

Annual Report

Fish Passage Operations

at the Landsburg Dam Fish Passage Facilities

on the Cedar River from

July 2006 through June 2007

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Summary

This report summarizes the fourth season of fish passage operations from 7/1/06 through 6/30/07 at the Landsburg Dam fish ladder and sorting facility on the Cedar River. Seattle Public Utilities (SPU) operated the ladder and sorting facility in sorting mode from 9/5/06 through 1/28/07 to prevent sockeye from passing above the Landsburg Dam and to aid in the collection of Chinook and coho salmon data for recolonization studies. The ladder was operated in passive mode from 7/1/06 – 8/27/06 and from 1/28/07 - 6/30/07, providing unhindered passage above the dam for all native fish species. The facility was shut down for maintenance from 8/28/06 through 9/5/06 and from 5/13/07 through 5/18/07 (forebay cleaning). A high flow event 11/6/06 built up debris on the adult guide panel gate and damaged it. The facility was shut down for emergency repairs to the gate from 11/7/06 to 11/13/06. While in sorting mode a total of 2,433 adult sockeye entered the sorting facility, of which 270 were transported to the lower Cedar River and 2,140 were transported to the Cedar River Sockeye Hatchery for use as broodstock. A total of 182 adult Chinook salmon were passed above the dam from 9/16/06 to 11/5/06 and 190 adult coho were passed above the dam from 9/25/06 to 1/28/07. The sorting facility did experience some fish mortality, losing 2 female Chinook salmon (unclipped), 1 male coho (unclipped), and 29 sockeye salmon with a majority of the losses attributed to jumping behavior.

Forward

The construction of the fish ladder and sorting facility was completed as part of the comprehensive Cedar River Watershed Habitat Conservation Plan (HCP). The HCP was approved in the spring of 2000 and includes an extensive array of protective land management practices, instream flow management prescriptions, mitigation measures for the fish migration barrier at the Landsburg Diversion Dam and other habitat protection and restoration measures. The primary purpose of the HCP is to provide certainty for maintaining a safe and high quality drinking water source for the Seattle metropolitan area while protecting and restoring 83 species of fish and wildlife and the habitats upon which they depend in the Cedar River basin. As part of the HCP, SPU constructed a fish ladder and sorting facility to provide passage above the dam for all fish species in the Cedar River with the exception of sockeye salmon. Sockeye which spawn in the Cedar River in much greater numbers than other fish species are not passed above the dam because large numbers of decaying carcasses could pose a risk to drinking water quality and public health. The fish passage project successfully reopened more than 12.5 miles of mainstem and approximately 4.5 miles of tributary spawning and rearing habitat for the first time in more than 100 years.

Introduction

This 2007 annual report focuses on the operation of the Landsburg Dam fish ladder and sorting facility from 7/1/06 through 6/30/07.

Fish Ladder Components

The fish ladder and sorting facility are composed of four main components the (1) lower ladder, (2) sorting and holding, (3) fish transport, and (4) upper ladder. The lower ladder includes three downward opening fish entrance gates, a series of 11 vertical slot steps in a channel that raises the water elevation in one-foot increments, and an adult guide panel gate. The adult guide panel gate swings on hinges and when it is open the ladder is in passive mode and when it is closed the ladder is in sorting mode. In general, the sorting and holding facility contain two holding ponds

with mechanical crowders, a pescalator (fish lift), a sorting table, and a volitional bypass channel with a fish trap. Holding pond one is divided in half with a size sorting panel to allow smaller fish into the upper half of the pond and keep larger fish in the lower half. Holding pond two contains a mechanical crowder and a wall that divides the pond lengthwise. The fish transport component contains a foot crowder, fish hopper, a 5-ton hoist, and parking area for the fish transport truck. The upper ladder contains 3 vertical slot steps, a fish counter, and the fish ladder exit. Figure 1 shows the schematic drawing of the fish ladder and sorting facility as well as a photograph of the sorting facility and Figure 2 shows the fish hopper on top of the fish transport truck.

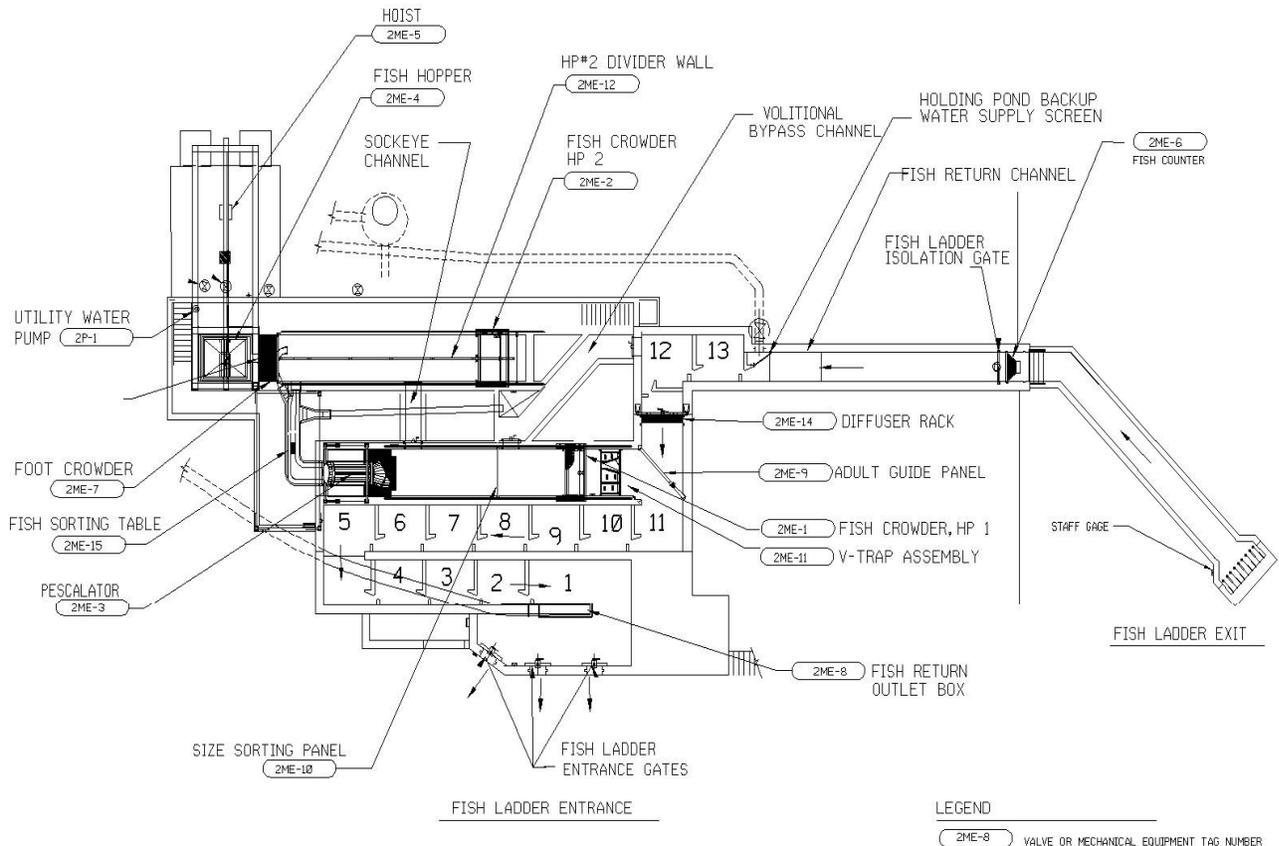


Figure 1: Layout of Landsburg Dam Fish Ladder and Sorting Facility

Methods and Procedures for Sorting Mode

The fish ladder and sorting facility were designed to operate in either sorting mode or passive mode. Sorting mode is used when sockeye are present at the ladder, typically from early September through December. In this mode, sockeye are sorted from Chinook or coho using a mechanical crowder in holding pond one. The crowder slowly moves fish towards a size sorting panel which passes smaller fish (mostly sockeye) into the upper half of pond one and retains Chinook and coho in the lower half. Fish retained in the lower half of holding pond one can be directed into a bypass channel and trap. The crowder is used to move sockeye in the upper part of pond one to a pescalator that deposits fish on to the sorting table. The sorting table (Fig. 2) provides a workstation to sort male and female sockeye into separate halves of holding pond two

and move small Chinook or coho into totes or down a pipe to the bypass channel. To prepare sockeye for transport, a mechanical crowder in holding pond two crowds sockeye into a hopper which is raised with a 5-ton hoist and placed on a water filled tank on the fish truck. The hopper is designed to provide a water-to-water transfer of sockeye from the hopper to the fish truck (Figure 2).



Figure 2: Sorting table operation and fish hopper on top of fish transport truck.

Passive Mode

When the fish ladder is operated in passive mode, the adult guide panel is moved out of the way and fish are not allowed in the sorting facility and they move unhindered through the upper ladder and into the river above the dam. The ladder was designed to be operated in this mode from late December through August (the time period when sockeye are generally absent from the river). In this mode, a Vaki River Watcher fish counter is used to monitor fish passage. The system was installed to aid in the understanding of: run timing, the rate of passage upriver and the rate of recolonization of stream and river habitat in the watershed. The system uses a scanner to count fish and calculate length and an underwater camera to aid in species identification, sex, and document the presence or absence of the adipose fin.

Results and Discussion

Sorting Mode

This was the third year SPU created a special assignment for Drainage and Wastewater (DWW) Collection Workers to work at fish passage facility. This opportunity was developed to encourage cross training within SPU and to allow the fish passage project to recruit staff that would return to the project on an annual basis, limiting the training of new staff and developing an experienced technical staff. John McDowell from DWW has returned to fish passage operations for three consecutive years. From 8/23/06 through 9/5/06 the new fish passage crew received preseason training in fish species identification, fish handling, fish hauling, facility equipment, and safety procedures. The ladder was configured in sorting mode on 9/5/06 and was staffed 7 days per week with hours of operation ranging from 7:00 AM to 5:00 PM. Fish were sorted daily to minimize delay of upstream migrating Chinook and coho. In late December the staffing level was reduced to the Landsburg Fish Passage Manager and a DWW Lead Collection Worker. The sorting operation continued until January 28th to get a better understanding of the daily movement of coho within the ladder and to assist recolonization studies.

Sockeye

From 9/05/06 to 12/05/06, 2,414 sockeye entered the facility of which 980 females and 1,434 males were collected and hauled to the river or the sockeye hatchery, less a few mortalities. As shown in Table 1, the facility lost 29 (1.2%) sockeye with most mortalities (.8%) attributed to fish jumping out of the holding ponds and the post-sort mortalities (.4%) attributed to holding over ripe fish.

Table 1: Count of sockeye sorted, transported and mortality at the Landsburg Fish Passage Facility in 2006

| | Entered Facility | Presort Mortality | Number Sorted | Post-sort Mortality | Transported to Hatchery | Transported to River | Total Mortality | Total Transported |
|--------------|------------------|-------------------|---------------|---------------------|-------------------------|----------------------|-----------------|-------------------|
| Female | 989 | 9 | 980 | 0 | 954 | 26 | 9 | 980 |
| Male | 1444 | 10 | 1434 | 10 | 1186 | 244 | 20 | 1430 |
| Total | 2433 | 19 | 2414 | 10 | 2140 | 270 | 29 | 2410 |

For the third year in a row, WDFW requested broodstock from the Landsburg fish ladder to spawn with fish held at the hatchery. This request was brought before the Anadromous Fish Committee (AFC) and members recommended that up to 20% of the broodstock for the hatchery could be collected from Landsburg. The fish passage operation provided 954 female and 1,186 male sockeye to the hatchery.

Chinook

Brood year 2006 marked the fourth year of a multi-year collaborative study to investigate and monitor the effects of recolonization by Chinook and coho on the Cedar River above the Landsburg Dam. Lead researchers included Peter Kiffney (NOAA), George Pess (NOAA), Joe Anderson (UW) and Tom Quinn (UW). To support the study fish passage staff collected biological data (presence/absence of adipose fin, sex, fork length and condition) and a dorsal fin clip from all adult Chinook passed above Landsburg. A small portion of each fin clip was preserved in 100% ethanol for future genetic parentage analysis. The fin clips were triangle shaped and approximately 15 mm wide at the base. The oversized clips provided staff with a mechanism to determine if the fish had already passed through the fish ladder.

Chinook salmon were passed upstream of the Landsburg Dam between 9/18/06 and 11/5/06. Table 2 shows that, of the 182 adult Chinook were passed upstream, a majority of the fish had adipose fins indicating that they were not of hatchery origin. There were 2 unclipped female Chinook mortalities at the ladder. On 9/24/06 a Chinook female gilled itself between crowder and pond wall and on 10/21/06 a Chinook female was found on the bottom of pond 1 and appeared to have damage to its gill.

Table 2: Summary of Chinook passed above the Landsburg Dam on the Cedar River, 2006

| | Adipose Absent | Adipose Present | Total |
|--------------|----------------|-----------------|--------------|
| Female | 12 | 20 | 32 |
| Male | 70 | 80 | 150 |
| Total | 82 | 100 | 182 |

Coho

To support the recolonization study mentioned above, fish passage staff also collected biological data from all adult coho passed above Landsburg (same methods as with Chinook) and tissue samples for future DNA parentage analysis.

Table 4 shows that a total of 190 coho were passed upstream and that all but nine of the fish had adipose fins, indicating that they were almost all of natural origin. The facility had 1 wild coho mortality on 11/18/06 (not included in total). The fish had jumped out of the bypass trap.

Table 3: Summary of Coho passed above the Landsburg Dam on the Cedar River, 2006/2007

| | Adipose Absent | Adipose Present | Total |
|--------------|----------------|-----------------|--------------|
| Female | 3 | 77 | 80 |
| Male | 6 | 104 | 110 |
| Total | 9 | 181 | 190 |

Passive Mode

From 7/1/06 – 8/27/06 and from 1/28/07 - 6/30/07, the fish passage facility operated in passive mode providing fish unhindered passage above the Landsburg Dam. In passive mode, the Water Treatment Operators at Landsburg conducted routine inspections of the ladder facility to ensure there were no issues with debris. While in passive mode a Vaki River Watcher system installed in the upper ladder enumerated fish migrating upriver. The system was installed to aid in the understanding of run timing, the rate of passage upriver and the rate of recolonization of stream and river habitat in the watershed. The system is designed to count fish, calculate fish lengths, and take five photographs of each fish. A software package can be used to be display the photos alongside other data recorded by the system (i.e., date and time, fish depth, fish length, swimming direction, and water temperature). In some cases the imaging capabilities helped determine the species, sex, and if the fish had an adipose fin.

Fish Passed Upriver in Passive Mode

A total of 375 fish were enumerated with the Vaki River Watcher system in passive mode. Species identification was based on length estimates, photographic interpretation, and seasonal migration timing. The trout migration made up the bulk of the upstream migration.

The Vaki River Watcher system started to intermittently malfunction in late April 2006 and was turned off during forebay cleaning from 5/14/06 to 5/18/06. Unfortunately, the fish counter/camera system was not functional after forebay cleaning and was not available for summer fish counts leading up to sorting mode in September. The vendor determined one of the scanner plates had faulty light emitting diodes and integrated circuits which may have resulted from power surges (i.e., lightning or power spikes). The system was repaired and reinstalled along with new surge protection equipment when the fish passage facility was switched from sorting mode to passive mode on 1/28/07.

Table 4: Summary of all species passed above the Landsburg Dam on the Cedar River while in passive mode in 1/28/07 - 6/30/07

| <i>Date Period</i> | <i>Coho</i> | <i>Coho or Trout</i> | <i>Presumptive Steelhead</i> | <i>Trout</i> | <i>Whitefish</i> | <i>Whitefish or Trout</i> | <i>Total by Wk</i> |
|-------------------------|-------------|----------------------|------------------------------|--------------|------------------|---------------------------|--------------------|
| 1/28/2007 - 2/10/2007 | 3 | 1 | | 34 | | | 38 |
| 2/11/2007 - 2/24/2007 | 2 | | | 19 | 1 | | 22 |
| 2/25/2007 - 3/10/2007 | | | | 23 | 1 | | 24 |
| 3/11/2007 - 3/24/2007 | | 2 | | 52 | 6 | 8 | 68 |
| 3/25/2007 - 4/7/2007 | | | 2 | 41 | 8 | 2 | 53 |
| 4/8/2007 - 4/21/2007 | | | | 18 | 8 | | 26 |
| 4/22/2007 - 5/5/2007 | | | 1 | 30 | 3 | | 34 |
| 5/6/2007 - 5/19/2007 | | | | 20 | 1 | | 21 |
| 5/20/2007 - 6/2/2007 | | | | 40 | 4 | 3 | 47 |
| 6/3/2007 - 6/16/2007 | | | | 22 | 6 | | 28 |
| 6/17/2007 - 6/30/2007 | | | 1 | 12 | 1 | | 14 |
| Total by Species | 5 | 3 | 4 | 311 | 39 | 13 | 375 |

Table 5: Summary of trout by size class (cm) passed above the Landsburg Dam on the Cedar River while in passive mode in 1/28/07 - 6/30/07

| <i>Date Period</i> | <i>19-28</i> | <i>29-38</i> | <i>39-48</i> | <i>49-58</i> | <i>59-68</i> | <i>Total by Wk</i> |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------------|
| 1/28/2007 - 2/10/2007 | 9 | 13 | 7 | 5 | | 34 |
| 2/11/2007 - 2/24/2007 | 5 | 2 | 8 | 3 | 1 | 19 |
| 2/25/2007 - 3/10/2007 | 4 | 11 | 5 | 2 | 1 | 23 |
| 3/11/2007 - 3/24/2007 | 8 | 21 | 17 | 3 | 3 | 52 |
| 3/25/2007 - 4/7/2007 | 12 | 17 | 6 | 5 | 1 | 41 |
| 4/8/2007 - 4/21/2007 | 3 | 9 | 4 | 1 | 1 | 18 |
| 4/22/2007 - 5/5/2007 | 1 | 18 | 7 | 2 | 2 | 30 |
| 5/6/2007 - 5/19/2007 | 6 | 11 | 3 | | | 20 |
| 5/20/2007 - 6/2/2007 | 23 | 15 | 1 | 1 | | 40 |
| 6/3/2007 - 6/16/2007 | 12 | 7 | 2 | | 1 | 22 |
| 6/17/2007 - 6/30/2007 | 4 | 5 | 2 | 1 | | 12 |
| Total by Size Class | 87 | 129 | 62 | 23 | 10 | 311 |

Conclusions

For the 2006-2007 season (7/1/06 – 6/30/07), the fish ladder and sorting facility operated as intended and provided SPU and researchers with on going support in long-term recolonization studies and collect biological data on Chinook and coho salmon and trout passed above the Landsburg. The fish passage operation also aided WDFW in broodstock collection efforts by providing male and female sockeye from the fish sorting facility.

Recommendations

In future years the fish ladder and sorting facility should continue to focus on:

- Providing a safe, efficient, and timely passage for all fish species (with the exception of sockeye) over the Landsburg Dam.
- Providing a safe, efficient, and timely trap and haul operation for sockeye.

- Handling fish with great care and limit the use of nets when handling fish.
- Monitoring, evaluating, and maintaining the facility to reduce or limit fish mortality.
- Collect relevant data from upstream migrating adult salmon to help monitor various qualitative and quantitative aspects of salmon recolonization upstream of the Landsburg.
- Providing a safe working environment for staff.
- Make improvements to facility to ensure long term reliability of equipment.

Acknowledgements

Fish passage staff from the Drainage and Wastewater Division (in particular John McDowell, John Piprude and Jeff Davenport) for operating the ladder and sorting facility. Bruce Bachen and Rand Little for supporting improvements to the fish ladder and sorting facility and Gary Sprague for his constructive comments on this report.

Appendix

Sockeye sorted, transported and mortality at the Landsburg Fish Passage Facility in 2006

| Date | Sockeye Female Presort Mortality | Sockeye Male Presort Mortality | Sockeye Female Sorted | Sockeye Male Sorted | Sockeye Female Postsort Mortality | Sockeye Male Postsort Mortality | Sockeye Female to Hatchery | Sockeye Male to Hatchery | Sockeye Female to RM 6.5 | Sockeye Male to RM 6.5 | Sockeye Female to Below Landsburg | Sockeye Male to Below Landsburg | Sockeye Female to RM 13.5 | Sockeye Male to RM 13.5 |
|---------|----------------------------------|--------------------------------|-----------------------|---------------------|-----------------------------------|---------------------------------|----------------------------|--------------------------|--------------------------|------------------------|-----------------------------------|---------------------------------|---------------------------|-------------------------|
| 9/11/06 | 0 | 0 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/12/06 | 0 | 0 | 11 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/13/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/14/06 | 0 | 0 | 7 | 7 | 0 | 1 | 27 | 29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/15/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/16/06 | 1 | 0 | 24 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/17/06 | 1 | 0 | 23 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/18/06 | 0 | 0 | 11 | 28 | 0 | 0 | 58 | 107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/19/06 | 0 | 2 | 55 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/20/06 | 0 | 1 | 34 | 64 | 0 | 1 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/21/06 | 0 | 0 | 73 | 86 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/22/06 | 1 | 1 | 109 | 110 | 0 | 0 | 195 | 100 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/23/06 | 1 | 0 | 36 | 59 | 0 | 0 | 0 | 0 | 0 | 160 | 0 | 0 | 0 | 0 |
| 9/24/06 | 0 | 0 | 12 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/25/06 | 0 | 0 | 37 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/26/06 | 0 | 0 | 17 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/27/06 | 0 | 0 | 22 | 26 | 0 | 0 | 107 | 100 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/28/06 | 1 | 0 | 25 | 46 | 0 | 0 | 0 | 109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/29/06 | 0 | 0 | 23 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9/30/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/1/06 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 75 | 0 | 0 | 0 | 3 | 0 | 3 |
| 10/2/06 | 1 | 1 | 56 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/3/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/4/06 | 0 | 1 | 19 | 25 | 0 | 0 | 75 | 100 | 0 | 0 | 0 | 0 | 0 | 0 |

| Date | Sockeye Female Presort Mortality | Sockeye Male Presort Mortality | Sockeye Female Sorted | Sockeye Male Sorted | Sockeye Female Postsort Mortality | Sockeye Male Postsort Mortality | Sockeye Female to Hatchery | Sockeye Male to Hatchery | Sockeye Female to RM 6.5 | Sockeye Male to RM 6.5 | Sockeye Female to Below Landsburg | Sockeye Male to Below Landsburg | Sockeye Female to RM 13.5 | Sockeye Male to RM 13.5 |
|----------|----------------------------------|--------------------------------|-----------------------|---------------------|-----------------------------------|---------------------------------|----------------------------|--------------------------|--------------------------|------------------------|-----------------------------------|---------------------------------|---------------------------|-------------------------|
| 10/5/06 | 0 | 0 | 12 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/6/06 | 0 | 0 | 13 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/7/06 | 1 | 0 | 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/8/06 | 1 | 0 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/9/06 | 0 | 0 | 19 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/10/06 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/11/06 | 0 | 0 | 4 | 4 | 0 | 2 | 60 | 83 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/12/06 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/13/06 | 0 | 0 | 5 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/14/06 | 0 | 0 | 11 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/15/06 | 0 | 0 | 14 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/16/06 | 0 | 0 | 33 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/17/06 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/18/06 | 0 | 0 | 18 | 9 | 0 | 2 | 70 | 76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/19/06 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/20/06 | 0 | 1 | 19 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/21/06 | 1 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/22/06 | 0 | 0 | 9 | 18 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/23/06 | 0 | 0 | 7 | 16 | 0 | 0 | 63 | 85 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/24/06 | 0 | 0 | 3 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/25/06 | 0 | 0 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/26/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/27/06 | 0 | 0 | 7 | 12 | 0 | 0 | 14 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/28/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/29/06 | 0 | 0 | 15 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/30/06 | 0 | 0 | 22 | 17 | 0 | 0 | 37 | 46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/31/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/1/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/2/06 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Date | Sockeye Female Presort Mortality | Sockeye Male Presort Mortality | Sockeye Female Sorted | Sockeye Male Sorted | Sockeye Female Postsort Mortality | Sockeye Male Postsort Mortality | Sockeye Female to Hatchery | Sockeye Male to Hatchery | Sockeye Female to RM 6.5 | Sockeye Male to RM 6.5 | Sockeye Female to Below Landsburg | Sockeye Male to Below Landsburg | Sockeye Female to RM 13.5 | Sockeye Male to RM 13.5 |
|----------|----------------------------------|--------------------------------|-----------------------|---------------------|-----------------------------------|---------------------------------|----------------------------|--------------------------|--------------------------|------------------------|-----------------------------------|---------------------------------|---------------------------|-------------------------|
| 11/3/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/4/06 | 0 | 0 | 28 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/5/06 | 0 | 2 | 64 | 141 | 0 | 0 | 51 | 111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/6/06 | 0 | 0 | 15 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/7/06 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/8/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/9/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/10/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/11/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/12/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/13/06 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/14/06 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/15/06 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/16/06 | 0 | 0 | 5 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/17/06 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 36 |
| 11/18/06 | 0 | 0 | 7 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/19/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/20/06 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/21/06 | 0 | 0 | 5 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 38 |
| 11/22/06 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/23/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/24/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/25/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/26/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/27/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/28/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/29/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/30/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12/1/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Date | Sockeye Female Presort Mortality | Sockeye Male Presort Mortality | Sockeye Female Sorted | Sockeye Male Sorted | Sockeye Female Postsort Mortality | Sockeye Male Postsort Mortality | Sockeye Female to Hatchery | Sockeye Male to Hatchery | Sockeye Female to RM 6.5 | Sockeye Male to RM 6.5 | Sockeye Female to Below Landsburg | Sockeye Male to Below Landsburg | Sockeye Female to RM 13.5 | Sockeye Male to RM 13.5 |
|-----------------|----------------------------------|--------------------------------|-----------------------|---------------------|-----------------------------------|---------------------------------|----------------------------|--------------------------|--------------------------|------------------------|-----------------------------------|---------------------------------|---------------------------|-------------------------|
| 12/2/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12/3/06 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 |
| 12/4/06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12/5/06 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| Subtotal | 9 | 10 | 980 | 1434 | 0 | 10 | 954 | 1186 | 0 | 160 | 2 | 7 | 24 | 77 |
| Total | 19 | | 2414 | | 10 | | 2140 | | 160 | | 9 | | 101 | |

Chinook and coho passed above the Landsburg Dam on the Cedar River, 2006

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3201 | Chinook | 9/16/06 | 530 | m | a |
| 2006 | 3202 | Chinook | 9/16/06 | 750 | m | p |
| 2006 | 3203 | Chinook | 9/17/06 | 790 | m | p |
| 2006 | 3204 | Chinook | 9/19/06 | 610 | m | a |
| 2006 | 3205 | Chinook | 9/19/06 | 470 | m | p |
| 2006 | 3206 | Chinook | 9/19/06 | 500 | m | p |
| 2006 | 3207 | Chinook | 9/19/06 | 550 | m | a |
| 2006 | 3208 | Chinook | 9/19/06 | 480 | m | a |
| 2006 | 3209 | Chinook | 9/19/06 | 880 | f | a |
| 2006 | 3210 | Chinook | 9/19/06 | 710 | m | p |
| 2006 | 3211 | Chinook | 9/20/06 | 930 | m | p |
| 2006 | 3212 | Chinook | 9/20/06 | 800 | m | p |
| 2006 | 3213 | Chinook | 9/21/06 | 540 | m | p |
| 2006 | 3214 | Chinook | 9/21/06 | 540 | m | p |
| 2006 | 3215 | Chinook | 9/21/06 | 470 | m | p |
| 2006 | 3216 | Chinook | 9/21/06 | 510 | m | p |
| 2006 | 3217 | Chinook | 9/21/06 | 750 | m | p |
| 2006 | 3218 | Chinook | 9/21/06 | 980 | m | p |
| 2006 | 3219 | Chinook | 9/21/06 | 860 | f | p |
| 2006 | 3220 | Chinook | 9/22/06 | 980 | m | a |
| 2006 | 3221 | Chinook | 9/22/06 | 560 | m | a |
| 2006 | 3222 | Chinook | 9/22/06 | 700 | m | p |
| 2006 | 3223 | Chinook | 9/22/06 | 770 | m | p |
| 2006 | 3224 | Chinook | 9/23/06 | 520 | m | p |
| 2006 | 3225 | Chinook | 9/23/06 | 540 | m | p |
| 2006 | 3226 | Chinook | 9/23/06 | 860 | f | p |
| 2006 | 3227 | Chinook | 9/23/06 | 800 | m | p |
| 2006 | 3228 | Chinook | 9/23/06 | 730 | m | a |
| 2006 | 3229 | Chinook | 9/23/06 | 790 | m | p |
| 2006 | 3230 | Chinook | 9/24/06 | 815 | f | p |
| 2006 | 3231 | Chinook | 9/24/06 | 550 | m | a |
| 2006 | 3232 | Chinook | 9/24/06 | 850 | m | p |
| 2006 | 3233 | Coho | 9/25/06 | 690 | f | p |
| 2006 | 3234 | Chinook | 9/25/06 | 510 | m | p |
| 2006 | 3235 | Chinook | 9/25/06 | 740 | f | p |
| 2006 | 3236 | Chinook | 9/25/06 | 800 | m | p |
| 2006 | 3237 | Chinook | 9/25/06 | 760 | m | p |
| 2006 | 3238 | Chinook | 9/26/06 | 960 | m | p |
| 2006 | 3239 | Chinook | 9/26/06 | 840 | f | p |
| 2006 | 3240 | Chinook | 9/27/06 | 530 | m | p |
| 2006 | 3241 | Chinook | 9/27/06 | 570 | m | p |
| 2006 | 3242 | Chinook | 9/27/06 | 560 | m | a |
| 2006 | 3243 | Chinook | 9/27/06 | 830 | f | p |
| 2006 | 3244 | Chinook | 9/27/06 | 800 | m | a |
| 2006 | 3245 | Chinook | 9/27/06 | 800 | m | p |
| 2006 | 3246 | Chinook | 9/27/06 | 750 | m | p |

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3247 | Chinook | 9/27/06 | 850 | m | p |
| 2006 | 3248 | Chinook | 9/27/06 | 770 | m | p |
| 2006 | 3249 | Chinook | 9/27/06 | 890 | m | a |
| 2006 | 3250 | Chinook | 9/28/06 | 540 | m | a |
| 2006 | 3251 | Chinook | 9/28/06 | 560 | m | p |
| 2006 | 3252 | Chinook | 9/28/06 | 590 | m | p |
| 2006 | 3253 | Chinook | 9/28/06 | 870 | m | a |
| 2006 | 3254 | Chinook | 9/28/06 | 740 | m | a |
| 2006 | 3255 | Chinook | 9/28/06 | 780 | f | p |
| 2006 | 3256 | Chinook | 9/28/06 | 820 | m | p |
| 2006 | 3257 | Chinook | 9/28/06 | 540 | m | a |
| 2006 | 3258 | Chinook | 9/28/06 | 710 | m | a |
| 2006 | 3259 | Chinook | 9/29/06 | 490 | m | a |
| 2006 | 3260 | Chinook | 9/29/06 | 540 | m | p |
| 2006 | 3261 | Chinook | 9/29/06 | 560 | m | a |
| 2006 | 3262 | Chinook | 9/29/06 | 780 | f | p |
| 2006 | 3263 | Chinook | 10/2/06 | 570 | m | a |
| 2006 | 3264 | Coho | 10/2/06 | 510 | m | p |
| 2006 | 3265 | Chinook | 10/2/06 | 590 | m | p |
| 2006 | 3266 | Chinook | 10/2/06 | 560 | m | p |
| 2006 | 3267 | Chinook | 10/2/06 | 830 | m | p |
| 2006 | 3268 | Chinook | 10/4/06 | 540 | m | a |
| 2006 | 3269 | Chinook | 10/4/06 | 830 | m | a |
| 2006 | 3270 | Chinook | 10/4/06 | 800 | m | p |
| 2006 | 3271 | Chinook | 10/4/06 | 840 | f | a |
| 2006 | 3272 | Chinook | 10/4/06 | 800 | m | a |
| 2006 | 3273 | Chinook | 10/5/06 | 930 | f | p |
| 2006 | 3274 | Chinook | 10/5/06 | 780 | f | a |
| 2006 | 3275 | Chinook | 10/5/06 | 500 | m | p |
| 2006 | 3276 | Chinook | 10/5/06 | 780 | m | p |
| 2006 | 3277 | Chinook | 10/5/06 | 870 | m | a |
| 2006 | 3278 | Coho | 10/5/06 | 560 | f | p |
| 2006 | 3279 | Chinook | 10/5/06 | 890 | m | a |
| 2006 | 3280 | Chinook | 10/6/06 | 980 | m | a |
| 2006 | 3281 | Chinook | 10/6/06 | 610 | m | a |
| 2006 | 3282 | Chinook | 10/6/06 | 1000 | m | a |
| 2006 | 3283 | Chinook | 10/6/06 | 540 | m | p |
| 2006 | 3284 | Chinook | 10/6/06 | 540 | m | a |
| 2006 | 3285 | Chinook | 10/6/06 | 740 | m | p |
| 2006 | 3286 | Chinook | 10/6/06 | 530 | m | a |
| 2006 | 3287 | Chinook | 10/6/06 | 540 | m | a |
| 2006 | 3288 | Chinook | 10/6/06 | 600 | m | p |
| 2006 | 3289 | Chinook | 10/6/06 | 550 | m | p |
| 2006 | 3290 | Chinook | 10/6/06 | 720 | m | p |
| 2006 | 3291 | Chinook | 10/6/06 | 780 | m | a |
| 2006 | 3292 | Chinook | 10/7/06 | 500 | m | p |
| 2006 | 3293 | Chinook | 10/7/06 | 500 | m | a |

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3294 | Chinook | 10/7/06 | 850 | m | p |
| 2006 | 3295 | Chinook | 10/7/06 | 800 | m | p |
| 2006 | 3296 | Chinook | 10/7/06 | 780 | f | p |
| 2006 | 3297 | Chinook | 10/7/06 | 860 | m | a |
| 2006 | 3298 | Chinook | 10/7/06 | 530 | m | p |
| 2006 | 3299 | Chinook | 10/7/06 | 590 | m | a |
| 2006 | 3300 | Chinook | 10/7/06 | 800 | m | p |
| 2006 | 3301 | Chinook | 10/7/06 | 740 | m | p |
| 2006 | 3302 | Chinook | 10/7/06 | 740 | m | a |
| 2006 | 3303 | Chinook | 10/7/06 | 940 | m | p |
| 2006 | 3304 | Chinook | 10/7/06 | 1060 | f | p |
| 2006 | 3305 | Chinook | 10/8/06 | 630 | m | p |
| 2006 | 3306 | Coho | 10/8/06 | 690 | m | p |
| 2006 | 3307 | Chinook | 10/8/06 | 920 | m | p |
| 2006 | 3308 | Chinook | 10/8/06 | 700 | m | a |
| 2006 | 3309 | Chinook | 10/8/06 | 820 | f | a |
| 2006 | 3310 | Chinook | 10/8/06 | 510 | m | a |
| 2006 | 3311 | Chinook | 10/8/06 | 750 | m | a |
| 2006 | 3312 | Chinook | 10/8/06 | 900 | m | p |
| 2006 | 3313 | Chinook | 10/8/06 | 770 | m | p |
| 2006 | 3314 | Chinook | 10/8/06 | 920 | f | p |
| 2006 | 3315 | Coho | 10/9/06 | 580 | m | p |
| 2006 | 3316 | Chinook | 10/9/06 | 580 | m | p |
| 2006 | 3317 | Chinook | 10/9/06 | 720 | m | a |
| 2006 | 3318 | Chinook | 10/9/06 | 860 | m | a |
| 2006 | 3319 | Chinook | 10/9/06 | 770 | m | a |
| 2006 | 3320 | Chinook | 10/9/06 | 810 | f | a |
| 2006 | 3321 | Coho | 10/9/06 | 570 | m | p |
| 2006 | 3322 | Chinook | 10/9/06 | 520 | m | a |
| 2006 | 3323 | Chinook | 10/9/06 | 760 | m | p |
| 2006 | 3324 | Chinook | 10/9/06 | 900 | f | p |
| 2006 | 3325 | Chinook | 10/9/06 | 850 | m | a |
| 2006 | 3326 | Chinook | 10/9/06 | 540 | m | p |
| 2006 | 3327 | Chinook | 10/9/06 | 560 | m | a |
| 2006 | 3328 | Chinook | 10/9/06 | 830 | f | p |
| 2006 | 3329 | Chinook | 10/10/06 | 820 | f | p |
| 2006 | 3330 | Chinook | 10/10/06 | 560 | m | a |
| 2006 | 3331 | Chinook | 10/10/06 | 830 | f | p |
| 2006 | 3332 | Chinook | 10/10/06 | 520 | m | p |
| 2006 | 3333 | Chinook | 10/10/06 | 1100 | m | p |
| 2006 | 3334 | Chinook | 10/10/06 | 670 | m | p |
| 2006 | 3335 | Coho | 10/10/06 | 720 | f | p |
| 2006 | 3336 | Chinook | 10/10/06 | 940 | m | p |
| 2006 | 3337 | Coho | 10/10/06 | 610 | m | p |
| 2006 | 3338 | Chinook | 10/11/06 | 900 | f | p |
| 2006 | 3339 | Chinook | 10/11/06 | 560 | m | p |
| 2006 | 3340 | Coho | 10/11/06 | 750 | m | p |

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3341 | Chinook | 10/12/06 | 890 | f | p |
| 2006 | 3342 | Chinook | 10/12/06 | 900 | f | a |
| 2006 | 3343 | Chinook | 10/12/06 | 840 | m | a |
| 2006 | 3344 | Chinook | 10/12/06 | 570 | m | p |
| 2006 | 3345 | Chinook | 10/12/06 | 430 | m | a |
| 2006 | 3346 | Chinook | 10/12/06 | 510 | m | p |
| 2006 | 3347 | Chinook | 10/12/06 | 510 | m | p |
| 2006 | 3348 | Chinook | 10/12/06 | 950 | m | p |
| 2006 | 3349 | Chinook | 10/12/06 | 580 | m | p |
| 2006 | 3350 | Chinook | 10/12/06 | 630 | m | a |
| 2006 | 3351 | Chinook | 10/12/06 | 760 | m | p |
| 2006 | 3352 | Coho | 10/12/06 | 690 | f | p |
| 2006 | 3353 | Chinook | 10/12/06 | 630 | m | p |
| 2006 | 3354 | Chinook | 10/12/06 | 860 | f | a |
| 2006 | No sample | Chinook | 10/12/06 | 540 | m | p |
| 2006 | 3355 | Chinook | 10/13/06 | 610 | m | a |
| 2006 | 3356 | Chinook | 10/13/06 | 570 | m | a |
| 2006 | 3357 | Chinook | 10/13/06 | 520 | m | a |
| 2006 | 3358 | Chinook | 10/13/06 | 870 | m | a |
| 2006 | 3359 | Chinook | 10/15/06 | 520 | m | a |
| 2006 | 3360 | Chinook | 10/15/06 | 740 | m | a |
| 2006 | 3361 | Coho | 10/15/06 | 720 | m | p |
| 2006 | 3362 | Coho | 10/15/06 | 740 | m | p |
| 2006 | 3363 | Chinook | 10/15/06 | 820 | f | a |
| 2006 | 3364 | Chinook | 10/15/06 | 480 | m | a |
| 2006 | 3365 | Chinook | 10/16/06 | 520 | m | p |
| 2006 | 3366 | Chinook | 10/16/06 | 800 | m | p |
| 2006 | 3367 | Chinook | 10/16/06 | 870 | m | a |
| 2006 | 3368 | Chinook | 10/17/06 | 880 | f | a |
| 2006 | 3369 | Chinook | 10/18/06 | 540 | m | p |
| 2006 | 3370 | Coho | 10/18/06 | 730 | m | p |
| 2006 | 3371 | Coho | 10/18/06 | 720 | f | p |
| 2006 | 3372 | Coho | 10/18/06 | 770 | f | p |
| 2006 | 3373 | Coho | 10/18/06 | 660 | f | p |
| 2006 | 3374 | Coho | 10/18/06 | 720 | f | p |
| 2006 | 3375 | Coho | 10/18/06 | 780 | f | p |
| 2006 | 3376 | Chinook | 10/19/06 | 850 | m | a |
| 2006 | 3377 | Chinook | 10/19/06 | 780 | m | a |
| 2006 | 3378 | Chinook | 10/19/06 | 900 | f | p |
| 2006 | 3379 | Chinook | 10/19/06 | 770 | m | a |
| 2006 | 3380 | Chinook | 10/19/06 | 710 | m | a |
| 2006 | 3381 | Chinook | 10/19/06 | 790 | m | a |
| 2006 | 3382 | Chinook | 10/20/06 | 510 | m | a |
| 2006 | 3383 | Chinook | 10/20/06 | 580 | m | p |
| 2006 | 3384 | Chinook | 10/20/06 | 700 | f | a |
| 2006 | 3385 | Chinook | 10/20/06 | 860 | f | a |
| 2006 | 3386 | Coho | 10/20/06 | 770 | m | p |

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3387 | Chinook | 10/21/06 | 800 | m | p |
| 2006 | 3388 | Chinook | 10/21/06 | 860 | m | a |
| 2006 | 3389 | Chinook | 10/21/06 | 600 | m | a |
| 2006 | 3390 | Chinook | 10/21/06 | 830 | m | p |
| 2006 | 3391 | Chinook | 10/22/06 | 950 | m | p |
| 2006 | 3392 | Chinook | 10/22/06 | 790 | m | a |
| 2006 | 3393 | Chinook | 10/22/06 | 730 | m | a |
| 2006 | 3394 | Chinook | 10/22/06 | 840 | f | p |
| 2006 | 3395 | Chinook | 10/22/06 | 760 | m | a |
| 2006 | 3396 | Chinook | 10/22/06 | 540 | m | a |
| 2006 | 3397 | Chinook | 10/23/06 | 740 | m | p |
| 2006 | 3398 | Chinook | 10/23/06 | 800 | m | a |
| 2006 | 3399 | Chinook | 10/23/06 | 830 | f | a |
| 2006 | 3400 | Coho | 10/24/06 | 740 | f | p |
| 2006 | 3401 | Coho | 10/25/06 | 660 | f | p |
| 2006 | 3402 | Coho | 10/25/06 | 700 | f | p |
| 2006 | 3403 | Coho | 10/25/06 | 690 | m | p |
| 2006 | 3404 | Coho | 10/29/06 | 720 | m | p |
| 2006 | 3405 | Coho | 10/29/06 | 670 | f | a |
| 2006 | 3406 | Coho | 10/30/06 | 740 | f | p |
| 2006 | 3407 | Coho | 11/4/06 | 550 | m | p |
| 2006 | 3408 | Coho | 11/4/06 | 490 | m | p |
| 2006 | 3409 | Coho | 11/4/06 | 590 | m | p |
| 2006 | 3410 | Coho | 11/4/06 | 710 | m | a |
| 2006 | 3411 | Coho | 11/4/06 | 710 | f | a |
| 2006 | 3412 | Coho | 11/4/06 | 780 | f | p |
| 2006 | 3413 | Coho | 11/4/06 | 650 | m | p |
| 2006 | 3414 | Coho | 11/4/06 | 750 | f | p |
| 2006 | 3415 | Coho | 11/5/06 | 680 | f | p |
| 2006 | 3416 | Coho | 11/5/06 | 650 | m | a |
| 2006 | 3417 | Coho | 11/5/06 | 810 | m | p |
| 2006 | 3418 | Coho | 11/5/06 | 760 | m | p |
| 2006 | 3419 | Coho | 11/5/06 | 550 | m | p |
| 2006 | 3420 | Chinook | 11/5/06 | 750 | m | a |
| 2006 | 3421 | Coho | 11/6/06 | 640 | m | a |
| 2006 | 3422 | Coho | 11/6/06 | 710 | m | p |
| 2006 | 3423 | Coho | 11/6/06 | 710 | f | p |
| 2006 | 3424 | Coho | 11/6/06 | 770 | m | p |
| 2006 | 3425 | Coho | 11/6/06 | 710 | f | p |
| 2006 | 3426 | Coho | 11/6/06 | 690 | m | p |
| 2006 | 3427 | Coho | 11/6/06 | 790 | m | p |
| 2006 | 3428 | Coho | 11/13/06 | 720 | f | p |
| 2006 | 3429 | Coho | 11/13/06 | 640 | f | p |
| 2006 | 3430 | Coho | 11/13/06 | 620 | m | p |
| 2006 | 3431 | Coho | 11/13/06 | 630 | m | p |
| 2006 | 3432 | Coho | 11/13/06 | 640 | f | p |
| 2006 | 3433 | Coho | 11/13/06 | 630 | m | p |

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3434 | Coho | 11/13/06 | 720 | m | p |
| 2006 | 3435 | Coho | 11/14/06 | 730 | m | p |
| 2006 | 3436 | Coho | 11/15/06 | 690 | m | p |
| 2006 | 3437 | Coho | 11/15/06 | 590 | m | p |
| 2006 | 3438 | Coho | 11/15/06 | 680 | m | p |
| 2006 | 3439 | Coho | 11/15/06 | 740 | m | p |
| 2006 | 3440 | Coho | 11/15/06 | 320 | m | p |
| 2006 | 3441 | Coho | 11/17/06 | 740 | m | p |
| 2006 | 3442 | Coho | 11/17/06 | 700 | m | p |
| 2006 | 3443 | Coho | 11/17/06 | 690 | m | p |
| 2006 | 3444 | Coho | 11/17/06 | 710 | m | p |
| 2006 | 3445 | Coho | 11/17/06 | 690 | m | p |
| 2006 | 3446 | Coho | 11/17/06 | 620 | m | p |
| 2006 | 3447 | Coho | 11/17/06 | 830 | m | p |
| 2006 | 3449 | Coho | 11/18/06 | 710 | m | p |
| 2006 | 3450 | Coho | 11/18/06 | 660 | m | p |
| 2006 | 3451 | Coho | 11/18/06 | 760 | m | p |
| 2006 | 3452 | Coho | 11/18/06 | 670 | f | p |
| 2006 | 3453 | Coho | 11/21/06 | 420 | m | p |
| 2006 | 3454 | Coho | 11/21/06 | 460 | m | p |
| 2006 | 3455 | Coho | 11/21/06 | 720 | m | a |
| 2006 | 3456 | Coho | 11/21/06 | 780 | m | p |
| 2006 | 3457 | Coho | 11/21/06 | 740 | f | p |
| 2006 | 3458 | Coho | 11/21/06 | 680 | f | p |
| 2006 | 3459 | Coho | 11/21/06 | 700 | f | p |
| 2006 | 3460 | Coho | 11/22/06 | 580 | m | a |
| 2006 | 3461 | Coho | 11/22/06 | 720 | m | p |
| 2006 | 3462 | Coho | 11/22/06 | 740 | m | p |
| 2006 | 3463 | Coho | 11/22/06 | 740 | m | p |
| 2006 | 3464 | Coho | 11/22/06 | 790 | f | a |
| 2006 | 3465 | Coho | 11/22/06 | 740 | m | p |
| 2006 | 3466 | Coho | 11/29/06 | 760 | m | p |
| 2006 | 3467 | Coho | 11/29/06 | 670 | f | p |
| 2006 | 3468 | Coho | 11/29/06 | 740 | m | p |
| 2006 | 3469 | Coho | 12/3/06 | 700 | f | p |
| 2006 | 3470 | Coho | 12/3/06 | 620 | f | p |
| 2006 | 3471 | Coho | 12/3/06 | 740 | m | p |
| 2006 | 3472 | Coho | 12/3/06 | 720 | m | p |
| 2006 | 3473 | Coho | 12/4/06 | 620 | f | p |
| 2006 | 3474 | Coho | 12/5/06 | 680 | m | p |
| 2006 | 3475 | Coho | 12/5/06 | 640 | f | p |
| 2006 | 3476 | Coho | 12/5/06 | 710 | f | p |
| 2006 | 3477 | Coho | 12/9/06 | 740 | m | p |
| 2006 | 3478 | Coho | 12/9/06 | 670 | f | p |
| 2006 | 3479 | Coho | 12/9/06 | 730 | f | p |
| 2006 | 3480 | Coho | 12/9/06 | 680 | f | p |
| 2006 | 3481 | Coho | 12/9/06 | 720 | f | p |

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3482 | Coho | 12/10/06 | 420 | m | p |
| 2006 | 3483 | Coho | 12/10/06 | 700 | m | p |
| 2006 | 3484 | Coho | 12/11/06 | 680 | f | p |
| 2006 | 3485 | Coho | 12/11/06 | 370 | m | p |
| 2006 | 3486 | Coho | 12/11/06 | 770 | m | p |
| 2006 | 3487 | Coho | 12/11/06 | 670 | f | p |
| 2006 | 3488 | Coho | 12/11/06 | 690 | f | p |
| 2006 | 3489 | Coho | 12/11/06 | 710 | f | p |
| 2006 | 3490 | Coho | 12/11/06 | 680 | m | p |
| 2006 | 3491 | Coho | 12/12/06 | 710 | m | p |
| 2006 | 3492 | Coho | 12/12/06 | 770 | M | P |
| 2006 | 3493 | Coho | 12/12/06 | 710 | M | P |
| 2006 | 3494 | Coho | 12/12/06 | 730 | F | P |
| 2006 | 3495 | Coho | 12/12/06 | 690 | M | P |
| 2006 | 3496 | Coho | 12/12/06 | 560 | F | P |
| 2006 | 3497 | Coho | 12/12/06 | 710 | F | P |
| 2006 | 3498 | Coho | 12/14/06 | 690 | F | P |
| 2006 | 3500 | Coho | 12/14/06 | 710 | F | P |
| 2006 | 3501 | Coho | 12/14/06 | 740 | M | P |
| 2006 | 3502 | Coho | 12/14/06 | 750 | M | P |
| 2006 | 3503 | Coho | 12/14/06 | 740 | F | P |
| 2006 | 3504 | Coho | 12/14/06 | 810 | M | P |
| 2006 | 3505 | Coho | 12/14/06 | 690 | M | P |
| 2006 | 3508 | Coho | 12/13/06 | 420 | M | P |
| 2006 | 3509 | Coho | 12/13/06 | 600 | M | a |
| 2006 | 3510 | Coho | 12/13/06 | 760 | M | P |
| 2006 | 3511 | Coho | 12/16/06 | 660 | F | P |
| 2006 | 3512 | Coho | 12/16/06 | 680 | M | P |
| 2006 | 3513 | Coho | 12/16/06 | 690 | F | P |
| 2006 | 3514 | Coho | 12/16/06 | 630 | M | P |
| 2006 | 3515 | Coho | 12/16/06 | 730 | M | P |
| 2006 | 3516 | Coho | 12/16/06 | 760 | M | P |
| 2006 | 3517 | Coho | 12/16/06 | 790 | M | P |
| 2006 | 3518 | Coho | 12/16/06 | 780 | M | P |
| 2006 | 3519 | Coho | 12/16/06 | 670 | F | P |
| 2006 | 3520 | Coho | 12/16/06 | 750 | M | P |
| 2006 | 3521 | Coho | 12/16/06 | 420 | M | P |
| 2006 | 3522 | Coho | 12/16/06 | 640 | F | P |
| 2006 | 3523 | Coho | 12/16/06 | 680 | M | P |
| 2006 | 3524 | Coho | 12/18/06 | 640 | F | P |
| 2006 | 3525 | Coho | 12/20/06 | 720 | F | P |
| 2006 | 3526 | Coho | 12/20/06 | 730 | F | P |
| 2006 | 3527 | Coho | 12/20/06 | 740 | M | P |
| 2006 | 3528 | Coho | 12/20/06 | 780 | F | P |
| 2006 | 3529 | Coho | 12/20/06 | 610 | F | P |
| 2006 | 3530 | Coho | 12/20/06 | 730 | F | P |
| 2006 | 3507 | Coho | 12/20/06 | 420 | M | P |

| Sample Year | Sample Number | Species | Date Sampled and Released | Fork Length (mm) | Sex | Adipose (p=present, a=absent) |
|-------------|---------------|---------|---------------------------|------------------|-----|-------------------------------|
| 2006 | 3531 | Coho | 12/22/06 | 740 | M | P |
| 2006 | 3532 | Coho | 12/22/06 | 720 | F | P |
| 2006 | 3533 | Coho | 12/26/06 | 660 | F | P |
| 2006 | 3534 | Coho | 12/26/06 | 590 | M | P |
| 2006 | 3535 | Coho | 12/27/06 | 740 | F | P |
| 2006 | 3536 | Coho | 1/2/07 | 670 | F | P |
| 2006 | 3537 | Coho | 1/2/07 | 710 | F | P |
| 2006 | 3538 | Coho | 1/2/07 | 690 | F | P |
| 2006 | 3539 | Coho | 1/2/07 | 660 | M | P |
| 2006 | 3540 | Coho | 1/2/07 | 660 | F | P |
| 2006 | 3541 | Coho | 1/2/07 | 730 | F | P |
| 2006 | 3542 | Coho | 1/2/07 | 740 | F | P |
| 2006 | 3543 | Coho | 1/2/07 | 710 | M | P |
| 2006 | 3544 | Coho | 1/2/07 | 760 | M | P |
| 2006 | 3545 | Coho | 1/2/07 | 740 | M | P |
| 2006 | 3546 | Coho | 1/2/07 | 450 | M | P |
| 2006 | 3547 | Coho | 1/2/07 | 710 | F | P |
| 2006 | 3548 | Coho | 1/2/07 | 680 | F | P |
| 2006 | 3549 | Coho | 1/2/07 | 710 | F | P |
| 2006 | 3550 | Coho | 1/3/07 | 680 | F | P |
| 2006 | 3551 | Coho | 1/3/07 | 720 | F | P |
| 2006 | 3552 | Coho | 1/3/07 | 420 | M | P |
| 2006 | 3553 | Coho | 1/3/07 | 750 | M | P |
| 2006 | 3554 | Coho | 1/3/07 | 680 | M | P |
| 2006 | 3555 | Coho | 1/3/07 | 740 | M | P |
| 2006 | 3556 | Coho | 1/3/07 | 710 | M | P |
| 2006 | 3557 | Coho | 1/3/07 | 720 | F | P |
| 2006 | 3558 | Coho | 1/3/07 | 740 | M | P |
| 2006 | 3559 | Coho | 1/3/07 | 650 | M | P |
| 2006 | 3560 | Coho | 1/3/07 | 780 | M | P |
| 2006 | 3561 | Coho | 1/3/07 | 730 | F | P |
| 2006 | 3562 | Coho | 1/3/07 | 460 | M | P |
| 2006 | 3563 | Coho | 1/3/07 | 680 | F | P |
| 2006 | 3564 | Coho | 1/3/07 | 720 | F | P |
| 2006 | 3565 | Coho | 1/3/07 | 670 | M | P |
| 2006 | 3566 | Coho | 1/4/07 | 690 | M | P |
| 2006 | 3567 | Coho | 1/4/07 | 710 | F | P |
| 2006 | 3568 | Coho | 1/4/07 | 600 | M | P |
| 2006 | 3569 | Coho | 1/4/07 | 740 | F | P |
| 2006 | 3570 | Coho | 1/10/07 | 670 | f | p |
| 2006 | 3571 | Coho | 1/10/07 | 620 | f | p |
| 2006 | 3572 | Coho | 1/10/07 | 690 | m | p |
| 2006 | 3573 | Coho | 1/18/07 | 600 | m | p |
| 2006 | 3574 | Coho | 1/28/07 | 660 | m | p |

All species passed above the Landsburg Dam on the Cedar River in passive mode, 2007

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|----------------|
| 1/28/07 3:51 PM | 58 | 34 | Trout |
| 1/28/07 4:25 PM | 62 | 37 | Trout |
| 1/29/07 2:17 PM | 55 | 33 | Trout |
| 1/29/07 5:59 PM | 45 | 27 | Trout |
| 1/30/07 1:21 AM | 113 | 67 | Coho |
| 1/30/07 2:23 PM | 92 | 55 | Trout |
| 1/30/07 2:23 PM | 52 | 31 | Trout |
| 1/30/07 3:45 PM | 60 | 36 | Trout |
| 1/30/07 4:52 PM | 81 | 48 | Trout |
| 2/1/07 3:44 PM | 62 | 37 | Trout |
| 2/2/07 3:54 PM | 40 | 24 | Trout |
| 2/4/07 12:17 AM | 105 | 63 | Coho |
| 2/4/07 2:47 AM | 117 | 70 | Coho |
| 2/4/07 5:47 AM | 62 | 37 | Trout |
| 2/4/07 7:49 AM | 60 | 36 | Trout |
| 2/4/07 7:58 AM | 77 | 46 | Trout |
| 2/4/07 8:11 AM | 45 | 27 | Trout |
| 2/4/07 8:55 AM | 45 | 27 | Trout |
| 2/4/07 11:46 AM | 77 | 46 | Trout |
| 2/4/07 12:17 PM | 55 | 33 | Trout |
| 2/4/07 3:36 PM | 55 | 33 | Trout |
| 2/4/07 6:40 PM | 57 | 34 | Trout |
| 2/4/07 8:08 PM | 95 | 57 | Trout |
| 2/4/07 9:04 PM | 75 | 45 | Trout |
| 2/7/07 12:36 AM | 42 | 25 | Trout |
| 2/7/07 4:55 AM | 62 | 37 | Trout |
| 2/7/07 6:17 AM | 85 | 51 | Trout |
| 2/7/07 6:43 AM | 105 | 63 | Coho or Trout |
| 2/7/07 8:15 AM | 45 | 27 | Trout |
| 2/7/07 8:17 AM | 85 | 51 | Trout |
| 2/7/07 1:43 PM | 77 | 46 | Trout |
| 2/7/07 5:26 PM | 42 | 25 | Trout |
| 2/8/07 12:52 PM | 75 | 45 | Trout |
| 2/8/07 12:55 PM | 70 | 42 | Trout |
| 2/8/07 1:48 PM | 50 | 30 | Trout |
| 2/8/07 3:14 PM | 42 | 25 | Trout |
| 2/8/07 3:21 PM | 40 | 24 | Trout |
| 2/9/07 9:11 AM | 85 | 51 | Trout |
| 2/11/07 2:24 PM | 60 | 36 | Whitefish |
| 2/11/07 3:13 PM | 77 | 46 | Trout |
| 2/11/07 10:11 PM | 106 | 63 | Coho |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|----------------|
| 2/12/07 2:00 AM | 163 | 97 | Coho |
| 2/12/07 4:12 PM | 52 | 31 | Trout |
| 2/13/07 6:41 AM | 97 | 58 | Trout |
| 2/13/07 6:47 AM | 82 | 49 | Trout |
| 2/14/07 4:22 PM | 65 | 39 | Trout |
| 2/15/07 1:17 PM | 87 | 52 | Trout |
| 2/15/07 9:26 PM | 45 | 27 | Trout |
| 2/16/07 6:53 AM | 75 | 45 | Trout |
| 2/16/07 10:21 AM | 102 | 61 | Trout |
| 2/16/07 11:10 AM | 52 | 31 | Trout |
| 2/16/07 1:31 PM | 67 | 40 | Trout |
| 2/16/07 3:46 PM | 42 | 25 | Trout |
| 2/17/07 3:13 PM | 80 | 48 | Trout |
| 2/20/07 8:42 AM | 72 | 43 | Trout |
| 2/20/07 9:07 AM | 75 | 45 | Trout |
| 2/20/07 11:37 AM | 70 | 42 | Trout |
| 2/20/07 2:11 PM | 37 | 22 | Trout |
| 2/20/07 2:35 PM | 47 | 28 | Trout |
| 2/20/07 4:57 PM | 37 | 22 | Trout |
| 3/3/07 9:15 AM | 90 | 54 | Trout |
| 3/4/07 1:37 PM | 52 | 31 | Trout |
| 3/5/07 11:58 AM | 102 | 61 | Trout |
| 3/5/07 4:34 PM | 62 | 37 | Trout |
| 3/5/07 11:12 PM | 75 | 45 | Trout |
| 3/6/07 8:08 AM | 75 | 45 | Trout |
| 3/6/07 1:52 PM | 40 | 24 | Trout |
| 3/6/07 4:30 PM | 62 | 37 | Trout |
| 3/6/07 4:45 PM | 45 | 27 | Trout |
| 3/7/07 9:22 AM | 47 | 28 | Trout |
| 3/7/07 10:14 AM | 60 | 36 | Trout |
| 3/7/07 12:56 PM | 55 | 33 | Trout |
| 3/7/07 1:38 PM | 72 | 43 | Trout |
| 3/7/07 1:45 PM | 40 | 24 | Trout |
| 3/7/07 2:09 PM | 45 | 27 | Whitefish |
| 3/7/07 4:33 PM | 62 | 37 | Trout |
| 3/8/07 11:20 AM | 77 | 46 | Trout |
| 3/8/07 4:08 PM | 62 | 37 | Trout |
| 3/8/07 10:45 PM | 52 | 31 | Trout |
| 3/9/07 8:06 AM | 80 | 48 | Trout |
| 3/9/07 2:38 PM | 62 | 37 | Trout |
| 3/9/07 4:19 PM | 62 | 37 | Trout |
| 3/10/07 3:17 PM | 96 | 57 | Trout |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|--------------------|
| 3/10/07 4:33 PM | 55 | 33 | Trout |
| 3/11/07 8:42 AM | 75 | 45 | Trout |
| 3/11/07 8:52 AM | 70 | 42 | Trout |
| 3/11/07 12:18 PM | 47 | 28 | Whitefish |
| 3/11/07 2:04 PM | 52 | 31 | Trout |
| 3/11/07 2:05 PM | 52 | 31 | Trout |
| 3/11/07 3:00 PM | 55 | 33 | Trout |
| 3/11/07 3:08 PM | 117 | 70 | Coho or Trout |
| 3/12/07 12:02 PM | 47 | 28 | Whitefish or Trout |
| 3/12/07 1:20 PM | 55 | 33 | Whitefish or Trout |
| 3/12/07 1:26 PM | 75 | 45 | Trout |
| 3/12/07 2:16 PM | 65 | 39 | Trout |
| 3/12/07 7:05 PM | 57 | 34 | Trout |
| 3/13/07 9:21 AM | 47 | 28 | Trout |
| 3/13/07 9:21 AM | 57 | 34 | Trout |
| 3/13/07 10:57 AM | 70 | 42 | Trout |
| 3/13/07 12:26 PM | 120 | 72 | coho or Trout |
| 3/13/07 5:08 PM | 42 | 25 | Trout |
| 3/13/07 5:51 PM | 35 | 21 | Whitefish |
| 3/13/07 6:42 PM | 42 | 25 | Trout |
| 3/14/07 7:23 AM | 65 | 39 | Trout |
| 3/14/07 5:20 PM | 45 | 27 | Trout |
| 3/15/07 5:04 PM | 55 | 33 | Trout |
| 3/15/07 5:24 PM | 52 | 31 | Trout |
| 3/15/07 7:23 PM | 62 | 37 | Trout |
| 3/16/07 3:12 PM | 50 | 30 | Trout |
| 3/16/07 5:37 PM | 47 | 28 | Whitefish |
| 3/16/07 5:37 PM | 45 | 27 | Whitefish |
| 3/16/07 6:35 PM | 50 | 30 | Trout |
| 3/16/07 7:39 PM | 57 | 34 | Trout |
| 3/16/07 7:52 PM | 50 | 30 | Trout |
| 3/17/07 1:42 PM | 67 | 40 | Trout |
| 3/17/07 1:47 PM | 100 | 60 | Trout |
| 3/17/07 2:39 PM | 100 | 60 | Trout |
| 3/17/07 3:45 PM | 55 | 33 | Trout |
| 3/17/07 7:40 PM | 57 | 34 | Trout |
| 3/18/07 8:59 AM | 47 | 28 | Trout |
| 3/18/07 10:47 AM | 82 | 49 | Trout |
| 3/18/07 12:40 PM | 65 | 39 | Trout |
| 3/18/07 2:19 PM | 45 | 27 | Whitefish |
| 3/18/07 3:42 PM | 50 | 30 | Trout |
| 3/18/07 5:51 PM | 70 | 42 | Trout |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|-----------------|------------------------|--------------------|
| 3/18/07 6:31 PM | 42 | 25 | Whitefish |
| 3/18/07 7:11 PM | 45 | 27 | Trout |
| 3/18/07 7:11 PM | 62 | 37 | Trout |
| 3/19/07 11:26 AM | 50 | 30 | Trout |
| 3/19/07 11:27 AM | 52 | 31 | Trout |
| 3/19/07 5:26 PM | 100 | 60 | Trout |
| 3/19/07 7:29 PM | 62 | 37 | Trout |
| 3/20/07 3:27 PM | 95 | 57 | Trout |
| 3/20/07 5:04 PM | 67 | 40 | Trout |
| 3/21/07 4:08 PM | 75 | 45 | Trout |
| 3/21/07 4:39 PM | 62 | 37 | Trout |
| 3/21/07 4:55 PM | 42 | 25 | Trout |
| 3/21/07 5:02 PM | 90 | 54 | Trout |
| 3/21/07 7:36 PM | 60 | 36 | Trout |
| 3/22/07 12:18 PM | 70 | 42 | Trout |
| 3/22/07 2:39 PM | 75 | 45 | Trout |
| 3/22/07 7:28 PM | 65 | 39 | Trout |
| 3/23/07 2:55 PM | 47 | 28 | Trout |
| 3/23/07 4:56 PM | 75 | 45 | Trout |
| 3/23/07 7:36 PM | 65 | 39 | Trout |
| 3/24/07 9:53 AM | 65 | 39 | Trout |
| 3/24/07 11:40 AM | 37 | 22 | Whitefish or Trout |
| 3/24/07 12:21 PM | 42 | 25 | Whitefish or Trout |
| 3/24/07 12:55 PM | 32 | 19 | Whitefish or Trout |
| 3/24/07 2:22 PM | 50 | 30 | Whitefish or Trout |
| 3/24/07 3:03 PM | 40 | 24 | Whitefish or Trout |
| 3/24/07 4:03 PM | 62 | 37 | Whitefish or Trout |
| 3/25/07 12:35 PM | 45 | 27 | Whitefish or Trout |
| 3/27/07 12:53 PM | 87 | 52 | Trout |
| 3/27/07 3:33 PM | 65 | 39 | Trout |
| 3/27/07 6:25 PM | 42 | 25 | Trout |
| 3/27/07 6:32 PM | 42 | 25 | Trout |
| 3/28/07 2:33 PM | 50 | 30 | Trout |
| 3/29/07 5:04 PM | 67 | 40 | Trout |
| 3/29/07 8:30 PM | 62 | 37 | Trout |
| 3/30/07 4:55 PM | 40 | 24 | Trout |
| 3/30/07 5:50 PM | 100 | 60 | Trout |
| 3/30/07 7:53 PM | 57 | 34 | Trout |
| 3/31/07 4:17 PM | 50 | 30 | Trout |
| 3/31/07 7:55 PM | 62 | 37 | Trout |
| 4/1/07 3:27 PM | 90 | 54 | Trout |
| 4/1/07 8:56 PM | 42 | 25 | Trout |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|-----------------------|
| 4/3/07 4:20 PM | 62 | 37 | Trout |
| 4/3/07 5:15 PM | 60 | 36 | Trout |
| 4/3/07 6:07 PM | 47 | 28 | Trout |
| 4/3/07 6:44 PM | 50 | 30 | Trout |
| 4/3/07 8:56 PM | 65 | 39 | Trout |
| 4/4/07 12:35 PM | 137 | 82 | Presumptive Steelhead |
| 4/4/07 5:56 PM | 37 | 22 | Whitefish |
| 4/4/07 8:42 PM | 60 | 36 | Trout |
| 4/5/07 2:50 PM | 45 | 27 | Whitefish or Trout |
| 4/5/07 4:32 PM | 47 | 28 | Whitefish |
| 4/5/07 5:44 PM | 45 | 27 | Trout |
| 4/5/07 5:45 PM | 45 | 27 | Trout |
| 4/5/07 6:07 PM | 40 | 24 | Trout |
| 4/5/07 6:15 PM | 40 | 24 | Trout |
| 4/5/07 6:21 PM | 52 | 31 | Whitefish |
| 4/5/07 6:21 PM | 40 | 24 | Trout |
| 4/5/07 7:14 PM | 90 | 54 | Trout |
| 4/5/07 8:21 PM | 52 | 31 | Trout |
| 4/5/07 8:38 PM | 62 | 37 | Trout |
| 4/6/07 11:25 AM | 60 | 36 | Trout |
| 4/6/07 5:00 PM | 52 | 31 | Trout |
| 4/6/07 5:29 PM | 50 | 30 | Whitefish |
| 4/6/07 5:31 PM | 92 | 55 | Trout |
| 4/6/07 5:51 PM | 45 | 27 | Trout |
| 4/6/07 5:54 PM | 42 | 25 | Trout |
| 4/6/07 8:51 PM | 65 | 39 | Trout |
| 4/6/07 8:53 PM | 54 | 32 | Trout |
| 4/6/07 9:04 PM | 47 | 28 | Whitefish |
| 4/6/07 9:09 PM | 50 | 30 | Whitefish |
| 4/7/07 8:23 AM | 90 | 54 | Trout |
| 4/7/07 10:33 AM | 62 | 37 | Trout |
| 4/7/07 2:51 PM | 70 | 42 | Trout |
| 4/7/07 3:18 PM | 60 | 36 | Trout |
| 4/7/07 5:27 PM | 55 | 33 | Trout |
| 4/7/07 7:11 PM | 172 | 103 | Presumptive Steelhead |
| 4/7/07 7:20 PM | 55 | 33 | Whitefish |
| 4/7/07 7:29 PM | 55 | 33 | Whitefish |
| 4/7/07 8:39 PM | 65 | 39 | Trout |
| 4/8/07 4:04 PM | 55 | 33 | Trout |
| 4/8/07 4:56 PM | 105 | 63 | Trout |
| 4/8/07 5:29 PM | 45 | 27 | Whitefish |
| 4/8/07 5:35 PM | 57 | 34 | Trout |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|----------------|
| 4/8/07 7:48 PM | 55 | 33 | Trout |
| 4/8/07 8:31 PM | 62 | 37 | Trout |
| 4/9/07 8:27 PM | 45 | 27 | Whitefish |
| 4/13/07 3:43 PM | 62 | 37 | Trout |
| 4/14/07 8:17 PM | 45 | 27 | Trout |
| 4/16/07 3:50 PM | 47 | 28 | Trout |
| 4/17/07 1:46 PM | 77 | 46 | Trout |
| 4/17/07 1:51 PM | 80 | 48 | Trout |
| 4/17/07 4:03 PM | 52 | 31 | Whitefish |
| 4/18/07 2:39 PM | 45 | 27 | Whitefish |
| 4/18/07 7:00 PM | 80 | 48 | Trout |
| 4/19/07 7:35 AM | 97 | 58 | Trout |
| 4/19/07 4:09 PM | 47 | 28 | Whitefish |
| 4/19/07 4:25 PM | 47 | 28 | Whitefish |
| 4/20/07 1:08 PM | 55 | 33 | Trout |
| 4/20/07 2:48 PM | 57 | 34 | Whitefish |
| 4/20/07 7:48 PM | 60 | 36 | Whitefish |
| 4/20/07 8:06 PM | 55 | 33 | Trout |
| 4/20/07 8:14 PM | 37 | 22 | Trout |
| 4/21/07 6:58 AM | 60 | 36 | Trout |
| 4/21/07 8:13 PM | 52 | 31 | Trout |
| 4/21/07 9:00 PM | 65 | 39 | Trout |
| 4/22/07 3:19 PM | 105 | 63 | Trout |
| 4/22/07 5:35 PM | 57 | 34 | Whitefish |
| 4/22/07 7:34 PM | 57 | 34 | Trout |
| 4/23/07 3:06 PM | 37 | 22 | Trout |
| 4/24/07 2:35 PM | 85 | 51 | Trout |
| 4/24/07 3:31 PM | 65 | 39 | Trout |
| 4/25/07 1:16 PM | 57 | 34 | Trout |
| 4/25/07 2:43 PM | 70 | 42 | Trout |
| 4/25/07 3:14 PM | 105 | 63 | Trout |
| 4/25/07 4:06 PM | 60 | 36 | Whitefish |
| 4/25/07 8:06 PM | 55 | 33 | Trout |
| 4/26/07 1:34 PM | 52 | 31 | Trout |
| 4/28/07 6:56 AM | 75 | 45 | Trout |
| 4/28/07 9:28 AM | 55 | 33 | Trout |
| 4/28/07 2:05 PM | 55 | 33 | Trout |
| 4/28/07 8:25 PM | 55 | 33 | Trout |
| 4/29/07 2:30 PM | 75 | 45 | Trout |
| 4/29/07 3:25 PM | 50 | 30 | Trout |
| 4/30/07 6:50 AM | 55 | 33 | Trout |
| 4/30/07 11:10 AM | 50 | 30 | Trout |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|-----------------------|
| 4/30/07 2:29 PM | 57 | 34 | Trout |
| 4/30/07 6:01 PM | 50 | 30 | Whitefish |
| 5/1/07 2:27 AM | 52 | 31 | Trout |
| 5/1/07 2:37 PM | 55 | 33 | Trout |
| 5/2/07 10:28 PM | 50 | 30 | Trout |
| 5/3/07 5:18 PM | 70 | 42 | Trout |
| 5/3/07 8:27 PM | 55 | 33 | Trout |
| 5/4/07 12:07 PM | 170 | 102 | Presumptive Steelhead |
| 5/4/07 8:02 PM | 55 | 33 | Trout |
| 5/4/07 8:42 PM | 65 | 39 | Trout |
| 5/5/07 5:46 AM | 90 | 54 | Trout |
| 5/5/07 12:56 PM | 67 | 40 | Trout |
| 5/5/07 8:08 PM | 55 | 33 | Trout |
| 5/5/07 8:36 PM | 55 | 33 | Trout |
| 5/6/07 7:21 AM | 57 | 34 | Trout |
| 5/6/07 8:50 AM | 50 | 30 | Trout |
| 5/6/07 9:40 AM | 50 | 30 | Trout |
| 5/7/07 4:42 PM | 50 | 30 | Trout |
| 5/8/07 3:42 PM | 60 | 36 | Whitefish |
| 5/8/07 6:07 PM | 40 | 24 | Trout |
| 5/8/07 8:21 PM | 65 | 39 | Trout |
| 5/9/07 11:01 AM | 57 | 34 | Trout |
| 5/9/07 8:02 PM | 47 | 28 | Trout |
| 5/9/07 8:05 PM | 65 | 39 | Trout |
| 5/9/07 11:47 PM | 45 | 27 | Trout |
| 5/9/07 11:53 PM | 45 | 27 | Trout |
| 5/10/07 1:15 PM | 62 | 37 | Trout |
| 5/10/07 3:47 PM | 55 | 33 | Trout |
| 5/10/07 5:10 PM | 42 | 25 | Trout |
| 5/10/07 7:41 PM | 65 | 39 | Trout |
| 5/10/07 8:49 PM | 45 | 27 | Trout |
| 5/11/07 6:11 AM | 55 | 33 | Trout |
| 5/11/07 9:14 AM | 55 | 33 | Trout |
| 5/11/07 12:50 PM | 62 | 37 | Trout |
| 5/11/07 2:26 PM | 52 | 31 | Trout |
| 5/20/07 2:18 PM | 45 | 27 | Trout |
| 5/20/07 2:34 PM | 50 | 30 | Trout |
| 5/20/07 4:47 PM | 42 | 25 | Whitefish |
| 5/20/07 5:22 PM | 37 | 22 | Whitefish or Trout |
| 5/20/07 7:23 PM | 50 | 30 | Whitefish |
| 5/21/07 7:18 AM | 42 | 25 | Trout |
| 5/21/07 12:38 PM | 55 | 33 | Trout |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|--------------------|
| 5/21/07 1:52 PM | 52 | 31 | Trout |
| 5/21/07 2:39 PM | 87 | 52 | Trout |
| 5/21/07 4:13 PM | 45 | 27 | Trout |
| 5/21/07 4:23 PM | 55 | 33 | Trout |
| 5/21/07 4:26 PM | 65 | 39 | Trout |
| 5/21/07 4:46 PM | 60 | 36 | Trout |
| 5/21/07 4:52 PM | 42 | 25 | Trout |
| 5/21/07 5:31 PM | 45 | 27 | Trout |
| 5/22/07 8:28 AM | 50 | 30 | Whitefish or Trout |
| 5/22/07 10:33 AM | 47 | 28 | Whitefish |
| 5/22/07 1:00 PM | 50 | 30 | Trout |
| 5/22/07 3:56 PM | 52 | 31 | Whitefish |
| 5/22/07 5:41 PM | 50 | 30 | Trout |
| 5/22/07 6:48 PM | 47 | 28 | Whitefish or Trout |
| 5/23/07 2:04 PM | 45 | 27 | Trout |
| 5/23/07 2:04 PM | 57 | 34 | Trout |
| 5/23/07 3:44 PM | 37 | 22 | Trout |
| 5/23/07 4:12 PM | 47 | 28 | Trout |
| 5/23/07 5:46 PM | 50 | 30 | Trout |
| 5/23/07 5:56 PM | 57 | 34 | Trout |
| 5/23/07 6:09 PM | 42 | 25 | Trout |
| 5/23/07 6:34 PM | 45 | 27 | Trout |
| 5/23/07 8:48 PM | 37 | 22 | Trout |
| 5/26/07 3:59 PM | 55 | 33 | Trout |
| 5/26/07 5:19 PM | 55 | 33 | Trout |
| 5/27/07 10:50 AM | 57 | 34 | Trout |
| 5/28/07 12:45 PM | 45 | 27 | Trout |
| 5/28/07 8:02 PM | 45 | 27 | Trout |
| 5/29/07 12:20 PM | 47 | 28 | Trout |
| 5/29/07 3:53 PM | 50 | 30 | Trout |
| 5/29/07 3:54 PM | 47 | 28 | Trout |
| 5/29/07 7:21 PM | 47 | 28 | Trout |
| 5/30/07 5:02 PM | 47 | 28 | Trout |
| 5/31/07 5:55 PM | 42 | 25 | Trout |
| 6/1/07 8:53 AM | 45 | 27 | Trout |
| 6/1/07 6:22 PM | 37 | 22 | Trout |
| 6/1/07 6:31 PM | 45 | 27 | Trout |
| 6/2/07 10:48 AM | 40 | 24 | Trout |
| 6/2/07 12:56 PM | 52 | 31 | Trout |
| 6/2/07 4:06 PM | 47 | 28 | Trout |
| 6/3/07 7:51 AM | 45 | 27 | Trout |
| 6/3/07 11:49 AM | 60 | 36 | Trout |

| Date/Time | Body Depth [mm] | Total Length Est. [cm] | Species |
|------------------|------------------------|-------------------------------|-----------------------|
| 6/3/07 9:07 PM | 57 | 34 | Trout |
| 6/4/07 8:26 AM | 47 | 28 | Trout |
| 6/4/07 10:12 AM | 47 | 28 | Trout |
| 6/4/07 5:09 PM | 45 | 27 | Trout |
| 6/4/07 6:39 PM | 42 | 25 | Whitefish |
| 6/4/07 7:52 PM | 45 | 27 | Whitefish |
| 6/4/07 9:08 PM | 50 | 30 | Trout |
| 6/5/07 3:39 PM | 50 | 30 | Trout |
| 6/5/07 7:19 PM | 45 | 27 | Whitefish |
| 6/7/07 1:00 PM | 60 | 36 | Trout |
| 6/7/07 3:59 PM | 45 | 27 | Trout |
| 6/7/07 7:57 PM | 47 | 28 | Trout |
| 6/8/07 8:22 PM | 42 | 25 | Trout |
| 6/8/07 8:54 PM | 57 | 34 | Trout |
| 6/9/07 3:47 PM | 42 | 25 | Trout |
| 6/10/07 10:51 AM | 45 | 27 | Whitefish |
| 6/10/07 11:07 AM | 70 | 42 | Trout |
| 6/10/07 3:34 PM | 40 | 24 | Whitefish |
| 6/10/07 4:52 PM | 101 | 60 | Trout |
| 6/11/07 9:52 AM | 60 | 36 | Trout |
| 6/11/07 8:43 PM | 40 | 24 | Trout |
| 6/12/07 1:22 PM | 45 | 27 | Trout |
| 6/12/07 6:23 PM | 35 | 21 | Whitefish |
| 6/14/07 2:43 PM | 80 | 48 | Trout |
| 6/14/07 9:01 PM | 47 | 28 | Trout |
| 6/16/07 12:10 PM | 40 | 24 | Trout |
| 6/17/07 5:36 AM | 90 | 54 | Trout |
| 6/20/07 2:37 PM | 65 | 39 | Trout |
| 6/20/07 9:30 PM | 45 | 27 | Trout |
| 6/21/07 10:20 AM | 37 | 22 | Trout |
| 6/22/07 12:50 PM | 50 | 30 | Trout |
| 6/22/07 1:39 PM | 50 | 30 | Whitefish |
| 6/22/07 5:28 PM | 70 | 42 | Trout |
| 6/26/07 3:39 PM | 120 | 72 | Presumptive Steelhead |
| 6/27/07 9:04 PM | 50 | 30 | Trout |
| 6/27/07 11:22 PM | 60 | 36 | Trout |
| 6/28/07 11:56 AM | 55 | 33 | Trout |
| 6/29/07 10:38 AM | 37 | 22 | Trout |
| 6/29/07 3:35 PM | 57 | 34 | Trout |
| 6/30/07 6:45 AM | 37 | 22 | Trout |