40.4 | 46.3 | 36.3 |
| 10/29/2011 | 41.6 | 44.8 | 39.9 |  |  |  | 40.9 | 43.8 | 38.1 | 41.5 | 47.3 | 37.2 |
| 10/30/2011 | 41.6 | 44.6 | 39.9 |  |  |  | 41.1 | 43.7 | 38.3 | 41.8 | 47.2 | 37.7 |
| 10/31/2011 | 42.0 | 44.8 | 40.2 |  |  |  | 41.6 | 44.0 | 38.7 | 42.3 | 47.6 | 38.1 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | LV Below Intake |  |  | LV County Road |  |  | Parker at Conduit |  |  | Walker at Mouth |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 11/1/2011 | 42.6 | 43.5 | 39.7 |  |  |  | 41.2 | 42.7 | 37.7 | 41.9 | 46.0 | 37.7 |
| 11/2/2011 | 39.2 | 41.1 | 36.7 |  |  |  | 36.5 | 38.8 | 34.0 | 36.4 | 41.3 | 32.4 |
| 11/3/2011 | 38.6 | 41.5 | 37.2 |  |  |  | 37.1 | 39.8 | 34.9 | 36.7 | 41.9 | 32.8 |
| 11/4/2011 | 39.5 | 39.5 | 36.7 |  |  |  | 35.8 | 37.3 | 34.5 | 36.6 | 39.3 | 34.2 |
| 11/5/2011 | 36.5 | 38.3 | 34.3 |  |  |  | 34.1 | 36.0 | 32.5 | 33.5 | 35.3 | 32.2 |
| 11/6/2011 | 37.0 | 39.4 | 36.3 |  |  |  | 35.1 | 36.6 | 33.7 | 34.9 | 38.0 | 32.5 |
| 11/7/2011 | 36.7 | 38.7 | 35.1 |  |  |  | 34.6 | 36.3 | 33.3 | 34.2 | 38.0 | 32.5 |
| 11/8/2011 | 35.9 | 38.3 | 34.0 |  |  |  | 33.1 | 33.9 | 32.4 | 32.9 | 34.2 | 32.1 |
| 11/9/2011 | 36.1 | 39.0 | 34.4 |  |  |  | 34.1 | 36.0 | 32.3 | 33.0 | 35.0 | 32.1 |
| 11/10/2011 | 37.3 | 39.5 | 35.1 |  |  |  | 35.3 | 37.1 | 33.2 | 34.3 | 38.1 | 32.1 |
| 11/11/2011 | 37.8 | 38.9 | 36.7 |  |  |  | 36.8 | 38.7 | 35.3 | 35.7 | 38.1 | 33.9 |
| 11/12/2011 | 38.3 | 41.6 | 38.1 |  |  |  | 37.9 | 40.1 | 36.8 | 37.7 | 40.7 | 35.9 |
| 11/13/2011 | 38.2 | 41.5 | 37.5 |  |  |  | 37.7 | 40.1 | 36.2 | 37.8 | 42.5 | 35.3 |
| 11/14/2011 | 38.6 | 41.3 | 37.6 |  |  |  | 37.7 | 39.9 | 36.2 | 37.9 | 42.4 | 35.1 |
| 11/15/2011 | 38.1 | 41.2 | 36.3 |  |  |  | 37.3 | 40.1 | 35.1 | 36.8 | 41.8 | 33.1 |
| 11/16/2011 | 38.4 | 40.8 | 36.4 |  |  |  | 36.9 | 38.9 | 34.8 | 36.6 | 41.5 | 33.1 |
| 11/17/2011 | 38.2 | 40.5 | 36.0 |  |  |  | 36.7 | 38.7 | 34.7 | 36.4 | 41.2 | 32.6 |
| 11/18/2011 | 38.5 | 39.8 | 36.3 |  |  |  | 36.3 | 38.2 | 34.0 | 36.9 | 40.4 | 34.4 |
| 11/19/2011 | 36.2 | 38.7 | 35.1 |  |  |  | 34.2 | 36.2 | 32.8 | 34.4 | 37.6 | 32.8 |
| 11/20/2011 | 36.0 | 38.1 | 35.8 |  |  |  | 33.4 | 34.1 | 32.6 | 33.6 | 34.8 | 32.5 |
| 11/21/2011 | 35.8 | 37.9 | 34.2 |  |  |  | 32.5 | 32.9 | 32.1 | 32.7 | 33.7 | 31.9 |
| 11/22/2011 | 36.2 | 39.3 | 35.1 |  |  |  | 33.4 | 35.0 | 32.2 | 32.8 | 33.4 | 32.1 |
| 11/23/2011 | 37.5 | 40.5 | 36.0 |  |  |  | 35.2 | 37.3 | 33.3 | 34.3 | 37.5 | 32.3 |
| 11/24/2011 | 37.9 | 40.3 | 36.6 |  |  |  | 35.4 | 37.0 | 34.2 | 35.3 | 39.0 | 32.9 |
| 11/25/2011 | 37.6 | 40.0 | 35.9 |  |  |  | 34.5 | 36.5 | 32.7 | 34.1 | 38.2 | 32.3 |
| 11/26/2011 | 37.5 | 40.0 | 35.8 |  |  |  | 34.5 | 36.4 | 32.7 | 34.1 | 38.1 | 32.1 |
| 11/27/2011 | 38.1 | 41.1 | 37.3 |  |  |  | 36.2 | 38.7 | 34.7 | 35.9 | 40.7 | 33.5 |
| 11/28/2011 | 39.1 | 40.8 | 37.0 |  |  |  | 36.3 | 37.9 | 34.3 | 35.6 | 39.6 | 32.5 |
| 11/29/2011 | 39.5 | 41.0 | 37.4 |  |  |  | 36.6 | 38.4 | 34.5 | 35.6 | 40.5 | 32.3 |
| 11/30/2011 | 38.8 | 39.6 | 35.9 |  |  |  | 36.9 | 38.2 | 34.3 | 35.5 | 38.7 | 33.1 |
| 12/1/2011 | 35.4 | 35.4 | 32.9 |  |  |  | 32.4 | 33.8 | 32.1 | 32.6 | 33.2 | 32.1 |
| 12/2/2011 | 33.5 | 36.3 | 32.0 |  |  |  | 32.3 | 32.6 | 32.0 | 32.3 | 33.1 | 31.9 |
| 12/3/2011 | 34.0 | 34.5 | 31.9 |  |  |  | 32.2 | 32.7 | 31.9 | 32.2 | 33.3 | 31.9 |
| 12/4/2011 | 32.1 | 35.0 | 31.9 |  |  |  | 32.2 | 32.5 | 32.0 | 32.2 | 32.5 | 32.0 |
| 12/5/2011 | 34.2 | 35.2 | 32.0 |  |  |  | 32.2 | 32.7 | 32.0 | 32.4 | 33.4 | 31.9 |
| 12/6/2011 | 32.5 | 35.3 | 31.9 |  |  |  | 32.2 | 32.6 | 32.0 | 32.3 | 33.1 | 32.0 |
| 12/7/2011 | 34.2 | 36.7 | 32.5 |  |  |  | 32.3 | 32.7 | 32.0 | 32.5 | 33.4 | 32.0 |
| 12/8/2011 | 34.9 | 37.0 | 33.1 |  |  |  | 32.4 | 32.7 | 32.1 | 32.5 | 33.6 | 32.0 |
| 12/9/2011 | 34.2 | 35.3 | 31.9 |  |  |  | 32.5 | 32.9 | 32.0 | 32.3 | 32.9 | 31.9 |
| 12/10/2011 | 33.2 | 35.0 | 32.0 |  |  |  | 32.3 | 32.7 | 32.0 | 32.2 | 33.0 | 31.9 |
| 12/11/2011 | 33.7 | 35.7 | 32.1 |  |  |  | 32.5 | 33.0 | 32.1 | 32.3 | 33.0 | 31.9 |
| 12/12/2011 | 33.2 | 34.7 | 32.0 |  |  |  | 32.4 | 32.7 | 32.0 | 32.4 | 33.0 | 32.0 |
| 12/13/2011 | 34.4 | 34.8 | 32.0 |  |  |  | 32.7 | 33.0 | 32.3 | 32.5 | 33.0 | 32.0 |
| 12/14/2011 | 33.5 | 34.1 | 31.9 |  |  |  | 32.3 | 32.6 | 32.0 | 32.3 | 32.7 | 32.0 |
| 12/15/2011 | 33.2 | 35.7 | 32.9 |  |  |  | 32.7 | 33.2 | 32.2 | 32.6 | 33.1 | 32.2 |
| 12/16/2011 | 33.9 | 35.6 | 32.6 |  |  |  | 32.9 | 33.4 | 32.6 | 32.6 | 33.3 | 32.2 |
| 12/17/2011 |  |  |  | 32.1 | 32.8 | 31.9 | 32.4 | 32.7 | 32.0 | 32.3 | 32.7 | 32.0 |
| 12/18/2011 |  |  |  | 32.0 | 32.5 | 31.9 | 32.4 | 33.0 | 32.0 | 32.3 | 32.7 | 32.0 |
| 12/19/2011 |  |  |  | 32.8 | 34.1 | 31.9 | 33.2 | 33.8 | 32.6 | 32.6 | 33.2 | 32.1 |
| 12/20/2011 |  |  |  | 32.3 | 33.3 | 31.9 | 32.8 | 33.5 | 32.3 | 32.3 | 33.2 | 32.0 |
| 12/21/2011 |  |  |  | 32.1 | 32.8 | 31.9 | 32.6 | 33.4 | 32.2 | 32.4 | 33.0 | 32.0 |
| 12/22/2011 |  |  |  | 32.0 | 32.0 | 31.9 | 32.1 | 32.3 | 32.0 | 32.1 | 33.0 | 32.0 |
| 12/23/2011 | 32.0 | 32.3 | 32.0 | 32.0 | 32.0 | 31.9 | 32.1 | 32.3 | 32.0 | 32.1 | 32.3 | 32.0 |
| 12/24/2011 | 32.5 | 32.9 | 32.0 | 32.0 | 32.3 | 31.9 | 32.1 | 32.4 | 32.0 | 32.1 | 32.2 | 32.0 |
| 12/25/2011 | 32.3 | 33.4 | 32.1 | 32.0 | 32.4 | 31.9 | 32.2 | 32.5 | 32.0 | 32.2 | 32.4 | 32.0 |
| 12/26/2011 | 32.2 | 33.7 | 32.0 | 32.0 | 32.4 | 31.9 | 32.2 | 32.5 | 32.0 | 32.3 | 32.6 | 32.1 |
| 12/27/2011 | 33.1 | 35.6 | 32.7 | 32.1 | 32.5 | 31.9 | 32.5 | 33.2 | 32.1 | 32.5 | 32.9 | 32.2 |
| 12/28/2011 |  |  |  | 33.3 | 35.3 | 31.9 | 33.9 | 34.6 | 33.2 | 32.8 | 33.4 | 32.3 |
| 12/29/2011 |  |  |  | 36.0 | 37.7 | 34.9 | 35.2 | 36.0 | 34.7 | 33.1 | 34.0 | 32.6 |
| 12/30/2011 |  |  |  | 36.0 | 38.1 | 35.0 | 35.2 | 35.9 | 34.6 | 33.1 | 34.4 | 32.3 |
| 12/31/2011 |  |  |  | 34.5 | 36.0 | 33.1 | 34.4 | 35.5 | 33.4 | 32.9 | 33.9 | 32.0 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | LV Below Intake |  |  | LV County Road |  |  | Parker at Conduit |  |  | Walker at Mouth |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 1/1/2012 |  |  |  | 34.0 | 35.9 | 32.4 | 33.8 | 34.8 | 32.7 | 32.9 | 33.8 | 32.0 |
| 1/2/2012 |  |  |  | 34.3 | 36.3 | 32.4 | 34.2 | 35.7 | 32.7 | 33.2 | 34.3 | 32.1 |
| 1/3/2012 |  |  |  | 35.9 | 38.1 | 34.7 | 35.5 | 36.7 | 34.6 | 34.4 | 35.7 | 33.2 |
| 1/4/2012 |  |  |  | 35.6 | 37.7 | 33.9 | 35.1 | 36.4 | 34.0 | 34.3 | 35.8 | 32.9 |
| 1/5/2012 |  |  |  | 35.9 | 38.1 | 34.1 | 35.4 | 36.7 | 34.4 | 34.7 | 36.5 | 33.0 |
| 1/6/2012 |  |  |  | 35.7 | 37.9 | 34.0 | 34.8 | 35.9 | 33.6 | 34.3 | 36.1 | 32.4 |
| 1/7/2012 |  |  |  | 34.2 | 36.6 | 32.5 | 33.8 | 34.8 | 32.2 | 33.0 | 34.1 | 32.1 |
| 1/8/2012 |  |  |  | 32.1 | 32.7 | 31.9 | 32.2 | 32.4 | 31.9 | 32.3 | 33.6 | 31.9 |
| 1/9/2012 |  |  |  | 32.9 | 35.0 | 31.9 | 32.6 | 33.4 | 32.0 | 32.4 | 33.2 | 32.0 |
| 1/10/2012 |  |  |  | 33.9 | 36.4 | 32.0 | 33.6 | 34.7 | 32.6 | 32.7 | 33.9 | 32.0 |
| 1/11/2012 |  |  |  | 33.1 | 35.0 | 31.9 | 32.9 | 33.7 | 32.1 | 32.3 | 33.3 | 31.9 |
| 1/12/2012 |  |  |  | 32.2 | 33.3 | 31.9 | 32.2 | 32.5 | 31.9 | 32.2 | 32.9 | 31.9 |
| 1/13/2012 |  |  |  | 32.0 | 32.2 | 31.9 | 32.1 | 32.4 | 31.9 | 32.2 | 33.5 | 31.9 |
| 1/14/2012 |  |  |  | 32.0 | 32.2 | 31.9 | 32.2 | 32.5 | 31.9 | 32.2 | 32.9 | 31.9 |
| 1/15/2012 |  |  |  | 32.7 | 34.8 | 31.9 | 32.6 | 33.8 | 32.0 | 32.5 | 33.7 | 31.9 |
| 1/16/2012 |  |  |  | 32.3 | 33.3 | 31.9 | 32.3 | 32.7 | 31.9 | 32.6 | 34.3 | 31.9 |
| 1/17/2012 |  |  |  | 32.0 | 32.1 | 31.9 | 32.1 | 32.3 | 32.0 | 32.4 | 34.3 | 32.0 |
| 1/18/2012 |  |  |  | 33.3 | 35.9 | 31.9 | 32.5 | 33.4 | 32.1 | 33.3 | 34.5 | 32.4 |
| 1/19/2012 |  |  |  | 34.9 | 37.2 | 33.1 | 33.7 | 34.5 | 33.0 | 33.2 | 34.7 | 32.1 |
| 1/20/2012 |  |  |  | 36.8 | 38.6 | 34.9 | 35.2 | 36.6 | 34.2 | 33.9 | 35.0 | 33.0 |
| 1/21/2012 |  |  |  | 34.0 | 38.4 | 31.9 | 33.2 | 36.2 | 31.9 | 32.5 | 33.8 | 32.0 |
| 1/22/2012 | 32.2 | 34.3 | 32.2 | 32.3 | 33.5 | 31.9 | 32.1 | 32.4 | 31.9 | 32.3 | 32.7 | 31.9 |
| 1/23/2012 | 34.0 | 34.7 | 32.1 | 33.3 | 34.7 | 32.0 | 32.7 | 33.4 | 32.2 | 32.7 | 33.1 | 32.4 |
| 1/24/2012 | 33.7 | 36.0 | 32.1 | 33.6 | 35.4 | 31.9 | 32.8 | 33.6 | 31.9 | 32.7 | 33.5 | 32.0 |
| 1/25/2012 | 34.7 | 37.9 | 33.2 | 35.1 | 38.5 | 32.7 | 33.9 | 35.5 | 32.8 | 34.0 | 36.8 | 32.2 |
| 1/26/2012 | 35.4 | 39.5 | 33.9 | 36.1 | 40.0 | 33.4 | 34.9 | 37.3 | 33.5 | 34.8 | 38.4 | 32.5 |
| 1/27/2012 | 36.2 | 37.8 | 33.3 | 36.3 | 39.6 | 33.7 | 34.6 | 36.2 | 32.9 | 35.2 | 37.6 | 33.6 |
| 1/28/2012 | 32.7 | 33.8 | 31.6 | 32.7 | 34.8 | 31.9 | 32.2 | 32.7 | 31.9 | 32.5 | 33.5 | 31.9 |
| 1/29/2012 | 32.4 | 36.0 | 32.0 | 33.1 | 35.5 | 31.9 | 32.2 | 32.5 | 31.9 | 32.5 | 33.7 | 32.0 |
| 1/30/2012 | 35.0 | 38.9 | 34.1 | 36.2 | 39.7 | 33.8 | 34.3 | 36.2 | 32.6 | 34.2 | 37.0 | 32.4 |
| 1/31/2012 | 36.7 | 38.5 | 33.1 | 36.7 | 39.8 | 34.2 | 34.6 | 36.3 | 33.1 | 35.1 | 38.2 | 32.3 |
| 2/1/2012 | 35.6 | 37.5 | 33.2 | 35.9 | 39.3 | 34.0 | 34.1 | 35.7 | 33.0 | 34.9 | 37.8 | 32.7 |
| 2/2/2012 | 33.1 | 36.4 | 31.7 | 33.8 | 37.3 | 31.9 | 32.5 | 33.5 | 31.9 | 33.1 | 34.8 | 32.0 |
| 2/3/2012 | 32.3 | 32.8 | 31.9 | 32.2 | 33.4 | 31.9 | 32.1 | 32.6 | 31.9 | 32.1 | 33.2 | 31.9 |
| 2/4/2012 | 32.0 | 33.3 | 32.0 | 32.1 | 32.6 | 31.9 | 32.1 | 32.5 | 31.9 | 32.1 | 32.6 | 32.0 |
| 2/5/2012 | 32.0 | 33.5 | 31.9 | 32.1 | 32.8 | 31.9 | 32.1 | 32.5 | 31.9 | 32.1 | 32.6 | 31.9 |
| 2/6/2012 | 32.1 | 34.1 | 31.9 | 32.1 | 32.7 | 31.9 | 32.1 | 32.4 | 31.9 | 32.2 | 32.7 | 31.9 |
| 2/7/2012 | 32.6 | 36.7 | 32.6 | 33.8 | 35.5 | 32.0 | 32.4 | 33.2 | 32.0 | 33.1 | 34.1 | 32.3 |
| 2/8/2012 | 35.3 | 38.2 | 32.4 | 35.3 | 39.0 | 32.8 | 33.7 | 35.2 | 32.7 | 33.1 | 34.6 | 32.0 |
| 2/9/2012 | 33.1 | 38.5 | 32.0 | 35.5 | 39.4 | 32.3 | 34.0 | 36.0 | 32.5 | 33.9 | 37.4 | 32.0 |
| 2/10/2012 | 35.2 | 39.8 | 32.6 | 36.7 | 41.1 | 33.6 | 34.8 | 37.3 | 33.3 | 35.0 | 39.2 | 32.1 |
| 2/11/2012 | 35.5 | 38.6 | 32.7 | 36.5 | 39.9 | 33.6 | 34.7 | 36.6 | 33.2 | 35.2 | 38.7 | 32.1 |
| 2/12/2012 | 35.7 | 38.5 | 32.6 | 36.8 | 40.4 | 33.9 | 35.2 | 37.2 | 33.5 | 35.6 | 39.2 | 32.3 |
| 2/13/2012 | 35.5 | 35.5 | 32.7 | 36.1 | 39.2 | 34.1 | 34.4 | 35.4 | 33.0 | 35.1 | 37.5 | 33.4 |
| 2/14/2012 | 32.4 | 37.8 | 32.4 | 35.7 | 39.8 | 33.6 | 33.9 | 36.5 | 32.5 | 34.9 | 38.5 | 33.0 |
| 2/15/2012 | 33.5 | 33.5 | 32.0 | 33.6 | 36.1 | 31.9 | 32.7 | 33.5 | 32.1 | 32.8 | 34.3 | 32.0 |
| 2/16/2012 |  |  |  | 33.1 | 36.6 | 31.9 | 32.4 | 33.7 | 31.9 | 32.6 | 34.3 | 31.9 |
| 2/17/2012 |  |  |  | 33.3 | 36.4 | 31.9 | 32.4 | 33.4 | 31.9 | 32.5 | 33.5 | 31.9 |
| 2/18/2012 | 33.4 | 38.1 | 32.1 | 34.7 | 38.2 | 32.1 | 33.7 | 35.9 | 32.2 | 32.9 | 34.0 | 32.0 |
| 2/19/2012 | 32.7 | 34.7 | 32.2 | 34.7 | 38.9 | 32.7 | 33.3 | 35.2 | 32.2 | 33.6 | 36.5 | 32.2 |
| 2/20/2012 | 32.6 | 39.1 | 32.3 | 35.9 | 40.2 | 32.9 | 33.9 | 36.4 | 32.3 | 34.5 | 38.3 | 32.2 |
| 2/21/2012 | 33.5 | 40.2 | 32.3 | 36.6 | 40.3 | 33.5 | 34.6 | 37.1 | 32.8 | 34.9 | 39.4 | 32.2 |
| 2/22/2012 | 34.8 | 40.9 | 32.7 | 37.6 | 42.5 | 34.2 | 35.6 | 38.7 | 33.6 | 35.9 | 41.4 | 32.2 |
| 2/23/2012 | 32.6 | 39.6 | 32.0 | 37.7 | 42.3 | 34.3 | 35.8 | 38.9 | 33.8 | 36.3 | 41.7 | 32.3 |
| 2/24/2012 | 33.7 | 41.7 | 32.1 | 37.6 | 42.7 | 33.5 | 35.5 | 39.1 | 33.0 | 36.1 | 42.1 | 32.1 |
| 2/25/2012 | 36.9 | 39.4 | 33.0 | 37.9 | 42.8 | 34.8 | 35.9 | 38.8 | 34.3 | 36.9 | 41.9 | 33.2 |
| 2/26/2012 |  |  |  | 34.4 | 38.6 | 31.9 | 32.8 | 33.9 | 31.9 | 33.0 | 34.9 | 31.9 |
| 2/27/2012 |  |  |  | 34.3 | 38.1 | 32.0 | 32.4 | 33.8 | 32.0 | 33.1 | 35.3 | 32.0 |
| 2/28/2012 | 32.2 | 34.2 | 31.6 | 33.9 | 38.1 | 31.9 | 32.2 | 32.6 | 31.9 | 32.8 | 34.5 | 31.9 |
| 2/29/2012 | 32.3 | 32.7 | 31.9 | 33.7 | 36.6 | 31.9 | 32.7 | 33.9 | 32.0 | 33.3 | 34.9 | 32.4 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | LV Below Intake |  |  | LV County Road |  |  | Parker at Conduit |  |  | Walker at Mouth |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 3/1/2012 |  |  |  | 33.4 | 37.4 | 31.9 | 32.4 | 33.4 | 31.9 | 33.4 | 36.6 | 32.2 |
| 3/2/2012 |  |  |  | 34.3 | 38.7 | 31.9 | 32.5 | 33.6 | 31.9 | 33.8 | 37.8 | 31.9 |
| 3/3/2012 |  |  |  | 36.2 | 41.9 | 31.9 | 33.7 | 37.0 | 31.9 | 34.5 | 39.2 | 32.0 |
| 3/4/2012 | 33.9 | 42.3 | 32.1 | 38.1 | 43.9 | 33.5 | 35.5 | 39.4 | 33.0 | 36.2 | 43.1 | 32.1 |
| 3/5/2012 | 35.2 | 42.2 | 32.5 | 38.7 | 44.4 | 34.4 | 36.2 | 40.1 | 33.6 | 36.9 | 44.1 | 32.1 |
| 3/6/2012 |  |  |  | 37.2 | 42.4 | 33.0 | 35.2 | 38.1 | 32.5 | 35.5 | 39.8 | 32.1 |
| 3/7/2012 |  |  |  | 33.0 | 36.1 | 31.9 | 32.4 | 33.2 | 31.9 | 32.5 | 34.0 | 31.9 |
| 3/8/2012 |  |  |  | 34.7 | 40.2 | 31.9 | 32.6 | 33.6 | 31.9 | 33.3 | 36.9 | 31.9 |
| 3/9/2012 |  |  |  |  |  |  | 34.6 | 38.5 | 32.1 | 35.2 | 41.5 | 31.9 |
| 3/10/2012 |  |  |  |  |  |  | 36.4 | 41.0 | 33.4 | 37.0 | 45.1 | 32.0 |
| 3/11/2012 |  |  |  |  |  |  | 37.1 | 41.9 | 34.4 | 39.1 | 46.8 | 33.5 |
| 3/12/2012 |  |  |  |  |  |  | 36.5 | 40.8 | 33.5 | 38.4 | 45.9 | 32.7 |
| 3/13/2012 |  |  |  |  |  |  | 36.8 | 41.2 | 34.0 | 37.3 | 43.2 | 33.5 |

### 8.2 Daily Average, Maximum, and Minimum Water Temperature ( ${ }^{\circ}$ F) at Rush Creek at Damsite, MGORD TOP, MGORD BOTTOM, and Upper Rush.

| Date | Rush Damsite |  |  | MGORD TOP |  |  | MGORD BOTTOM |  |  | Upper Rush |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 4/1/2011 | 37.6 | 37.9 | 37.4 | 39.9 | 40.5 | 39.5 | 40.9 | 45.2 | 38.7 | 42.9 | 48.4 | 39.6 |
| 4/2/2011 | 38.2 | 38.5 | 37.9 | 40.4 | 42.3 | 39.3 | 41.6 | 45.4 | 38.9 | 42.0 | 45.9 | 39.0 |
| 4/3/2011 | 38.4 | 38.5 | 38.2 | 39.2 | 39.5 | 38.8 | 39.9 | 43.9 | 38.0 | 40.0 | 44.6 | 37.1 |
| 4/4/2011 | 38.2 | 38.5 | 37.9 | 39.3 | 39.5 | 39.1 | 40.2 | 44.4 | 38.1 | 40.8 | 45.4 | 38.0 |
| 4/5/2011 | 38.6 | 38.8 | 38.5 | 39.6 | 39.9 | 39.3 | 40.7 | 44.7 | 38.6 | 42.4 | 46.8 | 39.7 |
| 4/6/2011 | 38.9 | 39.1 | 38.8 | 40.5 | 42.2 | 39.5 | 41.0 | 44.4 | 38.7 | 42.2 | 46.1 | 38.9 |
| 4/7/2011 | 38.6 | 39.1 | 38.0 | 40.2 | 41.1 | 40.0 | 39.8 | 42.3 | 38.4 | 39.6 | 42.2 | 38.4 |
| 4/8/2011 | 36.7 | 37.9 | 36.2 | 39.7 | 39.9 | 39.5 | 39.3 | 42.2 | 37.9 | 39.1 | 41.7 | 37.7 |
| 4/9/2011 | 35.8 | 36.1 | 35.5 | 39.8 | 40.1 | 39.5 | 40.1 | 43.7 | 38.3 | 40.0 | 43.4 | 38.2 |
| 4/10/2011 | 35.7 | 36.2 | 35.2 | 39.8 | 40.2 | 39.5 | 40.5 | 44.2 | 38.5 | 40.8 | 44.5 | 38.2 |
| 4/11/2011 | 36.3 | 36.8 | 36.1 | 40.5 | 41.8 | 39.8 | 41.2 | 44.3 | 38.9 | 42.4 | 46.1 | 40.0 |
| 4/12/2011 | 36.9 | 37.3 | 36.6 | 41.6 | 42.7 | 41.0 | 42.1 | 45.6 | 39.9 | 43.5 | 47.1 | 41.2 |
| 4/13/2011 | 37.3 | 37.3 | 37.2 | 41.1 | 42.1 | 40.4 | 41.0 | 42.7 | 39.6 | 41.4 | 43.2 | 39.5 |
| 4/14/2011 | 36.8 | 37.2 | 36.3 | 40.7 | 40.9 | 40.5 | 41.3 | 45.1 | 39.4 | 41.4 | 45.9 | 39.0 |
| 4/15/2011 | 37.6 | 38.0 | 37.3 | 40.7 | 41.0 | 40.5 | 41.7 | 44.8 | 39.8 | 42.5 | 46.6 | 40.2 |
| 4/16/2011 | 38.4 | 38.7 | 38.1 | 41.1 | 41.5 | 40.7 | 42.2 | 45.7 | 40.1 | 43.8 | 47.6 | 41.0 |
| 4/17/2011 | 39.2 | 39.7 | 38.8 | 41.8 | 42.6 | 41.1 | 42.8 | 46.8 | 40.4 | 45.1 | 49.0 | 42.3 |
| 4/18/2011 | 40.1 | 40.4 | 39.8 | 43.4 | 44.7 | 41.8 | 43.9 | 47.6 | 41.0 | 44.7 | 48.2 | 42.3 |
| 4/19/2011 | 40.4 | 40.7 | 40.3 | 42.8 | 43.3 | 42.3 | 43.6 | 47.0 | 41.8 | 44.1 | 47.4 | 42.2 |
| 4/20/2011 | 40.8 | 40.9 | 40.8 | 44.1 | 44.6 | 43.1 | 44.4 | 48.2 | 42.2 | 44.5 | 48.2 | 41.7 |
| 4/21/2011 | 40.7 | 40.9 | 40.6 | 43.1 | 43.9 | 42.6 | 43.6 | 47.4 | 41.3 | 43.7 | 47.6 | 41.7 |
| 4/22/2011 | 40.5 | 40.8 | 40.3 | 43.2 | 43.6 | 42.9 | 43.3 | 46.3 | 41.7 | 43.7 | 46.8 | 41.8 |
| 4/23/2011 | 40.5 | 40.7 | 40.4 | 43.5 | 43.7 | 43.2 | 44.0 | 46.7 | 42.6 | 44.5 | 46.8 | 43.1 |
| 4/24/2011 | 40.7 | 41.0 | 40.5 | 43.9 | 44.6 | 43.2 | 44.3 | 48.0 | 42.4 | 44.8 | 48.5 | 42.8 |
| 4/25/2011 | 41.1 | 41.4 | 41.0 | 44.1 | 44.6 | 43.8 | 44.4 | 48.6 | 42.3 | 44.7 | 49.0 | 42.6 |
| 4/26/2011 | 41.3 | 41.6 | 41.0 | 43.8 | 44.0 | 43.6 | 44.4 | 48.3 | 42.3 | 44.5 | 49.0 | 42.0 |
| 4/27/2011 | 41.6 | 42.0 | 41.4 | 43.9 | 45.4 | 43.5 | 44.7 | 48.6 | 42.4 | 45.0 | 49.9 | 42.2 |
| 4/28/2011 | 42.2 | 42.5 | 42.0 | 45.4 | 46.0 | 44.8 | 45.8 | 49.5 | 43.3 | 46.1 | 50.4 | 43.0 |
| 4/29/2011 | 42.1 | 42.4 | 41.9 | 44.6 | 45.2 | 44.3 | 44.9 | 48.7 | 42.9 | 44.8 | 48.6 | 42.8 |
| 4/30/2011 | 41.5 | 41.9 | 41.4 | 44.2 | 44.3 | 44.0 | 44.5 | 48.3 | 42.5 | 44.5 | 48.5 | 42.1 |

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| Date | Rush Damsite |  |  | MGORD TOP |  |  | MGORD BOTTOM |  |  | Upper Rush |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 5/1/2011 | 41.3 | 41.5 | 41.0 | 44.1 | 44.3 | 44.0 | 44.6 | 48.0 | 42.6 | 44.8 | 49.1 | 42.3 |
| 5/2/2011 | 41.5 | 42.1 | 41.2 | 44.5 | 45.8 | 44.1 | 45.1 | 47.8 | 43.2 | 45.6 | 49.5 | 42.9 |
| 5/3/2011 | 42.4 | 43.1 | 42.2 | 45.2 | 45.9 | 44.7 | 46.0 | 48.4 | 44.3 | 47.3 | 50.8 | 45.2 |
| 5/4/2011 | 43.1 | 43.5 | 42.8 | 44.8 | 45.0 | 44.6 | 45.4 | 47.8 | 44.0 | 47.2 | 50.9 | 45.0 |
| 5/5/2011 | 43.6 | 44.1 | 43.3 | 45.3 | 46.5 | 44.7 | 45.9 | 48.4 | 44.2 | 47.8 | 51.4 | 45.0 |
| 5/6/2011 | 44.5 | 45.1 | 44.2 | 45.1 | 46.2 | 44.6 | 45.7 | 48.0 | 44.1 | 48.7 | 51.8 | 46.3 |
| 5/7/2011 | 45.3 | 45.6 | 45.1 | 45.4 | 47.8 | 44.8 | 45.7 | 47.5 | 44.5 | 48.5 | 50.8 | 46.8 |
| 5/8/2011 | 45.4 | 45.6 | 45.3 | 47.6 | 49.6 | 46.1 | 47.7 | 50.6 | 45.3 | 49.0 | 51.2 | 46.4 |
| 5/9/2011 | 44.4 | 45.4 | 43.6 | 46.2 | 46.9 | 45.7 | 45.8 | 47.0 | 44.9 | 46.6 | 48.5 | 45.1 |
| 5/10/2011 | 43.1 | 43.6 | 42.9 | 46.5 | 47.2 | 45.8 | 46.7 | 49.9 | 45.0 | 47.0 | 51.1 | 44.7 |
| 5/11/2011 | 42.8 | 43.3 | 42.6 | 46.7 | 47.4 | 46.0 | 47.1 | 49.7 | 45.4 | 48.0 | 51.8 | 45.7 |
| 5/12/2011 | 43.5 | 44.1 | 43.2 | 46.8 | 48.1 | 46.1 | 47.5 | 49.1 | 45.9 | 49.6 | 52.8 | 47.4 |
| 5/13/2011 | 44.3 | 44.9 | 44.1 | 47.1 | 49.7 | 46.0 | 47.6 | 49.6 | 45.6 | 49.8 | 52.9 | 47.7 |
| 5/14/2011 | 45.1 | 45.3 | 44.9 | 48.9 | 50.6 | 46.3 | 49.0 | 52.3 | 45.9 | 49.9 | 53.3 | 47.9 |
| 5/15/2011 | 44.5 | 45.3 | 43.8 | 49.3 | 49.8 | 48.7 | 49.1 | 50.8 | 47.8 | 48.9 | 51.0 | 47.6 |
| 5/16/2011 | 43.4 | 43.7 | 43.2 | 48.3 | 49.1 | 47.7 | 48.4 | 49.9 | 47.0 | 48.6 | 51.2 | 47.2 |
| 5/17/2011 | 43.0 | 43.2 | 42.8 | 48.3 | 48.6 | 47.9 | 48.3 | 49.8 | 47.4 | 48.1 | 49.7 | 47.0 |
| 5/18/2011 | 42.5 | 42.8 | 42.3 | 47.7 | 47.8 | 47.6 | 47.7 | 49.3 | 47.0 | 47.8 | 50.5 | 46.5 |
| 5/19/2011 | 42.2 | 42.3 | 42.1 | 47.6 | 47.7 | 47.4 | 47.8 | 49.5 | 46.8 | 47.9 | 50.0 | 46.7 |
| 5/20/2011 | 42.2 | 42.5 | 41.9 | 47.4 | 47.6 | 47.3 | 48.0 | 50.3 | 46.6 | 48.5 | 52.0 | 46.2 |
| 5/21/2011 | 42.7 | 43.2 | 42.5 | 48.3 | 49.6 | 47.6 | 48.7 | 50.9 | 47.2 | 49.8 | 52.8 | 47.8 |
| 5/22/2011 | 43.3 | 43.7 | 43.1 | 48.2 | 49.0 | 47.7 | 48.6 | 49.8 | 47.4 | 49.5 | 51.6 | 47.7 |
| 5/23/2011 | 43.8 | 44.0 | 43.6 | 47.8 | 48.4 | 47.3 | 48.1 | 50.4 | 46.6 | 49.6 | 53.0 | 47.4 |
| 5/24/2011 | 43.9 | 44.1 | 43.6 | 47.8 | 48.4 | 47.4 | 48.3 | 50.2 | 46.7 | 49.8 | 52.9 | 47.6 |
| 5/25/2011 | 44.3 | 44.5 | 44.2 | 49.2 | 50.5 | 47.8 | 49.2 | 52.6 | 47.2 | 49.7 | 52.9 | 47.4 |
| 5/26/2011 | 44.4 | 44.8 | 44.3 | 48.8 | 48.9 | 48.7 | 49.1 | 51.5 | 48.1 | 49.4 | 53.3 | 47.6 |
| 5/27/2011 | 44.9 | 45.3 | 44.8 | 49.5 | 50.4 | 48.8 | 49.9 | 52.4 | 48.2 | 50.3 | 53.7 | 48.0 |
| 5/28/2011 | 45.4 | 45.5 | 45.3 | 49.9 | 50.4 | 49.4 | 50.1 | 52.4 | 48.7 | 50.3 | 53.3 | 48.7 |
| 5/29/2011 | 44.7 | 45.5 | 44.2 | 49.7 | 50.1 | 49.4 | 49.6 | 50.8 | 48.6 | 49.4 | 51.1 | 48.1 |
| 5/30/2011 | 43.9 | 44.1 | 43.7 | 49.5 | 50.5 | 49.1 | 49.7 | 51.6 | 48.3 | 49.8 | 52.6 | 47.6 |
| 5/31/2011 | 43.9 | 44.2 | 43.8 | 49.6 | 50.5 | 48.9 | 49.5 | 51.6 | 47.6 | 49.3 | 52.1 | 47.2 |
| 6/1/2011 | 44.0 | 44.1 | 43.9 | 48.8 | 49.2 | 48.4 | 48.6 | 51.0 | 47.1 | 48.4 | 51.7 | 46.5 |
| 6/2/2011 | 43.6 | 43.8 | 43.5 | 48.6 | 49.2 | 48.2 | 48.8 | 51.0 | 47.4 | 48.7 | 52.0 | 46.8 |
| 6/3/2011 | 43.4 | 43.6 | 43.3 | 49.1 | 49.6 | 48.8 | 49.1 | 50.6 | 48.0 | 49.0 | 51.1 | 47.3 |
| 6/4/2011 | 43.8 | 44.0 | 43.6 | 49.1 | 49.3 | 49.0 | 49.2 | 50.0 | 48.7 | 49.2 | 50.5 | 48.5 |
| 6/5/2011 | 44.1 | 44.5 | 44.0 | 49.4 | 50.0 | 48.9 | 50.0 | 52.1 | 48.7 | 50.4 | 53.2 | 48.7 |
| 6/6/2011 | 44.6 | 44.8 | 44.6 | 49.3 | 49.8 | 49.1 | 49.8 | 52.3 | 48.6 | 50.2 | 53.2 | 49.0 |
| 6/7/2011 | 44.6 | 44.8 | 44.4 | 49.2 | 49.4 | 48.9 | 49.7 | 52.0 | 48.5 | 50.3 | 53.5 | 48.6 |
| 6/8/2011 | 44.8 | 45.2 | 44.5 | 49.5 | 50.1 | 49.0 | 50.2 | 52.8 | 48.7 | 51.1 | 54.6 | 48.8 |
| 6/9/2011 | 45.3 | 45.8 | 45.0 | 49.1 | 50.2 | 48.7 | 49.8 | 52.1 | 48.2 | 52.1 | 55.0 | 49.9 |
| 6/10/2011 | 46.0 | 46.5 | 45.8 | 49.3 | 50.2 | 48.5 | 50.1 | 52.3 | 48.3 | 52.7 | 55.8 | 50.3 |
| 6/11/2011 | 46.5 | 46.9 | 46.3 | 49.3 | 50.6 | 48.7 | 49.7 | 51.6 | 48.2 | 52.8 | 55.3 | 50.9 |
| 6/12/2011 | 47.3 | 47.9 | 47.0 | 49.5 | 50.5 | 48.7 | 50.3 | 52.3 | 48.3 | 52.9 | 55.3 | 51.1 |
| 6/13/2011 | 48.2 | 48.9 | 47.9 | 49.4 | 50.7 | 48.9 | 50.2 | 52.0 | 48.6 | 53.5 | 55.9 | 51.4 |
| 6/14/2011 | 49.1 | 49.6 | 48.8 | 49.7 | 50.2 | 49.2 | 50.4 | 52.5 | 48.9 | 55.6 | 58.2 | 53.6 |
| 6/15/2011 | 50.0 | 50.5 | 49.7 | 49.6 | 50.6 | 49.0 | 50.2 | 52.1 | 48.8 | 55.5 | 57.4 | 53.9 |
| 6/16/2011 | 50.8 | 51.2 | 50.6 | 49.8 | 51.2 | 49.1 | 50.3 | 53.2 | 48.7 | 55.7 | 58.5 | 53.8 |
| 6/17/2011 | 50.8 | 51.2 | 50.4 | 49.9 | 51.1 | 49.3 | 50.3 | 52.3 | 48.9 | 54.9 | 57.3 | 53.4 |
| 6/18/2011 | 50.8 | 51.1 | 50.5 | 49.9 | 50.4 | 49.4 | 50.4 | 52.0 | 49.2 | 55.3 | 57.2 | 53.5 |
| 6/19/2011 | 51.3 | 51.6 | 51.1 | 50.1 | 51.1 | 49.7 | 50.5 | 51.9 | 49.4 | 54.9 | 57.4 | 52.6 |
| 6/20/2011 | 51.1 | 51.6 | 50.8 | 50.1 | 50.4 | 49.8 | 50.5 | 51.9 | 49.6 | 54.8 | 57.4 | 53.0 |
| 6/21/2011 | 51.4 | 52.0 | 51.1 | 50.2 | 50.9 | 49.8 | 50.7 | 52.0 | 49.7 | 55.6 | 58.2 | 53.8 |
| 6/22/2011 | 52.3 | 52.9 | 52.1 | 50.5 | 51.1 | 50.0 | 51.0 | 52.5 | 49.8 | 56.7 | 59.0 | 55.1 |
| 6/23/2011 | 53.3 | 53.8 | 52.9 | 50.5 | 51.9 | 49.7 | 50.9 | 53.1 | 49.5 | 56.7 | 59.0 | 55.2 |
| 6/24/2011 | 53.8 | 54.0 | 53.6 | 50.6 | 52.1 | 49.8 | 51.0 | 53.2 | 49.5 | 56.3 | 58.7 | 54.6 |
| 6/25/2011 | 53.8 | 54.1 | 53.5 | 50.9 | 51.7 | 50.3 | 51.2 | 53.2 | 49.9 | 56.5 | 59.0 | 54.7 |
| 6/26/2011 | 53.8 | 54.0 | 53.5 | 50.9 | 52.2 | 50.2 | 51.3 | 53.1 | 50.1 | 56.2 | 58.2 | 54.6 |
| 6/27/2011 | 53.8 | 54.1 | 53.5 | 51.3 | 53.0 | 50.3 | 51.7 | 54.2 | 50.1 | 56.4 | 58.9 | 54.8 |
| 6/28/2011 | 54.2 | 54.5 | 54.1 | 53.2 | 59.4 | 50.3 | 53.4 | 60.8 | 50.2 | 56.8 | 61.8 | 54.4 |
| 6/29/2011 | 53.9 | 54.5 | 53.2 | 51.7 | 53.6 | 50.4 | 51.9 | 54.2 | 50.1 | 55.4 | 57.1 | 54.2 |
| 6/30/2011 | 52.3 | 53.1 | 51.9 | 51.8 | 52.4 | 51.1 | 52.2 | 53.7 | 50.7 | 55.8 | 57.9 | 54.0 |

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| Date | Rush Damsite |  |  | MGORD TOP |  |  | MGORD BOTTOM |  |  | Upper Rush |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 7/1/2011 | 52.3 | 52.8 | 52.0 | 51.8 | 52.9 | 51.2 | 52.3 | 53.9 | 51.2 | 56.6 | 59.1 | 54.6 |
| 7/2/2011 | 52.9 | 53.5 | 52.7 | 51.9 | 53.1 | 51.2 | 52.4 | 53.9 | 51.1 | 57.1 | 59.4 | 55.3 |
| 7/3/2011 | 53.9 | 54.5 | 53.6 | 52.2 | 53.4 | 51.6 | 52.6 | 54.4 | 51.3 | 57.4 | 59.7 | 56.0 |
| 7/4/2011 | 54.8 | 55.3 | 54.5 | 52.3 | 55.3 | 51.4 | 52.7 | 56.3 | 51.1 | 57.2 | 60.3 | 55.6 |
| 7/5/2011 | 55.5 | 55.7 | 55.4 | 52.7 | 53.4 | 52.4 | 52.9 | 54.0 | 52.1 | 56.7 | 58.2 | 55.7 |
| 7/6/2011 | 55.6 | 55.9 | 55.4 | 53.1 | 55.2 | 52.1 | 53.4 | 55.1 | 52.0 | 56.4 | 58.1 | 55.0 |
| 7/7/2011 | 55.9 | 56.2 | 55.7 | 53.1 | 54.2 | 51.8 | 53.3 | 54.8 | 51.8 | 56.0 | 58.2 | 54.1 |
| 7/8/2011 | 55.9 | 56.2 | 55.6 | 53.4 | 54.2 | 52.6 | 53.6 | 55.0 | 52.2 | 55.8 | 58.1 | 54.1 |
| 7/9/2011 | 56.0 | 56.2 | 55.7 | 53.6 | 55.2 | 52.5 | 53.8 | 56.1 | 52.7 | 55.8 | 59.2 | 54.3 |
| 7/10/2011 | 55.8 | 56.3 | 55.4 | 53.8 | 54.9 | 53.0 | 53.9 | 55.0 | 52.9 | 55.5 | 57.4 | 54.1 |
| 7/11/2011 | 55.8 | 56.0 | 55.5 | 53.9 | 55.7 | 53.1 | 54.1 | 56.4 | 52.9 | 55.4 | 58.5 | 53.7 |
| 7/12/2011 | 55.6 | 56.0 | 55.3 | 54.1 | 55.1 | 53.3 | 54.3 | 55.8 | 53.0 | 55.3 | 57.6 | 53.7 |
| 7/13/2011 | 55.1 | 55.6 | 54.8 | 54.2 | 55.8 | 52.9 | 54.4 | 56.7 | 52.8 | 54.9 | 57.8 | 52.8 |
| 7/14/2011 | 54.7 | 55.1 | 54.4 | 54.0 | 55.4 | 52.8 | 54.3 | 56.5 | 52.8 | 54.7 | 57.9 | 52.8 |
| 7/15/2011 | 55.0 | 55.3 | 54.8 | 53.9 | 54.9 | 52.9 | 54.2 | 56.0 | 52.8 | 54.6 | 57.2 | 52.7 |
| 7/16/2011 | 55.1 | 55.3 | 54.8 | 53.8 | 55.4 | 52.7 | 54.1 | 56.5 | 52.4 | 54.6 | 57.9 | 52.3 |
| 7/17/2011 | 55.3 | 55.6 | 55.1 | 54.1 | 55.8 | 52.7 | 54.3 | 56.9 | 52.7 | 55.5 | 59.3 | 53.2 |
| 7/18/2011 | 55.4 | 55.7 | 55.2 | 54.1 | 55.3 | 53.1 | 54.3 | 56.7 | 52.9 | 56.1 | 59.6 | 53.9 |
| 7/19/2011 | 55.7 | 56.0 | 55.4 | 54.3 | 56.2 | 52.6 | 54.6 | 56.4 | 52.5 | 56.7 | 59.7 | 55.0 |
| 7/20/2011 | 55.6 | 56.0 | 55.3 | 54.8 | 57.7 | 52.7 | 55.1 | 58.6 | 52.5 | 57.5 | 60.9 | 55.4 |
| 7/21/2011 | 55.6 | 55.9 | 55.2 | 54.8 | 56.4 | 52.8 | 55.2 | 57.5 | 52.6 | 57.8 | 60.4 | 55.3 |
| 7/22/2011 | 55.8 | 56.2 | 55.5 | 54.8 | 55.9 | 53.5 | 55.2 | 57.0 | 53.2 | 58.3 | 60.8 | 55.7 |
| 7/23/2011 | 56.1 | 56.6 | 55.8 | 54.8 | 55.4 | 54.0 | 55.2 | 56.6 | 53.5 | 59.0 | 61.8 | 56.9 |
| 7/24/2011 | 56.9 | 57.3 | 56.7 | 54.9 | 55.9 | 53.4 | 55.2 | 57.2 | 53.4 | 59.0 | 61.5 | 57.3 |
| 7/25/2011 | 57.4 | 57.7 | 57.1 | 55.0 | 57.5 | 53.6 | 55.4 | 58.6 | 53.2 | 59.0 | 62.0 | 57.0 |
| 7/26/2011 | 57.3 | 57.7 | 57.0 | 55.2 | 56.2 | 53.9 | 55.5 | 57.4 | 54.0 | 59.2 | 61.9 | 57.3 |
| 7/27/2011 | 57.2 | 57.5 | 56.8 | 55.2 | 56.0 | 54.2 | 55.6 | 57.3 | 54.0 | 59.4 | 61.7 | 57.7 |
| 7/28/2011 | 57.2 | 57.6 | 56.8 | 55.3 | 56.4 | 54.6 | 55.7 | 57.1 | 54.3 | 59.6 | 62.0 | 58.2 |
| 7/29/2011 | 57.7 | 58.1 | 57.4 | 55.4 | 56.1 | 55.0 | 55.7 | 56.9 | 54.8 | 59.6 | 61.9 | 58.1 |
| 7/30/2011 | 57.9 | 58.1 | 57.7 | 55.5 | 56.4 | 54.3 | $55.7$ | 57.6 | 54.1 | 59.4 | 61.3 | 58.0 |
| 7/31/2011 | 57.8 | 58.0 | 57.6 | 55.5 | 57.0 | 54.3 | 55.7 | 57.0 | 54.2 | 59.6 | 60.9 | 58.2 |
| 8/1/2011 | 57.6 | 57.9 | 57.3 | 55.4 | 56.3 | 54.7 | 55.8 | 57.1 | 54.8 | 60.5 | 62.7 | 59.0 |
| 8/2/2011 | 57.6 | 57.8 | 57.3 | 55.7 | 56.6 | 54.3 | 56.0 | 58.1 | 54.0 | 61.1 | 63.3 | 59.7 |
| 8/3/2011 | 57.6 | 57.9 | 57.3 | 56.0 | 57.0 | 54.5 | 56.3 | 58.5 | 54.1 | 61.1 | 63.5 | 59.6 |
| 8/4/2011 | 57.7 | 57.9 | 57.4 | 56.0 | 57.4 | 54.8 | 56.3 | 58.8 | 54.5 | 60.8 | 63.4 | 59.1 |
| 8/5/2011 | 57.5 | 57.9 | 57.1 | 56.0 | 57.4 | 54.3 | 56.4 | 58.6 | 54.0 | 60.4 | 63.0 | 58.5 |
| 8/6/2011 | 57.3 | 57.7 | 56.9 | 56.2 | 57.7 | 54.5 | 56.5 | 59.0 | 54.3 | 60.2 | 62.8 | 58.1 |
| 8/7/2011 | 57.1 | 57.6 | 56.7 | 56.3 | 57.7 | 54.7 | 56.6 | 58.7 | 54.6 | 59.9 | 62.6 | 58.0 |
| 8/8/2011 | 57.0 | 57.5 | 56.5 | 56.2 | 57.4 | 55.1 | 56.6 | 58.5 | 54.7 | 59.8 | 62.7 | 57.7 |
| 8/9/2011 | 57.0 | 57.5 | 56.4 | 56.3 | 57.6 | 55.5 | 56.6 | 58.2 | 55.0 | 59.7 | 62.4 | 57.9 |
| 8/10/2011 | 57.0 | 57.7 | 56.4 | 56.4 | 57.2 | 55.2 | 56.8 | 58.9 | 55.1 | 59.7 | 62.7 | 57.8 |
| 8/11/2011 | 57.2 | 57.9 | 56.5 | 56.4 | 57.5 | 55.5 | 56.8 | 58.6 | 55.0 | 59.4 | 62.6 | 57.5 |
| 8/12/2011 | 57.0 | 57.4 | 56.6 | 56.6 | 57.4 | 55.4 | 56.9 | 59.4 | 55.0 | 59.3 | 62.8 | 56.9 |
| 8/13/2011 | 57.3 | 57.6 | 57.0 | 56.8 | 57.9 | 56.0 | 57.1 | 59.3 | 55.6 | 59.0 | 62.7 | 56.8 |
| 8/14/2011 | 57.7 | 58.0 | 57.4 | 56.9 | 59.1 | 55.8 | 57.3 | 60.5 | 55.5 | 58.6 | 62.7 | 56.1 |
| 8/15/2011 | 57.8 | 58.0 | 57.5 | 57.1 | 58.6 | 55.7 | 57.4 | 59.6 | 55.4 | 58.1 | 61.3 | 55.5 |
| 8/16/2011 | 57.4 | 58.0 | 56.9 | 57.5 | 58.9 | 55.9 | 57.8 | 59.9 | 55.6 | 57.9 | 61.9 | 55.2 |
| 8/17/2011 | 57.0 | 57.6 | 56.5 | 57.5 | 58.9 | 56.6 | 57.8 | 59.7 | 55.5 | 57.8 | 61.9 | 54.7 |
| 8/18/2011 | 57.0 | 57.5 | 56.6 | 57.5 | 58.6 | 56.5 | 58.0 | 59.6 | 56.4 | 58.1 | 61.8 | 55.5 |
| 8/19/2011 | 57.4 | 57.9 | 57.0 | 57.7 | 58.8 | 56.8 | 58.1 | 59.6 | 56.4 | 58.3 | 61.9 | 55.9 |
| 8/20/2011 | 57.6 | 58.0 | 57.2 | 57.7 | 58.8 | 56.6 | 58.1 | 60.9 | 56.1 | 58.2 | 62.9 | 55.3 |
| 8/21/2011 | 57.8 | 58.1 | 57.5 | 58.0 | 59.5 | 56.6 | 58.3 | 61.5 | 55.9 | 58.2 | 63.1 | 54.7 |
| 8/22/2011 | 57.7 | 58.1 | 57.3 | 57.9 | 60.0 | 56.8 | 58.2 | 61.0 | 56.0 | 58.1 | 62.1 | 54.8 |
| 8/23/2011 | 58.1 | 58.7 | 57.4 | 58.0 | 60.1 | 57.1 | 58.6 | 60.7 | 56.8 | 58.9 | 63.0 | 56.2 |
| 8/24/2011 | 58.8 | 59.7 | 58.1 | 58.2 | 59.3 | 57.3 | 58.7 | 61.1 | 56.7 | 58.9 | 63.3 | 56.2 |
| 8/25/2011 | 59.8 | 60.5 | 59.1 | 58.6 | 61.5 | 56.7 | 58.8 | 62.7 | 56.2 | 58.9 | 63.5 | 55.4 |
| 8/26/2011 | 60.4 | 61.1 | 59.8 | 59.1 | 61.8 | 56.8 | 59.7 | 63.2 | 56.3 | 59.4 | 63.6 | 55.9 |
| 8/27/2011 | 61.0 | 61.5 | 60.6 | 59.1 | 60.7 | 57.5 | 59.7 | 63.2 | 57.0 | 60.1 | 64.6 | 57.0 |
| 8/28/2011 | 61.0 | 61.6 | 60.3 | 59.2 | 60.4 | 57.6 | 59.6 | 63.1 | 57.2 | 59.7 | 64.6 | 56.7 |
| 8/29/2011 | 61.2 | 61.8 | 60.5 | 58.9 | 61.3 | 57.5 | 59.4 | 62.6 | 56.9 | 59.3 | 63.6 | 56.4 |
| 8/30/2011 | 60.8 | 61.7 | 59.7 | 59.6 | 62.6 | 57.5 | 59.9 | 63.1 | 57.0 | 59.5 | 63.9 | 56.2 |
| 8/31/2011 | 60.1 | 61.0 | 58.9 | 59.9 | 61.1 | 58.4 | 60.0 | 63.5 | 56.9 | 59.4 | 65.3 | 55.5 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Rush Damsite |  |  | MGORD TOP |  |  | MGORD BOTTOM |  |  | Upper Rush |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 9/1/2011 | 59.5 | 60.5 | 58.5 | 59.8 | 60.8 | 58.4 | 59.8 | 63.3 | 57.5 | 59.3 | 65.0 | 55.9 |
| 9/2/2011 | 58.7 | 59.8 | 57.7 | 59.9 | 60.9 | 59.0 | 60.2 | 62.1 | 59.0 | 59.7 | 64.2 | 57.5 |
| 9/3/2011 | 58.2 | 59.1 | 57.2 | 60.1 | 60.9 | 59.3 | 60.5 | 62.5 | 59.4 | 60.0 | 64.7 | 57.5 |
| 9/4/2011 | 58.3 | 59.1 | 57.4 | 60.1 | 61.0 | 59.3 | 60.5 | 62.5 | 59.0 | 60.1 | 64.3 | 57.7 |
| 9/5/2011 | 58.5 | 59.1 | 57.9 | 60.5 | 61.3 | 59.4 | 60.4 | 63.7 | 58.7 | 59.9 | 64.5 | 57.2 |
| 9/6/2011 | 57.6 | 58.5 | 56.6 | 60.2 | 61.1 | 59.2 | 60.6 | 63.5 | 59.0 | 60.1 | 65.3 | 57.3 |
| 9/7/2011 | 57.7 | 58.5 | 56.8 | 60.4 | 61.1 | 59.7 | 60.6 | 62.4 | 59.6 | 60.0 | 64.3 | 57.5 |
| 9/8/2011 | 58.5 | 59.1 | 57.9 | 60.7 | 61.3 | 59.9 | 60.8 | 64.4 | 58.9 | 60.2 | 65.7 | 57.3 |
| 9/9/2011 | 58.0 | 58.9 | 57.2 | 60.6 | 61.2 | 59.4 | 60.3 | 62.6 | 59.1 | 59.4 | 63.6 | 57.9 |
| 9/10/2011 | 57.2 | 57.9 | 56.6 | 60.6 | 61.4 | 60.1 | 60.4 | 63.6 | 59.1 | 59.3 | 62.9 | 56.9 |
| 9/11/2011 | 56.4 | 57.1 | 55.7 | 60.9 | 62.1 | 59.7 | 60.3 | 62.8 | 59.0 | 59.1 | 63.1 | 57.4 |
| 9/12/2011 | 55.2 | 55.6 | 54.6 | 60.7 | 61.3 | 60.2 | 60.8 | 63.8 | 58.8 | 59.7 | 64.2 | 56.7 |
| 9/13/2011 | 55.3 | 55.7 | 54.6 | 60.8 | 61.6 | 60.2 | 60.8 | 63.2 | 59.7 | 59.9 | 63.9 | 58.0 |
| 9/14/2011 | 54.9 | 55.9 | 53.7 | 60.6 | 60.9 | 60.3 | 60.9 | 64.6 | 58.9 | 60.0 | 66.0 | 56.3 |
| 9/15/2011 | 55.3 | 56.2 | 54.4 | 61.4 | 62.7 | 60.2 | 61.1 | 64.0 | 59.4 | 59.7 | 65.5 | 56.9 |
| 9/16/2011 | 56.2 | 56.7 | 55.7 | 61.3 | 62.6 | 60.0 | 61.3 | 63.6 | 59.1 | 60.1 | 64.1 | 57.7 |
| 9/17/2011 | 55.5 | 56.5 | 54.5 | 60.7 | 61.2 | 60.3 | 60.8 | 64.6 | 58.6 | 59.6 | 65.3 | 55.8 |
| 9/18/2011 | 55.0 | 55.7 | 54.0 | 61.0 | 61.4 | 60.4 | 61.1 | 65.1 | 59.0 | 59.9 | 66.1 | 56.0 |
| 9/19/2011 | 54.8 | 55.5 | 54.0 | 60.8 | 61.3 | 60.1 | 60.8 | 64.8 | 58.9 | 59.7 | 65.8 | 56.3 |
| 9/20/2011 | 54.8 | 55.6 | 53.9 | 60.5 | 60.9 | 60.2 | 60.4 | 64.6 | 58.8 | 59.4 | 65.4 | 56.3 |
| 9/21/2011 | 55.0 | 55.6 | 54.1 | 60.9 | 61.1 | 60.4 | 60.9 | 65.0 | 59.2 | 59.8 | 65.6 | 56.4 |
| 9/22/2011 | 54.9 | 55.8 | 54.0 | 60.3 | 60.8 | 60.0 | 60.7 | 64.2 | 58.7 | 59.8 | 65.4 | 56.5 |
| 9/23/2011 | 55.2 | 55.7 | 54.3 | 60.5 | 60.8 | 60.3 | 60.4 | 63.6 | 58.9 | 59.2 | 63.9 | 56.1 |
| 9/24/2011 | 54.9 | 55.5 | 54.3 | 60.5 | 61.2 | 60.2 | 60.1 | 62.1 | 58.9 | 58.9 | 62.1 | 56.7 |
| 9/25/2011 | 54.9 | 55.3 | 54.5 | 60.4 | 61.2 | 60.0 | 60.1 | 62.5 | 58.6 | 58.9 | 62.9 | 56.3 |
| 9/26/2011 | 54.6 | 55.3 | 53.7 | 60.3 | 60.9 | 60.0 | 60.5 | 64.1 | 58.6 | 59.6 | 65.3 | 56.3 |
| 9/27/2011 | 54.5 | 55.3 | 53.6 | 60.3 | 60.6 | 59.8 | 60.5 | 64.2 | 58.8 | 59.7 | 65.5 | 56.3 |
| 9/28/2011 | 54.7 | 55.4 | 53.8 | 60.0 | 60.7 | 59.7 | 60.2 | 64.2 | 58.4 | 59.4 | 65.2 | 56.0 |
| 9/29/2011 | 55.0 | 55.8 | 54.0 | 60.0 | 60.7 | 59.4 | 60.2 | 64.2 | 58.4 | 59.4 | 65.3 | 56.1 |
| 9/30/2011 | 55.0 | 55.6 | 54.2 | 60.0 | 60.8 | 59.4 | 59.6 | 63.2 | 58.0 | 58.5 | 63.3 | 55.7 |
| 10/1/2011 | 55.0 | 55.5 | 54.6 | 60.9 | 61.2 | 60.5 | 60.0 | 62.7 | 58.5 | 58.6 | 62.6 | 56.1 |
| 10/2/2011 | 55.3 | 55.7 | 55.0 | 60.0 | 60.4 | 59.6 | 59.5 | 61.9 | 58.3 | 58.8 | 62.5 | 57.1 |
| 10/3/2011 | 55.1 | 55.6 | 54.8 | 59.1 | 59.5 | 58.9 | 58.6 | 60.3 | 57.6 | 57.6 | 60.9 | 56.2 |
| 10/4/2011 | 54.2 | 54.7 | 53.8 | 58.5 | 58.9 | 58.2 | 58.2 | 60.4 | 57.1 | 57.2 | 60.6 | 55.4 |
| 10/5/2011 | 52.4 | 53.6 | 51.3 | 58.0 | 58.7 | 57.5 | 56.9 | 58.9 | 55.6 | 55.2 | 58.2 | 53.4 |
| 10/6/2011 | 50.6 | 51.2 | 49.7 | 57.2 | 57.6 | 57.0 | 56.0 | 57.4 | 55.2 | 53.9 | 56.7 | 52.3 |
| 10/7/2011 | 49.3 | 49.8 | 48.5 | 56.4 | 56.9 | 56.1 | 56.0 | 58.4 | 54.7 | 54.4 | 58.8 | 51.9 |
| 10/8/2011 | 49.2 | 49.9 | 48.5 | 56.1 | 56.1 | 55.8 | 55.8 | 58.1 | 54.8 | 54.9 | 58.8 | 52.6 |
| 10/9/2011 | 49.2 | 49.9 | 48.5 | 55.7 | 56.0 | 55.4 | 55.6 | 57.6 | 54.6 | 54.9 | 58.5 | 52.9 |
| 10/10/2011 | 49.5 | 50.0 | 49.0 | 55.7 | 56.1 | 55.4 | 55.4 | 56.4 | 54.6 | 54.8 | 56.7 | 53.3 |
| 10/11/2011 | 49.9 | 50.5 | 49.2 | 55.5 | 55.9 | 55.2 | 55.5 | 56.8 | 54.7 | 55.2 | 57.9 | 53.9 |
| 10/12/2011 | 49.9 | 50.6 | 49.2 | 55.5 | 55.6 | 55.2 | 55.4 | 56.8 | 54.7 | 55.1 | 57.7 | 53.6 |
| 10/13/2011 | 50.1 | 50.9 | 49.3 | 55.5 | 55.6 | 55.3 | 55.5 | 56.5 | 54.9 | 55.3 | 57.5 | 54.1 |
| 10/14/2011 | 50.4 | 51.2 | 49.7 | 55.3 | 55.8 | 55.0 | 55.3 | 56.0 | 54.6 | 55.1 | 56.9 | 53.9 |
| 10/15/2011 | 51.0 | 51.5 | 50.4 | 55.6 | 56.7 | 55.0 | 55.5 | 56.5 | 54.7 | 55.3 | 56.3 | 54.1 |
| 10/16/2011 | 51.4 | 51.8 | 50.9 | 55.4 | 55.8 | 55.0 | 55.3 | 55.9 | 54.8 | 55.3 | 56.3 | 54.6 |
| 10/17/2011 | 51.1 | 51.7 | 50.4 | 55.5 | 55.6 | 55.2 | 55.4 | 56.2 | 55.0 | 55.3 | 56.8 | 54.6 |
| 10/18/2011 | 50.5 | 51.1 | 49.8 | 55.5 | 55.5 | 55.3 | 55.4 | 56.1 | 55.1 | 55.3 | 56.7 | 54.5 |
| 10/19/2011 | 50.9 | 51.3 | 50.4 | 55.3 | 55.5 | 55.0 | 55.2 | 55.8 | 54.8 | 55.1 | 56.3 | 54.4 |
| 10/20/2011 | 50.3 | 50.8 | 49.6 | 55.3 | 55.4 | 55.1 | 55.2 | 55.8 | 54.9 | 55.0 | 56.4 | 54.3 |
| 10/21/2011 | 50.0 | 50.5 | 49.2 | 55.2 | 55.5 | 55.0 | 55.2 | 55.8 | 54.8 | 55.0 | 56.3 | 54.3 |
| 10/22/2011 | 49.4 | 49.9 | 48.7 | 55.2 | 55.4 | 55.0 | 55.1 | 55.7 | 54.8 | 54.9 | 56.2 | 54.1 |
| 10/23/2011 | 48.9 | 49.5 | 48.2 | 55.1 | 55.4 | 55.0 | 55.1 | 55.6 | 54.8 | 54.9 | 56.2 | 54.1 |
| 10/24/2011 | 49.3 | 49.8 | 48.9 | 55.0 | 55.2 | 54.9 | 54.9 | 55.4 | 54.7 | 54.7 | 55.6 | 54.1 |
| 10/25/2011 | 49.5 | 49.7 | 49.1 | 54.7 | 55.0 | 54.5 | 54.5 | 55.0 | 54.2 | 54.2 | 55.4 | 53.6 |
| 10/26/2011 | 48.4 | 49.2 | 47.8 | 54.2 | 54.5 | 54.0 | 53.9 | 54.5 | 53.6 | 53.3 | 54.6 | 52.5 |
| 10/27/2011 | 47.2 | 47.8 | 46.6 | 53.9 | 54.2 | 53.6 | 53.6 | 54.5 | 53.2 | 52.9 | 54.8 | 52.0 |
| 10/28/2011 | 46.8 | 47.4 | 46.1 | 53.6 | 53.9 | 53.5 | 53.4 | 54.5 | 53.0 | 52.8 | 55.0 | 51.8 |
| 10/29/2011 | 46.6 | 47.2 | 45.9 | 53.4 | 53.7 | 53.3 | 53.2 | 54.7 | 52.6 | 52.6 | 55.4 | 51.4 |
| 10/30/2011 | 46.4 | 47.0 | 45.7 | 53.1 | 53.4 | 53.0 | 53.0 | 54.7 | 52.2 | 52.2 | 55.3 | 50.8 |
| 10/31/2011 | 46.4 | 46.9 | 45.7 | 53.0 | 53.2 | 52.9 | 52.8 | 54.7 | 52.1 | 52.0 | 55.4 | 50.4 |

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| Date | Rush Damsite |  |  | MGORD TOP |  |  | MGORD BOTTOM |  |  | Upper Rush |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 11/1/2011 | 46.5 | 46.8 | 46.0 | 52.8 | 53.0 | 52.6 | 52.2 | 54.3 | 51.1 | 51.0 | 54.0 | 48.7 |
| 11/2/2011 | 45.1 | 45.8 | 44.5 | 52.2 | 52.6 | 52.0 | 51.4 | 53.4 | 50.6 | 49.7 | 53.3 | 47.9 |
| 11/3/2011 | 45.1 | 45.4 | 44.6 | 51.8 | 52.2 | 51.0 | 50.6 | 52.1 | 49.2 | 49.0 | 51.8 | 47.6 |
| 11/4/2011 | 44.3 | 45.1 | 43.8 | 50.7 | 50.9 | 50.5 | 49.8 | 51.0 | 49.1 | 48.4 | 50.6 | 47.1 |
| 11/5/2011 | 43.1 | 43.7 | 42.6 | 50.4 | 50.7 | 50.1 | 49.5 | 50.5 | 48.8 | 47.8 | 50.2 | 46.2 |
| 11/6/2011 | 42.9 | 43.2 | 42.5 | 50.0 | 50.5 | 49.8 | 49.4 | 51.0 | 48.7 | 48.2 | 51.0 | 46.6 |
| 11/7/2011 | 42.6 | 42.9 | 42.3 | 49.6 | 49.8 | 49.3 | 49.0 | 50.7 | 48.0 | 47.7 | 50.6 | 45.9 |
| 11/8/2011 | 41.5 | 42.2 | 40.9 | 49.0 | 49.3 | 48.7 | 48.3 | 50.2 | 47.5 | 46.8 | 50.0 | 45.0 |
| 11/9/2011 | 41.1 | 41.7 | 40.4 | 48.8 | 49.0 | 48.6 | 48.2 | 50.1 | 47.4 | 46.8 | 50.3 | 45.0 |
| 11/10/2011 | 41.0 | 41.4 | 40.4 | 48.4 | 48.7 | 48.3 | 47.9 | 49.3 | 47.1 | 46.8 | 49.5 | 45.0 |
| 11/11/2011 | 41.4 | 41.7 | 41.2 | 48.2 | 48.5 | 47.9 | 47.7 | 48.8 | 47.2 | 46.8 | 48.2 | 45.9 |
| 11/12/2011 | 41.7 | 42.2 | 41.5 | 47.8 | 48.0 | 47.7 | 47.6 | 49.2 | 46.8 | 47.1 | 50.0 | 45.5 |
| 11/13/2011 | 41.9 | 42.4 | 41.6 | 47.9 | 47.9 | 47.8 | 47.6 | 49.5 | 46.8 | 47.0 | 50.2 | 45.4 |
| 11/14/2011 | 42.1 | 42.5 | 41.7 | 47.6 | 47.7 | 47.5 | 47.3 | 49.2 | 46.5 | 46.7 | 49.8 | 45.2 |
| 11/15/2011 | 41.5 | 42.2 | 40.7 | 47.2 | 47.4 | 47.2 | 46.9 | 48.9 | 46.2 | 46.2 | 49.7 | 44.7 |
| 11/16/2011 | 41.0 | 41.9 | 40.0 | 47.0 | 47.2 | 46.9 | 46.7 | 48.6 | 46.0 | 46.0 | 49.4 | 44.4 |
| 11/17/2011 | 40.7 | 41.8 | 39.5 | 47.2 | 47.3 | 47.1 | 46.8 | 48.7 | 46.0 | 46.0 | 49.2 | 44.4 |
| 11/18/2011 | 41.8 | 42.1 | 41.6 | 46.4 | 47.1 | 45.5 | 45.3 | 47.1 | 43.4 | 44.2 | 47.1 | 41.7 |
| 11/19/2011 | 41.0 | 41.6 | 40.2 | 45.4 | 45.5 | 45.2 | 44.8 | 46.6 | 44.2 | 44.0 | 47.0 | 42.5 |
| 11/20/2011 | 39.9 | 40.6 | 38.9 | 45.0 | 45.6 | 44.8 | 44.2 | 44.9 | 43.7 | 43.2 | 44.8 | 42.3 |
| 11/21/2011 | 37.8 | 38.9 | 36.6 | 44.6 | 44.9 | 44.4 | 44.1 | 45.8 | 43.4 | 43.2 | 46.3 | 41.6 |
| 11/22/2011 | 38.6 | 39.6 | 37.8 | 44.7 | 44.8 | 44.6 | 44.2 | 46.0 | 43.6 | 43.4 | 46.6 | 41.9 |
| 11/23/2011 | 40.2 | 40.8 | 39.5 | 44.2 | 44.7 | 43.7 | 43.7 | 45.1 | 42.7 | 43.2 | 45.9 | 42.1 |
| 11/24/2011 | 40.8 | 41.3 | 40.4 | 43.7 | 44.0 | 43.4 | 43.2 | 44.9 | 42.4 | 42.7 | 45.4 | 41.6 |
| 11/25/2011 | 39.8 | 40.7 | 38.9 | 43.6 | 43.8 | 43.4 | 43.2 | 45.0 | 42.6 | 42.7 | 45.9 | 41.3 |
| 11/26/2011 | 39.2 | 40.2 | 38.2 | 43.5 | 43.6 | 43.4 | 43.2 | 44.9 | 42.5 | 42.7 | 45.8 | 41.1 |
| 11/27/2011 | 40.0 | 41.0 | 39.2 | 43.5 | 43.6 | 43.4 | 43.3 | 44.9 | 42.6 | 43.0 | 45.8 | 42.0 |
| 11/28/2011 | 40.7 | 41.2 | 39.8 | 43.2 | 43.4 | 43.1 | 42.9 | 44.4 | 42.3 | 42.5 | 45.1 | 41.2 |
| 11/29/2011 | 40.8 | 41.7 | 39.6 | 43.1 | 43.1 | 43.0 | 42.9 | 44.6 | 42.2 | 42.5 | 45.7 | 41.0 |
| 11/30/2011 | 41.2 | 41.6 | 40.6 | 43.1 | 43.1 | 42.8 | 42.5 | 44.0 | 41.4 | 42.0 | 44.2 | 40.3 |
| 12/1/2011 | 40.0 | 40.6 | 39.4 | 42.3 | 42.8 | 41.9 | 41.1 | 42.0 | 40.7 | 39.8 | 40.9 | 39.1 |
| 12/2/2011 | 38.7 | 39.5 | 38.2 | 41.6 | 41.9 | 41.3 | 41.0 | 42.5 | 40.0 | 40.0 | 42.8 | 38.6 |
| 12/3/2011 | 37.5 | 38.1 | 37.1 | 41.2 | 41.4 | 41.0 | 40.4 | 41.9 | 39.9 | 39.2 | 41.9 | 38.0 |
| 12/4/2011 | 36.1 | 36.9 | 35.6 | 40.7 | 41.0 | 40.4 | 40.2 | 41.8 | 39.5 | 39.2 | 42.3 | 37.8 |
| 12/5/2011 | 35.7 | 36.1 | 35.4 | 40.4 | 40.6 | 40.2 | 39.8 | 41.5 | 39.2 | 38.9 | 41.6 | 37.6 |
| 12/6/2011 | 35.0 | 35.6 | 34.5 | 39.9 | 40.2 | 39.8 | 39.5 | 41.2 | 38.9 | 38.6 | 41.8 | 37.2 |
| 12/7/2011 | 34.8 | 35.2 | 34.4 | 39.8 | 39.9 | 39.7 | 39.4 | 41.0 | 38.9 | 38.8 | 41.8 | 37.4 |
| 12/8/2011 | 35.2 | 35.7 | 34.9 | 39.8 | 39.9 | 39.6 | 39.4 | 40.8 | 38.8 | 38.8 | 41.5 | 37.7 |
| 12/9/2011 | 34.7 | 35.6 | 34.1 | 39.5 | 39.7 | 39.3 | 39.1 | 40.6 | 38.4 | 38.2 | 41.2 | 36.7 |
| 12/10/2011 | 34.0 | 34.5 | 33.6 | 39.4 | 39.5 | 39.3 | 38.9 | 40.2 | 38.3 | 37.9 | 40.5 | 36.5 |
| 12/11/2011 | 33.9 | 34.1 | 33.6 | 39.2 | 39.4 | 39.1 | 38.7 | 40.3 | 38.2 | 37.8 | 40.3 | 36.7 |
| 12/12/2011 | 33.8 | 34.1 | 33.5 | 38.8 | 39.1 | 38.4 | 38.4 | 39.5 | 38.0 | 37.7 | 39.9 | 36.4 |
| 12/13/2011 | 34.0 | 34.1 | 33.7 | 38.5 | 38.7 | 38.3 | 38.1 | 39.7 | 37.6 | 37.5 | 40.0 | 36.4 |
| 12/14/2011 | 33.7 | 34.1 | 33.4 | 38.4 | 38.7 | 37.8 | 37.9 | 39.4 | 37.2 | 37.1 | 39.9 | 35.7 |
| 12/15/2011 | 33.8 | 33.9 | 33.7 | 38.7 | 39.1 | 38.2 | 38.2 | 39.5 | 37.4 | 37.6 | 39.7 | 36.3 |
| 12/16/2011 | 33.9 | 34.1 | 33.7 | 38.9 | 39.1 | 38.8 | 38.6 | 39.9 | 38.1 | 38.0 | 40.4 | 36.8 |
| 12/17/2011 | 33.7 | 34.1 | 33.3 | 38.2 | 39.0 | 37.3 | 37.9 | 39.4 | 36.9 | 37.1 | 39.9 | 35.8 |
| 12/18/2011 | 33.5 | 33.8 | 33.3 | 37.5 | 37.9 | 37.0 | 37.2 | 39.0 | 36.2 | 36.7 | 39.7 | 35.0 |
| 12/19/2011 | 33.7 | 34.0 | 33.5 | 37.7 | 38.1 | 37.2 | 37.4 | 38.7 | 36.5 | 37.0 | 39.3 | 35.5 |
| 12/20/2011 | 33.7 | 34.0 | 33.4 | 37.9 | 38.2 | 37.2 | 37.5 | 39.1 | 36.8 | 36.8 | 39.7 | 35.5 |
| 12/21/2011 | 33.5 | 33.7 | 33.3 | 37.7 | 38.1 | 37.1 | 37.2 | 38.9 | 36.4 | 36.6 | 39.7 | 35.3 |
| 12/22/2011 | 33.2 | 33.7 | 32.9 | 38.1 | 38.2 | 37.4 | 37.4 | 39.1 | 36.7 | 36.1 | 39.1 | 34.6 |
| 12/23/2011 | 32.8 | 33.1 | 32.5 | 37.4 | 38.1 | 36.6 | 36.9 | 38.7 | 35.7 | 35.8 | 38.8 | 33.9 |
| 12/24/2011 | 32.8 | 33.0 | 32.5 | 37.5 | 38.0 | 37.2 | 37.1 | 38.5 | 36.2 | 36.2 | 39.1 | 34.7 |
| 12/25/2011 | 32.8 | 33.1 | 32.5 | 37.8 | 38.2 | 37.3 | 37.4 | 39.4 | 36.7 | 36.8 | 40.1 | 35.3 |
| 12/26/2011 | 33.0 | 33.3 | 32.8 | 37.8 | 38.2 | 37.4 | 37.4 | 38.9 | 36.5 | 36.8 | 39.7 | 35.3 |
| 12/27/2011 | 33.2 | 33.4 | 33.0 | 38.1 | 38.2 | 38.0 | 37.8 | 39.5 | 37.2 | 37.4 | 40.4 | 36.0 |
| 12/28/2011 | 33.5 | 33.7 | 33.3 | 38.2 | 38.3 | 38.0 | 38.2 | 39.6 | 37.4 | 38.2 | 40.5 | 36.6 |
| 12/29/2011 | 33.9 | 34.1 | 33.8 | 38.1 | 38.3 | 37.8 | 38.1 | 39.6 | 37.3 | 38.3 | 40.6 | 37.0 |
| 12/30/2011 | 34.2 | 34.4 | 34.0 | 37.6 | 38.2 | 36.7 | 37.5 | 39.3 | 35.9 | 37.5 | 40.2 | 35.6 |
| 12/31/2011 | 34.6 | 35.0 | 34.4 | 37.2 | 37.5 | 36.7 | 36.9 | 38.7 | 35.9 | 36.5 | 39.5 | 34.9 |

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| Date | Rush Damsite |  |  | MGORD TOP |  |  | MGORD BOTTOM |  |  | Upper Rush |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 1/1/2012 | 34.9 | 35.2 | 34.6 | 37.5 | 37.6 | 37.3 | 37.3 | 39.0 | 36.8 | 37.0 | 40.0 | 35.7 |
| 1/2/2012 | 35.3 | 36.0 | 35.0 | 37.3 | 37.6 | 37.1 | 37.1 | 38.5 | 36.6 | 37.0 | 39.9 | 35.5 |
| 1/3/2012 | 36.5 | 37.0 | 36.1 | 37.0 | 37.1 | 36.9 | 37.0 | 38.6 | 36.4 | 37.1 | 39.9 | 36.0 |
| 1/4/2012 | 36.7 | 37.0 | 36.4 | 37.2 | 37.3 | 37.1 | 37.1 | 38.7 | 36.5 | 37.1 | 40.0 | 35.9 |
| 1/5/2012 | 36.6 | 36.9 | 36.4 | 37.3 | 37.4 | 37.2 | 37.3 | 38.9 | 36.7 | 37.4 | 40.3 | 36.2 |
| 1/6/2012 | 36.6 | 36.9 | 36.3 | 37.4 | 37.5 | 37.3 | 37.2 | 38.9 | 36.7 | 37.1 | 40.1 | 35.7 |
| 1/7/2012 | 36.6 | 36.8 | 36.5 | 37.5 | 37.6 | 37.3 | 37.1 | 38.7 | 36.5 | 36.5 | 39.3 | 35.2 |
| 1/8/2012 | 35.6 | 36.4 | 35.1 | 37.6 | 37.7 | 37.6 | 37.2 | 38.9 | 36.5 | 36.5 | 39.7 | 34.9 |
| 1/9/2012 | 35.3 | 35.6 | 34.9 | 37.6 | 37.7 | 37.5 | 37.4 | 39.1 | 36.8 | 37.1 | 40.2 | 35.7 |
| 1/10/2012 | 35.3 | 35.6 | 35.0 | 37.5 | 37.8 | 37.4 | 37.4 | 38.9 | 36.7 | 37.2 | 40.1 | 35.8 |
| 1/11/2012 | 35.1 | 35.6 | 34.7 | 37.5 | 37.7 | 37.4 | 37.2 | 39.0 | 36.6 | 36.7 | 39.8 | 35.2 |
| 1/12/2012 | 34.6 | 35.2 | 34.1 | 37.3 | 37.4 | 37.2 | 37.0 | 38.7 | 36.3 | 36.4 | 39.7 | 35.0 |
| 1/13/2012 | 34.0 | 34.7 | 33.4 | 37.1 | 37.4 | 36.9 | 36.8 | 38.4 | 36.1 | 36.2 | 39.4 | 34.7 |
| 1/14/2012 | 33.9 | 34.5 | 33.5 | 37.1 | 37.4 | 36.9 | 36.9 | 38.7 | 36.0 | 36.4 | 39.8 | 34.7 |
| 1/15/2012 | 34.8 | 35.3 | 34.4 | 37.0 | 37.2 | 36.7 | 36.6 | 38.2 | 35.9 | 36.3 | 39.5 | 34.9 |
| 1/16/2012 | 34.9 | 35.3 | 34.5 | 36.9 | 37.2 | 36.8 | 36.3 | 38.1 | 35.5 | 35.6 | 38.5 | 34.2 |
| 1/17/2012 | 33.9 | 34.6 | 33.3 | 36.8 | 37.0 | 36.7 | 36.4 | 38.2 | 35.6 | 35.7 | 38.9 | 34.0 |
| 1/18/2012 | 35.3 | 36.4 | 34.5 | 37.0 | 37.0 | 36.9 | 37.0 | 38.8 | 36.5 | 37.3 | 40.2 | 36.0 |
| 1/19/2012 | 36.6 | 37.0 | 36.4 | 37.0 | 37.1 | 36.5 | 36.8 | 38.1 | 36.3 | 36.8 | 39.2 | 35.5 |
| 1/20/2012 | 37.3 | 37.9 | 37.0 | 36.3 | 36.7 | 36.0 | 36.5 | 37.4 | 35.8 | 37.1 | 38.7 | 36.1 |
| 1/21/2012 | 38.0 | 38.6 | 37.2 | 36.4 | 36.7 | 36.1 | 36.0 | 36.8 | 35.1 | 36.0 | 37.5 | 34.3 |
| 1/22/2012 | 36.3 | 37.1 | 36.0 | 36.3 | 36.5 | 36.1 | 36.1 | 37.8 | 35.3 | 35.8 | 38.6 | 34.1 |
| 1/23/2012 | 36.2 | 36.3 | 36.2 | 36.0 | 36.1 | 35.9 | 35.9 | 37.2 | 35.2 | 36.1 | 38.0 | 34.8 |
| 1/24/2012 | 35.9 | 36.3 | 35.6 | 36.0 | 36.1 | 35.8 | 36.0 | 37.6 | 35.3 | 36.2 | 38.8 | 34.7 |
| 1/25/2012 | 35.9 | 36.3 | 35.6 | 36.0 | 36.3 | 35.8 | 36.1 | 37.9 | 35.4 | 36.4 | 39.7 | 34.9 |
| 1/26/2012 | 36.4 | 37.0 | 36.2 | 36.4 | 36.6 | 36.3 | 36.6 | 38.6 | 35.8 | 36.9 | 40.8 | 35.3 |
| 1/27/2012 | 37.1 | 37.2 | 37.0 | 36.6 | 36.7 | 36.5 | 36.6 | 38.3 | 35.9 | 36.8 | 39.6 | 35.2 |
| 1/28/2012 | 36.0 | 37.1 | 35.4 | 36.5 | 36.7 | 36.3 | 36.3 | 38.2 | 35.4 | 36.0 | 39.5 | 34.2 |
| 1/29/2012 | 35.4 | 35.9 | 34.9 | 36.4 | 36.7 | 36.2 | 36.4 | 37.9 | 35.5 | 36.3 | 39.3 | 34.7 |
| 1/30/2012 | 36.1 | 36.7 | 35.9 | 36.7 | 36.8 | 36.5 | 36.8 | 38.5 | 36.2 | 37.1 | 40.2 | 35.8 |
| 1/31/2012 | 36.6 | 36.9 | 36.3 | 36.7 | 36.8 | 36.6 | 36.8 | 38.9 | 36.0 | 37.1 | 40.6 | 35.3 |
| 2/1/2012 | 36.9 | 37.2 | 36.7 | 36.4 | 36.7 | 36.0 | 36.3 | 38.6 | 35.2 | 36.5 | 40.1 | 34.8 |
| 2/2/2012 | 36.4 | 37.1 | 35.9 | 36.7 | 37.0 | 36.3 | 36.4 | 38.7 | 35.3 | 36.0 | 40.0 | 34.1 |
| 2/3/2012 | 35.3 | 36.3 | 34.6 | 37.0 | 37.2 | 36.7 | 36.6 | 39.3 | 35.5 | 35.7 | 40.3 | 33.5 |
| 2/4/2012 | 34.4 | 35.2 | 33.8 | 36.7 | 36.9 | 36.3 | 36.3 | 38.7 | 35.4 | 35.7 | 40.0 | 33.5 |
| 2/5/2012 | 34.0 | 34.6 | 33.4 | 36.5 | 36.9 | 36.0 | 36.3 | 38.5 | 35.4 | 35.7 | 39.9 | 33.7 |
| 2/6/2012 | 33.8 | 34.4 | 33.3 | 36.4 | 36.8 | 36.0 | 36.1 | 38.3 | 34.9 | 35.6 | 39.4 | 33.4 |
| 2/7/2012 | 34.7 | 35.3 | 34.4 | 36.0 | 36.7 | 35.5 | 35.9 | 37.5 | 35.3 | 36.1 | 38.3 | 35.1 |
| 2/8/2012 | 35.3 | 35.7 | 35.0 | 36.3 | 36.8 | 35.8 | 36.3 | 39.4 | 34.9 | 36.4 | 41.2 | 33.9 |
| 2/9/2012 | 35.5 | 36.1 | 35.1 | 36.7 | 36.9 | 36.4 | 36.9 | 39.7 | 35.5 | 37.0 | 42.0 | 34.4 |
| 2/10/2012 | 36.1 | 36.7 | 35.8 | 36.8 | 37.1 | 36.4 | 36.9 | 39.9 | 35.7 | 37.2 | 42.2 | 34.8 |
| 2/11/2012 | 36.9 | 37.2 | 36.7 | 36.9 | 37.2 | 36.2 | 36.9 | 39.5 | 35.4 | 37.0 | 41.1 | 34.4 |
| 2/12/2012 | 37.1 | 37.4 | 36.8 | 37.4 | 37.5 | 37.2 | 37.5 | 40.1 | 36.2 | 37.8 | 42.0 | 35.2 |
| 2/13/2012 | 37.3 | 37.5 | 37.0 | 37.1 | 37.4 | 36.9 | 37.0 | 38.6 | 36.1 | 37.1 | 40.2 | 35.7 |
| 2/14/2012 | 36.9 | 37.3 | 36.7 | 37.5 | 37.7 | 37.2 | 37.6 | 40.2 | 36.6 | 37.7 | 42.0 | 35.5 |
| 2/15/2012 | 36.8 | 37.3 | 36.2 | 37.2 | 37.8 | 37.0 | 36.6 | 38.3 | 35.1 | 36.1 | 39.2 | 33.8 |
| 2/16/2012 | 35.7 | 36.1 | 35.2 | 37.2 | 37.3 | 37.0 | 37.1 | 40.0 | 35.9 | 36.8 | 41.6 | 34.5 |
| 2/17/2012 | 35.2 | 35.8 | 34.6 | 36.9 | 37.0 | 36.7 | 36.9 | 39.9 | 35.5 | 36.8 | 42.2 | 33.9 |
| 2/18/2012 | 35.8 | 36.3 | 35.5 | 37.2 | 37.3 | 37.1 | 37.1 | 39.0 | 36.1 | 37.0 | 40.5 | 35.0 |
| 2/19/2012 | 36.0 | 36.3 | 35.7 | 37.3 | 37.5 | 37.2 | 37.3 | 40.1 | 36.0 | 37.1 | 41.5 | 34.9 |
| 2/20/2012 | 36.2 | 36.7 | 35.9 | 37.6 | 37.8 | 37.4 | 37.7 | 40.6 | 36.5 | 37.8 | 42.5 | 35.5 |
| 2/21/2012 | 36.5 | 37.0 | 36.2 | 37.6 | 37.7 | 37.3 | 37.7 | 39.9 | 36.7 | 37.9 | 42.0 | 35.6 |
| 2/22/2012 | 36.9 | 37.4 | 36.5 | 37.6 | 37.7 | 37.3 | 37.9 | 40.7 | 36.6 | 38.2 | 43.3 | 35.7 |
| 2/23/2012 | 37.3 | 37.7 | 36.9 | 37.6 | 37.9 | 37.4 | 37.9 | 40.9 | 36.7 | 38.2 | 43.3 | 35.8 |
| 2/24/2012 | 37.4 | 38.0 | 36.9 | 37.8 | 38.1 | 37.7 | 38.1 | 41.5 | 36.7 | 38.4 | 44.2 | 35.4 |
| 2/25/2012 | 38.3 | 38.7 | 38.0 | 37.8 | 38.1 | 37.5 | 37.7 | 40.8 | 36.1 | 37.9 | 43.1 | 35.4 |
| 2/26/2012 | 37.8 | 38.7 | 37.1 | 37.9 | 38.3 | 37.4 | 37.5 | 41.1 | 36.0 | 36.9 | 42.8 | 34.1 |
| 2/27/2012 | 37.3 | 37.7 | 37.0 | 37.4 | 37.7 | 37.1 | 37.2 | 40.0 | 36.1 | 36.9 | 41.7 | 35.0 |
| 2/28/2012 | 36.5 | 37.2 | 35.9 | 37.7 | 37.9 | 37.3 | 37.8 | 40.9 | 36.1 | 37.6 | 43.7 | 34.2 |
| 2/29/2012 | 36.7 | 36.9 | 36.6 | 37.4 | 37.7 | 37.2 | 36.8 | 38.7 | 35.9 | 36.6 | 39.1 | 35.3 |

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| Date | Rush Damsite |  |  | MGORD TOP |  |  | MGORD BOTTOM |  |  | Upper Rush |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 3/1/2012 | 36.3 | 36.6 | 35.9 | 36.9 | 37.4 | 36.5 | 36.6 | 39.1 | 35.2 | 36.3 | 40.2 | 34.4 |
| 3/2/2012 | 36.3 | 36.9 | 35.7 | 37.4 | 37.6 | 37.2 | 37.6 | 40.8 | 35.9 | 37.6 | 43.3 | 34.4 |
| 3/3/2012 | 36.7 | 37.5 | 36.1 | 37.7 | 37.9 | 37.6 | 38.1 | 41.4 | 36.5 | 38.3 | 44.4 | 35.1 |
| 3/4/2012 | 37.4 | 38.1 | 36.9 | 37.6 | 37.8 | 37.2 | 38.1 | 41.5 | 36.4 | 38.6 | 44.8 | 35.4 |
| 3/5/2012 | 38.2 | 38.8 | 37.8 | 37.9 | 38.3 | 37.6 | 38.3 | 41.9 | 36.8 | 38.8 | 45.1 | 35.7 |
| 3/6/2012 | 38.8 | 39.0 | 37.7 | 37.8 | 38.1 | 37.4 | 37.3 | 40.3 | 36.1 | 37.1 | 41.3 | 34.5 |
| 3/7/2012 | 35.9 | 37.4 | 35.0 | 37.7 | 38.0 | 37.4 | 37.4 | 40.9 | 35.2 | 36.7 | 42.9 | 32.9 |
| 3/8/2012 | 36.1 | 37.0 | 35.4 | 38.1 | 38.3 | 38.0 | 38.2 | 41.8 | 36.6 | 38.1 | 44.7 | 34.6 |
| 3/9/2012 | 36.9 | 37.8 | 36.3 | 37.9 | 38.1 | 37.4 | 38.4 | 41.9 | 36.4 | 38.7 | 45.1 | 35.0 |
| 3/10/2012 | 37.8 | 38.4 | 37.4 | 38.0 | 38.4 | 37.5 | 38.4 | 41.5 | 36.6 | 38.9 | 45.1 | 35.4 |
| 3/11/2012 | 38.7 | 39.2 | 38.4 | 38.3 | 38.9 | 37.8 | 38.7 | 42.1 | 37.0 | 39.3 | 45.3 | 36.2 |
| 3/12/2012 | 39.2 | 39.5 | 38.9 | 38.7 | 39.1 | 38.2 | 38.9 | 41.8 | 37.5 | 39.2 | 44.5 | 36.7 |
| 3/13/2012 | 39.4 | 39.7 | 39.1 | 38.5 | 39.2 | 38.1 | 38.7 | 41.8 | 37.1 | 39.0 | 44.4 | 36.6 |

### 8.3 Daily Average, Maximum, and Minimum Water Temperature ( ${ }^{\circ}$ F) at Rush Creek above Parker Confluence, Rush Creek Below the Narrows, Rush Creek below 10 Channel Falls, and Rush Creek at County Road.

| Date | Rush above Parker |  |  | Below Narrows |  |  | Rush 10 CH Falls |  |  | Rush County Rd |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 4/1/2011 | 43.5 | 50.3 | 39.4 | 43.6 | 51.3 | 38.6 | 44.2 | 53.3 | 38.2 | 44.8 | 54.3 | 38.3 |
| 4/2/2011 | 42.9 | 48.0 | 39.4 | 43.3 | 49.5 | 39.7 | 44.2 | 52.0 | 39.8 | 45.1 | 53.7 | 40.6 |
| 4/3/2011 | 40.4 | 46.0 | 36.8 | 40.5 | 46.8 | 36.3 | 41.0 | 48.5 | 36.1 | 41.5 | 49.5 | 36.2 |
| 4/4/2011 | 41.2 | 47.1 | 37.6 | 41.4 | 48.3 | 36.9 | 41.9 | 50.1 | 36.4 | 42.2 | 51.1 | 36.3 |
| 4/5/2011 | 43.0 | 48.7 | 39.5 | 43.3 | 50.1 | 39.0 | 43.9 | 52.4 | 38.6 | 44.2 | 53.2 | 38.5 |
| 4/6/2011 | 42.5 | 47.4 | 38.7 | 42.8 | 48.4 | 38.6 | 43.2 | 50.0 | 38.4 | 43.8 | 51.1 | 39.1 |
| 4/7/2011 | 39.5 | 42.3 | 37.8 | 39.0 | 42.3 | 36.9 | 38.8 | 42.7 | 36.2 | 39.0 | 42.9 | 36.7 |
| 4/8/2011 | 38.9 | 41.9 | 37.0 | 38.1 | 41.4 | 36.2 | 37.9 | 41.6 | 35.3 | 37.9 | 42.0 | 35.0 |
| 4/9/2011 | 40.0 | 44.2 | 37.7 | 39.6 | 45.0 | 36.8 | 39.8 | 46.3 | 36.2 | 40.0 | 47.1 | 36.1 |
| 4/10/2011 | 41.0 | 45.8 | 37.7 | 40.8 | 46.7 | 36.9 | 41.0 | 48.3 | 36.2 | 41.2 | 49.2 | 36.0 |
| 4/11/2011 | 42.6 | 47.1 | 39.7 | 42.6 | 48.0 | 39.0 | 42.9 | 49.3 | 38.6 | 43.1 | 50.0 | 38.5 |
| 4/12/2011 | 43.6 | 48.2 | 40.7 | 43.4 | 49.1 | 39.8 | 43.6 | 50.8 | 39.1 | 43.9 | 51.9 | 39.0 |
| 4/13/2011 | 41.4 | 43.8 | 39.0 | 41.1 | 43.8 | 38.3 | 41.1 | 44.7 | 37.8 | 41.4 | 45.3 | 38.4 |
| 4/14/2011 | 41.6 | 47.0 | 38.4 | 41.3 | 47.7 | 37.4 | 41.5 | 49.0 | 36.6 | 41.7 | 49.9 | 36.2 |
| 4/15/2011 | 43.0 | 48.2 | 39.9 | 43.3 | 49.6 | 39.2 | 43.8 | 51.6 | 38.7 | 44.1 | 52.6 | 38.5 |
| 4/16/2011 | 44.2 | 49.2 | 40.8 | 44.7 | 50.4 | 40.3 | 45.2 | 51.9 | 40.0 | 45.5 | 52.8 | 40.1 |
| 4/17/2011 | 45.5 | 50.6 | 42.0 | 45.8 | 52.0 | 41.6 | 46.1 | 53.2 | 41.4 | 46.3 | 53.4 | 41.5 |
| 4/18/2011 | 45.1 | 49.8 | 42.3 | 45.4 | 50.5 | 42.4 | 45.9 | 52.3 | 42.4 | 46.6 | 53.4 | 43.1 |
| 4/19/2011 | 44.4 | 48.7 | 41.9 | 44.5 | 49.4 | 41.1 | 44.8 | 50.8 | 40.8 | 45.1 | 51.3 | 40.9 |
| 4/20/2011 | 44.8 | 49.1 | 41.4 | 44.9 | 50.1 | 41.1 | 45.2 | 51.8 | 40.8 | 45.7 | 52.8 | 41.9 |
| 4/21/2011 | 44.0 | 48.8 | 41.3 | 43.9 | 49.6 | 40.9 | 44.2 | 51.3 | 40.5 | 44.5 | 52.2 | 40.5 |
| 4/22/2011 | 43.7 | 47.4 | 41.2 | 43.3 | 48.2 | 40.2 | 43.4 | 50.2 | 39.5 | 43.6 | 51.0 | 39.4 |
| 4/23/2011 | 44.8 | 48.5 | 43.0 | 44.7 | 49.0 | 42.4 | 45.1 | 51.6 | 42.2 | 45.4 | 53.2 | 42.3 |
| 4/24/2011 | 45.0 | 49.6 | 42.5 | 44.9 | 50.1 | 41.8 | 45.1 | 51.4 | 41.5 | 45.4 | 52.1 | 41.5 |
| 4/25/2011 | 44.9 | 50.3 | 42.1 | 44.8 | 51.0 | 41.8 | 45.1 | 52.6 | 41.3 | 45.4 | 53.7 | 41.2 |
| 4/26/2011 | 44.7 | 50.4 | 41.3 | 44.4 | 51.1 | 39.9 | 44.7 | 52.6 | 39.2 | 45.0 | 53.5 | 38.9 |
| 4/27/2011 | 45.3 | 51.3 | 41.7 | 45.4 | 52.6 | 40.9 | 45.9 | 53.9 | 40.2 | 46.2 | 54.7 | 40.1 |
| 4/28/2011 | 46.2 | 51.6 | 42.6 | 46.2 | 52.6 | 42.4 | 46.4 | 54.2 | 42.1 | 46.9 | 55.3 | 42.8 |
| 4/29/2011 | 44.8 | 49.7 | 42.3 | 44.6 | 50.5 | 41.3 | 44.7 | 51.8 | 40.5 | 44.9 | 52.8 | 40.3 |
| 4/30/2011 | 44.4 | 49.6 | 41.2 | 44.0 | 50.2 | 39.9 | 44.1 | 51.6 | 38.9 | 44.3 | 52.6 | 38.7 |

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| Date | Rush above Parker |  |  | Below Narrows |  |  | Rush 10 CH Falls |  |  | Rush County Rd |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 5/1/2011 | 44.9 | 50.2 | 41.6 | 44.7 | 51.1 | 40.4 | 44.9 | 52.7 | 39.5 | 45.1 | 53.8 | 39.2 |
| 5/2/2011 | 45.8 | 50.8 | 42.4 | 46.0 | 52.0 | 41.6 | 46.4 | 53.8 | 41.0 | 46.5 | 55.0 | 40.8 |
| 5/3/2011 | 47.7 | 52.2 | 44.8 | 48.1 | 53.7 | 44.2 | 48.5 | 55.6 | 43.6 | 48.9 | 56.8 | 43.5 |
| 5/4/2011 | 47.5 | 52.3 | 44.6 | 47.8 | 53.6 | 44.0 | 48.2 | 55.5 | 43.4 | 48.7 | 56.6 | 43.3 |
| 5/5/2011 | 48.1 | 52.8 | 44.7 | 48.6 | 54.3 | 44.3 | 49.0 | 56.3 | 43.7 | 49.3 | 57.4 | 43.7 |
| 5/6/2011 | 49.0 | 53.2 | 46.0 | 49.4 | 54.6 | 45.5 | 49.8 | 56.4 | 44.9 | 50.1 | 57.6 | 44.8 |
| 5/7/2011 | 48.6 | 51.3 | 46.6 | 48.8 | 52.0 | 46.3 | 48.9 | 52.2 | 45.9 | 49.1 | 52.3 | 45.9 |
| 5/8/2011 | 49.0 | 52.5 | 46.1 | 48.9 | 52.6 | 45.9 | 49.0 | 53.7 | 45.3 | 49.4 | 54.9 | 45.7 |
| 5/9/2011 | 46.3 | 49.0 | 44.8 | 45.4 | 48.6 | 43.8 | 44.9 | 48.3 | 43.2 | 45.0 | 48.0 | 43.2 |
| 5/10/2011 | 47.0 | 51.9 | 44.1 | 46.4 | 52.2 | 42.8 | 46.4 | 52.8 | 42.0 | 46.4 | 53.3 | 41.7 |
| 5/11/2011 | 48.3 | 53.0 | 45.3 | 48.3 | 53.6 | 44.5 | 48.6 | 55.1 | 43.9 | 48.9 | 56.4 | 43.9 |
| 5/12/2011 | 49.9 | 54.0 | 47.2 | 50.1 | 55.3 | 46.5 | 50.5 | 56.9 | 46.1 | 50.8 | 58.0 | 46.0 |
| 5/13/2011 | 50.1 | 54.2 | 47.6 | 50.4 | 55.5 | 47.1 | 50.7 | 57.1 | 46.5 | 50.9 | 58.1 | 46.5 |
| 5/14/2011 | 50.0 | 53.9 | 47.6 | 50.1 | 54.6 | 47.3 | 50.2 | 55.5 | 46.9 | 50.6 | 56.1 | 46.9 |
| 5/15/2011 | 48.7 | 51.5 | 47.0 | 48.1 | 51.5 | 46.1 | 48.0 | 52.4 | 45.5 | 48.2 | 53.1 | 45.4 |
| 5/16/2011 | 48.5 | 51.9 | 46.6 | 47.8 | 52.1 | 45.3 | 47.7 | 52.9 | 44.5 | 47.7 | 53.5 | 44.2 |
| 5/17/2011 | 48.1 | 50.2 | 46.8 | 47.8 | 50.8 | 46.3 | 47.8 | 52.0 | 45.7 | 48.0 | 52.8 | 45.6 |
| 5/18/2011 | 47.8 | 50.8 | 46.1 | 47.3 | 51.0 | 45.1 | 47.2 | 51.5 | 44.7 | 47.2 | 51.6 | 44.7 |
| 5/19/2011 | 48.0 | 50.6 | 46.5 | 47.7 | 50.9 | 45.8 | 47.7 | 52.2 | 45.4 | 47.8 | 52.0 | 45.3 |
| 5/20/2011 | 48.8 | 53.3 | 45.8 | 48.9 | 54.5 | 45.0 | 49.4 | 56.2 | 44.4 | 49.6 | 57.2 | 44.3 |
| 5/21/2011 | 50.1 | 54.1 | 47.5 | 50.4 | 55.5 | 47.3 | 50.9 | 57.3 | 46.8 | 51.1 | 58.4 | 46.8 |
| 5/22/2011 | 49.7 | 52.4 | 47.4 | 49.7 | 53.1 | 46.9 | 49.9 | 54.3 | 46.4 | 50.1 | 55.0 | 46.4 |
| 5/23/2011 | 49.7 | 54.0 | 47.0 | 49.8 | 54.9 | 46.3 | 50.0 | 56.4 | 45.7 | 50.3 | 57.2 | 45.6 |
| 5/24/2011 | 49.9 | 54.0 | 47.1 | 49.9 | 54.9 | 46.2 | 50.2 | 56.6 | 45.4 | 50.4 | 57.5 | 45.3 |
| 5/25/2011 | 49.9 | 53.9 | 47.2 | 49.9 | 54.9 | 47.0 | 50.0 | 56.3 | 46.8 | 50.3 | 57.0 | 46.7 |
| 5/26/2011 | 49.6 | 54.3 | 47.3 | 49.6 | 55.0 | 46.6 | 50.1 | 56.4 | 46.1 | 50.4 | 57.1 | 46.0 |
| 5/27/2011 | 50.4 | 55.2 | 47.8 | 50.5 | 56.3 | 47.3 | 50.5 | 57.3 | 46.8 | 50.6 | 58.2 | 46.7 |
| 5/28/2011 | 50.3 | 54.2 | 48.4 | 50.2 | 55.0 | 47.9 | 50.4 | 56.3 | 47.5 | 50.7 | 57.0 | 47.3 |
| 5/29/2011 | 49.3 | 51.9 | 47.6 | 48.7 | 52.1 | 46.5 | 48.7 | 53.4 | 45.9 | 48.8 | 53.9 | 45.7 |
| 5/30/2011 | 49.8 | 53.6 | 47.0 | 49.4 | 53.9 | 45.7 | 49.5 | 55.0 | 44.9 | 49.6 | 55.8 | 44.7 |
| 5/31/2011 | 49.3 | 52.9 | 46.8 | 49.1 | 53.5 | 46.5 | 49.2 | 54.6 | 46.1 | 49.5 | 55.5 | 46.2 |
| 6/1/2011 | 48.4 | 52.5 | 46.1 | 48.2 | 53.1 | 45.2 | 48.3 | 54.0 | 44.9 | 48.5 | 54.9 | 44.8 |
| 6/2/2011 | 48.8 | 52.9 | 46.2 | 48.3 | 53.5 | 45.0 | 48.5 | 54.8 | 44.3 | 48.7 | 55.7 | 44.1 |
| 6/3/2011 | 48.9 | 51.8 | 46.7 | 48.4 | 52.0 | 45.5 | 48.3 | 52.2 | 44.8 | 48.3 | 52.6 | 44.6 |
| 6/4/2011 | 49.4 | 51.0 | 48.4 | 49.2 | 51.1 | 47.9 | 49.3 | 51.6 | 47.6 | 49.5 | 52.2 | 47.6 |
| 6/5/2011 | 50.7 | 54.3 | 48.7 | 50.9 | 55.5 | 48.3 | 51.2 | 56.6 | 48.1 | 51.7 | 58.1 | 48.2 |
| 6/6/2011 | 50.5 | 54.6 | 48.9 | 50.7 | 55.5 | 48.7 | 50.9 | 55.9 | 48.5 | 51.4 | 57.3 | 48.5 |
| 6/7/2011 | 50.6 | 54.5 | 48.4 | 50.8 | 55.4 | 47.9 | 51.1 | 56.3 | 47.6 | 51.6 | 58.2 | 47.5 |
| 6/8/2011 | 51.5 | 55.8 | 48.5 | 51.8 | 57.0 | 48.0 | 52.0 | 57.9 | 47.6 | 52.5 | 59.5 | 47.6 |
| 6/9/2011 | 52.4 | 56.2 | 49.6 | 52.7 | 57.3 | 49.2 | 53.0 | 58.7 | 48.7 | 53.4 | 60.3 | 48.6 |
| 6/10/2011 | 53.0 | 56.7 | 50.1 | 53.5 | 58.0 | 49.9 | 53.7 | 59.1 | 49.6 | 54.2 | 60.5 | 49.5 |
| 6/11/2011 | 53.0 | 56.1 | 50.6 | 53.2 | 57.1 | 50.2 | 53.2 | 57.3 | 49.8 | 53.5 | 58.5 | 49.7 |
| 6/12/2011 | 53.3 | 56.5 | 51.1 | 54.0 | 57.9 | 51.0 | 54.3 | 59.0 | 50.9 | 54.9 | 60.5 | 51.1 |
| 6/13/2011 | 53.8 | 57.0 | 51.3 | 54.5 | 58.4 | 51.3 | 54.7 | 59.7 | 50.9 | 55.2 | 61.2 | 51.0 |
| 6/14/2011 | 55.8 | 59.0 | 53.3 | 56.4 | 60.4 | 53.1 | 56.3 | 60.7 | 52.6 | 56.9 | 62.8 | 52.7 |
| 6/15/2011 | 55.8 | 58.3 | 53.7 | 56.4 | 59.7 | 53.6 | 56.1 | 60.0 | 53.0 | 57.1 | 62.2 | 53.3 |
| 6/16/2011 | 55.8 | 59.1 | 53.5 | 56.0 | 59.7 | 52.9 | 54.8 | 57.9 | 52.1 | 56.5 | 61.5 | 52.4 |
| 6/17/2011 | 55.0 | 58.1 | 53.1 | 55.1 | 58.6 | 52.3 | 53.9 | 57.6 | 51.1 | 55.6 | 60.8 | 51.7 |
| 6/18/2011 | 55.4 | 57.9 | 53.3 | 55.5 | 58.4 | 52.8 | 53.7 | 56.6 | 51.5 | 56.0 | 60.3 | 52.4 |
| 6/19/2011 | 55.1 | 58.1 | 52.5 | 55.3 | 58.7 | 52.9 | 52.1 | 53.7 | 50.6 | 56.1 | 60.9 | 52.9 |
| 6/20/2011 | 55.0 | 58.2 | 52.8 | 55.0 | 59.0 | 51.9 | 55.2 | 60.2 | 51.1 | 55.6 | 61.2 | 51.5 |
| 6/21/2011 | 55.9 | 58.9 | 53.7 | 56.1 | 59.9 | 53.1 | 56.4 | 61.1 | 52.6 | 56.7 | 62.1 | 52.8 |
| 6/22/2011 | 56.9 | 59.7 | 55.0 | 57.2 | 60.8 | 54.6 | 57.5 | 61.8 | 54.2 | 57.9 | 62.7 | 54.3 |
| 6/23/2011 | 56.9 | 59.7 | 55.0 | 57.0 | 60.5 | 54.3 | 57.1 | 61.5 | 53.9 | 57.6 | 62.4 | 53.9 |
| 6/24/2011 | 56.5 | 59.4 | 54.4 | 56.3 | 59.9 | 53.2 | 56.3 | 60.9 | 52.8 | 56.9 | 62.1 | 52.8 |
| 6/25/2011 | 56.6 | 59.7 | 54.4 | 56.2 | 60.0 | 53.1 | 55.9 | 60.1 | 52.5 | 56.8 | 62.1 | 52.7 |
| 6/26/2011 | 56.4 | 58.8 | 54.3 | 56.1 | 59.5 | 53.1 | 56.0 | 60.2 | 52.6 | 56.7 | 61.6 | 52.6 |
| 6/27/2011 | 56.6 | 59.4 | 54.6 | 56.6 | 60.1 | 53.9 | 55.4 | 58.8 | 52.7 | 57.2 | 62.2 | 53.5 |
| 6/28/2011 | 56.9 | 62.3 | 54.4 | 56.7 | 61.9 | 54.1 | 54.7 | 58.9 | 52.6 | 57.2 | 63.2 | 53.8 |
| 6/29/2011 | 55.5 | 57.2 | 54.3 | 54.8 | 56.8 | 53.5 | 53.2 | 54.4 | 52.1 | 55.1 | 57.2 | 53.7 |
| 6/30/2011 | 56.0 | 58.7 | 53.8 | 55.5 | 59.1 | 52.4 | 54.6 | 58.1 | 51.5 | 56.0 | 61.2 | 51.9 |

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| Date | Rush above Parker |  |  | Below Narrows |  |  | Rush 10 CH Falls |  |  | Rush County Rd |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 7/1/2011 | 56.9 | 59.8 | 54.6 | 56.8 | 60.5 | 53.8 | 56.3 | 60.6 | 53.1 | 57.5 | 62.7 | 53.6 |
| 7/2/2011 | 57.4 | 60.3 | 55.3 | 57.5 | 61.1 | 54.6 | 56.5 | 60.6 | 53.2 | 58.2 | 63.3 | 54.3 |
| 7/3/2011 | 57.7 | 60.5 | 55.9 | 57.8 | 61.2 | 55.2 | 57.5 | 61.8 | 54.5 | 58.4 | 63.5 | 54.9 |
| 7/4/2011 | 57.6 | 61.1 | 55.6 | 57.8 | 61.7 | 55.0 | 57.3 | 61.5 | 54.1 | 58.6 | 63.7 | 54.9 |
| 7/5/2011 | 57.0 | 58.8 | 55.9 | 56.9 | 58.8 | 55.5 | 56.3 | 58.7 | 54.6 | 57.6 | 60.1 | 55.5 |
| 7/6/2011 | 56.7 | 58.8 | 55.1 | 56.9 | 59.4 | 54.6 | 56.5 | 59.8 | 54.2 | 57.7 | 61.6 | 54.8 |
| 7/7/2011 | 56.4 | 59.1 | 54.4 | 56.6 | 59.7 | 54.0 | 53.7 | 56.4 | 51.7 | 57.4 | 61.8 | 54.1 |
| 7/8/2011 | 56.1 | 58.8 | 54.2 | 56.3 | 59.4 | 54.1 | 54.0 | 57.2 | 51.8 | 57.0 | 62.0 | 53.6 |
| 7/9/2011 | 56.0 | 59.3 | 54.4 | 56.2 | 60.1 | 53.8 | 54.2 | 57.6 | 52.1 | 56.9 | 62.1 | 53.7 |
| 7/10/2011 | 55.7 | 58.2 | 53.9 | 55.7 | 58.8 | 53.1 | 54.0 | 57.2 | 51.5 | 56.2 | 60.7 | 52.6 |
| 7/11/2011 | 55.7 | 59.1 | 53.6 | 55.6 | 59.1 | 52.9 | 53.7 | 56.9 | 51.5 | 56.3 | 61.5 | 52.6 |
| 7/12/2011 | 55.6 | 58.3 | 53.7 | 55.6 | 58.9 | 53.1 | 53.5 | 56.4 | 51.2 | 56.3 | 61.0 | 52.7 |
| 7/13/2011 | 55.2 | 58.5 | 52.8 | 55.3 | 59.1 | 52.8 | 53.6 | 56.7 | 51.3 | 56.0 | 61.0 | 52.6 |
| 7/14/2011 | 55.0 | 58.8 | 52.6 | 55.1 | 59.5 | 52.0 | 53.8 | 57.6 | 51.1 | 55.7 | 61.3 | 51.6 |
| 7/15/2011 | 54.9 | 58.4 | 52.7 | 55.2 | 59.2 | 52.8 | 54.3 | 57.5 | 51.9 | 56.1 | 60.8 | 52.5 |
| 7/16/2011 | 54.8 | 58.5 | 52.1 | 54.9 | 59.1 | 51.6 | 54.3 | 58.5 | 51.0 | 55.5 | 61.4 | 51.1 |
| 7/17/2011 | 55.6 | 60.0 | 52.8 | 55.4 | 60.2 | 52.0 | 54.9 | 59.7 | 51.4 | 55.9 | 62.0 | 51.5 |
| 7/18/2011 | 56.2 | 60.2 | 53.5 | 55.9 | 60.4 | 52.5 | 55.4 | 59.8 | 52.1 | 56.4 | 62.3 | 52.2 |
| 7/19/2011 | 56.8 | 60.3 | 54.8 | 56.4 | 60.5 | 53.8 | 56.1 | 60.3 | 53.2 | 57.0 | 62.5 | 53.3 |
| 7/20/2011 | 57.7 | 61.1 | 55.1 | 57.3 | 61.3 | 54.3 | 56.9 | 60.9 | 53.6 | 57.9 | 63.6 | 53.7 |
| 7/21/2011 | 57.9 | 61.3 | 55.1 | 57.7 | 61.6 | 54.7 | 57.2 | 61.3 | 54.0 | 58.2 | 64.1 | 54.0 |
| 7/22/2011 | 58.4 | 61.7 | 55.7 | 58.3 | 62.1 | 55.4 | 57.9 | 61.9 | 54.7 | 58.9 | 64.4 | 54.9 |
| 7/23/2011 | 59.2 | 62.5 | 56.7 | 59.0 | 62.8 | 56.0 | 58.5 | 62.5 | 55.4 | 59.6 | 64.9 | 55.7 |
| 7/24/2011 | 59.1 | 62.1 | 57.1 | 59.0 | 62.3 | 56.6 | 58.5 | 62.0 | 55.9 | 59.5 | 64.3 | 56.0 |
| 7/25/2011 | 59.1 | 62.5 | 56.6 | 58.7 | 62.5 | 55.7 | 58.2 | 62.1 | 55.2 | 59.2 | 64.4 | 55.1 |
| 7/26/2011 | 59.2 | 62.5 | 56.8 | 58.6 | 62.4 | 55.5 | 58.0 | 61.9 | 54.8 | 58.9 | 64.5 | 54.6 |
| 7/27/2011 | 59.5 | 62.3 | 57.4 | 59.0 | 62.1 | 56.6 | 58.5 | 62.2 | 55.6 | 59.6 | 64.6 | 55.9 |
| 7/28/2011 | 59.8 | 62.6 | 57.8 | 59.4 | 62.6 | 57.0 | 59.0 | 62.7 | 56.2 | 60.0 | 64.9 | 56.5 |
| 7/29/2011 | 59.7 | 62.5 | 57.9 | 59.4 | 62.6 | 57.1 | 58.8 | 63.0 | 56.6 | 59.8 | 65.2 | 56.9 |
| 7/30/2011 | 59.5 | 61.9 | 57.6 | 59.0 | 61.9 | 56.9 | 57.9 | 60.5 | 55.9 | 59.4 | 63.6 | 56.6 |
| 7/31/2011 | 59.7 | 61.3 | 58.2 | 58.7 | 60.3 | 57.1 | 57.6 | 59.0 | 56.1 | 59.1 | 61.2 | 56.8 |
| 8/1/2011 | 60.7 | 63.3 | 58.8 | 59.8 | 62.6 | 57.6 | 58.5 | 61.6 | 56.3 | 60.4 | 64.8 | 57.4 |
| 8/2/2011 | 61.1 | 63.8 | 59.5 | 60.3 | 63.5 | 58.3 | 59.2 | 62.7 | 56.9 | 60.8 | 65.3 | 57.8 |
| 8/3/2011 | 61.1 | 64.2 | 59.4 | 60.4 | 63.9 | 58.0 | 59.4 | 63.0 | 56.7 | 60.7 | 66.0 | 57.3 |
| 8/4/2011 | 60.9 | 64.0 | 58.8 | 60.1 | 63.7 | 57.5 | 59.4 | 63.1 | 56.6 | 60.5 | 65.6 | 56.9 |
| 8/5/2011 | 60.4 | 63.8 | 58.2 | 59.8 | 63.5 | 57.1 | 59.2 | 63.3 | 56.3 | 60.2 | 65.7 | 56.4 |
| 8/6/2011 | 60.3 | 63.2 | 57.8 | 59.8 | 63.1 | 57.4 | 59.5 | 63.3 | 56.6 | 60.3 | 65.3 | 56.7 |
| 8/7/2011 | 59.9 | 63.5 | 57.4 | 59.4 | 63.4 | 56.1 | 59.1 | 63.5 | 55.5 | 59.7 | 65.4 | 55.2 |
| 8/8/2011 | 59.9 | 63.5 | 57.1 | 59.3 | 63.6 | 55.9 | 59.2 | 64.1 | 55.3 | 59.7 | 65.7 | 55.1 |
| 8/9/2011 | 59.8 | 63.4 | 57.2 | 59.3 | 63.5 | 56.0 | 59.3 | 64.3 | 55.5 | 59.7 | 65.8 | 55.3 |
| 8/10/2011 | 59.8 | 63.5 | 57.2 | 59.4 | 63.4 | 56.3 | 59.4 | 64.3 | 55.7 | 59.9 | 65.8 | 55.4 |
| 8/11/2011 | 59.5 | 63.6 | 57.0 | 59.2 | 63.5 | 56.3 | 59.3 | 64.6 | 55.6 | 59.8 | 66.1 | 55.4 |
| 8/12/2011 | 59.4 | 63.8 | 56.4 | 59.0 | 63.9 | 55.5 | 59.0 | 64.4 | 55.1 | 59.4 | 66.1 | 54.8 |
| 8/13/2011 | 59.1 | 63.6 | 56.5 | 58.7 | 63.3 | 55.7 | 58.8 | 63.4 | 55.3 | 59.2 | 65.0 | 54.9 |
| 8/14/2011 | 58.8 | 63.6 | 55.6 | 58.5 | 63.8 | 54.7 | 58.6 | 64.2 | 54.5 | 59.1 | 65.9 | 54.1 |
| 8/15/2011 | 58.3 | 62.5 | 55.1 | 58.0 | 62.7 | 54.6 | 58.2 | 63.3 | 54.4 | 58.6 | 65.1 | 53.9 |
| 8/16/2011 | 57.9 | 63.1 | 54.4 | 57.4 | 62.9 | 53.4 | 57.5 | 63.3 | 53.4 | 57.9 | 65.4 | 52.7 |
| 8/17/2011 | 57.8 | 63.3 | 54.1 | 57.4 | 63.1 | 53.1 | 57.6 | 63.6 | 53.0 | 57.8 | 65.3 | 52.4 |
| 8/18/2011 | 58.3 | 63.3 | 54.8 | 58.1 | 63.6 | 53.8 | 58.3 | 64.5 | 53.6 | 58.6 | 66.1 | 53.2 |
| 8/19/2011 | 58.6 | 63.6 | 55.3 | 58.5 | 64.0 | 54.8 | 58.8 | 65.0 | 54.6 | 59.2 | 66.6 | 54.3 |
| 8/20/2011 | 58.4 | 64.1 | 54.6 | 58.1 | 63.9 | 53.9 | 58.4 | 64.7 | 53.8 | 58.7 | 66.3 | 53.6 |
| 8/21/2011 | 58.2 | 64.1 | 53.9 | 57.6 | 63.7 | 52.9 | 57.8 | 64.2 | 52.9 | 58.1 | 65.6 | 52.5 |
| 8/22/2011 | 58.3 | 63.8 | 53.9 | 57.6 | 63.1 | 52.8 | 57.6 | 62.9 | 52.9 | 57.7 | 64.2 | 52.5 |
| 8/23/2011 | 59.2 | 64.6 | 55.4 | 59.0 | 64.7 | 54.8 | 59.2 | 65.1 | 54.7 | 59.7 | 67.0 | 54.4 |
| 8/24/2011 | 59.2 | 64.9 | 55.6 | 59.2 | 64.9 | 55.2 | 59.4 | 65.2 | 55.3 | 59.9 | 67.0 | 55.0 |
| 8/25/2011 | 59.1 | 64.7 | 54.8 | 58.8 | 64.3 | 54.4 | 59.1 | 64.7 | 54.7 | 59.4 | 66.4 | 54.1 |
| 8/26/2011 | 59.4 | 64.5 | 55.3 | 58.7 | 63.7 | 54.4 | 58.9 | 63.9 | 54.6 | 59.1 | 65.0 | 54.3 |
| 8/27/2011 | 60.6 | 65.9 | 57.2 | 60.4 | 65.5 | 57.1 | 60.8 | 66.2 | 57.2 | 61.4 | 67.8 | 57.1 |
| 8/28/2011 | 60.0 | 66.2 | 56.1 | 59.5 | 64.9 | 55.4 | 59.8 | 65.4 | 55.6 | 60.1 | 67.2 | 55.3 |
| 8/29/2011 | 59.5 | 64.8 | 55.5 | 58.9 | 64.2 | 54.6 | 59.3 | 65.2 | 54.8 | 59.6 | 66.7 | 54.3 |
| 8/30/2011 | 59.4 | 65.0 | 55.6 | 58.6 | 64.2 | 54.6 | 58.8 | 64.9 | 54.3 | 59.0 | 66.3 | 53.8 |
| 8/31/2011 | 59.3 | 66.4 | 54.3 | 58.0 | 64.9 | 52.8 | 58.3 | 65.3 | 52.6 | 58.3 | 66.6 | 51.7 |

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| Date | Rush above Parker |  |  | Below Narrows |  |  | Rush 10 CH Falls |  |  | Rush County Rd |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 9/1/2011 | 59.2 | 66.0 | 54.9 | 58.1 | 64.8 | 53.4 | 58.3 | 65.0 | 53.3 | 58.4 | 66.2 | 52.6 |
| 9/2/2011 | 59.6 | 65.4 | 56.2 | 58.2 | 64.2 | 54.1 | 58.4 | 64.6 | 53.6 | 58.5 | 66.1 | 52.9 |
| 9/3/2011 | 59.8 | 66.0 | 56.1 | 58.5 | 64.8 | 54.0 | 58.7 | 65.1 | 53.8 | 58.8 | 66.6 | 52.9 |
| 9/4/2011 | 59.9 | 65.6 | 56.3 | 58.7 | 64.6 | 54.5 | 58.9 | 64.8 | 54.3 | 59.0 | 66.6 | 53.4 |
| 9/5/2011 | 59.7 | 65.3 | 56.1 | 58.7 | 63.7 | 55.0 | 58.8 | 63.8 | 55.3 | 58.8 | 64.3 | 54.6 |
| 9/6/2011 | 60.1 | 66.5 | 56.3 | 58.7 | 65.1 | 54.5 | 58.8 | 64.8 | 54.3 | 58.9 | 66.4 | 53.4 |
| 9/7/2011 | 60.0 | 66.5 | 56.2 | 59.0 | 66.5 | 54.3 | 59.2 | 65.7 | 54.3 | 59.4 | 67.4 | 53.3 |
| 9/8/2011 | 60.2 | 66.6 | 56.3 | 59.4 | 66.3 | 55.2 | 59.5 | 64.9 | 55.5 | 59.7 | 66.0 | 54.7 |
| 9/9/2011 | 58.9 | 63.3 | 56.6 | 57.8 | 62.2 | 55.2 | 57.7 | 60.8 | 55.0 | 57.6 | 62.0 | 54.0 |
| 9/10/2011 | 58.8 | 63.2 | 55.6 | 57.4 | 61.7 | 53.8 | 57.2 | 60.8 | 54.1 | 57.1 | 61.7 | 52.9 |
| 9/11/2011 | 58.6 | 62.9 | 56.3 | 57.2 | 61.6 | 54.7 | 57.1 | 60.6 | 54.8 | 57.2 | 61.8 | 54.1 |
| 9/12/2011 | 59.1 | 64.3 | 55.1 | 56.9 | 61.8 | 52.6 | 56.8 | 61.1 | 53.0 | 56.8 | 62.8 | 51.9 |
| 9/13/2011 | 59.7 | 63.7 | 57.0 | 58.0 | 62.2 | 55.0 | 58.2 | 61.9 | 55.3 | 58.5 | 63.9 | 54.6 |
| 9/14/2011 | 59.7 | 66.4 | 54.7 | 57.9 | 64.8 | 52.7 | 58.0 | 63.7 | 53.3 | 58.1 | 65.7 | 52.1 |
| 9/15/2011 | 59.1 | 64.3 | 55.2 | 57.5 | 62.5 | 53.2 | 57.6 | 61.6 | 53.8 | 57.7 | 63.1 | 52.5 |
| 9/16/2011 | 59.6 | 64.1 | 56.7 | 58.1 | 63.7 | 54.7 | 58.1 | 62.8 | 55.1 | 58.0 | 64.8 | 54.3 |
| 9/17/2011 | 58.8 | 65.3 | 54.0 | 57.0 | 63.8 | 51.6 | 56.9 | 62.3 | 52.3 | 56.8 | 64.1 | 50.4 |
| 9/18/2011 | 59.2 | 66.3 | 54.0 | 57.5 | 65.0 | 51.8 | 57.2 | 63.0 | 52.2 | 57.2 | 65.1 | 50.4 |
| 9/19/2011 | 59.1 | 65.5 | 54.4 | 57.7 | 64.9 | 52.5 | 57.6 | 63.0 | 53.0 | 57.6 | 64.8 | 51.4 |
| 9/20/2011 | 58.9 | 66.0 | 54.7 | 57.7 | 65.4 | 52.9 | 57.6 | 62.8 | 53.5 | 57.7 | 64.9 | 51.9 |
| 9/21/2011 | 59.2 | 65.8 | 54.8 | 57.9 | 64.9 | 52.9 | 57.7 | 63.4 | 53.3 | 57.8 | 65.7 | 51.5 |
| 9/22/2011 | 59.4 | 65.9 | 55.0 | 58.1 | 65.0 | 53.0 | 57.9 | 63.0 | 53.5 | 57.8 | 64.6 | 51.8 |
| 9/23/2011 | 58.6 | 63.5 | 54.6 | 57.3 | 62.6 | 52.7 | 57.4 | 61.5 | 53.3 | 57.3 | 64.6 | 51.5 |
| 9/24/2011 | 58.2 | 61.5 | 55.4 | 56.9 | 60.6 | 53.7 | 56.8 | 59.7 | 54.0 | 56.7 | 61.2 | 52.5 |
| 9/25/2011 | 58.3 | 63.0 | 54.8 | 57.0 | 62.2 | 53.1 | 56.7 | 60.6 | 53.4 | 56.5 | 61.4 | 52.0 |
| 9/26/2011 | 59.1 | 65.5 | 54.7 | 57.8 | 65.0 | 52.8 | 57.4 | 62.7 | 53.0 | 57.4 | 64.9 | 51.4 |
| 9/27/2011 | 59.2 | 65.8 | 54.6 | 57.9 | 65.4 | 52.8 | 57.8 | 63.3 | 53.3 | 57.8 | 65.2 | 51.6 |
| 9/28/2011 | 58.9 | 65.4 | 54.5 | 57.4 | 64.2 | 52.4 | 57.4 | 62.4 | 53.1 | 57.3 | 64.4 | 51.5 |
| 9/29/2011 | 59.0 | 65.7 | 54.6 | 57.5 | 64.8 | 52.6 | 57.5 | 62.7 | 53.2 | 57.4 | 64.0 | 51.5 |
| 9/30/2011 | 58.0 | 63.8 | 54.4 | 56.5 | 62.8 | 52.6 | 56.5 | 59.8 | 53.3 | 56.2 | 60.8 | 51.6 |
| 10/1/2011 | 57.7 | 62.1 | 54.8 | 56.4 | 61.4 | 53.0 | 56.1 | 60.0 | 53.2 | 55.9 | 61.5 | 51.8 |
| 10/2/2011 | 58.3 | 62.6 | 56.1 | 57.2 | 62.1 | 54.5 | 57.0 | 60.9 | 54.6 | 57.0 | 62.5 | 53.7 |
| 10/3/2011 | 56.9 | 61.0 | 54.9 | 55.6 | 60.4 | 53.2 | 55.5 | 58.5 | 53.3 | 55.1 | 60.0 | 52.0 |
| 10/4/2011 | 56.6 | 60.9 | 54.3 | 55.0 | 59.4 | 52.4 | 54.8 | 58.1 | 52.6 | 54.5 | 58.9 | 51.5 |
| 10/5/2011 | 54.2 | 57.8 | 52.0 | 51.9 | 55.6 | 49.0 | 52.1 | 55.0 | 49.8 | 51.7 | 55.8 | 48.7 |
| 10/6/2011 | 52.5 | 55.2 | 50.5 | 49.4 | 52.2 | 47.0 | 49.4 | 51.8 | 47.8 | 48.5 | 52.6 | 46.6 |
| 10/7/2011 | 53.3 | 58.7 | 49.7 | 50.1 | 56.4 | 45.8 | 49.7 | 54.8 | 45.8 | 49.1 | 56.3 | 43.9 |
| 10/8/2011 | 54.3 | 59.4 | 51.1 | 52.2 | 58.0 | 48.4 | 51.7 | 56.6 | 48.2 | 51.6 | 58.2 | 46.8 |
| 10/9/2011 | 54.4 | 58.9 | 51.6 | 52.7 | 58.0 | 49.3 | 52.3 | 56.8 | 48.9 | 52.2 | 58.6 | 47.6 |
| 10/10/2011 | 54.4 | 57.4 | 52.4 | 53.1 | 56.5 | 50.7 | 52.7 | 55.5 | 50.5 | 52.5 | 56.8 | 49.5 |
| 10/11/2011 | 55.1 | 58.7 | 53.1 | 54.2 | 58.7 | 51.6 | 54.0 | 58.2 | 51.4 | 54.1 | 60.0 | 50.5 |
| 10/12/2011 | 54.9 | 58.1 | 53.0 | 54.0 | 58.3 | 51.5 | 53.8 | 57.8 | 51.0 | 53.7 | 59.6 | 50.0 |
| 10/13/2011 | 55.1 | 57.8 | 53.5 | 54.5 | 58.3 | 52.2 | 54.3 | 57.9 | 51.8 | 54.2 | 59.6 | 51.1 |
| 10/14/2011 | 55.0 | 57.2 | 53.4 | 54.6 | 57.6 | 52.4 | 54.4 | 57.2 | 52.2 | 54.4 | 58.9 | 51.4 |
| 10/15/2011 | 55.1 | 56.3 | 53.7 | 54.7 | 56.5 | 52.8 | 54.5 | 56.1 | 52.6 | 54.4 | 57.6 | 52.0 |
| 10/16/2011 | 55.2 | 56.7 | 54.4 | 54.9 | 56.8 | 53.8 | 54.8 | 56.6 | 53.5 | 54.8 | 58.0 | 53.1 |
| 10/17/2011 | 55.3 | 57.3 | 54.3 | 54.9 | 57.5 | 53.6 | 54.7 | 57.3 | 53.2 | 54.8 | 58.5 | 52.7 |
| 10/18/2011 | 55.3 | 57.1 | 54.2 | 54.9 | 57.2 | 53.4 | 54.7 | 57.3 | 52.9 | 54.7 | 58.3 | 52.5 |
| 10/19/2011 | 55.1 | 56.7 | 54.1 | 54.7 | 56.9 | 53.4 | 54.5 | 57.0 | 53.1 | 54.5 | 57.9 | 52.6 |
| 10/20/2011 | 54.9 | 56.8 | 53.9 | 54.6 | 56.8 | 53.2 | 54.3 | 56.6 | 52.8 | 54.3 | 57.9 | 52.2 |
| 10/21/2011 | 54.8 | 56.6 | 53.9 | 54.5 | 56.6 | 53.1 | 54.2 | 56.7 | 52.7 | 54.1 | 57.7 | 52.0 |
| 10/22/2011 | 54.7 | 56.6 | 53.7 | 54.3 | 56.5 | 52.9 | 54.0 | 56.6 | 52.3 | 53.8 | 57.5 | 51.8 |
| 10/23/2011 | 54.7 | 56.5 | 53.6 | 54.3 | 56.4 | 52.8 | 54.0 | 56.5 | 52.3 | 53.9 | 57.5 | 51.7 |
| 10/24/2011 | 54.6 | 55.9 | 53.8 | 54.2 | 55.8 | 53.2 | 53.9 | 55.6 | 52.9 | 53.8 | 55.9 | 52.4 |
| 10/25/2011 | 54.0 | 55.8 | 53.2 | 53.5 | 55.8 | 52.4 | 53.2 | 55.9 | 51.9 | 53.1 | 56.6 | 51.4 |
| 10/26/2011 | 52.8 | 54.8 | 51.6 | 51.9 | 54.4 | 50.3 | 51.3 | 54.4 | 49.4 | 51.1 | 54.8 | 48.9 |
| 10/27/2011 | 52.4 | 55.0 | 51.1 | 51.2 | 54.4 | 49.5 | 50.6 | 54.3 | 48.5 | 50.3 | 54.7 | 47.8 |
| 10/28/2011 | 52.3 | 55.3 | 50.8 | 51.2 | 54.7 | 49.2 | 50.7 | 54.8 | 48.2 | 50.4 | 55.3 | 47.6 |
| 10/29/2011 | 52.1 | 55.9 | 50.4 | 50.9 | 55.2 | 48.7 | 50.4 | 55.2 | 47.7 | 50.2 | 55.6 | 47.1 |
| 10/30/2011 | 51.8 | 55.7 | 49.7 | 50.4 | 54.8 | 47.9 | 50.0 | 54.7 | 47.0 | 49.8 | 55.0 | 46.3 |
| 10/31/2011 | 51.5 | 55.7 | 49.1 | 50.0 | 54.7 | 47.2 | 49.7 | 54.6 | 46.3 | 49.4 | 54.9 | 45.5 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Rush above Parker |  |  | Below Narrows |  |  | Rush 10 CH Falls |  |  | Rush County Rd |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 11/1/2011 | 50.3 | 53.8 | 47.3 | 48.7 | 52.8 | 45.3 | 48.3 | 52.2 | 44.9 | 48.0 | 52.2 | 44.9 |
| 11/2/2011 | 48.6 | 53.0 | 45.9 | 46.3 | 51.1 | 43.3 | 45.6 | 50.4 | 42.2 | 44.8 | 50.2 | 40.7 |
| 11/3/2011 | 47.9 | 51.6 | 46.4 | 45.7 | 50.1 | 43.8 | 45.2 | 49.6 | 42.7 | 44.5 | 49.5 | 41.4 |
| 11/4/2011 | 47.4 | 50.3 | 45.8 | 45.3 | 48.4 | 43.5 | 44.8 | 47.5 | 42.8 | 44.1 | 47.0 | 42.0 |
| 11/5/2011 | 46.6 | 49.3 | 44.2 | 44.2 | 46.7 | 42.3 | 43.6 | 45.8 | 41.0 | 42.8 | 46.0 | 39.5 |
| 11/6/2011 | 47.3 | 50.6 | 45.2 | 45.1 | 48.5 | 42.9 | 44.6 | 47.6 | 42.5 | 44.1 | 47.3 | 41.7 |
| 11/7/2011 | 46.7 | 50.4 | 44.6 | 44.5 | 48.5 | 42.4 | 44.1 | 47.8 | 41.9 | 43.7 | 47.7 | 41.3 |
| 11/8/2011 | 45.7 | 49.8 | 43.2 | 43.4 | 46.3 | 41.5 | 42.9 | 46.2 | 40.5 | 42.2 | 46.9 | 39.0 |
| 11/9/2011 | 45.9 | 50.3 | 43.4 | 43.6 | 46.7 | 41.6 | 43.0 | 46.1 | 40.4 | 42.3 | 46.4 | 38.9 |
| 11/10/2011 | 45.9 | 49.5 | 43.4 | 43.8 | 47.6 | 41.5 | 43.3 | 46.8 | 40.6 | 42.7 | 46.4 | 39.4 |
| 11/11/2011 | 46.1 | 47.8 | 44.8 | 44.3 | 46.3 | 42.8 | 43.9 | 45.9 | 42.4 | 43.4 | 45.8 | 41.6 |
| 11/12/2011 | 46.8 | 50.5 | 44.7 | 45.4 | 49.4 | 43.2 | 45.2 | 48.7 | 43.3 | 45.1 | 49.3 | 43.0 |
| 11/13/2011 | 46.6 | 50.6 | 44.5 | 45.2 | 49.6 | 42.9 | 45.0 | 49.2 | 42.6 | 44.7 | 49.5 | 41.8 |
| 11/14/2011 | 46.3 | 50.2 | 44.4 | 44.9 | 49.2 | 42.6 | 44.7 | 48.8 | 42.5 | 44.4 | 49.0 | 41.7 |
| 11/15/2011 | 45.7 | 50.1 | 43.4 | 44.3 | 49.0 | 41.5 | 44.1 | 48.6 | 40.9 | 43.6 | 48.9 | 39.9 |
| 11/16/2011 | 45.5 | 49.8 | 43.1 | 44.1 | 48.8 | 41.3 | 43.8 | 48.3 | 40.8 | 43.4 | 48.3 | 39.8 |
| 11/17/2011 | 45.5 | 49.6 | 43.0 | 44.0 | 48.5 | 41.1 | 43.8 | 48.0 | 40.5 | 43.3 | 48.1 | 39.5 |
| 11/18/2011 | 43.6 | 46.9 | 40.8 | 42.3 | 45.9 | 39.6 | 42.4 | 45.4 | 39.8 | 42.0 | 45.0 | 39.4 |
| 11/19/2011 | 43.3 | 47.2 | 41.1 | 41.9 | 46.1 | 39.7 | 41.7 | 45.6 | 39.6 | 41.1 | 45.4 | 38.5 |
| 11/20/2011 | 42.5 | 44.4 | 41.5 | 41.2 | 43.0 | 40.1 | 41.0 | 42.8 | 40.0 | 40.4 | 42.6 | 39.1 |
| 11/21/2011 | 42.6 | 46.5 | 40.2 | 41.1 | 43.8 | 39.3 | 40.8 | 44.3 | 38.5 | 40.3 | 45.1 | 37.1 |
| 11/22/2011 | 42.8 | 46.9 | 40.6 | 41.2 | 43.9 | 39.5 | 41.0 | 44.0 | 38.8 | 40.4 | 44.7 | 37.5 |
| 11/23/2011 | 42.8 | 46.2 | 41.0 | 41.6 | 45.2 | 39.8 | 41.5 | 44.9 | 39.2 | 41.1 | 44.8 | 38.3 |
| 11/24/2011 | 42.3 | 45.9 | 40.9 | 41.3 | 45.0 | 39.6 | 41.3 | 44.8 | 39.5 | 41.0 | 45.1 | 38.8 |
| 11/25/2011 | 42.2 | 46.4 | 40.2 | 41.0 | 45.3 | 39.1 | 40.9 | 44.9 | 38.5 | 40.4 | 44.9 | 37.4 |
| 11/26/2011 | 42.2 | 46.2 | 40.0 | 41.0 | 45.1 | 38.9 | 40.8 | 44.6 | 38.3 | 40.3 | 44.5 | 37.1 |
| 11/27/2011 | 42.8 | 46.4 | 41.3 | 41.8 | 45.9 | 40.1 | 41.8 | 45.8 | 39.8 | 41.4 | 46.2 | 39.1 |
| 11/28/2011 | 42.2 | 45.6 | 40.3 | 41.2 | 44.9 | 39.0 | 41.2 | 44.6 | 38.7 | 40.7 | 44.9 | 37.8 |
| 11/29/2011 | 42.2 | 46.3 | 40.0 | 41.3 | 45.8 | 38.8 | 41.1 | 45.6 | 38.3 | 40.7 | 45.3 | 37.3 |
| 11/30/2011 | 41.5 | 44.1 | 39.2 | 40.6 | 43.5 | 38.2 | 40.1 | 43.2 | 37.5 | 40.1 | 42.9 | 37.5 |
| 12/1/2011 | 38.6 | 39.7 | 37.6 | 37.7 | 38.7 | 36.7 | 36.9 | 38.4 | 35.7 | 36.5 | 38.2 | 35.3 |
| 12/2/2011 | 39.2 | 42.9 | 37.0 | 38.2 | 41.7 | 36.3 | 37.4 | 41.6 | 34.9 | 36.9 | 41.3 | 34.0 |
| 12/3/2011 | 38.2 | 41.7 | 36.4 | 37.4 | 41.0 | 35.6 | 36.5 | 40.3 | 34.2 | 36.1 | 40.0 | 33.5 |
| 12/4/2011 | 38.4 | 42.5 | 36.2 | 37.5 | 41.6 | 35.4 | 36.7 | 41.4 | 33.9 | 36.1 | 41.0 | 32.9 |
| 12/5/2011 | 38.2 | 41.7 | 36.3 | 37.4 | 40.8 | 35.5 | 36.8 | 40.5 | 34.5 | 36.5 | 40.3 | 34.0 |
| 12/6/2011 | 37.8 | 42.0 | 35.7 | 37.0 | 41.1 | 34.8 | 36.2 | 40.7 | 33.4 | 35.7 | 40.4 | 32.5 |
| 12/7/2011 | 38.3 | 42.2 | 36.3 | 37.5 | 41.3 | 35.4 | 36.9 | 41.3 | 34.3 | 36.6 | 41.0 | 33.5 |
| 12/8/2011 | 38.3 | 41.6 | 36.7 | 37.4 | 40.8 | 35.8 | 36.9 | 40.8 | 34.7 | 36.6 | 40.6 | 34.1 |
| 12/9/2011 | 37.6 | 41.6 | 35.4 | 36.8 | 40.7 | 34.6 | 36.1 | 40.5 | 33.4 | 35.8 | 40.2 | 32.6 |
| 12/10/2011 | 37.2 | 40.6 | 35.1 | 36.4 | 39.8 | 34.2 | 35.6 | 39.6 | 32.9 | 35.2 | 39.3 | 32.2 |
| 12/11/2011 | 37.1 | 40.5 | 35.6 | 36.4 | 39.8 | 34.8 | 35.7 | 39.5 | 33.7 | 35.3 | 39.2 | 33.0 |
| 12/12/2011 | 37.0 | 40.0 | 35.0 | 36.3 | 39.1 | 34.2 | 35.6 | 38.8 | 33.0 | 35.1 | 38.5 | 32.3 |
| 12/13/2011 | 37.0 | 40.0 | 35.2 | 36.3 | 39.2 | 34.6 | 35.8 | 39.1 | 33.7 | 35.6 | 38.9 | 33.3 |
| 12/14/2011 | 36.4 | 40.0 | 34.4 | 35.7 | 39.2 | 33.7 | 35.1 | 38.9 | 32.6 | 34.8 | 38.8 | 32.0 |
| 12/15/2011 | 37.1 | 39.8 | 35.5 | 36.5 | 39.1 | 34.9 | 36.0 | 38.9 | 34.3 | 35.8 | 38.7 | 33.9 |
| 12/16/2011 | 37.5 | 40.7 | 35.6 | 36.8 | 39.9 | 34.9 | 36.4 | 39.9 | 34.0 | 36.1 | 39.9 | 33.4 |
| 12/17/2011 | 36.5 | 40.1 | 34.9 | 35.9 | 39.4 | 34.2 | 35.3 | 39.1 | 33.1 | 35.0 | 38.8 | 32.4 |
| 12/18/2011 | 36.2 | 40.1 | 34.0 | 35.7 | 39.5 | 33.4 | 35.2 | 39.5 | 32.5 | 34.9 | 39.3 | 32.0 |
| 12/19/2011 | 36.6 | 39.6 | 34.5 | 36.1 | 39.1 | 34.0 | 35.8 | 39.8 | 33.2 | 35.6 | 39.8 | 32.7 |
| 12/20/2011 | 36.2 | 39.9 | 34.2 | 35.6 | 39.3 | 33.5 | 35.1 | 39.0 | 32.5 | 34.9 | 38.7 | 32.0 |
| 12/21/2011 | 36.1 | 40.3 | 34.4 | 35.6 | 39.7 | 33.8 | 35.1 | 39.7 | 32.7 | 34.9 | 39.5 | 32.2 |
| 12/22/2011 | 35.0 | 38.9 | 33.0 | 34.4 | 38.4 | 32.3 | 33.5 | 37.6 | 31.9 | 33.1 | 36.9 | 32.0 |
| 12/23/2011 | 34.9 | 38.7 | 32.3 | 34.3 | 38.1 | 32.0 | 33.5 | 37.3 | 31.9 | 33.0 | 36.6 | 32.0 |
| 12/24/2011 | 35.4 | 39.2 | 33.2 | 34.9 | 38.7 | 32.6 | 34.2 | 38.3 | 31.9 | 33.8 | 37.8 | 32.0 |
| 12/25/2011 | 36.1 | 40.4 | 34.0 | 35.6 | 39.8 | 33.4 | 34.9 | 39.4 | 32.2 | 34.5 | 38.9 | 32.0 |
| 12/26/2011 | 36.2 | 40.0 | 34.1 | 35.6 | 39.4 | 33.5 | 35.1 | 39.3 | 32.3 | 34.8 | 38.9 | 32.0 |
| 12/27/2011 | 36.9 | 40.9 | 34.9 | 36.4 | 40.3 | 34.3 | 35.9 | 40.1 | 33.4 | 35.6 | 39.9 | 32.7 |
| 12/28/2011 | 38.1 | 41.6 | 35.7 | 37.5 | 40.9 | 35.1 | 37.3 | 41.1 | 34.4 | 37.1 | 41.1 | 34.1 |
| 12/29/2011 | 38.3 | 41.6 | 36.5 | 37.8 | 40.9 | 36.0 | 37.7 | 40.9 | 35.5 | 37.6 | 40.8 | 35.3 |
| 12/30/2011 | 37.4 | 40.8 | 35.4 | 36.9 | 40.3 | 35.1 | 36.8 | 40.9 | 34.5 | 36.9 | 41.1 | 34.0 |
| 12/31/2011 | 36.2 | 40.0 | 34.0 | 35.7 | 39.5 | 33.5 | 35.4 | 39.5 | 32.6 | 35.2 | 39.4 | 32.1 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Rush above Parker |  |  | Below Narrows |  |  | Rush 10 CH Falls |  |  | Rush County Rd |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 1/1/2012 | 36.6 | 40.4 | 34.8 | 36.1 | 39.9 | 34.2 | 35.7 | 40.0 | 33.2 | 35.6 | 40.0 | 32.6 |
| 1/2/2012 | 36.9 | 40.7 | 34.7 | 36.4 | 40.1 | 34.1 | 36.2 | 40.3 | 33.3 | 36.0 | 40.4 | 32.9 |
| 1/3/2012 | 37.2 | 40.7 | 35.5 | 36.9 | 40.5 | 35.2 | 36.9 | 40.9 | 35.0 | 37.0 | 41.0 | 34.9 |
| 1/4/2012 | 37.0 | 40.8 | 35.2 | 36.7 | 40.6 | 34.8 | 36.6 | 40.9 | 34.1 | 36.5 | 40.9 | 33.7 |
| 1/5/2012 | 37.3 | 41.0 | 35.6 | 37.1 | 40.8 | 35.2 | 37.0 | 41.1 | 34.5 | 36.9 | 41.2 | 34.1 |
| 1/6/2012 | 36.9 | 40.7 | 34.8 | 36.6 | 40.4 | 34.3 | 36.4 | 40.6 | 33.6 | 36.4 | 40.5 | 33.2 |
| 1/7/2012 | 36.0 | 39.6 | 34.3 | 35.6 | 39.3 | 33.8 | 35.1 | 39.2 | 33.0 | 35.1 | 39.0 | 32.6 |
| 1/8/2012 | 35.8 | 39.9 | 33.5 | 35.3 | 39.3 | 33.0 | 34.6 | 39.1 | 31.9 | 34.2 | 38.8 | 32.0 |
| 1/9/2012 | 36.8 | 40.8 | 34.8 | 36.3 | 40.1 | 34.2 | 35.8 | 40.3 | 33.2 | 35.6 | 40.3 | 32.6 |
| 1/10/2012 | 37.0 | 40.8 | 35.1 | 36.5 | 40.3 | 34.5 | 36.2 | 40.5 | 33.8 | 36.1 | 40.6 | 33.3 |
| 1/11/2012 | 36.3 | 40.3 | 34.1 | 35.8 | 39.6 | 33.6 | 35.3 | 39.7 | 32.6 | 35.2 | 39.7 | 32.0 |
| 1/12/2012 | 35.9 | 40.2 | 33.8 | 35.4 | 39.6 | 33.3 | 34.9 | 39.6 | 32.2 | 34.6 | 39.5 | 32.0 |
| 1/13/2012 | 35.7 | 39.9 | 33.4 | 35.2 | 39.5 | 32.9 | 34.5 | 39.5 | 31.9 | 34.3 | 39.2 | 32.0 |
| 1/14/2012 | 35.9 | 40.3 | 33.5 | 35.4 | 39.9 | 33.0 | 34.8 | 39.8 | 31.9 | 34.4 | 39.5 | 32.0 |
| 1/15/2012 | 35.9 | 40.1 | 33.9 | 35.4 | 39.6 | 33.4 | 35.0 | 39.5 | 32.4 | 34.7 | 39.1 | 32.0 |
| 1/16/2012 | 35.0 | 38.5 | 33.1 | 34.6 | 38.2 | 32.8 | 34.0 | 37.9 | 32.0 | 33.8 | 37.6 | 32.0 |
| 1/17/2012 | 35.0 | 39.4 | 32.5 | 34.6 | 39.2 | 32.0 | 33.9 | 38.5 | 31.9 | 33.5 | 37.8 | 32.0 |
| 1/18/2012 | 37.5 | 41.4 | 35.5 | 37.0 | 41.0 | 35.1 | 37.0 | 41.0 | 34.6 | 36.9 | 40.8 | 34.4 |
| 1/19/2012 | 36.8 | 39.9 | 34.8 | 36.4 | 39.6 | 34.4 | 36.4 | 40.4 | 33.6 | 36.5 | 40.9 | 33.2 |
| 1/20/2012 | 37.4 | 39.2 | 36.2 | 37.1 | 38.9 | 35.9 | 37.4 | 39.0 | 35.7 | 37.5 | 39.5 | 35.6 |
| 1/21/2012 | 36.0 | 38.0 | 33.4 | 35.4 | 37.3 | 32.9 | 35.4 | 37.7 | 32.3 | 35.8 | 38.3 | 32.6 |
| 1/22/2012 | 35.4 | 38.9 | 33.1 | 34.8 | 37.9 | 32.7 | 34.5 | 38.3 | 32.0 | 34.2 | 38.2 | 32.0 |
| 1/23/2012 | 36.2 | 38.3 | 34.6 | 35.7 | 37.6 | 34.3 | 35.9 | 38.1 | 34.3 | 36.1 | 38.4 | 34.2 |
| 1/24/2012 | 36.3 | 39.7 | 34.1 | 35.8 | 39.1 | 33.7 | 35.9 | 39.5 | 33.6 | 36.0 | 39.7 | 33.5 |
| 1/25/2012 | 36.6 | 40.8 | 34.5 | 36.3 | 40.6 | 34.1 | 36.4 | 41.1 | 33.7 | 36.6 | 41.3 | 33.5 |
| 1/26/2012 | 37.1 | 42.1 | 34.7 | 36.9 | 42.0 | 34.3 | 37.0 | 42.5 | 33.7 | 37.1 | 42.8 | 33.5 |
| 1/27/2012 | 36.9 | 40.4 | 34.7 | 36.8 | 40.4 | 34.5 | 36.9 | 41.1 | 34.2 | 37.2 | 41.6 | 35.1 |
| 1/28/2012 | 35.7 | 40.1 | 33.2 | 35.3 | 39.6 | 32.8 | 35.0 | 39.9 | 32.0 | 34.9 | 40.1 | 32.0 |
| 1/29/2012 | 36.1 | 40.1 | 33.9 | 35.6 | 39.2 | 33.6 | 35.4 | 40.0 | 32.7 | 35.3 | 40.3 | 32.2 |
| 1/30/2012 | 37.3 | 41.0 | 35.4 | 37.0 | 40.7 | 35.0 | 37.1 | 41.2 | 34.6 | 37.2 | 41.5 | 34.5 |
| 1/31/2012 | 37.3 | 41.6 | 34.7 | 37.1 | 41.4 | 34.3 | 37.2 | 41.8 | 34.0 | 37.4 | 42.0 | 33.8 |
| 2/1/2012 | 36.6 | 40.9 | 34.4 | 36.4 | 40.7 | 34.1 | 36.6 | 41.0 | 33.9 | 36.8 | 41.1 | 33.7 |
| 2/2/2012 | 35.7 | 40.7 | 33.0 | 35.2 | 39.5 | 32.5 | 35.0 | 40.0 | 32.0 | 35.0 | 40.1 | 32.0 |
| 2/3/2012 | 35.0 | 40.6 | 31.9 | 34.4 | 39.3 | 31.9 | 33.9 | 39.2 | 32.0 | 33.7 | 38.5 | 32.0 |
| 2/4/2012 | 35.1 | 40.5 | 32.1 | 34.5 | 39.5 | 31.9 | 34.1 | 39.6 | 32.0 | 33.9 | 39.2 | 32.0 |
| 2/5/2012 | 35.2 | 40.6 | 32.3 | 34.7 | 39.7 | 32.0 | 34.3 | 39.9 | 32.0 | 34.1 | 39.8 | 32.0 |
| 2/6/2012 | 35.1 | 40.1 | 32.0 | 34.5 | 39.1 | 32.0 | 34.2 | 39.4 | 32.0 | 34.0 | 38.9 | 32.0 |
| 2/7/2012 | 36.0 | 38.5 | 34.6 | 35.6 | 37.9 | 34.1 | 35.6 | 38.3 | 33.9 | 35.6 | 38.3 | 33.7 |
| 2/8/2012 | 36.5 | 42.2 | 33.0 | 36.1 | 41.4 | 32.7 | 36.2 | 41.8 | 32.3 | 36.3 | 42.0 | 32.1 |
| 2/9/2012 | 37.1 | 43.3 | 33.4 | 36.6 | 42.4 | 32.9 | 36.5 | 42.5 | 32.3 | 36.6 | 42.6 | 32.0 |
| 2/10/2012 | 37.4 | 43.6 | 33.9 | 37.1 | 43.3 | 33.5 | 37.2 | 43.6 | 32.8 | 37.4 | 43.7 | 32.5 |
| 2/11/2012 | 37.0 | 42.2 | 33.6 | 36.8 | 42.0 | 33.3 | 37.0 | 42.4 | 32.9 | 37.1 | 42.6 | 32.6 |
| 2/12/2012 | 37.9 | 43.1 | 34.3 | 37.7 | 42.8 | 33.9 | 37.7 | 43.0 | 33.5 | 37.8 | 43.2 | 33.4 |
| 2/13/2012 | 37.1 | 40.8 | 35.3 | 36.9 | 40.3 | 35.1 | 37.1 | 41.0 | 35.0 | 37.5 | 41.6 | 34.8 |
| 2/14/2012 | 37.7 | 43.1 | 35.1 | 37.5 | 42.8 | 34.7 | 37.6 | 43.1 | 34.5 | 37.7 | 43.3 | 34.4 |
| 2/15/2012 | 35.6 | 39.9 | 32.7 | 35.1 | 38.7 | 32.4 | 34.8 | 37.8 | 32.3 | 34.8 | 37.4 | 32.0 |
| 2/16/2012 | 36.6 | 42.4 | 33.3 | 36.0 | 41.2 | 32.8 | 35.7 | 41.6 | 32.2 | 35.7 | 41.8 | 32.0 |
| 2/17/2012 | 36.6 | 43.6 | 32.5 | 35.8 | 41.2 | 32.0 | 35.7 | 42.3 | 32.0 | 35.6 | 42.9 | 32.0 |
| 2/18/2012 | 36.7 | 40.9 | 33.9 | 36.1 | 39.8 | 33.4 | 35.9 | 39.8 | 32.5 | 35.9 | 40.0 | 32.1 |
| 2/19/2012 | 36.9 | 42.3 | 34.1 | 36.4 | 41.8 | 33.6 | 36.3 | 41.8 | 33.0 | 36.4 | 42.0 | 32.6 |
| 2/20/2012 | 37.9 | 43.6 | 34.7 | 37.5 | 43.1 | 34.2 | 37.6 | 43.2 | 33.7 | 37.6 | 43.4 | 33.5 |
| 2/21/2012 | 37.9 | 43.4 | 34.7 | 37.6 | 43.1 | 34.2 | 37.7 | 43.4 | 33.6 | 37.8 | 43.4 | 33.2 |
| 2/22/2012 | 38.5 | 44.8 | 35.0 | 38.2 | 44.7 | 34.5 | 38.5 | 45.4 | 33.9 | 38.7 | 45.7 | 33.6 |
| 2/23/2012 | 38.4 | 44.7 | 35.0 | 38.3 | 44.6 | 34.5 | 38.4 | 45.2 | 34.0 | 38.7 | 45.6 | 33.7 |
| 2/24/2012 | 38.6 | 45.9 | 34.4 | 38.3 | 45.6 | 33.8 | 38.4 | 46.1 | 33.1 | 38.6 | 46.1 | 32.7 |
| 2/25/2012 | 38.1 | 44.3 | 34.8 | 38.1 | 44.4 | 34.4 | 38.3 | 44.7 | 34.2 | 38.8 | 44.9 | 34.1 |
| 2/26/2012 | 36.4 | 43.4 | 32.4 | 35.8 | 42.2 | 32.0 | 35.5 | 42.1 | 32.0 | 35.5 | 41.7 | 32.0 |
| 2/27/2012 | 36.6 | 42.4 | 34.1 | 36.1 | 40.6 | 33.6 | 36.1 | 41.8 | 32.9 | 36.0 | 41.7 | 32.3 |
| 2/28/2012 | 37.3 | 44.1 | 32.7 | 36.5 | 41.6 | 32.1 | 36.3 | 43.0 | 32.0 | 36.2 | 43.1 | 32.0 |
| 2/29/2012 | 36.4 | 40.0 | 34.7 | 35.9 | 39.0 | 34.2 | 35.9 | 39.6 | 33.6 | 36.2 | 39.7 | 33.5 |

FINAL REPORT: Monitoring Results and Analyses for RY2011-12

| Date | Rush above Parker |  |  | Below Narrows |  |  | Rush 10 CH Falls |  |  | Rush County Rd |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min |
| 3/1/2012 | 36.3 | 41.6 | 33.6 | 35.8 | 41.0 | 33.2 | 36.0 | 42.0 | 32.6 | 36.0 | 43.4 | 32.1 |
| 3/2/2012 | 37.6 | 44.7 | 33.2 | 37.0 | 43.6 | 32.9 | 37.0 | 43.9 | 32.2 | 37.1 | 44.3 | 32.0 |
| 3/3/2012 | 38.4 | 46.2 | 33.9 | 37.8 | 45.1 | 33.4 | 37.9 | 45.1 | 32.3 | 38.0 | 45.9 | 32.0 |
| 3/4/2012 | 39.1 | 46.8 | 34.6 | 38.8 | 46.7 | 34.1 | 39.2 | 47.4 | 33.4 | 39.5 | 47.6 | 33.1 |
| 3/5/2012 | 39.1 | 46.8 | 34.7 | 38.9 | 46.9 | 34.1 | 39.1 | 47.5 | 33.3 | 39.5 | 47.8 | 33.0 |
| 3/6/2012 | 37.0 | 42.4 | 33.4 | 36.8 | 42.4 | 33.0 | 37.1 | 43.1 | 32.8 | 37.6 | 43.2 | 34.1 |
| 3/7/2012 | 36.1 | 43.9 | 31.9 | 35.3 | 42.2 | 32.0 | 35.0 | 42.3 | 32.0 | 34.8 | 42.0 | 32.0 |
| 3/8/2012 | 38.0 | 46.3 | 33.0 | 37.1 | 43.8 | 32.4 | 36.9 | 44.5 | 32.0 | 36.9 | 45.2 | 32.0 |
| 3/9/2012 | 38.9 | 47.1 | 34.0 |  |  |  |  |  |  |  |  |  |
| 3/10/2012 | 39.2 | 46.8 | 34.5 |  |  |  |  |  |  |  |  |  |
| 3/11/2012 | 39.9 | 47.6 | 35.7 |  |  |  |  |  |  |  |  |  |
| 3/12/2012 | 39.5 | 45.8 | 36.0 |  |  |  |  |  |  |  |  |  |
| 3/13/2012 | 38.9 | 44.4 | 36.0 |  |  |  |  |  |  |  |  |  |


[^0]:    * RY2007 was not included because no weather data were collected during most of the 2007-08 winter due to equipment malfunction.

