

**U.S. ARMY CORPS OF ENGINEERS
WALLA WALLA DISTRICT
FISH FACILITIES WEEKLY REPORT
#32-2016**

Project: McNary

Biologists: Bobby Johnson and Denise Griffith

Dates: September 30 – October 6, 2016

Turbine Operation

All available turbine units were operated within the 1% peak efficiency criteria. McNary turbine unit outages are recorded in Table 1 below.

Table 1. Unit Outages at McNary Project.

Units	Outage Dates	Outage Length	Reason
13	Oct 3 to Dec 2	About 2 months.	Nine year over haul.
7	Oct 3 to 6	3.4 days.	Annual maintenance.
1	Oct 3	5.2 hours.	Headgate indicator calibration.
14	Oct 4	9.1 hours.	Bonneville Power Administration (BPA) system maintenance.
4 & 5	Oct 4	46 minutes.	ESBS camera inspections.
6	Oct 5	8.4 hours.	Hub tapped.
4	Oct 6	4.6 hours.	Turbine bearing oil switch.

Adult Fish Passage Facilities

McNary fisheries biologists performed measured inspections of the adult fishways on September 30, October 2 and 6. Adult lamprey video monitoring and ladder water temperature monitoring concluded on September 30.

The lamprey passage structure entry gate located below Oregon ladder entrance weir SFEW2 would not close on October 6. The gate will remain open until the entry is redesigned and replaced.

Fish Ladder Exits: The head over weir criteria at both exits are to be within 1.0 to 1.3 feet. The differential criteria at the count stations are to be within 0.0 to 0.5 feet. The picketed leads were cleaned as required.

The Washington exit met all criteria during measured inspections and debris loads were minimal.

At the Oregon exit, all criteria were met and debris loads were very light to moderate. Along the shore, debris loads were light to moderate. Three high water alarms due to picketed lead

blockage occurred on September 30. The general maintenance staff was called in and cleaned the leads at 1730 hours.

The tilting weir set point was adjusted on October 2.

Weir 338 will remain out of service until the winter maintenance season. The exit software program is regulating the weirs satisfactorily. The fisheries staff will continue to monitor the exit frequently. The hard forebay elevation constraint will remain in place through October 15.

Fishway Entrances and Collection Channel: Criteria for all entrances are pool differentials measuring between 1.0 and 2.0 feet, and weir depths measuring 8.0 feet or deeper.

At the Washington ladder, all inspection points were in criteria.

At the Oregon ladder, north powerhouse entrance NFEW2 measured 7.9 feet in depth on September 30 and October 6. Entrance NFEW3 measured 7.9 and 7.8 feet in depth on September 30 and October 6, respectively. South powerhouse entrance SFEW1 measured 7.2 to 7.8 feet in depth all week. Entrance SFEW2 measured 7.2 to 7.9 feet in depth all week. A possible explanation for this measurement is low tailwater elevation. Pool differentials remained in criteria.

The biologist cleaned the exit traveling screens debris trough twice this week.

The Oregon ladder collection channel surface velocities averaged 1.4 fps.

Auxiliary Water Supply System: The Wasco County Public Utility District (PUD) turbine unit in the Washington ladder remains out of service for runner replacement, which is scheduled for completion in late October. Unit testing is scheduled to start the second week in November. The bypass continues to function satisfactorily.

Two of the three Oregon ladder fish pumps operated satisfactorily with no interruptions in service this week. Both pumps operated with blade angles of 25 to 26 degrees. Fish pump 2 is currently under contract for major overhaul with completion scheduled for mid-November. Testing is scheduled for early March.

The juvenile facility continued to supply 450 cubic feet per second (cfs) to the north powerhouse pool.

Juvenile Fish Passage Facility

The fall primary bypass season began on September 30 at 0700 hours. No smolts and no juvenile lamprey were in the sample examined on September 30. There will be no fisheries personnel available to monitor the juvenile collection channel from 1600 to 2400 hours each day due to a staffing reduction, which began October 1.

Forebay Debris/Gatewell Debris/Oil: Forebay debris loads at the powerhouse and spillway were very light to light.

No high trash rack differential measurements were recorded and no trash racks were cleaned.

No problems were observed in the gatewell slots.

Extended-length submersible bar screen (ESBSs)/Vertical barrier screen (VBSs): ESBSs are deployed in all units. ESBS camera inspections occurred in units 4, 5 and 7 on October 4. No problems were found. The ESBSs in slots 1A, 6B, 6C, 12A and 12C remained in timer mode.

VBS differential monitoring revealed one screen out of criteria. This screen and five others were cleaned on October 1 and 3. As scheduled, the VBSs in unit 8 were also cleaned and examined on October 3. VBS rehabilitations continued with new mesh being installed on torn VBS sections.

Orifices, Collection Channel, Dewatering Structure, and Bypass Pipe: Forty-two orifices were in use. During VBS cleaning, orifices in the affected slots were closed, with makeup water coming from orifices in adjacent slots. An orifice valve actuator was replaced in slot 12A on October 6.

All dewatering and cleaning systems operated satisfactory when in automatic mode. The rectangular screen cleaning brush cycle time was set at 120 (previously 90) minutes on September 30. A new oil catch basin was installed on the access platform below the side screen cleaning brush drive gearbox on October 6.

The north side dewater valve (one of two dewatering valves) was noted making a “popping” noise when operating through approximately 60 percent open. This problem was observed last year but no cause was found during the last winter maintenance season.

Bypass Facility: All secondary bypass and sampling systems were removed from service on September 30 at 0700 hours. Facility winter maintenance has begun. Fisheries technicians are concentrating on the juvenile channel, ladder exits and maintenance.

As part of the station service upgrades, the facility was without power on October 3 and 5 for 1.5 hours each day. The facility was powered by a generator between those dates.

River Conditions

River conditions during the week are outlined in Table 2 below as provided by the McNary control room. The data period runs from 0000 to 2400 hours each day. Flows and spill are recorded in one-thousand cubic feet per second. Temperature is recorded in degrees Fahrenheit.

Table 2. River Conditions at McNary Dam.

Daily Average River Flow		Daily Average Spill		Water Temperature		Water Clarity (Secchi disk - feet)	
High	Low	High	Low	High	Low	High	Low
102.6	80.5	0.0	0.0	65.0	64.0	6.0	6.0

Other

Inline Cooling Water Strainers: Cooling water strainer examinations occurred on October 4. No juvenile lamprey or smolt mortalities were removed.

Invasive Species: The next mussel station examinations will occur in late October.

Avian Activity: Avian counts concluded on September 30. Casual observations were performed during other inspections. A gull flock appears to be roosting at various locations near the project.

Gulls and cormorants were observed in the tailwater observation area, roosting on the navigation lock wing wall. They appear to be feeding on juvenile shad in the powerhouse flow.

Occasionally, gulls and cormorants were observed near the juvenile bypass outfall.

In the forebay observation zone, an occasional gull, cormorant, loon or small flock of grebes was noted. Gulls and cormorants were roosting on the rocks by the Washington shore boat dock, which is outside the forebay observation zone.

The fisheries mechanic cleaned the bird hazing water cannon pump intake and winterized the water cannon system on September 29.

Fish Salvage/Rescue: Unit 13 was dewatered on October 5. Four adult channel catfish were removed from the draft tube and returned to the river. No fish were found in the scroll case. Air stones were mounted in unit 13 tailwater bulkhead slots on October 3 right after the bulkheads were installed.

Research: No research is occurring at this time.

Project: Ice Harbor

Biologists: Ken Fone

Dates: September 30 – October 6, 2016

Turbine Operation

Unit 5 was taken out of service on March 14 at 1117 hours, due to an oil leak from the blade packing. The packing was replaced and the blades will be welded in place to fix the leak. Unit 2 was taken out of service on April 25 at 0606 hours for runner replacement. Unit 4 was removed from service on October 3 at 0832 hours for annual maintenance.

Available units were operated within the 1% operating efficiency range (hard constraint), except for unit 3. Unit 3 was sometimes operated a few megawatts below the peak efficiency range, due to the GDACS (Generic Data Acquisition Control Program) needing to be updated with the narrower operating efficiency range of unit 3 since it became a fixed-blade unit.

Adult Fish Passage Facilities

Fish facility personnel inspected the adult fishways on October 3, 4, and 5.

Fish Ladders: The north fish ladder inspection areas (head differentials at the fishway exit and picketed leads, and depth over the weirs) were in criteria on all inspections. The south fish ladder inspection areas (head differentials at the fishway exit and picketed leads, and depth over the weirs) met criteria on all inspections. Criteria for head differentials at ladder exits and picketed leads, and depth over the weirs are 0.5 feet or less, 0.3 feet or less, and 1.0-1.3 feet, respectively. The water surface above the fish ladder exits were clear of debris and the bubblers were operating satisfactorily.

Fishway Entrances and Collection Channel: The south shore entrance (SFE-1) depth and channel/tailwater head differential were in criteria on all inspections. The north powerhouse entrance (NFE-2) depth and channel/tailwater head differential met criteria, except on October 4, when the depth was 7.7 feet and the gate was not on sill. The north shore entrance (NSE-1) depth and channel/tailwater head differential were in criteria, except on October 4, when the depth was 7.8' and the gate was not on sill. These out of criteria readings may have been due to calibration issues. A calibration check of the fishways was completed on October 5 and any discrepancies will be reported for calibration. Fishway entrance criteria are 8 feet depth or greater, or on sill. Channel/tailwater differential criteria are 1 – 2 feet.

The south shore channel velocity was in criteria. The channel velocity criterion is 1.5-4.0 feet per second.

Auxiliary Water Supply (AWS) System: Two of the three north shore AWS pumps were in operation during the week. Five of the eight south shore AWS pumps were in operation throughout the week.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil: There was an average of 4 square yards of debris observed in the forebay. The surface debris coverage in each gatewell slot ranged from 0% to 5%. Slot 2C was un-watered on July 6 to facilitate the unit 2 head gate sill plate repair.

STSs/VBSs: The STSs are in cycle-run mode, as the average fork length of subyearling Chinook was over 120 mm at Lower Monumental Juvenile Fish Facility (fish sampling at this location ended on September 30). The STS for slot 5B remains uninstalled to facilitate the work on unit 5. Unit 2 STSs are raised and stored in their gatewell slots, since unit 2 will not be operated for the rest of the year. Units 1, 3, 4, and 6 STSs were inspected on September 20 and 21, with no problems found.

Orifices, Collection Channel, Dewatering Structure, and Bypass Pipe: The juvenile fish bypass operated with 20 opened orifices. Orifices were routinely cycled and back-flushed once per day. The light for orifice 3CN was found burnt out on October 5. Orifice 3CS was opened and orifice 3CN was closed. This change will remain in effect until the light can be replaced.

Juvenile Fish Facility: The juvenile fish facility is operating in bypass mode.

Fish Sampling: Sampling is done for the season.

Removable Spillway Weir (RSW): Spill for fish passage began on April 3 at midnight and ended on September 1 at midnight.

River Conditions

River conditions during the week are outlined in Table 1 below.

Table 1. River conditions at Ice Harbor Dam.

Daily Average River Flow (kcfs)		Daily Average Spill (kcfs)		Water Temperature* (°F)		Water Clarity (Secchi disk - feet)	
High	Low	High	Low	High	Low	High	Low
22.0	12.20	0.0	0.0	64.0	63.0	7.8	7.4

*Unit 1 scroll case temperature.

Other

Inline Cooling Water Strainers: The latest monthly turbine cooling water strainer inspections took place on September 1, 20, and 21. A total of 63 juvenile shad and 3 Siberian prawns (all mortalities) were found.

Invasive Species: No new exotic species have been found.

Avian Activity: There were low numbers of piscivorous birds observed around the project. Towards the end of the reporting period, up to 10 grebes were observed foraging in the forebay close to the powerhouse side of the dam.

Research: No on-site research is actively occurring at this time.

Project: Lower Monumental

Biologists: Bill Spurgeon and Raymond Addis

Dates: September 30 – October 6, 2016

Turbine Operation

The units are being operated within the hard constraint 1% peak efficiency criteria. Unit 1 was removed from service on December 10, 2014 for unit rehabilitation with an estimated return to service of January 12, 2017. Unit 5 was removed from service at 0658 hours on September 19 for annual maintenance with an estimated return to service of October 31, 2016. Units 2, 3, 4 and 6 were rotated out of service on October 4 and 5 for STS inspections.

Adult Fish Passage Facility

The adult fishway was inspected by Corps and Anchor QEA biologists on September 30, October 1 and 5.

Fish Ladders: Fishway exit head differentials and depths over the weirs were within criteria ($\leq 0.5'$ and $1.0'$ - $1.3'$, respectively) on all inspections.

Picketed lead head differentials were in criteria ($\leq 0.4'$ and $\leq 0.3'$ for north and south shore fishways, respectively) on all inspections.

Fishway Entrances and Collection Channel: NSE1 and NSE2 weir gates met depth criteria (criteria: $\geq 8'$ or on sill) on all inspections. North shore channel/tailwater head was in criteria ($1'$ - $2'$) on all inspections.

SPE1 and SPE2 weir gates were in sill criteria (criteria: $\geq 8'$ or on sill) on all inspections. While on sill, readings were 6.6, 7.2 and 6.7 feet. South powerhouse channel/tailwater head was in criteria ($1'$ - $2'$) on all inspections.

SSE1 weir gate was in depth or sill criteria (criteria: $\geq 8'$ or on sill) on all inspections. While on sill, readings were 7.6 and 7.7 feet.

SSE2 was in criteria ($6'$ above sill) on all inspections. South shore channel/tailwater head was in criteria ($1'$ - $2'$) on all inspections.

Auxiliary Water Supply System: AWS pumps 2 and 3 were operated throughout this period. Pump 1 was out of service throughout this period due to a bushing problem. This pump will be replaced with the spare pump as time permits.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil: There was an average of 0 square yards of forebay debris observed during this period. Gatewell debris ranged from 0 - 20% surface coverage. No oil problems were observed in the gatewells.

STSS/VBSs: STSSs were operated in cycle-run mode throughout this report period. STS inspections were conducted October 4 and 5 with all screens found in good operating condition.

Orifices, Collection Channel, Dewatering Structure, and Flume: The collection channel was operated with 18 opened orifices.

Collection Facility: The collection season ended at 0700 hours on September 30 at which time the facility entered primary bypass. The facility was dewatered for winter maintenance on October 1.

Transport Summary: Every-other-day truck transport concluded at 0700 hours on September 30.

River Conditions

Summer spill operations in support of fish passage ended at 2400 hours on August 31. River conditions during the week are outlined in Table 1 below.

Table 1. River conditions at Lower Monumental Dam.

Daily Average River Flow (kcfs)		Daily Average Spill (kcfs)		Water Temperature (°F)*		Water Clarity (Secchi disk - feet)	
High	Low	High	Low	High	Low	High	Low
22.6	13.0	0.0	0.0	64.0	63.6	5.0	4.0

*Scrollcase temperatures.

Other

Inline Cooling Water Strainers: Cooling water strainers were inspected on October 3. No live fish were recovered. Mortalities included 5 Siberian prawns.

Invasive Species: No zebra or quagga mussels were observed during monitoring station inspections on October 1.

Avian Activity: Daily tailrace counts of feeding piscivorous birds are summarized in Table 2 below. Daily tailrace counts ceased at end of collection season on September 30. Cormorants and gulls were the dominant species observed during this inspection. No action trigger points from the avian action plan occurred this period.

Table 2. Tailrace counts of foraging piscivorous birds at Lower Monumental Dam.

Date	Time	Gulls	Cormorants	Terns	Grebes	Pelicans
September 30	1145	1	4	0	0	0
October 1	---	---	---	---	---	---
October 2	---	---	---	---	---	---
October 3	---	---	---	---	---	---
October 4	---	---	---	---	---	---
October 5	---	---	---	---	---	---
October 6	---	---	---	---	---	---

Research: No onsite research is in progress at this time.

Project: Little Goose

Biologists: Scott St. John and Richard Weis

Dates: September 30 – October 6, 2016

Turbine Operation

All turbine units were available for service except unit 3. Unit 3 was placed out of service for an extended annual on September 26. No 1% violations to report.

Adult Fish Passage Facility

The Fishway Control System software was updated by RJS construction and returned to automatic operation on August 9. All weirs were manually adjusted and returned to automatic mode to determine functionality of the new software. The system was not operating sufficiently and was returned to manual mode on September 19. Future calibration and maintenance still need to be performed.

Adult fishway inspections were performed on October 2 and 6.

Fish Ladder: The ladder exit head differentials and water depth at Diffuser 13 maintained within criteria (≤ 0.5 ft. and 1.0-1.3 ft., respectively) and picketed lead differentials ranged from 0.0 to 0.1 feet (criteria ≤ 0.3 ft.). The air bubbler used to prevent debris from collecting near the ladder exit operated satisfactorily. The emergency cooling pumps for the adult fish ladder were removed from service on September 9.

Fishway Entrances and Collection Channel: Channel to tailwater head differentials at SSE and NPE maintained within criteria (1.0 to 2.0 ft.) on all inspections. SSE weir depths stayed in criteria (≥ 8.0 ft.) on all inspections, ranging between 9.2 and 9.3 feet. NPE weir depths ranged between 7.5 and 7.8 feet (criteria ≥ 7.0 ft.) and were on sill. NSE weir depths ranged between 7.0 to 7.3 feet (criteria ≥ 6.0 ft.). Collection channel surface water velocity measurements ranged between 2.0 and 2.5 fps (criteria 1.5 to 4.0 fps).

Auxiliary Water Supply System: The fish ladder is now operating on three pumps. The average water velocity (bottom, middle, top) of the adult channel at the NPE was 3.1 fps on September 28.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil: The trash/shear boom is currently still on shore. Efforts are underway to have it repaired. Woody debris in the immediate forebay was estimated at about 2,600 square feet on October 6.

Spillway Weir: The TSW was removed on July 11.

ESBS/VBS: Electrical ESBS brush tests were performed on September 13. Unit 5 and 6 were found with electrical faults and repaired. Limits switches were reset on both units.

Orifices, Collection Channel, Dewatering Structure, and Flume: The gear box for the weirs in the primary dewatering structure was removed from service after an oil leak was discovered. The leak was subsequently contained and cleaned. The weirs will remain turned off until repairs are completed. The juvenile bypass system is presently running with 19 opened orifices. Orifices are cycled every 24 hours.

Collection Facility: Fish collection and sampling is occurring every day at the JFF. Fish transportation by truck is occurring on even numbered days.

Transport Summary: The collection and transportation facility operated within criteria this report period. A total of 313 fish were collected. The descaling and mortality rates were 5.8% and 0.7% respectively. There were no adult lamprey removed from the raceways or sample this report period.

River Conditions

River conditions during the week are outlined in Table 1 below.

Table 1. River conditions at Little Goose Dam.

Daily Average River Flow (kcfs)		Daily Average Spill (kcfs)		Water Temperature* (°F)		Water Clarity (Secchi disk - feet)	
High	Low	High	Low	High	Low	High	Low
20.9	12.7	0.0	0.0	62.2	61.8	6.0	5.4

*Ladder temperature.

Other

Inline Cooling Water Strainers: Cooling water strainers on all units were inspected September 28. No fish were seen.

Invasive Species: The zebra mussel substrate monitor was inspected on August 24. No mussels were seen.

Avian Activity: USDA Bird hazing ended on June 25. See Table 2 below for USACE counts.

Table 2. Daily Avian Counts at Little Goose Dam, September 30 – October 6, 2016.

Date	Time (hours)	Gulls	Cormorants	Caspian Terns	Pelicans
September 30	0945	17	1	0	0
October 1	0915	19	3	0	0
October 2	1245	36	44	0	0
October 3	1420	20	24	0	0
October 4	1000	4	2	0	0
October 5	1000	20	7	0	0
October 6	1000	9	15	0	0

*Bird counts are taken from a single observation, Forebay and Tailrace.

Siberian Prawn: Siberian prawns continue to be collected at the Juvenile Fish Facility. Prawns are humanely euthanized by Oregon Department of Fish and Wildlife and Anchor QEA, frozen and properly disposed of in a landfill. There were 920 prawns collected in the sample and euthanized during this report period. Prawn numbers are outlined in Table 3 below.

Table 3. Daily Siberian Prawn Counts at Little Goose Dam, September 30 – October 6, 2016.

Date	Sample	Collection*
September 30	91	
October 1	38	
October 2	154	
October 3	247	
October 4	122	
October 5	141	
October 6	127	
Totals	920	

*Collection and sample numbers are the same as the facility is currently sampling at 100%

Gas Bubble Trauma: GBT inspections ended for the season with the July 19 report. No signs of GBT were seen this season.

Research: The Fish Guidance Efficiency (FGE) emergency gate closure study ended on July 22 and equipment was removed from unit 2 on August 30.

Project: Lower Granite

Biologists: Elizabeth Holdren and Robert Horal

Dates: September 30 – October 6, 2016

Turbine Operation

Units are being operated within the hard constraint 1% peak efficiency criteria. Unit 1 remains out of service for Kaplan blade linkage repair. Unit 5 remains out of service for six year overhaul. Unit 6 was operated out of unit priority order from 1159-1523 hours on October 6 for EAL (Environmentally Acceptable Lubricants) testing.

Adult Fish Passage Facility

Adult fish facilities were inspected by Corps or Anchor QEA biologists on September 30 and October 1 and 3.

Fish Ladder: Fish ladder exit head differential and depth over the weirs met criteria ($\leq 0.5'$ and $1.0-1.3'$, respectively) on all inspections. Picketed lead head differential was in criteria ($\leq 0.3'$). An average of about 2.3 square yards of debris was observed near the ladder exit.

Fish Ladder Entrances and Collection Channel: SSE1 and SSE2 weir gates were in depth criteria (criteria $\geq 8'$ or on sill) on all inspections. The South shore channel/tailwater head differential was in criteria (criteria $1'-2'$) on all inspections.

NPE1 and NPE2 weir gates were in depth or sill criteria (criteria $\geq 8'$ or on sill) on all inspections. While on sill, the gate depth readings were 6.5' and 6.7' feet. North powerhouse channel/tailwater head differential met criteria (criteria $1'-2'$) on all inspections.

NSE1 was in criteria (criteria $\geq 7'$ or on sill) on all inspections. NSE2 has been out of service since 2011 and remains set with a chain fall hoist in the closed position. North shore channel/tailwater head differential was in criteria (criteria $1'-2'$) on all inspections.

Collection Channel Velocity: The average collection channel velocity was in criteria (criteria $1.5-4.0$ fps) on all inspections with the exception of a 0.9 fps reading that was taken during a navigation lock discharge.

Auxiliary Water Supply System: The fish ladder is in two pump operation with AWS pumps 1 and 3 in service. Pump 2 is in standby mode.

Fish Ladder Temperature Control System: Not in service at this time.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil: An average of about 11.3 square yards of debris was observed in the forebay this week.

ESBSs/VBSs: ESBS/VBS inspections are scheduled for late October.

Orifices, Collection Channel, Dewatering Structure, and Bypass Pipe: The collection channel is operating with 18-21 opened orifices. Orifices are being cycled every three hours.

Collection Facility: The facility is in collection for transport mode. Sampling is occurring every other day.

Transport Summary: Truck transport is occurring on even numbered days.

River Conditions

No spill is occurring at this time. River conditions during the week are outlined in Table 1 below.

Table 1: River conditions at Lower Granite Dam.

Daily Average River Flow (kcfs)		Daily Average Spill (kcfs)		Water Temperature* (F°)		Water Clarity (Secchi disk - feet)	
High	Low	High	Low	High	Low	High	Low
23.89	17.1	0.0	0.0	64.0	63.0	5.0	5.0

*Cooling water intake temperature.

Other

Inline Cooling Water Strainers: No inspections this week.

Invasive Species: The zebra/quagga mussel substrate was inspected September 4. No zebra/quagga mussels were found. Smolt monitoring biologists euthanized 119 Siberian prawns from the collection sample this week.

Avian Activity: Daily piscivorous bird counts are summarized in Table 2 below.

Table 2. Daily piscivorous bird counts at Lower Granite Dam.

Date	Time (hours)	Gulls	Cormorants	Caspian Terns	Pelicans
September 30	1000	4	2	0	0
October 1	1158	6	46	0	0
October 2	1535	2	33	0	0
October 3	1530	15	3	0	0
October 4	1325	13	46	0	0
October 5	1323	18	44	0	0
October 6	1444	20	58	0	0

GBT: Gas bubble trauma sampling has concluded for the season.

Adult Fish Trap Operations: The trap is being operated seven day a week with a sample rate of 19%. Fall Chinook are being collected for transport to the Lyons Ferry Hatchery and the Nez Perce Tribal Hatchery. Coho collection for the Nez Perce Tribe brood stock program continues.

Fish Rescue Operation: No fish rescues took place this week.

Research: No onsite research is in progress at this time.