Out of Criteria – NWW Weekly Report #12 – May 17-23, 2024

1. McNary

Yes	No	Location	Criteria	Measurements
	X	Washington Exit	Head over weir 1.0’ to 1.3’	0.8’ to 1.1’

The out of criterion point mentioned above occurred on May 19 and was resolved with a set point adjustment.

Yes	No	Sill	Location	Criteria	Measurements
	X		WFE3 Weir Depth	$\geq$ 8.0’	7.6’ to 7.8’

WFE3 was out of criterion all week. This could possibly be calibration issues related to the spill season. The electrical staff will be asked to look into the issue next week.

Fish pump 1 remained out of service for a scheduled 5-year overhaul. Return to service dates are subject to change.

2. Ice Harbor

Unit 6 was run out of priority ahead of unit 3 from 1906 hours on May 21 to 0500 hours on May 22 as part of the testing on TW6 (MOC 24IHR04).

Yes	No	Location	Criteria	Measurements
	x	South ladder picketed lead differential	Head $\leq$ 0.3’	0.6’

The south fish ladder picketed lead differential was found to be out of criteria on the May 20 inspection due to the buildup of filamentous algae on the upstream leads.

North shore AWS pump #1 has been out of service since March 1, 2023, because of a hydraulic cylinder leak on the butterfly valve. A new cylinder is being installed.

South shore AWS pump #6 has been out of service since March 1, 2024, due to high vibration readings coming from the motor and gearbox. The gearbox is being replaced with a refurbished one.

Yes	No	NA	Item	Number open and in service
	x		Dewaterer and cleaning systems operating satisfactory?	

The replacement actuator for the water regulating weirs in the collection channel is in local control due to a problem with the actuator being undersized for this application. The actuator will be rebuilt to enable it to work in automatic mode. The weirs are being operated at the actuator to adjust the water level as needed until the problem can be fixed.

Personnel noticed that the bird abatement hydrocannon was not shooting out any water on Apr 30. The hydrocannon pump was restarted but kept tripping off. An electrician determined that the motor is drawing high amperage and needs to be replaced. A spare motor will be wired up for installation.

3. Lower Monumental

South Shore Channel/Tailwater differential was out of criteria during the May 17 inspection with a reading of 0.6 feet. The automative system can have issues with high tailwater levels and high spill causing this error.

Yes	No	NA	Item	Number open and in service
	X		Dewaterer and cleaning systems operating satisfactory?	

4. Little Goose

Yes	No	Sill	Location	Criteria	Measurements
X	X		North Shore Entrance (NSE-1) Weir Depth	$\geq$ 6.0' or on sill	5/18 – 5.4, 5/19-5.4
X	X		North Shore Entrance (NSE-2) Weir Depth	$\geq$ 6.0' or on sill	5/18 – 5.4, 5/19-5.3

The fish system control program is proving unreliable and inadequate to balance the adult fishway in "automated" mode. Biologist personnel are manually adjusting and balancing the adult fishway with increasing frequency. EAS Bio personnel report the FSC board reflects weir and channel height readings with notable discrepancies compared to actual physical hand measurements taken during inspection periods.

5. Lower Granite Dam

Yes	No	Sill	Location	Criteria	Comments
	X		South Shore Channel/Tailwater Differential	1.0' – 2.0'	0.7'
	X		North Powerhouse Entrance Channel/Tailwater Differential	1.0'–2.0'	0.6', 0.4', 0.4', 0.2'
	X		North Shore Entrance (NSE-1) Weir Depth	$\geq$ 7.0' or on sill	6.8'
	X		North Shore Entrance (NSE-2) Weir Depth	$\geq$ 7.0' or on sill	6.9'
	X		North Shore Channel/Tailwater Differential	1.0'–2.0'	2.1', 0.5'
	X		Collection Channel Surface Velocity	1.5 – 4.0 fps	1.4, 1.4

Fish ladder control system operation and configuration is an ongoing issue that began when the system was installed in 2016. LWG is moving forward with inhouse design and install of fish ladder control system based off the system used at LMN. Efforts of the electrical crew continue to bring the ladder back into criteria however the control system drifts out of calibration shortly after. There is a swell at the north powerhouse where the back eddy collides with powerhouse and spillway flow that may be impacting channel/tailwater differentials.

AWS Pump 1 remains in slow mode due to the inability to operate in fast mode while operating at MOP elevation. AWS pump 2 remains out of service for maintenance. It is recommended that pump 1 be removed from service and replaced with pump 2 when the three-year overhaul repairs are complete. Swapping the AWS pumps will be scheduled when the mechanical crew has completed reconfiguring the fish ladder cooling pumps to its original state.

U.S. ARMY CORPS OF ENGINEERS
WALLA WALLA DISTRICT
FISH FACILITIES WEEKLY REPORT
#12-2024

Project: McNary
Biologist: Bobby Johnson and Paul Bertschinger
Dates: May 17-23, 2024

Turbine Operation

Yes	No	Turbine Unit Status		
	X	All 14 turbine units available for service. (see table & comments below for details).	**Hard**	**Soft**
X		Available turbines operated within 1% peak efficiency? Constraint in effect.	X	

Table 1. McNary Unit Outages (OOS) and Return to Service (RTS)

	OOS		RTS		
Unit	**Date**	**Time**	**Date**	**Time**	**Outage Description**
9	11/27/23	0631	5/20/24	1054	Control system upgrades
10	5/20	1059	5/30	NA	Complete collector ring & control system upgrades
14	5/13	1232	11/18	NA	Isophase replacement and headgate work
13	5/21	0955	11/18	NA	Isophase replacement and headgate work
11 & 12	5/21	1000	5/21	1055	ESBS camera inspections, rotated through units

Comments: RTS dates are subject to change. The hard one percent criteria remained in place.

Adult Fish Passage Facilities

McNary fisheries staff performed measured inspections of the adult fishways on May 17, 19, and 23. Adult fish counting continued. District personnel examined the Oregon shore south powerhouse entrance temperature probe on May 22.

Fish Ladder Exits:

Yes	No	Location	Criteria	Measurements
X		Oregon Exit	Head over weir 1.0’ to 1.3’	1.0’ to 1.1’
X		Oregon Count Station Differential	0.0’ to 0.5’	0.2 to 0.3’
	X	Washington Exit	Head over weir 1.0’ to 1.3’	0.8’ to 1.1’
X		Washington Count Station Differential	0.0’ to 0.5’	0.2’

Comments: Debris loads were minimal to very light near both exits and count station backboards were cleaned on May 20.

At the Washington shore exit, one regulating weir alarm came in and was reset on May 17. The out of criterion point mentioned above occurred on May 19 and was resolved with a set point adjustment. In order to reroute electrical conduit, the exit weirs were in manual mode on May 23.

There are no other problems to report.

Fishway Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Measurements
X			North Oregon Entrance Head Differential	1.0' – 2.0'	1.5' to 1.6'
X			NFEW2 Weir Depth	≥ 8.0'	8.1' to 8.2'
X			NFEW3 Weir Depth	≥ 8.0'	8.1' to 8.2'
X			South Oregon Entrance Head Differential	1.0' – 2.0'	1.3' to 1.4'
X			SFEW1 Weir Depth	≥ 8.0'	8.2'
X			SFEW2 Weir Depth	≥ 8.0'	8.1' to 8.2'
X			Oregon Collection Channel Velocities	1.5 to 4.0 fps	2.1 fps
X			Washington Entrance Head Differential	1.0' – 2.0'	1.5' to 1.6'
X			WFE2 Weir Depth	≥ 8.0'	8.9' to 9.1'
	X		WFE3 Weir Depth	≥ 8.0'	7.6' to 7.8'

Comments: WFE3 was out of criterion all week. This could possibly be calibration issues related to the spill season. The electrical staff will be asked to look into the issue next week.

Auxiliary Water Supply System:

Operating Satisfactory	Standby	Out of Service	Blade angle	Auxiliary Water Supply System (AWS)
X*				WA shore Wasco County PUD Turbine Unit
	X*			WA shore Wasco PUD Bypass
		X	NA	Oregon Ladder Fish Pump 1, return to service June 25
X			23° to 24°	Oregon Ladder Fish Pump 2
X			23° to 24°	Oregon Ladder Fish Pump 3
X				OR North Powerhouse Pool from juvenile fishway

*Comments: Fish pump 1 remained out of service for a scheduled 5-year overhaul. Return to service dates are subject to change.

The Wasco County PUD unit was briefly out of service for a transmission line outage on May 22, from 0610 to 0700 hours. The bypass system functioned well during the outage.

Juvenile Fish Passage Facility

The juvenile system alternated between primary and secondary bypass every 24 hours at 0700 hours. There were no interrupts in this schedule.

In order to collect smolts for tagging, for the sample collection day of May 18, the sample rates were split, with the A side set at 0.5 percent and the B side set at 10.0 percent. Also, that day, the B side sample timer was adjusted during the sample day resulting in one lost sample.

Forebay Debris/Gatewell Debris/Oil:

Yes	No	NA	Item	Comments
X			Forebay debris load acceptable? (amount)	Minimal near the powerhouse
X			Gatewell drawdown measured this week?	Daily
X			Gatewell drawdown acceptable	
	X		Any debris seen in gatewells (% coverage)	
	X		Any oil seen in gatewells?	

Comments: The powerhouse and spillway debris remained minimal. New debris loads were minimal.

Trash rack cleaning is scheduled for mid-June.

There are no problems to report. A few pieces of larger woody material were removed from the gatewell slots on May 23. The emergency bulkhead remained in 14A slot.

Extended-length submersible bar screen (ESBSs)/Vertical barrier screen (VBSs):

Yes	No	NA	Item
X			ESBSs deployed in all slots and in service?
X			ESBSs inspected this week?
X			ESBSs inspection results acceptable?
X			VBSs differentials checked this week?
X			VBSs differentials acceptable?

Comments: ESBS's are installed in all units. With the emergency bulkhead in 14A slot, the ESBS remained uninstalled. The control program for the fish screens in unit 10 is not currently communicating with the panel view on the 8th floor. When the unit is in service, the brush cycle sequences will be monitored in the control room until repairs can occur later this month. It was noted that the brush cycle sequence for the remaining screens in unit 14 were operational on May 20. With the units being out of service, these screens, and the ones in unit 13 were switched to manual mode on May 20 and 21, respectively. Camera inspections in units 11 and 12 revealed no issues on May 21. Examination of ESBS screen brush programming continued.

Daily VBS monitoring continued, no high differentials were recorded, and no screens were cleaned.

Orifices, Collection Channel, Dewatering Structure, and Bypass Pipe:

Yes	No	NA	Item	Number open and in service
X			Orifices operating satisfactory?	42
	X		Dewaterer and cleaning systems operating satisfactory?	

Comments: There are no problems to report. One of two air hoist in the channel received a new counterweight on May 20.

Orifice operator and valve rehabilitation continued. In order to repair the valve, the south orifice in 11C slot was closed from May 19, at 1200 hours to May 21, at 0830 hours. For the same reason, the south orifice in 9C slot was closed on May 21, from 0830 to 1130 hours. During these outages, the north orifice in the slot was in use. With 14A slot dewatered, north orifice in 13C slot is being used for makeup water.

Bypass Facility:

Yes	No	NA	Item
X			Sample gates on?
		X	PIT-tag sampling system on?

Comments: The sample system is being used on secondary bypass days. The sample gates will be used every other day. The PIT tag system will not be in use again this season, which is similar to past years.

There were 1,710 juvenile lamprey and 49,971 smolts bypassed this week. The primary species/races were yearling Chinook and sockeye.

TSW Operations: The TSW's in bays 19 and 20 remained open. Both TSW's are attached to a hoist.

River Conditions

Table 2. River Conditions at McNary 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
237.2	205.3	177.0	144.7	56.8	56.0	6.0	6.0

Comments: The above data is from the smolt monitoring staff, with the data day starting at 0700 hours. Water clarity comes from the control room.

The spring spill season continues. The spillway hoists, cranes, and gates are set up per the updated Fish Operation Plan and the FPP.

Bays 6 and 9 were adjusted by crane on May 20 and 23. If adjustments are required in bays 6 and 9, they will occur on Monday and Thursday unless there is a holiday.

Rehabilitation of the downstream wall dogs from bay 22 continues.

Other

Inline Cooling Water Strainers: The next cooling water strainer inspections will occur on June 4.

Avian Activity: Bird counting continued, and the results are reflected in Table 3 below.

Table 3. McNary Project's Daily Avian Count.

Date	Zone	Gull	Cormorant	Tern	Pelican	Grebe
May 17	Spill	47	0	0	3	0
	Powerhouse	0	0	0	0	0
	Outfall	0	0	0	0	0
	Forebay	0	0	0	0	4
May 18	Spill	46	0	0	1	0
	Powerhouse	0	0	0	0	0
	Outfall	19	3	0	0	0
	Forebay	0	0	0	0	10
May 19	Spill	55	1	0	17	0
	Powerhouse	22	0	0	0	0
	Outfall	76	20	0	0	0
	Forebay	0	0	0	0	4
May 20	Spill	100	1	0	34	0
	Powerhouse	2	0	0	0	0
	Outfall	0	0	0	0	0
	Forebay	0	0	0	0	46
May 21	Spill	450	0	0	6	0
	Powerhouse	42	0	0	0	0
	Outfall	46	0	0	0	0
	Forebay	0	0	0	0	8
May 22	Spill	217	0	0	1	0
	Powerhouse	0	0	0	0	0
	Outfall	57	0	0	0	0
	Forebay	0	0	0	0	17
May 23	Spill	6	0	0	0	0
	Powerhouse	0	0	0	0	0
	Outfall	0	0	0	0	0
	Forebay	0	0	0	0	90

In the spill zone, gulls, and pelicans in fluctuating numbers along with a few cormorants were noted. Most birds were feeding.

In the powerhouse zone, gulls in fluctuating numbers were seen roosting on the water at the edge of the spill.

In the outfall zone, gulls and cormorants in fluctuating numbers were noted roosting on the outfall pipe along with a few of these birds feeding. An osprey pair has nested on the outfall pipe where the walkway ends. This and the boat hazing has resulted the fluctuating bird counts observed.

For the forebay zone, grebes were observed in fluctuating numbers. Birds were roosting and feeding. More grebes maybe outside the zone along with a few gulls, cormorants, pelicans, and ospreys. Pelican numbers in the area is slowly increasing.

The LRAD remains out of service until the osprey are done nesting.

The laser on the navigation lock wing wall opposite the outfall was removed on May 17 and will be sent into the manufacture for a repair evaluation.

The two distress calls on the navigation lock wing wall remained in service and have been functioning well.

USDA Wildlife Services continued shore and boat hazing. When wind speed has been too high, the boat crew hazes on the next day. The osprey nest is not an issue. PSMFC continues the stomach content examinations of the birds that were lethally taken with the boat.

A tori line remains installed outside the Oregon ladder south entrance. These lines have been effective at other projects in discouraging pelicans from entering the ladder.

Invasive Species: The next mussel station examinations will occur on May 27.

Siberian Prawn: No prawns were observed in the sample this week. No have been observed this season.

Fish Rescue/Salvage**:** At unit 13's scroll case, two sockeye smolt mortalities (one old and one new) were removed on May 22. Later that day, no fish were found in the unit's draft tube.

Research: For the smolt and juvenile lamprey passage studies, PNNL removed 334 smolts and no juvenile lampreys from the samples for tagging this week.

For a CRITFC study, there were tissue samples removed from 23 juvenile lamprey collected at the facility this week. The yearly total is 125 fish, which were returned to the river unharmed.

Gas bubble trauma examinations occur twice a week. Fish were collected on May 20 and 22, with the data being reported the next day. For the report week, two mortalities were removed from the recovery raceway and no signs of trauma were observed.

Project: Ice Harbor
Biologist: Ken Fone
Biological Science Technician: Ben McArthur
Dates: May 17-23, 2024

Turbine Operation

Yes	No	Turbine Unit Status
	x	All 6 turbine units available for service (see table & comments below for details).
x		All available turbine units are operated in accordance with Appendix C of the Fish Passage Plan

Ice Harbor Unit Outages (OOS) and Return to Service (RTS)

	OOS		RTS		
Unit	**Date**	**Time**	**Date**	**Time**	**Outage Description**
1	6/27/23	0708	---	---	Turbine runner replacement and stator rewind
6	4/8/24	1315	5/22/24	1124	Foreign material found in TW6 transformer oil recirculating line
2	5/20/24	1211	5/23/24	1613	Generator field rotor ground and exciter problem

Comments: Unit 6 was run at speed-no-load from 1630 hours to 1837 hours on May 21 to conduct testing on TW6 transformer. Unit 6 was run out of priority ahead of unit 3 from 1906 hours on May 21 to 0500 hours on May 22 as part of the testing on TW6. The testing was coordinated through FPOM via MOC 24IHR04.

Adult Fish Passage Facility

Ice Harbor Fish Facility staff inspected the adult fishways on May 20, 21, and 22.

Fish Ladders:

Yes	No	Location	Criteria	Measurements
x		North ladder exit differential	Head ≤ 0.3’	
x		North ladder picketed lead differential	Head ≤ 0.3’	
x		North ladder depth over weirs	Head over weir 1.0’ to 1.3’	
x		South ladder exit differential	Head ≤ 0.3’	
	x	South ladder picketed lead differential	Head ≤ 0.3’	0.6’
x		South ladder depth over weirs	Head over weir 1.0’ to 1.3’	

Fishway Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Measurements
x			South fish entrance (SFE-1) weir depth	≥ 8.0’ or on sill	
x			South fish entrance channel/tailwater differential	1.0’ – 2.0’	
x			South shore channel velocity	1.5 – 4.0 fps	
x			Central fish entrance (CFE-2) weir depth	≥ 8.0’ or on sill	
x			Central fish entrance channel/tailwater differential	1.0’ – 2.0’	
x			North fish entrance (NFE-1) weir depth	≥ 8.0’ or on sill	
x			North fish entrance channel/tailwater differential	1.0’ – 2.0’	

Comments: The south fish ladder picketed lead differential was found to be out of criteria on the May 20 inspection due to the buildup of filamentous algae on the upstream leads. The picketed leads were cleaned shortly after being inspected. The picketed leads will be inspected daily and cleaned to keep them in criteria.

Auxiliary Water Supply (AWS) System:

Operating Satisfactory	Standby	Out of Service	Auxiliary Water Supply System
6 pumps	1 pump	1	Status of the 8 south shore AWS pumps
2 pumps		1	Status of the 3 north shore AWS pumps

Comments: North shore AWS pump #1 has been out of service since March 1, 2023, because of a hydraulic cylinder leak on the butterfly valve. A new cylinder is being installed.

South shore AWS pump #6 has been out of service since March 1, 2024, due to high vibration readings coming from the motor and gearbox. The gearbox is being replaced with a refurbished one.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

Yes	No	NA	Item	Comments
x			Forebay debris load acceptable? (amount)	Average of 8 square yards
x			Gatewell drawdown measured this week?	
x			Gatewell drawdown acceptable	
x			Any debris seen in gatewells (% coverage)	0-20% coverage
	x		Any oil seen in gatewells?	

Comments: Debris was raked from unit 2 intake trash racks on May 21. Approximately 3 cubic yards of woody debris was removed.

Submersible Traveling Screens (STSs) / Vertical Barrier Screens (VBSs):

Yes	No	NA	Item
x			STSs deployed in all slots that are in service?
x			STSs in continuous-run mode (Note: if not, then STSs are in cycle-run mode)?
	x		STSs inspected this week?
		x	STSs inspection results acceptable?
		x	VBSs differentials checked this week?
		x	VBSs differentials acceptable?

Comments: None.

Orifices, Collection Channel, Dewatering Structure, and Flume:

Yes	No	NA	Item	Number open and in service
x			Orifices operating satisfactory?	20
	x		Dewaterer and cleaning systems operating satisfactory?	

Comments: The replacement actuator for the water regulating weirs in the collection channel is in local control due to a problem with the actuator being undersized for this application. The actuator will be rebuilt to enable it to work in automatic mode. The weirs are being operated at the actuator to adjust the water level as needed until the problem can be fixed.

Personnel noticed that the bird abatement hydrocannon was not shooting out any water on Apr 30. The hydrocannon pump was restarted but kept tripping off. An electrician determined that the motor is drawing high amperage and needs to be replaced. A spare motor will be wired up for installation.

Juvenile Fish Facility: The fish facility is in primary bypass mode except during fish sampling.

Fish Sampling: Juvenile fish sampling is scheduled to occur on Mondays and Thursdays each week. See the tables below for a summary of the sampling results. The cause of descaling observed on one of the steelhead in the May 20 sample was attributed to birds. Five steelhead in the May 20 sample exhibited partial descaling (5-20% descaled per side of the fish) not attributed to predation attempts by birds or other fish. The incidence of partial descaling was lower in the May 23 sample, with one subyearling Chinnok being partially descaled.

Fish condition sampling results at Ice Harbor Dam:

Date: May 20

Species, Run, Rear type	Sampled	#Descaled	Morts	Avian Marks
Chinook yearling clipped	2	0	1	0
Chinook yearling unclipped	2	0	0	0
Chinook subyearling clipped	1	0	0	0
Chinook subyearling unclipped	14	0	0	0
Steelhead clipped	90	2	0	1
Steelhead unclipped	22	0	0	0
Sockeye clipped	0	---	---	---
Sockeye unclipped	0	---	---	---
Coho clipped	0	---	---	---
Coho unclipped	0	---	---	---
Total	131	2	1	1

Date: May 23

Species, Run, Rear type	Sampled	#Descaled	Morts	Avian Marks
Chinook yearling clipped	7	0	0	0
Chinook yearling unclipped	5	0	0	0
Chinook subyearling clipped	13	0	0	0
Chinook subyearling unclipped	16	0	0	0
Steelhead clipped	41	2	0	1
Steelhead unclipped	25	0	0	0
Sockeye clipped	0	---	---	---
Sockeye unclipped	2	0	0	0
Coho clipped	0	---	---	---
Coho unclipped	1	0	0	0
Total	110	2	0	1

Removable Spillway Weir (RSW): Spring spill for fish passage is occurring.

River Conditions

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
109.0	79.1	94.7	67.4	59	58	5.8	4.6

*Unit 1 scroll case temperature.

Other

Inline Cooling Water Strainers: The next monthly turbine unit cooling water strainer inspections will occur in early June.

Avian Activity: There were variable numbers of piscivorous birds seen around the project (see table below). Gull numbers increased from the previous reporting week. The gulls were not easily hazed away from the dam with pyrotechnics, including with the use of boat-based hazing and lethal take. However, gull numbers decreased towards the end of the week. Land-based hazing of piscivorous birds is occurring for 16 hours each day. Boat-based hazing is occurring 5 days per week for up to 8 hours per day.

Daily maximum piscivorous bird counts at Ice Harbor Dam.

Date	Gulls	Cormorants	Caspian Terns	Grebes	Pelicans
May 17	10	5	0	0	6
May 18	30	16	0	0	0
May 19	34	10	0	0	42
May 20	49	9	0	0	6
May 21	39	0	0	0	1
May 22	18	2	2	0	0
May 23	4	2	1	0	2

Invasive Species: No exotic species that are new to the area have been found.

Siberian Prawn: Siberian prawns collected in the sample at the Juvenile Fish Facility are humanely euthanized by the fish sampling contractor, frozen and properly disposed of in a landfill. Daily and total Siberian prawn counts at Ice Harbor Dam for this reporting period are shown below.

Number of Siberian prawns in the sample at Ice Harbor Dam.

Date	**Sample (euthanized)**	**Collection***
May 20	2	2
May 23	0	0
Totals	2	2

*Collection and sample numbers are the same for the facility when sampling at 100%

Fish Rescue/Salvage: None

Research: No on-site research is occurring.

Project: Lower Monumental
Biologists: Denise Griffith and Raymond Addis
Dates: May 17 - 23, 2024

Turbine Operation

Yes	No	Turbine Unit Status
	X	All 6 turbine units available for service (see table & comments below for details).
X		Available turbines operated within 1% peak efficiency? Constraint in effect.

Comments: See Unit Outages and Return to Service comments below.

Lower Monumental Unit Outages (OOS) and Return to Service (RTS)

	OOS		RTS		
Unit	**Date**	**Time**	**Date**	**Time**	**Outage Description**
Unit 5	5/01/24	0624	8/31/24	ERTS	T2/Rooftop bus out of service due to BPA Line outage
Unit 6	5/01/24	0624	8/31/24	ERTS	T2/Rooftop bus out of service due to BPA Line outage

Comments: BPA line tripped at 0624 hours on May 1. Units 5 and 6 remain out of service until T2 line is repaired. Estimated return to service date is August 31.

Adult Fish Passage Facility

Lower Monumental fish facility and EAS staff inspected the adult fishways on May 17, 18, 19, 21 and 22.

Fish Ladder Exit:

Yes	No	Location	Criteria	Measurements
X		North Ladder Exit Differential	Head ≤ 0.5’	
X		North Ladder Picketed Lead Differential	Head ≤ 0.4’	
X		North Ladder Depth over Weirs	Head over weir 1.0’ to 1.3’	
X		South Ladder Exit Differential	Head ≤ 0.5’	
X		South Ladder Picketed Lead Differential	Head ≤ 0.3’	
X		South Ladder Depth over Weirs	Head over weir 1.0’ to 1.3’	

Comments: None

Fishway Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Measurements
X			North Shore Entrance (NSE-1) Weir Depth	≥ 8.0’ or on sill	
X			North Shore Entrance (NSE-2) Weir Depth	≥ 8.0’ or on sill	
X			North Shore Channel/Tailwater Differential	1.0’–2.0’	
		X	South Powerhouse Entrance (SPE-1) Weir Depth	≥ 8.0’ or on sill	
		X	South Powerhouse Entrance (SPE-2) Weir Depth	≥ 8.0’ or on sill	
X			South Powerhouse Entrance Channel/Tailwater Differential	1.0’–2.0’	
X		X	South Shore Entrance (SSE-1) Weir Depth	≥ 8.0’	
		X	South Shore Entrance (SSE-2) Weir Depth	≥ 6.0’	
	X		South Shore Channel/Tailwater Differential	1.0’ – 2.0’	

Comments: South Powerhouse Entrance SPE-1 weir was at sill during all inspections with readings 7.7, 8.3, 7.6, 7.0 and 7.2 feet respectively. South Powerhouse Entrance SPE-2 weir was at sill during all inspections with readings 7.7, 8.3, 7.6, 7.0 and 7.2 feet respectively. South Shore Entrance SSE-1 weir was at sill during the May 19, 21 and 22 inspections with readings of 7.4, 6.8 and 7.0 feet respectively. South Shore Channel/Tailwater differential was

out of criteria during the May 17 inspection with a reading of 0.6 feet. The automative system can have issues with high tailwater levels and high spill causing this error.

Auxiliary Water Supply System:

Operating Satisfactory	Standby	Out of Service	Auxiliary Water Supply System (AWS)
X			AWS Fish Pump 1
X			AWS Fish Pump 2
X			AWS Fish Pump 3

Comments: None

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

Yes	No	NA	Item	Comments
X			Forebay debris load acceptable? (amount)	29 yrd²
	X		Gatewell drawdown measured this week?	
		X	Gatewell drawdown acceptable	
X			Any debris seen in gatewells (% coverage)	1 – 10%
		X	Any oil seen in gatewells?	

Comments: None

STSs/VBSs:

Yes	No	NA	Item
X			STSs deployed in all slots and in service?
X			STSs in continuous-run mode (Note: if not, then STSs are in cycle-run mode)?
	X		STSs inspected this week?
		X	STSs inspection results acceptable?
	X		VBSs differentials checked this week?
		X	VBSs differentials acceptable?

Comments STSs were switched to continuous-run mode at 1630 on May 17 due to the average sub-yearling Chinook and sockeye lengths seen in the sample being less than 120 mm.

Orifices, Collection Channel, Dewatering Structure, and Flume:

Yes	No	NA	Item	Number open and in service
X			Orifices operating satisfactory?	18
	X		Dewaterer and cleaning systems operating satisfactory?	

Comments: None

Collection Facility: Collection for transport resumed at 1300 on May 17 for the May 18 barge.

Transport Summary: Transport resumed on May 18. A total of 17,450 fish were collected of which 12, 823 were transported and 3,096 were bypassed. Bypassed fish were from the facility being in secondary bypass prior to 1300 on May 17, fry and GBT fish.

Spillway Weir: Spring spill continues.

River Conditions

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
108.3	77.0	94.6	64.1	58.1	56.0	5.2	4.3

*Scrollcase temperatures.

Other

Inline Cooling Water Strainers: Cooling water strainers will next be inspected in May.

Avian Activity: Tailrace counts of foraging piscivorous birds at Lower Monumental Dam began on April 1.

Date	Time	Gulls	Cormorants	Terns	Grebes	Pelicans
5/17/2024	1615	24	0	0	0	52
5/18/2024	1530	46	2	0	0	31
5/19/2024	1845	122	0	0	0	9
5/20/2024	1400	157	2	0	0	72
5/21/2024	1430	202	0	0	0	50
5/22/2024	900	14	0	0	0	0
5/23/2024	1315	175	2	0	0	16

Comments: Bird hazing by USDA personnel begin on April 8.

Invasive Species: Zebra or quagga mussel traps will next be examined in June.

Siberian Prawn: Siberian prawns collected in the sample at the Juvenile Fish Facility are humanely euthanized by EAS personnel, frozen and properly disposed of in a landfill. Daily and total Siberian prawn counts at Lower Monumental Dam for this reporting period are reported below.

Date	Sample (euthanized)	Collection*
5/17/2024	1	10
5/18/2024	0	0
5/19/2024	0	0
5/20/2024	5	100
5/21/2024	0	0
5/22/2024	1	10
5/23/2024	0	0
Total	7	120

*Collection refers to extrapolated values based on sampling percent.

Fish Rescue/Salvage: No fish rescue was performed this week for Lower Monumental Dam.

Research: This season, PNNL plan to obtain lamprey from Lower Monumental Dam to study behavior and survival of Pacific lamprey.

GBT examinations occurred on May 23. A total of 2 clipped yearling Chinook, 1 unclipped yearling Chinook, 8 clipped subyearling Chinook, 9 unclipped subyearling Chinook, 45 clipped steelhead and 28 unclipped steelhead smolts were examined, both days combined. No gas bubble trauma was detected.

The Nez Perce steelhead kelt study and rehabilitation collection continued, one steelhead kelts was placed in the collection tank for this reporting period.

Project: Little Goose Dam
Biologist: Deb Snyder
Dates: May 17 – May 23, 2024

Turbine Operation

Yes	No	Turbine Unit Status
	X	All 6 turbine units available for service? (See table and comments below for details)

*All available turbine units are operated in accordance with Appendix C of the Fish Passage Plan

Little Goose Unit Outages (OOS) and Return to Service (RTS)

	OOS		RTS		
Unit	Date	Time	Date	Time	Outage Description
5	4/14/2017	14:11	06/30/2024	ERTS	Spider and upper guide bearing repair.

Comments: Contractual obligations and performance issues realigned the Unit 5 ERTS date into 2024.

Adult Fish Passage Facility

EAS Bio and USACE staff inspected the adult Fishway on May 14, May 18, May 19, and May 21.

Fish Ladder:

Yes	No	NA	Location	Criteria	Measurements
X			Fish Ladder Exit Differential	Head ≤ 0.5’	
X			Fish Ladder Picketed Lead Differential	Head ≤ 0.3’	
X			Fish Ladder Depth over Weirs	Head over weir 1.0’ to 1.3’	
		X	Fish Ladder Cooling Water Pumps in Service		
		X	Fish Ladder Exit Cooling Water Pumps Operating Satisfactorily		

Fishway Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Measurements
X			South Shore Entrance (SSE-1) Weir Depth	≥ 8.0’	
X			South Shore Entrance (SSE-2) Weir Depth	≥ 8.0’	
X			South Shore Channel/Tailwater Differential	1.0’ – 2.0’	
		X	North Powerhouse Entrance (NPE-1) Weir Depth	≥ 7.0’ or on sill	
		X	North Powerhouse Entrance (NPE-2) Weir Depth	≥ 7.0’ or on sill	
X			North Powerhouse Entrance Channel/Tailwater Differential	1.0’–2.0’	
X	X		North Shore Entrance (NSE-1) Weir Depth	≥ 6.0’ or on sill	5/18 – 5.4, 5/19-5.4
X	X		North Shore Entrance (NSE-2) Weir Depth	≥ 6.0’ or on sill	5/18 – 5.4, 5/19-5.3
X			North Shore Channel/Tailwater Differential	1.0’–2.0’	
X			Collection Channel Surface Velocity	1.5 – 4.0 fps	

Comments: The adult fishway was returned to service on February 15. The AWS pumps returned to service on February 22. The Collection Channel Surface Velocity is measured at NPE. Current LGS performance spill operations create rapid tailrace elevation changes during each 24-hour period. The fish system control program is proving unreliable and inadequate to balance the adult fishway in “automated” mode. Biologist personnel are manually adjusting and balancing the adult fishway with increasing frequency. EAS Bio personnel report the FSC board reflects weir and channel height readings with notable discrepancies compared to actual physical hand measurements taken during inspection periods. For example, the FSC board readings of May 14 report the SSE Channel elevation at 531.7 feet, while physical measurements document the same channel height to be 539.9 feet.

Auxiliary Water Supply System:

Operating Satisfactory	Standby	Out of Service	Auxiliary Water Supply System (AWS)
X			AWS Fish Pump 1
X			AWS Fish Pump 2
X			AWS Fish Pump 3

Comments: Fish pumps 1 and 3 were returned to service February 22. Fish pump 2 was returned to service on February 28.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

Yes	No	NA	Item	Comment
X			Forebay debris load acceptable? (amount)	High 5 ft^2 - Low 0 ft^2
X			Gatewell drawdown measured this week?	
X			Gatewell drawdown acceptable	
X	X		Any debris seen in gatewells (% coverage)	5/21-5B:1%,5C:1%, 5/22-5A:2%, 5C:1%; 5/23-5A:1%,5B:1%,5C:5%
	X		Any oil seen in gatewells?	

Comments: The forebay had minimal floating debris inside the trash shear boom with the highest measurement occurring on May 18 at 5 ft^2. The overall total forebay debris high occurred May 18 at 5 ft^2.

ESBS/VBS:

Yes	No	NA	Item
X			ESBSs deployed in all slots and in service?
	X		ESBSs inspected this week?
		X	ESBSs inspection results acceptable?
X			VBSs differentials checked this week?
X			VBSs differentials acceptable?
	X		VBSs inspected this week?

Comments: Installation of ESBS's were fully functional and deployed the week of March 18. Gatewell camera inspections on all units took place from May 14 through May 16.

Orifices, Collection Channel, Dewatering Structure, and Flume:

Yes	No	NA	Item	Number open and in service
X			Orifices operating satisfactory?	21, 19
X			Dewaterer and cleaning systems operating satisfactory?	

Comments: The juvenile bypass system was watered up on March 7 without incident.
Collection Facility: The juvenile collection facility was successfully watered up on March 20. Every other day collection for condition monitoring in conjunction with secondary bypass commenced March 25 with the first sample being conducted on March 26. Every day collection began April 23 coinciding with barge transportation operations. During this reporting period a total of 69,855 fish were collected, 62,954 were barged, 39 were bypassed, and there were 193 sample or facility mortalities. The descaling and mortality rates were 5.3% and 0.36%, respectively. The collection and transport facility operated within criteria and four lamprey were removed from the sample or separator during this report period.

Transport Summary: Collection for fish transportation began April 23 with the first barge departure on April 24. Every day barging continued through May 16 upon transition to every other day barge operations.

Spillway Weir: Little Goose began operation of the adjustable spillway weir (ASW) on March 1 to facilitate passage of adult steelhead overshoots. On March 21, the ASW transitioned to 625 ft. crest height spilling 24 hours 7 days per week per CBR LGS R 022724 1735. Spring spill operations began on April 3 spilling 24/7 up to the 125% gas cap. On April 16th we hit the 50 adult Chinook threshold at Ice Harbor and began spilling at performance spill (30% of outflow) from 0400 to 1200 to facilitate adult fish passage. On May 14 the ASW was positioned to Low Crest. Summer spill operations are scheduled to begin on June 21.

River Conditions

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
107.9	77.7	67.1	50.9	58.8	56.6	4.9	3.3

*Ladder temperature.

Other

Inline Cooling Water Strainers: Inline cooling strainer inspections commenced on December 1, 2023. Inspections will continue in accordance with the Fish Passage Plan (FPP) and results will be submitted to the District.

Avian Activity: Daily piscivorous bird counts at Little Goose Dam are scheduled to begin April 1, while USDA-APHIS bird abatement contract services are in place.

Date	Time	Gulls	Cormorants	Caspian Terns	Pelicans
5-17	0830	14	0	10	7
5-18	0830	6	0	6	12
5-19	0900	0	0	4	4
5-20	0820	123	0	0	2
5-21	0930	13	5	0	2
5-22	0800	10	0	0	2
5-23	0730	9	0	0	2

Invasive Species: No invasive species have been observed on the mussel station.

Siberian Prawn: Juvenile fish collection will begin March 25. Siberian prawns collected in the sample at the Juvenile Fish Facility will be humanely euthanized by Oregon Department of Fish and Wildlife and EAS Bio personnel, frozen and properly disposed of in a landfill.

Date	Sample	Collection*
5-17	0	0
5-18	0	0
5-19	0	0
5-20	0	0
5-21	0	0
5-22	0	0
5-23	0	0
Totals	0	0

*Collection and sample numbers are equal when sample rates change to 100%

Gas Bubble Trauma (GBT): Oregon Department of Fish and Wildlife performed GBT monitoring on May 22. Of the 101 fish examined, 0 fish exhibited gas bubble trauma symptoms.

Fish Rescue/Salvage: Fish rescue activities due to every-other-day collection and return to primary bypass operations took place April 19 and April 21. Results were reported and submitted to District.

Research: The Nez Perce Tribe (NPT) commenced adult steelhead kelt collection efforts on March 27 with an anticipated conclusion date of July 1.

Project: Lower Granite
Biologists: Elizabeth Holdren and Steve Lee
Dates: May 17-23, 2024

Turbine Operation

Yes	No	Turbine Unit Status		
X		All 6 turbine units available for service (see table & comments below for details).	**Hard**	**Soft**
X		Available turbines operated within 1% peak efficiency? Constraint in effect.	X	

Lower Granite Unit Outages (OOS) and Return to Service (RTS)

	OOS		RTS		
Unit	**Date**	**Time**	**Date**	**Time**	**Outage Description**

Comments: Units were rotated out of service for ESBS inspection May 19 and 20.

Adult Fish Passage Facility

Lower Granite Biologists and EAS staff inspected the adult fishway on May 17, 18, 22, and 23.

Fish Ladder:

Yes	No	NA	Location	Criteria	Comments
X			Fish Ladder Exit Differential	Head ≤ 0.5’	
X			Fish Ladder Picketed Lead Differential	Head ≤ 0.3’	
X			Fish Ladder Depth over Weirs	Head over weir 1.0’ to 1.3’	
	X		Fish Ladder Cooling Water Pumps in Service		
		X	Fish Ladder Cooling Water Pumps Operating Satisfactorily		

Comments: LWG mechanical crew has returned fish ladder exit cooling pumps to their original orientation and will be operational testing prior to 1 June.

Fish Ladder Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Comments
X			South Shore Entrance (SSE-1) Weir Depth	≥ 8.0’	
X			South Shore Entrance (SSE-2) Weir Depth	≥ 8.0’	
	X		South Shore Channel/Tailwater Differential	1.0’ – 2.0’	0.7’
		X	North Powerhouse Entrance (NPE-1) Weir Depth	≥ 8.0’ or on sill	
		X	North Powerhouse Entrance (NPE-2) Weir Depth	≥ 8.0’ or on sill	
	X		North Powerhouse Entrance Channel/Tailwater Differential	1.0’–2.0’	0.6’, 0.4’, 0.4’, 0.2’
	X		North Shore Entrance (NSE-1) Weir Depth	≥ 7.0’ or on sill	6.8’
	X		North Shore Entrance (NSE-2) Weir Depth	≥ 7.0’ or on sill	6.9’
	X		North Shore Channel/Tailwater Differential	1.0’–2.0’	2.1’, 0.5’
	X		Collection Channel Surface Velocity	1.5 – 4.0 fps	1.4, 1.4

Comments: Fish ladder control system operation and configuration is an ongoing issue that began when the system was installed in 2016. LWG is moving forward with inhouse design and install of fish ladder control system based off the system used at LMN. Efforts of the electrical crew continue to bring the ladder back into criteria however

the control system drifts out of calibration shortly after. There is a swell at the north powerhouse where the back eddy collides with powerhouse and spillway flow that may be impacting channel/tailwater differentials.

Auxiliary Water Supply System:

Operating Satisfactorily	Standby	Out of Service	Auxiliary Water Supply (AWS)
Yes			AWS Fish Pump 1
No		Yes	AWS Fish Pump 2
Yes			AWS Fish Pump 3

Comments: AWS Pump 1 remains in slow mode due to the inability to operate in fast mode while operating at MOP elevation. AWS pump 2 remains out of service for maintenance. It is recommended that pump 1 be removed from service and replaced with pump 2 when the three-year overhaul repairs are complete. Swapping the AWS pumps will be scheduled when the mechanical crew has completed reconfiguring the fish ladder cooling pumps to its original state.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

Yes	No	NA	Item	Comments
X			Forebay debris load acceptable? (amount)	20 yd^2
X			Trash rack differentials measured this week?	
X			Trash rack differentials acceptable	
	X		Any debris seen in gatewells (% coverage)	
	X		Any oil seen in gatewells?	

Comments:

ESBSs/VBSs:

Yes	No	NA	Item
X			ESBSs deployed in all slots and in service?
X			ESBSs inspected this week?
X			ESBSs inspection results acceptable?
X			VBSs differentials checked this week?
X			VBSs differentials acceptable?

Comments:

Orifices, Collection Channel, Dewatering Structure, Bypass Pipe:

Yes	No	NA	Item	Number open and in service
X			Orifices operating satisfactory?	18 minimum
X			Dewaterer and cleaning systems operating satisfactory?	

Comments: The juvenile facility is collecting daily for condition sampling and transport. Collection for the NOAA seasonal effect of transport and in river survival evaluation Sunday through Thursday.

Collection Facility: Collection for transport and research continues daily.

Transport Summary: Every-other-day barging began and transport from LMN resumed 18 May.

Spillway Weir: Spring spill operation began April 3.

PIT tag interrogations: RSW detections included 49,963 juvenile and 43 adult Chinook salmon, 44,889 juvenile and 490 adult steelhead, 8,853 juvenile sockeye and 2,391 juvenile coho salmon at the RSW. Juvenile bypass system detections included 7,574 juvenile and 2 adult Chinook salmon, 12,570 juvenile and 34 adult steelhead, 219 juvenile sockeye, and 231 juvenile coho salmon through May 23 (DART).

River Conditions

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
111.8	81.6	80.4	69.2	54.0	52.5	3.9	2.7

*Cooling water intake temperature.

Other

Inline Cooling Water Strainers: N/A

Invasive Species: No zebra/quagga muscles were detected on the trap substrate. One live and 8 Siberian prawns mortalities were collected in the sample this report week.

Avian Activity: Biologist daily piscivorous bird counts and hazing began April 1. Bird hazers are on site daily.

Date	Time	Gulls	Cormorants	Caspian Terns	Pelicans
17 May	1435	6	0	0	3
18 May	1330	5	0	0	0
19 May	1720	3	0	0	1
20 May	1515	5	0	0	2
21 May	1630	0	0	0	0
22 May	1429	0	1	0	5
23 May	1430	0	0	0	0

Gas Bubble Trauma (GBT) Monitoring: SMP examined 5 clipped steelhead and for GBT. No symptoms of GBT were observed.

Adult Fish Trap Operations: The adult trap was watered up March 4. Collection for sampling continues with fish being collected 24-hours per day Sunday-Thursday and sampled Monday- Friday at a 25% (18% /week) sample rate. Collection for sampling will be conducted Monday through Friday until broodstock collection starts August 18.

Fish Rescue/Salvage: N/A

Research:

National Marine Fisheries Service (NMFS) PIT tagging of Adult Wild Chinook and Adult Steelhead for ISEMP-Related Dispersal Monitoring:

The goal of this project is to PIT tag up to 4000 unclipped adult Chinook and 4000 unclipped adult steelhead collected in the adult trap daily sample for dispersal monitoring.

Sampling of Steelhead, Chinook salmon, and Sockeye salmon by the Idaho Department of Fish and Game (IDFG) and NOAA Fisheries for Biological data collection.

Upriver migrating steelhead, spring/summer Chinook salmon, and sockeye salmon are collected from the adult trap beginning March 1 through November 30. The goal is to collect 5-20% of adult steelhead, spring/summer Chinook salmon, and sockeye salmon ascending the ladder March 1-November 30. Data collection includes fish scales, genetics tissue, sex and length, wild/hatchery composition, and non-adipose clipped hatchery fish assessment. All natural origin adult steelhead and spring/summer Chinook salmon trapped will be PIT tagged to estimate headwater tributary escapement. Sockeye salmon may be PIT tagged in the future to estimate metrics regarding conversion rates. Some steelhead and spring/summer Chinook salmon may be radio-tagged or spaghetti-tagged. This information on adult fish forms the basis for status information used in several forums including BiOp-RPA identified needs.

Sampling and PIT tagging of Walleye by the Idaho Department of Fish and Game (IDFG) and NOAA Fisheries.

Walleye collected in the adult fish trap will be PIT tagged to investigate movement and ascension rate of walleye that successfully exit the fish ladder into the upstream reservoir. PIT tag data collected will be used to gain an understanding of the potential expansion and threat of walleye upstream of LWG to ESA-listed salmonids and guide future management actions of walleye in the Snake River Basin.

Nez Perce Tribe (NPT)/U. of Idaho (UI)/Columbia River Intertribal Fisheries Commission (CRITFC) – Kelt Study

This research investigates steelhead kelt physiology and endocrinology to evaluate the feasibility and success of rehabilitating strategies. The goal is to collect kelts from LWG and LGO juvenile fish facility separators. Up to 500 selected kelts are transported by NPT to Dworshak National Fish Hatchery for reconditioning and later release as part of this study.

PIT Tagging and Genetic Sample Collection from Bull Trout for USFWS:

Bull trout will be collected as part of the normal adult trap daily sample and using the adult SbyC system to recapture previously PIT tagged fish. Untagged bull trout will be PIT tagged, fin clipped for genetic analysis, and have morphometric data collected including weight and length etc. Fin clips will be sent to USFWS to determine the fish's origin. Previously PIT tagged bull trout will only have morphometric data collected. All fish will be released back into the adult fish ladder.

PNNL Juvenile Pacific Lamprey Passage Behavior and Survival study:
Juvenile lamprey (macropthalmia) will be collected from LWG sample, as needed, to meet PNNL downriver study objectives. LWG collected 671 juvenile lamprey this report ween and a total of 898 this season in support of this study.

Columbia River Inter-Tribal Fisheries Commission (CRITFC) Pacific Lamprey Genetic Study:

CRITFC has requested that the SMP collect non-lethal tissue samples from up to 2000 juvenile and 1250 larval Pacific lamprey, not to exceed 10 juvenile and 5 larvae daily during the routine smolt monitor condition sampling from March through September. The purpose of this study is to fill two objectives; 1) Determine relative proportion of translocation offspring among the total abundance of larval and juvenile lamprey passing the juvenile bypass systems at BON, JDA, MCN, and LWG. 2) Describe life history characteristics of larval and juvenile lamprey emigrating from the Columbia and Snake River basins. The genetic information collected will be used to evaluate the tribal Pacific lamprey programs efficacy and assist with guiding future management. LWG SMP have collected genetic samples from 368 juvenile and 166 larval lamprey this season.

National Marine Fisheries Service (NMFS) In-River Survival:

NMFS PIT-tag Chinook and steelhead smolts for their Survival Study April through early June to compare smolt to adult returns of in-river migrating smolts to the smolt to adult returns of transported smolts. PIT-tagged fish are held for 24 hours before being bypassed to the LWG tailrace. Collection and tagging will continue Monday-Friday until the middle of June.

National Marine Fisheries Service (NMFS) Seasonal Effects of Transporting Fish from the Snake River to Optimize Transportation Strategy:

This study aims to build on the current database of information on the seasonality of smolt-to-adult return rates (SARs). Collection will occur Sunday-Thursday with fish being tagged Monday-Friday throughout the barging fish transport period. Collection and tagging continue as scheduled.

Idaho Power Hells Canyon Sturgeon Recruitment:

LWG Corps bio techs continue collecting passage and estimated lengths and of White Sturgeon prior to removing them from the separator in support of Idaho Power Sturgeon program.