

**ANALYSIS OF THE 2012 AMERICAN SHAD RADIO
TELEMETRY ANIMATIONS
RSP 3.5**

CONOWINGO HYDROELECTRIC PROJECT

FERC PROJECT NUMBER 405



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September 2012

EXECUTIVE SUMMARY

Exelon Generation Company, LLC (Exelon) is in the process of relicensing the 573-megawatt Conowingo Hydroelectric Project (Conowingo Project) with the Federal Energy Regulatory Commission (FERC). The final study plan determination required Exelon to conduct an Upstream Fish Passage Effectiveness Study and provide a series of accompanying animations to visually illustrate radio-tagged shad movement in relationship to generation. The initial phase of this study was conducted in spring 2010 with the second phase, or a repeat of the study, planned for spring 2011. However, high river flows in 2011 caused a postponement of the 2011 study. The study was conducted in 2012, and this document describes and summarizes the 2012 animations, along with comparisons to the 2010 animation report.

To organize the 2012 radio-telemetry data, the overall database was separated into several charts or spreadsheets. American shad that entered the Conowingo East Fish Lift (EFL) were placed into three categories: Successful EFL entry and passage, Successful EFL Entry without passage prior to successful passage, and Successful Entry into the EFL by shad that never passed upstream. Individual shad foray data were compared to the flow bin and turbine scenario that these shad encountered as they entered various sections of the tailrace. Since radio tagged shad moved into and through various sections of the tailrace, a series of zones within the tailrace were created based on antenna locations and detection areas. The tailrace is designated as the area from the lower tip of Rowland Island upstream to Conowingo Dam.

During the 2012 Upstream Fish Passage Efficiency Study, a total of 66 radio-tagged American shad were detected in the tailrace, of which 29 entered the EFL (29 of 66 = 43.9%). A total of 17 of the 29 American shad that entered the EFL successfully passed upstream (17 of 29 = 58.6%). Eleven of the 17 shad passed upstream with one foray into the EFL; the other six shad made one, two, or five forays in the EFL before successfully passing upstream. Twelve of the 29 American shad that entered the EFL did not pass upstream (12 of 29 = 41.3%). These 12 shad made a total of 20 forays into the EFL. Eight shad made a single unsuccessful foray inside the EFL while four shad made either two or four unsuccessful forays into the EFL.

Overall, the 29 tagged shad that entered the EFL made a total of 49 forays (successful and unsuccessful combined). A total of 15 of the 49 EFL forays (nearly 31%) occurred during station discharges of 36,000 cfs or less while 32 of the 49 EFL forays (65%) occurred with station discharge greater than 49,000 cfs.

The forays of American shad that resulted in successful passage in 2012 were compared to station discharges as shad entered various sections of the tailrace prior to EFL entry. Entry into the tailrace occurred most frequently (41% to 75%) with two Francis turbines operating (Flow bin 1) while 12.5% to

35% of entries into the tailrace occurred during station discharge correlated to flow bin 7. In 2012, the turbine scenario of two Francis turbines and no operation of any Kaplan turbines occurred 25.5% of the time while the turbine scenario of seven Francis and 4 Kaplan turbines occurred 32.4% of the time during EFL operations.

TABLE ES-1: FLOW BIN DISCHARGE RANGES.

Flow Bin	Range
1	7,500-17,999cfs
2	18,000-27,999cfs
3	28,000-35,999cfs
4	36,000-44,999cfs
5	45,000-54,999cfs
6	55,000-65,999cfs
7	66,000-80,000cfs
8*	80,001-100,000 cfs
9**	100,001-120,000 cfs

* All turbines on plus 1 spill gate open

** All turbines on plus 2 spill gates open

Three of the 10 documented forays (30%) started with shad entering the tailrace during the operation of two Francis turbines only (Flow bin 1) while four of the 10 forays (40%) started during the operation of all seven Francis and four Kaplan turbines (Flow bin 7). Only two forays (20%) began as shad entered the tailrace with station discharges correlated to flow bins 4 and 5, and no forays ended with these same two discharge bins. Although four (40%) of these forays started in conjunction with flow bin 7, eight (80%) of the forays ended during discharges correlated to flow bin 7. The slightly higher percentage rate of shad entering the tailrace during high station discharges in 2012 may be due to the fact that the turbine scenario of seven Francis and four Kaplan turbines operating occurred 32.4% during 2012 EFL operations as compared to only 4.7% of the time in 2010.

The disposition of 15 forays inside the EFL by shad that ultimately failed to pass upstream shows a similar number of entries into and exits from the tailrace occurred with lower and higher station discharges (Flow bins 1 and 7). The remaining entries into and exits from the tailrace were evenly distributed across flow bins 2, 4, and 8.

Further review of the “sub-forays” within these 15 forays shows low station discharges (Flow bin 1) coincided with the highest number of entrances (70) into the upper tailrace but also accounted for the

highest number of exits (63) from the upper tailrace. Flow bin 7 recorded the second highest number of entries into the upper tailrace (37) as well as the second highest number of exits (43). Flow bins 2 through 6 accounted for 28% of the entries into the upper tailrace and nearly 30% of exits from the upper tailrace. The number of entries into and exits out of the EFL aerial detection zones (within 75 ft of the EFL) was nearly identical for each flow bin.

A total of 37 radio-tagged shad entered the tailrace but did not enter the EFL. Twenty-one of the 29 documented unsuccessful forays (72%) were initiated during flow bin 1 discharge conditions with the remaining eight unsuccessful forays distributed among flow bins 4, 5, and 7. Flow bins 2 and 3 accounted for zero entries into the tailrace but accounted for two exits each from the tailrace. Flow bin 7 had only four forays initiated during its respective discharge range but accounted for eight exits from the tailrace.

A closer review of the entries into and exits from the upper tailrace reveals 51% of entries into the upper tailrace occurred during station discharges correlated to flow bin 1, but this flow bin also accounted for 39% (43 of 110) of exits from the upper tailrace. Flow bin 7 accounted for 18% (20 of 110) of entries into the upper tailrace and nearly 24% (26 of 110) of exits from the upper tailrace.

Entries and exits into and out of the EFL aerial detection zones were drastically lower than the entries and exits into and out of the upper tailrace. Only one entry and exit into the EFL aerial detection zone occurred during station discharges correlated to flow bin 1 in contrast to 56 of the 110 foray entries into the upper tailrace during the same station discharges.

The 2012 upstream fish passage efficiency study results, although different than those observed in 2010, revealed some similarities of radio-tagged shad movements into and out of the tailrace. Overall, a larger proportion of shad movement into the upper tailrace was initiated during periods of lower generation. However, a high number of exits from the upper tailrace also occurred during these low generation periods. Review of the data suggests that only a few shad advanced directly towards the EFL (without exhibiting searching behavior) during any station discharge scenario.

Review of the 2010 and 2012 radio-telemetry data shows that river conditions and station discharges varied between years. During EFL operations in 2012, the occurrence of station discharges associated with flow bin 7 was quite different than what was observed in 2010. The turbine scenario of seven Francis and four Kaplan turbines occurred about 32% of the time during 2012 EFL operations whereas the same scenario occurred about 5% during 2010 EFL operation. Generally, April 2012 river flows were lower than those observed in 2010 and may explain why the shad run was earlier in 2012 than in 2010. River

flow in May 2012 was higher than in May 2010 and enabled the station to discharge higher volumes of water.

In addition to scenarios suggested for study in the 2010 Animation report (Normandeau and Gomez and Sullivan, 2012), evaluation of turbine generation scenarios that include the use of Kaplan turbines 10 and 11 should be considered. In 1991, the first year of EFL operations, it was noted that the catch of American shad at the EFL increased when Kaplan turbines 10 and 11 were operating. Nearly 70% of the EFL shad catch (in 1991) occurred during the operation of these two Kaplan turbines ([RMC February 1992](#)).

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LIST OF ABBREVIATIONS

FERC	Federal Energy Regulatory Commission
cfs	cubic feet per second
F	Fahrenheit
EFL	Conowingo East Fish Lift
WFL	Conowingo West Fish Lift

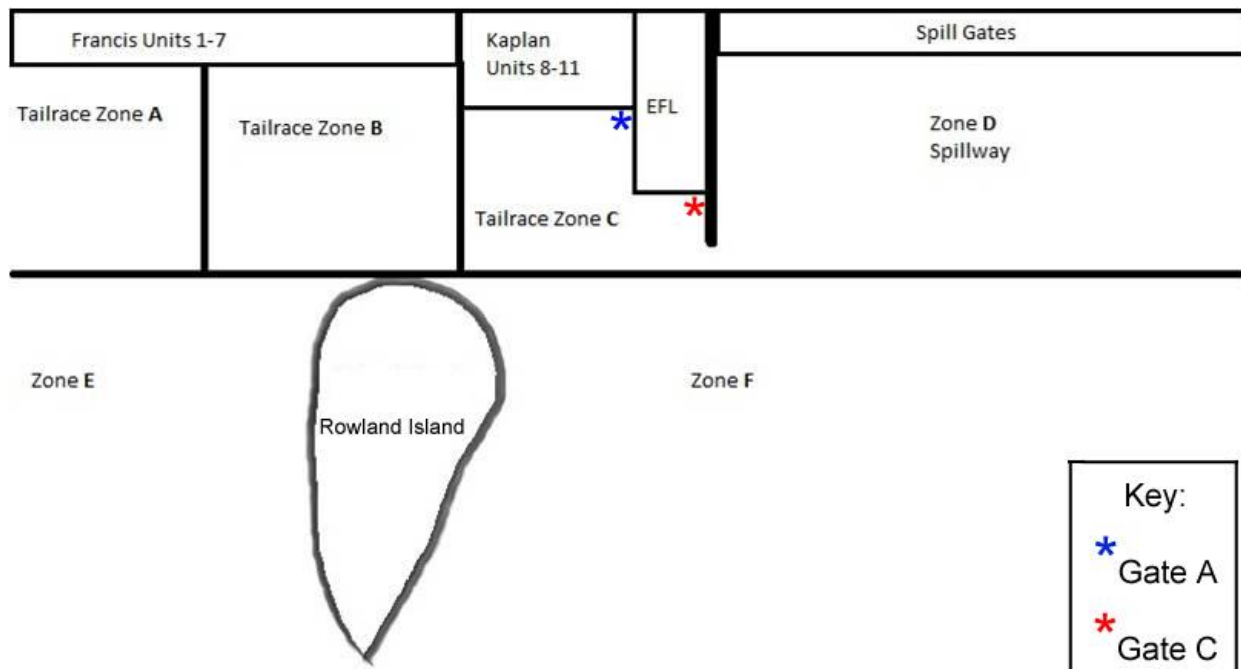
1.0 INTRODUCTION

Exelon Generation Company, LLC (Exelon) has initiated with the Federal Energy Regulatory Commission (FERC) the process of relicensing the 573-megawatt Conowingo Hydroelectric Project (Conowingo Project). The current license for the Conowingo Project was issued on 14 August 1980 and expires on 1 September 2014. FERC issued the final study plan determination for the Conowingo Project on 4 February 2010, approving the revised study plan with certain modifications. The final study plan determination required Exelon to conduct an Upstream Fish Passage Effectiveness Study, ([RSP 3.5](#)) and provide a series of accompanying animations to visually illustrate radio tagged shad movement in relationship to generation. The 2010 animations have been provided ([RSP 3.5 Upstream Fish Passage Effectiveness Study, February 2011](#)). This report describes and summarizes the 2012 animations (provided in conjunction with the 2012 Upstream Fish Passage Effectiveness Study, RSP 3.5) and compares findings to the 2010 animation report.

2.0 METHODS

To organize the 2012 radio-telemetry data, the overall database was separated into several charts or spreadsheets. The first “cut” of the data separated American shad that entered the EFL from shad that were present in the tailrace but never entered the EFL. The tailrace is designated as the area from the lower tip of Rowland Island upstream to Conowingo Dam. American shad that entered the EFL were then placed into three categories: Successful EFL Entry and Passage, Unsuccessful EFL forays by shad that eventually passed, and Successful EFL Entry by shad that never passed upstream. For each category, charts were developed to document EFL operating conditions during recorded shad detection times ([Appendix A-1, A-2, and A-3](#)). The individual foray data were then compared to the flow bin (i.e., range of station discharges) and turbine scenario that these shad encountered as they entered various sections of the tailrace.

American shad detected in the designated Tailrace area tended to move into and out of several areas of the tailrace. To describe these movements, a series of zones within the tailrace were created based on antenna locations and detection zones. These zones included the upper tailrace (Zones A, B, C), the lower tailrace (Zones E and F), and the spillway (Zone D). A basic schematic of the tailrace zones is shown below.



Each radio-tagged American shad foray within the tailrace was inspected to determine location and movement patterns. In addition, a panel of five biologists with radio-telemetry experience, (one from Gomez and Sullivan; four from Normandeau Associates) reviewed the forays of individual fish and

recorded comments regarding its fish movements and associated turbine discharge scenarios ([Appendix A-4](#), [A-5](#), and [A-6](#)). This review provided additional information to further interpret the telemetry data if obvious trends did not appear when comparing foray times and locations to flow bins and specific turbine operating scenarios.

3.0 RESULTS

3.1 Radio-tagged Shad Entering EFL

During the 2012 Upstream Fish Passage Efficiency Study, a total of 66 radio-tagged American shad were detected in the tailrace, of which 29 entered the EFL (29 of 66 = 43.9%). A total of 17 of the 29 American shad that entered the EFL successfully passed upstream (17 of 29 = 58.6%), and 12 shad entered the EFL but did not pass upstream (12 of 29 = 41.4%). Seven of the 17 American shad (41%) passed during periods of low generation, (two Francis turbines operating) ([Table 3.1-1](#)). Based on the flow bins developed for the [Conowingo RSP 3.6 Report](#) ([Table 3.1-2](#)), the discharge of two Francis turbines fits into flow bin 1 (discharge values between 7,500 to 17,999 cfs.)

The remaining 10 American shad (59%) were successfully passed by the EFL when 4 to 7 Francis turbines in conjunction with two to four Kaplan turbines were operating, (Flow bin ranges: 45,000 to 54,999 cfs, 55,000 to 65,999 cfs, and 66,000 to 80,000 cfs). Seven of these 10 shad (70%) passed when six or seven Francis turbines in conjunction with all four Kaplan turbines were operating ([Table 3.1-1](#)) with associated discharges greater than 66,000 cfs (Flow bin 7).

Eleven of the 29 shad (37.9%) successfully passed upstream on their initial foray into the EFL. Six of the 29 shad (20.7%) made one or more forays into the EFL before successfully passing upstream. The 12 shad that entered the EFL but failed to pass upstream made a total of 20 forays into the EFL; eight shad made only one foray, two shad made two forays, and two shad made four forays. These 12 shad plus the six shad that eventually passed upstream made a total of 32 unsuccessful forays (not resulting in passage) into the EFL ([Table 3.1-3](#)). Six of these forays (18.8%) occurred with two Francis turbines operating (Flow bin range of 7,500 to 17,999 cfs). The remaining 26 forays (81.2%) occurred with four to seven Francis units in combination with two to four Kaplan turbines. Sixteen of these 26 forays (61.5%) occurred during the operation of six or seven Francis and all four Kaplan turbines.

Overall, the 29 tagged shad that entered the EFL made a total of 49 forays (successful and unsuccessful forays combined) ([Table 3.1-4](#)). A total of 15 of the 49 forays (nearly 31%) occurred during station discharges of 36,000 cfs or less while 32 of the 49 forays (65%) occurred with station discharge greater than 49,000 cfs. Detailed foray information is provided in [Appendix A-1, A-2, and A-3](#).

3.2 Successful Passage Forays of Radio-tagged Shad prior to EFL Entry

The forays of American shad that resulted in successful passage in 2012 were compared to station discharges as shad entered various sections of the tailrace prior to EFL entry ([Tables 3.2-1](#) and [3.2-2](#)). Entry into the upper, lower, and EFL aerial detection zones of the tailrace occurred most frequently (41%

to 75%) with two Francis turbines operating (Flow bin 1). In 2012, the turbine scenario of two Francis turbines and no operation of any Kaplan turbines occurred 25.5% of the time during EFL operations ([Table 3.2-3](#)). Flow bins 1 and 3 (flows ranging from 7,500 to 35,999 cfs) accounted for 47% to 75% of shad entry into each tailrace section, ([Table 3.2-2](#)). Flow bin 4 (flow range 36,000 to 44,999 cfs) accounted for 12% to 25% of shad entering all tailrace zones while flow bin 7 (flow range 66,000 to 80,000 cfs) accounted for 12.5% to 35% of shad entering all tailrace zones.

3.3 Unsuccessful Forays of Radio-tagged Shad Prior to Successful Passage

Six of the 17 radio-tagged shad that successfully passed upstream made unsuccessful forays into the EFL prior to successful passage ([Appendix A-2](#)). Two of these six shad made two forays prior to successful passage and one shad made five forays before passage. Station discharge status described by flow bin and turbines operating when radio-tagged shad entered and exited the tailrace during these unsuccessful EFL forays is presented in [Table 3.3-1](#). Three of the 10 documented forays (30%) started with shad entering the tailrace during the operation of two Francis turbines only (Flow bin 1) while four of the 10 forays (40%) started during the operation of all seven Francis and four Kaplan turbines (Flow bin 7). Only two forays (20%) began as shad entered the tailrace with station discharges correlated to flow bins 4 and 5, and no forays ended with these same 2 discharge bins. Four (40%) of these forays started in conjunction with flow bin 7, but eight (80%) forays ended during discharges correlated to flow bin 7. Note that there are fewer unsuccessful forays recorded in 2012 than in 2010 (10 vs. 23), but they are, ultimately, unsuccessful forays. The slightly higher percentage rate of shad entering the tailrace during high station discharges in 2012 may be due to the fact that the turbine scenario of seven Francis and four Kaplan turbines operating occurred 32.4% during 2012 EFL operations as compared to only 4.7% of the time in 2010 ([Table 3.2-3](#)).

[Table 3.3-2](#) provides a breakdown of the unsuccessful forays described above. For this overview, two specific areas of the tailrace (Upper tailrace (Zones A, B, and C) and EFL aerial antennas (75ft detection area)) were reviewed. As shown in [Table 3.3-2](#), a substantial number of “sub-forays” (vertical and lateral shad movement within the tailrace zones) occur within each overall foray. As these radio-tagged shad move into the tailrace, the fish demonstrate vertical and lateral movement within the upper, lower, and EFL aerial detection zones. Review of the upper tailrace area shows a slightly different pattern to the overall foray pattern described in [Table 3.3-1](#) in that the number of entries into the upper tailrace (50) is higher during the low-generation scenario (Flow bin 1) with fewer exits (37) than during the high-generation scenario (Flow bin 7) where there are fewer entries (43) but more exits from the upper tailrace

(55). However, review of the EFL aerial detections shows only a slight disparity between the entries into or exits from the small EFL aerial detection zones during both the low- and high-generation scenarios.

3.4 Forays into the EFL of Radio-tagged Shad That Failed to Pass Upstream

Twelve American shad made 20 forays into the EFL without successfully passing upstream. Of these twenty forays, fifteen were complete forays; i.e. the fish were initially detected entering the lower tailrace (Zones E or F) and detected again in the same zones heading downstream out of the tailrace. For unknown reasons, some radio-tagged shad are not always detected by the telemetry monitors as they enter the lower tailrace. The disposition of 15 complete forays with radio-telemetry detection inside the EFL by shad that ultimately failed to pass upstream is shown in [Table 3.4-1](#). A similar number of entries into and exits from the tailrace occurred with lower and higher station discharges (Flow bins 1 and 7). The remaining entries into and exits from the tailrace were evenly distributed across flow bins 2, 4, and 8. Note that flow bin 8 includes the discharge from one spill gate (approximately 16,000 cfs).

Further review of the “sub-forays” within these 15 forays is shown in [Table 3.4-2](#). Low station discharges (Flow bin 1) coincided with the highest number of entrances (70) into the upper tailrace but also accounted for the highest number of exits (63) from the upper tailrace. Flow bin 7 recorded the second highest number of entries into the upper tailrace (37) as well as the second highest number of exits (43). Flow bins 2 through 6 accounted for 28% of the entries into the upper tailrace and nearly 30% of exits from the upper tailrace. As noted before, when reviewing the EFL aerial antenna detection zones, the number of entries into and exits out of these zones is nearly identical for each flow bin. However, it is unknown as to why there are so few forays (eight) recorded in the EFL aerial detection zone for flow bin 1 since there were 70 sub-forays entering the upper tailrace in conjunction with the same flow bin.

3.5 Forays of Radio-tagged Shad in the Tailrace and No EFL Entry

A total of 37 radio-tagged shad entered the tailrace but did not enter the EFL ([Upstream Fish Passage Efficiency Study, RSP 3.5; September 2012](#)). Twenty-one of the 29 documented unsuccessful forays (72%) were initiated during flow bin 1 discharge conditions with the remaining eight unsuccessful forays distributed among flow bins 4, 5, and 7. Flow bins 2 and 3 accounted for zero entries into the tailrace but accounted for two exits each from the tailrace. Flow bin 7 had only four forays initiated during its respective discharge range but accounted for eight exits from the tailrace.

A closer review of the entries into and exits from the upper tailrace reveals 51% of entries into the upper tailrace occurred during station discharges correlated to flow bin 1, but this flow bin also accounted for

39% (43 of 110) of exits from the upper tailrace ([Table 3.5-2](#)). Flow bin 7 accounted for 18% (20 of 110) of entries into the upper tailrace and nearly 24% (26 of 110) of exits from the upper tailrace.

Entries and exits into and out of the EFL aerial detection zones were drastically lower than the entries and exits into and out of the upper tailrace ([Table 3.5-2](#)). Only one entry and exit into the EFL aerial detection zone occurred during station discharges correlated to flow bin 1 in contrast to 56 of the 110 foray entries into the upper tailrace during the same station discharges.

4.0 SUMMARY

During the 2012 Upstream Fish Passage Efficiency Study, a total of 66 radio-tagged American shad were detected in the tailrace, of which 29 entered the EFL (29 of 66 = 43.9%). A total of 17 of the 29 American shad that entered the EFL successfully passed upstream (17 of 29 = 58.6%). Seven of the 17 American shad (41%) passed during periods of low generation, (two Francis turbines operating: Flow bin 1), with an additional seven shad (41%) passed during periods of high generation (six or seven Francis and all four Kaplan turbines: Flow bin 7) ([Table 3.1-1](#)). In 2012, 58.8% of successful passage by radio-tagged shad (10 of 17) occurred during discharges greater than 45,000 cfs which is in contrast to the 2010 study results that observed nearly 68% of successful shad passage (27 of 40 shad) occurred during discharges less than 36,000 cfs.

Overall, the 29 tagged shad that entered the EFL made a total of 49 forays (successful and unsuccessful combined) ([Table 3.1-4](#)). A total of 15 of the 49 EFL forays (nearly 31%) occurred during station discharges of 36,000 cfs or less while 32 of the 49 EFL forays (65%) occurred with station discharge greater than 49,000 cfs.

During EFL operations in 2012, the occurrence of station discharges associated with flow bin 7 was quite different than what was observed in 2010. The turbine scenario of seven Francis and four Kaplan turbines occurred about 32% of the time during 2012 EFL operations whereas the same scenario occurred about 5% during 2010 EFL operation. Table 4.0-1 compares shad passage, river flow and water temperature (as measured at Holtwood Dam) in 2010 and 2012. Generally, April 2012 river flows were lower than those observed in 2010 and may explain why the shad run was earlier in 2012 than in 2010. River flow in May 2012 was higher than in May 2010 and enabled the station to discharge higher volumes of water.

Although an equal number of radio-tagged shad were passed in conjunction with flow bins 1 and 7 in 2012, it should be noted that overall, more entries into the upper tailrace were initiated during lower station discharges, similar to what was observed in 2010. In 2012, radio-tagged shad that entered the EFL but did not pass upstream entered the upper tailrace 151 times with seventy (46%) entries occurring during discharges correlated to flow bin 1 ([Table 3.4-2](#)), while in 2010, the same category of radio-tagged shad entered the upper tailrace 147 times with seventy-five (51%) entries occurring during flow bin 1 discharges.

5.0 DISCUSSION

The 2012 upstream fish passage efficiency study results, although different than those observed in 2010, revealed some similarities of radio-tagged shad movements into and out of the tailrace. Overall, a larger number of entries into the upper tailrace (zones A, B, and C) were initiated during periods of lower generation ([Tables 3.4-2](#) and [3.5-2](#)). However, a high number of exits from the upper tailrace also occur during these low generation periods. The data suggests that only a few shad advance directly towards the EFL (without exhibiting searching behavior) during any station discharge scenario.

Review of the data derived from those shad that entered the tailrace but failed to enter the EFL in 2012 revealed a noticeable difference from those shad in the same category in 2010. Although the number of “sub-forays” into the upper tailrace was similar in both years (114 in 2010; 110 in 2012), only 15 forays into the EFL aerial antenna zone were recorded in 2012 compared to 40 recorded in 2010. Fifty-six of the entries into the upper tailrace occurred during station discharges associated with flow bin1 in 2012, but only 1 of the 15 entries into the EFL aerial detection zone occurred in conjunction with flow bin 1. We would expect to see more shad moving towards the EFL during this discharge condition as it has been assumed that lower station discharges generally result in higher fish passage attraction rates. As river flows in April 2012 were lower than in 2010 ([Table 4.0-1](#)) and water temperatures were favorable for shad spawning, some tagged shad may have started to spawn prior to re-entering the tailrace and may not have had as strong of an urge to continue moving upstream, particularly if they are of wild origin downstream of Conowingo Dam. Since 2006, the ratio of hatchery shad to wild shad has decreased ([Table 5.0-1](#); derived from [Annual SRAFRC Reports, 2006 – 2011](#)). It is difficult to prove this hypothesis, as there is no method for identifying a shad’s origin prior to radio-tagging.

Review of the 2010 and 2012 radio-telemetry data shows that river conditions and station discharges varied by year. In addition to scenarios suggested for study in the 2010 Animation report (Normandeau and Gomez and Sullivan, August 2012), we should consider evaluation of turbine generation scenarios that include the use of Kaplan turbines 10 and 11. In 1991, the first year of EFL operations, it was noted that unlike the WFL, which performs better when the two adjacent Francis turbines are off, the catch of American shad at the EFL increased when Kaplan turbines 10 and 11 were operating. Nearly 70% of the EFL shad catch (in 1991) occurred during the operation of these two Kaplan turbines ([RMC February 1992](#)).

TABLE 3.1-1: TURBINE SCENARIO DURING SUCCESSFUL PASSAGE.

		EFL Successful Passage	
		Turbine Scenario	Units On
			Number of fish Passed
Flow Bin 1	2;0	3,5	1
	2;0	4,5	1
	2;0	5,7	5
Flow Bin 3 or 4	4;2	2,3,4,5,8,10	1
	4;2	4,5,6,7,9,10	1
	4;3	3,4,5,7,9,10,11	1
Flow Bin 7	6;4	2,3,4,5,6,7,8,9,10,11	1
	7;4	1,2,3,4,5,6,7,8,9,10,11	6
			17

TABLE 3.1-2: FLOW BIN DISCHARGE RANGES.

Flow Bin	Range
1	7,500-17,999cfs
2	18,000-27,999cfs
3	28,000-35,999cfs
4	36,000-44,999cfs
5	45,000-54,999cfs
6	55,000-65,999cfs
7	66,000-80,000cfs
8*	80,001-100,000 cfs
9**	100,001-120,000 cfs

* All turbines on plus 1 spill gate open

** All turbines on plus 2 spill gates open

TABLE 3.1-3: TURBINE SCENARIOS DURING UNSUCCESSFUL PASSAGE.

EFL Unsuccessful Passage Forays		
Turbine Scenario	Units On	Number of forays
2;0	5,7	6
4;2	3,4,5,7,10,11	1
4;2	4,5,6,7,9,10	1
4;3	3,4,5,7,9,10,11	4
4;4	3,4,5,7,8,9,10,11	1
6;3	2,3,4,5,6,7,8,10,11	3
6;4	1,2,3,4,5,7,8,9,10,11	1
6;4	2,3,4,5,6,7,8,9,10,11	2
7;4	1,2,3,4,5,6,7,8,9,10,11	13
		32

*Includes unsuccessful forays of shad that eventually passed upstream.

TABLE 3.1-4: GENERATION SCENARIOS DURING FORAYS INTO EFL, SPRING 2012.

Fish	Initial Foray into the EFL Date and Time	Generation Total Discharge (cfs)	Turbine Operating Combination Scenario	Units Operating	Foray Outcome
54-28	04/17/12 15:25:24	11330	2 & 0	5,7	Successful
54-19	04/20/12 18:05:32	11450	2 & 0	4,5	Successful
21-77	04/24/12 16:39:15	11580	2 & 0	5,7	Successful
21-27	04/27/12 13:39:00	11530	2 & 0	5,7	Successful
54-12	04/27/12 15:37:32	11530	2 & 0	5,7	Successful
21-75	05/05/12 15:32:57	49530	4 & 3	3,4,5,7,9,10,11	Successful
54-42	05/09/12 16:16:30	69250	6 & 4	2,3,4,5,6,7,8,9,10,11	Successful
54-80	05/14/12 07:58:28	39590	4 & 2	2,3,4,5,8,10	Successful
21-39	05/14/12 08:18:49	74830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Successful
21-72	05/14/12 08:55:17	74830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Successful
54-89	05/20/12 17:28:13	75860	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Successful
54-79	05/21/12 10:06:22	74940	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Successful
21-41	05/23/12 12:24:37	73830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Successful
54-73	05/24/12 10:57:03	32,490	4 & 2	4,5,6,7,9,10	Successful
21-66	05/25/12 09:55:30	10610	2 & 0	3,5	Successful
54-39	05/27/12 08:40:44	9200	2 & 0	5,7	Successful
54-81	05/29/12 18:43:52	76200	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Successful
21-27	4/24/2012 13:40:02	11580	2 & 0	5,7	Unsuccessful
21-27	4/24/2012 17:21:53	11580	2 & 0	5,7	Unsuccessful
21-75	4/29/2012 10:08:58	58880	4 & 4	3,4,5,7,8,9,10,11	Unsuccessful
54-39	5/8/2012 12:10:03	61170	6 & 3	2,3,4,5,6,7,8,10,11	Unsuccessful
21-66	5/21/2012 11:22:15	74940	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-66	5/21/2012 15:27:52	74940	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
54-81	5/21/2012 15:52:58	74940	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-66	5/23/2012 11:24:12	73830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
54-73	5/23/2012 12:52:40	73830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
54-81	5/23/2012 15:03:00	73830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-66	5/23/2012 17:15:44	73830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-66	5/24/2012 10:55:13	32490	4 & 2	4,5,6,7,9,10	Unsuccessful
21-18	5/4/2012 14:39:21	40640	4 & 2	3,4,5,7,10,11	Unsuccessful
21-18	5/5/2012 12:30:40	49530	4 & 3	3,4,5,7,9,10,11	Unsuccessful
54-36	5/6/2012 08:12:14	10530	2 & 0	5,7	Unsuccessful
21-18	5/6/2012 12:28:35	49210	4 & 3	3,4,5,7,9,10,11	Unsuccessful
21-18	5/8/2012 09:39:46	61170	6 & 3	2,3,4,5,6,7,8,10,11	Unsuccessful
54-24	5/8/2012 12:27:18	61170	6 & 3	2,3,4,5,6,7,8,10,11	Unsuccessful
54-15	5/8/2012 15:56:24	75100	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-68	5/9/2012 18:53:17	49660	4 & 3	3,4,5,7,9,10,11	Unsuccessful
21-14	5/13/2012 15:49:49	75500	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-87	5/14/2012 09:44:34	74830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-87	5/15/2012 15:09:35	69110	6 & 4	2,3,4,5,6,7,8,9,10,11	Unsuccessful
21-37	5/16/2012 18:52:24	77520	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
54-65	5/25/2012 14:00:37	68840	6 & 4	2,3,4,5,6,7,8,9,10,11	Unsuccessful
54-90	5/26/2012 06:25:02	10480	2 & 0	5,7	Unsuccessful
54-65	5/26/2012 14:09:20	49060	4 & 3	3,4,5,7,9,10,11	Unsuccessful
21-89	5/27/2012 08:13:40	9200	2 & 0	5,7	Unsuccessful
54-65	5/27/2012 12:30:29	9200	2 & 0	5,7	Unsuccessful
21-43	5/27/2012 18:07:50	67160	6 & 4	1,2,3,4,5,7,8,9,10,11	Unsuccessful
21-43	5/28/2012 17:32:41	74830	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful
54-65	5/29/2012 18:53:21	76200	7 & 4	1,2,3,4,5,6,7,8,9,10,11	Unsuccessful

Denotes shad that made unsuccessful forays prior to successful passage.

TABLE 3.2-1: STATION DISCHARGES RELATED TO ENTRY OF RADIO-TAGGED AMERICAN SHAD INTO SPECIFIC TAILRACE ZONES DURING SUCCESSFUL PASSAGE FORAYS IN 2012.

Flow Bin #*	Turbines on during entry into Zones E or F	# of Forays	Turbines on during entry into Zones A,B, or C	# of Forays	Turbines on during EFL Aerial Detection	# of Forays
1	2,5	1	2,5	NA	3,5	1
1	4,5	1	4,5	1	4,5	1
1	5,7	4	5,7	3	5,7	5
2	NA	NA	NA	NA	NA	NA
3	NA	NA	NA	NA	4,5,6,7,9,10	1
4	2,5,6,7,10,11	1	2,3,4,5,8,10	1	2,3,4,5,8,10	2
4	NA	NA	4,5,6,7,10,11	1	NA	NA
5	NA	NA	NA	NA	3,4,5,7,9,10,11	1
6	NA	NA	NA	NA	NA	NA
7	NA	NA	NA	NA	2-7,8-11	1
7	1-7,8-11	1	1-7,8-11	1	1-7,8-11	5
8*	NA	NA	1-7,8-11	1	NA	NA
Total forays/ group		8		8		17

* Flow Bin #8 includes discharge from 1 spill gate.

TABLE 3.2-2: ENTRY OF RADIO-TAGGED SHAD INTO UPPER AND LOWER TAILRACE AS COMPARED TO FLOW BINS.

Flow Bin #	Lower Tailrace % Entries into Zones E or F	Upper Tailrace % Entries into Zones, A,B,C	% Entry into EFL Aerial Detection Zone
1	75.0	50.0	41.0
2	0.0	0.0	0.0
3	0.0	0.0	6.0
4	12.5	25.0	12.0
5	0.0	0.0	6.0
6	0.0	0.0	0.0
7	12.5	12.5	35.0
8*	0.0	12.5	0.0

*Flow bin #8 includes discharge from 1 spill gate.

TABLE 3.2-3: TURBINE GENERATION SCENARIOS AND PERCENT OCCURRENCE DURING CONOWINGO EAST FISH LIFT OPERATIONS IN 2012

Turbine Operating Combinations		Percentage of Time Turbine Operating	
Francis Units	Kaplan Units	Hours	Percentage
1	0	1	0.16%
2	0	161.5	25.49%
2	1	10.5	1.66%
3	0	36.5	5.76%
4	0	13.5	2.13%
4	1	30	4.74%
4	2	39.5	6.24%
4	3	34.5	5.45%
4	4	12	1.89%
5	2	1	0.16%
5	4	5	0.79%
6	1	1	0.16%
6	2	1	0.16%
6	3	21	3.31%
6	4	40	6.31%
7	1	8	1.26%
7	3	12	1.89%
7	4	205.5	32.44%
Total		633.5	100.00%

TABLE 3.3-1: UNSUCCESSFUL FORAYS BY RADIO-TAGGED SHAD PRIOR TO SUCCESSFUL PASSAGE THROUGH THE EFL IN 2012.

Flow Bin #	Entered Tailrace		Exited Tailrace	
	Turbines Operating	# of Forays	Turbines Operating	# of Forays
1	4,5	1	4,5	1
1	5,7	2	5,7	0
1	4,5,7	0	4,5,7	1
Total Forays		3		2
2	NA	NA	NA	NA
Total Forays		0		0
3	NA	NA	NA	NA
Total Forays		0		0
4	2,3,4,5,8,10	1	2,3,4,5,8,10	0
Total Forays		1		0
5	3,4,5,7,9,10,11	1	NA	0
Total Forays		1		0
6	NA	NA	NA	NA
Total Forays		0		0
7	1,2,3,4,5,7,8,9,10,11	0	1,2,3,4,5,7,8,9,10,11	1
7	1 through 11	4	1 through 11	7
Total Forays		4		8
8*	1 through 11	1	1 through 11	0
Total Forays		1		0
Overall Total Forays		10		10

* Flow bin #8 includes discharge from 1 spill gate.

TABLE 3.3-2: BREAKDOWN OF UNSUCCESSFUL FORAYS BY RADIO-TAGGED SHAD PRIOR TO SUCCESSFUL PASSAGE THROUGH THE EFL IN 2012.

Entered Upper Tailrace			Exited Upper Tailrace		Entered EFL Aerial			Exited EFL Aerial	
Flow Bin #	Turbines Operating	Number of Forays	Turbines Operating	Number of Forays	Flow Bin #	Turbines Operating	Number of Forays	Turbines Operating	Number of Forays
1	2,3	3	2,3	1	1	2,3	1	2,3	1
1	2,5	2	2,5	0	1	3,5	3	3,5	3
1	3,5	4	3,5	4	1	5,7	10	5,7	11
1	4,5	9	4,5	10	Total Forays		14		15
1	5,7	29	5,7	21	2	4,5,6,7	5	3,4,5,7	4
1	3,4,5	1	3,4,5	0	Total Forays		5		4
1	4,5,7	2	4,5,7	1	3	2,4,5,7,11	2	2,4,5,7,11	2
Total Forays		50		37	3	3,4,5,7,11	2	3,4,5,7,11	1
2	2,3,8	0	2,3,8	1	3	4,5,6,7,9,10	2	4,5,6,7,9,10	3
2	3,4,5	1	3,4,5	1	Total Forays		6		6
2	2,3,4,5	1	2,3,4,5	0	4	2,3,4,5,8,10	5	2,3,4,5,8,10	5
2	3,4,5,7	2	3,4,5,7	4	4	3,4,5,7,9,11	2	2,5,6,7,8,11	1
2	4,5,6,7	1	4,5,6,7	1	4	3,4,5,7,10,11	6	3,4,5,7,10,11	5
Total Forays		5		7	Total Forays		13		11
3	2,4,5,7,11	2	2,4,5,7,11	1	5	2,4,5,7,9,10,11	1	2,4,5,7,9,10,11	0
3	3,4,5,7,10	2	3,4,5,7,10	1	5	3,4,5,7,9,10,11	4	3,4,5,7,9,10,11	5
3	3,4,5,7,11	2	3,4,5,7,11	1	5	2,3,4,5,6,7,8,9	1	2,3,4,5,6,7,8,9	0
3	4,5,6,7,10	0	4,5,6,7,10	1	Total Forays		6		5
3	2,3,4,5,6,7	1	2,3,4,5,6,7	1	6	3,4,5,7,8,9,10,11	2	3,4,5,7,8,9,10,11	2
Total Forays		7		5	6	2,3,4,5,6,7,8,10,11	6	2,3,4,5,6,7,8,10,11	6
4	2,3,4,5,8,10	1	2,3,4,5,8,10	0	Total Forays		8		8
4	3,4,5,7,10,11	2	3,4,5,7,10,11	3	7	2,3,4,5,6,7,8,9,10,11	2	2,3,4,5,6,7,8,9,10,11	2
4	4,5,6,7,10,11	0	4,5,6,7,10,11	1	7	1 through 11	40	1 through 11	43
4	2,3,4,5,6,7,11	0	2,3,4,5,6,7,11	2	Total Forays		42		45
Total Forays		3		6	9*	1 through 11	1	1 through 11	1
5	2,3,4,7,8,10,11	2	2,3,4,7,8,10,11	0	Total Forays		1		1
5	3,4,5,7,9,10,11	5	3,4,5,7,9,10,11	7	Overall Total Forays		95		95
5	4,5,6,7,9,10,11	1	4,5,6,7,9,10,11	1	* Flow bin #9 includes discharge from 2 spill gates				
Total Forays		8		8					
6	2,3,4,7,8,9,10,11	1	2,3,4,7,8,9,10,11	1					
6	3,4,5,7,8,9,10,11	1	3,4,5,7,8,9,10,11	1					
6	2,3,4,5,6,7,8,10,11	4	2,3,4,5,6,7,8,10,11	2					
Total Forays		6		4					
7	1,2,3,4,5,7,8,9,10,11	0	1,2,3,4,5,7,8,9,10,11	1					
7	1,3,4,5,6,7,8,9,10,11	1	1,3,4,5,6,7,8,9,10,11	0					
7	2,3,4,5,6,7,8,9,10,11	7	2,3,4,5,6,7,8,9,10,11	7					
7	1 through 11	35	1 through 11	47					
Total Forays		43		55					
8*	1 through 11	2	1 through 11	2					
Total Forays		2		2					
Overall Total Forays		124		124					

*Flow bin #8 includes discharge from 1 spill gate

TABLE 3.4-1: FORAYS INTO THE EFL BY RADIO-TAGGED SHAD THAT FAILED TO PASS UPSTREAM IN 2012.

Flow Bin Number	Entered Tailrace	# of Forays	Exited Tailrace	# of Forays
1	2,3	1	2,3	1
1	4,7	1	4,7	0
1	5,7	1	5,7	3
1	4,5,7	1	4,5,7	1
Total Forays		4		5
2	1,5,6,7	1	1,5,6,7	1
2	3,4,5,7	1	3,4,5,7	0
Total Forays		2		1
3	2,5,6,7,10	0	2,5,6,7,10	1
Total Forays		0		1
4	2,3,4,5,8,10	1	2,3,4,5,8,10	0
4	2,5,6,7,10,11	1	2,5,6,7,10,11	0
Total Forays		2		0
5		NA		
Total Forays		NA		
6	3,4,5,7,8,9,10,11	0	3,4,5,7,8,9,10,11	1
Total Forays		0		1
7	1,2,3,4,5,7,8,9,10,11	1	2,3,4,5,6,7,8,9,10,11	0
7	1 through 11	4	1 through 11	5
Total Forays		5		5
8*	1 through 11	2	1 through 11	2
Total Forays		2		2
Overall Total Forays		15		15

* Flow bin 8 includes discharge from 1 spill gate

TABLE 3.4-2: BREAKDOWN OF FORAYS INTO THE EFL BY RADIO-TAGGED SHAD THAT FAILED TO PASS UPSTREAM IN 2012.

Flow Bin Number	Entered Upper Tailrace	# of Forays	Exited Upper Tailrace	# of Forays	Flow Bin Number	Entered Aerial Zone	# of Forays	Exited Aerial Zone	Number of Forays
1	2,5	1	2,5	0	1	5,7	8	5,7	7
1	3,5	9	3,5	9	Total Forays		8		7
1	4,5	14	4,5	11	2	2,3,8	1	2,3,8	1
1	5,6	2	5,6	1	2	3,4,5,7	1	3,4,5,7	1
1	5,7	37	5,7	37	Total Forays		2		2
1	3,4,5	0	3,4,5	1	3	3,4,5,7,10	4	2,5,6,7,8	4
1	4,5,7	4	4,5,7	2	3	4,5,6,7,10	1	4,5,6,7,8	1
1	5,6,7	3	5,6,7	2	Total Forays		5		5
Total Forays		70		63	4	2,3,4,5,8,10	1	2,3,4,5,8,10	1
2	3,4,5	0	3,4,5	1	4	3,4,5,7,10,11	3	3,4,5,7,10,11	3
2	1,5,6,7	1	1,5,6,7	1	4	2,3,4,5,6,7,11	1	2,3,4,5,6,7,11	1
2	3,4,5,7	9	3,4,5,7	9	Total Forays		5		5
2	4,5,6,7	4	4,5,6,7	3	5	3,4,5,7,9,10,11	8	3,4,5,7,9,10,11	9
Total Forays		14		14	Total Forays		8		9
3	1,5,6,7,10	0	1,5,6,7,10	2	6	3,4,5,7,8,9,10,11	1	3,4,5,7,8,9,10,11	1
3	2,5,6,7,10	1	2,5,6,7,10	1	6	2,3,4,5,6,7,8,10,11	12	2,3,4,5,6,7,8,10,11	11
3	3,4,5,7,9	0	3,4,5,7,9	1	Total Forays		13		12
3	3,4,5,7,10	6	3,4,5,7,10	3	7	1,2,3,4,5,7,8,9,10,11	1	1,2,3,4,5,7,8,9,10,11	2
3	3,4,5,7,11	2	3,4,5,7,11	0	7	2,3,4,5,6,7,8,9,10,11	5	2,3,4,5,6,7,8,9,10,11	6
3	4,5,7,8,11	1	4,5,7,8,11	0	7	1,2,3,4,5,6,7,8,9,10,11	28	1,2,3,4,5,6,7,8,9,10,11	27
3	2,3,4,5,6,7	1	2,3,4,5,6,7	1	Total Forays		34		35
Total Forays		11		8	Overall Total Forays		75		75
4	2,3,4,5,8,10	1	2,3,4,5,8,10	1					
4	2,5,6,7,10,11	1	2,5,6,7,10,11	0					
4	3,4,5,7,10,11	4	3,4,5,7,10,11	5					
4	4,5,6,7,10,11	0	4,5,6,7,10,11	1					
4	2,3,4,5,6,7,11	0	2,3,4,5,6,7,11	1					
Total Forays		6		8					
5	3,4,5,7,9,10,11	5	3,4,5,7,9,10,11	7					
5	4,5,6,7,9,10,11	0	4,5,6,7,9,10,11	1					
Total Forays		5		8					
6	3,4,5,7,8,9,10,11	4	3,4,5,7,8,9,10,11	5					
6	2,3,4,5,6,7,8,10,11	3	2,3,4,5,6,7,8,10,11	2					
Total Forays		7		7					
7	1,2,3,4,5,7,8,9,10,11	2	1,2,3,4,5,7,8,9,10,11	4					
7	2,3,4,5,6,7,8,9,10,11	6	2,3,4,5,6,7,8,9,10,11	6					
7	1,2,3,4,5,6,7,8,9,10,11	29	1,2,3,4,5,6,7,8,9,10,11	33					
Total Forays		37		43					
9*	1,2,3,4,5,6,7,8,9,10,11	1	1,2,3,4,5,6,7,8,9,10,11	0					
Total Forays		1		0					
Overall Total Forays		151		151					

* Flow bin #9 includes discharge from 2 spill gates

TABLE 3.5-1: FORAYS OF RADIO-TAGGED SHAD IN THE CONOWINGO TAILRACE WITHOUT EFL ENTRY IN 2012.

Flow Bin Number	Entered Tailrace	# of Forays	Exited Tailrace	# of Forays
1	2,3	1	2,3	0
1	4,5	2	4,5	3
1	5,7	14	5,7	11
1	3,4,5	2	3,4,5	0
1	4,5,7	2	4,5,7	0
Total Forays		21		14
2	2,3,8	0	2,3,8	1
2	1,5,6,7	0	1,5,6,7	1
Total Forays		0		2
3	2,3,4,5,10	0	2,3,4,5,10	1
3	2,5,6,7,10	0	2,5,6,7,10	1
Total Forays		0		2
4	2,3,4,5,8,10	1	2,3,4,5,8,10	0
4	2,5,6,7,10,11	1	2,5,6,7,10,11	0
Total Forays		2		0
5	3,4,5,7,9,10,11	2	3,4,5,7,9,10,11	3
Total Forays		2		3
6	NA		NA	
7	2,3,4,5,6,7,8,9,10,11	2	2,3,4,5,6,7,8,9,10,11	3
7	1,2,3,4,5,6,7,8,9,10,11	2	1,2,3,4,5,6,7,8,9,10,11	5
Total Forays		4		8
Overall Total Forays		29		29

TABLE 3.5-2: BREAKDOWN OF FORAYS INTO THE CONOWINGO TAILRACE WITHOUT EFL ENTRY IN 2012.

Flow Bin Number	Entered Upper Tailrace	# of Forays	Exited Upper Tailrace	# of Forays	Flow Bin Number	Entered Aerial Zone	# of Forays	Exited Aerial Zone	# of Forays
1	2,5	1	2,5	0	1	3,5,	1	3,5,	1
1	3,5	5	3,5	4					
1	4,5	6	4,5	4					
1	5,7	40	5,7	28					
1	3,4,5	0	3,4,5	1					
1	4,5,7	4	4,5,7	5					
1	5,6,7	0	5,6,7	1					
Total Forays		56		43	Total Forays		0		0
2	2,3,8	1	2,3,8	0	2	NA	NA	NA	NA
2	3,4,5,7	6	3,4,5,7	8	3	2,3,4,5,8	1	2,3,4,5,8	0
2	4,5,6,7	1	4,5,6,7	1					
Total Forays		8		9					
3	2,3,4,5,9	0	2,3,4,5,9	1	3	4,5,6,7,9,10	1	4,5,6,7,9,10	1
3	2,3,4,5,10	0	2,3,4,5,10	1					
3	3,4,5,7,10	4	3,4,5,7,10	5					
3	3,4,5,7,11	2	3,4,5,7,11	0					
3	2,3,4,5,6,7	0	2,3,4,5,6,7	1					
Total Forays		6		8	Total Forays		4		4
4	1,5,6,7,10,11	1	1,5,6,7,10,11	2	4	3,4,5,7,10,11	4	3,4,5,7,10,11	4
4	2,3,4,7,8,10	1	2,3,4,7,8,10	1					
4	2,5,6,7,10,11	0	2,5,6,7,10,11	1					
4	3,4,5,7,10,11	3	3,4,5,7,10,11	2					
Total Forays		5		6	Total Forays		1		1
5	2,3,4,5,7,8,9	1	2,3,4,5,7,8,9	0	5	3,4,5,7,9,10,11	1	3,4,5,7,9,10,11	1
5	2,3,4,7,8,10,11	0	2,3,4,7,8,10,11	1					
5	3,4,5,7,9,10,11	5	3,4,5,7,9,10,11	10					
5	4,5,6,7,9,10,11	1	4,5,6,7,9,10,11	1					
Total Forays		7		12					
6	2,3,4,7,8,9,10,11	1	2,3,4,7,8,9,10,11	0	6	NA	NA	NA	NA
6	3,4,5,7,8,9,10,11	2	3,4,5,7,8,9,10,11	1					
6	2,3,4,5,6,7,8,10,11	5	2,3,4,5,6,7,8,10,11	4					
Total Forays		8		5	Total Forays		7		8
7	1,2,3,4,5,7,8,9,10,11	2	1,2,3,4,5,7,8,9,10,11	2	7	2,3,4,5,6,7,8,9,10,11	1	2,3,4,5,6,7,8,9,10,11	1
7	2,3,4,5,6,7,8,9,10,11	0	2,3,4,5,6,7,8,9,10,11	1					
7	1,2,3,4,5,6,7,8,9,10,11	18	1,2,3,4,5,6,7,8,9,10,11	23					
Total Forays		20		26	Total Forays		6		7
8*	1 through 11	0	1 through 11	1	Total Forays		15		15
Total Forays		0		1	Overall Total Forays		15		15
Overall Total Forays		110		110					

* Flow bin 8 includes discharge from 1 spill gate.

TABLE 4.0-1: 2010 AND 2012 COMPARISON OF AMERICAN SHAD PASSAGE AT THE CONOWINGO EFL.*

2010 Season		2012 Season	
Days of operation 59		Days of operation 62	
Total number of lifts 685		Total number of lifts 1230	
Total hours of operation 526		Total hours of operation 633	
April, 2010		April, 2012	
River flow range 5 - 15 April: 30,900-72,100 cfs 16-30 April: 21,000-45,5000 cfs	Ave. daily flow 46,582 cfs 28,193 cfs	River flow range 2-15 April: 16,000-27,600 cfs 16-30 April: 13,700-43,500 cfs	Ave. daily flow 21,807 cfs 24,166 cfs
Water Temperature Range 5-15 April: 55.4-63.7°F 16-30 April: 56.8-61.0°F	Ave. Temp 59.8°F 59.3°F	Water Temperature Range 2-15 April: 54.0-56.8°F 16-30 April: 55.8-64.5°F	Ave. Temp 55.5°F 63.6°F
No. shad passed 5-15 April: 679 16-30 April: 15,933	% of Run 1.8 42	No. shad passed 2-15 April: 4,326 16-30 April: 8,160	% of Run 19.5 36.8
April total % 43.8		April total % 56.3	
May, 2010		May, 2012	
River flow range 1-15 May: 25,400-46,000 cfs 16-31 May: 19,000-47,600cfs	Ave. daily flow 34987 cfs 31,500 cfs	River flow range 1-15 May: 29,400-65,200 cfs 16-31 May: 31,800-107,300 cfs	Ave. daily flow 46,580 cfs 54,188 cfs
Water Temperature Range 1-15 May: 58.4-69.4°F 16-31 May: 62.5-77.4°F	Ave. Temp 64.3°F 68.9°F	Water Temperature Range 1-15 May: 55.5-67.6°F 16-31 May: 65.6-79.0°F	Ave. Temp 62.8°F 71.1°F
No. shad passed 1-15 May: 16,361 16- 31 May: 4,363	% of Run 43 11.5	No. shad passed 1-15 May: 5,728 16-31 May: 3,889	% of Run 25.9 17.6
May total % 54.5		May total % 43.5	

*Data provided in Conowingo EFL Summary Reports for SRAFRC, 2010 and 2012 (2012 report in progress).

TABLE 5.0-1 RATIO OF WILD TO HATCHERY ORIGIN AMERICAN SHAD COLLECTED AT THE CONOWINGO WFL.

	Year		% Wild		% Hatchery	
	2006		50		50	
	2007		52		47	
	2008		57		43	
	2009		62		38	
	2010		67		33	
	2011		63		37	
	2012*		NA		NA	
Data provided by PFBC in annual SRAFRC reports						

REFERENCES

Conowingo RSP 3.5 Upstream Fish Passage Effectiveness Study 2011.

Conowingo RSP 3.5 Upstream Fish Passage Effectiveness Study 2012.

Conowingo RSP 3.6. Updated Study Report Conowingo East Fish Lift Attraction Flows Addendum-Statistical Analysis of Turbine Operations and East Fish Lift Catch 2012.

Normandeau Associates, Inc. 2010. Summary of the Operations at the Conowingo Dam Fish Passage Facilities in Spring 2010.

Normandeau Associates, Inc. 2012. Summary of the Operations at the Conowingo Dam Fish Passage Facilities in Spring 2012 (In Progress).

RMC. 1992. Summary of the Operations at the Conowingo Dam Fish Passage Facilities in Spring 1991.

Updated Study Report Conowingo East Fish Lift Attraction Flows – Addendum – Statistical Analysis of Turbine Operation and East Fish Lift Catch RSP 36 Jan 2012.

2006-2011, Susquehanna River Anadromous Fish Restoration Cooperation, Annual Reports.

APPENDICES

APPENDIX A-1, A-2, and A-3: 2012 CONO EFL TELEMETRY SHAD CHARTS.

Fish ID	Date	EFL Entry hh:mm:ss	Last Lower Dection hh:mm:ss	Last Lower Dection Location	Exit Trough Time hh:mm:ss	Foray Duration Time hh:mm:ss	Weir Gate Entered	Weir Gate Percent Open Setting	Crowder Doors Open	Crowder Doors Close	Lift Time hh:mm	Passage (Y/N)	Tailwater Elevation	Water Temperature (Daily Average)	Hourly Gizzard Shad Passage	Hourly Am. shad Passage	Lift Operation Status
54-28	4/17/2012	15:25:24	15:52:43	Upper Crowder Channel (West)	14:11:43	00:24:05	A	94	1553	1550	1550	Y	14.91	59.25	4375	280	Operational
54-19	4/20/2012	18:05:32	18:33:55	Upper Crowder Channel (West)	18:39:04	00:26:52	A	95			1830	Y	15.44	63.14	648	110	Operational
21-77	4/24/2012	16:39:15	17:04:57	Upper Crowder Channel (West)	17:16:49	00:25:16	A	96	1703	1700	1700	Y	15.06	61.6	3402	417	Operational
21-27	4/27/2012	13:39:00	13:58:49	Upper Crowder Channel (West)	15:24:08	00:19:49	A	91	1358	1355	1355	Y	15.84	55.81	3049	250	Operational
54-12	4/27/2012	15:37:32	16:03:16	Upper Crowder Channel (East)	16:09:21	00:22:10	A	95-72	1603	1600	1600	Y	15.12	56.12	1565	369	Operational
21-75	5/5/2012	15:32:57	16:02:43	Upper Crowder Channel (East)	16:17:01	00:28:15	C	45	1602	1600	1600	Y	19.67	63.27	2840	231	Operational
54-42	5/9/2012	16:16:30	16:32:15	Upper Crowder Channel (East)	16:38:49	00:13:36	C	30	1633	1630	1630	Y	20.46	64.3	3315	29	Operational
21-39	5/14/2012	8:18:49	9:09:57	Upper Crowder Channel (East)	9:22:52	00:47:46	C	0	908	905	905	Y	21.06	64.78	1618	161	Operational
21-72	5/14/2012	8:55:17	9:09:42	Upper Crowder Channel (East)	0:00:00	00:11:31	C	0	908	905	905	Y	21.07	64.78	1618	279	Operational
54-80	5/14/2012	7:58:28	8:41:44	Upper Crowder Channel (West)	8:50:09	00:42:25	C	46-0	838	835	835	Y	18.78-21.06	64.78	1618	161	Operational
54-89	5/20/2012	17:28:13	18:03:07	Upper Crowder Channel (East)	18:36:56	00:32:29	C	15	1803	1800	1800	Y	20.77	66.96	1038	37	Operational
54-79	5/21/2012	10:06:22	10:33:52	Upper Crowder Channel (East)	11:21:33	00:24:38	C	15	1033	1030	1030	Y	21.22	68.45	1086	58	Operational
21-41	5/23/2012	12:24:37	18:07:44	Upper Crowder Channel (East)	18:17:48	05:39:29	C	10	1804	1800	1800	Y	21.05-20.76	69.2	476	43	Operational
54-73	5/24/2012	10:57:03	11:02:54	Upper Crowder Channel (East)	11:16:15	00:14:29	C	40	1103	1059	1100	Y	18.99	69.93	1554	75	Operational
21-66	5/25/2012	9:55:30	10:34:35	Upper Crowder Channel (East)	10:39:11	00:34:19	A	107	1033	1030	1030	Y	15.14	71.36	795	91	Operational
54-39	5/27/2012	8:40:44	8:56:04	Upper Crowder Channel (West)	9:08:03	00:11:31	A	105	918	915	915	Y	15.11	74.36	171	24	Operational
54-81	5/29/2012	18:43:52	19:01:44	Upper Crowder Channel (East)	8:29:10	00:15:03	C	35		1900	1900	Y	20.74	78.16	262	4	Operational

Fish ID	Final Successful Foray Date	Final Successful Foray Time	Number of Unsuccessful Forays Attempted	Unsuccessful Foray Number	Start Date	EFL Entry hh:mm:ss	EFL Entry Detection Location	Last Lower Detection Location	Last Date	Last Lower Detection hh:mm:ss	Foray Duration hh:mm:ss	Weir Gate Entered	Weir Gate Percent Open Setting	Crowder Doors Open	Crowder Doors Close	Possible Lift Time hh:mm	Passage (Y/N)	Tailwater Elevation	Water Temperature (Daily Average)	Hourly Am. Shad Passage	Hourly Gizzard Shad Passage	Lift Operation Status
21-27	4/27/2012	13:39:00	2	1	4/24/12	13:40:02	"A" Gate Entrance Dropper	"A" Gate Upstream Dropper	4/24/12	13:43:14	00:03:12	A	96	1335	1330	1330	N	15.72	61.6	57	3402	operational
21-27	4/27/2012	13:39:00	2	2	4/24/12	17:21:30	"A" Gate Upstream Dropper	"A" Gate Upstream Dropper	4/24/12	17:32:10	00:10:40	A	96	1732	1730	1730	N	15.04	61.6	208	1230	operational
21-66	5/25/2012	9:55:30	5	1	5/21/12	11:22:15	"C" Gate Upstream Dropper	"C" Gate Upstream Dropper	5/21/12	11:50:37	00:28:22	C	15	1134	1130	1130	N	21.24	68.45	5	1459	operational
21-66	5/25/2012	9:55:30	5	2	5/21/12	15:27:52	"C" Gate Upstream Dropper	"C" Gate Upstream Dropper	5/21/12	16:05:43	00:37:51	C	15	1604	1600	1600	N	20.8	68.45	65	1246	operational
21-66	5/25/2012	9:55:30	5	3	5/23/12	13:16:51	"C" Gate Upstream Dropper	"A" Gate Upstream Dropper	5/23/12	13:30:17	00:13:26	C	10	1333	1330	1330	N	21.05	69.2	73	917	operational
21-66	5/25/2012	9:55:30	5	4	5/23/12	17:15:09	Lower Crowder Channel (West)	"C" Gate Upstream Dropper	5/23/12	18:13:54	00:58:45	C	10	1804	1800	1800	N	20.76	69.2	32	476	operational
21-66	5/25/2012	9:55:30	5	5	5/24/12	10:55:13	"C" Gate Upstream Dropper	"C" Gate Entrance Dropper	5/24/12	11:34:01	00:38:48	C	40	1133	1130	1130	N	19.02	69.93	75	1554	operational
21-75	5/5/2012	15:32:57	1	1	4/29/12	10:08:58	"C" Gate Upstream Dropper	"C" Gate Upstream Dropper	4/29/12	11:06:47	00:57:49	C	55	1114	1110	1110	N	19.92	66.81	1	6901	operational
54-39	5/27/2012	8:40:44	1	1	5/8/12	12:10:03	"C" Gate Upstream Dropper	Lower Crowder Channel (East)	5/8/12	12:31:28	00:21:25	C	16	1233	1230	1230	N	20.46	65.45	19	3769	operational
54-73	5/24/2012	10:57:03	1	1	5/23/12	12:52:40	"C" Gate Upstream Dropper	"C" Gate Upstream Dropper	5/23/12	13:02:09	00:09:29	C	10	1303	1300	1300	N	21.04	69.2	32	917	operational
54-81	5/29/2012	18:43:52	2	1	5/21/12	15:52:58	"C" Gate Upstream Dropper	Lower Crowder Channel (West)	5/21/12	16:02:43	00:09:45	C	15	1604	1600	1600	N	20.8	68.45	57	1246	operational
54-81	5/29/2012	18:43:52	2	2	5/23/12	15:03:00	"C" Gate Upstream Dropper	"A" Gate Entrance Dropper	5/23/12	15:12:17	00:09:17	C	10	1503	1500	1500	N	21.05	69.2	32	970	operational

Fish ID	Number of Forays Attempted	Foray Number	Date	EFL Entry hh:mm:ss	EFL Entry Detection Location	Last Lower Detection hh:mm:ss	Last Lower Detection Location	Foray Duration hh:mm:ss	Weir Gate Entered	Weir Gate Percent Open Setting	Crowder Doors Open	Crowder Doors Close	Possible Lift Time hh:mm	Passage (Y/N)	Tailwater Elevation	Water Temperature (Daily Average)	Hourly Am. Shad Passage	Hourly Gizzard Shad Passage	Lift Operation Status
54-36	1	1	5/6/2012	8:12:14	"A" Gate Entrance Dropper	8:25:22	"A" Gate Entrance Dropper	00:13:09	A	95%	803	800	830	N	14.6	65.76	77	3426	Operational
54-15	1	1	5/8/2012	15:56:24	"C" Gate Upstream Dropper	16:09:48	"A" Gate Upstream Dropper	00:14:04	A	95%	1603	1600	1630	N	20.69	65.45	68	2789	Operational
54-24	1	1	5/8/2012	12:27:18	"C" Gate Upstream Dropper	18:55:06	Lower Crowder Channel (East)	06:25:24	A	95%	1833	1830	1900	N	19.83	65.45	19	3769	Operational
21-68	1	1	5/9/2012	18:53:17	"C" Gate Upstream Dropper	18:58:54	"A" Gate Upstream Dropper	00:04:19	C	21%	1833		1900	N	19.46	64.3	23	3292	Operational
21-14	1	1	5/13/2012	15:49:49	"A" Gate Upstream Dropper	16:00:28	"A" Gate Upstream Dropper	00:10:39	C	0%	1603	1600	1600 or 1630	N	20.96	63.46	18	3826	Operational
21-37	1	1	5/16/2012	18:52:24	"C" Gate Upstream Dropper	19:04:29	"C" Gate Upstream Dropper	00:12:05	C	0%		1900	1900	N	21.66	65.74	13	479	Operational
54-90	1	1	5/26/2012	6:25:02	"A" Gate Entrance Dropper	6:32:38	Lower Crowder Channel (West)	00:08:38	A	107%	633	630	630 or 700	N	14.4	72.71	8	526	Operational
21-89	1	1	5/27/2012	8:13:40	"A" Gate Entrance Dropper	8:32:13	"A" Gate Upstream Dropper	00:18:33	A	105%	834	830	830	N	15.1	74.36	24	171	Operational
21-87	2	1	5/14/2012	9:44:34	"C" Gate Upstream Dropper	10:01:58	Lower Crowder Channel (East)	00:15:28	C	0%	1008	1005	1005	N	21.2	64.78	279	2799	Operational
		2	5/15/2012	15:09:35	"C" Gate Upstream Dropper	15:18:18	Upper Crowder Channel (East)	00:07:32	C	0%	1503	1500	1530	N	20.34	65.44	7	1681	Operational
21-43	2	1	5/27/2012	18:07:50	"C" Gate Upstream Dropper	18:19:47	Lower Crowder Channel (West)	00:12:22	C	20%	1804	1800	1830	N	20.33	74.36	9	276	Operational
		2	5/28/2012	17:32:41	"C" Gate Upstream Dropper	17:56:20	Lower Crowder Channel (West)	00:23:56	C	25%-60%	1803	1730	1800	N	20.67	76.36	0	69	Operational
21-18	4	1	5/4/2012	14:39:21	"C" Gate Upstream Dropper	14:52:04	"C" Gate Upstream Dropper	00:12:17	C	50%	1437	1430	1510	N	18.99	60.85	125	2879	Operational
		2	5/5/2012	12:30:40	"C" Gate Upstream Dropper		"C" Gate Upstream Dropper		C					N					
		3	5/6/2012	12:28:35	"C" Gate Upstream Dropper	14:23:25	"C" Gate Upstream Dropper	01:52:31	C	40%	1403	1400	1430	N	19.66	65.76	38	2100	Operational
		4	5/8/2012	9:39:46	"C" Gate Upstream Dropper	9:41:16	"C" Gate Upstream Dropper	00:01:30	C	16%	933	930	1000	N	20.2	65.45	10	4225	Operational
54-65	4	1	5/25/2012	14:00:37					C					N					
		2	5/26/2012	14:09:20	"C" Gate Entrance Dropper	15:35:27	"C" Gate Upstream Dropper	01:34:46	C	0%-15%	1534	1530	1530 or 1600	N	20.7	71.36	15	708	Operational
		3	5/27/2012	12:30:29	"A" Gate Entrance Dropper	13:16:42	"C" Gate Upstream Dropper	00:46:05	A	99%-55%	1305	1300	1300 or 1330	N	15.08	74.36	25	966	Operational
		4	5/29/2012	18:53:21	"C" Gate Upstream Dropper	19:04:17	"C" Gate Upstream Dropper	00:10:56	C	35%		1900	1900	1900	N	20.74	78.16	2	39

APPENDIX A-4: 2012 CONOWINGO TAILRACE ZONES.

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Traffic Zone	Total Station	Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL	Flow Trend	Fish Trend	Comment	Water Temp (F)	Flow Bin Number	Units On	Literal Movement	Spill Depth	Comment	± N/A1	
21-66	5/2/12	15:00	6/9/02 12 15-00-00					10390	0	0	0	0	0	0	0	0	0	0	0	0	0	A	up	stay	no movement, increase in gen	56.5	157						
21-66	5/2/12	21:30:22	Sponsor Street West	5/2/12	21:31:20	Last Fallback Detection		79020	0	0	0	0	0	0	0	0	0	0	0	0	0	A	up	stay	no movement, increase in gen	56.0	157	6.345.7.8.10.11					
21-66	5/2/12	NA	NA	NA	NA	Start Tailrace Detection 1																A											
21-66	5/2/12	NA	NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)																A											
21-66	5/2/12	13:50:00	Tailrace Unit 8 (Mid)	5/2/12	13:52:45	Start Upper Tailrace Detection (Start UT Forey 1)	C	79040	5330	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	67.6	157	71.2.3.4.5.6.7.8.10.11	1		move up		
21-66	5/2/12	13:50:00	Tailrace Unit 8 (Mid)	5/2/12	13:52:45	Start Upper Tailrace Detection (Start UT Forey 1)	C	79040	5330	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	67.6	157	71.2.3.4.5.6.7.8.10.11	1		move up		
21-66	5/2/12	15:21:15	Tailrace Unit 10 (Mid)	5/2/12	15:26:06	End Upper Tailrace Detection (End UT Forey 1)	C	79100	5330	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	67.6	157	71.2.3.4.5.6.7.8.10.11	1		move east, all units drop back, no change in generation		
21-66	5/2/12	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)																A											
21-66	5/2/12	14:55:00	T1 - Muddy Is.	5/2/12	14:57:45	Start Lower River		79100	5330	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	67.6	157	71.2.3.4.5.6.7.8.10.11	1		move east, all units drop back, no change in generation		
21-66	5/2/12	14:52:44	T3 - McInbry Is.	5/2/12	14:57:45	Start Lower River		79100	5330	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	67.6	157	71.2.3.4.5.6.7.8.10.11	1		move east, all units drop back, no change in generation		
21-66	5/2/12	12:28:56	T1 - Muddy Is.	5/2/12	12:27:18	End Lower River		61170	0	0	0	0	0	0	0	0	0	0	0	0	0	C	down	stay	no movement, decrease in gen	65.0	157	6.3.4.5.6.7.8.10.11					
21-66	5/2/12	NA	NA	NA	NA	Start Tailrace Detection 2																A											
21-66	5/2/12	NA	NA	NA	NA	Transition Upstream 2 (Upper Tailrace to Tailrace)																A											
21-66	5/2/12	12:39:10	Tailrace Unit 8 (Mid)	5/2/12	12:42:26	Start Upper Tailrace Detection (Start UT Forey 2)	C	61170	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, decrease in gen	65.0	157	6.3.4.5.6.7.8.10.11	1		move up, decrease in generation		
21-66	5/2/12	13:30:00	Tailrace Unit 10 (Mid)	5/2/12	13:30:00	Start Upper Tailrace Detection (Start UT Forey 2)	C	79100	5330	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	65.0	157	71.2.3.4.5.6.7.8.10.11	1		move east, no change in generation		
21-66	5/2/12	14:30:00	Conowago Tailrace Units 1-7 (Near)	5/2/12	14:30:00	Start Upper Tailrace Detection (Start UT Forey 2)	A/B	79100	5330	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	65.0	157	71.2.3.4.5.6.7.8.10.11	1		move center and west, no change in generation		
21-66	5/2/12	16:30:00		5/2/12	16:30:00			61170	0	0	0	0	0	0	0	0	0	0	0	0	0	C	down	stay	no movement, decrease in gen	65.0	157	6.3.4.5.6.7.8.10.11			no response to changes in generation		
21-66	5/2/12	17:30:00		5/2/12	17:30:00			61170	0	0	0	0	0	0	0	0	0	0	0	0	0	C	down	stay	no movement, decrease in gen	65.0	157	6.3.4.5.6.7.8.10.11			no response to changes in generation		
21-66	5/2/12	18:30:00		5/2/12	18:30:00			43420	0	0	0	0	0	0	0	0	0	0	0	0	0	C	down	stay	no movement, decrease in gen	65.0	157	4.3.4.5.6.7.11					
21-66	5/2/12	19:30:00		5/2/12	19:30:00			43420	0	0	0	0	0	0	0	0	0	0	0	0	0	C	down	stay	no movement, decrease in gen	65.0	157	4.3.4.5.6.7.11					
21-66	5/2/12	20:30:00		5/2/12	20:30:00			43420	0	0	0	0	0	0	0	0	0	0	0	0	0	C	down	stay	no movement, decrease in gen	65.0	157	4.3.4.5.6.7.11					
21-66	5/2/12	22:30:00		5/2/12	22:30:00			21390	0	0	0	0	0	0	0	0	0	0	0	0	0	A	down	stay	no movement, decrease in gen	65.0	157	4.3.4.5.7					
21-66	5/2/12	23:30:00		5/2/12	23:30:00			11110	0	0	0	0	0	0	0	0	0	0	0	0	0	A	down	stay	no movement, decrease in gen	65.0	157	4.3.4.5.7					
21-66	5/2/12	6:30:00		5/2/12	6:30:00			10900	0	0	0	0	0	0	0	0	0	0	0	0	0	A	down	stay	no movement, decrease in gen	64.3	157	4.3.4.5.7					
21-66	5/2/12	7:30:00		5/2/12	7:30:00			10900	0	0	0	0	0	0	0	0	0	0	0	0	0	A	down	stay	no movement, decrease in gen	64.3	157	4.3.4.5.7					
21-66	5/2/12	2:30:00		5/2/12	2:30:00			10900	0	0	0	0	0	0	0	0	0	0	0	0	0	A	down	stay	no movement, decrease in gen	64.3	157	4.3.4.5.7					
21-66	5/2/12	3:30:00		5/2/12	3:30:00			10900	0	0	0	0	0	0	0	0	0	0	0	0	0	A	down	stay	no movement, decrease in gen	64.3	157	4.3.4.5.7					
21-66	5/2/12	4:30:00		5/2/12	4:30:00			10900	0	0	0	0	0	0	0	0	0	0	0	0	0	A	down	stay	no movement, decrease in gen	64.3	157	4.3.4.5.7					
21-66	5/2/12	5:30:00		5/2/12	5:30:00			22130	0	0	0	0	0	0	0	0	0	0	0	0	0	A	up	stay	no movement, increase in gen	64.3	245.7	4.5.7.8.10.11					
21-66	5/2/12	6:30:00		5/2/12	6:30:00			22130	0	0	0	0	0	0	0	0	0	0	0	0	0	A	up	stay	no movement, increase in gen	64.3	245.7	4.5.7.8.10.11					
21-66	5/2/12	7:30:00		5/2/12	7:30:00			76000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	8:30:00		5/2/12	8:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	9:30:00		5/2/12	9:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	10:30:00		5/2/12	10:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	11:30:00		5/2/12	11:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	12:30:00		5/2/12	12:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	13:30:00		5/2/12	13:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	14:30:00		5/2/12	14:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	15:30:00		5/2/12	15:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	16:30:00		5/2/12	16:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	17:30:00		5/2/12	17:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	18:30:00		5/2/12	18:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					
21-66	5/2/12	19:30:00		5/2/12	19:30:00			66000	0	0	0	0	0	0	0	0	0	0	0	0	0	C	up	stay	no movement, increase in gen	64.3	245.7	2.3.4.5.6.7.8.10.11					

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1	
21-75	4/29/12	10:43:06	"A" Gate Entrance Dropper	4/29/12	10:43:49		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:43:56	Lower Crowder Channel (West)	4/29/12	10:48:44	Lower Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:45:46	"C" Gate Upstream Dropper	4/29/12	10:46:26		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:47:12	"A" Gate Upstream Dropper	4/29/12	10:51:07		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:48:24	"A" Gate Entrance Dropper	4/29/12	10:50:48		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:48:31	Lower Crowder Channel (East)	4/29/12	10:51:32	Lower Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:48:57	Lower Crowder Channel (West)	4/29/12	10:53:16	Lower Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:51:54	"A" Gate Entrance Dropper	4/29/12	10:53:43		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:51:58	"A" Gate Upstream Dropper	4/29/12	10:53:47		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:53:00	Lower Crowder Channel (East)	4/29/12	10:53:25	Lower Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:54:10	Upper Crowder Channel (West)	4/29/12	10:57:50	Start Upstream Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:54:31	Upper Crowder Channel (East)	4/29/12	10:57:45	Upstream Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	10:58:00	Upper Crowder Channel (East)	4/29/12	11:02:29	End Upstream Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	11:05:06	Lower Crowder Channel (West)	4/29/12	11:05:58	Lower Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	11:05:06	"A" Gate Entrance Dropper	4/29/12	11:05:23		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	11:05:25	Lower Crowder Channel (East)	4/29/12	11:06:44	End Lower Crowder Channel	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	11:06:17	"A" Gate Upstream Dropper	4/29/12	11:06:32		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	11:06:28	"A" Gate Entrance Dropper	4/29/12	11:06:28		C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	11:06:47	"C" Gate Upstream Dropper	4/29/12	11:06:47	End EFL	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
21-75	4/29/12	11:19:49	"C" Gate Aerial	4/29/12	11:19:49	End EFL Aerial Detection	C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11			leave EFL, no change in generation	
4/29/12	11:30:00		"C" Gate Aerial				C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C				78.2	6	3,4,5,7,8,9,10,11				
4/29/12	12:30:00						C	32260	0	0	6000	6000	5600	0	5840	0	0	0	0	0	C	down	stay		78.2	3	3,4,5,7,10				
4/29/12	13:30:00		Tailrace Unit 9-10 (Mid)				C	11440	0	0	0	0	5600	0	5840	0	0	0	0	0	A	down	stay		78.2	1	5,7	1		move west, decrease in generation	
4/29/12	14:30:00						C	11440	0	0	0	0	5600	0	5840	0	0	0	0	0	A	down	stay		78.2	1	5,7				
4/29/12	15:30:00						C	11440	0	0	0	0	5600	0	5840	0	0	0	0	0	A	down	stay		78.2	1	5,7				
4/29/12	16:30:00						C	11440	0	0	0	0	5600	0	5840	0	0	0	0	0	A	down	stay		78.2	1	5,7				
21-75	4/29/12	17:30:00	Tailrace Unit 9-10 (Mid)	4/29/12	18:00:08	End Upper Tailrace Detection (End UT Foray 9)	C	11440	0	0	0	0	5600	0	5840	0	0	0	0	0	A	down	stay		78.2	1	5,7	1			
21-75	4/29/12	17:57:51	NA	NA	NA	Transition Downstream 9 (Upper Tailrace to Tailrace)	C	11440	0	0	0	0	5600	0	5840	0	0	0	0	0	A	down	stay		78.2	1	5,7			drop back, no change in generation	
21-75	4/29/12	NA	NA	NA	NA	End Tailrace Detection 1	A													A				78.2							
21-75	4/29/12	20:07:31	T1 - Opp. Mudd Is.	4/29/12	20:11:49	Start Lower River		75080	5320	5120	6000	6000	5600	5760	5840	8830	8680	8820	9110		C	up	stay		78.2	7	1,2,3,4,5,6,7,8,9,10,11				
21-75	4/29/12	23:57:46	T1 - Opp. Mudd Is.	4/29/12	23:58:32	End Lower River		11440	0	0	0	0	5600	0	5840	0	0	0	0	0	A	down	stay		78.2	1	5,7				
21-75	4/29/12	NA	NA	NA	NA	Start Tailrace Detection 2	A													A				78.2							
21-75	4/29/12	NA	NA	NA	NA	Transition Upstream 10 (Tailrace to Upper Tailrace)	A													A				78.2							
21-75	4/30/12	2:08:54	Tailrace Unit 9 (Mid)	4/30/12	2:11:10	Start Upper Tailrace Detection (Start UT Foray 10)	C	11550	0	0	0	0	5580	0	5970	0	0	0	0	0	A	down	stay		79.0	1	5,7	1		move up, decrease in generation	
21-75	4/30/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 10)	A													A				79.0							
21-75	4/30/12	NA	NA	NA	NA	Transition Downstream 10 (Upper Tailrace to Tailrace)	A													A				79.0							
21-75	4/30/12	NA	NA	NA	NA	End Tailrace Detection 2	A													A				79.0							
21-75	4/30/12	20:08:35	T1 - Opp. Mudd Is.	4/30/12	20:13:33	Start Lower River		75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140		C	up	stay		79.0	7	1,2,3,4,5,6,7,8,9,10,11				
21-75	4/30/12	23:19:18	T1 - Opp. Mudd Is.	4/30/12	23:23:45	End Lower River		75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140		C	up	stay		79.0	7	1,2,3,4,5,6,7,8,9,10,11				
21-75	5/1/12	0:59:14	LT - Upper Rowland Is. West	5/1/12	1:04:00	Start Tailrace Detection 3	E	10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A	down	down		77.0	1	5,7			move up, decrease in generation	
5/1/12	1:30:00							10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A				77.0	1	5,7				
5/1/12	2:30:00							10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A				77.0	1	5,7				
5/1/12	3:30:00							10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A				77.0	1	5,7				
5/1/12	4:30:00							10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A				77.0	1	5,7				
21-75	5/1/12	4:42:03	LT - Upper Rowland Is. West	5/1/12	4:44:53	Transition Upstream 11 (Tailrace to Upper Tailrace)	E	10520	0	0	0	0	4870	0	5650	0	0	0	0	0	0	A				77.0	1	5,7			
21-75	5/1/12	5:52:48	Tailrace Unit 1 (Mid)	5/1/12	5:54:15	Start Upper Tailrace Detection (Start UT Foray 11)	A	10520	0	0	0	0																			

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1	
54-12	4/12/12	13:08:00	04/12/12 13:08:00					11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A				62.9	1,5,7				
54-12	4/22/12	10:31:31	Spencer Island West	4/22/12	10:34:49	Last Fallback Detection		11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				69.1	1,3,5				
54-12	4/22/12	NA	NA	NA	NA	Start Tailrace Detection 1																			69.1						
54-12	4/22/12	NA	NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)																			69.1						
54-12	4/24/12	2:19:09	Tailrace Unit 8 (Mid)	4/24/12	2:27:53	Start Upper Tailrace Detection (Start UT Foray 1)	C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A	A			69.9	1,5,7			move up, no change in generation	
	4/24/12	2:30:00	Tailrace Unit 8 (Mid)				C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	3:30:00					C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	4:30:00	Tailrace Unit 8,9,10 (Mid)				C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	5:30:00					C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	6:30:00	Tailrace Unit 9 (Mid)				C	41430	0	0	6030	6090	5490	0	6090	0	0	8780	8950	0		C	up	stay	no movement; increase in gen	69.9	4,3,4,5,7,10,11				no response to changes in generation
	4/24/12	7:30:00					C	41430	0	0	6030	6090	5490	0	6090	0	0	8780	8950	0		C				69.9	4,3,4,5,7,10,11				
	4/24/12	8:30:00					C	41430	0	0	6030	6090	5490	0	6090	0	0	8780	8950	0		C				69.9	4,3,4,5,7,10,11				
	4/24/12	9:30:00					C	41430	0	0	6030	6090	5490	0	6090	0	0	8780	8950	0		C				69.9	4,3,4,5,7,10,11				
	4/24/12	10:30:00					C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A	down	stay	no movement; decrease in gen.	69.9	1,5,7				
	4/24/12	11:30:00					C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	12:30:00					C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	13:30:00					C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	14:30:00					C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	15:30:00	Tailrace Unit 9,10 (Mid)				C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	16:30:00	Tailrace Unit 8,9,10 (Mid)				C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	17:30:00	Tailrace Unit 8,9,10 (Mid)				C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0		A				69.9	1,5,7				
	4/24/12	18:30:00					C	23700	0	0	6030	6090	5490	0	6090	0	0	0	0	0		A	up	stay	no movement; increase in gen	69.9	2,3,4,5,7				
	4/24/12	19:30:00	Tailrace Unit 8,9,10 (Mid)				C	23700	0	0	6030	6090	5490	0	6090	0	0	0	0	0		A				69.9	2,3,4,5,7				
54-12	4/24/12	19:43:29	Tailrace Unit 9 (Mid)	4/24/12	19:51:26	End Upper Tailrace Detection (End UT Foray 1)	C	23700	0	0	6030	6090	5490	0	6090	0	0	0	0	0		A				69.9	2,3,4,5,7				
54-12	4/24/12	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)																			69.9					drop back, no change in generation	
54-12	4/24/12	NA	NA	NA	NA	End Tailrace Detection 1																			69.9						
54-12	4/24/12	20:04:31	Spencer Island West	4/24/12	20:08:53	Start Lower River		41430	0	0	6030	6090	5490	0	6090	0	0	8780	8950	0		C	up	stay	no movement; increase in gen	69.9	4,3,4,5,7,10,11				
54-12	4/25/12	1:03:29	T1 - Opp. Mudd Is.	4/25/12	1:08:00	End Lower River		11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A	down	stay	no movement; decrease in gen	71.4	1,5,7				
54-12	4/25/12	1:54:04	LT - Upper Rowland Is. West	4/25/12	1:58:39	Start Tailrace Detection 2	E	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A	down	down	fish down; no change in gen	71.4	1,5,7			move up, decrease in generation	
	4/25/12	2:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
	4/25/12	3:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
	4/25/12	4:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
	4/25/12	5:30:00					C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0		C	up	stay	no movement; increase in gen	71.4	3,3,4,5,7,10				no response to changes in generation
	4/25/12	6:30:00					C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0		C				71.4	3,3,4,5,7,10				
	4/25/12	7:30:00					C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0		C				71.4	3,3,4,5,7,10				
	4/25/12	8:30:00					C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0		C				71.4	3,3,4,5,7,10				
	4/25/12	9:30:00					C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0		C				71.4	3,3,4,5,7,10				
	4/25/12	10:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A	down	stay	no movement; decrease in gen.	71.4	1,5,7				
	4/25/12	11:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
	4/25/12	12:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
	4/25/12	13:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
	4/25/12	14:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
	4/25/12	15:30:00					C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
54-12	4/25/12	15:35:52	LT - Upper Rowland Is. West	4/25/12	15:40:27	Transition Upstream 2 (Tailrace to Upper Tailrace)	E	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1,5,7				
54-12	4/25/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 2)																			71.4						
54-12	4/25/12	19:29:13	"C" Gate Aerial	4/25/12	19:33:47	Start EFL Aerial Detection	C	41240	0	0	6040	6060	5180	0	6110	0	0	8800	9050	0		C	up	up	fish up; increase in gen	71.4	4,3,4,5,7,10,11			move up, increase in generation	
	4/25/12	19:30:00					C	41240	0	0	6040	6060	5180	0	6110	0	0	8800	9050	0		C				71.4	4,3,4,5,7,10,11				
54-12	4/25/12	19:33:55	"C" Gate Aerial	4/25/12	19:36:36	End EFL Aerial Detection	C	41240	0	0	6040	6060	5180	0	6110	0	0	8800	9050	0		C				71.4	4,3,4,5,7,10,11				
54-12	4/25/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 2)																			71.4						
54-12	4/25/12	NA																													

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1	
54-19	4/12/12	16:11:00	04/12/12 16:11:00					11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
54-19	4/12/12	22:45:30	Tailrace Unit 1 (Mid)	4/12/12	22:52:01	Last Fallback Detection		11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
54-19	4/12/12	22:54:34	Upper Rowland Is. West	4/12/12	22:57:35	Start Tailrace Detection 1	E	11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
	4/12/12	23:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
	4/12/12	0:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
	4/12/12	1:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
	4/12/12	2:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
	4/12/12	3:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
	4/12/12	4:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0					62.9	1,5,7					
	4/12/12	5:30:00						32500	0	0	0	0	6100	5550	5940	6030	0	0	8880	0		C	up	stay	no movement; increase in gen	62.9	3,4,5,6,7,10				no response to changes in generation
	4/12/12	6:30:00						32500	0	0	0	0	6100	5550	5940	6030	0	0	8880	0		C			62.9	3,4,5,6,7,10					
	4/12/12	7:30:00						32500	0	0	0	0	6100	5550	5940	6030	0	0	8880	0		C			62.9	3,4,5,6,7,10					
	4/12/12	8:30:00						32500	0	0	0	0	6100	5550	5940	6030	0	0	8880	0		C			62.9	3,4,5,6,7,10					
	4/12/12	9:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A	down	stay	no movement; decrease in gen	62.9	1,5,7				
	4/12/12	10:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	11:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	12:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	13:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	14:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	15:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	16:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	17:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/12/12	18:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C	up	stay	no movement; increase in gen	62.9	3,1,5,6,7,10					
	4/12/12	19:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C				62.9	3,1,5,6,7,10					
	4/12/12	20:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C				62.9	3,1,5,6,7,10					
	4/12/12	21:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C				62.9	3,1,5,6,7,10					
	4/12/12	22:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A	down	stay	no movement; decrease in gen	62.9	1,5,7				
	4/12/12	23:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0	0		A			62.9	1,5,7					
	4/13/12	0:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	1:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	2:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	3:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	4:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	5:30:00						40070	5500	0	0	0	5290	5830	5760	0	0	8780	8910		C	up	stay	no movement; increase in gen	63.5	4,1,5,6,7,10,11					
	4/13/12	6:30:00						48750	5500	0	0	0	5290	5830	5760	0	0	8880	8780	8910		C			63.5	5,1,5,6,7,9,10,11					
	4/13/12	7:30:00						48750	5500	0	0	0	5290	5830	5760	0	0	8880	8780	8910		C			63.5	5,1,5,6,7,9,10,11					
	4/13/12	8:30:00						48750	5500	0	0	0	5290	5830	5760	0	0	8880	8780	8910		C			63.5	5,1,5,6,7,9,10,11					
	4/13/12	9:30:00						48750	5500	0	0	0	5290	5830	5760	0	0	8880	8780	8910		C			63.5	5,1,5,6,7,9,10,11					
	4/13/12	10:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A	down	stay	no movement; decrease in gen	63.5	1,5,7				
	4/13/12	11:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	12:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	13:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	14:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	15:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	16:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	17:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	18:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	19:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	20:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	21:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	22:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A			63.5	1,5,7					
	4/13/12	23:30:00						11050	0	0	0	0	529																		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1		
54-28	4/13/12	13:24:00	04/13/12 13:24:00					11650	0	0	0	0	5290	0	5760	0	0	0	0	0					63.5							
54-28	4/15/12	10:34:37	T1 - Mudd Is.	4/15/12	10:38:27	Last Fallback Detection		32070	5590	0	0	0	5430	5980	6160	0	0	8910	0		C	up	stay	no movement; increase in gen	65.4	3	1,5,6,7,10					
54-28	4/15/12	NA	NA	NA	NA	Start Tailrace Detection 1															A				65.4							
54-28	4/15/12	15:45:24	Tailrace Unit 9 (Mid)	4/15/12	15:46:34	Transition Upstream 1 (Tailrace to Upper Tailrace)							5430	0	6160	0	0	0	0		A	down	stay	no movement; decrease in gen	65.4	1	5,7			move up, decrease in generation		
54-28	4/16/12	15:11:46	Tailrace Unit 9 (Mid)	4/16/12	15:11:46	End Upper Tailrace Detection (End UT Foray 1)	C	32270	0	0	0	6080	5320	5950	6130	0	0	8790	0		C	up	stay	no movement; increase in gen	65.7		3,4,5,6,7,10					
54-28	4/16/12	15:19:14	Upper Rowland Is. West	4/16/12	15:21:02	Transition Downstream 1 (Upper Tailrace to Tailrace)	E	32270	0	0	0	6080	5320	5950	6130	0	0	8790	0		C	down	stay	fish down; no change in gen	65.7		3,4,5,6,7,10			drop back, increase in generation		
54-28	4/16/12	16:06:35	Upper Rowland Is. West	4/16/12	16:06:47	Transition Upstream 2 (Tailrace to Upper Tailrace)	E	50110	0	0	0	6080	5320	5950	6130	0	8720	8790	9120		C	up	stay	no movement; increase in gen	65.7		5,4,5,6,7,9,10,11					
54-28	4/16/12	17:12:48	Tailrace Unit 7 (Mid)	4/16/12	17:19:14	Start Upper Tailrace Detection (Start UT Foray 2)	B	50110	0	0	0	6080	5320	5950	6130	0	8720	8790	9120		C	up	stay	fish up; no change in gen	65.7		5,4,5,6,7,9,10,11			move up, three big units on		
54-28	4/16/12	17:30:00	Tailrace Unit 7 (Mid)				B	50110	0	0	0	6080	5320	5950	6130	0	8720	8790	9120		C				65.7		5,4,5,6,7,9,10,11					
54-28	4/16/12	18:30:00	Tailrace Unit 7 (Mid)				B	50110	0	0	0	6080	5320	5950	6130	0	8720	8790	9120		C				65.7		5,4,5,6,7,9,10,11					
54-28	4/16/12	19:30:57	Tailrace Unit 7 (Mid)	4/16/12	19:34:09	End Upper Tailrace Detection (End UT Foray 2)	B	50110	0	0	0	6080	5320	5950	6130	0	8720	8790	9120		C				65.7		5,4,5,6,7,9,10,11					
54-28	4/16/12	19:33:47	Upper Rowland Is. West	4/16/12	19:38:46	Transition Downstream 2 (Upper Tailrace to Tailrace)	E	50110	0	0	0	6080	5320	5950	6130	0	8720	8790	9120		C	down	stay	fish down; no change in gen	65.7		5,4,5,6,7,9,10,11			drop back, no change in generation		
54-28	4/16/12	20:02:58	Upper Rowland Is. West	4/16/12	20:06:45	Transition Upstream 3 (Tailrace to Upper Tailrace)	E	17530	0	0	0	6080	5320	0	6130	0	0	0	0	0		A	down	stay	no movement; decrease in gen	65.7		1,4,5,7				
54-28	4/16/12	21:35:31	Tailrace Unit 10 (Mid)	4/16/12	21:39:43	Start Upper Tailrace Detection (Start UT Foray 3)	C	17530	0	0	0	6080	5320	0	6130	0	0	0	0	0		A	up	stay	fish up; no change in gen	65.7		1,4,5,7			move up, decrease in generation	
	4/16/12	22:30:00						11450	0	0	0	5320	0	6130	0	0	0	0	0		A	down	stay	no movement; decrease in gen	65.7		1,5,7			no response to changes in generation		
	4/16/12	23:30:00						11450	0	0	0	5320	0	6130	0	0	0	0	0		A				65.7		1,5,7					
	4/17/12	0:30:00						11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
	4/17/12	1:30:00						11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
	4/17/12	2:30:00						11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
	4/17/12	3:30:00						11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
	4/17/12	4:30:00	Tailrace Unit 9,10 (Mid)				C	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
	4/17/12	5:30:00	Tailrace Unit 9 (Mid)				C	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
	4/17/12	6:30:00						11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
54-28	4/17/12	6:34:34	Tailrace Unit 10 (Mid)	4/17/12	6:36:47	End Upper Tailrace Detection (End UT Foray 3)	C	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
54-28	4/17/12	6:38:00	Upper Rowland Is. West	4/17/12	6:42:50	Transition Downstream 3 (Upper Tailrace to Tailrace)	E	11330	0	0	0	5200	0	6130	0	0	0	0	0		A	down	stay	fish down; no change in gen	66.1		1,5,7			drop back, no change in generation		
54-28	4/17/12	6:53:03	Upper Rowland Is. West	4/17/12	6:57:55	Transition Upstream 4 (Tailrace to Upper Tailrace)	E	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
54-28	4/17/12	6:54:29	Tailrace Unit 10 (Mid)	4/17/12	7:01:17	Start Upper Tailrace Detection (Start UT Foray 4)	C	11330	0	0	0	5200	0	6130	0	0	0	0	0		A	up	stay	fish up; no change in gen	66.1		1,5,7			move up, no change in generation		
54-28	4/17/12	6:57:18	Tailrace Unit 7 (Mid)	4/17/12	7:03:41	End Upper Tailrace Detection (End UT Foray 4)	B	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7			move to center, no change in generation		
54-28	4/17/12	6:58:06	Upper Rowland Is. West	4/17/12	7:02:58	Transition Downstream 4 (Upper Tailrace to Tailrace)	E	11330	0	0	0	5200	0	6130	0	0	0	0	0		A	down	stay	fish down; no change in gen	66.1		1,5,7			drop back, no change in generation		
54-28	4/17/12	8:15:18	Upper Rowland Is. West	4/17/12	8:20:05	Transition Upstream 5 (Tailrace to Upper Tailrace)	E	17350	0	0	0	6020	5200	0	6130	0	0	0	0	0		A	up	stay	no movement; increase in gen	66.1		1,4,5,7				
54-28	4/17/12	8:16:49	Tailrace Unit 7 (Mid)	4/17/12	8:16:49	Start Upper Tailrace Detection (Start UT Foray 5)	B	17350	0	0	0	6020	5200	0	6130	0	0	0	0	0		A	up	stay	fish up; no change in gen	66.1		1,4,5,7			move up, increase in generation	
	4/17/12	8:30:00	Tailrace Unit 1,7 (Mid)				A/B	17350	0	0	0	6020	5200	0	6130	0	0	0	0		A				66.1		1,4,5,7			2	move west and center, no change in generation	
54-28	4/17/12	8:39:19	Tailrace Unit 7 (Mid)	4/17/12	8:46:02	End Upper Tailrace Detection (End UT Foray 5)	B	17350	0	0	0	6020	5200	0	6130	0	0	0	0	0		A				66.1		1,4,5,7			1	move to center, no change in generation
54-28	4/17/12	8:43:16	Upper Rowland Is. West	4/17/12	8:46:52	Transition Downstream 5 (Upper Tailrace to Tailrace)	E	17350	0	0	0	6020	5200	0	6130	0	0	0	0	0		A	down	stay	fish down; no change in gen	66.1		1,4,5,7			drop back, no change in generation	
54-28	4/17/12	10:52:09	Upper Rowland Is. West	4/17/12	10:55:34	Transition Upstream 6 (Tailrace to Upper Tailrace)	E	11330	0	0	0	5200	0	6130	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	66.1		1,5,7				
54-28	4/17/12	10:56:17	Tailrace Unit 7 (Mid)	4/17/12	11:02:45	Start Upper Tailrace Detection (Start UT Foray 6)	B	11330	0	0	0	5200	0	6130	0	0	0	0	0	0		A	up	stay	fish up; no change in gen	66.1		1,5,7			move up, no change in generation	
	4/17/12	11:30:00	Tailrace Unit 1,7 (Mid)				A/B	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7			2	move west and center, no change in generation	
54-28	4/17/12	11:41:30	Tailrace Unit 1 (Mid)	4/17/12	11:44:37	End Upper Tailrace Detection (End UT Foray 6)	A	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7			1	move west, no change in generation	
54-28	4/17/12	11:55:15	Upper Rowland Is. West	4/17/12	12:00:02	Transition Downstream 6 (Upper Tailrace to Tailrace)	E	11330	0	0	0	5200	0	6130	0	0	0	0	0	0		A	down	stay	fish down; no change in gen	66.1		1,5,7			drop back, no change in generation	
54-28	4/17/12	12:27:02	Upper Rowland Is. West	4/17/12	12:31:53	Transition Upstream 7 (Tailrace to Upper Tailrace)	E	11330	0	0	0	5200	0	6130	0	0	0	0	0	0		A				66.1		1,5,7				
54-28	4/17/12	12:35:42	Tailrace Unit 10 (Mid)	4/17/12	12:43:09	Start Upper Tailrace Detection (Start UT Foray 7)	C	11330	0	0	0	5200	0	6130	0	0	0	0	0	0		A	up	stay	fish up; no change in gen	66.1		1,5,7			move up, no change in generation	
	4/17/12	13:30:00	Tailrace Unit 10 (Mid)				C	11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
	4/17/12	14:30:00						11330	0	0	0	5200	0	6130	0	0	0	0	0		A				66.1		1,5,7					
54-28	4/17/12	15:19:37	"A" Gate Aerial	4/17/12	15:22:11	Start EFL Aerial Detection	C	11330	0	0	0	5200	0	6130	0	0	0	0	0	0		A				66.1		1,5,7			move to EFL, no change in generation	
54-28	4/17/12	15:25:24	"A" Gate Entrance Dropper	4/17/12	15:27:31	Start EFL	C	11330	0	0	0	5200	0	6130	0	0	0	0	0	0		A										

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1	
54-28	4/18/12	1:29:40	ELF Exit Trough - Lower Dropper	4/18/12	1:34:00		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	1:30:00	ELF Exit Trough - Lower Dropper	4/18/12	1:30:00		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	1:34:44	ELF Exit Trough - Lower Dropper	4/18/12	1:39:10		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	1:40:19	ELF Exit Trough - Lower Dropper	4/18/12	1:43:29		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	1:44:26	ELF Exit Trough - Lower Dropper	4/18/12	1:48:36		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	1:50:00	ELF Exit Trough - Lower Dropper	4/18/12	1:54:19		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	1:54:39	ELF Exit Trough - Lower Dropper	4/18/12	1:59:15		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	1:59:41	ELF Exit Trough - Lower Dropper	4/18/12	2:03:42		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:04:35	ELF Exit Trough - Lower Dropper	4/18/12	2:09:27		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:09:35	ELF Exit Trough - Lower Dropper	4/18/12	2:14:32		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:14:39	ELF Exit Trough - Lower Dropper	4/18/12	2:19:35		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:19:42	ELF Exit Trough - Lower Dropper	4/18/12	2:24:35		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:24:42	ELF Exit Trough - Lower Dropper	4/18/12	2:27:44		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:30:03	ELF Exit Trough - Lower Dropper	4/18/12	2:33:39		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:34:49	ELF Exit Trough - Lower Dropper	4/18/12	2:39:42		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:39:50	ELF Exit Trough - Lower Dropper	4/18/12	2:44:26		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:45:29	ELF Exit Trough - Lower Dropper	4/18/12	2:49:36		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:50:28	ELF Exit Trough - Lower Dropper	4/18/12	2:54:37		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	2:56:06	ELF Exit Trough - Lower Dropper	4/18/12	2:59:34		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:00:19	ELF Exit Trough - Lower Dropper	4/18/12	3:04:39		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:04:48	ELF Exit Trough - Lower Dropper	4/18/12	3:09:47		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:09:55	ELF Exit Trough - Lower Dropper	4/18/12	3:14:41		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:12:05	EFL Upper Exit Trough	4/18/12	3:12:05		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:14:55	ELF Exit Trough - Lower Dropper	4/18/12	3:19:36		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:19:57	ELF Exit Trough - Lower Dropper	4/18/12	3:24:50		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:24:58	ELF Exit Trough - Lower Dropper	4/18/12	3:29:24		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:29:58	ELF Exit Trough - Lower Dropper	4/18/12	3:34:45		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:30:00	ELF Exit Trough - Lower Dropper	4/18/12	3:39:41		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:34:58	ELF Exit Trough - Lower Dropper	4/18/12	3:39:41		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:40:07	ELF Exit Trough - Lower Dropper	4/18/12	3:44:47		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:41:26	EFL Upper Exit Trough	4/18/12	3:41:26		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:45:08	ELF Exit Trough - Lower Dropper	4/18/12	3:49:52		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:50:48	EFL Upper Exit Trough	4/18/12	3:51:23		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:51:09	ELF Exit Trough - Lower Dropper	4/18/12	3:53:40		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:51:30	EFL Upper Exit Trough	4/18/12	3:54:09		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	3:55:46	ELF Exit Trough - Lower Dropper	4/18/12	4:00:00		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:00:13	ELF Exit Trough - Lower Dropper	4/18/12	4:05:03		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:03:47	EFL Upper Exit Trough	4/18/12	4:06:26		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:05:29	ELF Exit Trough - Lower Dropper	4/18/12	4:10:03		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:10:16	ELF Exit Trough - Lower Dropper	4/18/12	4:15:03		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:15:11	ELF Exit Trough - Lower Dropper	4/18/12	4:20:11		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:20:18	ELF Exit Trough - Lower Dropper	4/18/12	4:24:08		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:26:56	ELF Exit Trough - Lower Dropper	4/18/12	4:30:06		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:30:32	ELF Exit Trough - Lower Dropper	4/18/12	4:35:07		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:35:46	ELF Exit Trough - Lower Dropper	4/18/12	4:40:15		C	12090	0	0	0	6150	0	0	5940	0	0	0	0	0	0	A				65.5	1, 4, 7				
54-28	4/18/12	4:40:30	ELF Exit Trough - Lower																												

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1
54-28	4/18/12	8:01:18	ELF Exit Trough - Lower Dropper	4/18/12	8:06:14		C	23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A				65.5	2	3,4,5,7			
54-28	4/18/12	8:07:31	ELF Exit Trough - Lower Dropper	4/18/12	8:11:19		C	23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A				65.5	2	3,4,5,7			
54-28	4/18/12	8:11:27	ELF Exit Trough - Lower Dropper	4/18/12	8:16:17		C	23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A				65.5	2	3,4,5,7			
54-28	4/18/12	8:16:25	ELF Exit Trough - Lower Dropper	4/18/12	8:20:23		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A	down	stay	no movement; decrease in gen	65.5	1	4,5,7			
54-28	4/18/12	8:20:05	EFL Upper Exit Trough	4/18/12	8:20:05		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:21:28	ELF Exit Trough - Lower Dropper	4/18/12	8:26:20		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:26:27	ELF Exit Trough - Lower Dropper	4/18/12	8:31:00		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:30:00	ELF Exit Trough - Lower Dropper	4/18/12	8:36:22		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:31:53	EFL Upper Exit Trough	4/18/12	8:31:53		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:33:27	EFL Upper Exit Trough	4/18/12	8:33:27		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:36:30	ELF Exit Trough - Lower Dropper	4/18/12	8:41:25		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:41:38	ELF Exit Trough - Lower Dropper	4/18/12	8:46:15		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:46:41	ELF Exit Trough - Lower Dropper	4/18/12	8:51:30		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:51:43	ELF Exit Trough - Lower Dropper	4/18/12	8:56:33		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	8:56:47	ELF Exit Trough - Lower Dropper	4/18/12	9:01:36		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:06:58	ELF Exit Trough - Lower Dropper	4/18/12	9:11:37		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:11:45	ELF Exit Trough - Lower Dropper	4/18/12	9:16:41		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:16:49	ELF Exit Trough - Lower Dropper	4/18/12	9:21:45		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:21:53	ELF Exit Trough - Lower Dropper	4/18/12	9:26:46		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:23:50	EFL Upper Exit Trough	4/18/12	9:25:18		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:26:53	ELF Exit Trough - Lower Dropper	4/18/12	9:31:23		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:30:00	EFL Upper Exit Trough	4/18/12	9:32:47		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:31:55	ELF Exit Trough - Lower Dropper	4/18/12	9:36:47		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:36:54	ELF Exit Trough - Lower Dropper	4/18/12	9:41:16		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:42:31	ELF Exit Trough - Lower Dropper	4/18/12	9:46:38		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:47:04	ELF Exit Trough - Lower Dropper	4/18/12	9:51:45		C	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				65.5	1	4,5,7			
54-28	4/18/12	9:57:10	ELF Exit Trough - Lower Dropper	4/18/12	10:01:52		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	65.5	1	5,7			
54-28	4/18/12	10:02:00	ELF Exit Trough - Lower Dropper	4/18/12	10:06:55		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:07:03	ELF Exit Trough - Lower Dropper	4/18/12	10:11:21		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:12:38	ELF Exit Trough - Lower Dropper	4/18/12	10:16:20		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:17:18	ELF Exit Trough - Lower Dropper	4/18/12	10:22:01		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:22:08	ELF Exit Trough - Lower Dropper	4/18/12	10:26:58		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:27:37	ELF Exit Trough - Lower Dropper	4/18/12	10:32:04		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:30:00	EFL Upper Exit Trough	4/18/12	10:36:57		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:32:18	ELF Exit Trough - Lower Dropper	4/18/12	10:36:57		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:37:41	ELF Exit Trough - Lower Dropper	4/18/12	10:41:52		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:42:25	ELF Exit Trough - Lower Dropper	4/18/12	10:46:39		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:47:56	ELF Exit Trough - Lower Dropper	4/18/12	10:51:05		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:53:06	ELF Exit Trough - Lower Dropper	4/18/12	10:57:39		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:54:42	EFL Upper Exit Trough	4/18/12	10:55:03		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:58:17	EFL Upper Exit Trough	4/18/12	10:58:24		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	10:58:18	ELF Exit Trough - Lower Dropper	4/18/12	11:02:11		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:02:19	ELF Exit Trough - Lower Dropper	4/18/12	11:07:01		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:07:20	ELF Exit Trough - Lower Dropper	4/18/12	11:12:14		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:12:21	ELF Exit Trough - Lower Dropper	4/18/12	11:17:20		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:15:37	EFL Upper Exit Trough	4/18/12	11:15:58		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:17:28	ELF Exit Trough - Lower Dropper	4/18/12	11:22:20		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:22:52	ELF Exit Trough - Lower Dropper	4/18/12	11:27:26		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:27:33	ELF Exit Trough - Lower Dropper	4/18/12	11:30:38		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:28:23	EFL Upper Exit Trough	4/18/12	11:32:36		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:30:00	EFL Upper Exit Trough	4/18/12	11:37:21		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:33:34	ELF Exit Trough - Lower Dropper	4/18/12	11:37:21		C	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				65.5	1	5,7			
54-28	4/18/12	11:37:41	ELF Exit Trough - Lower Dropper	4/18/12	11:41:21		C	11240	0	0	0	5300	0	5940	0	0	0	0												

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1	
54-39	4/18/12	14:48:00		04/18/12	14:48:00			11240	0	0	0	0	5300	0	5940	0	0	0	0	0	0					65.5					
54-39	4/19/12	22:09:02	Spencer Island West	4/19/12	22:13:24	Last Fallback Detection	E	45880	0	4980	6060	5960	5300	0	5960	8850	8770	0	0	0		C	up	stay	no movement; increase in gen	65.9	5	1,2,3,4,6,7,8			
54-39	NA	NA	NA	NA	NA	Start Tailrace Detection 1																A									
54-39	NA	NA	NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)																A									
54-39	4/25/12	10:00:42	Tailrace Unit 8 (Mid)	4/25/12	10:02:06	Start Upper Tailrace Detection (Start UT Foray 1)	C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A	down	up	fish up; decrease in gen	71.4	1	4,6	1		move up, decrease in generation
	4/25/12	10:30:00	Tailrace Unit 8 (Mid)				C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6			
	4/25/12	11:30:00						11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6			
	4/25/12	12:30:00						11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6			
	4/25/12	13:30:00						11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6			
	4/25/12	14:30:00						11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6			
	4/25/12	15:30:00						11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6			
	4/25/12	16:30:00	Tailrace Unit 8 (Mid)				C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6	1		
	4/25/12	17:30:00						11290	0	0	0	0	5180	0	6110	0	0	0	0	0		A				71.4	1	4,6			
54-39	4/25/12	18:10:44	Tailrace Unit 10 (Mid)	4/25/12	18:15:23	End Upper Tailrace Detection (End UT Foray 1)	C	23390	0	0	6040	6060	5180	0	6110	0	0	0	0	0		A	up	stay	no movement; increase in gen	71.4	2	2,3,4,6	1		
54-39	NA	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)																A									drop back, increase in generation
54-39	NA	NA	NA	NA	NA	End Tailrace Detection 1																A									
54-39	4/26/12	1:23:27	T2 - Opp. Crab House	4/26/12	1:28:21	Start Lower River		11300	0	0	0	0	5240	0	6060	0	0	0	0	0		A	down	stay	no movement; decrease in gen	72.7	1	4,6			
54-39	4/26/12	5:23:50	T1 - Mudd Is.	4/26/12	5:27:30	End Lower River		50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150			C	up	stay	no movement; increase in gen		5	2,3,4,6,8,9,10			
54-39	4/26/12	8:11:49	Upper Rowland Is. East	4/26/12	8:16:35	Start Tailrace Detection 2	F	50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150			C	down	down	moved back to east tailrace; no change in gen		5	2,3,4,6,8,9,10			move up, three big units
	4/26/12	8:30:00						50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150			C					5	2,3,4,6,8,9,10			
	4/26/12	9:30:00						50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150			C					5	2,3,4,6,8,9,10			
	4/26/12	10:30:00						50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150			C					5	2,3,4,6,8,9,10			
	4/26/12	11:30:00						50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150			C					5	2,3,4,6,8,9,10			
54-39	4/26/12	11:59:11	Upper Rowland Is. East	4/26/12	12:01:23	Transition Upstream 2 (Tailrace to Upper Tailrace)	F	32520	0	0	5990	6080	5240	0	6060	0	0	0	9150			C	down	stay	no movement; decrease in gen		3	2,3,4,6,10			
54-39	4/26/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 2)																A									
	4/26/12	12:30:00						32520	0	0	5990	6080	5240	0	6060	0	0	0	9150			C					3	2,3,4,6,10			move up, increase in generation
	4/26/12	13:30:00						11300	0	0	0	0	5240	0	6060	0	0	0	0	0		A	down	stay	no movement; decrease in gen		1	4,6			
	4/26/12	14:30:00						11300	0	0	0	0	5240	0	6060	0	0	0	0	0		A		spillway			1	4,6			
	4/26/12	15:30:00						11300	0	0	0	0	5240	0	6060	0	0	0	0	0		A		spillway			1	4,6			
	4/26/12	16:30:00						11300	0	0	0	0	5240	0	6060	0	0	0	0	0		A		spillway			1	4,6			
	4/26/12	17:30:00	Tailrace Unit 9, 10 (Mid)				C	11300	0	0	0	0	5240	0	6060	0	0	0	0	0		A		spillway			1	4,6			no response to changes in generation
	4/26/12	18:30:00	Tailrace Unit 8,9,10 (Mid)				C	41430	0	0	5990	6080	5240	0	6060	0	0	8910	9150			C	up	stay	no movement; increase in gen		4	2,3,4,6,9,10	1		
	4/26/12	19:30:00						75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150			C	up	stay	no movement; increase in gen		7	1,2,3,4,5,6,7,8,9,10			
	4/26/12	20:30:00						75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150			C	up	spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/26/12	21:30:00						75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150			C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/26/12	22:30:00						75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150			C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/26/12	23:30:00						11300	0	0	0	0	5240	0	6060	0	0	0	0	0		A	down	stay	no movement; decrease in gen		1	4,6			
	4/27/12	0:30:00						11530	0	0	0	0	5490	0	6040	0	0	0	0	0		A		spillway			7	4,6			
	4/27/12	1:30:00						11530	0	0	0	0	5490	0	6040	0	0	0	0	0		A		spillway			7	4,6			
	4/27/12	2:30:00						11530	0	0	0	0	5490	0	6040	0	0	0	0	0		A		spillway			7	4,6			
	4/27/12	3:30:00						11530	0	0	0	0	5490	0	6040	0	0	0	0	0		A		spillway			7	4,6			
	4/27/12	4:30:00						11530	0	0	0	0	5490	0	6040	0	0	0	0	0		A		spillway			7	4,6			
	4/27/12	5:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270			C	up	stay	no movement; increase in gen		7	1,2,3,4,5,6,7,8,9,10			
	4/27/12	6:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270			C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/27/12	7:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270			C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/27/12	8:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270			C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/27/12	9:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270			C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/27/12	10:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270			C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/27/12	11:30:00						70100	0	5120	5950	6030	5490</																		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1
	4/28/12	0:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway		76.4	1	4,6			
	4/28/12	1:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6			
	4/28/12	2:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6			
	4/28/12	3:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6			
	4/28/12	4:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6			
	4/28/12	5:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C	up	stay	no movement; increase in gen		6	1,2,3,4,6,7,8,9,10			
	4/28/12	6:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C		spillway			6	1,2,3,4,6,7,8,9,10			
	4/28/12	7:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C		spillway			6	1,2,3,4,6,7,8,9,10			
	4/28/12	8:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C		spillway			6	1,2,3,4,6,7,8,9,10			
	4/28/12	9:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C		spillway			6	1,2,3,4,6,7,8,9,10			
	4/28/12	10:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C		spillway			6	1,2,3,4,6,7,8,9,10			
	4/28/12	11:30:00						31900	0	0	5930	6000	5560	0	5940	0	0	8470	0		C	down	stay	no movement; decrease in gen		3	2,3,4,6,9			
	4/28/12	12:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A	down	stay	no movement; decrease in gen		1	4,6			
	4/28/12	13:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6			
	4/28/12	14:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6			
	4/28/12	15:30:00	Tailrace Unit 9 (Mid)				C	11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6		1	move east, no change in generation
	4/28/12	16:30:00	Tailrace Unit 8,9,10 (Mid)				C	11500	0	0	0	0	5560	0	5940	0	0	0	0		A		spillway			1	4,6		1	
	4/28/12	17:30:00						31900	0	0	5930	6000	5560	0	5940	0	0	8470	0		C	up	stay	no movement; increase in gen		3	2,3,4,6,9			no response to changes in generation
	4/28/12	18:30:00						31900	0	0	5930	6000	5560	0	5940	0	0	8470	0		C		spillway			3	2,3,4,6,9			
	4/28/12	19:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C	up	stay			6	1,2,3,4,6,7,8,9,10			
	4/28/12	20:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C		spillway			6	1,2,3,4,6,7,8,9,10			
	4/28/12	21:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C		spillway			6	1,2,3,4,6,7,8,9,10			
	4/28/12	22:30:00						31900	0	0	5930	6000	5560	0	5940	0	0	8470	0		C	down	stay	no movement; decrease in gen		3	2,3,4,6,9			
	4/28/12	23:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0		A	up	stay	no movement; increase in gen		1	4,6			
	4/29/12	0:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway		78.2	1	4,6			
	4/29/12	1:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	2:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	3:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	4:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	5:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	6:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	7:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	8:30:00	Tailrace Unit 8,9,10 (Mid)				C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C	up	stay	no movement; increase in gen		6	2,3,4,6,7,8,9,10		1	
	4/29/12	9:30:00	Tailrace Unit 9 (Mid)				C	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C		spillway			6	2,3,4,6,7,8,9,10		1	
	4/29/12	10:30:00	Conowingo Tailrace Units 1-7 (Near)				A/B	58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C		spillway			6	2,3,4,6,7,8,9,10			move west and center, no change in generation
	4/29/12	11:30:00						58880	0	0	6000	6000	5600	0	5840	8830	8680	8820	9110		C		spillway			6	2,3,4,6,7,8,9,10			
	4/29/12	12:30:00						32260	0	0	6000	6000	5600	0	5840	0	0	8820	0		C	down	stay	no movement; decrease in gen		3	2,3,4,6,9			
	4/29/12	13:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	14:30:00	Tailrace Unit 8 (Mid)				C	11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6		1	move east, decrease in generation
	4/29/12	15:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6			
	4/29/12	16:30:00	Tailrace Unit 10 (Mid)				C	11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6		1	
	4/29/12	17:30:00	Tailrace Unit 8,9,10 (Mid)				C	11440	0	0	0	0	5600	0	5840	0	0	0	0		A		spillway			1	4,6		1	
	4/29/12	18:30:00						32260	0	0	6000	6000	5600	0	5840	0	0	8820	0		C	up	stay	no movement; increase in gen		3	2,3,4,6,9			no response to changes in generation
	4/29/12	19:30:00						75080	5320	5120	6000	6000	5600	5760	5840	8830	8680	8820	9110		C	up	stay	no movement; increase in gen		7	1,2,3,4,5,6,7,8,9,10			
	4/29/12	20:30:00						75080	5320	5120	6000	6000	5600	5760	5840	8830	8680	8820	9110		C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/29/12	21:30:00						75080	5320	5120	6000	6000	5600	5760	5840	8830	8680	8820	9110		C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/29/12	22:30:00						75080	5320	5120	6000	6000	5600	5760	5840	8830	8680	8820	9110		C		spillway			7	1,2,3,4,5,6,7,8,9,10			
	4/29/12	23:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0		A	down	stay	no movement; decrease in gen		1	4,6			
	4/30/12	0:30:00						11550	0	0	0	0	5580	0	5970	0	0	0	0		A		spillway		79.0	1	4,6			
	4/30/12	1:30:00						11550	0	0	0	0	5580	0	5970	0	0	0	0		A		spillway			1	4,6			
	4/30/12	2:30:00						11550	0	0	0	0	5580	0	5970	0	0	0	0		A		spillway			1	4,6			
	4/30/12	3:30:00						11550	0	0	0	0	5580	0	5970	0	0	0	0		A		spillway			1	4,6			
	4/30/12	4:30:00						11550	0	0	0	0	5580	0	5970	0	0	0	0		A		spillway			1	4,6			
	4/30/12	5:30:00						32470	0	0	5970	6080	5580	0	5970	0	0	8870	0		C	up	stay	no movement; increase in gen		3	2,3,4,6,9			
	4/30/12	6:30:00						59190	0	0	5970	6080	5580	0	5970	8870	8710	8870	9140		C	up	stay	no movement; increase in gen		6	2,3,4,6,7,8,9,10			
	4/30/12	7:30:00						59190	0	0	5970	6080	5580	0	5970	8870	8710	8870	9140		C		spillway			6	2,3,4,6,7,8,9,10			
	4/30/12	8:30:00	Tailrace Unit 9,10 (Mid)				C	59190	0	0	5970	6080	5580	0	5970	8870	8710	8870	9140		C		spillway			6	2,3,4,6,7,8,9,10		1	four big units on
54-39	4/30/12	8:42:43	"C" Gate Aerial	4/30/12	8:44:06	Start EFL Aerial Detection	C	59190	0	0	5970	6080	5580	0	5970	8870	8710	8870	91											

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1	
54-39	4/30/12	11:43:30	Upper Rowland Is. East	4/30/12	11:45:41	Transition Upstream 3 (Tailrace to Upper Tailrace)	F	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A	down	spillway	moved to spillway; decrease in gen		2	2,3,4,6			move east, decrease in generation	
54-39	4/30/12	12:39:29	Tailrace Unit 7 (Mid)	4/30/12	12:45:48	Start Upper Tailrace Detection (Start UT Foray 3)	B	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A	up	up	fish up; no change in gen		2	2,3,4,6	1		move up; no change in generation	
	4/30/12	13:30:00	Tailrace Unit 1 (Mid)				A	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A					2	2,3,4,6	1		move west, no change in generation	
	4/30/12	14:30:00	Tailrace Unit 1 (Mid)				A	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A					2	2,3,4,6	1			
	4/30/12	15:30:00					A	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A					2	2,3,4,6				
54-39	4/30/12	16:06:55	"C" Gate Aerial	4/30/12	16:07:52	Start EFL Aerial Detection	C	52110	0	5110	5970	6080	5580	5820	5970	8870	8710	0	0	0	C	up	stay	no movement; increase in gen		5	1,2,3,4,5,6,7,8			move to EFL, increase in generation	
54-39	4/30/12	16:14:18	"C" Gate Aerial	4/30/12	16:14:54	End EFL Aerial Detection	C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C	up	stay	no movement; increase in gen		7	1,2,3,4,5,6,7,8,9,10			leave EFL, all units on	
	4/30/12	16:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				
54-39	4/30/12	16:31:37	"C" Gate Aerial	4/30/12	16:31:37	Start EFL Aerial Detection	C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				move to EFL, no change in generation
54-39	4/30/12	16:33:37	"C" Gate Aerial	4/30/12	16:35:01	End EFL Aerial Detection	C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				leave EFL, no change in generation
54-39	4/30/12	17:08:41	"C" Gate Aerial	4/30/12	17:13:33	Start EFL Aerial Detection	C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				move to EFL, no change in generation
54-39	4/30/12	17:20:09	"C" Gate Aerial	4/30/12	17:20:43	End EFL Aerial Detection	C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				leave EFL, no change in generation
54-39	4/30/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 3)															A										
	4/30/12	17:30:00	"C" Gate Aerial				C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10	1			move to EFL, no change in generation
	4/30/12	18:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				drop back, no change in generation
	4/30/12	19:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				
	4/30/12	20:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				
	4/30/12	21:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				
	4/30/12	22:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				
	4/30/12	23:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	0	C					7	1,2,3,4,5,6,7,8,9,10				
	5/1/12	0:30:00						10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A	down	stay	no movement; decrease in gen	77.0	1	4,6				
	5/1/12	1:30:00						10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A					1	4,6				
	5/1/12	2:30:00						10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A					1	4,6				
	5/1/12	3:30:00						10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A					1	4,6				
	5/1/12	4:30:00						10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A					1	4,6				
	5/1/12	5:30:00						10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A					1	4,6				
54-39	5/1/12	6:01:32	Upper Rowland Is. West	5/1/12	6:05:43	Transition Downstream 3 (Upper Tailrace to Tailrace)		10520	0	0	0	0	4870	0	5650	0	0	0	0	0	A					1	4,6				
	5/1/12	6:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	0	C	up	stay	no movement; increase in gen		5	2,3,4,6,8,9,10				
	5/1/12	7:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	0	C					5	2,3,4,6,8,9,10				
	5/1/12	8:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	0	C					5	2,3,4,6,8,9,10				
	5/1/12	9:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	0	C					5	2,3,4,6,8,9,10				
	5/1/12	10:30:00						16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A	down	stay	no movement; decrease in gen		1	3,4,6				
54-39	5/1/12	10:41:41	Upper Rowland Is. West	5/1/12	10:46:27	End Tailrace Detection 2	E	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A		down	fish down; decrease in gen		1	3,4,6			drop back, decrease in generation	
54-39	5/1/12	11:20:55	T1 - Opp. Mudd Is.	5/1/12	11:22:55	Start Lower River		16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1	3,4,6				
54-39	5/1/12	12:39:45	T1 - Opp. Mudd Is.	5/1/12	12:40:51	End Lower River		16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1	3,4,6				
54-39	5/1/12	NA	NA	NA	NA	Start Tailrace Detection 3															A										
54-39	5/1/12	16:50:18	LT - Lower Rowland Is. West	5/1/12	16:55:03	Transition Upstream 4 (Tailrace to Upper Tailrace)	E	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	0	C	up	stay	no movement; increase in gen		5	2,3,4,6,8,9,10				move up, increase in generation
54-39	5/1/12	20:16:49	Tailrace Unit 10 (Mid)	5/1/12	20:17:55	Start Upper Tailrace Detection (Start UT Foray 4)	C	68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070	0	C	up	up	fish up; increase in gen		7	1,2,3,4,5,6,7,8,9,10	1		move up, all big units on	
	5/1/12	20:30:00	Tailrace Unit 10 (Mid)				C	68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070	0	C					7	1,2,3,4,5,6,7,8,9,10	1			
	5/1/12	21:30:00					C	62970	0	4890	5980	6090	4870	0	5650	8850	8710	8860	9070	0	C					6	1,2,3,4,6,7,8,9,10				
54-39	5/1/12	21:56:22	Tailrace Unit 10 (Mid)	5/1/12	22:03:21	End Upper Tailrace Detection (End UT Foray 4)	C	62970	0	4890	5980	6090	4870	0	5650	8850	8710	8860	9070	0	C					6	1,2,3,4,6,7,8,9,10	1			
54-39	5/2/12	14:23:49	Upper Rowland Is. West	5/2/12	14:27:26	Transition Downstream 4 (Upper Tailrace to Tailrace)	E	16420	0	0	0	6060	4830	0	5530	0	0	0	0	0	0	A	down	down	fish down; decrease in gen	74.4	1	3,4,6			drop back, decrease in generation
54-39	5/2/12	16:23:00	Lower Rowland E. side of Rowland next to lower single tower			Transition Upstream 5 (Tailrace to Upper Tailrace)	F	68300	0	4870	6000	6060	4830	5800	5530	8730	8630	8780	9070	0	C	up	spillway	moved to spillway; increase in gen		7	1,2,3,4,5,6,7,8,9,10			move east, all big units on	
54-39	5/2/12	17:34:52	Tailrace Unit 9 (Mid)	5/2/12	17:39:10	Start Upper Tailrace Detection (Start UT Foray 5)	C	68300	0	4870	6000	6060	4830	5800	5530	8730	8630	8780	9070	0	C		up	fish up; no change in gen		7	1,2,3,4,5,6,7,8,9,10	1		move up, no change in generation	
	5/2/12	18:30:00					C	68300	0	4870	6000	6060	4830	5800	5530	8730	8630	8780	9070	0	C					7	1,2,				

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1
	5/3/12	13:30:00						41020	0	0	6020	6030	4960	0	5680	0	0	9050	9280		C		spillway			4	2,3,4,6,9,10			
	5/3/12	14:30:00						41020	0	0	6020	6030	4960	0	5680	0	0	9050	9280		C		spillway			4	2,3,4,6,9,10			
	5/3/12	15:30:00						58520	0	0	6020	6030	4960	0	5680	8820	8680	9050	9280		C	up	stay	no movement; increase in gen		6	2,3,4,6,7,8,9,10			
	5/3/12	16:30:00						58520	0	0	6020	6030	4960	0	5680	8820	8680	9050	9280		C		spillway			6	2,3,4,6,7,8,9,10			
	5/3/12	17:30:00						58520	0	0	6020	6030	4960	0	5680	8820	8680	9050	9280		C		spillway			6	2,3,4,6,7,8,9,10			
	5/3/12	18:30:00						58520	0	0	6020	6030	4960	0	5680	8820	8680	9050	9280		C		spillway			6	2,3,4,6,7,8,9,10			
54-39	5/3/12	19:02:55	Upper Rowland Is. East	5/3/12	19:03:54	End Tailrace Detection 3	F	58520	0	0	6020	6030	4960	0	5680	8820	8680	9050	9280		C		spillway			6	2,3,4,6,7,8,9,10			drop back, no change in generation
54-39	5/3/12	20:23:18	T1 - Mudd Is.	5/3/12	20:27:55	Start Lower River		58520	0	0	6020	6030	4960	0	5680	8820	8680	9050	9280		C					6	2,3,4,6,7,8,9,10			
54-39	5/3/12	22:05:37	Spencer Island West	5/3/12	22:12:49	End Lower River		31740	0	0	6020	6030	4960	0	5680	0	0	9050	0		C	down	stay	no movement; decrease in gen		3	2,3,4,6,9			
54-39	5/3/12	22:30:00	NA	NA	NA	Start Tailrace Detection 4		31740	0	0	6020	6030	4960	0	5680	0	0	9050	0		C		spillway			3	2,3,4,6,9			
54-39	5/3/12	23:30:00	NA	NA	NA	Transition Upstream 6 (Tailrace to Upper Tailrace)		10640	0	0	0	0	4960	0	5680	0	0	0	0		A	down	stay	no movement; decrease in gen		1	4,6			
	5/4/12	0:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway		69.8	1	4,6			
	5/4/12	1:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/4/12	2:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/4/12	3:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/4/12	4:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/4/12	5:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/4/12	6:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/4/12	7:30:00						22390	0	0	6090	6090	4800	0	5410	0	0	0	0		A	up	stay	no movement; increase in gen		2	2,3,4,6			
	5/4/12	8:30:00						22390	0	0	6090	6090	4800	0	5410	0	0	0	0		A		spillway			2	2,3,4,6			
	5/4/12	9:30:00						22390	0	0	6090	6090	4800	0	5410	0	0	0	0		A		spillway			2	2,3,4,6			
	5/4/12	10:30:00						22390	0	0	6090	6090	4800	0	5410	0	0	0	0		A		spillway			2	2,3,4,6			
	5/4/12	11:30:00						40640	0	0	6090	6090	4800	0	5410	0	0	8970	9280		C	up	stay	no movement; increase in gen		4	2,3,4,6,9,10			
	5/4/12	12:30:00						40640	0	0	6090	6090	4800	0	5410	0	0	8970	9280		C		spillway			4	2,3,4,6,9,10			
	5/4/12	13:30:00						40640	0	0	6090	6090	4800	0	5410	0	0	8970	9280		C		spillway			4	2,3,4,6,9,10			
	5/4/12	14:30:00						40640	0	0	6090	6090	4800	0	5410	0	0	8970	9280		C		spillway			4	2,3,4,6,9,10			
	5/4/12	15:30:00						49340	0	0	6090	6090	4800	0	5410	0	8700	8970	9280		C		spillway			5	2,3,4,6,8,9,10			
	5/4/12	16:30:00						68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C	up	stay	no movement; increase in gen		7	1,2,3,4,6,7,8,9,10			
	5/4/12	17:30:00						68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C		spillway			7	1,2,3,4,6,7,8,9,10			
	5/4/12	18:30:00						68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C		spillway			7	1,2,3,4,6,7,8,9,10			
	5/4/12	19:30:00						49340	0	0	6090	6090	4800	0	5410	0	8700	8970	9280		C	down	stay	no movement; decrease in gen		5	2,3,4,6,8,9,10			
	5/4/12	20:30:00						22390	0	0	6090	6090	4800	0	5410	0	0	0	0		A	down	stay	no movement; decrease in gen		2	2,3,4,6			
	5/4/12	21:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A	down	stay	no movement; decrease in gen		1	4,6			
	5/4/12	22:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/4/12	23:30:00						10210	0	0	0	0	4800	0	5410	0	0	0	0		A		spillway			1	4,6			
	5/5/12	0:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway		68.4	1	4,6			
	5/5/12	1:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway			1	4,6			
	5/5/12	2:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway			1	4,6			
	5/5/12	3:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway			1	4,6			
	5/5/12	4:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway			1	4,6			
	5/5/12	5:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway			1	4,6			
	5/5/12	6:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway			1	4,6			
	5/5/12	7:30:00						10450	0	0	0	0	4920	0	5530	0	0	0	0		A		spillway			1	4,6			
	5/5/12	8:30:00						22570	0	0	6040	6080	4920	0	5530	0	0	0	0		A	up	stay	no movement; increase in gen		2	2,3,4,6			
	5/5/12	9:30:00						22570	0	0	6040	6080	4920	0	5530	0	0	0	0		A		spillway			2	2,3,4,6			
	5/5/12	10:30:00						22570	0	0	6040	6080	4920	0	5530	0	0	0	0		A		spillway			2	2,3,4,6			
	5/5/12	11:30:00						49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C	up	stay	no movement; increase in gen		5	2,3,4,6,8,9,10			
	5/5/12	12:30:00						49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C		spillway			5	2,3,4,6,8,9,10			
	5/5/12	13:30:00						49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C		spillway			5	2,3,4,6,8,9,10			
54-39	5/5/12	14:15:25	Tailrace Unit 8 (Mid)	5/5/12	14:16:56	Start Upper Tailrace Detection (Start UT Foray 6)	C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C		up	fish up; no change in gen		5	2,3,4,6,8,9,10		1	move up, no change in generation
	5/5/12	14:30:00	Tailrace Unit 8,9,10 (Mid)				C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	2,3,4,6,8,9,10		1	
	5/5/12	15:30:00					C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	2,3,4,6,8,9,10			
	5/5/12	16:30:00					C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	2,3,4,6,8,9,10			
	5/5/12	17:30:00	Tailrace Unit 9,10 (Mid)				C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	2,3,4,6,8,9,10		1	
	5/5/12	18:30:00	Tailrace Unit 10 (Mid)				C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	2,3,4,6,8,9,10		1	
	5/5/12	19:30:00	Tailrace Unit 9 (Mid)				C	74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C	up	stay	no movement; increase in gen		7	1,2,3,4,5,6,7,8,9,10		1	
54-39	5/5/12	19:53:41	Tailrace Unit 8 (Mid)	5/5/12	19:57:14	End Upper Tailrace Detection (End UT Foray 6)	C	74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C					7	1,2,3,4,5,6,7,8,9,10		1	
54-39	5/5/12																													

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1	
	5/6/12	0:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0		A	down	stay	no movement; decrease in gen	67.9		1,4,6				
	5/6/12	1:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0		A	down	stay	no movement; decrease in gen	67.9		1,4,6				
54-39	5/6/12	2:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0		A	down	stay	no movement; decrease in gen	67.9		1,4,6				
54-39	5/6/12	2:56:10	T3 - McGibney Is.	5/6/12	3:00:58	Start Lower River		10530	0	0	0	0	4820	0	5710	0	0	0	0		A	down	stay	no movement; decrease in gen	67.9		1,4,6				
54-39	5/6/12	5:34:33	T1 - Opp. Mudd Is.	5/6/12	5:36:32	End Lower River		10530	0	0	0	0	4820	0	5710	0	0	0	0		A	down	stay	no movement; decrease in gen	67.9		1,4,6				
54-39	5/6/12	8:53:51	Upper Rowland Is. West	5/6/12	8:58:48	Start Tailrace Detection 5	E	10530	0	0	0	0	4820	0	5710	0	0	0	0		A	down	fish down; no change in gen		68.3	1,4,6			move up, no change in generation		
	5/6/12	9:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up	stay	no movement; increase in gen			5,2,3,4,6,8,9,10			no response to change in generation	
	5/6/12	10:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up	stay	no movement; increase in gen			5,2,3,4,6,8,9,10				
	5/6/12	11:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up	stay	no movement; increase in gen			5,2,3,4,6,8,9,10				
54-39	5/6/12	11:51:36	Upper Rowland Is. West	5/6/12	11:53:38	Transition Upstream 7 (Tailrace to Upper Tailrace)	E	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up	stay	no movement; increase in gen			5,2,3,4,6,8,9,10				
54-39	5/6/12	13:07:18	Tailrace Unit 8 (Mid)	5/6/12	13:12:09	Start Upper Tailrace Detection (Start UT Foray 7)	C	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up	fish up; no change in gen			5,2,3,4,6,8,9,10			1	move up, no change in generation	
54-39	5/6/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 7)															A	down	stay	no movement; decrease in gen							
54-39	5/6/12	20:15:40	Upper Rowland Is. West	5/6/12	20:19:02	Transition Downstream 7 (Upper Tailrace to Tailrace)	E	74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C	up	down	fish down; increase in gen			7,1,2,3,4,5,6,7,8,9,10			drop back, all units on	
54-39	5/6/12	NA	NA	NA	NA	End Tailrace Detection 5															A	down	stay	no movement; decrease in gen							
54-39	5/6/12	21:00:39	T1 - Mudd Is.	5/6/12	21:04:26	Start Lower River		74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
54-39	5/6/12	21:26:04	T1 - Mudd Is.	5/6/12	21:31:01	End Lower River		74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
54-39	5/6/12	NA	NA	NA	NA	Start Tailrace Detection 6															A	down	stay	no movement; decrease in gen							
54-39	5/7/12	5:41:14	Upper Rowland Is. West	5/7/12	5:45:48	Transition Upstream 8 (Tailrace to Upper Tailrace)	E	32830	0	0	5910	6000	5550	0	6020	0	0	0	0	9350		C	down	stay	no movement; decrease in gen	68.3		3,2,3,4,6,10			move up, decrease in generation
54-39	5/7/12	5:48:16	Tailrace Unit 9 (Mid)	5/7/12	5:57:50	Start Upper Tailrace Detection (Start UT Foray 8)	C	32830	0	0	5910	6000	5550	0	6020	0	0	0	0	9350		C	up	fish up; no change in gen			3,2,3,4,6,10			1	move up, increase in generation
	5/7/12	6:30:00	Tailrace Unit 8,9,10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			6,2,3,4,6,7,8,9,10			1	no response to changes in generation
	5/7/12	7:30:00	Tailrace Unit 8,9 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			6,2,3,4,6,7,8,9,10			1	
	5/7/12	8:30:00						58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			6,2,3,4,6,7,8,9,10				
	5/7/12	9:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
	5/7/12	10:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
	5/7/12	11:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
	5/7/12	12:30:00						70040	5330	0	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,2,3,4,5,6,7,8,9,10				
	5/7/12	13:30:00						70040	5330	0	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,2,3,4,5,6,7,8,9,10				
	5/7/12	14:30:00	"A" Gate Aerial					75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10			1	
	5/7/12	15:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
	5/7/12	16:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
	5/7/12	17:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
	5/7/12	18:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10				
	5/7/12	19:30:00	Tailrace Unit 8 (Mid)					75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10			1	
54-39	5/7/12	19:55:36	Tailrace Unit 8 (Mid)	5/7/12	20:00:05	End Upper Tailrace Detection (End UT Foray 8)	C	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen			7,1,2,3,4,5,6,7,8,9,10			1	
54-39	5/8/12	1:27:11	LT - Lower Rowland Is. West	5/8/12	2:27:08	Transition Downstream 8 (Upper Tailrace to Tailrace)	E	10580	0	5210	0	0	5370	0	0	0	0	0	0		A	down	down	fish down; decrease in gen	69.7		11,4			drop back, decrease in generation	
54-39	5/8/12	3:27:34	LT - Lower Rowland Is. West	5/8/12	4:19:56	Transition Upstream 9 (Tailrace to Upper Tailrace)	E	10580	0	5210	0	0	5370	0	0	0	0	0	0		A	down	down	fish down; decrease in gen	69.7		11,4				
54-39	5/8/12	6:01:44	Tailrace Unit 7 (Mid)	5/8/12	6:05:01	Start Upper Tailrace Detection (Start UT Foray 9)	B	34150	0	5210	6040	6040	5370	5750	5740	0	0	0	0		A	up	up	fish up; increase in gen			3,1,2,3,4,5,6			1	move up, increase in generation
	5/8/12	6:30:00	Tailrace Unit 7 (Mid)					34150	0	5210	6040	6040	5370	5750	5740	0	0	0	0		A	up	up	fish up; increase in gen			3,1,2,3,4,5,6			1	
	5/8/12	7:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	stay	no movement; increase in gen			6,1,2,3,4,5,6,7,9,10				
54-39	5/8/12	7:41:46	"A" Gate Aerial	5/8/12	7:41:46	Start EFL Aerial Detection	C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	stay	no movement; increase in gen			6,1,2,3,4,5,6,7,9,10			1	move to EFL, two big units on
54-39	5/8/12	7:55:15	"C" Gate Aerial	5/8/12	7:57:10	End EFL Aerial Detection	C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	stay	no movement; increase in gen			6,1,2,3,4,5,6,7,9,10			1	leave EFL, no change in generation
	5/8/12	8:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	stay	no movement; increase in gen			6,1,2,3,4,5,6,7,9,10				
	5/8/12	9:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	stay	no movement; increase in gen			6,1,2,3,4,5,6,7,9,10				
	5/8/12	10:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	stay	no movement; increase in gen			6,1,2,3,4,5				

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1	
	5/11/12	14:30:00	Tailrace Unit 8.9,10 (Mid)				C	74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10	1		
	5/11/12	15:30:00	Tailrace Unit 8.10 (Mid)				C	74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10	1		
	5/11/12	16:30:00						74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10			
	5/11/12	17:30:00						74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10			
	5/11/12	18:30:00						74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10			
	5/11/12	19:30:00						74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10			
	5/11/12	20:30:00						74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10			
	5/11/12	21:30:00						74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240		C							71,2,3,4,5,6,7,8,9,10			
	5/11/12	22:30:00						39740	0	4860	0	0	5070	5770	5940	0	0	8860	9240		C	down	stay	no movement; decrease in gen			41,4,5,6,9,10			no response to changes in generation	
	5/11/12	23:30:00						39740	0	4860	0	0	5070	5770	5940	0	0	8860	9240		C						41,4,5,6,9,10				
	5/12/12	0:30:00						40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260		C				75.2		41,4,5,6,9,10				
	5/12/12	1:30:00						40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260		C						41,4,5,6,9,10				
	5/12/12	2:30:00						40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260		C						41,4,5,6,9,10				
	5/12/12	3:30:00						40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260		C						41,4,5,6,9,10				
	5/12/12	4:30:00						40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260		C						41,4,5,6,9,10				
	5/12/12	5:30:00						40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260		C						41,4,5,6,9,10				
	5/12/12	6:30:00						40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260		C						41,4,5,6,9,10				
	5/12/12	7:30:00	Tailrace Unit 9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen			71,2,3,4,5,6,7,8,9,10	1			
	5/12/12	8:30:00						75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10				
	5/12/12	9:30:00	Tailrace Unit 9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10	1			
	5/12/12	10:30:00	Tailrace Unit 9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10	1			
	5/12/12	11:30:00	Tailrace Unit 8.9 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10	1			
	5/12/12	12:30:00	Tailrace Unit 8.9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10	1			
	5/12/12	13:30:00						75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10				
	5/12/12	14:30:00	Tailrace Unit 8 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10	1			
	5/12/12	15:30:00						75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10				
54-39	5/12/12	16:27:42	Tailrace Unit 10 (Mid)	5/12/12	16:35:00	End Upper Tailrace Detection (End UT Foray 11)	C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C						71,2,3,4,5,6,7,8,9,10	1			
54-39	5/12/12	NA	NA	NA	NA	Transition Downstream 11 (Upper Tailrace to Tailrace)															A									drop back, no change in generation	
54-39	5/12/12	NA	NA	NA	NA	End Tailrace Detection 7															A										
54-39	5/12/12	19:17:09	T1 - Mudd Is.	5/12/12	19:21:11	Start Lower River		31410	0	4900	0	0	5550	5820	6030	0	0	9110	0		C	down	stay	no movement; decrease in gen			31,4,5,6,9				
54-39	5/13/12	5:22:03	T1 - Mudd Is.	5/13/12	5:26:24	End Lower River		10370	0	4920	0	0	5450	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	75.9		11,4				
54-39	5/13/12	NA	NA	NA	NA	Start Tailrace Detection 8															A										
54-39	5/13/12	NA	NA	NA	NA	Transition Upstream 12 (Tailrace to Upper Tailrace)															A										
54-39	5/13/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 12)															A										
54-39	5/13/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 12)															A										
54-39	5/14/12	5:32:37	Upper Rowland Is. West	5/14/12	5:37:13	Transition Downstream 12 (Upper Tailrace to Tailrace)	E	10980	0	0	0	5950	5030	0	0	0	0	0	0		A		down	fish down; no change in gen	76.3		1,3,4			move up, decrease in generation	
54-39	5/14/12	6:26:27	Upper Rowland Is. West	5/14/12	6:28:39	Transition Upstream 13 (Tailrace to Upper Tailrace)	E	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0		C	up	stay	no movement; increase in gen			41,2,3,4,7,9				
54-39	5/14/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 13)															A										
54-39	5/14/12	7:10:09	"A" Gate Aerial	5/14/12	7:11:00	Start EFL Aerial Detection	C	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0		C						41,2,3,4,7,9			move to EFL, increase in generation	
54-39	5/14/12	7:30:00						39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0		C						41,2,3,4,7,9				
54-39	5/14/12	8:09:50	"A" Gate Aerial	5/14/12	8:09:50	End EFL Aerial Detection	C	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0		C						41,2,3,4,7,9			leave EFL, no change in generation	
54-39	5/14/12	8:30:00						74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360		C	up	stay	no movement; increase in gen			71,2,3,4,5,6,7,8,9,10				
54-39	5/14/12	9:30:00						74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360		C						71,2,3,4,5,6,7,8,9,10				
54-39	5/14/12	10:12:03	"C" Gate Aerial	5/14/12	10:14:58	Start EFL Aerial Detection	C	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360		C						71,2,3,4,5,6,7,8,9,10			move to EFL, all units on	
54-39	5/14/12	10:15:05	"C" Gate Aerial	5/14/12	10:18:56	End EFL Aerial Detection	C	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360		C						71,2,3,4,5,6,7,8,9,10			leave EFL, no change in generation	
54-39	5/14/12	10:30:00						74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360		C						71,2,3,4,5,6,7,8,9,10				
54-39	5/14/12	11:30:00						74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360		C										

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1	
54-39	5/17/12	10:03:39	Spillway - East	5/17/12	10:04:07	Start Spillway	D	78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway	moved to spillway; no change in gen		81	2,3,4,5,6,7,8,9,10		16,000	move to spillway; no change in generation	
	5/17/12	10:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			81	2,3,4,5,6,7,8,9,10		16,000		
	5/17/12	11:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			81	2,3,4,5,6,7,8,9,10		16,000		
	5/17/12	12:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			81	2,3,4,5,6,7,8,9,10		16,000		
	5/17/12	13:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			81	2,3,4,5,6,7,8,9,10		16,000		
	5/17/12	14:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			81	2,3,4,5,6,7,8,9,10		16,000		
	5/17/12	15:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			81	2,3,4,5,6,7,8,9,10		16,000		
	5/17/12	16:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			91	2,3,4,5,6,7,8,9,10		32,000		
	5/17/12	17:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			91	2,3,4,5,6,7,8,9,10		32,000		
	5/17/12	18:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			91	2,3,4,5,6,7,8,9,10		32,000		
	5/17/12	19:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			91	2,3,4,5,6,7,8,9,10		32,000		
	5/17/12	20:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			91	2,3,4,5,6,7,8,9,10		32,000		
	5/17/12	21:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			91	2,3,4,5,6,7,8,9,10		32,000		
	5/17/12	22:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			71	2,3,4,5,6,7,8,9,10				
	5/17/12	23:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			71	2,3,4,5,6,7,8,9,10				
54-39	5/17/12	23:49:50	Spillway - East	5/17/12	23:57:44	End Spillway	D	78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C		spillway			71	2,3,4,5,6,7,8,9,10			leave spillway; no change in generation	
54-39	5/18/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 14)																			75.9						
54-39	5/19/12	11:40:47	LT - Lower Rowland Is. West	5/19/12	11:50:24	Transition Downstream 14 (Upper Tailrace to Tailrace)	E	78860	6070	5110	6240	6250	6530	6360	6360	8880	8740	8980	9340		C	down	up	fish down; no change in gen	75.9	71	2,3,4,5,6,7,8,9,10			drop back; no change in generation	
54-39	5/19/12	12:24:48	Upper Rowland Is. East	5/19/12	12:27:25	End Tailrace Detection 9	F	78860	6070	5110	6240	6250	6530	6360	6360	8880	8740	8980	9340		C	spillway	stay	no movement; decrease in gen	75.9	71	2,3,4,5,6,7,8,9,10			move east; no change in generation	
54-39	5/19/12	19:05:46	T2 - Opp. Crab House	5/19/12	19:07:06	Start Lower River		78860	6070	5110	6240	6250	6530	6360	6360	8880	8740	8980	9340		C		spillway			75.9	71	2,3,4,5,6,7,8,9,10			
54-39	5/19/12	19:54:04	Spencer Island West	5/19/12	20:02:55	End Lower River		78860	6070	5110	6240	6250	6530	6360	6360	8880	8740	8980	9340		C		spillway			75.9	71	2,3,4,5,6,7,8,9,10			
54-39	NA	NA	NA	NA	NA	Start Tailrace Detection 10																									
54-39	NA	NA	NA	NA	NA	Transition Upstream 15 (Tailrace to Upper Tailrace)																									
54-39	5/20/12	12:17:49	Tailrace Unit 10 (Mid)	5/20/12	12:25:00	Start Upper Tailrace Detection (Start UT Foray 15)	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C	down	up	fish up; decrease in gen	78.5	71	2,3,4,5,6,7,8,9,10			move west; no change in generation	
	5/20/12	12:30:00	Tailrace Unit 9, 10 (Mid)				C	41770	0	0	6070	6130	5480	0	6030	0	0	9080	8980		C	down	stay	no movement; decrease in gen	78.5	4	2,3,4,6,9,10		1	no response to changes in generation	
	5/20/12	13:30:00	Tailrace Unit 9, 10 (Mid)				C	41770	0	0	6070	6130	5480	0	6030	0	0	9080	8980		C				78.5	4	2,3,4,6,9,10		1		
	5/20/12	14:30:00					C	41770	0	0	6070	6130	5480	0	6030	0	0	9080	8980		C				78.5	4	2,3,4,6,9,10				
	5/20/12	15:30:00					C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C	up	stay	no movement; increase in gen	78.5	71	2,3,4,5,6,7,8,9,10				
	5/20/12	16:30:00					C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C				78.5	71	2,3,4,5,6,7,8,9,10				
	5/20/12	17:30:00					C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C				78.5	71	2,3,4,5,6,7,8,9,10				
54-39	5/20/12	18:14:48	Tailrace Unit 10 (Mid)	5/20/12	18:23:00	End Upper Tailrace Detection (End UT Foray 15)	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					78.5	71	2,3,4,5,6,7,8,9,10		1	
54-39	5/20/12	NA	NA	NA	NA	Transition Downstream 15 (Upper Tailrace to Tailrace)																									
54-39	5/20/12	NA	NA	NA	NA	End Tailrace Detection 10																									
54-39	5/20/12	23:56:36	Spencer Island West	5/21/12	0:06:34	Start Lower River		20490	0	0	0	0	5480	0	6030	0	0	0	8980		C	down	stay	no movement; decrease in gen	78.5	2	4,6,10				
54-39	5/21/12	0:37:03	Spencer Island West	5/21/12	0:46:15	End Lower River		10670	0	0	0	0	5010	0	5660	0	0	0	0		A	down	stay	no movement; decrease in gen	78.5	1	4,6				
54-39	5/21/12	NA	NA	NA	NA	Start Tailrace Detection 11																									
54-39	5/21/12	NA	NA	NA	NA	Transition Upstream 16 (Tailrace to Upper Tailrace)																									
54-39	5/21/12	1:25:38	Tailrace Unit 9 (Mid)	5/21/12	1:34:15	Start Upper Tailrace Detection (Start UT Foray 16)	C	10670	0	0	0	0	5010	0	5660	0	0	0	0		A					78.5	1	4,6		1	move up; decrease in generation
	5/21/12	1:30:00	Tailrace Unit 8,9,10 (Mid)				C	10670	0	0	0	0	5010	0	5660	0	0	0	0		A				78.5	1	4,6		1		
	5/21/12	2:30:00					C	10670	0	0	0	0	5010	0	5660	0	0	0	0		A				78.5	1	4,6				
	5/21/12	3:30:00					C	10670	0	0	0	0	5010	0	5660	0	0	0	0		A				78.5	1	4,6				
	5/21/12	4:30:00					C	10670	0	0	0	0	5010	0	5660	0	0	0	0		A				78.5	1	4,6				
	5/21/12	5:30:00					C	10670	0	0	0	0	5010	0	5660	0	0	0	0		A				78.5	1	4,6				
54-39	5/21/12	5:47:11	Tailrace Unit 10 (Mid)	5/21/12	5:53:06	End Upper Tailrace Detection (End UT Foray 16)	C	10670	0	0	0	0	5010	0	5660	0	0	0	0		A				78.5	1	4,6				
54-39	5/21/12	NA	NA	NA	NA	Transition Downstream 16 (Upper Tailrace to Tailrace)																									
54-39	5/21/12	NA	NA	NA	NA	End Tailrace Detection 11																									
54-39	5/21/12	8:48:11	T3 - McGibney Is.	5/21/12	8:52:57	Start Lower River																									

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	Flow Meters											EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1					
									1	2	3	4	5	6	7	8	9	10	11															
	5/21/12	13:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	14:30:00	Tailrace Unit 1.3,5,7 (Mid)				A/B	74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10	2				move center and west, no change in generation	
	5/21/12	15:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	16:30:00	Tailrace Unit 1.5,7 (Mid)				A/B	74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10	2					
	5/21/12	17:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	18:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	19:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	20:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	21:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	22:30:00						74940	5440	5180	5970	6110	5010	5890	5660	8900	8730	8890	9160		C					78.5		71,2,3,4,5,6,7,8,9,10						
	5/21/12	23:30:00						40800	0	0	5970	6110	5010	0	5660	0	0	8890	9160		C	down	stay			78.5		4,2,3,4,6,9,10					no response to changes in generation	
	5/22/12	0:30:00						10030	0	0	0	0	4470	0	5560	0	0	0	0		A	down	stay			79.4		1,4,6						
	5/22/12	1:30:00						10030	0	0	0	0	4470	0	5560	0	0	0	0		A					79.4		1,4,6						
	5/22/12	2:30:00						10030	0	0	0	0	4470	0	5560	0	0	0	0		A					79.4		1,4,6						
	5/22/12	3:30:00						10030	0	0	0	0	4470	0	5560	0	0	0	0		A					79.4		1,4,6						
	5/22/12	4:30:00						10030	0	0	0	0	4470	0	5560	0	0	0	0		A					79.4		1,4,6						
	5/22/12	5:30:00						10030	0	0	0	0	4470	0	5560	0	0	0	0		A					79.4		1,4,6						
54-39	5/22/12	5:40:08	Tailrace Unit 7 (Mid)	5/22/12	5:46:52	End Upper Tailrace Detection (End UT Foray 18)	B	10030	0	0	0	0	4470	0	5560	0	0	0	0		A					79.4		1,4,6	1					move to center, no change in generation
54-39	5/22/12	6:03:18	Upper Rowland Is. West	5/22/12	6:08:05	Transition Downstream 18 (Upper Tailrace to Tailrace)	E	10030	0	0	0	0	4470	0	5560	0	0	0	0		A	down	fish down;			79.4		1,4,6						move down, no change in generation
54-39	5/22/12	7:22:04	Upper Rowland Is. West	5/22/12	7:26:39	Transition Upstream 19 (Tailrace to Upper Tailrace)	E	10030	0	0	0	0	4470	0	5560	0	0	0	0		A					79.4		1,4,6						
54-39	5/22/12	7:46:53	Tailrace Unit 5 (Mid)	5/22/12	7:48:23	Start Upper Tailrace Detection (Start UT Foray 19)	B	10030	0	0	0	0	4470	0	5560	0	0	0	0		A	up	fish up;			79.4		1,4,6	1					move up, no change in generation
54-39	5/22/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 19)															A				79.4									
54-39	5/22/12	10:50:24	Upper Rowland Is. West	5/22/12	10:53:59	Transition Downstream 19 (Upper Tailrace to Tailrace)	E	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410		C	up	stay			79.4		71,2,3,4,5,6,7,8,9,10						move back, all units on
54-39	5/22/12	11:59:57	Upper Rowland Is. West	5/22/12	12:02:57	End Tailrace Detection 13	E	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410		C					79.4		71,2,3,4,5,6,7,8,9,10						
54-39	5/22/12	15:28:06	T1 - Opp. Mudd Is.	5/22/12	15:30:14	Start Lower River		74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410		C					79.4		71,2,3,4,5,6,7,8,9,10						
54-39	5/22/12	20:07:49	Spencer Island West	5/22/12	20:17:47	End Lower River		31460	0	0	5990	6030	4470	0	5560	0	0	0	9410		C	down	stay			79.4		3,2,3,4,6,10						
54-39	NA	NA	NA	NA	NA	Start Tailrace Detection 14															A													
54-39	NA	NA	NA	NA	NA	Transition Upstream 20 (Tailrace to Upper Tailrace)															A													
54-39	5/23/12	9:54:18	Tailrace Unit 8 (Mid)	5/23/12	9:59:46	Start Upper Tailrace Detection (Start UT Foray 20)	C	10170	0	0	0	0	4580	0	5590	0	0	0	0		A	down	up			80.1		1,4,6	1					move up, decrease in generation
	5/23/12	10:30:00	Tailrace Unit 8,9,10 (Mid)				C	10170	0	0	0	0	4580	0	5590	0	0	0	0		A					80.1		1,4,6	1					
	5/23/12	11:30:00					C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C	up	stay			80.1		71,2,3,4,5,6,7,8,9,10						no response to increase in generation
	5/23/12	12:30:00	Tailrace Unit 10 (Mid)				C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C					80.1		71,2,3,4,5,6,7,8,9,10	1					
	5/23/12	13:30:00	Tailrace Unit 8,9 (Mid)				C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C					80.1		71,2,3,4,5,6,7,8,9,10	1					
	5/23/12	14:30:00	Tailrace Unit 8,9,10 (Mid)				C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C					80.1		71,2,3,4,5,6,7,8,9,10	1					
	5/23/12	15:30:00					C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C					80.1		71,2,3,4,5,6,7,8,9,10						
	5/23/12	16:30:00	Tailrace Unit 9,10 (Mid)				C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C					80.1		71,2,3,4,5,6,7,8,9,10	1					
	5/23/12	17:30:00					C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C					80.1		71,2,3,4,5,6,7,8,9,10						
54-39	5/23/12	17:54:10	Tailrace Unit 9 (Mid)	5/23/12	17:57:40	End Upper Tailrace Detection (End UT Foray 20)	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C					80.1		71,2,3,4,5,6,7,8,9,10	1					
54-39	NA	NA	NA	NA	NA	Transition Downstream 20 (Upper Tailrace to Tailrace)															A													drop back, no change in generation
54-39	NA	NA	NA	NA	NA	End Tailrace Detection 14															A													
54-39	5/24/12	3:37:25	Spencer Island West	5/24/12	3:47:10	Start Lower River		10740	0	0	0	0	4970	0	5770	0	0	0	0		A	down	stay			80.1		1,4,6						
54-39	5/24/12	7:33:24	T1 - Opp. Mudd Is.	5/24/12	7:43:13	End Lower River		22670	0	0	0	6060	4970	5870	5770	0	0	0	0		A	up	stay			80.1		2,3,4,5,6						
54-39	5/24/12	NA	NA	NA	NA	Start Tailrace Detection 15															A													
54-39	5/24/12	9:32:19	Upper Rowland Is. West	5/24/12	9:37:08	Transition Upstream 21 (Tailrace to Upper Tailrace)	E	22670																										

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NA1
	5/25/12	23:30:00						22730	0	0	6060	6060	4550	0	6060	0	0	0	0		A				81.9	2	2,3,4,6			
	5/26/12	0:30:00	Tailrace Unit 8.9.10 (Mid)				C	22560	0	0	6040	6040	4830	0	5650	0	0	0	0		A				80.7	2	2,3,4,6	1		
	5/26/12	1:30:00						22560	0	0	6040	6040	4830	0	5650	0	0	0	0		A				80.7	2	2,3,4,6			
	5/26/12	2:30:00						22560	0	0	6040	6040	4830	0	5650	0	0	0	0		A				80.7	2	2,3,4,6			
	5/26/12	3:30:00	Tailrace Unit 8.9.10 (Mid)				C	22560	0	0	6040	6040	4830	0	5650	0	0	0	0		A				80.7	2	2,3,4,6	1		
	5/26/12	4:30:00						10480	0	0	0	0	4830	0	5650	0	0	0	0		A	down	stay	no movement; decrease in gen	80.7	1	4,6			
	5/26/12	5:30:00						10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6			
	5/26/12	6:30:00	Tailrace Unit 9.10 (Mid)				C	10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6	1		
	5/26/12	7:30:00	Tailrace Unit 9.10 (Mid)				C	10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6	1		
	5/26/12	8:30:00	Tailrace Unit 9.10 (Mid)				C	10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6	1		
	5/26/12	9:30:00	Tailrace Unit 8.9.10 (Mid)				C	10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6	1		
54-39	5/26/12	9:56:26	Tailrace Unit 9 (Mid)	5/26/12	9:58:46	End Upper Tailrace Detection (End UT Foray 22)	C	10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6	1		
54-39	5/26/12	NA	NA	NA	NA	Transition Downstream 22 (Upper Tailrace to Tailrace)															A				80.7					
54-39	5/26/12	NA	NA	NA	NA	End Tailrace Detection 15															A				80.7					
54-39	5/26/12	10:34:15	T1 - Opp. Mudd Is.	5/26/12	10:42:46	Start Lower River		10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6			
54-39	5/26/12	11:00:39	T1 - Mudd Is.	5/26/12	11:05:38	End Lower River		10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6			
54-39	5/26/12	12:01:43	Upper Rowland Is. West	5/26/12	12:06:36	Start Tailrace Detection 16	E	10480	0	0	0	0	4830	0	5650	0	0	0	0		A		down	fish down; no change in gen	80.7	1	4,6			drop back, no change in generation
54-39	5/26/12	12:01:43	Upper Rowland Is. West	5/26/12	12:06:36	Transition Upstream 23 (Tailrace to Upper Tailrace)	E	10480	0	0	0	0	4830	0	5650	0	0	0	0		A				80.7	1	4,6			
54-39	5/26/12	12:14:45	Tailrace Unit 1 (Mid)	5/26/12	12:17:48	Start Upper Tailrace Detection (Start UT Foray 23)	A	31320	0	0	6040	6040	4830	0	5650	0	0	8760	0		C	up	up	fish up; increase in gen	80.7	3	2,3,4,6,9	1		move up, increase in generation
54-39	5/26/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 23)															A				80.7					
54-39	5/26/12	20:59:18	Upper Rowland Is. East	5/26/12	20:59:41	Transition Downstream 23 (Upper Tailrace to Tailrace)	F	40250	0	0	6040	6040	4830	0	5650	0	0	8760	8930		C	up	spillway	moved to spillway; increase in g	80.7	4	2,3,4,6,9,10			drop back and east, increase in generation
54-39	5/27/12	6:55:43	Upper Rowland Is. West	5/27/12	6:58:18	Transition Upstream 24 (Tailrace to Upper Tailrace)	E	9200	0	0	0	0	4250	0	4950	0	0	0	0		A	down	down	fish down; decrease in gen	80.5	1	4,6			move west, decrease in generation
54-39	5/27/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 24)															A				80.5					
54-39	5/27/12	8:34:16	"A" Gate Aerial	5/27/12	8:34:16	Start EFL Aerial Detection	C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A		up	fish up; no change in gen	80.5	1	4,6			move to EFL, no change in generation
54-39	5/27/12	8:40:44	"A" Gate Entrance Dropper	5/27/12	8:42:38	Start EFL	C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:40:49	"A" Gate Upstream Dropper	5/27/12	8:42:14		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:42:52	"A" Gate Entrance Dropper	5/27/12	8:47:40		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:44:04	"A" Gate Upstream Dropper	5/27/12	8:47:46		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:47:57	"A" Gate Entrance Dropper	5/27/12	8:48:10		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:48:23	Lower Crowder Channel (West)	5/27/12	8:51:06	Start Lower Crowder Channel	C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:48:27	"A" Gate Upstream Dropper	5/27/12	8:51:21		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:48:03	"C" Gate Upstream Dropper	5/27/12	8:49:17		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:49:30	"C" Gate Upstream Dropper	5/27/12	8:51:01		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:51:44	Lower Crowder Channel (East)	5/27/12	8:52:00	End Lower Crowder Channel	C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:52:04	Upper Crowder Channel (East)	5/27/12	8:54:30	Start Upstream Crowder Channel	C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	8:52:15	Upper Crowder Channel (West)	5/27/12	8:56:04	End Upstream Crowder Channel	C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:08:03	ELF Exit Trough - Lower Dropper	5/27/12	9:09:07	Start Exit Trough	C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:09:51	ELF Exit Trough - Lower Dropper	5/27/12	9:14:22		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:14:36	ELF Exit Trough - Lower Dropper	5/27/12	9:19:26		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:19:34	ELF Exit Trough - Lower Dropper	5/27/12	9:24:23		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:24:36	ELF Exit Trough - Lower Dropper	5/27/12	9:29:32		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:29:39	ELF Exit Trough - Lower Dropper	5/27/12	9:34:34		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
	5/27/12	9:30:00						9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:34:54	ELF Exit Trough - Lower Dropper	5/27/12	9:39:33		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:39:40	ELF Exit Trough - Lower Dropper	5/27/12	9:44:29		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:44:55	ELF Exit Trough - Lower Dropper	5/27/12	9:49:39		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:49:53	ELF Exit Trough - Lower Dropper	5/27/12	9:54:34		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12	9:55:00	ELF Exit Trough - Lower Dropper	5/27/12	9:59:42		C	9200	0	0	0	0	4250	0	4950	0	0	0	0		A				80.5	1	4,6			
54-39	5/27/12</																													

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments	NA1				
54-42	4/18/12	15:31:00		04/18/12	15:31:00			11240	0	0	0	0	5300	0	5940	0	0	0	0	0															
54-42	5/4/12	15:10:15	T1 - Opp. Mudd Is.	5/4/12	15:13:44	Last Back Detection		49340	0	0	6090	6090	4800	0	5410	0	8700	8970	9280		C	up	stay	no movement; increase in gen	69.8	5	3,4,5,7,9,10,11								
54-42	5/4/12	NA	NA	NA	NA	Start Tailrace Detection 1															A														
54-42	5/4/12	NA	NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)															A														
54-42	5/4/12	15:16:43	Tailrace Unit 8 (Mid)	5/4/12	15:21:24	Start Upper Tailrace Detection (Start UT Foray 1)	C	49340	0	0	6090	6090	4800	0	5410	0	8700	8970	9280		C					69.8	5	3,4,5,7,9,10,11							
54-42	5/4/12	15:30:00	Tailrace Unit 8 (Mid)				C	49340	0	0	6090	6090	4800	0	5410	0	8700	8970	9280		C					69.8	5	3,4,5,7,9,10,11							
54-42	5/4/12	15:30:00	Tailrace Unit 9 (Mid)				C	68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C	up	stay	no movement; increase in gen	69.8	7	1,2,3,4,5,7,8,9,10,11								
54-42	5/4/12	17:30:00	Tailrace Unit 8,9,10 (Mid)				C	68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C					69.8	7	1,2,3,4,5,7,8,9,10,11							
54-42	5/4/12	18:30:00	Tailrace Unit 8,9,10 (Mid)				C	68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C					69.8	7	1,2,3,4,5,7,8,9,10,11							
54-42	5/4/12	19:16:17	Tailrace Unit 8 (Mid)	5/4/12	19:21:45	End Upper Tailrace Detection (End UT Foray 1)	C	49340	0	0	6090	6090	4800	0	5410	0	8700	8970	9280		C	down	stay	no movement; decrease in gen	69.8	5	3,4,5,7,9,10,11								
54-42	NA	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)															A														
54-42	NA	NA	NA	NA	NA	End Tailrace Detection 1															A														
54-42	5/5/12	0:27:44	T1 - Mudd Is.	5/5/12	0:31:37	Start Lower River		10450	0	0	0	0	4920	0	5530	0	0	0	0	0		A	down	stay	no movement; decrease in gen	68.4	1	5,7							
54-42	5/5/12	5:18:33	T1 - Mudd Is.	5/5/12	5:23:24	End Lower River		10450	0	0	0	0	4920	0	5530	0	0	0	0	0		A				68.4	1	5,7							
54-42	5/5/12	NA	NA	NA	NA	Start Tailrace Detection 2															A														
54-42	5/5/12	NA	NA	NA	NA	Transition Upstream 2 (Tailrace to Upper Tailrace)															A														
54-42	5/5/12	13:19:36	Tailrace Unit 9 (Mid)	5/5/12	13:25:58	Start Upper Tailrace Detection (Start UT Foray 2)	C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C	up	stay	no movement; increase in gen	68.4	5	3,4,5,7,9,10,11								
54-42	5/5/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 2)															A														
54-42	5/5/12	20:06:55	Upper Rowland Is. West	5/5/12	20:10:17	Transition Downstream 2 (Upper Tailrace to Tailrace)	E	74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C	up	down	fish down; increase in gen	68.4	7	1,2,3,4,5,6,7,8,9,10,11								
54-42	5/5/12	NA	NA	NA	NA	End Tailrace Detection 2															A														
54-42	5/5/12	20:54:28	T1 - Mudd Is.	5/5/12	20:59:15	Start Lower River		74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C					68.4	7	1,2,3,4,5,6,7,8,9,10,11							
54-42	5/6/12	5:41:04	T1 - Mudd Is.	5/6/12	5:43:54	End Lower River		10530	0	0	0	0	4820	0	5710	0	0	0	0	0		A	down	stay	no movement; decrease in gen	67.9	1	5,7							
54-42	5/6/12	6:37:06	Upper Rowland Is. West	5/6/12	6:41:56	Start Tailrace Detection 3	E	10530	0	0	0	0	4820	0	5710	0	0	0	0	0		A				67.9	1	5,7							
54-42	5/6/12	6:42:06	Upper Rowland Is. West	5/6/12	6:46:56	Transition Upstream 3 (Tailrace to Upper Tailrace)	E	10530	0	0	0	0	4820	0	5710	0	0	0	0	0		A				67.9	1	5,7							
54-42	5/6/12	8:50:15	Tailrace Unit 8 (Mid)	5/6/12	8:51:28	Start Upper Tailrace Detection (Start UT Foray 3)	C	10530	0	0	0	0	4820	0	5710	0	0	0	0	0		A	up	stay	fish up; no change in gen	67.9	1	5,7							
5/6/12	9:30:00							49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up	stay	no movement; increase in gen	67.9	5	3,4,5,7,9,10,11								
5/6/12	10:30:00		Tailrace Unit 8,9,10 (Mid)				C	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				67.9	5	3,4,5,7,9,10,11								
5/6/12	11:30:00						C	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				67.9	5	3,4,5,7,9,10,11								
5/6/12	12:30:00		Tailrace Unit 8,9,10 (Mid)				C	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				67.9	5	3,4,5,7,9,10,11								
54-42	5/6/12	13:26:09	Tailrace Unit 10 (Mid)	5/6/12	13:29:48	End Upper Tailrace Detection (End UT Foray 3)	C	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				67.9	5	3,4,5,7,9,10,11								
54-42	5/6/12	14:09:54	Upper Rowland Is. West	5/6/12	14:14:31	Transition Downstream 3 (Upper Tailrace to Tailrace)	E	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C		down	fish down; no change in gen	67.9	5	3,4,5,7,9,10,11								
54-42	5/6/12	NA	NA	NA	NA	End Tailrace Detection 3															A														
54-42	5/6/12	20:32:57	T1 - Mudd Is.	5/6/12	20:34:57	Start Lower River		74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8970	9130		C	up	stay	no movement; increase in gen	67.9	7	1,2,3,4,5,6,7,8,9,10,11								
54-42	5/7/12	4:34:25	T1 - Mudd Is.	5/7/12	4:39:05	End Lower River		11570	0	0	0	0	5550	0	6020	0	0	0	0	0		A	down	stay	no movement; decrease in gen	68.3	1	5,7							
54-42	5/7/12	NA	NA	NA	NA	Start Tailrace Detection 4															A														
54-42	5/7/12	NA	NA	NA	NA	Transition Upstream 4 (Tailrace to Upper Tailrace)															A														
54-42	5/7/12	4:38:58	Tailrace Unit 10 (Mid)	5/7/12	4:47:04	Start Upper Tailrace Detection (Start UT Foray 4)	C	11570	0	0	0	0	5550	0	6020	0	0	0	0	0		A				68.3	1	5,7							
5/7/12	5:30:00		Tailrace Unit 8 (Mid)				C	32830	0	0	5910	6000	5550	0	6020	0	0	0	9350		C	up	stay	no movement; increase in gen	68.3	3	3,4,5,7,11								
5/7/12	6:30:00						C	58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen	68.3	6	3,4,5,7,8,9,10,11								
5/7/12	7:30:00						C	58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C				68.3	6	3,4,5,7,8,9,10,11								
5/7/12	8:30:00						C	58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C				68.3	6	3,4,5,7,8,9,10,11								
5/7/12	9:30:00		Tailrace Unit 8,9,10 (Mid)				C	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen	68.3	7	1,2,3,4,5,6,7,8,9,10,11								
5/7/12	10:30:00		Tailrace Unit 8,9,10 (Mid)				C	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				68.3	7	1,2,3,4,5,6,7,8,9,10,11								
5/7/12	11:30:00						C	75100	5330	5060	5910	6000	5550	5720	6020																				

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	Flow											EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep	Comments	NA1				
									1	2	3	4	5	6	7	8	9	10	11												Spill			
54-73	5/22/12	10:44:45	T3 - Opp. McGibney	5/22/12	10:48:36	Start Lower River		74000	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C				69.1	7	1,2,3,4,5,6,7,8,9,10,11								
54-73	5/22/12	11:30:33	T1 - Opp. Mudd Is.	5/22/12	11:39:41	End Lower River		74000	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C				69.1	7	1,2,3,4,5,6,7,8,9,10,11								
54-73	5/22/12	NA	NA	NA	NA	Start Tailrace Detection 8													A				69.1											
54-73	5/22/12	NA	NA	NA	NA	Transition Upstream 8 (Tailrace to Upper Tailrace)													A				69.1											
54-73	5/22/12	12:06:55	Tailrace Unit 8 (Mid)	5/22/12	12:16:02	Start Upper Tailrace Detection (Start UT Foray 8)	C	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C	up			69.1	7	1,2,3,4,5,6,7,8,9,10,11	1		move up, no change in generation					
54-73	5/22/12	12:30:00	Tailrace Unit 8.9,10 (Mid)				C	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C				69.1	7	1,2,3,4,5,6,7,8,9,10,11	1							
54-73	5/22/12	13:08:07	Tailrace Unit 10 (Mid)	5/22/12	13:09:25	End Upper Tailrace Detection (End UT Foray 8)	C	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C	down			69.1	7	1,2,3,4,5,6,7,8,9,10,11	1							
54-73	5/22/12	13:26:41	Upper Rowland Is. East	5/22/12	13:31:20	Transition Downstream 8 (Upper Tailrace to Tailrace)	F	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C	down		move back to east tailrace; no change in gen	69.1	7	1,2,3,4,5,6,7,8,9,10,11			drop back, no change in generation					
54-73	5/22/12	13:56:39	Upper Rowland Is. East	5/22/12	13:59:16	Transition Upstream 9 (Tailrace to Upper Tailrace)	F	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C	up		fish up; no change in gen	69.1	7	1,2,3,4,5,6,7,8,9,10,11	1		move up, no change in generation					
54-73	5/22/12	15:31:46	Tailrace Unit 8 (Mid)	5/22/12	15:35:14	Start Upper Tailrace Detection (Start UT Foray 9)	C	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C	up		fish up; no change in gen	69.1	7	1,2,3,4,5,6,7,8,9,10,11	1		move up, no change in generation					
54-73	5/22/12	16:28:56	Tailrace Unit 9 (Mid)	5/22/12	16:31:19	End Upper Tailrace Detection (End UT Foray 9)	C	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C				69.1	7	1,2,3,4,5,6,7,8,9,10,11	1							
54-73	5/22/12	17:02:08	Upper Rowland Is. West	5/22/12	17:05:20	Transition Downstream 9 (Upper Tailrace to Tailrace)	E	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C	down		fish down; no change in gen	69.1	7	1,2,3,4,5,6,7,8,9,10,11			drop back, no change in generation					
54-73	5/22/12	NA	NA	NA	NA	End Tailrace Detection 8													A				69.1											
54-73	5/22/12	17:15:03	T1 - Mudd Is.	5/22/12	17:19:49	Start Lower River		74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C				69.1	7	1,2,3,4,5,6,7,8,9,10,11								
54-73	5/22/12	17:45:13	T1 - Mudd Is.	5/22/12	17:50:01	End Lower River		74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C				69.1	7	1,2,3,4,5,6,7,8,9,10,11								
54-73	5/22/12	NA	NA	NA	NA	Start Tailrace Detection 9													A				69.1											
54-73	5/22/12	18:08:47	Tailrace Unit 10 (Mid)	5/22/12	18:17:20	Transition Upstream 10 (Tailrace to Upper Tailrace)	C	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C	up		fish up; no change in gen	69.1	7	1,2,3,4,5,6,7,8,9,10,11	1		move up, no change in generation					
54-73	5/22/12	18:30:00	Tailrace Unit 9,10 (Mid)				C	74090	5380	4850	5990	6030	4470	5810	5560	8840	8800	8950	9410	C				69.1	7	1,2,3,4,5,6,7,8,9,10,11	1							
54-73	5/22/12	18:39:02	Tailrace Unit 10 (Mid)	5/22/12	18:39:02	End Upper Tailrace Detection (End UT Foray 10)	C	31460	0	0	5990	6030	4470	0	5560	0	0	0	9410	C	down	stay	no movement; decrease in gen	69.1	3	3,4,5,7,11	1							
54-73	5/22/12	19:46:05	Upper Rowland Is. East	5/22/12	19:50:05	Transition Downstream 10 (Upper Tailrace to Tailrace)	F	31460	0	0	5990	6030	4470	0	5560	0	0	0	9410	C	spillway		moved to spillway; no change in gen	69.1	3	3,4,5,7,11			drop back, decrease in generation					
54-73	5/22/12	20:03:42	LT - Lower Rowland Is. West	5/22/12	20:05:43	End Tailrace Detection 9	E	31460	0	0	5990	6030	4470	0	5560	0	0	0	9410	C	down	fish down; no change in gen	69.1	3	3,4,5,7,11			move west, no change in generation						
54-73	5/22/12	20:20:36	T1 - Mudd Is.	5/22/12	20:25:23	Start Lower River		31460	0	0	5990	6030	4470	0	5560	0	0	0	9410	C				69.1	3	3,4,5,7,11			drop back, no change in generation					
54-73	5/23/12	5:32:28	T1 - Mudd Is.	5/23/12	5:37:02	End Lower River		10170	0	0	0	4580	0	5590	0	0	0	0	0	A	down	stay	no movement; decrease in gen	69.2	1	5,7								
54-73	5/23/12	NA	NA	NA	NA	Start Tailrace Detection 10													A				69.2	69.2										
54-73	5/23/12	NA	NA	NA	NA	Transition Upstream 11 (Tailrace to Upper Tailrace)													A				69.2	69.2										
54-73	5/23/12	5:41:41	Tailrace Unit 9 (Mid)	5/23/12	5:50:02	Start Upper Tailrace Detection (Start UT Foray 11)	C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A	up		fish up; no change in gen	69.2	69.2	5,7	1		move up, decrease in generation					
5/23/12	6:30:00	Tailrace Unit 1,3,5,6,9,10(Mid)					A/B/C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A				69.2	69.2	5,7	3		move back and forth, no change in generation					
5/23/12	7:30:00	Tailrace Unit 1,3,5,7,10(Mid)					A/B/C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A				69.2	69.2	5,7								
5/23/12	8:30:00	Tailrace Unit 1,8,9,10 (Mid)					B/C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A				69.2	69.2	5,7	2							
54-73	5/23/12	9:20:40	"A" Gate Aerial	5/23/12	9:24:26	Start EFL Aerial Detection	C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A				69.2	69.2	5,7			move to EFL, no change in generation					
54-73	5/23/12	9:30:01	"A" Gate Aerial	5/23/12	9:32:36	End EFL Aerial Detection	C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A				69.2	69.2	5,7			leave EFL, no change in generation					
54-73	5/23/12	9:40:11	Tailrace Unit 7 (Mid)	5/23/12	9:47:37	End Upper Tailrace Detection (End UT Foray 11)	B	10170	0	0	0	4580	0	5590	0	0	0	0	0	A	down			69.2	69.2	5,7	1		move to center, no change in generation					
54-73	5/23/12	9:47:16	Upper Rowland Is. West	5/23/12	9:52:04	Transition Downstream 11 (Upper Tailrace to Tailrace)	E	10170	0	0	0	4580	0	5590	0	0	0	0	0	A	down		fish down; no change in gen	69.2	69.2	5,7			drop back, no change in generation					
54-73	5/23/12	10:04:04	Upper Rowland Is. West	5/23/12	10:08:59	Transition Upstream 12 (Tailrace to Upper Tailrace)	E	10170	0	0	0	4580	0	5590	0	0	0	0	0	A				69.2	69.2	5,7								
54-73	5/23/12	10:13:23	Tailrace Unit 9 (Mid)	5/23/12	10:21:30	Start Upper Tailrace Detection (Start UT Foray 12)	C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A	up		fish up; no change in gen	69.2	69.2	5,7	1		move up, no change in generation					
5/23/12	10:30:00	Tailrace Unit 1,3,7,8,9,10 (Mid)					A/B/C	10170	0	0	0	4580	0	5590	0	0	0	0	0	A				69.2	69.2	5,7	3		move back and forth, no change in generation					
5/23/12	11:30:00	Tailrace Unit 10 (Mid)					C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100	C	up	stay	no movement; increase in gen	69.2	69.2	1,2,3,4,5,6,7,8,9,10,11	1		move east, all units on					
5/23/12	12:30:00	Tailrace Unit 1,3,5,7,10 (Mid)					A/B	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100	C				69.2	69.2	1,2,3,4,5,6,7,8,9,10,11	2		move center and east, no change in generation					
54-73	5/23/12	12:48:55	"C" Gate Aerial	5/23/12	12:53:46	Start EFL Aerial Detection	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100	C				69.2	69.2	1,2,3,4,5,6,7,8,9,10,11			move to EFL, no change in generation					
54-73	5/23/12	12:52:40	"C" Gate Upstream Dropper	5/23/12	12:56:19	Start EFL	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100	C				6										

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep	Comments NAI1
54-73	5/24/12	5:17:21	Tailrace Unit 3 (Mid)	5/24/12	5:23:05	Start Upper Tailrace Detection (Start UT Foray 13)	A	10740	0	0	0	0	4970	0	5770	0	0	0	0	0	A		up	fish up; no change in gen	69.9	1,5,7		1		move up, decrease in generation
	5/24/12	5:30:00	Tailrace Unit 1,3,7 (Mid)				A/B	10740	0	0	0	0	4970	0	5770	0	0	0	0	0	A				69.9	1,5,7		2		move west and center, no change in generation
54-73	5/24/12	6:16:29	Tailrace Unit 5 (Mid)	5/24/12	6:22:06	End Upper Tailrace Detection (End UT Foray 13)	B	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A	up	stay	no movement; increase in gen	69.9	2,4,5,6,7		1		move center, increase in generation
54-73	5/24/12	6:26:41	Upper Rowland Is. West	5/24/12	6:31:29	Transition Downstream 13 (Upper Tailrace to Tailrace)	E	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A		down	fish down; no change in gen	69.9	2,4,5,6,7				drop back, no change in generation
54-73	5/24/12	6:37:39	Upper Rowland Is. East	5/24/12	6:38:26	Transition Upstream 14 (Tailrace to Upper Tailrace)	F	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A			moved to east tailrace; no change in gen	69.9	2,4,5,6,7				
54-73	5/24/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 14)																								
54-73	5/24/12	6:46:43	*A* Gate Aerial	5/24/12	6:49:42	Start EFL Aerial Detection	C	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A		up	fish up; no change in gen	69.9	2,4,5,6,7				move to EFL, no change in generation
54-73	5/24/12	6:54:56	*A* Gate Aerial	5/24/12	6:55:39	End EFL Aerial Detection	C	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A				69.9	2,4,5,6,7				leave EFL, no change in generation
	5/24/12	7:30:00						22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A				69.9	2,4,5,6,7				
	5/24/12	8:30:00						22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A				69.9	2,4,5,6,7				
54-73	5/24/12	8:31:49	*A* Gate Aerial	5/24/12	8:31:49	Start EFL Aerial Detection	C	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A				69.9	2,4,5,6,7				move to EFL, no change in generation
54-73	5/24/12	8:35:43	*A* Gate Aerial	5/24/12	8:36:32	End EFL Aerial Detection	C	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A				69.9	2,4,5,6,7				leave EFL, no change in generation
	5/24/12	9:30:00						22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	A				69.9	2,4,5,6,7				
54-73	5/24/12	10:30:15	"C" Gate Aerial	5/24/12	10:32:00	Start EFL Aerial Detection	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C	up	stay	no movement; increase in gen	69.9	3,4,5,6,7,9,10				move to EFL, increase in generation
54-73	5/24/12	10:56:10	"C" Gate Upstream Dropper	5/24/12	10:56:23	Start EFL	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:56:46	Lower Crowder Channel (West)	5/24/12	10:57:24	Start Lower Crowder Channel	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:57:03	"A" Gate Entrance Dropper	5/24/12	10:57:03		C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:57:11	Lower Crowder Channel (East)	5/24/12	10:57:24	End Lower Crowder Channel	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:57:30	"A" Gate Entrance Dropper	5/24/12	10:57:45		C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:57:34	"A" Gate Upstream Dropper	5/24/12	10:57:34		C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:58:06	Upper Crowder Channel (West)	5/24/12	10:58:19	Start Upstream Crowder Channel	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:58:33	Upper Crowder Channel (West)	5/24/12	11:02:21	Upstream Crowder Channel	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	10:58:44	Upper Crowder Channel (East)	5/24/12	11:02:54	End Upstream Crowder Channel	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	11:11:24	ELF Exit Trough - Lower Dropper	5/24/12	11:11:24		C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	11:11:32	ELF Exit Trough - Lower Dropper	5/24/12	11:16:18		C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C				69.9	3,4,5,6,7,9,10				
54-73	5/24/12	11:16:15	EFL Upper Exit Trough	5/24/12	11:18:01	Passage	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	C			fish passed; no change in gen	69.9	3,4,5,6,7,9,10				

Fish ID	Date	Time	Location	Description	Tailrace Zone	Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NA1
54-81	5/4/12	10:09:00	05/04/12 10:09:00			22300	0	0	0	0	0	0	0	0	0	0	0	0	A				2	3,4,5,7			60.9		
54-81	5/4/12	12:25:44	Upper Rowland Is. East	Last Fallback Detection	F	40640	0	0	6090	6090	4800	0	5410	0	0	0	8970	9280		C	up		moved to east tailrace; increase in gen	4	3,4,5,7,10,11			60.9	
54-81	NA	NA	NA	Start Tailrace Detection 1															A										
54-81	NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)															A										
54-81	5/5/12	3:07:42	Tailrace Unit 10 (Mid)	Start Upper Tailrace Detection (Start UT Foray 1)	C	10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A	down	up	fish up; decrease in gen	1	5,7		1	63.3	move up, decrease in generation
54-81	5/5/12	3:30:00	Tailrace Unit 10 (Mid)		C	10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A									
54-81	5/5/12	4:30:00	Tailrace Unit 10 (Mid)		C	10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A									
54-81	5/5/12	5:30:00	Tailrace Unit 8,9,10 (Mid)		C	10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A									
54-81	5/5/12	5:37:53	Tailrace Unit 10 (Mid)	End Upper Tailrace Detection (End UT Foray 1)	C	10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A									
54-81	5/5/12	5:46:19	Upper Rowland Is. West	Transition Downstream 1 (Upper Tailrace to Tailrace)	E	10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A	down		fish down; no change in gen	1	5,7		1	63.3	drop back, no change in generation
54-81	5/5/12	6:03:09	Upper Rowland Is. West	Transition Upstream 2 (Tailrace to Upper Tailrace)	E	10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A									
54-81	5/5/12	6:30:00				10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A									
54-81	5/5/12	7:30:00				10450	0	0	0	4920	0	5530	0	0	0	0	0	0		A									
54-81	5/5/12	8:30:00				22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0		A	up	stay	no movement; increase in gen	2	3,4,5,7			63.3	no response to changes in generation
54-81	5/5/12	9:30:00				22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0		A									
54-81	5/5/12	10:30:00				22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0		A									
54-81	5/5/12	11:30:00				49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C	up	stay	no movement; increase in gen	5	3,4,5,7,9,10,11			63.3	
54-81	5/5/12	12:30:00				49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	13:30:00				49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	14:30:00				49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	14:59:38	Tailrace Unit 8 (Mid)	Start Upper Tailrace Detection (Start UT Foray 2)	C	49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	15:30:00				49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	16:30:00				49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	17:30:00				49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	18:30:00	Tailrace Unit 8 (Mid)		C	49530	0	0	6040	6080	4920	0	5530	0	0	8730	8940	9290		C									
54-81	5/5/12	19:30:00				74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.3	no response to changes in generation	
54-81	5/5/12	20:30:00				74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C										
54-81	5/5/12	21:30:00				74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C										
54-81	5/5/12	22:30:00				74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C										
54-81	5/5/12	23:30:00				22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0		A	down	stay	no movement; decrease in gen	2	3,4,5,7			63.3	
54-81	5/6/12	1:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	1	5,7			65.8	
54-81	5/6/12	1:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	2:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	3:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	4:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	5:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	6:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	7:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	8:30:00				10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	9:30:00				49210	0	0	5950	6030	4820	0	5710	0	0	8700	8870	9130		C	up	stay	no movement; increase in gen	5	3,4,5,7,9,10,11			65.8	
54-81	5/6/12	10:30:00				49210	0	0	5950	6030	4820	0	5710	0	0	8700	8870	9130		C									
54-81	5/6/12	11:30:00				49210	0	0	5950	6030	4820	0	5710	0	0	8700	8870	9130		C									
54-81	5/6/12	12:30:00				49210	0	0	5950	6030	4820	0	5710	0	0	8700	8870	9130		C									
54-81	5/6/12	13:30:00				49210	0	0	5950	6030	4820	0	5710	0	0	8700	8870	9130		C									
54-81	5/6/12	14:30:00	Tailrace Unit 9,10 (Mid)		C	10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	15:30:00	Tailrace Unit 9,10 (Mid)		C	10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	16:30:00	Tailrace Unit 8,9,10 (Mid)		C	10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	17:30:00	Tailrace Unit 9,10 (Mid)		C	10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	18:30:00	Tailrace Unit 8,9,10 (Mid)		C	10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	19:30:00				74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C										
54-81	5/6/12	20:30:00	Tailrace Unit 1 (Mid)		C	10530	0	0	0	4820	0	5710	0	0	0	0	0	0		A									
54-81	5/6/12	21:30:00				74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C										
54-81	5/6/12	22:30:00				31340	0	0	5950	6030	4820	0	5710	8830															

Fish ID	Date	Time	Location	Description	Tailrace Zone	Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NA1	
	5/10/12	0:30:00				10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A				1.3,5				64.3		
	5/10/12	1:30:00				10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A				1.3,5				64.3		
	5/10/12	2:30:00				10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A				1.3,5				64.3		
	5/10/12	3:30:00				10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A				1.3,5				64.3		
	5/10/12	4:30:00				10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A				1.3,5				64.3		
	5/10/12	5:30:00				30840	0	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	stay	no movement; increase in gen	3.2,3,4,5,8				64.3		
	5/10/12	6:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	stay	no movement; increase in gen	7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	7:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	spillway	moved to spillway; no change in gen	7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	8:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	spillway		7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	9:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	spillway		7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	10:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	spillway		7.1,2,3,4,5,6,7,8,9,10,11				64.3		
54-81	5/10/12	10:13:35	Tailrace Unit 10 (Mid)		C	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	fish up; no change in gen		7.1,2,3,4,5,6,7,8,9,10,11		1		64.3	move up, no change in generation	
	5/10/12	10:30:00	Tailrace Unit 10 (Mid)		C	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	fish up; no change in gen		7.1,2,3,4,5,6,7,8,9,10,11		1		64.3		
	5/10/12	11:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	12:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	13:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	14:30:00	Tailrace Unit 8,10 (Mid)		C	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	fish up; no change in gen		7.1,2,3,4,5,6,7,8,9,10,11		1		64.3		
	5/11/12	16:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
54-81	5/10/12	17:25:07	Tailrace Unit 8 (Mid)	End Upper Tailrace Detection (End UT Foray 4)	C	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	fish up; no change in gen		7.1,2,3,4,5,6,7,8,9,10,11		1		64.3		
	5/10/12	17:30:00	Tailrace Unit 9,10 (Mid)		C	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up	fish up; no change in gen		7.1,2,3,4,5,6,7,8,9,10,11		1		64.3		
	5/10/12	18:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	19:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	20:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
	5/10/12	21:30:00				74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				64.3		
54-81	5/10/12	21:52:48	Upper Rowland Is. East	Transition Downstream (Upper Tailrace to Tailrace)	F	22830	0	0	5710	5980	5150	0	5990	0	0	0	0	0	A	down	down	moved to east tailrace; decrease in gen	2,3,4,5,7				64.3	drop back, decrease in generation	
	5/10/12	22:30:00				22830	0	0	5710	5980	5150	0	5990	0	0	0	0	0	A				2,3,4,5,7				64.3		
	5/10/12	23:30:00				22830	0	0	5710	5980	5150	0	5990	0	0	0	0	0	A				2,3,4,5,7				64.3		
	5/11/12	0:30:00				23000	0	0	5970	6020	5070	0	5940	0	0	0	0	0	A				2,3,4,5,7				63.6		
	5/11/12	1:30:00				11010	0	0	0	0	5070	0	5940	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				63.6	no response to changes in generation	
	5/11/12	2:30:00				11010	0	0	0	0	5070	0	5940	0	0	0	0	0	A				1,5,7				63.6		
	5/11/12	3:30:00				11010	0	0	0	0	5070	0	5940	0	0	0	0	0	A				1,5,7				63.6		
	5/11/12	4:30:00				74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	0	C	up	stay	no movement; increase in gen	7.1,2,3,4,5,6,7,8,9,10,11				63.6		
	5/11/12	5:30:00				74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				63.6		
	5/11/12	6:30:00				74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				63.6		
	5/11/12	7:30:00				74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				63.6		
	5/11/12	8:30:00				74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				63.6		
	5/11/12	9:30:00				74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				63.6		
54-81	5/11/12	9:37:05	Upper Rowland Is. East	Transition Upstream 5 (Tailrace to Upper Tailrace)	F	74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				63.6		
54-81	5/11/12	NA	NA	Start Upper Tailrace Detection (Start UT Foray 5)	A														A								63.6		
54-81	5/12/12	12:07:22	Tailrace Unit 10 (Mid)	End Upper Tailrace Detection (End UT Foray 5)	E	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	0	C	up	fish up; no change in gen		7.1,2,3,4,5,6,7,8,9,10,11		1		62.9	move up, slight increase in generation	
54-81	5/12/12	NA	NA	Transition Downstream 5 (Upper Tailrace to Tailrace)	A														A								62.9		
54-81	5/12/12	NA	NA	End Tailrace Detection 2	A														A								62.9	drop back, no change in generation	
54-81	5/12/12	12:38:37	T1 - Opp. Mudd Is.	Start Lower River	E	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				62.9		
54-81	5/12/12	17:44:51	T2 - Opp. Crab House	End Lower River	E	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	0	C	up			7.1,2,3,4,5,6,7,8,9,10,11				62.9		
54-81	5/12/12	19:24:22	LT - Lower Rowland Is. West	Start Tailrace Detection 3	E	31410	0	4900	0	0	5550	5820	6030	0	0	9110	0	0	C	down	down	fish down; decrease in gen	3.2,5,6,7,10				62.9	move up, decrease in generation	
54-81	5/13/12	5:52:34	Upper Rowland Is. West	Transition Upstream 6 (Tailrace to Upper Tailrace)	E	10370	0	4920	0	0	5450	0	0	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,2,5				63.5	
54-81	5/13/12	NA	NA	Start Upper Tailrace Detection (Start UT Foray 6)	A														A								63.5		
54-81	5/13/12	19:43:12	Tailrace Unit 8 (Mid)	End Upper Tailrace Detection (End UT Foray 6)	C	75500	5420	4920	6000	6020																			

Fish ID	Date	Time	Location	Description	Tailrace Zone	Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NA1		
54-81	5/23/12	16:03:00	"C" Gate Upstream Dropper	Start EFL	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/23/12	16:06:53	"A" Gate Entrance Dropper	Start Lower Crowder Channel	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/23/12	16:07:03	Lower Crowder Channel (East)	Lower Crowder Channel	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/23/12	16:07:52	Lower Crowder Channel (West)	Lower Crowder Channel	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/23/12	16:09:16	"A" Gate Upstream Dropper	Start Lower Crowder Channel	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/23/12	16:12:03	Lower Crowder Channel (East)	Lower Crowder Channel	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/23/12	16:12:17	"A" Gate Entrance Dropper	End EFL	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/23/12	16:30:00	"C" Gate Aerial	End EFL Aerial Detection	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2	leave EFL, no change in generation		
54-81	5/23/12	16:30:00	"C" Gate Aerial	End EFL Aerial Detection	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2	leave EFL, no change in generation		
54-81	5/23/12	17:01:32	Tailrace Unit 10 (Mid)	End Upper Tailrace Detection (End UT Foray 16)	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11		1		69.2			
54-81	5/23/12	NA	NA	Transition Downstream 16 (Upper Tailrace to Tailrace)	A														A								69.2	drop back, no change in generation		
54-81	5/23/12	NA	NA	End Tailrace Detection 8	A														A								69.2			
54-81	5/23/12	20:22:41	T1 - Mudd Is.	Start Lower River	C	73830	5470	4830	5980	6040	4580	5790	5590	8860	8740	8850	9100		C				71,2,3,4,5,6,7,8,9,10,11				69.2			
54-81	5/24/12	4:30:49	T1 - Mudd Is.	End Lower River	C	10740	0	0	0	0	4970	0	5770	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				69.9		
54-81	5/24/12	6:23:42	Upper Rowland Is. West	Start Tailrace Detection 9	E	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	0	A	up	down	fish down; increase in gen	2,4,5,6,7				69.9	move up, decrease in generation	
54-81	5/24/12	6:28:52	Upper Rowland Is. West	Transition Upstream 17 (Tailrace to Upper Tailrace)	E	22670	0	0	0	0	6060	4970	5870	5770	0	0	0	0	0	A				2,4,5,6,7				69.9		
54-81	5/24/12	NA	NA	Start Upper Tailrace Detection (Start UT Foray 17)	A														A								69.9			
54-81	5/24/12	11:42:43	"C" Gate Aerial	Start EFL Aerial Detection	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	0	C	up	up	fish up; increase in gen	3,4,5,6,7,9,10				69.9	move to EFL, increase in generation	
54-81	5/24/12	11:56:43	"A" Gate Aerial	End EFL Aerial Detection	C	32490	0	0	0	0	6060	4970	5870	5770	0	8710	1110	0	0	C				3,4,5,6,7,9,10				69.9	leave EFL, no change in generation	
54-81	5/24/12	12:30:00	"C" Gate Aerial	Start EFL Aerial Detection	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C	up	stay	no movement; increase in gen	71,2,3,4,5,6,7,8,9,10,11				69.9	
54-81	5/24/12	13:30:00	"C" Gate Aerial	Start EFL Aerial Detection	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11				69.9	
54-81	5/24/12	14:30:00	"C" Gate Aerial	Start EFL Aerial Detection	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11				69.9	
54-81	5/24/12	15:30:00	"C" Gate Aerial	Start EFL Aerial Detection	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11				69.9	
54-81	5/24/12	16:30:00	"C" Gate Aerial	Start EFL Aerial Detection	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11				69.9	
54-81	5/24/12	16:38:16	"C" Gate Aerial	Start EFL Aerial Detection	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11				69.9	move to EFL, no change in generation
54-81	5/24/12	16:43:37	"C" Gate Aerial	End EFL Aerial Detection	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11				69.9	leave EFL, no change in generation
54-81	5/24/12	NA	NA	End Upper Tailrace Detection (End UT Foray 17)	A														A								69.9			
54-81	5/24/12	17:09:46	Upper Rowland Is. East	Transition Downstream 17 (Upper Tailrace to Tailrace)	F	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C	down		moved to east tailrace; no change in gen	71,2,3,4,5,6,7,8,9,10,11				69.9	drop back, no change in generation
54-81	5/24/12	17:14:50	Upper Rowland Is. East	Transition Upstream 18 (Tailrace to Upper Tailrace)	F	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11				69.9	
54-81	5/24/12	17:15:35	Tailrace Unit 8 (Mid)	Start Upper Tailrace Detection (Start UT Foray 18)	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C	up		fish up; no change in gen	71,2,3,4,5,6,7,8,9,10,11		1		69.9	move up, no change in generation
54-81	5/24/12	17:15:35	Tailrace Unit 10 (Mid)	End Upper Tailrace Detection (End UT Foray 18)	C	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C				71,2,3,4,5,6,7,8,9,10,11		1		69.9	
54-81	5/24/12	17:21:35	LT - Lower Rowland Is. West	Transition Downstream 19 (Upper Tailrace to Tailrace)	E	66920	5420	4870	6010	6060	4970	5870	5770	8840	8710	1110	9290		0	0	C	down		fish up; no change in gen	71,2,3,4,5,6,7,8,9,10,11				69.9	drop back, no change in generation
54-81	5/25/12	5:57:35	Upper Rowland Is. West	Transition Upstream 19 (Tailrace to Upper Tailrace)	E	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,3,5				71.4		
54-81	5/25/12	NA	NA	Start Upper Tailrace Detection (Start UT Foray 19)	A														A								71.4			
54-81	5/25/12	7:04:09	"A" Gate Aerial	Start EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A	up	fish up; no change in gen	1,3,5				71.4	move to EFL, decrease in generation		
54-81	5/25/12	7:15:31	"A" Gate Aerial	End EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4	leave EFL, no change in generation	
54-81	5/25/12	7:30:00	"A" Gate Aerial	Start EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4		
54-81	5/25/12	8:15:28	"A" Gate Aerial	End EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4	move to EFL, no change in generation	
54-81	5/25/12	8:21:06	"A" Gate Aerial	Start EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4	leave EFL, no change in generation	
54-81	5/25/12	8:30:00	"A" Gate Aerial	End EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4		
54-81	5/25/12	9:26:52	"A" Gate Aerial	Start EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4	move to EFL, no change in generation	
54-81	5/25/12	9:30:00	"A" Gate Aerial	End EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4		
54-81	5/25/12	9:35:37	"A" Gate Aerial	End EFL Aerial Detection	C	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A				1,3,5				71.4	leave EFL, no change in generation	
54-81	5/25/12	NA	NA	End Upper Tailrace Detection (End UT Foray 19)	A														A								71.4			
54-81	5/25/12	10:31:42	Upper Rowland Is. West	Transition Downstream 19 (Upper Tailrace to Tailrace)	E	10610	0	0	0	0	4550	0	0	0	0	0	0	0	0	A	down		fish up; no change in gen	1,3,5				71.4	drop back, no change in generation	
54-81	5/25/12	11:28:58	Upper Rowland Is. West	Transition Upstream 20 (Tailrace to Upper Tailrace)	E																									

Fish ID	Date	Time	Location	Description	Tailrace Zone	Station	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NA1
	5/29/12	5:30:00	Tailrace Unit 10 (Mid)		C	10500	0	0	0	0	4930	0	5570	0	0	0	0		A				1.5,7	78.2				
	5/29/12	6:30:00			C	10500	0	0	0	0	4930	0	5570	0	0	0	0		A				1.5,7	78.2				
	5/29/12	7:30:00			C	10500	0	0	0	0	4930	0	5570	0	0	0	0		A				1.5,7	78.2				
54-81	5/29/12	8:10:26	Tailrace Unit 10 (Mid)	End Upper Tailrace Detection (End UT Foray 22)	C	41630	0	0	0	6830	4930	5820	5570	0	0	9050	9430		C	up	stay	no movement; increase in gen	4.4,5,6,7,10,11	78.2	1		78.2 drop back, increase in generation	
54-81	5/29/12	NA	NA	Transition Downstream 22 (Upper Tailrace to Tailrace)															A									
54-81	5/29/12	NA	NA	End Tailrace Detection 11															A									
54-81	5/29/12	14:05:08	T3 - McChesny Is.	Start Lower River	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C	up	stay	no movement; increase in gen	7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	16:09:28	T1 - Mud Is.	End Lower River	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	17:08:38	Upper Rowland Is. West	Start Tailrace Detection 12	E	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C		down	fish down; no change in gen	7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2 move up, no change in generation	
54-81	5/29/12	17:13:38	Upper Rowland Is. West	Transition Upstream 23 (Tailrace to Upper Tailrace)	E	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	NA	NA	Start Upper Tailrace Detection (Start UT Foray 23)															A									
54-81	5/29/12	18:29:00	"C" Gate Aerial	Start EFL Aerial Detection	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C	up		fish up; no change in gen	7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2 move to EFL, all units on	
	5/29/12	18:30:00			C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:43:40	Lower Crowder Channel (West)	Start Lower Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:43:52	"A" Gate Upstream Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:44:03	"A" Gate Entrance Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:44:07	"A" Gate Upstream Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:44:16	Lower Crowder Channel (East)	Lower Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:46:57	"C" Gate Upstream Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:49:50	"C" Gate Upstream Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:50:21	"A" Gate Entrance Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:50:25	"A" Gate Upstream Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:51:23	Lower Crowder Channel (East)	End Lower Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:52:27	Upper Crowder Channel (West)	Start Upstream Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:53:06	Upper Crowder Channel (East)	Upstream Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:53:19	Upper Crowder Channel (West)	Upstream Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:54:12	Upper Crowder Channel (East)	Upstream Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:58:54	Upper Crowder Channel (West)	Upstream Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	18:58:55	Upper Crowder Channel (East)	End Upstream Crowder Channel	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:06:49	ELF Exit Trough - Lower Dropper	Start Exit Trough	C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:11:41	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:16:10	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:21:29	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:26:50	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
	5/29/12	19:30:00			C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:31:35	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:36:36	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:41:42	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:46:33	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:51:41	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	19:56:40	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	20:01:45	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	20:06:51	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	20:12:00	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	
54-81	5/29/12	20:18:25	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C				7.1,2,3,4,5,6,7,8,9,10,11	78.2			78.2	

Fish ID	Date	Time	Location	Description	Tailrace Zone	Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NA1		
54-81	5/29/12	23:43:10	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C					7	1,2,3,4,5,6,7,8,9,10,11			78.2		
54-81	5/29/12	23:48:08	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C					7	1,2,3,4,5,6,7,8,9,10,11			78.2		
54-81	5/29/12	23:53:19	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C					7	1,2,3,4,5,6,7,8,9,10,11			78.2		
54-81	5/29/12	23:58:17	ELF Exit Trough - Lower Dropper		C	76200	5490	4890	6110	6830	4930	5820	5570	9050	9030	9050	9430		C					7	1,2,3,4,5,6,7,8,9,10,11			78.2		
54-81	5/30/12	00:31:16	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A	down	stay	no movement; decrease in gen		4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	00:38:16	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	01:32:20	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	01:28:25	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	02:23:26	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	02:28:31	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	03:00:00			C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	03:32:29	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	03:28:29	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	04:33:36	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	04:34:36	ELF Exit Trough - Lower Dropper		C	39180	5380	5030	5960	6040	5270	5820	5680	0	0	0	0		A					4	1,2,3,4,5,6,7			79.0		
54-81	5/30/12	04:38:44	ELF Exit Trough - Lower Dropper		C	22950	0	0	5960	6040	5270	0	5680	0	0	0	0	0		A	down	stay	no movement; decrease in gen		2	3,4,5,7			79.0	
54-81	5/30/12	05:33:38	ELF Exit Trough - Lower Dropper		C	22950	0	0	5960	6040	5270	0	5680	0	0	0	0		A					2	3,4,5,7			79.0		
54-81	5/30/12	05:42:42	ELF Exit Trough - Lower Dropper		C	22950	0	0	5960	6040	5270	0	5680	0	0	0	0		A					2	3,4,5,7			79.0		
54-81	5/30/12	10:32:47	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A	down	stay	no movement; decrease in gen		1	5,7			79.0		
54-81	5/30/12	1:08:47	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:13:51	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:18:57	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:24:01	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:29:16	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:30:00			C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:34:03	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:39:07	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:44:05	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:49:08	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:54:12	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	1:59:13	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:04:45	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:09:45	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:14:19	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:19:19	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:24:22	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:29:22	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:30:00			C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:34:47	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:39:27	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:44:36	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:49:41	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:54:41	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	2:59:39	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:04:48	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:09:38	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:14:45	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:19:44	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:24:53	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:29:50	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:30:00			C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:34:52	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:39:56	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:44:55	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:50:00	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	3:55:06	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1	5,7			79.0		
54-81	5/30/12	4:00:11	ELF Exit Trough - Lower Dropper		C	10950	0	0	0	0	5270	0	5680	0	0	0	0		A					1						

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spillway Deep Corner	Water Temp. (°F)	Comments NAI1					
54-89	5/5/12	10:17:00	05/05/12 10:17:00					22570	0	0	6040	6080	4920	0	5530	0	0	0	0		A					2	3,4,5,7								
54-89	5/6/12	5:57:28	T1 - Mudd Is.	5/6/12	6:02:14	Last Fallback Detection		10530	0	0	0	4820	0	5710	0	0	0	0	0		A	up	stay	no movement;		1	5,7								
54-89	5/6/12	10:31:16	Upper Rowland Is. West	5/6/12	10:36:03	Start Tailrace Detection 1	E	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up	stay	no movement;		5	3,4,5,7,9,10,11								
54-89	5/6/12	11:28:27	Upper Rowland Is. West	5/6/12	11:33:26	Transition Upstream 1 (Tailrace to Upper Tailrace)	E	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C					5	3,4,5,7,9,10,11								
54-89	5/6/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 1)	A														A														
54-89	5/6/12	16:54:09	"C" Gate Aerial	5/6/12	16:59:00	Start EFL Aerial Detection	C	74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C	up	up	fish up; increas		7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/6/12	16:59:07	"C" Gate Aerial	5/6/12	17:01:35	End EFL Aerial Detection	C	74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C					7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/6/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 1)	A														A														
54-89	5/6/12	19:30:06	Upper Rowland Is. West	5/6/12	19:34:58	Transition Downstream 1 (Upper Tailrace to Tailrace)	E	74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C		down	fish down; no c		7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/6/12	NA	NA	NA	NA	End Tailrace Detection 1	A														A														
54-89	5/6/12	20:26:11	T1 - Mudd Is.	5/6/12	20:31:08	Start Lower River		74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C					7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/7/12	7:02:08	T1 - Mudd Is.	5/7/12	7:07:05	End Lower River		58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C	down	stay	no movement;		6	3,4,5,7,8,9,10,11								
54-89	5/7/12	NA	NA	NA	NA	Start Tailrace Detection 2															A														
54-89	5/7/12	8:01:32	Tailrace Unit 9 (Mid)	5/7/12	8:08:39	Start Upper Tailrace Detection (Start UT Foray 2)	C														A														
54-89	5/7/12	8:30:00	Tailrace Unit 9.10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C		up	fish up; no cha		6	3,4,5,7,8,9,10,11								
54-89	5/7/12	9:30:00	Tailrace Unit 9.10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/7/12	10:30:00	Tailrace Unit 9.10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/7/12	11:30:00	Tailrace Unit 10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/7/12	12:30:00						70040	5330	0	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	down	stay	no movement;		7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/7/12	13:30:00	Conowingo Tailrace Units 1-7 (Near)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/7/12	14:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C					7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/7/12	15:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C					7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/7/12	16:30:00	Tailrace Unit 9.10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/7/12	17:30:00	Tailrace Unit 9.10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/7/12	18:30:00	Tailrace Unit 9.10 (Mid)					58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/7/12	19:02:38	Tailrace Unit 8 (Mid)	5/7/12	19:05:22	End Upper Tailrace Detection (End UT Foray 2)	C	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C					7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/7/12	NA	NA	NA	NA	Transition Downstream 2 (Upper Tailrace to Tailrace)	A														A														
54-89	5/7/12	NA	NA	NA	NA	End Tailrace Detection 2	A														A														
54-89	5/7/12	19:25:16	T1 - Mudd Is.	5/7/12	19:29:16	Start Lower River		75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C					7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/8/12	6:17:22	T1 - Mudd Is.	5/8/12	6:21:32	End Lower River		34150	0	5210	6040	6040	5370	5750	5740	0	0	0	0		A	down	stay			3	2,3,4,5,6,7								
54-89	5/8/12	NA	NA	NA	NA	Start Tailrace Detection 3	A														A														
54-89	5/8/12	7:06:43	LT - Lower Rowland Is. West	5/8/12	7:28:39	Transition Upstream 3 (Tailrace to Upper Tailrace)	E	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	down	fish down; incr		6	2,3,4,5,6,7,8,10,11								
54-89	5/8/12	7:57:49	Tailrace Unit 9 (Mid)	5/8/12	8:02:47	Start Upper Tailrace Detection (Start UT Foray 3)	C	58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C					6	3,4,5,7,8,9,10,11								
54-89	5/8/12	8:30:00	Tailrace Unit 8.9.10 (Mid)					61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C					6	2,3,4,5,6,7,8,11								
54-89	5/8/12	9:30:00	Tailrace Unit 8.9.10 (Mid)					61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C					6	2,3,4,5,6,7,8,11								
54-89	5/8/12	9:59:18	"C" Gate Aerial	5/8/12	10:04:07	Start EFL Aerial Detection	C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C					6	2,3,4,5,6,7,8,10,11								
54-89	5/8/12	10:04:16	"C" Gate Aerial	5/8/12	10:08:47	End EFL Aerial Detection	C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C					6	2,3,4,5,6,7,8,10,11								
54-89	5/8/12	10:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C					6	2,3,4,5,6,7,8,10,11								
54-89	5/8/12	11:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C					6	2,3,4,5,6,7,8,10,11								
54-89	5/8/12	12:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C					6	2,3,4,5,6,7,8,10,11								
54-89	5/8/12	13:30:00						75100	5330	5210	6040	6040	5370	5750	5740	8830	8600	8920	9270		C	up	stay	no movement;		7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/8/12	14:30:00						75100	5330	5210	6040	6040	5370	5750	5740	8830	8600	8920	9270		C					7	1,2,3,4,5,6,7,8,9,10,11								
54-89	5/8/12	15:30:00						75100																											

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spillway Deep Corner	Water Temp. (°F)	Comments NAI1		
	5/20/12	16:30:00						75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:17:21	"C" Gate Aerial	5/20/12	17:22:11	Start EFL Aerial Detection	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	move to EFL all units on
54-89	5/20/12	17:26:46	"C" Gate Upstream Dropper	5/20/12	17:27:13	Start EFL	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:27:32	Lower Crowder Channel (West)	5/20/12	17:28:23	Start Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:27:49	"A" Gate Upstream Dropper	5/20/12	17:30:07		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:28:01	Lower Crowder Channel (East)	5/20/12	17:29:43	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:28:13	"A" Gate Entrance Dropper	5/20/12	17:30:17		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:30:03	Lower Crowder Channel (West)	5/20/12	17:33:38	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:30:32	"C" Gate Upstream Dropper	5/20/12	17:34:44		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:30:34	Lower Crowder Channel (East)	5/20/12	17:35:22	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:32:00	"A" Gate Entrance Dropper	5/20/12	17:35:48		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:32:12	Upper Crowder Channel (West)	5/20/12	17:32:12	Start Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:32:26	"A" Gate Upstream Dropper	5/20/12	17:35:52		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:34:53	Lower Crowder Channel (West)	5/20/12	17:37:39	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:36:00	Lower Crowder Channel (East)	5/20/12	17:38:40	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:38:06	"A" Gate Upstream Dropper	5/20/12	17:40:39		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:38:15	"C" Gate Upstream Dropper	5/20/12	17:38:15		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:39:55	"C" Gate Upstream Dropper	5/20/12	17:44:30		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:40:08	Lower Crowder Channel (West)	5/20/12	17:43:43	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:40:32	Lower Crowder Channel (East)	5/20/12	17:44:49	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:42:54	"A" Gate Entrance Dropper	5/20/12	17:44:13		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:46:25	Lower Crowder Channel (West)	5/20/12	17:49:34	Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:47:21	Upper Crowder Channel (East)	5/20/12	17:47:35	Start Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:47:36	"C" Gate Upstream Dropper	5/20/12	17:49:27		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:47:57	Lower Crowder Channel (East)	5/20/12	17:50:04	End Lower Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:50:03	Upper Crowder Channel (West)	5/20/12	17:54:34	Start Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:50:33	Upper Crowder Channel (East)	5/20/12	17:55:14	Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:54:47	Upper Crowder Channel (West)	5/20/12	17:59:39	Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	17:56:05	Upper Crowder Channel (East)	5/20/12	18:00:28	Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:00:06	Upper Crowder Channel (West)	5/20/12	18:02:19	Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:00:42	Upper Crowder Channel (East)	5/20/12	18:03:07	End Upstream Crowder Channel	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:09:31	ELF Exit Trough - Lower Dropper	5/20/12	18:11:07	Start Exit Trough	C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:11:27	ELF Exit Trough - Lower Dropper	5/20/12	18:15:06		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:18:28	ELF Exit Trough - Lower Dropper	5/20/12	18:21:11		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:18:43	ELF Upper Exit Trough	5/20/12	18:18:43		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:22:08	ELF Exit Trough - Lower Dropper	5/20/12	18:25:45		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:25:36	ELF Upper Exit Trough	5/20/12	18:30:15		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:30:23	ELF Upper Exit Trough	5/20/12	18:34:45		C	75860	5400	4970	6070	6130	5480	5730	6030	9110	8880	9080	8980		C					7	1,2,3,4,5,6,7,8,9,10,11				66.9	
54-89	5/20/12	18:36:56	ELF Upper Exit Trough	5/20/12	18:39:17																											

APPENDIX A-5: 2012 CONOWINGO TAILRACE ZONES.

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp (F)	Comments NAIt	
18-Apr-12	10:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A	down	stay	no movement; decrease in gen	1	4,6.11				60.1	
18-Apr-12	11:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	12:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	13:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	14:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	15:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	16:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	17:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	18:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	19:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	20:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	21:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	22:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
18-Apr-12	23:30:00							11240	0	0	0	0	5300	0	5940	0	0	0	0	None	A					1	4,6.11				60.1
19-Apr-12	0:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	1:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	2:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	3:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	4:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	5:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	6:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	7:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	8:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	9:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	10:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	11:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	12:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	13:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	14:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	15:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	16:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	17:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	18:30:00							11260	0	0	0	0	5300	0	5960	0	0	0	0	None	A					1	4,6.11				62.3
19-Apr-12	19:30:00							32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	None	C	up	stay	no movement; increase in gen	3	2,3,4,6,8,11					62.3
19-Apr-12	20:30:00							32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	None	C					3	2,3,4,6,8,11				62.3
19-Apr-12	21:30:00							32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	None	C					3	2,3,4,6,8,11				62.3
19-Apr-12	22:30:00							45880	0	4980	6060	5960	5300	0	5960	8850	8770	0	0	None	C	up	stay	no movement; increase in gen	5	1,2,3,4,6,7,8,11					62.3
19-Apr-12	23:30:00							11260	0	0	0	5960	5300	0	0	0	0	0	0	None	A	down	stay	no movement; decrease in gen	1	3,4,11					62.3
20-Apr-12	0:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	1:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	2:14:23	LT - Lower Rowland Is. West	4/20/12	2:54:35	Transition Upstream 5 (Tailrace to Upper Tailrace)		E	11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	2:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	3:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	4:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
21-14	20-Apr-12	4:30:48	Tailrace Unit 10 (Mid)	4/20/12	4:38:38	Start Upper Tailrace Detection (Start UT Foray 5)	C	11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A	up		Moved up; no change in gen	1	63.1	move up, no change in generation				63.1
20-Apr-12	5:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	6:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	7:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	8:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	9:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	10:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	11:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	12:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	13:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	14:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	15:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	16:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	17:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	18:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0	None	A					1	3,4,11				63.1
20-Apr-12	19:30:00							17550	0	0	6100	6240	5210	0																	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	Flow										EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp (F)	Comments NAIt	
									1	2	3	4	5	6	7	8	9	10											11
21-Apr-12	23:30:00		Tailrace Unit 8.9.10 (Mid)			End Upper Tailrace Detection (End UT Foray 6)	C	18160	0	0	6190	6220	5760	0	0	0	0	0	0	None	A	down	stay	no movement; decrease in gen	2	2,3,4,11	1	64.6	
21-Apr-12	01:00:00		Tailrace Unit 1 (Mid)	4/22/12	01:30:20	End Upper Tailrace Detection (End UT Foray 6)	A	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A	down	stay	no movement; decrease in gen	1	1,2,4,11	1	64.4	move west, drop in generation
21-Apr-12	01:14:51		LT - Upper Rowland Is. West	4/22/12	01:19:37	Transition Downstream 6 (Upper Tailrace to Tailrace)	E	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A	down	down	moved down; no change in gen	1	1,2,4,11	2	64.4	drop back, no change in generation
22-Apr-12	0:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	1:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	2:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	3:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	4:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	5:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	6:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	7:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	8:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	9:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	10:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	11:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	12:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
21-Apr-12	22-Apr-12	12:54:25	LT - Upper Rowland Is. West	4/22/12	12:59:12	Transition Upstream 7 (Tailrace to Upper Tailrace)	E	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
21-Apr-12	22-Apr-12	12:58:15	Tailrace Unit 5 (Mid)	4/22/12	12:57:40	Start Upper Tailrace Detection (Start UT Foray 7)	B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A	up	moved up; no change in gen	1	1,2,4,11	1	64.4	move up and back and forth, center and west, no change in generation	
22-Apr-12	13:30:00		Tailrace Unit 1.3.5 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4			
21-Apr-12	22-Apr-12	13:51:07	Tailrace Unit 7 (Mid)	4/22/12	13:53:58	End Upper Tailrace Detection (End UT Foray 7)	B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
21-Apr-12	22-Apr-12	13:52:26	LT - Upper Rowland Is. West	4/22/12	13:57:16	Transition Downstream 7 (Upper Tailrace to Tailrace)	E	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A	down	moved down; no change in gen	1	1,2,4,11		64.4	drop back, no change in generation	
22-Apr-12	14:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	15:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	16:30:00							11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
21-Apr-12	22-Apr-12	17:13:52	LT - Upper Rowland Is. West	4/22/12	17:18:27	Transition Upstream 8 (Tailrace to Upper Tailrace)	E	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				1	1,2,4,11		64.4	
22-Apr-12	17:20:40		Tailrace Unit 3 (Mid)			Start Upper Tailrace Detection (Start UT Foray 8)	A	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A	up	moved up; no change in gen	1	1,2,4,11	1	64.4	move up, no change in generation	
22-Apr-12	17:30:00		Tailrace Unit 3.5 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4	back and forth, seemingly favoring Units 3 and 5 which are on		
22-Apr-12	18:30:00		Tailrace Unit 1.3,7 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4			
22-Apr-12	19:30:00		Tailrace Unit 1.3,5,7 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4			
22-Apr-12	20:30:00		Tailrace Unit 1.3,5 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4			
22-Apr-12	21:30:00		Tailrace Unit 1.3,5 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4			
22-Apr-12	22:30:00		Tailrace Unit 3.5,7 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4			
22-Apr-12	23:30:00		Tailrace Unit 3.5,7 (Mid)				A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	None	A				2	64.4			
23-Apr-12	0:30:00		Tailrace Unit 3.5,7 (Mid)				A/B	11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A				2	62.5			
23-Apr-12	1:30:00		Tailrace Unit 1.3,5,7 (Mid)				A/B	11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A				2	62.5			
23-Apr-12	2:30:00		Tailrace Unit 3.5,7,10 (Mid)				A/B/C	11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A				3	62.5			
21-Apr-12	23-Apr-12	2:44:44	Tailrace Unit 3 (Mid)	4/23/12	2:51:35	End Upper Tailrace Detection (End UT Foray 8)	A	11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A				1	1,2,4,11		62.5	
21-Apr-12	23-Apr-12	2:48:20	LT - Upper Rowland Is. West	4/23/12	2:53:10	Transition Downstream 8 (Upper Tailrace to Tailrace)	E	11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A	down	moved down; no change in gen	1	1,2,4,11		62.5	drop back, no change in generation	
23-Apr-12	3:30:00							11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A				1	1,2,4,11		62.5	
23-Apr-12	4:30:00							11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A				1	1,2,4,11		62.5	
23-Apr-12	5:30:00							11600	0	0	6110	0	5490	0	0	0	0	0	0	None	A				1	1,2,4,11		62.5	
23-Apr-12	6:30:00							22760	0	5020	6110	6140	5490	0	0	0	0	0	0	None	A	up	stay	no movement; increase in gen	2	21,2,3,4,11		62.5	no response to changes is generation
23-Apr-12	7:30:00							22760	0	5020	6110	6140	5490	0	0	0	0	0	0	None	A				2	21,2,3,4,11		62.5	
23-Apr-12	8:30:00							22760	0	5020	6110	6140	5490	0	0	0	0	0	0	None	A				2	21,2,3,4,11		62.5	
23-Apr-12	9:30:00							22760	0	5020	6110	6140	5490	0	0	0	0	0	0	None	A				2	21,2,3,4,11		62.5	
23-Apr-12	10:30:00							22760	0	5020	6110	6140	5490	0	0	0	0	0	0	None	A				2	21,2,3,4,11		62.5	
23-Apr-12	11:30:00							11630	0	0	6140	5490	0	0	0	0	0	0	0	None	A	down	stay	no movement; decrease in gen	1	1,3,4,11		62.5	
23-Apr-12	12:30:00							11630	0	0	6140	5490	0	0	0	0	0	0	0	None	A				1	1,3,4,11		62.5	
21-Apr-12	23-Apr-12	12:38:14	LT - Upper Rowland Is. West	4/23/12	12:42:16	Transition Upstream 9 (Tailrace to Upper Tailrace)	E	11630	0	0	6140	5490	0	0	0	0	0	0	0	None	A				1	1,3,4,11		62.5	
23-Apr-12	13:30:00							11630	0	0	6140	5490	0	0	0	0	0	0	0	None	A				1	1,3,4,11		62.5	
23-Apr-12	14:30:0																												

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	Flow											EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1							
									1	2	3	4	5	6	7	8	9	10	11											Spill						
21-37	5/12/12	15:56:21	Tailrace Unit 8 (Mid)	5/12/12	15:57:34	End Upper Tailrace Detection (End UT Foray 7)	C	75360	5360	4900	5930	5990	5550	5820	6030	6790	8630	9110	9260	0	C				7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1				62.9					
21-37	5/12/12	NA	NA	NA	NA	Transition Downstream 7 (Upper Tailrace to Tailrace)	C													A												drop back, no change in generation				
21-37	5/12/12	NA	NA	NA	NA	End Tailrace Detection 7	C													A																
21-37	5/12/12	16:13:22	T1 - Opp. Mudd Is.	5/12/12	16:16:04	Start Lower River	C	75360	5360	4900	5930	5990	5550	5820	6030	6790	8630	9110	9260	0	C				7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					62.9				
21-37	5/13/12	5:40:08	T1 - Mudd Is.	5/13/12	5:42:08	End Lower River	C	10370	0	4920	0	0	5450	0	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	2.5							63.5			
21-37	5/13/12	NA	NA	NA	NA	Start Tailrace Detection 8	C													A																
21-37	5/13/12	6:22:18	LT - Upper Rowland Is. West	5/13/12	6:27:06	Transition Upstream 8 (Tailrace to Upper Tailrace)	E	10370	0	4920	0	0	5450	0	0	0	0	0	0	0	A		down	fish down; no change in gen	1	2.5							63.5	move up, 42 min after decrease in generation		
21-37	5/13/12	6:30:00	NA				C	10370	0	4920	0	0	5450	0	0	0	0	0	0	A				1	2.5								63.5			
21-37	5/13/12	7:30:00	NA				C	34240	0	4920	6000	6020	5450	5820	6030	0	0	0	0	0	A	up	stay	no movement; increase in gen	3	2, 3, 4, 5, 6, 7							63.5			
21-37	5/13/12	8:20:27	Tailrace Unit 8 (Mid)	5/13/12	8:28:11	Start Upper Tailrace Detection (Start UT Foray 8)	C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C	up	up	fish up; increase in gen	1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5	move up, increase in generation		
21-37	5/13/12	8:30:00	Tailrace Unit 8.9 (Mid)				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	9:30:00	Tailrace Unit 9.10 (Mid)				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	10:30:00	Tailrace Unit 8.9.10 (Mid)				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	11:30:00	Tailrace Unit 9.10 (Mid)				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	12:30:00	NA				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	13:30:00	NA				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	15:18:12	"C" Gate Aerial	5/13/12	15:23:12	Start EFL Aerial Detection	C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5	move to EFL, no change in generation		
21-37	5/13/12	15:30:00	NA				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	15:38:26	"C" Gate Aerial	5/13/12	15:38:34	End EFL Aerial Detection	C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5	leave EFL, no change in generation		
21-37	5/13/12	16:30:00	NA				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	17:30:00	NA				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	17:41:28	Tailrace Unit 10 (Mid)	5/13/12	18:14:38	End Upper Tailrace Detection (End UT Foray 8)	C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5	move west, no change in generation		
21-37	5/13/12	18:30:00	Tailrace Unit 8.9.10 (Mid)				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	19:30:00	NA				C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	0	C				1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1					63.5			
21-37	5/13/12	20:09:38	LT - Upper Rowland Is. East	5/13/12	20:14:37	Transition Downstream 8 (Upper Tailrace to Tailrace)	E	40170	0	4920	6000	6020	5450	0	0	8880	0	8900	0	0	C	down	down	fish down; decrease in gen	4	2, 3, 4, 5, 8, 10							63.5	drop back, decrease in generation		
21-37	5/13/12	20:30:00	NA				C	40170	0	4920	6000	6020	5450	0	0	8880	0	8900	0	0	C				4	2, 3, 4, 5, 8, 10							63.5			
21-37	5/13/12	21:30:00	NA				C	40170	0	4920	6000	6020	5450	0	0	8880	0	8900	0	0	C				4	2, 3, 4, 5, 8, 10							63.5			
21-37	5/13/12	22:30:00	NA				C	40170	0	4920	6000	6020	5450	0	0	8880	0	8900	0	0	C				4	2, 3, 4, 5, 8, 10							63.5			
21-37	5/13/12	23:30:00	NA				C	40170	0	4920	6000	6020	5450	0	0	8880	0	8900	0	0	C				4	2, 3, 4, 5, 8, 10							63.5			
21-37	5/14/12	0:30:00	NA				C	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0	0	C				4	2, 3, 4, 5, 8, 10							64.8			
21-37	5/14/12	1:30:00	NA				C	40740	0	0	5960	5950	5030	0	0	6030	8870	0	8900	0	C				4	3, 4, 5, 7, 8, 10							64.8			
21-37	5/14/12	2:30:00	NA				C	10980	0	0	5950	5030	0	0	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	4, 5							64.8	no response to changes in generation		
21-37	5/14/12	3:30:00	NA				C	10980	0	0	5950	5030	0	0	0	0	0	0	0	0	A				1	4, 5							64.8			
21-37	5/14/12	4:30:00	NA				C	10980	0	0	5950	5030	0	0	0	0	0	0	0	0	A				1	4, 5							64.8			
21-37	5/14/12	5:24:55	LT - Upper Rowland Is. East	5/14/12	5:27:29	End Tailrace Detection 8	E	10980	0	0	5950	5030	0	0	0	0	0	0	0	0	A				1	4, 5							64.8			
21-37	5/14/12	6:12:12	T1 - Mudd Is.	5/14/12	6:15:47	Start Lower River	C	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0	0	C	up	stay	no movement; increase in gen	4	2, 3, 4, 5, 8, 10								64.8	drop back, 45 min after increase in generation	
21-37	5/14/12	6:41:57	T1 - Opp. Mudd Is.	5/14/12	6:42:36	End Lower River	C	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0	0	C				4	2, 3, 4, 5, 8, 10								64.8		
21-37	5/14/12	NA	NA	NA	NA	Start Tailrace Detection 9	C													A																
21-37	5/14/12	NA	NA	NA	NA	Transition Upstream 9 (Tailrace to Upper Tailrace)	C													A																
21-37	5/14/12	10:34:00	Tailrace Unit 3 (Mid)	5/14/12	10:40:25	Start Upper Tailrace Detection (Start UT Foray 9)	A	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360	0	C	up	up	fish up; increase in gen	1	7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1							64.8	move up, increase in generation
21-37	5/14/12	10:42:1																																		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Traffic Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp (F)	Comments
21-68	05/02/12	13:55	05/02/12 13:55:00					15420	0	0	0	6080	4830	0	5530	0	0	0	0	0	A				1	4.5,7			56	
21-68	05/02/12	17:09:04	T3 - McGilroy Is.	5/2/2012	17:11:51	Last Fallback Detection		68300	0	4870	6000	6060	4830	5800	5530	8730	8630	8780	9070		C	up	stay	no movement; increase in gen	7	2,3,4,5,6,7,8,9,10,11			56.49	
21-68	NA	NA	NA	NA	NA	Start Fallback Detection 1														A										
21-68	05/06/12	17:06:14	Trairace Unit 8 (Mid)	5/6/2012	17:06:14	Start Upper Trairace Detection (Start UT Foray 1)	C	74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		65.76	move up, not clear if response to generation
		17:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7	1,2,3,4,5,6,7,8,9,10,11			65.76	
		18:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7	1,2,3,4,5,6,7,8,9,10,11			65.76	
		19:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7	1,2,3,4,5,6,7,8,9,10,11			65.76	
		20:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7	1,2,3,4,5,6,7,8,9,10,11			65.76	
		21:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7	1,2,3,4,5,6,7,8,9,10,11			65.76	
		22:30:00						31340	0	0	5950	6030	4820	0	5710	8830	0	0	0	0	C	down	stay	no movement; decrease in gen	3	3,4,5,7,8			65.76	
		23:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	5,7			65.76	no response to decrease in generation
05/07/12	0:30:00							11570	0	0	0	5550	6020	0	0	0	0	0	0	A				1	5,7			67.60		
		1:30:00						11570	0	0	0	5550	6020	0	0	0	0	0	0	A				1	5,7			67.60		
		2:30:00						11570	0	0	0	5550	6020	0	0	0	0	0	0	A				1	5,7			67.60		
		3:30:00						11570	0	0	0	5550	6020	0	0	0	0	0	0	A				1	5,7			67.60		
		4:30:00						11570	0	0	0	5550	6020	0	0	0	0	0	0	A				1	5,7			67.60		
		5:30:00						32830	0	0	5910	6000	5550	0	6020	0	0	0	0	0	C	up	stay	no movement; increase in gen	6	3,4,5,7,11			67.60	
		6:30:00						58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen	6	3,4,5,7,8,9,10,11			67.60	no response to increase in generation
		7:30:00						58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C				6	3,4,5,7,8,9,10,11			67.60	
		8:30:00						58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C				6	3,4,5,7,8,9,10,11			67.60	
		9:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			67.60	
		10:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
		11:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
		12:30:00						70040	5330	0	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,3,4,5,6,7,8,9,10,11			67.60	
		13:30:00						70040	5330	0	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,3,4,5,6,7,8,9,10,11			67.60	
		14:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
21-68	05/07/12	14:51:26	Trairace Unit 8 (Mid)	5/7/2012	14:52:38	End Upper Trairace Detection (End UT Foray 1)	C	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11	1		67.60	drop back, not clear if response to change in generation
21-68	05/07/12	NA	NA	NA	NA	End Trairace Detection 1 (Upper Trairace to Trairace)														A										
21-68	05/07/12	NA	NA	NA	NA	End Trairace Detection 1														A										
21-68	05/07/12	15:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
21-68	05/07/12	15:37:12	T1 - Opp. Mudd Is.	5/7/2012	15:40:44	Start Lower River		75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
21-68	05/07/12	15:50:53	T1 - Opp. Mudd Is.	5/7/2012	15:52:11	End Lower River		75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
21-68	05/07/12	NA	NA	NA	NA	Start Trairace Detection 2														A										
21-68	05/07/12	NA	NA	NA	NA	Transition Upstream 2 (Trairace to Upper Trairace)														A										
21-68	05/07/12	17:32:05	Cowwingo Trairace Units 1-7 (Near)	5/7/2012	17:32:05	Start Upper Trairace Detection (Start UT Foray 2)	A/B	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11	2		67.60	move up, no change in generation
		18:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
21-68	05/07/12	19:07:17	Trairace Unit 9 (Mid)	5/7/2012	19:08:30	End Upper Trairace Detection (End UT Foray 2)	C	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11	1		67.60	move east, no change in generation
21-68	05/07/12	NA	NA	NA	NA	Transition Downstream 2 (Upper Trairace to Trairace)														A										
21-68	05/07/12	20:16:40	T1 - Opp. Mudd Is.	5/7/2012	20:21:04	Start Lower River		75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7	1,2,3,4,5,6,7,8,9,10,11			67.60	
21-68	05/08/12	6:39:01	T1 - Opp. Mudd Is.	5/8/2012	6:42:52	End Lower River		34150	0	5210	6040	6040	5370	5750	5740	0	0	0	0	0	A	down	stay	no movement; decrease in gen	3	2,3,4,5,6,7			65.45	
21-68	05/08/12	NA	NA	NA	NA	Start Trairace Detection 3														A										
21-68	05/08/12	NA	NA	NA	NA	Transition Downstream 3 (Trairace to Upper Trairace)														A										
21-68	05/08/12	7:02:09	Trairace Unit 8 (Mid)	5/8/2012	7:04:29	Start Upper Trairace Detection (Start UT Foray 3)	C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C	up	stay	no movement; increase in gen	6	2,3,4,5,6,7,8,10,11	1		65.45	move up, not clear if response to generation
		7:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C				6	2,3,4,5,6,7,8,10,11			65.45	
		8:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C				6	2,3,4,5,6,7,8,10,11			65.45	
		9:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C				6	2,3,4,5,6,7,8,10,11			65.45	
		10:30:00						61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270		C				6	2,3,4,5,6,7,8,10,11			65.45	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1		
54-15	5/15/12	NA	NA	NA	NA	Transition Downstream 22 (Upper Tailrace to Tailrace)															A				65.4							
54-15	5/15/12	NA	NA	NA	NA	End Tailrace Detection 16															A				65.4							
54-15	5/15/12	20:39:56	T1 - Mudd Is.	5/15/2012	20:44:46	Start Lower River		74440	5330	4180	5750	6080	5460	5770	6080	8860	8680	8940	9370			C				65.4						
54-15	5/16/12	5:11:58	T1 - Mudd Is.	5/16/2012	5:16:23	End Lower River		50830	0	5030	6180	6180	0	0	6180	8860	0	8940	9460			C	down	stay	no movement; decrease in gen	65.7	5	2,3,4,7,8,10,11				
54-15	5/16/12	5:54:05	Upper Rowland Is. West	5/16/2012	5:55:54	Start Tailrace Detection 17	E	59510	0	5030	6180	6180	0	0	6180	8860	8680	8940	9460			C				65.7	6	2,3,4,7,8,9,10,11			move up, increase in generation	
54-15	5/16/12	5:59:17	Upper Rowland Is. West	5/16/2012	6:02:51	Transition Upstream 23 (Tailrace to Upper Tailrace)	E	59510	0	5030	6180	6180	0	0	6180	8860	8680	8940	9460			C				65.7						
54-15	5/16/12	6:00:32	Tailrace Unit 5 (Mid)	5/16/2012	6:03:08	Start Upper Tailrace Detection (Start UT Foray 23)	B	59510	0	5030	6180	6180	0	0	6180	8860	8680	8940	9460			C	up	stay	fish up; no change in gen	65.7				1	move up, no change in generation	
	5/16/12	6:30:00					A/B	77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C	up	stay	no movement; increase in gen	65.7				2	move back and forth, all units on	
	5/16/12	7:30:00					A/B	77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C				65.7				1		
	5/16/12	8:30:00					A/B/C	77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C				65.7				3		
54-15	5/16/12	8:31:16	"C" Gate Aerial	5/16/2012	8:36:03	Start EFL Aerial Detection	C	77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C				65.7					move to EFL, no change in generation	
54-15	5/16/12	8:51:30	"C" Gate Aerial	5/16/2012	8:54:37	End EFL Aerial Detection	C	77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C				65.7					leave EFL, no change in generation	
54-15	5/16/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 23)															A				65.7							
54-15	5/16/12	NA	NA	NA	NA	Transition into Spillway															A				65.7							
54-15	5/16/12	20:41:47	Spillway - West	5/16/2012	20:43:35	Start Spillway	D	77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C	spillway	moved to spillway; no change in gen	65.7				1	move to spillway, no change in generation		
		21:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C										
		22:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C										
		23:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460			C										
	5/17/12	0:30:00						78780	6020	6150	6270	6370	5930	6490	6430	8860	8760	9010	9490			C				66.1						

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1					
54-24	4/13/12	13:11:00		04/13/12	13:11:00			11050	0	0	0	0	5290	0	5760	0	0	0	0						54.93	1	5.7								
54-24	4/14/12	5:04:29	T1 - Mudd Is.	4/14/2012	5:08:45	Last Fallback Detector		11230	0	0	0	0	5430	0	5800	0	0	0	0						54.86	1	5.7								
54-24	4/14/12		NA	NA	NA	Start Tailrace Detection 1																		54.86											
54-24	4/14/12		NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)																		54.86											
54-24	4/14/12	18:21:09	Tailrace Unit 8 (Mid)	4/14/2012	18:27:29	Start Upper Tailrace Detection (Start UT Foray 1)	C	23040	5720	0	0	0	5430	6090	5800	0	0	0	0				stay		54.86	2	1,5,6,7	1	move up						
54-24	4/14/12	18:30:00						23040	5720	0	0	0	5430	6090	5800	0	0	0	0						54.86	2	1,5,6,7								
54-24	4/14/12	19:13:50	Tailrace Unit 9 (Mid)	4/14/2012	19:14:58	End Upper Tailrace Detection (End UT Foray 1)	C	23040	5720	0	0	0	5430	6090	5800	0	0	0	0						54.86	2	1,5,6,7	1							
54-24	4/14/12	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)																down		54.86											
54-24	4/14/12	NA	NA	NA	NA	End Tailrace Detection 1																		54.86											
54-24	4/14/12	19:22:37	T1 - Mudd Is.	4/14/2012	19:26:50	Start Lower Rise		23040	5720	0	0	0	5430	6090	5800	0	0	0	0						54.86	2	1,5,6,7								
54-24	4/15/12	5:00:44	T1 - Mudd Is.	4/15/2012	5:05:35	End Lower Rise		11410	0	0	0	0	5430	5980	0	0	0	0	0						55.37	1	5.6								
54-24	4/15/12	NA	NA	NA	NA	Start Tailrace Detection 2																		55.37											
54-24	4/15/12	NA	NA	NA	NA	Transition Upstream 2 (Tailrace to Upper Tailrace)																		55.37											
54-24	4/15/12	5:13:54	Tailrace Unit 10 (Mid)	4/15/2012	5:21:56	Start Upper Tailrace Detection (Start UT Foray 2)	C	11410	0	0	0	0	5430	5980	0	0	0	0	0				down up		55.37	1	5.6	1	move up, decrease in generatio						
54-24	4/15/12	5:30:00						11410	0	0	0	0	5430	5980	0	0	0	0	0						55.37	1	5.6								
54-24	4/15/12	6:30:00						11410	0	0	0	0	5430	5980	0	0	0	0	0						55.37	1	5.6								
54-24	4/15/12	7:30:00						11410	0	0	0	0	5430	5980	0	0	0	0	0						55.37	1	5.6								
54-24	4/15/12	8:30:00						32070	5590	0	0	0	5430	5980	6160	0	0	8910	0				up	stay	55.37	3	1,5,6,7,10								
54-24	4/15/12	9:30:00						32070	5590	0	0	0	5430	5980	6160	0	0	8910	0						55.37	3	1,5,6,7,10								
54-24	4/15/12	10:30:00						32070	5590	0	0	0	5430	5980	6160	0	0	8910	0						55.37	3	1,5,6,7,10								
54-24	4/15/12	11:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0				down	stay	55.37	1	5.7								
54-24	4/15/12	12:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	13:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	14:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	15:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	16:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	16:45:21	Tailrace Unit 9 (Mid)	4/15/2012	16:49:57	End Upper Tailrace Detection (End UT Foray 2)	C	11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	17:05:36	Upper Rowland Is. West	4/15/2012	17:10:25	Transition Downstream 2 (Upper Tailrace to Tailrace)	E	11590	0	0	0	0	5430	0	6160	0	0	0	0				down		55.37	1	5.7								
54-24	4/15/12	17:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	17:31:36	Upper Rowland Is. West	4/15/2012	17:36:26	Transition Upstream 3 (Tailrace to Upper Tailrace)	E	11590	0	0	0	0	5430	0	6160	0	0	0	0	0				up		55.37	1	5.7							
54-24	4/15/12	17:47:15	Tailrace Unit 9 (Mid)	4/15/2012	17:50:39	Start Upper Tailrace Detection (Start UT Foray 3)	C	11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7	1	move up, no change in generatio						
54-24	4/15/12	18:30:00					A/B	32070	5590	0	0	0	5430	5980	6160	0	0	8910	0					55.37	3	1,5,6,7,10	2	move west, decrease in generatio							
54-24	4/15/12	19:08:47	Tailrace Unit 7 (Mid)	4/15/2012	19:12:06	End Upper Tailrace Detection (End UT Foray 3)	B	32070	5590	0	0	0	5430	5980	6160	0	0	8910	0				up		55.37	3	1,5,6,7,10	1							
54-24	4/15/12	19:21:14	Upper Rowland Is. East	4/15/2012	19:25:54	Transition Downstream 3 (Upper Tailrace to Tailrace)	F	32070	5590	0	0	0	5430	5980	6160	0	0	8910	0				down		55.37	3	1,5,6,7,10	2	drop back, no change in generatio						
54-24	4/15/12	19:30:00						32070	5590	0	0	0	5430	5980	6160	0	0	8910	0						55.37	3	1,5,6,7,10								
54-24	4/15/12	20:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	21:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	22:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
54-24	4/15/12	23:30:00						11590	0	0	0	0	5430	0	6160	0	0	0	0						55.37	1	5.7								
4/16/12	0:30:00							11450	0	0	0	0	5320	0	6130	0	0	0	0						56.52	1	5.7								
4/16/12	1:30:00							11450	0	0	0	0	5320	0	6130	0	0	0	0						56.52	1	5.7								
4/16/12	2:30:00							11450	0	0	0	0	5320	0	6130	0	0	0	0						56.52	1	5.7								
4/16/12	3:30:00							11450	0	0	0	0	5320	0	6130	0	0	0	0						56.52	1	5.7								
4/16/12	4:30:00							11450	0	0	0	0	5320	0	6130	0	0	0	0						56.52	1	5.7								
4/16/12	5:30:00							11450	0	0	0	0	5320	0	6130	0	0	0	0						56.52	1	5.7								
4/16/12	6:30:00							17400	0	0	0	0	5320	5950	6130	0	0	0	0						56.52	1	5.6,7								
54-24	4/16/12	7:30:00						17400	0	0	0	0	5320	5950	6130	0	0	0	0						56.52	1	5.6,7								

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1	
		6:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
		7:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
		8:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
		9:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
54-24	4/21/12	10:30:32	Upper Rowland Is. West	4/21/2012	10:35:09	Transition Upstream 18 (Tailrace to Upper Tailrace	E	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5			move west, no change in generatio	
54-24	4/21/12	10:44:15	Tailrace Unit 8 (Mid)	4/21/2012	10:51:21	Start Upper Tailrace Detection (Start UT Foray 1E	C	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	1		move up, no change in generatio	
		11:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
54-24	4/21/12	11:35:27	Tailrace Unit 9 (Mid)	4/21/2012	11:38:52	End Upper Tailrace Detection (End UT Foray 1B	C	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	1			
54-24	4/21/12	11:47:55	Upper Rowland Is. West	4/21/2012	11:52:54	Transition Downstream 18 (Upper Tailrace to Tailrace	E	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5			drop back, no change in generatio	
54-24	4/21/12	12:28:45	Upper Rowland Is. West	4/21/2012	12:33:22	Transition Upstream 19 (Tailrace to Upper Tailrace	E	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
		12:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
54-24	4/21/12	12:45:44	Tailrace Unit 9 (Mid)	4/21/2012	12:52:27	Start Upper Tailrace Detection (Start UT Foray 1E	C	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	1		move up, no change in generatio	
		4/21/12 13:30:00						A/C	11980	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	2		move west then back east, no change in generati	
		4/21/12 14:30:00						C	11980	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
54-24	4/21/12	15:16:10	Tailrace Unit 10 (Mid)	4/21/2012	15:24:55	End Upper Tailrace Detection (End UT Foray 1B	C	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	1			
54-24	4/21/12	15:22:05	Upper Rowland Is. West	4/21/2012	15:27:03	Transition Downstream 19 (Upper Tailrace to Tailrace	E	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	1		drop back, no change in generatio	
		15:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
54-24	4/21/12	17:06:41	Upper Rowland Is. West	4/21/2012	17:11:31	Transition Upstream 20 (Tailrace to Upper Tailrace	E	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
		17:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
54-24	4/21/12	17:55:51	Tailrace Unit 10 (Mid)	4/21/2012	17:55:51	Start Upper Tailrace Detection (Start UT Foray 2C	C	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	1		move up, no change in generatio	
		4/21/12 18:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5				
54-24	4/21/12	18:47:09	Tailrace Unit 10 (Mid)	4/21/2012	18:53:15	End Upper Tailrace Detection (End UT Foray 2C	C	11980	0	0	0	6220	5760	0	0	0	0	0	0						64.55	1	4.5	1			
54-24	4/21/12	NA	NA	NA	NA	Transition Downstream 20 (Upper Tailrace to Tailrace)																			64.55					drop back, no change in generation	
54-24	4/21/12	NA	NA	NA	NA	End Tailrace Detection 4																			64.55						
54-24	4/21/12	19:06:42	T1 - Mudd Is.	4/21/2012	19:11:31	Start Lower Rise		18160	0	0	6180	6220	5760	0	0	0	0	0	0						64.55	2	3.4,5				
54-24	4/22/12	6:53:33	T1 - Mudd Is.	4/22/2012	6:56:58	End Lower Rise		11330	0	0	6190	0	5140	0	0	0	0	0	0							64.40	1	3.5			
54-24	4/22/12	7:37:00	Upper Rowland Is. West	4/22/2012	7:41:35	Start Tailrace Detection 5	E	11330	0	0	6190	0	5140	0	0	0	0	0	0						64.40	1	3.5			move up, decrease in generatio	
54-24	4/22/12	7:57:10	Upper Rowland Is. West	4/22/2012	8:02:01	Transition Upstream 21 (Tailrace to Upper Tailrace	E	11330	0	0	6190	0	5140	0	0	0	0	0	0						64.40	1	3.5	1		continue move up, no change in generatio	
54-24	4/22/12	8:03:09	Tailrace Unit 8 (Mid)	4/22/2012	8:06:33	Start Upper Tailrace Detection (Start UT Foray 21	A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0						64.40	1	3.5	2		move back and forth, no change in generati	
		4/22/12 8:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 9:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 10:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 11:30:00						A/B	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	2			
		4/22/12 12:30:00						A/B	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	2			
		4/22/12 13:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 14:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 15:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 16:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 17:30:00						C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 18:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 19:30:00						A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	3			
		4/22/12 20:30:00						A/B	11330	0	0	6190	0	5140	0	0	0	0	0						64.40	1	3.5	2			
		4/22/12 21:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0						64.40	1	3.5				
		4/22/12 22:30:00						11600	0	0	6110	0	5490	0	0	0	0	0	0						62.54	1	3.5				
		4/23/12 0:30:00						C	11600	0	0	6110	0	5490	0	0	0	0	0						62.54	1	3.5	1			
		4/23/12 1:30:00						11600	0	0	6110	0	5490	0	0	0	0	0	0						62.54	1	3.5				
		4/23/12 2:30:00						11600	0	0	6110	0	5490	0	0	0	0	0	0						62.54	1	3.5				
		4/23/12 3:30:00						11600	0	0	6110	0	5490	0	0	0	0	0	0						62.54	1	3.5				
		4/23/12 4:30:00						11600	0	0	6110	0	5490	0	0	0	0	0	0						62.54	1	3.5				
		4/23/12 5:30:00						11600	0	0	6110	0	5490	0	0	0	0	0	0						62.54	1	3.5				
		4/23/12 6:30:00						22760	0	0	5020	6110	6140	5490	0	0	0	0	0	0					62.54	2	2,3,4,5				
		4/23/12 7:30:00						22760	0	0	5020	6110	6140	5490	0	0	0	0	0	0					62.54	2	2,3,4,5				
		4/23/12 8:30:00						22760	0	0	5020	6110	6140	5490	0	0	0	0	0	0					62.54	2	2,3,4,5				
		4/23/12 9:30:00						A	22760	0	0	5020	6110	6140	5490	0	0	0	0	0					62.54	2	2,3,4,5	1		move back and forth, not in response to changes in generati	
		4/23/12 10:30:00						C	22760	0	0	5020	6110	6140	5490	0	0	0	0	0					62.54	2	2,3,4,5	1			
		4/23/12 11:30:00						A/B/C	11630	0	0	0	6140	5490	0	0	0	0	0	0					62.54	1	4.5	3			
		4/23/12 12:30:00						C	11630	0	0	0	6140	5490	0	0	0	0	0	0					62.54	1	4.5	1			
		4/23/12 13:30:00						C	11630	0	0	0	6140	5490	0	0	0	0	0	0					62.54	1	4.5				
		4/23/12 14:30:00						17740	0	0	6110	6140	5490	0																	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Number	Units On	Lateral Movement	Spill Deep Corner	Comments	
54-24	4/25/12	4:43:49	T1 - Mudd Is.	4/25/2012	4:48:36	End Lower River		11290	0	0	0	0	5180	0	6110	0	0	0	0							61.23	1,5,7				
54-24	4/25/12	NA	NA	NA	NA	Start Tailrace Detection 6																			61.23						
54-24	4/25/12	NA	NA	NA	NA	Transition Upstream 23 (Tailrace to Upper Tailrace)																			61.23						
54-24	4/25/12	6:37:15	Tailrace Unit 1 (Mid,	4/25/2012	6:45:05	Start Upper Tailrace Detection (Start UT Foray 2)	A	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0							61.23	3,3,4,5,7,10		1		move up, increase in generatio
54-24	4/25/12	7:25:55	"C" Gate Aeria	4/25/2012	7:27:26	Start EFL Aerial Detector	A	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0							61.23	3,3,4,5,7,10				move to EFL, no change in generatio
54-24	4/25/12	7:30:00					C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0							61.23	3,3,4,5,7,10				
54-24	4/25/12	7:32:46	"A" Gate Aeria	4/25/2012	7:33:26	End EFL Aerial Detector	C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0							61.23	3,3,4,5,7,10				leave EFL, no change in generatio
4/25/12	8:30:00						A/B/C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0							61.23	3,3,4,5,7,10		3		move back and forth, not in response to changes in generatio
4/25/12	9:30:00						A/C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0							61.23	3,3,4,5,7,10		2		
4/25/12	10:30:00						B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
4/25/12	11:30:00						A/B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
4/25/12	12:30:00						C	11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7		3		
4/25/12	13:30:00							11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
4/25/12	14:30:00							11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
4/25/12	15:30:00						A/B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7		3		
4/25/12	16:30:00						C	11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7		1		
4/25/12	17:30:00							11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
4/25/12	18:30:00						A/B	23390	0	0	6040	6060	5180	0	6110	0	0	0	0							61.23	2,3,4,5,7		2		
4/25/12	19:30:00						A/B	41240	0	0	6040	6060	5180	0	6110	0	0	0	8800	9050						61.23	4,3,4,5,7,10,11		2		
4/25/12	20:30:00						C	41240	0	0	6040	6060	5180	0	6110	0	0	0	8800	9050						61.23	4,3,4,5,7,10,11		1		
4/25/12	21:30:00							11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
4/25/12	22:30:00							11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
54-24	4/25/12	23:29:47	Tailrace Unit 10 (Mid,	4/25/2012	23:39:01	End Upper Tailrace Detection (End UT Foray 23)	C	11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7		1		move east, decrease in generatio
4/26/12	0:30:00							11290	0	0	0	5180	0	6110	0	0	0	0	0							61.23	1,5,7				
4/26/12	1:30:00							11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7				
4/26/12	2:30:00							11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7				
54-24	4/26/12	3:23:59	LT - Lower Rowland Is. West	4/26/2012	3:57:09	Transition Downstream 23 (Upper Tailrace to Tailrace)	E	11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7				drop back, no change in generatio
4/26/12	4:30:00							11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7				
54-24	4/26/12	5:13:18	Upper Rowland Is. West	4/26/2012	5:16:19	Transition Upstream 24 (Tailrace to Upper Tailrace)	E	11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7				
4/26/12	5:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150							58.97	5,3,4,5,7,9,10,11				
4/26/12	6:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150							58.97	5,3,4,5,7,9,10,11				
54-24	4/26/12	7:00:49	Tailrace Unit 10 (Mid,	4/26/2012	7:07:42	Start Upper Tailrace Detection (Start UT Foray 24)	C	50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150							58.97	5,3,4,5,7,9,10,11		1		move up, increase in generatio
4/26/12	7:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150							58.97	5,3,4,5,7,9,10,11				
4/26/12	8:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150							58.97	5,3,4,5,7,9,10,11				
4/26/12	9:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150							58.97	5,3,4,5,7,9,10,11				
4/26/12	10:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150							58.97	5,3,4,5,7,9,10,11				
4/26/12	11:30:00						A/C	32520	0	0	5990	6080	5240	0	6060	0	0	0	9150							58.97	3,3,4,5,7,11		2		move back and forth, big units of
4/26/12	12:30:00							11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7		3		
4/26/12	13:30:00						A/B/C	11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7		3		
4/26/12	14:30:00						A/B	11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7		2		
4/26/12	15:30:00						A/B/C	11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7		3		
4/26/12	16:30:00						A/B	11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7		2		
4/26/12	17:30:00						A/B/C	11300	0	0	0	5240	0	6060	0	0	0	0	0							58.97	1,5,7		3		
4/26/12	18:30:00						C	41430	0	0	5990	6080	5240	0	6060	0	0	8910	9150							58.97	4,3,4,5,7,10,11		1		move east, two big units of
54-24	4/26/12	18:43:12	Tailrace Unit 8 (Mid,	4/26/2012	18:43:12	End Upper Tailrace Detection (End UT Foray 24)	C	41430	0	0	5990	6080	5240	0	6060	0	0	8910	9150							58.97	4,3,4,5,7,10,11		1		
54-24	4/26/12	NA	NA	NA	NA	Transition Downstream 24 (Upper Tailrace to Tailrace)																			58.97					drop back, no change in generation	
54-24	4/26/12	NA	NA	NA	NA	End Tailrace Detection 6																			58.97						
54-24	4/26/12	19:20:03	T1 - Opp. Mudd Is.	4/26/2012	19:24:20	Start Lower River		75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150							58.97	7,1,2,3,4,5,6,7,8,9,10,11				
54-24	4/26/12	19:39:38	T1 - Opp. Mudd Is.	4/26/2012	19:43:32	End Lower River		75060	5420	4840	59																				

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Water Temp. (°F)	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Comments NAI1	
4/25/12	17:30:00						C	11290	0	0	0	0	0	0	0	0	0	0	0						61.23	1	5.7				
4/25/12	18:30:00						C	23390	0	0	6040	6060	5180	0	6110	0	0	0	0							61.23	2	3,4,5,7			
4/25/12	19:30:00						C	41240	0	0	6040	6060	5180	0	6110	0	0	8800	9050							61.23	4	3,4,5,7,10,11			
4/25/12	20:30:00						C	41240	0	0	6040	6060	5180	0	6110	0	0	8800	9050							61.23	4	3,4,5,7,10,11			
4/25/12	21:30:00						C	11290	0	0	0	0	5180	0	6110	0	0	0	0							61.23	1	5.7			
4/25/12	22:30:00						C	11290	0	0	0	0	5180	0	6110	0	0	0	0							61.23	1	5.7			
4/25/12	23:30:00						C	11290	0	0	0	0	5180	0	6110	0	0	0	0							61.23	1	5.7			
4/26/12	0:30:00						C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			
4/26/12	1:30:00						C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			
4/26/12	2:30:00						C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			
4/26/12	3:30:00						A/B	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			2
4/26/12	4:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8910	9150							58.97	5	3,4,5,7,9,10,11			
4/26/12	5:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8740	8910	9150						58.97	5	3,4,5,7,9,10,11			
4/26/12	6:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8740	8910	9150						58.97	5	3,4,5,7,9,10,11			
4/26/12	7:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8740	8910	9150						58.97	5	3,4,5,7,9,10,11			
4/26/12	8:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8740	8910	9150						58.97	5	3,4,5,7,9,10,11			
4/26/12	9:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8740	8910	9150						58.97	5	3,4,5,7,9,10,11			
4/26/12	10:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8740	8910	9150						58.97	5	3,4,5,7,9,10,11			
4/26/12	11:30:00						C	50170	0	0	5990	6080	5240	0	6060	0	0	8740	8910	9150						58.97	5	3,4,5,7,9,10,11			
4/26/12	12:30:00						B	32520	0	0	0	0	5240	0	6060	0	0	0	9150							58.97	3	3,4,5,7,11			1
4/26/12	13:30:00						B/C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			2
4/26/12	14:30:00						B/C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			2
4/26/12	15:30:00						B/C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			2
4/26/12	16:30:00						C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			1
54-36	4/26/12	16:36:18	Tailrace Unit 10 (Mid)	4/26/2012	16:40:49	End Upper Tailrace Detection (End UT Foray 4)	C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			1
		17:30:00					C	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			
		18:30:00					C	41430	0	0	0	0	5240	0	6060	0	0	8910	9150							58.97	4	3,4,5,7,10,11			
		19:30:00					C	75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150							58.97	7	1,2,3,4,5,6,7,8,9,10,11			
		20:30:00					C	75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150							58.97	7	1,2,3,4,5,6,7,8,9,10,11			
54-36	4/26/12	20:49:17	Upper Rowland Is. West	4/26/2012	20:53:43	Transition Downstream 4 (Upper Tailrace to Tailrace)	E	75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150							58.97	7	1,2,3,4,5,6,7,8,9,10,11			drop back, increase in generatio
		21:30:00					E	75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150							58.97	7	1,2,3,4,5,6,7,8,9,10,11			
		22:30:00					E	75060	5420	4840	5990	6080	5240	5820	6060	8810	8740	8910	9150							58.97	7	1,2,3,4,5,6,7,8,9,10,11			
		23:30:00					E	11300	0	0	0	0	5240	0	6060	0	0	0	0							58.97	1	5.7			
4/27/12	0:30:00						E	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
		1:30:00					E	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
		2:30:00					E	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
		3:30:00					E	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
		4:30:00					E	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
		5:30:00					E	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	2,3,4,5,6,7,8,9,10,11			
		6:30:00					E	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	2,3,4,5,6,7,8,9,10,11			
		7:30:00					E	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	2,3,4,5,6,7,8,9,10,11			
54-36	4/27/12	8:30:44	Upper Rowland Is. East	4/27/2012	9:03:31	Transition Upstream 5 (Tailrace to Upper Tailrace)	F	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	2,3,4,5,6,7,8,9,10,11			move east, no change in generatio
54-36	4/27/12	10:26:54	Tailrace Unit 8 (Mid)	4/27/2012	10:26:54	Start Upper Tailrace Detection (Start UT Foray 5)	C	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	2,3,4,5,6,7,8,9,10,11			move up, no change in generatio
4/27/12	10:30:00						C	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	2,3,4,5,6,7,8,9,10,11			
4/27/12	11:30:00						C	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	2,3,4,5,6,7,8,9,10,11			
4/27/12	12:30:00						C	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
4/27/12	13:30:00						C	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
4/27/12	14:30:00						C	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
4/27/12	15:30:00						C	11530	0	0	0	0	5490	0	6040	0	0	0	0							56.12	1	5.7			
4/27/12	16:30:00						C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0							56.12	3	3,4,5,7,10			
4/27/12	17:30:00						C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0							56.12	3	3,4,5,7,10			
4/27/12	18:30:00						C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0							56.12	3	3,4,5,7,10			
4/27/12	19:30:00						C	75470	5370	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	1,2,3,4,5,6,7,8,9,10,11			
4/27/12	20:30:00						C	75470	5370	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	1,2,3,4,5,6,7,8,9,10,11			
4/27/12	21:30:00						C	75470	5370	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270							56.12	7	1,2,3,4,5,6,7,8,9,10,11			
4/27/12	22:30:00						C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0												

APPENDIX A-6: 2012 CONOWINGO TAILRACE ZONES.

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Water Temp. (°F)	Spill Deep Corner	Comments NAI1
	4/20/12	4:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	5:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	6:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	7:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	8:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	9:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	10:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	11:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	12:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	13:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	14:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	15:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	16:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	17:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
	4/20/12	18:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
21-13	4/20/12	18:54:41	LT - Upper Rowland Is. West	4/20/12	18:58:06	End Tailrace Detection 1	E	11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		move east to west, no change in generation
21-13	4/20/12	21:25:29	T3 - Opp. McGibney	4/20/12	21:29:35	Start Lower River		31460	0	5000	6100	6240	5210	0	0	0	0	8910	0		C	up	stay	no movement; increase in gen	3,2,3,4,5,10		63.1		
21-13	4/20/12	21:39:51	T3 - Opp. McGibney	4/20/12	21:41:25	End Lower River		31460	0	5000	6100	6240	5210	0	0	0	0	8910	0		C				3,2,3,4,5,10		63.1		
21-13	4/20/12	22:27:50	LT - Upper Rowland Is. West	4/20/12	22:32:02	Start Tailrace Detection 2	E	17550	0	0	6100	6240	5210	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	1,3,4,5		63.1		move up, decrease in generation
	4/20/12	22:30:00						17550	0	0	6100	6240	5210	0	0	0	0	0	0		A				1,3,4,5		63.1		
	4/20/12	23:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		
21-13	4/20/12	23:35:28	LT - Upper Rowland Is. West	4/20/12	23:38:40	End Tailrace Detection 2	E	11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1,4,5		63.1		drop out of tailrace no change in generation
21-13	4/21/12	2:15:13	T1 - Mud Is.	4/21/12	2:16:15	Start Lower River		11980	0	0	0	6220	5760	0	0	0	0	0	0		A				1,4,5		64.6		
21-13	5/2/12	17:25:00	W. shore across from Tones, downstream of Lapidum			End Detections																				56.5			

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NAI1			
21-16	4/13/12	13:47:00	04/13/12 13:47:00					11050	0	0	0	0	5290	0	5760	0	0	0	0	0	A					1,5,7						54.9		
21-16	4/16/12	4:00:12	T1 - Mudd Is.	4/16/12	4:00:33	Last Fallback Detection		11450	0	0	0	0	5320	0	6130	0	0	0	0	0	A					1,5,7						56.5		
21-16	4/16/12	20:10:30	LT - Lower Rowland Is. West	4/16/12	21:09:45	Start Tailrace Detection 1	E	17530	0	0	0	6080	5320	0	6130	0	0	0	0	0	A	up	stay	no movement; increase in gen	1,4,5,7							56.5		
	4/16/12	20:30:00						17530	0	0	0	6080	5320	0	6130	0	0	0	0	0	A					1,4,5,7						56.5		
	4/16/12	21:30:00						17530	0	0	0	6080	5320	0	6130	0	0	0	0	0	A					1,4,5,7						56.5		
	4/16/12	22:30:00						11450	0	0	0	0	5320	0	6130	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7							56.5		
	4/16/12	23:30:00						11450	0	0	0	0	5320	0	6130	0	0	0	0	0	A					1,5,7						56.5		
	4/17/12	0:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	1:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	2:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	3:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	4:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	5:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
21-16	4/17/12	5:38:00	LT - Upper Rowland Is. East	4/17/12	5:42:10	Transition Upstream 1 (Tailrace to Upper Tailrace)	F	11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3	move east to west, no change in generation	
21-16	4/17/12	5:45:47	Tailrace Unit 1 (Mid)	4/17/12	5:52:20	Start Upper Tailrace Detection (Start UT Foray 1)	A	11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A	up	stay	fish up; no change in gen	1,5,7		1					59.3	move up, no change in generation	
21-16	4/17/12	5:55:38	Tailrace Unit 1 (Mid)	4/17/12	6:01:56	End Upper Tailrace Detection (End UT Foray 1)	A	11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7		1				59.3		
21-16	4/17/12	5:57:25	LT - Upper Rowland Is. West	4/17/12	6:02:12	Transition Downstream 1 (Upper Tailrace to Tailrace)	E	11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A		down	fish down; no change in gen	1,5,7							59.3	drop back, no change in generation	
	4/17/12	6:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	7:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	8:30:00						17350	0	0	0	6020	5200	0	6130	0	0	0	0	0	A	up	stay	no movement; increase in gen	1,4,5,7							59.3		
	4/17/12	9:30:00						17350	0	0	0	6020	5200	0	6130	0	0	0	0	0	A					1,4,5,7						59.3		
	4/17/12	10:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7							59.3		
	4/17/12	11:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	12:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	13:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	14:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	15:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	16:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	17:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0	0	A					1,5,7						59.3		
	4/17/12	18:30:00						49490	0	0	5910	6020	5200	0	6130	0	8700	8690	8840	0	C	up	stay	no movement; increase in gen	5,3,4,5,7,9,10,11							59.3		
	4/17/12	19:30:00						68720	5490	4870	5910	6020	5200	0	6130	8870	8700	8690	8840	0	C	up	stay	no movement; increase in gen	7,1,2,3,4,5,7,8,9,10,11							59.3		
	4/17/12	20:30:00						68720	5490	4870	5910	6020	5200	0	6130	8870	8700	8690	8840	0	C					7,1,2,3,4,5,7,8,9,10,11						59.3		
	4/17/12	21:30:00						54360	0	4870	5910	6020	5200	0	6130	0	8700	8690	8840	0	C	down	stay	no movement; decrease in gen	5,2,3,4,5,7,9,10,11							59.3		
	4/17/12	22:30:00						17350	0	0	0	6020	5200	0	6130	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,4,5,7						59.3			
	4/17/12	23:30:00						17350	0	0	0	6020	5200	0	6130	0	0	0	0	0	A					1,4,5,7						59.3		
	4/18/12	0:30:00						12090	0	0	0	6150	0	5940	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,4,7						60.1			
	4/18/12	1:30:00						12090	0	0	0	6150	0	5940	0	0	0	0	0	0	A					1,4,7						60.1		
	4/18/12	2:30:00						12090	0	0	0	6150	0	5940	0	0	0	0	0	0	A					1,4,7						60.1		
	4/18/12	3:30:00						12090	0	0	0	6150	0	5940	0	0	0	0	0	0	A					1,4,7						60.1		
	4/18/12	4:30:00						12090	0	0	0	6150	0	5940	0	0	0	0	0	0	A					1,4,7						60.1		
	4/18/12	5:30:00						23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A	up	stay	no movement; increase in gen	2,3,4,5,7						60.1			
	4/18/12	6:30:00						23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A					2,3,4,5,7						60.1		
21-16	4/18/12	6:59:37	LT - Upper Rowland Is. West	4/18/12	7:04:17	Transition Upstream 2 (Tailrace to Upper Tailrace)	E	23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A					2,3,4,5,7						60.1		
21-16	4/18/12	7:00:56	Tailrace Unit 1 (Mid)	4/18/12	7:07:21	Start Upper Tailrace Detection (Start UT Foray 2)	A	23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A	up	stay	fish up; no change in gen	2,3,4,5,7		1					60.1	move up, increase in generation	
	4/18/12	7:30:00	Tailrace Unit 1 (Mid)				A	23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A					2,3,4,5,7		1				60.1		
21-16	4/18/12	8:23:40	Tailrace Unit 1 (Mid)	4/18/12	8:30:00	End Upper Tailrace Detection (End UT Foray 2)	A	17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,4,5,7		1					60.1	
21-16	4/18/12	8:28:25	LT - Upper Rowland Is. West	4/18/12	8:33:16	Transition Downstream 2 (Upper Tailrace to Tailrace)	E	17390	0	0	0	6																						

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Discharge	Discharge											Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NA1								
									1	2	3	4	5	6	7	8	9	10	11																				
	4/19/12	19:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	C	up	stay	no movement; increase in gen	3	3,4,5,7,9								62.3						
	4/19/12	20:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	C	up	stay	no movement; increase in gen	3	3,4,5,7,9								62.3						
	4/19/12	21:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	C	up	stay	no movement; increase in gen	3	3,4,5,7,9								62.3	no response to increase in generation					
	4/19/12	22:30:00						45880	0	4980	6060	5960	5300	0	5960	8850	8770	0	0	C	up	stay	no movement; increase in gen	5	2,3,4,5,7,8,9								62.3						
	4/19/12	23:30:00						11260	0	0	5960	5300	0	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	4,5								62.3						
	4/20/12	0:30:00						11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5								63.1						
	4/20/12	1:30:00						11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5								63.1						
	4/20/12	2:30:00				Tailrace Unit 1,7 (Mid)	A/B	11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5									63.1					
	4/20/12	3:30:00				Tailrace Unit 1 (Mid)	A	11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5									63.1					
	4/20/12	3:42:09		4/20/12	3:45:19	End Upper Tailrace Detection (End UT Foray 3)	A	11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5										63.1				
	4/20/12	4:30:00						11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5										63.1				
	4/20/12	5:30:00						11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5										63.1				
21-16	4/20/12	6:12:34		4/20/12	6:17:31	Transition Downstream 3 (Upper Tailrace to Tailrace)	E	11450	0	0	6240	5210	0	0	0	0	0	0	0	A				1	4,5										63.1	drop back, no change in generation			
21-16	4/21/12	6:14:20		4/21/12	6:15:42	Transition Upstream 4 (Tailrace to Upper Tailrace)	E	11980	0	0	6220	5760	0	0	0	0	0	0	0	A		down	fish down; no change in gen	1	4,5											64.6			
	4/21/12	6:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	7:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	8:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	9:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	10:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	11:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	12:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	13:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
	4/21/12	14:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5										64.6				
21-16	4/21/12	15:16:38		4/21/12	15:24:01	Start Upper Tailrace Detection (Start UT Foray 4)	C	11980	0	0	6220	5760	0	0	0	0	0	0	0	A		up	fish up; no change in gen	1	4,5											64.6	move up, no change in generation		
	4/21/12	15:30:00				Tailrace Unit 8,9,10 (Mid)	C	11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5											64.6			
	4/21/12	16:30:00				Tailrace Unit 8,9,10 (Mid)	C	11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5											64.6			
	4/21/12	17:30:00				Tailrace Unit 3 (Mid)	A	11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5											64.6	move east to west, no change in generation		
	4/21/12	18:30:00						11980	0	0	6220	5760	0	0	0	0	0	0	0	A				1	4,5											64.6			
	4/21/12	19:30:00						18160	0	0	6180	6220	5760	0	0	0	0	0	0	A	up	stay	no movement; increase in gen	2	3,4,5											64.6			
	4/21/12	20:30:00						32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C	up	stay	no movement; increase in gen	3	2,3,4,5,10											64.6			
21-16	4/21/12	21:27:49		4/21/12	21:28:56	End Upper Tailrace Detection (End UT Foray 4)	A	32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C				1	4,5											64.6			
	4/21/12	21:30:00				Tailrace Unit 3 (Mid)	A	32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C				1	4,5											64.6			
21-16	4/21/12	21:36:39		4/21/12	21:41:36	Transition Downstream 4 (Upper Tailrace to Tailrace)	E	32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C		down	fish down; no change in gen	3	2,3,4,5,10											64.6	drop back, no change in generation		
	4/21/12	22:30:00						32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C				1	4,5										64.6				
	4/21/12	23:30:00						18160	0	0	6180	6220	5760	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	2	3,4,5											64.6			
	4/22/12	0:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	3,5											64.4			
	4/22/12	1:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.4				
	4/22/12	2:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.4				
	4/22/12	3:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.4				
	4/22/12	4:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.4				
	4/22/12	5:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.4				
	4/22/12	6:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.4				
	4/22/12	7:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.4				
	4/22/12	8:30:00						11330	0	0	6190	5140	0	0	0	0	0	0	0	A				1	3,5										64.				

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Discharge	Flow											EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments
									1	2	3	4	5	6	7	8	9	10	11										
21-16	5/8/12	7:40:31	Tailrace Unit 10 (Mid)	5/8/12	7:43:02	Start Upper Tailrace Detection (Start UT Foray 10)	C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C	up	stay	no movement; increase in gen	6	2,3,4,5,6,7,8,10,11	1	65.5	move up	
	5/8/12	8:30:00					C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C				6	2,3,4,5,6,7,8,10,11		65.5		
	5/8/12	9:30:00	Tailrace Unit 8.9.10 (Mid)				C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C				6	2,3,4,5,6,7,8,10,11	1	65.5		
	5/8/12	10:30:00	Tailrace Unit 10 (Mid)				C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C				6	2,3,4,5,6,7,8,10,11	1	65.5		
	5/8/12	11:30:00					C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C				6	2,3,4,5,6,7,8,10,11		65.5		
	5/8/12	12:30:00					C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C				6	2,3,4,5,6,7,8,10,11		65.5		
	5/8/12	13:30:00					C	75100	5330	5210	6040	6040	5370	5750	5740	8830	8600	8920	9270	C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11		65.5		
	5/8/12	14:30:00					C	75100	5330	5210	6040	6040	5370	5750	5740	8830	8600	8920	9270	C				7	1,2,3,4,5,6,7,8,9,10,11		65.5		
	5/8/12	15:30:00	Tailrace Unit 8 (Mid)				C	75100	5330	5210	6040	6040	5370	5750	5740	8830	8600	8920	9270	C				7	1,2,3,4,5,6,7,8,9,10,11	1	65.5		
	5/8/12	16:30:00					C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C	down	stay	no movement; decrease in gen	6	2,3,4,5,6,7,8,10,11		65.5		
	5/8/12	17:30:00					C	61170	0	5210	6040	6040	5370	5750	5740	8830	0	8920	9270	C				6	2,3,4,5,6,7,8,10,11		65.5		
	5/8/12	18:30:00					C	43420	0	5210	6040	6040	5370	5750	5740	0	0	0	9270	C	down	stay	no movement; decrease in gen	4	2,3,4,5,6,7,11	1	65.5	move east, decrease in generation	
	5/8/12	19:30:00	"A" Gate Aerial				C	43420	0	5210	6040	6040	5370	5750	5740	0	0	0	9270	C				4	2,3,4,5,6,7,11		65.5		
	5/8/12	20:30:00					C	43420	0	5210	6040	6040	5370	5750	5740	0	0	0	9270	C				4	2,3,4,5,6,7,11		65.5		
	5/8/12	21:30:00					C	43420	0	5210	6040	6040	5370	5750	5740	0	0	0	9270	C				4	2,3,4,5,6,7,11		65.5		
	5/8/12	22:30:00					C	23190	0	0	6040	6040	5370	0	5740	0	0	0	0	A	down	stay	no movement; decrease in gen	2	3,4,5,7		65.5		
	5/8/12	23:30:00					C	11110	0	0	0	5370	0	5740	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	5,7		65.5		
	5/9/12	0:30:00					C	10900	0	0	0	5130	0	5770	0	0	0	0	0	A				1	5,7		64.3		
	5/9/12	1:30:00					C	10900	0	0	0	5130	0	5770	0	0	0	0	0	A				1	5,7		64.3		
	5/9/12	2:30:00					C	10900	0	0	0	5130	0	5770	0	0	0	0	0	A				1	5,7		64.3		
	5/9/12	3:30:00					C	10900	0	0	0	5130	0	5770	0	0	0	0	0	A				1	5,7		64.3		
	5/9/12	4:30:00					C	10900	0	0	0	5130	0	5770	0	0	0	0	0	A				1	5,7		64.3		
	5/9/12	5:30:00					C	22130	0	5190	0	6040	5130	0	5770	0	0	0	0	A	up	stay	no movement; increase in gen	2	2,4,5,7		64.3		
	5/9/12	6:30:00					C	57810	0	5190	0	6040	5130	0	5770	0	0	0	0	A	up	stay	no movement; increase in gen	6	2,4,5,7,8,9,10,11		64.3		
	5/9/12	7:30:00					C	60600	0	5190	5900	6040	5130	5540	5770	8860	0	8890	9280	C	up	stay	no movement; increase in gen	6	2,3,4,5,6,7,8,10,11		64.3		
	5/9/12	8:30:00					C	60600	0	5190	5900	6040	5130	5540	5770	8860	0	8890	9280	C				6	2,3,4,5,6,7,8,10,11		64.3		
	5/9/12	9:30:00					C	60600	0	5190	5900	6040	5130	5540	5770	8860	0	8890	9280	C				6	2,3,4,5,6,7,8,10,11		64.3		
	5/9/12	10:30:00					C	69250	0	5190	5900	6040	5130	5540	5770	8860	8650	8890	9280	C	up	stay	no movement; increase in gen	7	2,3,4,5,6,7,8,9,10,11		64.3		
	5/9/12	11:30:00					C	69250	0	5190	5900	6040	5130	5540	5770	8860	8650	8890	9280	C				7	2,3,4,5,6,7,8,9,10,11		64.3		
	5/9/12	12:30:00					C	69250	0	5190	5900	6040	5130	5540	5770	8860	8650	8890	9280	C				7	2,3,4,5,6,7,8,9,10,11		64.3		
	5/9/12	13:30:00	Tailrace Unit 9.10 (Mid)				C	69250	0	5190	5900	6040	5130	5540	5770	8860	8650	8890	9280	C				7	2,3,4,5,6,7,8,9,10,11	1	64.3	move west, increase in generation	
	5/9/12	14:30:00					C	69250	0	5190	5900	6040	5130	5540	5770	8860	8650	8890	9280	C				7	2,3,4,5,6,7,8,9,10,11		64.3		
	5/9/12	15:30:00					C	69250	0	5190	5900	6040	5130	5540	5770	8860	8650	8890	9280	C				7	2,3,4,5,6,7,8,9,10,11		64.3		
	5/9/12	16:30:00					C	69250	0	5190	5900	6040	5130	5540	5770	8860	8650	8890	9280	C				7	2,3,4,5,6,7,8,9,10,11		64.3		
	5/9/12	17:30:00	Tailrace Unit 8.9.10 (Mid)				C	49660	0	0	5900	6040	5130	0	5770	0	8650	8890	9280	C	down	stay	no movement; decrease in gen	5	3,4,5,7,9,10,11	1	64.3	move back and forth, decrease in generation	
21-16	5/9/12	18:09:53	Tailrace Unit 9 (Mid)	5/9/12	18:12:18	End Upper Tailrace Detection (End UT Foray 10)	C	49660	0	0	5900	6040	5130	0	5770	0	8650	8890	9280	C				5	3,4,5,7,9,10,11	1	64.3		
21-16	5/9/12	NA	NA	NA	NA	Transition Downstream 10 (Upper Tailrace to Tailrace)														A							64.3		
21-16	5/9/12	NA	NA	NA	NA	End Tailrace Detection 3														A							64.3		
21-16	5/9/12	NA	NA	NA	NA	Start Lower River														A							64.3		
21-16	5/10/12	3:32:17	T1 - Mudd Is.	5/10/12	3:34:29	End Lower River		10860	0	0	5710	0	5150	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	3,5		64.3		
21-16	5/10/12	10:37:32	LT - Upper Rowland Is. West	5/10/12	10:42:09	Start Tailrace Detection 4	E	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C	up	down	fish down; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11		64.3	move up	
	5/10/12	11:30:00					E	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C				7	1,2,3,4,5,6,7,8,9,10,11		64.3		
	5/10/12	12:30:00					E	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C				7	1,2,3,4,5,6,7,8,9,10,11		64.3		
	5/10/12	13:30:00					E	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C				7	1,2,3,4,5,6,7,8,9,10,11		64.3		
	5/10/12	14:30:00					E	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C				7	1,2,3,4,5,6,7,8,9,10,11		64.3		
21-16	5/10/12	14:49:16	LT - Lower Rowland Is. West	5/10/12	14:58:27	Transition Upstream 11 (Tailrace to Upper Tailrace)	E	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C				7	1,2,3,4,5,6,7,8,9,10,11		64.3		
21-16	5/10/12	15:03:05	Tailrace Unit 9 (Mid)	5/10/12	15:10:02	Start Upper Tailrace Detection (Start UT Foray 11)	C	74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C	up	fish up; no change in gen		7	1,2,3,4,5,6,7,8,9,10,11	1	64.3	move up, no change in generation	
	5/10/12	15:30:00	Tailrace Unit 9 (Mid)				C	74890	5390	5150	5710	5980																	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NA11						
21-16	5/12/12	7:30:00	Tailrace Unit 8 (Mid)	5/12/12	8:30:53	Start Upper Tailrace Detection (Start UT Foray 13)	C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			62.9								
	5/12/12	8:25:47	Tailrace Unit 8 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	fish up; no change in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		62.9								
	5/12/12	8:30:00	Tailrace Unit 8 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			62.9								
	5/12/12	9:30:00	Tailrace Unit 8,9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		62.9								
	5/12/12	10:30:00					C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			62.9								
	5/12/12	11:30:00					C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			62.9								
	5/12/12	12:30:00	Tailrace Unit 8,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		62.9								
	5/12/12	13:30:00	Tailrace Unit 9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		62.9								
	5/12/12	14:30:00	Tailrace Unit 9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		62.9								
21-16	5/12/12	14:58:43	"C" Gate Aerial	5/12/12	15:01:38	Start EFL Aerial Detection	C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			62.9								
21-16	5/12/12	15:01:46	"C" Gate Aerial	5/12/12	15:06:16	End EFL Aerial Detection	C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			62.9								
21-16	5/12/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 13)																															
	5/12/12	15:30:00	Tailrace Unit 9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		62.9								
	5/12/12	16:30:00	Tailrace Unit 8,9,10 (Mid)				C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		62.9								
	5/12/12	17:30:00					C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			62.9								
21-16	5/12/12	18:13:03	LT - Upper Rowland Is. West	5/12/12	18:17:28	Transition Downstream 13 (Upper Tailrace to Tailrace)	E	31410	0	4920	0	0	5550	5820	6030	0	0	9110	0		C	down	down	fish down; decrease in gen	3	2,5,6,7,10			62.9								
21-16	5/12/12	18:23:19	LT - Upper Rowland Is. West	5/12/12	18:26:56	End Tailrace Detection 5	E	31410	0	4920	0	0	5550	5820	6030	0	0	9110	0		C	down	down	fish down; decrease in gen	3	2,5,6,7,10			62.9								
21-16	5/13/12	0:00:52	T1 - Mudd Is.	5/13/12	0:02:02	Start Lower River		49370	0	4920	0	0	5450	5820	6030	8880	0	8900	9370		C	up	stay	no movement; increase in gen	5	2,5,6,7,8,10,11			63.5								
21-16	5/13/12	3:56:20	T1 - Mudd Is.	5/13/12	4:00:29	End Lower River		10370	0	4920	0	0	5450	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	1	2,5			63.5								
21-16	5/13/12	5:23:02	LT - Upper Rowland Is. West	5/13/12	5:27:53	Start Tailrace Detection 6	E	10370	0	4920	0	0	5450	0	0	0	0	0	0		A	up	stay	no movement; increase in gen	1	2,5			63.5								
	5/13/12	5:30:00						10370	0	4920	0	0	5450	0	0	0	0	0	0		A	up	stay	no movement; increase in gen	1	2,5			63.5								
	5/13/12	6:30:00						10370	0	4920	0	0	5450	0	0	0	0	0	0		A	up	stay	no movement; increase in gen	1	2,5			63.5								
21-16	5/13/12	7:30:57	LT - Upper Rowland Is. West	5/13/12	7:35:09	Transition Upstream 14 (Tailrace to Upper Tailrace)	E	34240	0	4920	6000	6020	5450	5820	6030	0	0	0	0		A	up	stay	no movement; increase in gen	3	2,3,4,5,6,7			63.5								
21-16	5/13/12	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 14)																															
21-16	5/13/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 14)																															
	5/13/12	8:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	9:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	10:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	11:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	12:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	13:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	14:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	15:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	16:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	17:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
	5/13/12	18:30:00						75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
21-16	5/13/12	18:31:13	LT - Upper Rowland Is. West	5/13/12	18:36:05	Transition Downstream 14 (Upper Tailrace to Tailrace)	E	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11			63.5								
21-16	5/13/12	NA	NA	NA	NA	End Tailrace Detection 6																															
21-16	5/13/12	18:58:33	T1 - Mudd Is.	5/13/12	19:03:11	Start Lower River		75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370		C	up	stay	no movement; increase in gen													

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	
21-21	4/13/12	10:21:00	04/13/12 10:21:00					11050	0	0	0	0	5290	0	5760	0	0	0	0	0		A				1,5,7				54.9	
21-21	4/18/12	23:48:53	T1 - Mudd Is.	4/18/12	23:52:41	Last Fallback Detection		11240	0	0	0	5300	0	5940	0	0	0	0	0	0		A				1,5,7				60.1	
21-21	4/20/12	22:42:24	LT - Upper Rowland Is. East	4/20/12	22:47:12	Start Tailrace Detection 1	F	17550	0	0	6100	6240	5210	0	0	0	0	0	0	0		A	up	stay	no movement; increase in gen	1,3,4,5				63.1	move up
	4/20/12	23:30:00					F	11450	0	0	0	6240	5210	0	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	1,4,5				63.1	
	4/21/12	0:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	1:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	2:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	3:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	4:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	5:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	6:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	7:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	8:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	9:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	10:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	11:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	12:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	13:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	14:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	15:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	16:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	17:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0		A				1,4,5				64.6	
	4/21/12	18:30:00						18160	0	0	6180	6220	5760	0	0	0	0	0	0	0		A	up	stay	no movement; increase in gen	2,3,4,5				64.6	
	4/21/12	19:30:00						32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	0		C	up	stay	no movement; increase in gen	2,3,4,5,10				64.6	no response, increase in generation
	4/21/12	20:30:00						32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	0		C				3,2,3,4,5,10				64.6	
	4/21/12	21:30:00						32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	0		C				3,2,3,4,5,10				64.6	
	4/21/12	22:30:00						32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	0		C				3,2,3,4,5,10				64.6	
	4/21/12	23:30:00						18160	0	0	6180	6220	5760	0	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	2,3,4,5				64.6	
	4/22/12	0:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A	down	stay	no movement; decrease in gen	1,3,5				64.4	no response, decrease in generation
	4/22/12	1:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	2:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	3:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	4:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	5:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	6:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	7:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	8:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	9:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	10:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	11:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	12:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	13:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	14:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	15:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
21-21	4/22/12	15:38:59	LT - Upper Rowland Is. West	4/22/12	15:39:25	Transition Upstream 1 (Tailrace to Upper Tailrace)	E	11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	16:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	17:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	18:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	19:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	20:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5				64.4	
	4/22/12	21:30:00						11330	0	0	6190	0	5140	0	0	0	0	0	0	0		A				1,3,5					

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NAI1
4/24/12	10:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				61.6		
4/24/12	11:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A				1,5,7				61.6		
4/24/12	12:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A				1,5,7				61.6		
4/24/12	13:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A				1,5,7				61.6		
4/24/12	14:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A				1,5,7				61.6		
4/24/12	15:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A				1,5,7				61.6		
21-21	4/24/12	16:30:00	Tailrace Unit 9 (Mid)	4/24/12	17:32:00	Start Upper Tailrace Detection (Start UT Foray 1)	C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A		up	fish up; no change in gen	1,5,7		1		61.6	move up, no change in generation	
4/24/12	17:30:00		Tailrace Unit 9, 10 (Mid)				C	11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A				1,5,7		1		61.6		
4/24/12	18:30:00		Tailrace Unit 8 (Mid)				C	23700	0	0	6030	6090	5490	0	6090	0	0	0	0	0	A	up	stay	no movement; increase in gen	2,3,4,5,7		1		61.6	move back and forth, not in response to generation	
4/24/12	19:30:00		Tailrace Unit 9, 10 (Mid)				C	23700	0	0	6030	6090	5490	0	6090	0	0	0	0	0	A				2,3,4,5,7		1		61.6		
4/24/12	20:30:00							41430	0	0	6030	6090	5490	0	6090	0	0	8780	8950	C	up	stay	no movement; increase in gen	4,3,4,5,7,10,11				61.6			
4/24/12	21:30:00							41430	0	0	6030	6090	5490	0	6090	0	0	8780	8950	C				4,3,4,5,7,10,11				61.6			
4/24/12	22:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				61.6		
4/24/12	23:30:00							11580	0	0	0	0	5490	0	6090	0	0	0	0	0	A				1,5,7				61.6		
4/25/12	0:30:00		Tailrace Unit 8,9,10 (Mid)				C	11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7		1		61.2	move back and forth, no change in generation	
4/25/12	1:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	2:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	3:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	4:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	5:30:00							32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0	C	up	stay	no movement; increase in gen	3,3,4,5,7,10				61.2		
4/25/12	6:30:00							32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0	C				3,3,4,5,7,10				61.2		
4/25/12	7:30:00							32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0	C				3,3,4,5,7,10				61.2		
4/25/12	8:30:00		Tailrace Unit 9, 10 (Mid)				C	32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0	C				3,3,4,5,7,10		1		61.2	move back and forth, not in response to generation	
4/25/12	9:30:00							32190	0	0	6040	6060	5180	0	6110	0	0	8800	0	0	C				3,3,4,5,7,10				61.2		
4/25/12	10:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				61.2		
4/25/12	11:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	12:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	13:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	14:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	15:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	16:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	17:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	18:30:00							23390	0	0	6040	6060	5180	0	6110	0	0	0	0	0	A	up	stay	no movement; increase in gen	2,3,4,5,7				61.2		
4/25/12	19:30:00							41240	0	0	6040	6060	5180	0	6110	0	0	8800	9050	C	up	stay	no movement; increase in gen	4,3,4,5,7,10,11				61.2			
4/25/12	20:30:00							41240	0	0	6040	6060	5180	0	6110	0	0	8800	9050	C				4,3,4,5,7,10,11				61.2			
4/25/12	21:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				61.2		
4/25/12	22:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/25/12	23:30:00							11290	0	0	0	0	5180	0	6110	0	0	0	0	0	A				1,5,7				61.2		
4/26/12	0:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	1:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	2:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	3:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	4:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	5:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C	up	stay	no movement; increase in gen	5,3,4,5,7,9,10,11				58.9			
4/26/12	6:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C				5,3,4,5,7,9,10,11				58.9			
4/26/12	7:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C				5,3,4,5,7,9,10,11				58.9			
4/26/12	8:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C				5,3,4,5,7,9,10,11				58.9			
4/26/12	9:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C				5,3,4,5,7,9,10,11				58.9			
4/26/12	10:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C				5,3,4,5,7,9,10,11				58.9			
4/26/12	11:30:00							50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C				5,3,4,5,7,9,10,11				58.9			
21-21	4/26/12	11:55:37	Tailrace Unit 8 (Mid)	4/26/12	11:57:04	End Upper Tailrace Detection (End UT Foray 1)	C	50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	C				5,3,4,5,7,9,10,11		1		58.9	drop back, decrease in generation		
4/26/12	12:30:00							32520	0	0	5990	6080	5240	0	6060	0	0	9150	0	0	C	down	stay	no movement; decrease in gen	3,3,4,5,7,11				58.9		
4/26/12	13:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				58.9		
4/26/12	14:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	15:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	16:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	17:30:00							11300	0	0	0	0	5240	0	6060	0	0	0	0	0	A				1,5,7				58.9		
4/26/12	18:30:00							41430	0	0	5990	6080	5240	0	6060	0	0	8910	9150	C	up	stay	no movement; increase in gen	4,3,4,5,7,10,11				58.9			
4/26/12	19:30:00							75060	5420	4840	5990	6080	5240	582																	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1 2 3 4 5 6 7 8 9 10 11											EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1	
									1	2	3	4	5	6	7	8	9	10	11											
	5/1/12	7:30:00	Tailrace Unit 3.5 (Mid)				A/B	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070					5,3,4,5,7,9,10,11		2			55.5	
	5/1/12	8:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070					5,3,4,5,7,9,10,11				55.5		
	5/1/12	9:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070					5,3,4,5,7,9,10,11				55.5		
	5/1/12	10:30:00						16610	0	0	0	6090	4870	0	5650	0	0	0	0	A	down	stay	no movement; decrease in gen	1,4,5,7				55.5		
	5/1/12	11:30:00						16610	0	0	0	6090	4870	0	5650	0	0	0	0	A				1,4,5,7				55.5		
	5/1/12	12:30:00						16610	0	0	0	6090	4870	0	5650	0	0	0	0	A				1,4,5,7				55.5		
	5/1/12	13:30:00						16610	0	0	0	6090	4870	0	5650	0	0	0	0	A				1,4,5,7				55.5		
	5/1/12	14:30:00						16610	0	0	0	6090	4870	0	5650	0	0	0	0	A				1,4,5,7				55.5		
	5/1/12	15:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070		up	stay	no movement; increase in gen	5,3,4,5,7,9,10,11				55.5		
	5/1/12	16:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070					5,3,4,5,7,9,10,11				55.5		
	5/1/12	17:30:00						68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070		up	stay	no movement; increase in gen	7,2,3,4,5,6,7,8,9,10,11				55.5	no response to increase in generation	
	5/1/12	18:30:00						68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070					7,2,3,4,5,6,7,8,9,10,11				55.5		
	5/1/12	19:30:00						68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070					7,2,3,4,5,6,7,8,9,10,11				55.5		
	5/1/12	20:30:00						68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070					7,2,3,4,5,6,7,8,9,10,11				55.5		
	5/1/12	21:30:00						62970	0	4890	5980	6090	4870	0	5650	8850	8710	8860	9070		down	stay	no movement; decrease in gen	6,2,3,4,5,7,8,9,10,11				55.5		
	5/1/12	22:30:00						49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070		down	stay	no movement; decrease in gen	5,3,4,5,7,9,10,11				55.5		
	5/1/12	23:00:00						10520	0	0	0	0	4870	0	5650	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				55.5		
	5/2/12	0:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
21-21	5/2/12	0:47:44	LT - Lower Rowland Is. West	5/2/12	0:56:34	Transition Downstream 3 (Upper Tailrace to Tailrace)	E	10360	0	0	0	0	4830	0	5530	0	0	0	0	A		down	fish down; no change in gen	1,5,7				56.5	drop back, decrease in generation	
	5/2/12	1:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	2:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	3:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	4:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	5:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	6:30:00						31200	0	0	6000	8060	4830	0	5530	0	0	8780	0	C	up	stay	no movement; increase in gen	3,3,4,5,7,10				55.5	no response to increase in generation	
	5/2/12	7:30:00						31200	0	0	6000	8060	4830	0	5530	0	0	8780	0	C				3,3,4,5,7,10				56.5		
	5/2/12	8:30:00						31200	0	0	6000	8060	4830	0	5530	0	0	8780	0	C				3,3,4,5,7,10				56.5		
	5/2/12	9:30:00						31200	0	0	6000	8060	4830	0	5530	0	0	8780	0	C				3,3,4,5,7,10				56.5		
	5/2/12	10:30:00						16420	0	0	0	6060	4830	0	5530	0	0	0	0	A	down	stay	no movement; decrease in gen	1,4,5,7				56.5	no response to decrease in generation	
	5/2/12	11:30:00						16420	0	0	0	6060	4830	0	5530	0	0	0	0	A				1,4,5,7				56.5		
	5/2/12	12:30:00						16420	0	0	0	6060	4830	0	5530	0	0	0	0	A				1,4,5,7				56.5		
	5/2/12	13:30:00						16420	0	0	0	6060	4830	0	5530	0	0	0	0	A				1,4,5,7				56.5		
	5/2/12	14:30:00						16420	0	0	0	6060	4830	0	5530	0	0	0	0	A				1,4,5,7				56.5		
21-21	5/2/12	14:32:59	LT - Lower Rowland Is. West	5/2/12	15:32:10	End Tailrace Detection 1	E	16420	0	0	0	6060	4830	0	5530	0	0	0	0	A				1,4,5,7				56.5		
21-21	5/2/12	18:01:19	T1 - Mudd Is.	5/2/12	18:05:53	Start Lower River		68300	0	4870	6000	6060	4830	5800	5530	8730	8630	8780	9070		C	up	stay	no movement; increase in gen	7,2,3,4,5,6,7,8,9,10,11				56.5	
21-21	5/2/12	19:23:18	T1 - Mudd Is.	5/2/12	19:27:40	End Lower River		68300	0	4870	6000	6060	4830	5800	5530	8730	8630	8780	9070		C			7,2,3,4,5,6,7,8,9,10,11				56.5		
21-21	5/2/12	23:23:53	LT - Lower Rowland Is. West	5/3/12	0:23:51	Start Tailrace Detection 2	E	10360	0	0	0	0	4830	0	5530	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				56.5	move up	
	5/2/12	23:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	0:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	1:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	2:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	3:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
	5/2/12	4:30:00						10360	0	0	0	0	4830	0	5530	0	0	0	0	A				1,5,7				56.5		
21-21	5/3/12	5:03:40	LT - Upper Rowland Is. West	5/3/12	5:08:26	Transition Upstream 4 (Tailrace to Upper Tailrace)	E	10640	0	0	0	0	4960	0	5680	0	0	0	0	A				1,5,7				58.0		
21-21	5/3/12	5:26:54	Tailrace Unit 5 (Mid)	5/3/12	5:36:29	Start Upper Tailrace Detection (Start UT Foray 4)	B	10640	0	0	0	0	4960	0	5680	0	0	0	0	A	up	stay	fish up; no change in gen	1,5,7		1		58.0	move up, no change in generation	
21-21	5/9/12	20:58:03	Tailrace Unit 5 (Mid)	5/9/12	20:59:15	End Upper Tailrace Detection (End UT Foray 4)	B	49660	0	5900	6040	5130	0	5770	0	8650	8890	9280	0	C	up	stay	no movement; increase in gen	5,3,4,5,7,9,10,11				64.3	move down, increase in generation	
21-21	5/9/12	22:01:48	LT - Upper Rowland Is. East	5/9/12	22:03:49	Transition Downstream 4 (Upper Tailrace to Tailrace)	F	32120	0	0	5900	6040	5130	0	5770	0	0	9280	0	C	down	down	fish down; decrease in gen	3,3,4,5,7,11				64.3		
	5/10/12	0:30:00						32120	0	0	5900	6040	5130	0	5770	0	0	9280	0	C				3,3,4,5,7,11						
	5/10/12	1:30:00						11030	0	0	5900	0	5130	0	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,3,5						
	5/10/12	2:30:00						10860	0																					

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Water Temp. (°F)	Spill Deep Corner	Comments	NAI1	
21-23	4/12/12	14:28:00	04/12/12 14:28:00					11980	0	0	0	0	5550	0	6030	0	0	0	0		A					1,5,7			62.9			
21-23	4/21/12	3:44:30	T1 - Mudd Is.	4/21/12	3:45:42	Last Fallback Detection		11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
21-23	4/21/12	8:49:28	LT - Upper Rowland Is. West	4/21/12	8:53:28	Start Tailrace Detection 1	E	11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5		move up, no change in generation	
	4/21/12	8:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	9:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	10:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	11:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	12:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	13:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	14:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	15:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	16:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	17:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	18:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0		A					1,4,5			68.5			
	4/21/12	19:30:00						18160	0	0	6180	6220	5760	0	0	0	0	0	0		A	up	stay		2,3,4,5			68.5				
	4/21/12	20:30:00						32130	0	5040	6180	6220	5760	0	0	0	8930	0	0		C	up	stay		3,2,3,4,5,10			68.5				
	4/21/12	21:30:00						32130	0	5040	6180	6220	5760	0	0	0	8930	0	0		C				3,2,3,4,5,10			68.5				
21-23	4/21/12	22:12:13	LT - Upper Rowland Is. West	4/21/12	22:13:25	End Tailrace Detection 1	E	32130	0	5040	6180	6220	5760	0	0	0	8930	0	0		C				3,2,3,4,5,10			68.5		drop back, no change in generation		
21-23	4/22/12	18:43:37	T1 - Opp. Mudd Is.	4/22/12	18:47:30	Start Lower River		11330	0	0	6190	0	5140	0	0	0	0	0	0		A	down	stay		1,3,5			69.1				
21-23	5/2/12	9:16:24	T3 - Opp. McGibney	5/2/12	9:22:06	End Detections		31200	0	0	6000	6060	4830	0	5530	0	8780	0	0		C	up	stay		3,3,4,5,7,10			74.4				

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1	
21-28	4/12/12	12:16:00	04/12/12 12:16:00					11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	5,7				62.9	
21-28	4/12/12	NA	NA	NA	NA	Last fallback Detection															A									62.9	
21-28	4/12/12	17:01:20	LT - Upper Rowland Is. West	4/12/12	17:06:07	Start Tailrace Detection 1	E	11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	5,7				62.9	move up, no change in generation
	4/12/12	17:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	5,7				62.9	
	4/12/12	18:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C	up	stay	no movement; increase in gen	3	1,5,6,7,10				62.9	no response to increase in generation
	4/12/12	19:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C				3	1,5,6,7,10				62.9	
	4/12/12	20:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C				3	1,5,6,7,10				62.9	
	4/12/12	21:30:00						32010	5610	0	0	0	5550	5940	6030	0	0	8880	0		C				3	1,5,6,7,10				62.9	
21-28	4/12/12	22:16:30	LT - Upper Rowland Is. West	4/12/12	22:21:17	Transition Upstream 1 (Tailrace to Upper Tailrace)	E	11580	0	0	0	0	5550	0	6030	0	0	0	0		A	down	stay	no movement; decrease in gen	1	5,7				62.9	drop back, decrease in generation
	4/12/12	22:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	5,7				62.9	
21-28	4/12/12	22:44:23	Tailrace Unit 1 (Mid)	4/12/12	22:53:04	Start Upper Tailrace Detection (Start UT Foray 1)	A	11580	0	0	0	0	5550	0	6030	0	0	0	0		A	up	fish up; no change in gen		1	5,7				62.9	move up, no change in generation
	4/12/12	23:30:00	Tailrace Unit 1.7 (Mid)				A/B	11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	5,7				62.9	move back and forth, nochange in generation
	4/13/12	0:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0		A				1	5,7				63.5	
	4/13/12	1:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0		A				1	5,7				63.5	
	4/13/12	2:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0		A				1	5,7				63.5	
	4/13/12	3:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0		A				1	5,7				63.5	
	4/13/12	4:30:00						11050	0	0	0	0	5290	0	5760	0	0	0	0		A				1	5,7				63.5	
21-28	4/13/12	5:11:08	Tailrace Unit 7 (Mid)	4/13/12	5:17:01	End Upper Tailrace Detection (End UT Foray 1)	B	40070	5500	0	0	0	5290	5830	5760	0	0	8780	8910		C	up	stay	no movement; increase in gen	4	1,5,6,7,10,11				63.5	move east, increase in generation
21-28	4/13/12	5:13:18	LT - Upper Rowland Is. Wes	4/13/12	5:16:56	Transition Downstream 1 (Upper Tailrace to Tailrace)	E	40070	5500	0	0	0	5290	5830	5760	0	0	8780	8910		C	down	fish down; no change in gen	4	1,5,6,7,10,11				63.5	drop back, increase in generatio	
21-28	NA	NA	NA	NA	NA	End Tailrace Detection 1															A										
21-28	4/17/12	19:10:09	T2 - Opp. Crab House	4/17/12	19:14:18	Start Lower River		68720	5490	4870	5910	6020	5200	0	6130	8870	8700	8690	8840		C	up	stay	no movement; increase in gen	7	1,2,3,4,5,7,8,9,10,11				66.1	
21-28	4/17/12	19:59:46	T3 - Opp. McGibney	4/17/12	20:00:13	End Detections		68720	5490	4870	5910	6020	5200	0	6130	8870	8700	8690	8840		C				7	1,2,3,4,5,7,8,9,10,11				66.1	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1			
21-29	4/12/12	12:48:00	04/12/12 12:48:00					11580	0	0	0	0	5550	0	6030	0	0	0	0		A			No movement	1	.5,7							
21-29	4/12/12	NA	NA	NA	NA	Last Fallback Detection															A												
21-29	4/12/12	13:11:28	LT - Upper Rowland Is. West	4/12/12	13:16:25	Start Tailrace Detection 1	E	11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	.5,7			55.1				
	4/12/12	13:30:00						11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	.5,7			55.1				
21-29	4/12/12	14:27:53	LT - Upper Rowland Is. West	4/12/12	14:32:43	End Tailrace Detection 1	E	11580	0	0	0	0	5550	0	6030	0	0	0	0		A				1	.5,7			55.1	drop back,no change in generation			
21-29	4/13/12	12:23:16	T1 - Mudd Is.	4/13/12	12:27:41	Start Lower River		11050	0	0	0	0	5290	0	5760	0	0	0	0		A				1	.5,7			54.9				
21-29	5/11/12	3:35:56	Spencer Island East	5/11/12	3:45:31	End Detections		11010	0	0	0	0	5070	0	5940	0	0	0	0		A				1	.5,7			63.6				

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station	Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1		
21-36	5/1/12	12:22:00	05/01/12 12:22:00						16610	0	0	0	6090	4870	0	5650	0	0	0	0		A					1	4,5,7					
21-36	5/3/12	5:41:06	T1 - Mudd Is.	5/3/12	5:45:41	Last Fallback Detection			10640	0	0	0	4960	0	5680	0	0	0	0		A	down	stay	no movement; decrease in gen		1	5,7				58.0		
21-36	5/5/12	7:29:18	LT - Upper Rowland Is. West	5/5/12	7:32:40	Start Tailrace Detection 1	E		10450	0	0	0	4920	0	5530	0	0	0	0		A					1	5,7				63.3	move up, no change in generation	
5/5/12	7:30:00								10450	0	0	0	4920	0	5530	0	0	0	0		A					1	5,7				63.3		
5/5/12	8:30:00								22570	0	0	6040	6080	4920	0	5530	0	0	0	0		A	up	stay	no movement; increase in gen		2	3,4,5,7				63.3	
5/5/12	9:30:00								22570	0	0	6040	6080	4920	0	5530	0	0	0	0		A				2	3,4,5,7				63.3		
5/5/12	10:30:00								22570	0	0	6040	6080	4920	0	5530	0	0	0	0		A				2	3,4,5,7				63.3		
5/5/12	11:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C	up	stay	no movement; increase in gen		5	3,4,5,7,9,10,11				63.3	no response to increase in generation
5/5/12	12:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	3,4,5,7,9,10,11				63.3	
5/5/12	13:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	3,4,5,7,9,10,11				63.3	
5/5/12	14:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	3,4,5,7,9,10,11				63.3	
5/5/12	15:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	3,4,5,7,9,10,11				63.3	
5/5/12	16:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	3,4,5,7,9,10,11				63.3	
5/5/12	17:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	3,4,5,7,9,10,11				63.3	
5/5/12	18:30:00								49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C					5	3,4,5,7,9,10,11				63.3	
21-36	5/5/12	19:14:10	LT - Upper Rowland Is. West	5/5/12	19:18:10	End Tailrace Detection 1	E		74250	6350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C	up	stay	no movement; increase in gen		7	1,2,3,4,5,6,7,8,9,10,11				63.3	drop back, increase in generation
21-36	5/6/12	0:03:18	T1 - Mudd Is.	5/6/12	0:08:08	Start Lower River			10530	0	0	0	4820	0	5710	0	0	0	0		A	down	stay	no movement; decrease in gen		1	5,7				65.8		
21-36	5/6/12	5:12:18	T3 - McGibney Is.	5/6/12	5:17:15	End Detections			10530	0	0	0	4820	0	5710	0	0	0	0		A					1	5,7				65.8		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Temp. [F]	Comments N/A1	Notes			
21-46	5/2/2012	13:51	05/02/12 13:51:00					16420	0	0	0	0	6060	4830	0	5530	0	0	0	0	A					1	4,5,7			56.5				
21-46	5/14/2012	19:46:10	Spencer Island West	5/14/2012	19:53:22	Last Fallback Detection		74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360		C	up	stay	no movement; increase in gen		1	2,3,4,5,6,7,8,9,10,11			64.8				
21-46	NA	NA	NA	NA	NA	Start Tailrace Detection 1															A													
21-46	5/16/2012	13:57:34		5/16/2012	13:58:41	Transition Upstream 1 (Tailrace to Upper Tailrace)															A													
21-46	5/16/2012	14:30:00	Tailrace Unit 8 (Mid)	5/16/2012		Start Upper Tailrace Detection (Start UT Foray 1)	C														C	up	stay	no movement; increase in gen	7	1,2,3,4,5,6,7,8,9,10,11	1		65.7	move up				
	5/16/2012	15:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					7	1,2,3,4,5,6,7,8,9,10,11			65.7				
	5/16/2012	16:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					7	1,2,3,4,5,6,7,8,9,10,11			65.7				
	5/16/2012	17:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					7	1,2,3,4,5,6,7,8,9,10,11			65.7				
	5/16/2012	18:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					7	1,2,3,4,5,6,7,8,9,10,11			65.7				
	5/16/2012	19:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					7	1,2,3,4,5,6,7,8,9,10,11			65.7				
	5/16/2012	20:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					7	1,2,3,4,5,6,7,8,9,10,11			65.7				
	5/16/2012	21:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					7	1,2,3,4,5,6,7,8,9,10,11			65.7				
	5/16/2012	22:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					9	1,2,3,4,5,6,7,8,9,10,11	32,000		65.7				
	5/17/2012	23:30:00						77520	5860	5030	6180	6180	5960	6190	6180	8860	8680	8940	9460		C					9	1,2,3,4,5,6,7,8,9,10,11	32,000		65.7				
	5/17/2012	0:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					9	1,2,3,4,5,6,7,8,9,10,11	32,000		66.1				
	5/17/2012	1:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					8	1,2,3,4,5,6,7,8,9,10,11	16,000		66.1				
	5/17/2012	2:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					8	1,2,3,4,5,6,7,8,9,10,11	16,000		66.1				
	5/17/2012	3:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					8	1,2,3,4,5,6,7,8,9,10,11	16,000		66.1				
	5/17/2012	4:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					8	1,2,3,4,5,6,7,8,9,10,11	16,000		66.1				
	5/17/2012	5:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					8	1,2,3,4,5,6,7,8,9,10,11	16,000		66.1				
	5/17/2012	6:30:00						78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					8	1,2,3,4,5,6,7,8,9,10,11	16,000		66.1				
21-46	5/17/2012	7:04:26	Tailrace Unit 8 (Mid)	5/17/2012	7:09:56	End Upper Tailrace Detection (End UT Foray 1)	C	78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C					8	1,2,3,4,5,6,7,8,9,10,11	1	16,000		66.1			
21-46	5/17/2012	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)															A													
21-46	5/17/2012	NA	NA	NA	NA	End Tailrace Detection 1															A													
21-46	5/17/2012	9:03:40	Spencer Island East	5/17/2012	9:05:39	Start Lower River		78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C													
21-46	5/17/2012	10:41:02	T3 - McGibney Is.	5/17/2012	10:45:52	End Lower River		78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C													
21-46	5/17/2012	NA	NA	NA	NA	Start Tailrace Detection 2															A													
21-46	5/17/2012	NA	NA	NA	NA	Transition Upstream 2 (Tailrace to Upper Tailrace)															A													
21-46	5/17/2012	14:54:42	Tailrace Unit 10 (Mid)	5/17/2012	15:00:09	Start Upper Tailrace Detection (Start UT Foray 2)	C	78780	6020	5150	6270	6370	5930	6490	6430	8860	8760	9010	9490		C						8	1,2,3,4,5,6,7,8,9,10,11	1	16,000		66.1	move up, no change in generation	
21-46	5/17/2012	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 2)															A													
21-46	5/18/2012	7:14:55	LT - Upper Rowland Is. East	5/18/2012	7:19:42	Transition Downstream 2 (Upper Tailrace to Tailrace)	E	78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C		down	fish down; no change in gen		7	1,2,3,4,5,6,7,8,9,10,11			65.5	drop back, no change in generation			
	5/18/2012	7:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	8:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	9:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	10:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	11:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	12:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	13:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	14:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	15:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
	5/18/2012	16:30:00						78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
21-46	5/18/2012	17:04:57	LT - Upper Rowland Is. East	5/18/2012	17:05:22	End Tailrace Detection 2	E	78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C					7	1,2,3,4,5,6,7,8,9,10,11			65.5				
21-46	5/18/2012	17:31:22	T1 - Mudd Is.	5/18/2012	17:36:08	Start Lower River		78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440		C													
21-46	5/18/2012	19:48:45	Spencer Island East	5/18/2012	19:54:4																													

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	Flow											EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp (°F)	Comments NA11			
									1	2	3	4	5	6	7	8	9	10	11													
5/25/2012	23:30:00							22730	0	0	6060	6060	4550	0	6060	0	0	0	0	0	A				2	3,4,5,7					71.2	
5/26/2012	0:30:00							22560	0	0	6040	6040	4830	0	5650	0	0	0	0	0	A				2	3,4,5,7					72.7	
5/26/2012	1:30:00							22560	0	0	6040	6040	4830	0	5650	0	0	0	0	0	A				2	3,4,5,7					72.7	
5/26/2012	2:30:00							22560	0	0	6040	6040	4830	0	5650	0	0	0	0	0	A				2	3,4,5,7					72.7	
5/26/2012	3:30:00							22560	0	0	6040	6040	4830	0	5650	0	0	0	0	0	A				2	3,4,5,7					72.7	
5/26/2012	4:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	5,7					72.7	
5/26/2012	5:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A				1	5,7					72.7	
5/26/2012	6:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A				1	5,7					72.7	
5/26/2012	7:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A				1	5,7					72.7	
5/26/2012	8:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A				1	5,7					72.7	
5/26/2012	9:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A				1	5,7					72.7	
5/26/2012	10:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A				1	5,7					72.7	
5/26/2012	11:30:00							10480	0	0	0	0	4830	0	5650	0	0	0	0	0	A				1	5,7					72.7	
5/26/2012	12:30:00							31320	0	0	6040	6040	4830	0	5650	0	0	8760	0	0	C	up	stay	no movement; increase in gen	3	3,4,5,7,10					72.7	
5/26/2012	13:30:00							49060	0	0	6040	6040	4830	0	5650	0	8810	8760	8930	0	C	up	stay	no movement; increase in gen	5	3,4,5,7,9,10,11					72.7	
5/26/2012	14:30:00							49060	0	0	6040	6040	4830	0	5650	0	8810	8760	8930	0	C				5	3,4,5,7,9,10,11					72.7	
5/26/2012	15:30:00							57870	0	0	6040	6040	4830	0	5650	8810	8810	8760	8930	0	C	up	stay	no movement; increase in gen	6	3,4,5,7,8,9,10,11					72.7	
5/26/2012	16:30:00							57870	0	0	6040	6040	4830	0	5650	8810	8810	8760	8930	0	C				6	3,4,5,7,8,9,10,11					72.7	
5/26/2012	17:30:00							57870	0	0	6040	6040	4830	0	5650	8810	8810	8760	8930	0	C				6	3,4,5,7,8,9,10,11					72.7	
5/26/2012	18:30:00							40250	0	0	6040	6040	4830	0	5650	0	0	8760	8930	0	C	down	stay	no movement; decrease in gen	4	3,4,5,7,10,11					72.7	
5/26/2012	19:30:00							40250	0	0	6040	6040	4830	0	5650	0	0	8760	8930	0	C				4	3,4,5,7,10,11					72.7	
5/26/2012	20:30:00							40250	0	0	6040	6040	4830	0	5650	0	0	8760	8930	0	C				4	3,4,5,7,10,11					72.7	
5/26/2012	21:30:00							22560	0	0	6040	6040	4830	0	5650	0	0	0	0	0	A	down	stay	no movement; decrease in gen	2	3,4,5,7					72.7	
5/26/2012	22:30:00							22560	0	0	6040	6040	4830	0	5650	0	0	0	0	0	A				2	3,4,5,7					72.7	
5/26/2012	23:30:00							22560	0	0	6040	6040	4830	0	5650	0	0	0	0	0	A				2	3,4,5,7					72.7	
5/27/2012	0:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	5,7					74.4	
5/27/2012	1:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	2:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	3:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	4:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	5:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	6:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	7:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	8:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	9:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	10:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	11:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	12:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	13:30:00							39200	0	0	6000	6020	4250	0	4950	0	0	8860	9120	0	C	up	stay	no movement; increase in gen	4	3,4,5,7,10,11					74.4	
5/27/2012	14:30:00							56780	0	0	6000	6020	4250	0	4950	8850	8730	8860	9120	0	C	up	stay	no movement; increase in gen	6	3,4,5,7,8,9,10,11					74.4	
5/27/2012	15:30:00							67160	5500	4880	6000	6020	4250	0	4950	8850	8730	8860	9120	0	C	up	stay	no movement; increase in gen	7	1,2,3,4,5,7,8,9,10,11					74.4	
5/27/2012	16:30:00							67160	5500	4880	6000	6020	4250	0	4950	8850	8730	8860	9120	0	C				7	1,2,3,4,5,7,8,9,10,11					74.4	
5/27/2012	17:30:00							67160	5500	4880	6000	6020	4250	0	4950	8850	8730	8860	9120	0	C				7	1,2,3,4,5,7,8,9,10,11					74.4	
5/27/2012	18:30:00							67160	5500	4880	6000	6020	4250	0	4950	8850	8730	8860	9120	0	C				7	1,2,3,4,5,7,8,9,10,11					74.4	
5/27/2012	19:30:00							47930	0	0	6000	6020	4250	0	4950	0	8730	8860	9120	0	C	down	stay	no movement; decrease in gen	5	3,4,5,7,9,10,11					74.4	
5/27/2012	20:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1	5,7					74.4	
5/27/2012	21:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	22:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/27/2012	23:30:00							9200	0	0	0	0	4250	0	4950	0	0	0	0	0	A				1	5,7					74.4	
5/28/2012	0:30:00							10600	0	0	0	0	5160	0	5440	0	0	0	0	0	A				1	5,7					76.4	
5/28/2012	1:30:00							10600	0	0	0	0	5160	0	5440	0	0	0	0	0	A				1	5,7					76.4	
5/28/2012	2:30:00							10600	0	0	0	0	5160	0	5440	0	0	0	0	0	A				1	5,7					76.4	
5/28/2012	3:30:00							10600	0	0	0	0	5160	0	5440	0	0	0	0	0	A				1	5,7					76.4	
5/28/2012	4:30:00							10600	0	0	0	0	5160	0	5440	0	0	0	0	0	A				1	5,7					76.4	
5/28/2012	5:30:00							10600	0	0	0	0	5160	0	5440	0	0	0	0	0	A				1	5,7					76.4	
5/28/2012	6:30:00							10600	0	0	0	0	5160	0	5440	0	0	0	0	0	A											

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1
21-69	4/16/2012	13:20	04/16/12 13:20:00					23480	0	0	0	6080	5320	5950	6130	0	0	0	0		A				2	4,5,6,7			56.5	
21-69	4/16/2012	NA	NA	NA	NA	Last Fallback Detection															A								56.5	
21-69	4/16/2012	20:04:03	LT - Upper Rowland Is. West	4/16/2012	20:08:51	Start Tailrace Detection 1	E	17530	0	0	0	6080	5320	0	6130	0	0	0	0		A	down			1	4,5,7			56.5	move up, decrease in generation
	4/16/2012	20:30:00						17530	0	0	0	6080	5320	0	6130	0	0	0	0		A				1	4,5,7			56.5	
	4/16/2012	21:30:00						17530	0	0	0	6080	5320	0	6130	0	0	0	0		A				1	4,5,7			56.5	
	4/16/2012	22:30:00						11450	0	0	0	0	5320	0	6130	0	0	0	0		A	down			1	5,7			56.5	
	4/16/2012	23:30:00						11450	0	0	0	0	5320	0	6130	0	0	0	0		A				1	5,7			56.5	
	4/17/2012	0:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	1:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	2:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	3:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	4:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	5:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	6:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	7:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	8:30:00						17350	0	0	0	6020	5200	0	6130	0	0	0	0		A	up			1	4,5,7			59.3	
	4/17/2012	9:30:00						17350	0	0	0	6020	5200	0	6130	0	0	0	0		A				1	4,5,7			59.3	
	4/17/2012	10:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A	down			1	5,7			59.3	
	4/17/2012	11:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	12:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	13:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	14:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	15:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
	4/17/2012	16:30:00						11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
21-69	4/17/2012	16:43:59	LT - Upper Rowland Is. West	4/17/2012	16:46:59	End Tailrace Detection 1	E	11330	0	0	0	0	5200	0	6130	0	0	0	0		A				1	5,7			59.3	
21-69	4/17/2012	18:40:39	T1 - Opp. Mudd Is.	4/17/2012	18:43:14	Start Lower River		49490	0	0	5910	6020	5200	0	6130	0	8700	8690	8840		C	up			5	3,4,5,7,9,10,11			59.3	drop back, no change in generation
21-69	4/17/2012	20:45:05	T3 - Opp. McGibney	4/17/2012	20:47:16	End Detections		68720	5490	4870	5910	6020	5200	0	6130	8870	8700	8690	8840		C	up			7	1,2,3,4,5,7,8,9,10,11			59.3	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1		
21-74	4/18/2012	12:46	04/18/12 12:46:00					11240	0	0	0	0	5300	0	5940	0	0	0	0	0		A				1,5,7				60.1		
21-74	5/4/2012	16:10:07	T1 - Mudd Is.	5/4/2012	16:11:58	Last Fallback Detection		68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		A	C up			7	1,2,3,4,5,7,8,9,10,11				60.9		
21-74	NA	NA	NA	NA	NA	Start Tailrace Detection 1															A											
21-74	NA	NA	NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)															A											
21-74	5/5/2012	18:18:56	Tailrace Unit 10 (Mid)	5/5/2012	18:26:29	Start Upper Tailrace Detection (Start UT Foray 1)	C	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		A	C down			5	3,4,5,7,9,10,11	1			63.3	move up	
	5/5/2012	18:30:00	Tailrace Unit 10 (Mid)					49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		A	C			5	3,4,5,7,9,10,11	1			63.3		
	5/5/2012	19:30:00	Tailrace Unit 9.10 (Mid)					74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C up			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3	no response to increase in generation	
	5/5/2012	20:30:00	Tailrace Unit 9.10 (Mid)					74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3		
	5/5/2012	21:30:00	Tailrace Unit 9.10 (Mid)					74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3		
21-74	5/5/2012	22:10:17	Tailrace Unit 10 (Mid)	5/5/2012	22:17:13	End Upper Tailrace Detection (End UT Foray 1)	C	74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)															A											
21-74	5/5/2012	NA	NA	NA	NA	End Tailrace Detection 1															A											
21-74	5/5/2012	22:10:48	T1 - Opp. Mudd Is.	5/5/2012	22:11:58	Start Lower River		74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3		
21-74	5/5/2012	22:17:31	T1 - Opp. Mudd Is.	5/5/2012	22:21:58	End Lower River		74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Start Tailrace Detection 2															A											
21-74	5/5/2012	NA	NA	NA	NA	Transition Upstream 2 (Tailrace to Upper Tailrace)															A											
21-74	5/5/2012	22:20:39	Tailrace Unit 9 (Mid)	5/5/2012	22:27:48	Start Upper Tailrace Detection (Start UT Foray 2)	C	74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3	move up, no change in generation	
	5/5/2012	22:30:00	Tailrace Unit 9.10 (Mid)					74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		A	C			7	1,2,3,4,5,6,7,8,9,10,11	1			63.3		
21-74	5/5/2012	22:51:33	Tailrace Unit 9 (Mid)	5/5/2012	22:57:35	End Upper Tailrace Detection (End UT Foray 2)	C	22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A	C down			2	3,4,5,7	1			63.3	
21-74	5/5/2012	NA	NA	NA	NA	Transition Downstream 2 (Upper Tailrace to Tailrace)															A											
21-74	5/5/2012	NA	NA	NA	NA	End Tailrace Detection 2															A											
21-74	5/5/2012	22:52:41	T1 - Opp. Mudd Is.	5/5/2012	22:57:29	Start Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	23:20:12	T1 - Mudd Is.	5/5/2012	23:25:02	End Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Start Tailrace Detection 3															A											
21-74	5/5/2012	NA	NA	NA	NA	Transition Upstream 3 (Tailrace to Upper Tailrace)															A											
21-74	5/5/2012	23:20:17	Tailrace Unit 8 (Mid)	5/5/2012	23:26:58	Start Upper Tailrace Detection (Start UT Foray 3)	C	22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3	move up, no change in generation	
21-74	5/5/2012	23:20:28	Tailrace Unit 10 (Mid)	5/5/2012	23:28:35	End Upper Tailrace Detection (End UT Foray 3)	C	22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Transition Downstream 3 (Upper Tailrace to Tailrace)															A											
21-74	5/5/2012	NA	NA	NA	NA	End Tailrace Detection 3															A											
21-74	5/5/2012	23:23:00	T1 - Opp. Mudd Is.	5/5/2012	23:27:51	Start Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3	drop back, no change in generation	
21-74	5/5/2012	23:28:04	T1 - Opp. Mudd Is.	5/5/2012	23:32:53	End Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Start Tailrace Detection 4															A											
21-74	5/5/2012	NA	NA	NA	NA	Transition Upstream 4 (Tailrace to Upper Tailrace)															A											
21-74	5/5/2012	23:29:42	Tailrace Unit 8 (Mid)	5/5/2012	23:39:09	Start Upper Tailrace Detection (Start UT Foray 4)	C	22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3	move up, no change in generation	
21-74	5/5/2012	23:30:01	Tailrace Unit 10 (Mid)	5/5/2012	23:39:26	End Upper Tailrace Detection (End UT Foray 4)	C	22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Transition Downstream 4 (Upper Tailrace to Tailrace)															A											
21-74	5/5/2012	NA	NA	NA	NA	End Tailrace Detection 4															A											
21-74	5/5/2012	23:30:25	T1 - Mudd Is.	5/5/2012	23:35:02	Start Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	23:40:27	T1 - Mudd Is.	5/5/2012	23:45:18	End Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Start Tailrace Detection 5															A											
21-74	5/5/2012	NA	NA	NA	NA	Transition Upstream 5 (Tailrace to Upper Tailrace)															A											
21-74	5/5/2012	23:40:32	Tailrace Unit 8 (Mid)	5/5/2012	23:48:58	Start Upper Tailrace Detection (Start UT Foray 5)	C	22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3	move up, no change in generation	
21-74	5/5/2012	23:40:52	Tailrace Unit 10 (Mid)	5/5/2012	23:49:15	End Upper Tailrace Detection (End UT Foray 5)	C	22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Transition Downstream 5 (Upper Tailrace to Tailrace)															A											
21-74	5/5/2012	NA	NA	NA	NA	End Tailrace Detection 5															A											
21-74	5/5/2012	23:43:14	T1 - Opp. Mudd Is.	5/5/2012	23:47:57	Start Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	23:48:10	T1 - Opp. Mudd Is.	5/5/2012	23:53:00	End Lower River		22570	0	0	6040	6080	4920	0	5530	0	0	0	0	0	0	A			2	3,4,5,7	1			63.3		
21-74	5/5/2012	NA	NA	NA	NA	Start Tailrace Detection																										

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1	
	5/6/2012	1:30:00	Tailrace Unit 8,9,10 (Mid)				C	10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7		1		65.8	
	5/6/2012	2:30:00	Tailrace Unit 8,9,10 (Mid)				C	10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7		1		65.8	
	5/6/2012	3:30:00	Tailrace Unit 8,9,10 (Mid)				C	10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7		1		65.8	
21-74	5/6/2012	3:41:56	Tailrace Unit 9 (Mid)	5/6/2012	3:41:56	End Upper Tailrace Detection (End UT Foray 10)	C	10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7		1		65.8	
21-74	5/6/2012	3:45:16	LT - Upper Rowland Is. West	5/6/2012	3:50:05	Transition Downstream 10 (Upper Tailrace to Tailrace)	E	10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7				65.8	drop back, no change in generation
	5/6/2012	4:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7				65.8	
	5/6/2012	5:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7				65.8	
21-74	5/6/2012	5:43:39	LT - Upper Rowland Is. West	5/6/2012	5:48:36	Transition Upstream 11 (Tailrace to Upper Tailrace)	E	10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7				65.8	
21-74	5/6/2012	NA	NA	NA	NA	Start Upper Tailrace Detection (Start UT Foray 11)															A									65.8	
	5/6/2012	6:30:00	Tailrace Unit 8,9,10 (Mid)				C	10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7		1		65.8	move up, no change in generation
	5/6/2012	7:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7				65.8	
	5/6/2012	8:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7				65.8	
	5/6/2012	9:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C	up			5,3,4,5,7,9,10,11					65.8	no response to changes in generation
	5/6/2012	10:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				5,3,4,5,7,9,10,11					65.8	
	5/6/2012	11:30:00	Tailrace Unit 8,9,10 (Mid)				C	49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				5,3,4,5,7,9,10,11		1			65.8	
	5/6/2012	12:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				5,3,4,5,7,9,10,11					65.8	
	5/6/2012	13:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				5,3,4,5,7,9,10,11					65.8	
	5/6/2012	14:30:00						49210	0	0	5950	6030	4820	0	5710	0	8700	8870	9130		C				5,3,4,5,7,9,10,11					65.8	
	5/6/2012	15:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C	up			7,1,2,3,4,5,6,7,8,9,10,11					65.8	
	5/6/2012	16:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7,1,2,3,4,5,6,7,8,9,10,11					65.8	
	5/6/2012	17:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7,1,2,3,4,5,6,7,8,9,10,11					65.8	
	5/6/2012	18:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7,1,2,3,4,5,6,7,8,9,10,11					65.8	
	5/6/2012	19:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7,1,2,3,4,5,6,7,8,9,10,11					65.8	
	5/6/2012	20:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7,1,2,3,4,5,6,7,8,9,10,11					65.8	
	5/6/2012	21:30:00						74680	5370	5050	5950	6030	4820	6220	5710	8830	8700	8870	9130		C				7,1,2,3,4,5,6,7,8,9,10,11					65.8	
	5/6/2012	22:30:00						31340	0	0	5950	6030	4820	0	5710	8830	0	0	0	0	C	down			3,4,5,7,8					65.8	
	5/6/2012	23:30:00						10530	0	0	0	0	4820	0	5710	0	0	0	0	0	A					1,5,7				65.8	
	5/7/2012	0:30:00						11570	0	0	0	0	5550	0	6020	0	0	0	0	0	A					1,5,7				67.6	
	5/7/2012	1:30:00						11570	0	0	0	0	5550	0	6020	0	0	0	0	0	A					1,5,7				67.6	
	5/7/2012	2:30:00	"C" Gate Aerial				C	11570	0	0	0	0	5550	0	6020	0	0	0	0	0	A					1,5,7				67.6	move to EFL, no change in generation
	5/7/2012	3:30:00	Tailrace Unit 7 (Mid)				B	11570	0	0	0	0	5550	0	6020	0	0	0	0	0	A					1,5,7		1		67.6	
	5/7/2012	4:30:00	Conowingo Tailrace Units 1-7 (Near)				B	11570	0	0	0	0	5550	0	6020	0	0	0	0	0	A					1,5,7				67.6	
	5/7/2012	5:30:00	Tailrace Unit 1 (Mid)				A	32830	0	0	5910	6000	5550	0	6020	0	0	0	9350		C	up			3,3,4,5,7,11		1			67.6	
	5/7/2012	5:51:24	Tailrace Unit 7 (Mid)	5/7/2012	5:51:24	End Upper Tailrace Detection (End UT Foray 11)	B	32830	0	0	5910	6000	5550	0	6020	0	0	0	9350		C				3,3,4,5,7,11					67.6	
	5/7/2012	6:30:00					B	58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C	up			6,3,4,5,7,8,9,10,11					67.6	
21-74	5/7/2012	7:28:17	LT - Upper Rowland Is. East	5/7/2012	7:30:54	Transition Downstream 11 (Upper Tailrace to Tailrace)	E	58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C				6,3,4,5,7,8,9,10,11					67.6	drop back, no change in generation
	5/7/2012	7:30:00						58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C				6,3,4,5,7,8,9,10,11					67.6	
	5/7/2012	8:30:00						58990	0	0	5910	6000	5550	0	6020	8770	8620	8770	9350		C				6,3,4,5,7,8,9,10,11					67.6	
	5/7/2012	9:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C	up			7,1,2,3,4,5,6,7,8,9,10,11					67.6	
	5/7/2012	10:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7,1,2,3,4,5,6,7,8,9,10,11					67.6	
	5/7/2012	11:30:00						75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7,1,2,3,4,5,6,7,8,9,10,11					67.6	
21-74	5/7/2012	12:05:24	LT - Upper Rowland Is. East	5/7/2012	12:06:36	End Tailrace Detection 10	E	75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7,1,2,3,4,5,6,7,8,9,10,11					67.6	
21-74	5/7/2012	14:51:03	T1 - Opp. Mudd Is.	5/7/2012	14:55:37	Start Lower River		75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7,1,2,3,4,5,6,7,8,9,10,11					67.6	drop back, no change in generation
21-74	5/7/2012	15:15:43	T2 - Opp. Crab House	5/7/2012	15:19:04	End Detections		75100	5330	5060	5910	6000	5550	5720	6020	8770	8620	8770	9350		C				7,1,2,3,4,5,6,7,8,9,10,11					67.6	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1	
21-80	4/18/2012	15:58	04/18/12 15:58:00					11240	0	0	0	0	5300	0	5940	0	0	0	0	0	A					1,5,7				54.6	
21-80	4/18/2012	NA	NA	NA	NA	Last Fallback Detection															A								54.6		
21-80	4/18/2012	21:25:54	LT - Upper Rowland Is. West	4/18/2012	21:30:22	Start Tailrace Detection 1	E	11240	0	0	0	0	5300	0	5940	0	0	0	0	0	A					1,5,7				54.6	move up, no change in generation
	4/18/2012	21:30:00						11240	0	0	0	0	5300	0	5940	0	0	0	0	0	A					1,5,7				54.6	
21-80	4/18/2012	21:31:22	LT - Upper Rowland Is. West	4/18/2012	21:35:46	End Tailrace Detection 1	E	11240	0	0	0	0	5300	0	5940	0	0	0	0	0	A					1,5,7				54.6	drop back, no change in generation
21-80	4/21/2012	20:23:59	T1 - Mudd Is.	4/21/2012	20:26:11	Start Lower River		32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	0	C	up			3,2,3,4,5,10				65.0		
21-80	4/23/2012	22:48:03	T2 - Opp. Crab House	4/24/2012	6:45:12	End Detections		11560	0	0	0	0	5490	0	6070	0	0	0	0	0	A	down			1,5,7				62.5		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Move ment	Spill Deep Corner	Water Temp. (F)	Comments NAI1	
5/10/12	2:30:00							10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A					1,3,5				64.33	
5/10/12	3:30:00							10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A					1,3,5				64.33	
5/10/12	4:30:00							10860	0	0	5710	0	5150	0	0	0	0	0	0	0	A					1,3,5				64.33	
5/10/12	5:30:00							30840	0	5150	5710	5980	5150	0	0	8850	0	0	0	0	C	up	stay	no movement; increase in gen	3,2,3,4,5,8				64.33		
5/10/12	6:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C	up	stay	no movement; increase in gen	7,1,2,3,4,5,6,7,8,9,10,11				64.33	no response to increase in generation		
5/10/12	7:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	8:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	9:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	10:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	11:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	12:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	13:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	14:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	15:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	16:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	17:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	18:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	19:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	20:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	21:30:00							74890	5390	5150	5710	5980	5150	5780	5990	8850	8660	8860	9370	C					7,1,2,3,4,5,6,7,8,9,10,11				64.33		
5/10/12	22:30:00							22830	0	0	5710	5980	5150	0	5990	0	0	0	0	0	A	down	stay	no movement; decrease in gen	2,3,4,5,7				64.33		
5/10/12	23:30:00							22830	0	0	5710	5980	5150	0	5990	0	0	0	0	0	A					2,3,4,5,7				64.33	
5/11/12	0:30:00							23000	0	0	5970	6020	5070	0	5940	0	0	0	0	0	A					2,3,4,5,7				63.57	
5/11/12	1:30:00							11010	0	0	0	0	5070	0	5940	0	0	0	0	0	A	down	stay	no movement; decrease in gen	1,5,7				63.57	no response to decrease in generation	
5/11/12	2:30:00							11010	0	0	0	0	5070	0	5940	0	0	0	0	0	A					1,5,7				63.57	
5/11/12	3:30:00							11010	0	0	0	0	5070	0	5940	0	0	0	0	0	A					1,5,7				63.57	
5/11/12	4:30:00							74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C	up	stay	no movement; increase in gen	7,1,2,3,4,5,6,7,8,9,10,11				63.57			
5/11/12	5:30:00							74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C					7,1,2,3,4,5,6,7,8,9,10,11				63.57		
5/11/12	6:30:00							74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C					7,1,2,3,4,5,6,7,8,9,10,11				63.57		
5/11/12	7:30:00							74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C					7,1,2,3,4,5,6,7,8,9,10,11				63.57		
5/11/12	8:30:00							74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C					7,1,2,3,4,5,6,7,8,9,10,11				63.57		
5/11/12	9:30:00							74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C					7,1,2,3,4,5,6,7,8,9,10,11				63.57		
54-13	5/11/12	9:36:51	Tailrace Unit 10 (Mid)	5/11/2012	9:45:32	End Upper Tailrace Detection (End UT Foray 6)	C	74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C					7,1,2,3,4,5,6,7,8,9,10,11		1		63.57	drop back, no change in generation	
54-13	5/11/12	NA	NA	NA	NA	Transition Downstream 6 (Upper Tailrace to Tailrace)	A																							63.57	
54-13	5/11/12	NA	NA	NA	NA	End Tailrace Detection 5	A																							63.57	
54-13	5/11/12	10:37:26	T3 - Opp. McGibney	5/11/2012	10:46:43	Start Lower River		74540	5370	4860	5970	6020	5070	5770	5940	8810	8630	8860	9240	C					7,1,2,3,4,5,6,7,8,9,10,11				63.57		
54-13	5/16/12	17:41:04	Spencer Island East	5/16/2012	17:42:38	End Lower River		77520	5860	5030	6180	6180	5960	6180	6180	8860	8680	8940	9460	C	up	stay	no movement; increase in gen	7,1,2,3,4,5,6,7,8,9,10,11					65.74		
54-13	NA	NA	NA	NA	NA	Start Tailrace Detection 6	A																								
54-13	NA	NA	NA	NA	NA	Transition Upstream 7 (Tailrace to Upper Tailrace)	A																								
54-13	5/18/12	4:02:05	Tailrace Unit 9 (Mid)	5/18/2012	4:03:16	Start Upper Tailrace Detection (Start UT Foray 7)	C	78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11		1		65.49	move up, slight increase in generation	
5/18/12	4:30:00							78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11				65.49		
5/18/12	5:30:00							78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11				65.49		
5/18/12	6:30:00							78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11				65.49		
5/18/12	7:30:00							78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11				65.49		
5/18/12	8:30:00							78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11				65.49		
5/18/12	9:30:00							78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11				65.49		
54-13	5/18/12	9:48:38	Tailrace Unit 9 (Mid)	5/18/2012	9:49:51	End Upper Tailrace Detection (End UT Foray 7)	C	78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11		1		65.49	drop back, no change in generation	
54-13	5/18/12	NA	NA	NA	NA	Transition Downstream 7 (Upper Tailrace to Tailrace)	A																							65.49	
54-13	5/18/12	NA	NA	NA	NA	End Tailrace Detection 6	A																							65.49	
54-13	5/18/12	14:38:58	Spencer Island West	5/18/2012	14:48:39	Start Lower River		78830	6160	5220	6360	6420	5260	6590	6420	9000	8860	9100	9440	C					7,1,2,3,4,5,6,7,8,9,10,11				65.49		
54-13	5/20/12	1:08:21	Spencer Island West	5/20/2012	1:16:19	End Detections		31590	0	4970	0	6130	5480	0	6030	0	0	0	8980	C	down	stay	no movement; decrease in gen	3,2,4,5,7,11					66.96		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Water Temp. (°F)	Spill Deep Corner	Comments NAI1	
54-17	4/12/12	14:54:00	04/12/12 14:54:00					11580	0	0	0	0	5550	0	6030	0	0	0	0		A					1	5,7		55.05		
54-17	5/5/12	13:37:18	T1 - Opp. Mudd Is.	5/5/2012	13:37:32	Last Fallback Detection		49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C	up	stay		5	3,4,5,7,9,10,11		63.27			
54-17	5/5/12	15:12:07	Upper Rowland Is. West	5/5/2012	15:16:42	Start Tailrace Detection 1	E	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C				5	3,4,5,7,9,10,11		63.27		move up, no change in generation	
	5/5/12	15:30:00						49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C				5	3,4,5,7,9,10,11		63.27			
54-17	5/5/12	16:07:01	Upper Rowland Is. West	5/5/2012	16:11:12	End Tailrace Detection 1	E	49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C				5	3,4,5,7,9,10,11		63.27			
54-17	5/5/12	18:33:09	T1 - Opp. Mudd Is.	5/5/2012	18:36:07	Start Lower River		49530	0	0	6040	6080	4920	0	5530	0	8730	8940	9290		C				5	3,4,5,7,9,10,11		63.27		drop back, no change in generation	
54-17	5/6/12	8:19:48	T3 - McGibney Is.	5/6/2012	8:24:38	End Detections		10530	0	0	0	0	4820	0	5710	0	0	0	0		A	down	stay		1	5,7		65.76			

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NAI1
	4/19/12	1:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	2:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	3:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	4:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	5:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	6:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	7:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	8:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	9:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	10:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	11:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	12:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	13:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	14:02:42	Upper Rowland Is. West	4/19/2012	14:07:28	Transition Downstream 5 (Upper Tailrace to Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31	drop back, no change in generation	
54-30	4/19/12	14:18:52	Upper Rowland Is. West	4/19/2012	14:23:29	Transition Upstream 6 (Tailrace to Upper Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	14:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	15:17:10	Tailrace Unit 7 (Mid)	4/19/2012	15:20:20	Start Upper Tailrace Detection (Start UT Foray 6)	B	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31	move up and back and forth, no change in generation	
	4/19/12	15:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A/B				2	5,7			62.31		
54-30	4/19/12	15:40:06	Tailrace Unit 1 (Mid)	4/19/2012	15:43:20	End Upper Tailrace Detection (End UT Foray 6)	A	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	15:46:37	Upper Rowland Is. West	4/19/2012	15:51:27	Transition Downstream 6 (Upper Tailrace to Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31	drop back, no change in generation	
54-30	4/19/12	16:06:54	Upper Rowland Is. West	4/19/2012	16:11:42	Transition Upstream 7 (Tailrace to Upper Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
	4/19/12	16:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	16:40:35	Tailrace Unit 7 (Mid)	4/19/2012	16:44:01	Start Upper Tailrace Detection (Start UT Foray 7)	B	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31	move up, no change in generation	
54-30	4/19/12	16:57:38	Tailrace Unit 7 (Mid)	4/19/2012	17:04:15	End Upper Tailrace Detection (End UT Foray 7)	B	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	17:05:35	Upper Rowland Is. West	4/19/2012	17:10:25	Transition Downstream 7 (Upper Tailrace to Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31	drop back, no change in generation	
	4/19/12	17:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	18:07:30	Upper Rowland Is. West	4/19/2012	18:12:22	Transition Upstream 8 (Tailrace to Upper Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	18:20:10	Tailrace Unit 1 (Mid)	4/19/2012	18:27:00	Start Upper Tailrace Detection (Start UT Foray 8)	A	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31	move up and back and forth, no change in generation	
	4/19/12	18:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	18:41:24	Tailrace Unit 7 (Mid)	4/19/2012	18:48:18	End Upper Tailrace Detection (End UT Foray 8)	B	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31		
54-30	4/19/12	18:48:26	Upper Rowland Is. East	4/19/2012	18:52:28	Transition Downstream 8 (Upper Tailrace to Tailrace)	F	11260	0	0	0	0	5300	0	5960	0	0	0	0		A				1	5,7			62.31	drop back, no change in generation	
	4/19/12	19:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	0		C	up			3	3,4,5,7,9			62.31	
	4/19/12	20:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	0		C				3	3,4,5,7,9			62.31	
	4/19/12	21:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	0		C				3	3,4,5,7,9			62.31	
	4/19/12	22:30:00						45880	0	4980	6060	5960	5300	0	5960	8850	8770	0	0	0		C	up			5	2,3,4,5,7,8,9			62.31	
	4/19/12	23:30:00						11260	0	0	0	5960	5300	0	0	0	0	0	0		A	down				1	4,5			62.31	
4/20/12	0:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
4/20/12	1:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
4/20/12	2:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
4/20/12	3:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
4/20/12	4:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
4/20/12	5:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
4/20/12	6:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
4/20/12	7:30:00							11450	0	0	0	6240	5210	0	0	0	0	0	0		A					1	4,5			63.14	
54-30	4/20/12	8:22:38	Upper Rowland Is. West	4/20/2012	8:26:35	Transition Upstream 9 (Tailrace to Upper Tailrace)	E	11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14	move west, no change in generation	
	4/20/12	8:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
	4/20/12	9:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
	4/20/12	10:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
54-30	4/20/12	11:08:02	Tailrace Unit 7 (Mid)	4/20/2012	11:10:58	Start Upper Tailrace Detection (Start UT Foray 9)	B	11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14	move up and back and forth, no change in generation	
	4/20/12	11:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
	4/20/12	12:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
	4/20/12	13:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
	4/20/12	14:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
54-30	4/20/12	14:55:22	Tailrace Unit 8 (Mid)	4/20/2012	14:58:39	End Upper Tailrace Detection (End UT Foray 9)	C	11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
	4/20/12	15:30:00						11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
54-30	4/20/12	15:41:58	Upper Rowland Is. West	4/20/2012	15:46:20	Transition Downstream 9 (Upper Tailrace to Tailrace)	E	11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14	drop back, no change in generation	
54-30	4/20/12	16:13:01	Upper Rowland Is. West	4/20/2012	16:17:58	Transition Upstream 10 (Tailrace to Upper Tailrace)	E	11450	0	0	0	6240	5210	0	0	0	0	0	0		A				1	4,5			63.14		
54-30	4/20/12	16:27:07																													

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1	
54-30	4/21/12	10:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5				64.55	
54-30	4/21/12	10:59:31	Tailrace Unit 7 (Mid)	4/21/2012	11:05:46	End Upper Tailrace Detection (End UT Foray 11)	B	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	1			64.55	move west, no change in generation
	4/21/12	11:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5				64.55	
54-30	4/21/12	12:02:22	Upper Rowland Is. West	4/21/2012	12:06:33	Transition Downstream 11 (Upper Tailrace to Tailrace)	E	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5				64.55	drop back, no change in generation
54-30	4/21/12	12:12:46	Upper Rowland Is. West	4/21/2012	12:17:23	Transition Upstream 12 (Tailrace to Upper Tailrace)	E	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5				64.55	
54-30	4/21/12	12:15:00	Tailrace Unit 8 (Mid)	4/21/2012	12:21:41	Start Upper Tailrace Detection (Start UT Foray 12)	C	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	1			64.55	move up and back and forth, no change in generation
	4/21/12	12:30:00						11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5				64.55	
	4/21/12	13:30:00					A/B/C	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	3			64.55	
	4/21/12	14:30:00					C	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	1			64.55	
	4/21/12	15:30:00					A/C	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	1			64.55	
	4/21/12	16:30:00					A/C	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	1			64.55	
	4/21/12	17:30:00					A/B/C	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	3			64.55	
	4/21/12	18:30:00					A/B/C	11980	0	0	0	6220	5760	0	0	0	0	0	0	0	A					1,4.5	3			64.55	
	4/21/12	19:30:00					A/B/C	18160	0	0	6180	6220	5760	0	0	0	0	0	0	0	A	up			2,3,4,5	3			64.55		
	4/21/12	20:30:00					C	32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C	up				3,2,3,4,5,10	1			64.55		
	4/21/12	21:30:00					C	32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C					3,2,3,4,5,10				64.55		
	4/21/12	22:30:00					C	32130	0	5040	6180	6220	5760	0	0	0	0	8930	0	C					3,2,3,4,5,10				64.55		
	4/21/12	23:30:00					C	18160	0	0	6180	6220	5760	0	0	0	0	0	0	0	A	down			2,3,4,5				64.55		
	4/22/12	0:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A	down			1,3,5				64.40		
	4/22/12	1:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5				64.40		
	4/22/12	2:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5				64.40		
	4/22/12	3:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5				64.40		
	4/22/12	4:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5				64.40		
	4/22/12	5:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5				64.40		
	4/22/12	6:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5				64.40		
	4/22/12	7:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5	3			64.40		
	4/22/12	8:30:00					A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5	2			64.40		
	4/22/12	9:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A				1,3,5	3			64.40		
54-30	4/22/12	10:18:58	Tailrace Unit 10 (Mid)	4/22/2012	10:26:55	End Upper Tailrace Detection (End UT Foray 12)	C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	1			64.40	
54-30	4/22/12	10:20:51	Upper Rowland Is. West	4/22/2012	10:25:39	Transition Downstream 12 (Upper Tailrace to Tailrace)	E	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5				64.40	drop back, no change in generation
	4/22/12	10:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5				64.40	
54-30	4/22/12	10:36:38	Upper Rowland Is. West	4/22/2012	10:40:26	Transition Upstream 13 (Tailrace to Upper Tailrace)	E	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5				64.40	
54-30	4/22/12	10:38:12	Tailrace Unit 1 (Mid)	4/22/2012	10:46:04	Start Upper Tailrace Detection (Start UT Foray 13)	A	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	1			64.40	move up and back and forth, no change in generation
	4/22/12	11:30:00					A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	2			64.40	
	4/22/12	12:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	3			64.40	
	4/22/12	13:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	3			64.40	
	4/22/12	14:30:00					A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	2			64.40	
	4/22/12	15:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	3			64.40	
	4/22/12	16:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	3			64.40	
	4/22/12	17:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	3			64.40	
	4/22/12	18:30:00					A/B/C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	3			64.40	
	4/22/12	19:30:00					A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	2			64.40	
	4/22/12	20:30:00					A/B	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5	2			64.40	
	4/22/12	21:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5				64.40	
	4/22/12	22:30:00					C	11330	0	0	6190	0	5140	0	0	0	0	0	0	0	A					1,3,5				64.40	
	4/23/12	0:30:00					C	11600	0	0	6110	0	5490	0	0	0	0	0	0	0	A					1,3,5				62.54	
	4/23/12	1:30:00					C	11600	0	0	6110	0	5490	0	0	0	0	0	0	0	A					1,3,5				62.54	
	4/23/12	2:30:00					C	11600	0	0	6110	0	5490	0	0	0	0	0	0	0	A					1,3,5				62.54	
	4/23/12	3:30:00					C	11600	0	0	6110	0	5490	0	0	0	0	0	0	0	A					1,3,5				62.54	
	4/23/12	4:30:00					C	11600	0	0	6110	0	5490	0	0	0	0	0													

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1	
54-30	4/24/12	7:29:42	Tailrace Unit 9 (Mid)	4/24/2012	7:38:55	Start Upper Tailrace Detection (Start UT Foray 14)	C	41430	0	0	6030	6090	5490	0	6090	0	0	0	8780	8950	C					4,3,4.5,7,10,11		1	61.60	move up and back and forth, no change in generation	
	4/24/12	7:30:00						41430	0	0	6030	6090	5490	0	6090	0	0	0	8780	8950	C					4,3,4.5,7,10,11			61.60		
	4/24/12	8:30:00					B/C	41430	0	0	6030	6090	5490	0	6090	0	0	0	8780	8950	C					4,3,4.5,7,10,11		2	61.60		
	4/24/12	9:30:00					A/B/C	41430	0	0	6030	6090	5490	0	6090	0	0	0	8780	8950	C					4,3,4.5,7,10,11		3	61.60		
	4/24/12	10:30:00					B/C	11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A	down				1,5,7		2	61.60		
	4/24/12	11:30:00					A/B/C	11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A					1,5,7		3	61.60		
	4/24/12	12:30:00					A/B/C	11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A					1,5,7		3	61.60		
	4/24/12	13:30:00						11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A					1,5,7			61.60		
	4/24/12	14:30:00					C	11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A					1,5,7		1	61.60		
	4/24/12	15:30:00						11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A					1,5,7			61.60		
	4/24/12	16:30:00					A/B/C	11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A					1,5,7		3	61.60		
	4/24/12	17:30:00					C	11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A					1,5,7			61.60		
	4/24/12	18:30:00						23700	0	0	6030	6090	5490	0	6090	0	0	0	0	0	A	up				2,3,4.5,7			61.60		
	4/24/12	19:30:00					C	23700	0	0	6030	6090	5490	0	6090	0	0	0	0	0	A					2,3,4.5,7			61.60		
54-30	4/24/12	20:13:39	Tailrace Unit 10 (Mid)	4/24/2012	20:21:26	End Upper Tailrace Detection (End UT Foray 14)	C	41430	0	0	6030	6090	5490	0	6090	0	0	0	8780	8950	C	up				4,3,4.5,7,10,11		1	61.60		
54-30	4/24/12	20:14:32	Upper Rowland Is. West	4/24/2012	20:16:57	Transition Downstream 14 (Upper Tailrace to Tailrace)	E	41430	0	0	6030	6090	5490	0	6090	0	0	0	8780	8950	C					4,3,4.5,7,10,11			61.60	drop back, 1 min after increase in generation	
54-30	4/24/12	NA	NA	NA	NA	End Tailrace Detection 1														A										61.60	
54-30	4/24/12	23:00:00	T1 - Mudd Is.	4/24/2012	23:04:36	Start Lower River		11580	0	0	0	5490	0	6090	0	0	0	0	0	0	A	down					1,5,7			61.60	
54-30	4/25/12	2:19:42	T1 - Mudd Is.	4/25/2012	2:24:17	End Lower River		11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7			61.23		
54-30	4/25/12	NA	NA	NA	NA	Start Tailrace Detection 2														A										61.23	
54-30	4/25/12	NA	NA	NA	NA	Transition Upstream 15 (Tailrace to Upper Tailrace)														A										61.23	
54-30	4/25/12	3:45:26	Tailrace Unit 10 (Mid)	4/25/2012	3:53:31	Start Upper Tailrace Detection (Start UT Foray 15)	C	11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7		1	61.23	move up and back and forth, no change in generation	
	4/25/12	4:30:00						11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7			61.23		
	4/25/12	5:30:00						32190	0	0	6040	6060	5180	0	6110	0	0	0	8800	0	C	up				3,3,4.5,7,10			61.23		
	4/25/12	6:30:00						32190	0	0	6040	6060	5180	0	6110	0	0	0	8800	0	C					3,3,4.5,7,10			61.23		
	4/25/12	7:30:00						32190	0	0	6040	6060	5180	0	6110	0	0	0	8800	0	C					3,3,4.5,7,10			61.23		
	4/25/12	8:30:00						32190	0	0	6040	6060	5180	0	6110	0	0	0	8800	0	C					3,3,4.5,7,10			61.23		
	4/25/12	9:30:00						32190	0	0	6040	6060	5180	0	6110	0	0	0	8800	0	C					3,3,4.5,7,10			61.23		
	4/25/12	10:30:00						11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A	down				1,5,7			61.23		
	4/25/12	11:30:00					B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7		2	61.23		
	4/25/12	12:30:00					B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7			61.23		
	4/25/12	13:30:00					B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7		2	61.23		
	4/25/12	14:30:00					B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7		2	61.23		
	4/25/12	15:30:00					B/C	11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7		2	61.23		
	4/25/12	16:30:00					C	11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7		1	61.23		
	4/25/12	17:30:00						11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7			61.23		
	4/25/12	18:30:00					A/B	23390	0	0	6040	6060	5180	0	6110	0	0	0	0	0	A	up				2,3,4.5,7		2	61.23		
	4/25/12	19:30:00					A/B/C	41240	0	0	6040	6060	5180	0	6110	0	0	0	8800	9050	C	up				4,3,4.5,7,10,11		3	61.23		
54-30	4/25/12	19:42:17	Tailrace Unit 9 (Mid)	4/25/2012	19:47:00	End Upper Tailrace Detection (End UT Foray 15)	C	41240	0	0	6040	6060	5180	0	6110	0	0	0	8800	9050	C					4,3,4.5,7,10,11		1	61.23		
	4/25/12	20:30:00						41240	0	0	6040	6060	5180	0	6110	0	0	0	8800	9050	C					4,3,4.5,7,10,11			61.23		
54-30	4/25/12	20:35:25	Upper Rowland Is. East	4/25/2012	20:40:03	Transition Downstream 15 (Upper Tailrace to Tailrace)	F	41240	0	0	6040	6060	5180	0	6110	0	0	0	8800	9050	C					4,3,4.5,7,10,11			61.23	drop back, 1hr after increase in generation	
	4/25/12	21:30:00						11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A	down				1,5,7			61.23		
	4/25/12	22:30:00						11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7			61.23		
	4/25/12	23:30:00						11290	0	0	0	5180	0	6110	0	0	0	0	0	0	A					1,5,7			61.23		
	4/26/12	0:30:00						11300	0	0	0	5240	0	6060	0	0	0	0	0	0	A					1,5,7			58.97		
	4/26/12	1:30:00						11300	0	0	0	5240	0	6060	0	0	0	0	0	0	A					1,5,7			58.97		
	4/26/12	2:30:00						11300	0	0	0	5240	0	6060	0	0	0	0	0	0	A					1,5,7			58.97		
	4/26/12	3:30:00						11300	0	0	0	5240	0	6060	0	0	0	0	0	0	A					1,5,7			58.97		
	4/26/12	4:30:00						11300	0	0	0	5240	0	6060	0	0	0	0	0	0	A					1,5,7			58.97		
	4/26/12	5:30:00						50170	0	0	5990	6080	5240	0	6060	0	8740	8910	9150	0	C										

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1	
	4/27/12	8:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270		C					7	2,3,4,5,6,7,8,9,10,11			56.12	
	4/27/12	9:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270		C					7	2,3,4,5,6,7,8,9,10,11			56.12	
	4/27/12	10:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270		C					7	2,3,4,5,6,7,8,9,10,11			56.12	
54-30	4/27/12	11:04:28	Upper Rowland Is. West	4/27/2012	11:09:14	Transition Upstream 17 (Tailrace to Upper Tailrace)	E	70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270		C					7	2,3,4,5,6,7,8,9,10,11			56.12	
	4/27/12	11:30:00						70100	0	5120	5950	6030	5490	5760	6040	8820	8710	8910	9270		C					7	2,3,4,5,6,7,8,9,10,11			56.12	
54-30	4/27/12	12:07:58	Tailrace Unit 7 (Mid)	4/27/2012	12:15:35	Start Upper Tailrace Detection (Start UT Foray 17)	B	11530	0	0	0	0	5490	0	6040	0	0	0	0	0	A	down				1	1,5,7		1	56.12	move up and back and forth, only Units 5 and 7 on
	4/27/12	12:30:00						11530	0	0	0	0	5490	0	6040	0	0	0	0	A						1	1,5,7			56.12	
	4/27/12	13:30:00					A/B/C	11530	0	0	0	0	5490	0	6040	0	0	0	0	A						3	1,5,7			56.12	
	4/27/12	14:30:00					B/C	11530	0	0	0	0	5490	0	6040	0	0	0	0	A						2	1,5,7			56.12	
	4/27/12	15:30:00					A/B/C	11530	0	0	0	0	5490	0	6040	0	0	0	0	A						3	1,5,7			56.12	
	4/27/12	16:30:00					C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0	C	up				3	3,4,5,7,10		1	56.12		
	4/27/12	17:30:00					C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0	C						3	3,4,5,7,10			56.12	
	4/27/12	18:30:00					A/B/C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0	C						3	3,4,5,7,10			56.12	
54-30	4/27/12	18:55:27	Tailrace Unit 10 (Mid)	4/27/2012	19:03:14	End Upper Tailrace Detection (End UT Foray 17)	C	32420	0	0	5950	6030	5490	0	6040	0	0	8910	0	C						3	3,4,5,7,10		1	56.12	
54-30	NA	NA	NA	NA	NA	Transition Downstream 17 (Upper Tailrace to Tailrace)														A										drop back, no change in generation	
54-30	NA	NA	NA	NA	NA	End Tailrace Detection 2														A											
54-30	4/28/12	6:33:43	T1 - Opp. Mudd Is.	4/28/2012	6:35:01	Start Lower River		63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C	up				6	2,3,4,5,7,8,9,10,11			55.91	
54-30	4/28/12	7:06:18	T1 - Opp. Mudd Is.	4/28/2012	7:10:54	End Lower River		63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11			55.91	
54-30	4/28/12	NA	NA	NA	NA	End Tailrace Detection 3														A											
54-30	4/28/12	NA	NA	NA	NA	Transition Upstream 18 (Tailrace to Upper Tailrace)														A											
54-30	4/28/12	7:07:22	Tailrace Unit 9 (Mid)	4/28/2012	7:15:35	Start Upper Tailrace Detection (Start UT Foray 18)	C	63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11		1	55.91	move up, increase in generation
	4/28/12	7:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11			55.91	
	4/28/12	8:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11			55.91	
	4/28/12	9:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11			55.91	
	4/28/12	10:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11			55.91	
	4/28/12	11:30:00						31900	0	0	5930	6000	5560	0	5940	0	0	8470	0	C	down					3	3,4,5,7,10			55.91	
	4/28/12	12:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0	A	down					1	1,5,7			55.91	
	4/28/12	13:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0	A						1	1,5,7			55.91	
	4/28/12	14:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0	A						1	1,5,7			55.91	
	4/28/12	15:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0	A						1	1,5,7			55.91	
	4/28/12	16:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0	A						1	1,5,7			55.91	
	4/28/12	17:30:00					A/B/C	31900	0	0	5930	6000	5560	0	5940	0	0	8470	0	C	up					3	3,4,5,7,10			55.91	move back and forth, 3 small and Unit 10 come on
	4/28/12	18:30:00					C	31900	0	0	5930	6000	5560	0	5940	0	0	8470	0	C						3	3,4,5,7,10			55.91	
	4/28/12	19:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C	up				6	2,3,4,5,7,8,9,10,11			55.91	
54-30	4/28/12	20:28:45	Tailrace Unit 10 (Mid)	4/28/2012	20:34:03	End Upper Tailrace Detection (End UT Foray 18)	C	63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11		1	55.91	stay east, all big units on
	4/28/12	20:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11			55.91	
	4/28/12	21:30:00						63520	0	5090	5930	6000	5560	0	5940	8800	8670	8470	9060		C					6	2,3,4,5,7,8,9,10,11			55.91	
	4/28/12	22:30:00						31900	0	0	5930	6000	5560	0	5940	0	0	8470	0	C	down					3	3,4,5,7,10			55.91	
	4/28/12	23:30:00						11500	0	0	0	0	5560	0	5940	0	0	0	0	A	down					1	1,5,7			55.91	
	4/29/12	0:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	
	4/29/12	1:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	
	4/29/12	2:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	
	4/29/12	3:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	
	4/29/12	4:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	
	4/29/12	5:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	
	4/29/12	6:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	
54-30	4/29/12	6:53:02	Upper Rowland Is. West	4/29/2012	6:57:51	Transition Downstream 18 (Upper Tailrace to Tailrace)	E	11440	0	0	0	0	5600	0	5840	0	0	0	0	A						1	1,5,7			55.81	drop back, no change in generatio
	4/29/12	7:30:00						11440	0	0	0	0	5600	0	5840	0	0	0	0	A</											

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NAI1
54-30	4/30/12	14:30:00					C	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A					2,3,4,5,7		1		39.94	
54-30	4/30/12	15:04:52	Tailrace Unit 9 (Mid)	4/30/2012	15:08:32	End Upper Tailrace Detection (End UT Foray 19)	C	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A					2,3,4,5,7		1		39.94	
	4/30/12	15:30:00					C	23600	0	0	5970	6080	5580	0	5970	0	0	0	0	0	A					2,3,4,5,7		1		39.94	
	4/30/12	16:30:00					C	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	C	up				7,1,2,3,4,5,6,7,8,9,10,11				39.94		
54-30	4/30/12	16:31:37	Upper Rowland Is. West	4/30/2012	16:32:58	Transition Downstream 19 (Upper Tailrace to Tailrace)	E	75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140	C					7,1,2,3,4,5,6,7,8,9,10,11				39.94	drop back, 1 min after increase in generation	
54-30	NA	NA	NA	NA	NA	End Tailrace Detection 3	A													A											
54-30	5/1/12	1:01:07	T1 - Mudd Is.	5/1/2012	1:05:53	Start Lower River	A	10520	0	0	0	4870	0	5650	0	0	0	0	0	0	A	down				1,5,7				55.46	
54-30	5/1/12	3:37:25	T1 - Mudd Is.	5/1/2012	3:41:47	End Lower River	A	10520	0	0	0	4870	0	5650	0	0	0	0	0	0	A					1,5,7				55.46	
54-30	5/1/12	9:21:38	Upper Rowland Is. West	5/1/2012	9:26:27	Start Tailrace Detection 4	E	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C	up					5,3,4,5,7,9,10,11				55.46	
	5/1/12	9:30:00					E	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C					5,3,4,5,7,9,10,11				55.46		
54-30	5/1/12	9:36:51	Upper Rowland Is. West	5/1/2012	9:41:50	Transition Upstream 20 (Tailrace to Upper Tailrace)	E	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C					5,3,4,5,7,9,10,11				55.46		
	5/1/12	10:30:00					E	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A	down				1,4,5,7				55.46	
54-30	5/1/12	10:45:33	Tailrace Unit 7 (Mid)	5/1/2012	10:52:02	Start Upper Tailrace Detection (Start UT Foray 20)	B	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7		1		55.46	move up, 15 min after big units come off
54-30	5/1/12	11:05:20	Tailrace Unit 7 (Mid)	5/1/2012	11:08:28	End Upper Tailrace Detection (End UT Foray 20)	B	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7		1		55.46	
54-30	5/1/12	11:26:59	Upper Rowland Is. West	5/1/2012	11:31:58	Transition Downstream 20 (Upper Tailrace to Tailrace)	E	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7				55.46	drop back, no change in generation
	5/1/12	11:30:00					E	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7				55.46	
54-30	5/1/12	11:37:22	Upper Rowland Is. West	5/1/2012	11:42:09	Transition Upstream 21 (Tailrace to Upper Tailrace)	E	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7				55.46	
54-30	5/1/12	11:52:53	Tailrace Unit 7 (Mid)	5/1/2012	11:56:05	Start Upper Tailrace Detection (Start UT Foray 21)	B	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7		1		55.46	move up and back and forth, no change in generation
	5/1/12	12:30:00					A/B	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7		2		55.46	
	5/1/12	13:30:00					C	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7		1		55.46	
	5/1/12	14:30:00					C	16610	0	0	0	6090	4870	0	5650	0	0	0	0	0	A					1,4,5,7				55.46	
54-30	5/1/12	15:29:10	Tailrace Unit 10 (Mid)	5/1/2012	15:32:49	End Upper Tailrace Detection (End UT Foray 21)	C	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C	up					5,3,4,5,7,9,10,11		1		55.46	
	5/1/12	15:30:00					C	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C					5,3,4,5,7,9,10,11				55.46		
54-30	5/1/12	15:37:24	Upper Rowland Is. West	5/1/2012	15:37:45	Transition Downstream 21 (Upper Tailrace to Tailrace)	E	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C					5,3,4,5,7,9,10,11				55.46	drop back, 5 min after 3 big units come on	
	5/1/12	16:30:00					E	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C					5,3,4,5,7,9,10,11				55.46		
	5/1/12	17:30:00					C	68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070	C	up				7,2,3,4,5,6,7,8,9,10,11				55.46		
	5/1/12	18:30:00					C	68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070	C					7,2,3,4,5,6,7,8,9,10,11				55.46		
	5/1/12	19:30:00					C	68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070	C					7,2,3,4,5,6,7,8,9,10,11				55.46		
	5/1/12	20:30:00					C	68830	0	4890	5980	6090	4870	5860	5650	8850	8710	8860	9070	C					7,2,3,4,5,6,7,8,9,10,11				55.46		
	5/1/12	21:30:00					C	62970	0	4890	5980	6090	4870	0	5650	8850	8710	8860	9070	C	down				6,2,3,4,5,7,8,9,10,11				55.46		
	5/1/12	22:30:00					C	49230	0	0	5980	6090	4870	0	5650	0	8710	8860	9070	C	down				5,3,4,5,7,9,10,11				55.46		
	5/1/12	23:30:00					A	10520	0	0	0	4870	0	5650	0	0	0	0	0	A	down				1,5,7				55.46		
	5/2/12	0:30:00					A	10360	0	0	0	4830	0	5530	0	0	0	0	0	A					1,5,7				56.49		
	5/2/12	1:30:00					A	10360	0	0	0	4830	0	5530	0	0	0	0	0	A					1,5,7				56.49		
	5/2/12	2:30:00					A	10360	0	0	0	4830	0	5530	0	0	0	0	0	A					1,5,7				56.49		
	5/2/12	3:30:00					A	10360	0	0	0	4830	0	5530	0	0	0	0	0	A					1,5,7				56.49		
	5/2/12	4:30:00					A	10360	0	0	0	4830	0	5530	0	0	0	0	0	A					1,5,7				56.49		
	5/2/12	5:30:00					A	10360	0	0	0	4830	0	5530	0	0	0	0	0	A					1,5,7				56.49		
	5/2/12	6:30:00					C	31200	0	0	6000	6060	4830	0	5530	0	0	8780	0	0	C	up				3,4,5,7,10				56.49	
	5/2/12	7:30:00					C	31200	0	0	6000	6060	4830	0	5530	0	0	8780	0	0	C					3,4,5,7,10				56.49	
	5/2/12	8:30:00					C	31200	0	0	6000	6060	4830	0	5530	0	0	8780	0	0	C					3,4,5,7,10				56.49	
	5/2/12	9:30:00					C	31200	0	0	6000	6060	4830	0	5530	0	0	8780	0	0	C					3,4,5,7,10				56.49	
	5/2/12	10:30:00					A	16420	0	0	0	6060	4830	0	5530	0	0	0	0	0	A	down				1,4,5,7				56.49	
	5/2/12	11:30:00					A	16420	0	0	0	6060	4830	0	5530	0	0	0	0	0	A					1,4,5,7				56.49	
	5/2/12	12:30:00					A	16420	0	0	0	6060	4830	0	5530	0	0	0	0	0	A					1,4,5,7				56.49	
54-30	5/2/12	12:38:30	Upper Rowland Is. West	5/2/2012	12:43:17	Transition Upstream 22 (Tailrace to Upper Tailrace)	E	16420	0	0	0	6060	4830	0	5530	0	0	0	0	0	A					1,4,5,7				56.49	
54-30	5/2/12	12:55:22	Tailrace Unit 7 (Mid)	5/2/2012	12:55:22	Start Upper Tailrace Detection (Start UT Foray 22)	B	16420	0	0	0	6060	4830	0	5530	0</															

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NAI1
	5/12/12	15:30						75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C					7	1,2,3,4,5,6,7,8,9,10,11			62.94	
	5/12/12	16:30						75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C					7	1,2,3,4,5,6,7,8,9,10,11			62.94	
	5/12/12	17:30						75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C					7	1,2,3,4,5,6,7,8,9,10,11			62.94	
	5/12/12	18:30						31410	0	4900	0	0	5550	5820	6030	0	0	9110	0		C	down			3	2,5,6,7,10			62.94		
54-30	5/12/12	18:38:11	Upper Rowland Is. East	5/12/2012	18:42:51	Transition Downstream 27 (Upper Tailrace to Tailrace)	F	31410	0	4900	0	0	5550	5820	6030	0	0	9110	0		C				3	2,5,6,7,10			62.94	drop back, 10 min after decrease in generation	
54-30	5/12/12	19:12:46	LT - Lower Rowland Is. West	5/12/2012	19:22:21	End Tailrace Detection 9	E	31410	0	4900	0	0	5550	5820	6030	0	0	9110	0		C				3	2,5,6,7,10			62.94	move west, no change in generation	
54-30	5/12/12	20:01:55	T1 - Mudd Is.	5/12/2012	20:06:30	Start Lower River		75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260		C	up			7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-30	5/13/12	0:29:53	T1 - Opp. Mudd Is.	5/13/2012	0:33:36	End Detections		49370	0	4920	0	0	5450	5820	6030	8880	0	8900	9370		C	down			5	2,5,6,7,8,10,11			63.46		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	NAI1
54-32	4/16/12	12:51:00	04/16/12 12:51:00					23480	0	0	0	6080	5320	5950	6130	0	0	0	0		A					2,4,5,6,7				56.52	
54-32	5/4/12	15:12:11	Spencer Island West	5/4/2012	15:21:24	Last Fallback Detection		49340	0	0	6090	6090	4800	0	5410	0	8700	8970	9280		C	up	stay	no movement; increase in gen	5,3,4,5,7,9,10,11					60.85	
54-32	5/4/12	NA	NA	NA	NA	Start Tailrace Detection 1															A									60.85	
54-32	5/4/12	NA	NA	NA	NA	Transition Upstream 1 (Tailrace to Upper Tailrace)															A									60.85	
54-32	5/4/12	16:22:38	Tailrace Unit 8 (Mid)	5/4/2012	16:23:52	Start Upper Tailrace Detection (Start UT Foray 1)	C	68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C	up	stay	no movement; increase in gen	7,1,2,3,4,5,7,8,9,10,11	1				60.85	move up, all Units on
	5/4/12	16:30:00						68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C				7,1,2,3,4,5,7,8,9,10,11					60.85	
54-32	5/4/12	17:13:37	Tailrace Unit 10 (Mid)	5/4/2012	17:17:17	End Upper Tailrace Detection (End UT Foray 1)	C	68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C				7,1,2,3,4,5,7,8,9,10,11	1				60.85	
54-32	5/4/12	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)															A									60.85	drop back, no change in generation
54-32	5/4/12	NA	NA	NA	NA	End Tailrace Detection 1															A									60.85	
54-32	5/4/12	17:15:44	T3 - Opp. McGibney	5/4/2012	17:24:18	Start Lower River		68680	5390	5080	6090	6090	4800	0	5410	8870	8700	8970	9280		C				7,1,2,3,4,5,7,8,9,10,11					60.85	
54-32	5/5/12	20:09:55	T3 - McGibney Is.	5/5/2012	20:14:42	End Detections		74250	5350	4810	6040	6080	4920	5760	5530	8800	8730	8940	9290		C	up	stay	no movement; increase in gen	7,1,2,3,4,5,6,7,8,9,10,11					63.27	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NA11	
54-33	4/18/12	12:58:00	04/18/12 12:58:00					11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A					1,5,7				60.08	
54-33	4/18/12	13:04:56	Tailrace Unit 7 (Mid)	4/18/2012	13:08:07	Last Fallback Detection	B	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A					1,5,7				60.08	
	4/18/12	13:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A					1,5,7				60.08	
	4/18/12	14:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A					1,5,7				60.08	
54-33	4/18/12	14:56:34	Upper Rowland Is. West	4/18/2012	15:00:55	Start Tailrace Detection 1	E	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A					1,5,7				60.08	drop back, no change in generation
	4/18/12	15:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A					1,5,7				60.08	
54-33	4/18/12	16:28:35	Upper Rowland Is. West	4/18/2012	16:30:12	Transition Upstream 1 (Tailrace to Upper Tailrace)		11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A					1,5,7				60.08	
54-33	4/19/12	4:27:40	Tailrace Unit 10 (Far)	4/19/2012	4:33:44	Start Upper Tailrace Detection (Start UT Foray 1)	C	11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A					1,5,7	1			60.08	move up, no change in generation
	4/18/12	4:30:00						12090	0	0	0	6150	0	5940	0	0	0	0	0	0	A					1,4,7				60.08	
	4/18/12	5:30:00						23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A	up			2,3,4,5,7				60.08		
	4/18/12	6:30:00						23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A				2,3,4,5,7				60.08		
	4/18/12	7:30:00						23500	0	0	6110	6150	5300	0	5940	0	0	0	0	0	A				2,3,4,5,7				60.08		
	4/18/12	8:30:00						17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A	down			1,4,5,7				60.08		
	4/18/12	9:30:00						17390	0	0	0	6150	5300	0	5940	0	0	0	0	0	A				1,4,5,7				60.08		
	4/18/12	10:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A	down			1,5,7				60.08		
	4/18/12	11:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	12:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	13:30:00					B	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7	1			60.08	move west, no change in generation	
	4/18/12	14:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	15:30:00					A	11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7	1			60.08		
	4/18/12	16:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	17:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	18:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	19:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	20:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	21:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	22:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/18/12	23:30:00						11240	0	0	0	5300	0	5940	0	0	0	0	0	0	A				1,5,7				60.08		
	4/19/12	0:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	1:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	2:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	3:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	4:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	5:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	6:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
54-33	4/19/12	6:58:32	Tailrace Unit 10 (Far)	4/19/2012	6:59:46	End Upper Tailrace Detection (End UT Foray 1)	C	11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A					1,5,7	1			62.31	
	4/19/12	7:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	8:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	9:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	10:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	11:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	12:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	13:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	14:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	15:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	16:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	17:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	18:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	19:30:00						11260	0	0	0	5300	0	5960	0	0	0	0	0	0	A				1,5,7				62.31		
	4/19/12	20:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	0	C	up			3,3,4,5,7,9				62.31		
	4/19/12	21:30:00						32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	0	C				3,3,4,5,7,9				62.31		
	4/19/12	22:30:00						32050	0																						

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments NAI1
54-33	4/20/12	18:12:02	Upper Rowland Is. West	4/20/2012	18:14:37	End Tailrace Detection 1	E	11450	0	0	0	6240	5210	0	0	0	0	0	0	0	A				1,4,5				63.14	drop back, increase in generation
54-33	4/20/12	20:37:50	T3 - Opp. McGibney	4/20/2012	20:39:23	Start Lower River		31460	0	5000	6100	6240	5210	0	0	0	0	8910	0	C	up				3,2,3,4,5,10				63.14	
54-33	4/28/12	4:06:36	Spencer Island East	4/28/2012	4:16:16	End Detections		11500	0	0	0	5560	0	5940	0	0	0	0	0	A	down				1,5,7				55.91	

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Water Temp. (°F)	Spill Deep Corner	Comments NAI1	
54-34	4/18/12	13:05:00	04/18/12 13:05:00					11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		
54-34	4/18/12	18:39:12	Tailrace Unit 1 (Mid)	4/18/2012	18:41:57	Last Fallback Detection	A	11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		
54-34	4/18/12	19:19:53	Upper Rowland Is. West	4/18/2012	19:24:52	Start Tailrace Detection 1	E	11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		drop back, no change in generation
	4/18/12	19:30:00						11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		
	4/18/12	20:30:00						11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		
	4/18/12	21:30:00						11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		
	4/18/12	22:30:00						11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		
	4/18/12	23:30:00						11240	0	0	0	0	5300	0	5940	0	0	0	0		A					1,5,7			60.08		
	4/19/12	0:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	1:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	2:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	3:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	4:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	5:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	6:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
54-34	4/19/12	6:33:05	Upper Rowland Is. West	4/19/2012	6:37:16	Transition Upstream 1 (Tailrace to Upper Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	7:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
54-34	4/19/12	7:42:07	Tailrace Unit 1 (Mid)	4/19/2012	7:45:17	Start Upper Tailrace Detection (Start UT Foray 1)	A	11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7	1	62.31		move up, nochange in generation	
	4/19/12	8:30:00					A/B	11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7	2	62.31			
	4/19/12	9:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	10:30:00					A	11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7	1	62.31			
	4/19/12	11:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	12:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	13:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	14:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	15:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	16:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
	4/19/12	17:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7			62.31		
54-34	4/19/12	17:52:56	Tailrace Unit 1 (Mid)	4/19/2012	17:56:23	End Upper Tailrace Detection (End UT Foray 1)	A	11260	0	0	0	0	5300	0	5960	0	0	0	0		A					1,5,7	1	62.31			
54-34	4/19/12	NA	NA	NA	NA	Transition Downstream 1 (Upper Tailrace to Tailrace)															A							62.31		drop back, no change in generation	
54-34	4/19/12	NA	NA	NA	NA	End Tailrace Detection 1															A							62.31			
54-34	4/19/12	19:43:05	T1 - Mudd Is.	4/19/2012	19:45:43	Start Lower River		32050	0	0	6060	5960	5300	0	5960	0	8770	0	0		C	up			3	3,4,5,7,9			62.31		
54-34	4/19/12	23:41:45	Spencer Island East	4/19/2012	23:46:06	End Detections		11260	0	0	0	5960	5300	0	0	0	0	0	0		A	down			1,4,5			62.31			

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	Spill	EFL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Water Temp. (°F)	Spill Deep Corner	Comments NAI1	
54-40	4/18/12	14:52:00	04/18/12 14:52:00					11240	0	0	0	0	5300	0	5940	0	0	0	0	0	A					1	5,7		60.08		
54-40	4/19/12	1:31:40	Tailrace Unit 1 (Mid)	4/19/2012	1:38:01	Last Fallback Detection	A	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
54-40	4/19/12	1:32:31	Upper Rowland Is. West	4/19/2012	1:37:20	Start Tailrace Detection 1	E	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		drop back, no change in generation
	4/19/12	2:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	3:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	4:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	5:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	6:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	7:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	8:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	9:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	10:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	11:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
54-40	4/19/12	12:06:26	Upper Rowland Is. West	4/19/2012	12:11:12	Transition Upstream 1 (Tailrace to Upper Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	12:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
54-40	4/19/12	12:49:49	Tailrace Unit 1 (Mid)	4/19/2012	12:49:49	Start Upper Tailrace Detection (Start UT Foray 1)	A	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		move up, back and forth west center, no change in generation
	4/19/12	13:30:00					A/B	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					2	62.31		62.31		
	4/19/12	14:30:00					A	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	15:30:00					A/B	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					2	62.31		62.31		
	4/19/12	16:30:00					A	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
54-40	4/19/12	17:29:39	Tailrace Unit 1 (Mid)	4/19/2012	17:33:02	End Upper Tailrace Detection (End UT Foray 1)	A	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
	4/19/12	17:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
54-40	4/19/12	17:33:04	Upper Rowland Is. West	4/19/2012	17:37:52	Transition Downstream 1 (Upper Tailrace to Tailrace)	E	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		drop back, no change in generation
	4/19/12	18:30:00						11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		
54-40	4/19/12	18:35:12	Upper Rowland Is. West	4/19/2012	18:40:03	End Tailrace Detection 1	E	11260	0	0	0	0	5300	0	5960	0	0	0	0	0	A					1	5,7		62.31		drop back, no change in generation
54-40	4/19/12	20:03:47	T1 - Mudd Is.	4/19/2012	20:08:33	Start Lower River		32050	0	0	6060	5960	5300	0	5960	0	8770	0	0	0	C	up				3,3,4,5,7,9		62.31			
54-40	4/30/12	21:33:48	Spencer Island East	4/30/2012	21:39:23	End Detections		75550	5430	5110	5970	6080	5580	5820	5970	8870	8710	8870	9140		C	down				7	1,2,3,4,5,6,7,8,9,10,11		55.81		

Fish ID	Date	Time	Location	StopDate	StopTime	Description	Tailrace Zone	Total Station Discharge	1	2	3	4	5	6	7	8	9	10	11	EPL Gate	Flow Trend	Fish Trend	Comment	Flow Bin Number	Units On	Lateral Movement	Spill Deep Corner	Water Temp. (°F)	Comments	
54-71	5/12/12	4:35:46	Upper Rowland Is. East	5/12/2012	4:39:10	Start Tailrace Detection 5	F	40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260	C				4	2,5,6,7,10,11			62.94	move west to east, no change in generator	
54-71	5/12/12	6:30:00					F	40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260	C				4	2,5,6,7,10,11			62.94		
54-71	5/12/12	7:30:00					F	40670	0	4900	0	0	5550	5820	6030	0	0	9110	9260	C				4	2,5,6,7,10,11			62.94		
54-71	5/12/12	7:30:00					F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C	up			7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	8:30:00					F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	9:30:00					F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	10:30:00					F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	11:30:00					F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	12:30:00					F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	13:30:00					F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	13:49:56	Upper Rowland Is. West	5/12/2012	13:52:51	End Tailrace Detection 5	E	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94	move east to west, no change in generator	
54-71	5/12/12	14:00:25	T1 - Mudd Is.	5/12/2012	14:05:13	Start Lower River	F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	16:21:27	T1 - Opp. Mudd Is.	5/12/2012	16:21:57	End Lower River	F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/12/12	NA	NA	NA	NA	Start Tailrace Detection 6	F													A								62.94		
54-71	5/12/12	NA	NA	NA	NA	Transition Upstream 6 (Tailrace to Upper Tailrace)	F													A								62.94		
54-71	5/12/12	16:38:12	Tailrace Unit 10 (Mid)	5/12/2012	16:42:17	Start Upper Tailrace Detection (Start UT Foray 6)	C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11		1	62.94	move up, no change in generator	
54-71	5/12/12	17:07:50	Tailrace Unit 8 (Mid)	5/12/2012	17:11:21	End Upper Tailrace Detection (End UT Foray 8)	C	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11		1	62.94	move up, no change in generator	
54-71	5/12/12	NA	NA	NA	NA	Transition Downstream 6 (Upper Tailrace to Tailrace)	F													A								62.94		
54-71	5/12/12	NA	NA	NA	NA	End Tailrace Detection 6	F													A								62.94		
54-71	5/12/12	17:11:38	T1 - Opp. Mudd Is.	5/12/2012	17:16:01	Start Lower River	F	75360	5360	4900	5930	5990	5550	5820	6030	8780	8630	9110	9260	C				7	1,2,3,4,5,6,7,8,9,10,11			62.94		
54-71	5/13/12	13:41:58	T1 - Opp. Mudd Is.	5/13/2012	13:42:25	End Lower River	F	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46		
54-71	5/13/12	NA	NA	NA	NA	Start Tailrace Detection 7	F													A								63.46		
54-71	5/13/12	14:32:10	Upper Rowland Is. West	5/13/2012	14:36:35	Transition Upstream 7 (Tailrace to Upper Tailrace)	E	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46	drop back, no change in generator	
54-71	5/13/12	14:41:12	Tailrace Unit 10 (Mid)	5/13/2012	14:49:24	Start Upper Tailrace Detection (Start UT Foray 7)	C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11		1	63.46	move up, no change in generator	
54-71	5/13/12	15:30:00					C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46		
54-71	5/13/12	15:44:10	Tailrace Unit 10 (Mid)	5/13/2012	15:46:38	End Upper Tailrace Detection (End UT Foray 7)	C	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11		1	63.46		
54-71	5/13/12	16:22:24	Upper Rowland Is. East	5/13/2012	16:26:24	Transition Downstream 7 (Upper Tailrace to Tailrace)	F	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46	drop back, no change in generator	
54-71	5/13/12	16:30:00					F	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46		
54-71	5/13/12	17:30:00					F	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46		
54-71	5/13/12	18:30:00					F	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46		
54-71	5/13/12	19:30:00					F	75500	5420	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C				7	1,2,3,4,5,6,7,8,9,10,11			63.46		
54-71	5/13/12	19:58:51	LT - Lower Rowland Is. West	5/13/2012	20:05:37	End Tailrace Detection 7	E	49540	0	4920	6000	6020	5450	5820	6030	8880	8690	8900	9370	C	down			5	2,3,4,5,8,10,11			63.46	move east to west, not clear if response to generator	
54-71	5/14/12	2:09:20	T1 - Mudd Is.	5/14/2012	2:14:17	Start Lower River	F	10980	0	0	0	5950	5030	0	0	0	0	0	0	A	down							64.78		
54-71	5/14/12	5:42:05	T1 - Mudd Is.	5/14/2012	5:46:30	End Lower River	F	10980	0	0	0	5950	5030	0	0	0	0	0	0	A								64.78		
54-71	5/14/12	6:31:06	Upper Rowland Is. West	5/14/2012	6:35:54	Start Tailrace Detection 8	E	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0	C	up				4	2,3,4,5,8,10			64.78	move up, increase in generator
54-71	5/14/12	7:30:00					F	39590	0	4880	5960	5950	5030	0	0	8870	0	8900	0	C				4	2,3,4,5,8,10			64.78		
54-71	5/14/12	8:30:00					F	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360	C	up			7	1,2,3,4,5,6,7,8,9,10,11			64.78		
54-71	5/14/12	9:30:00	Upper Rowland Is. East	5/14/2012	9:15:58	Transition Upstream 8 (Tailrace to Upper Tailrace)	F	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360	C				7	1,2,3,4,5,6,7,8,9,10,11			64.78	move west to east, not clear if response change in generator	
54-71	5/14/12	10:30:00					F	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360	C				7	1,2,3,4,5,6,7,8,9,10,11			64.78		
54-71	5/14/12	10:41:31	Tailrace Unit 7 (Mid)	5/14/2012	10:42:57	Start Upper Tailrace Detection (Start UT Foray 8)	B	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360	C				7	1,2,3,4,5,6,7,8,9,10,11		1	64.78	move up, back and forth, no change in generator	
54-71	5/14/12	11:00:14	"C" Gate Aerial	5/14/2012	11:02:31	Start EPL Aerial Detection	C	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360	C				7	1,2,3,4,5,6,7,8,9,10,11			64.78		
54-71	5/14/12	11:05:16	"C" Gate Aerial	5/14/2012	11:05:36	End EPL Aerial Detection	C	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900	9360	C				7	1,2,3,4,5,6,7,8,9,10,11			64.78		
54-71	5/14/12	NA	NA	NA	NA	End Upper Tailrace Detection (End UT Foray 8)	F													A								64.78		
54-71	5/14/12	11:30					A/B	74830	5410	4880	5960	5950	5030	5780	6030	8870	8660	8900												

