

**U.S. ARMY CORPS OF ENGINEERS
WALLA WALLA DISTRICT
FISH FACILITIES WEEKLY REPORT
#02-2018**

Project: McNary

Biologist: Bobby Johnson and Denise Griffith

Dates: March 9 to 15, 2018

Turbine Operation

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

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

Unit	OOS		RTS		Outage Description
	Date	Time	Date	Time	
8	3/12	0704	3/14	1627	Cooling water strainer upgrade.

Comments: The hard constraint will begin on April 1.

Adult Fish Passage Facilities

McNary fisheries biologists performed measured inspections of the adult fishways on March 9, 12, and 15. Temperature monitoring will begin on April 1.

Fish Ladder Exits:

Yes	No	Location	Criteria	Comments
X		Oregon Exit	Head over weir 1.0' to 1.3'	
X		Oregon Count Station Differential	0.0' to 0.5'	
X		Washington Exit	Head over weir 1.0' to 1.3'	
X		Washington Count Station Differential	0.0' to 0.5'	

Comments: Debris loads were light to moderate near the Oregon exit and minimal to light near the Washington exit. Picketed leads will be lowered on March 29.

Fishway Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Comments
X			North Oregon Entrance Head Differential	1.0' – 2.0'	
X			NFEW2 Weir Depth	≥ 8.0'	
X			NFEW3 Weir Depth	≥ 8.0'	
X			South Oregon Entrance Head Differential	1.0' – 2.0'	
X			SFEW1 Weir Depth	≥ 8.0'	
X			SFEW2 Weir Depth	≥ 8.0'	
X			Oregon Collection Channel Velocities	1.5 to 4.0 fps	Averaged 2.5 fps.
X			Washington Entrance Head Differential	1.0' – 2.0'	
X			WFE2 Weir Depth	≥ 8.0'	
X			WFE3 Weir Depth	≥ 8.0'	

Comments: NFEW3, SFEW2 and WFE3 elevation dial indicators still require calibration.

Auxiliary Water Supply System:

Operating Satisfactory	Standby	Out of Service	Auxiliary Water Supply System (AWS)
X			WA shore Wasco County PUD Turbine Unit
	X		WA shore Wasco PUD Bypass
X			Oregon Ladder Fish Pump 1, Blade angle: 22 degrees
X			Oregon Ladder Fish Pump 2, Blade angle: 22 degrees
X			Oregon Ladder Fish Pump 3, Blade angle: 22 degrees
		X	OR North Powerhouse Pool supply from juvenile fishway

Comments: The juvenile facility will return to service on March 26.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

Yes	No	NA	Item	Comments
X			Forebay debris load acceptable? (amount)	Moderate to heavy. New debris was light.
X			Trash rack differentials measured this week?	Three times.
X			Trash rack differentials acceptable?	
	X		Any debris seen in gatewells? (% coverage)	
	X		Any oil seen in gatewells?	

Comments: Forebay debris removal and trash rack cleaning are scheduled for March 20 to 22 and 27 to 29.

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: FPOM agreed to move the start of ESBS installation from April 5 to April 2. VBS differential monitoring will begin with ESBS installation.

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

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

Comments: On April 12, from 1130 to 1337 hours, at unit 8, which was out of service, six orifices were opened to test fill the juvenile channel. The water elevation was held to a point so no water went down the full flow bypass pipe. The channel was left to set overnight with no orifice open.

On April 13, from 0726 to 1530, the same orifices were opened for testing of the brushes, the side dewatering valves, the alarms and the system programmable logic. From 1230 to 1500 hours, two orifices from unit 7 were opened to improve flow conditions for the side dewatering valve testing. During testing, one issue was found. The

south side dewatering valve was not communicating properly with the system program. This issue will be resolved next week.

On April 14, after the channel had drained down overnight, seven Chinook and two steelhead smolts along with two juvenile lamprey, one juvenile shad and two juvenile bluegills were rescued from the side screen pool. One white crappie mortality was also removed. Six five gallon buckets of concrete chips were also removed from the side screen pool area. The concrete “cream” on the channel floor in this area was damaged by exposure to winter air temperatures and moisture. Finally, the three rectangular floor screen drains were calibrated.

Bypass Facility:

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

Comments: All systems are out of service for winter maintenance. The first sample will be collected on April 2. The fisheries staff completed the gasket replacement in the sample tanks. A new heat pump was installed in the separator observation building. Stillwell installation for the juvenile system water temperature monitoring program was completed.

TSW Operations: The TSWs will be installed in late March.

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
207.4	171.8	0.0	0.0	41	40	5.4	5.0

Comments: The above data is supplied by the control room.

Other

Inline Cooling Water Strainers: The next cooling water strainer examinations will occur on April 3.

Avian Activity: Avian counts will begin on April 1. An occasional small group of gulls or cormorants was noted this week.

Invasive Species: None have been seen during the winter outages. Mussel stations will be examined in late March.

Fish Rescue/Salvage: None occurred.

Research: None is occurring.

Project: Ice Harbor

Biologist: Ken Fone

Dates: March 9 – March 15, 2018

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

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

Unit	OOS		RTS		Outage Description
	Date	Time	Date	Time	
2	4/25/16	0606	---	---	Runner replacement
4	12/17/17	1342	---	---	Initially to investigate oil leak. Also fixing governor pump

Comments: Unit 6 was noted to be operating a few megawatts above the 1% peak efficiency range on the March 14 and 15 inspections.

Adult Fish Passage Facility

Ice Harbor fish facility staff inspected the adult fishways on March 12, 13, 14, and 15.

Fish Ladders:

Yes	No	Location	Criteria	Out of Criteria Measurements
X		North Ladder Exit Differential	Head \leq 0.3'	
X		North Ladder Picketed Lead Differential	Head \leq 0.3'	
X		North Ladder Depth over Weirs	Head over weir 1.0' to 1.3'	
X		South Ladder Exit Differential	Head \leq 0.3'	
X		South Ladder Picketed Lead Differential	Head \leq 0.3'	
X		South Ladder Depth over Weirs	Head over weir 1.0' to 1.3'	

Fishway Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Out of Criteria Measurements
	X		South Shore Entrance (SFE-1) Weir Depth	\geq 8.0' or on sill	6.9' on 3/12
X			South Shore Channel/Tailwater Differential	1.0' – 2.0'	
X			South Shore Channel Velocity	1.5 – 4.0 fps	
X			North Powerhouse Entrance (NFE-2) Weir Depth	\geq 8.0' or on sill	
X			North Powerhouse Entrance Channel/Tailwater Differential	1.0' – 2.0'	
	X		North Shore Entrance (NEW-1) Weir Depth (Criteria	\geq 8.0' or on sill	7.5' on 3/15
X			North Shore Channel/Tailwater Differential	1.0' – 2.0'	

Comments: The SFE-1 weir depth was out of criteria on March 12, due to a problem controlling the weir in automatic mode. The weir will be operated in manual mode until the problem is fixed. The NEW-1 weir depth was out of criteria on the March 15 inspection, when it was stationery during a planned power outage to accomplish preventative maintenance on the associated power distribution center. Shortly after the inspection, the tailwater level came up to bring the weir depth in criteria.

Auxiliary Water Supply (AWS) System:

Operating Satisfactory	Standby	Out of Service	Auxiliary Water Supply System (AWS)
6 pumps	2 pumps		Status of the 8 South Shore AWS Pumps
2 pumps	1 pump		Status of the 3 North Shore AWS Pumps

Comments: None.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

Yes	No	NA	Item	Comments
X			Forebay debris load acceptable? (amount)	388 square yards
		X	Gatewell drawdown measured this week?	
		X	Gatewell drawdown acceptable	
X			Any debris seen in gatewells (% coverage)	STSs blocking view into slots
	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: The STSs are removed for annual maintenance.

Orifices, Collection Channel, Dewatering Structure, and Flume:

Yes	No	NA	Item	Number open and in service
		X	Orifices operating satisfactory?	0
		X	Dewaterer and cleaning systems operating satisfactory?	

Comments: The juvenile fish channel is unwatered for annual maintenance. During the winter, one of the regulating weirs in the dewatering structure was discovered to have its stem broken off. The weir was found to be corroded and seized in place in its guide slot. The weir was cut out and replaced with a newly fabricated weir this week.

Juvenile Fish Facility: The fish facility is unwatered for annual maintenance.

Fish Sampling: Sampling begins on April 2.

Removable Spillway Weir (RSW): Voluntary spill for fish passage begins on April 3.

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
76.8	55.2	20.5	0	42	40	7.0	6.9

*Unit 1 scroll case temperature.

Other

Inline Cooling Water Strainers: Monthly turbine cooling water strainer inspections will take place later in March.

Avian Activity: There were very few piscivorous birds seen around the project.

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 will be humanely euthanized by PSMFC and Anchor, frozen and properly disposed of in a landfill.

Fish Rescue/Salvage: Unwatering activities that involved fish rescue did not occur.

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

Project: Lower Monumental

Biologists: Chuck Barnes and Raymond Addis

Dates: March 9 – 15, 2017

Turbine Operation

Yes	No	Turbine Unit Status	Hard	Soft
	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.		X

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

Unit	OOS		RTS		Outage Description
	Date	Time	Date	Time	
Unit 1	12/10/2014		07/2018		Rehabilitation Overhaul
Unit 4	2/12/2018	12:18	4/13/2018		Stator Ground

Comments: None.

Adult Fish Passage Facility

Lower Monumental fish facility staff inspected the adult fishways on March 12, 13 and 14.

Fish Ladder:

Yes	No	Location	Criteria	Out of Criteria Measurements
X		North Ladder Exit Differential	Head \leq 0.5'	
X		North Ladder Picketed Lead Differential	Head \leq 0.4'	
X		North Ladder Depth over Weirs	Head over weir 1.0' to 1.3'	
X		South Ladder Exit Differential	Head \leq 0.5'	
X		South Ladder Picketed Lead Differential	Head \leq 0.3'	
X		South Ladder Depth over Weirs	Head over weir 1.0' to 1.3'	

Fishway Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Out of Criteria Measurements
X			North Shore Entrance (NSE-1) Weir Depth	\geq 8.0' or on sill	
X			North Shore Entrance (NSE-2) Weir Depth	\geq 8.0' or on sill	
X			North Shore Channel/Tailwater Differential	1.0'–2.0'	
	X	X	South Powerhouse Entrance (SPE-1) Weir Depth	\geq 8.0' or on sill	See comments
X		X	South Powerhouse Entrance (SPE-2) Weir Depth	\geq 8.0' or on sill	See comments
X			South Powerhouse Entrance Channel/Tailwater Differential	1.0'–2.0'	
	X		South Shore Entrance (SSE-1) Weir Depth	\geq 8.0'	See comments
X			South Shore Entrance (SSE-2) Weir Depth	\geq 6.0'	
X			South Shore Channel/Tailwater Differential	1.0' – 2.0'	

Comments: South Powerhouse Entrance weir (SPE-1) was on sill during the March 12 and 14 inspections with readings of 8.0 and 7.9 feet, respectively.

South Powerhouse Entrance weir (SPE-2) was on sill during the March 12 and 14 inspections with readings of 8.0 feet on each.

South Shore Entrance weir (SSE-1) was out of criteria during the March 13 inspection with a reading of 7.0 feet. The automatic system was found to be set with the wrong set point. Powerhouse operator was informed and changed the set point.

Auxiliary Water Supply System:

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

Comments: AWS Fish pump 1 is out of service for Seized Wicket Gate Bushings. There is no current return to service estimate date.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

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

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: Gatewells could not be observed during this reporting period due to STS's hanging over them. Approximate date for STS installation is March 26.

Orifices, Collection Channel, Dewatering Structure, and Flume:

Yes	No	NA	Item	Number open and in service
		X	Orifices operating satisfactory?	0
		X	Dewaterer and cleaning systems operating satisfactory?	

Comments: The approximate date for the Collection Channel to be watered up is March 19.

Collection Facility: The collection facility is currently in winter maintenance and is scheduled to be watered up on March 19.

Transport Summary: No transport at this time.

Spillway Weir: RSW scheduled to go into service at 0001 on April 3.

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
70.9	56.4	2.4	0.0	43.0	42.0	3.0	2.2

*Scroll case temperatures.

Other

Inline Cooling Water Strainers: Cooling water strainers were inspected on March 5. No live fish were recovered. Mortalities included 99 juvenile lamprey.

Avian Activity: Tailrace counts of foraging piscivorous birds at Lower Monumental Dam are scheduled to begin in April.

Invasive Species: No zebra or quagga mussels were observed during monitoring station inspections on March 6.

Siberian Prawn: Siberian prawns collected in the sample at the Juvenile Fish Facility are humanely euthanized by PSMFC and Anchor, frozen and properly disposed of in a landfill. The collection facility is currently in winter maintenance thus no Siberian prawns were collected during this reporting period.

Fish Rescue/Salvage: No Fish Rescue/Salvage took place during this reporting period.

Research: No onsite research is in progress at this time

Project: Little Goose

Biologists: Scott St. John and Richard Weis

Dates: March 9 – March 15, 2018

Turbine Operation

Yes	No	Turbine Unit Status	Hard	Soft
	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.		X

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

Unit	OOS		RTS		Outage Description
	Date	Time	Date	Time	
5	04/14/17	14:11	07/31/2018	17:00	Spider and upper guide bearing repair.

Comments: A generic (rolling) two unit at a time outage occurred March 12-15 from 07:00 until 17:00 for trash raking and VBS inspection.

Adult Fish Passage Facility

Little Goose fish facility and Anchor QEA staff inspected the adult fishway on March 11, 13 and 15.

Fish Ladder:

Yes	No	NA	Location	Criteria	Out of Criteria or Measurements
X			Fish Ladder Exit Differential	Head \leq 0.5'	
X			Fish Ladder Picketed Lead Differential	Head \leq 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	Out of Criteria Measurements
X			South Shore Entrance (SSE-1) Weir Depth	\geq 8.0'	
X			South Shore Entrance (SSE-2) Weir Depth	\geq 8.0'	
X			South Shore Channel/Tailwater Differential	1.0' – 2.0'	
		X	North Powerhouse Entrance (NPE-1) Weir Depth	\geq 7.0' or on sill	
		X	North Powerhouse Entrance (NPE-2) Weir Depth	\geq 7.0' or on sill	
X			North Powerhouse Entrance Channel/Tailwater Differential	1.0'–2.0'	
X			North Shore Entrance (NSE-1) Weir Depth	\geq 6.0' or on sill	
X			North Shore Entrance (NSE-2) Weir Depth	\geq 6.0' or on sill	
X			North Shore Channel/Tailwater Differential	1.0'–2.0'	
X			Collection Channel Surface Velocity	1.5 – 4.0 fps	

Comments: None.

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	Comment
X			Forebay debris load acceptable? (amount)	See comment below
	X		Gatewell drawdown measured this week?	
		X	Gatewell drawdown acceptable	
	X		Any debris seen in gatewells (% coverage)	
	X		Any oil seen in gatewells?	

Comments: There is approximately 15,000 square feet of floating woody debris currently inside the trash shear boom in the forebay.

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: VBS screens were inspected on units 1, 2, 3, 4 and 6. All screens were in good condition.

Orifices, Collection Channel, Dewatering Structure, and Flume:

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

Comments: Primary dewatering structure weir elevation is currently operating in manual mode. The limitorque motor that automatically adjusts weirs for water elevation failed upon watering up the juvenile fish collection system. A new limitorque motor has been ordered and is expected to be installed upon delivery.

Collection Facility: The collection and transportation facility operated within criteria this report period. A total of 91 fish were collected. The descaling and mortality rates were 0.85% and 0.0% respectively.

Transport Summary: Fish transportation is scheduled to begin when guidance from TMT is provided.

Spillway Weir: Spring spill operations will begin on April 03.

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
64.5	55.1	0.0	0.0	43.3	42.2	5.0	4.4

*Ladder temperature.

Other

Inline Cooling Water Strainers: Inline cooling strainers are being inspected and results submitted every other week.

Avian Activity: Daily piscivorous bird counts at Little Goose Dam.

Date	Zone	Gull	Cormorant	Tern	Pelican	Grebe
March 09	Forebay count	0	0	0	0	0
	Unmodified boat barrier	0	0	0	0	0
	Modified boat barrier*	0	0	0	0	0
	Forebay debris	0	0	0	0	0
	Trash/shear boom	0	0	0	0	0
March 10	Tailrace count	0	0	0	0	0
	Forebay count	0	0	0	0	0
	Unmodified boat barrier	0	0	0	0	0
	Modified boat barrier*	0	0	0	0	0
	Forebay debris	0	0	0	0	0
March 11	Trash/shear boom	0	0	0	0	0
	Tailrace count	0	0	0	0	0
	Forebay count	0	0	0	0	0
	Unmodified boat barrier	0	0	0	0	0
	Modified boat barrier*	0	0	0	0	0
March 12	Forebay debris	0	0	0	0	0
	Trash/shear boom	0	0	0	0	0
	Tailrace count	0	0	0	0	0
	Forebay count	3	0	0	0	0
	Unmodified boat barrier	0	0	0	0	0
	Modified boat barrier*	0	0	0	0	0
	Forebay debris	0	0	0	0	0
	Trash/shear boom	0	0	0	0	0

	Tailrace count	0	0	0	0	0
March 13	Forebay count	2	6	0	0	0
	Unmodified boat barrier	0	0	0	0	0
	Modified boat barrier*	0	0	0	0	0
	Forebay debris	0	0	0	0	0
	Trash/shear boom	0	0	0	0	0
	Tailrace count	0	0	0	0	0
March 14	Forebay count	0	0	0	0	0
	Unmodified boat barrier	0	0	0	0	0
	Modified boat barrier*	0	0	0	0	0
	Forebay debris	0	0	0	0	0
	Trash/shear boom	0	0	0	0	0
	Tailrace count	0	0	0	0	0
March 15	Forebay count	1	3	0	0	0
	Unmodified boat barrier	0	0	0	0	0
	Modified boat barrier*	0	0	0	0	0
	Forebay debris	0	0	0	0	0
	Trash/shear boom	0	0	0	0	0
	Tailrace count	0	0	0	0	0

*modified boat barrier section has weights and bird spike removed.

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

Siberian Prawn: Siberian prawns collected in the sample at the Juvenile Fish Facility are humanely euthanized by Oregon Department of Fish and Wildlife and Anchor, frozen and properly disposed of in a landfill. Daily and total Siberian prawn counts at Little Goose Dam for this reporting period are reported below.

Date	Sample (euthanized)	Collection*
3-09	0	0
3-10	0	0
3-11	0	0
3-12	3	3
3-13	0	0
3-14	9	9
3-15	0	0
Total	12	12

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

Gas Bubble Trauma (GBT): GBT monitoring is not being conducted at this time.

Fish Rescue/Salvage: None.

Research: PNNL is currently installing temporary trolley pipes, hydrophones and associated equipment for an acoustic telemetry study.

Project: Lower Granite

Biologists: Elizabeth Holdren and Stephen Hampton

Dates: March 9-15, 2018

Turbine Operation

Yes	No	Turbine Unit Status	Hard	Soft
	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.		x

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

Unit	OOS		RTS		Outage Description
	Date	Time	Date	Time	
1	05-Mar	1936	26-Mar	N/A	Servo oil supply leak waiting on contractor repair and oil procurement.

Comments:

Adult Fish Passage Facility

Lower Granite biological staff inspected the adult fishway on March 11, 12, 13, and 14.

Fish Ladder:

Yes	No	NA	Location	Criteria	Out of Criteria Measurements
X			Fish Ladder Exit Differential	Head \leq 0.5'	
X			Fish Ladder Picketed Lead Differential	Head \leq 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:

Fish Ladder Entrances and Collection Channel:

Yes	No	Sill	Location	Criteria	Out of Criteria Measurements
X			South Shore Entrance (SSE-1) Weir Depth	\geq 8.0'	
	X		South Shore Entrance (SSE-2) Weir Depth	\geq 8.0'	7.2, 6.3, 6.8
X			South Shore Channel/Tailwater Differential	1.0' – 2.0'	
X		X	North Powerhouse Entrance (NPE-1) Weir Depth	\geq 8.0' or on sill	
	X		North Powerhouse Entrance (NPE-2) Weir Depth	\geq 8.0' or on sill	6.2, 4.9, 5.5
X			North Powerhouse Entrance Channel/Tailwater Differential	1.0'–2.0'	
X			North Shore Entrance (NSE-1) Weir Depth	\geq 7.0' or on sill	
			North Shore Entrance (NSE-2) Weir Depth	\geq 7.0' or on sill	OOS
X			North Shore Channel/Tailwater Differential	1.0'–2.0'	
X			Collection Channel Surface Velocity	1.5 – 4.0 fps	

Comments: SSE-2 and NPE-2 out of criteria readings were due to the fish ladder control system gate synchronization. Electricians identified the problem and recalibrated the gates following the March 14 inspection.

Auxiliary Water Supply System:

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

Comments: AWS pump 2 is out of service for drive shaft bearing repair. AWS pump 1 tripped offline March 10, 11, and 13 while in fast operation. Pump 1 has not tripped again since it was restarted in slow mode March 13.

Juvenile Fish Passage Facility

Forebay Debris/Gatewell Debris/Oil:

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

Comments: There is about 1400 square yards of debris in front of the RSW that is scheduled to be spilled prior to the spring spill season.

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: ESBSs are scheduled to be installed the week of March 26. This will be a deviation from Lower Granite FPP section 2.3.1.2.vii requirement to have ESBS installed in at least four units by March 24. It is anticipated ESBSs will be installed in all operating units prior to the April 1 deadline.

Orifices, Collection Channel, Dewatering Structure, Bypass Pipe:

Yes	No	NA	Item	Number open and in service
		X	Orifices operating satisfactory?	0
		X	Dewaterer and cleaning systems operating satisfactory?	

Comments:

Collection Facility: The facility is in bypass commissioning mode.

Transport Summary: No transport occurring.

Spill/Spillway Weir: Spill season scheduled to begin April 03.

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
65.7	51.0	0	0	42.6	41.7	3.8	2.5

*Cooling water intake temperature.

Other

Inline Cooling Water Strainers: N/A

Invasive Species: N/A

Siberian Prawn: N/A

Avian Activity: N/A

Gas Bubble Trauma (GBT) Monitoring: N/A

Adult Fish Trap Operations: Adult trap is operating Monday through Friday with a 28% sample rate.

Fish Rescue/Salvage: N/A

Research: N/A