OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE- 18TDA14 Fish Unit Breaker Rehab AWS Contingency
COORDINATION DATE- 12/10/18
PROJECT- The Dalles Dam
RESPONSE DATE- 12/13/18 (FPOM meeting)

Description of the problem
The Dalles fish unit rehab contract is behind schedule. Last year, demolition of the old breakers was delayed a year until all necessary preparatory work was completed, as well as from interference from the AWS construction. Demolition was then planned for December 5, 2018, but is now postponed due to more preparatory items that still need to be completed. Contractors and planners feel we can still complete the project within the original schedule to return fish units with new breakers by January 14. However, given the uncertainty of meeting this schedule, we are proposing a *contingency plan* of operating the AWS only, in lieu of fish unit flow.

Normally a single fish unit is returned midway through the in water work period while annual maintenance is complete on the other fish unit. A single fish unit operates just over 2500cfs, whereas AWS discharge is 1500cfs. Therefore, there would be about 40% reduction normal attraction flow during this period. As designed, the AWS flow will only provide enough for the operation of the east entrance. The west and south entrances will be closed. If this operation occurs, AWS effectiveness will be monitored through daily fishway inspections of the east entrance.

The north fish ladder will be out of service from 22 January through February 28 for annual maintenance. Since the north fishway had shortened maintenance periods the last two years, due to the AWS construction and weather complications, the project requires the full outage period to catch up. If the north maintenance is completed sooner than expected the project will return the ladder to service as soon as possible.

Type of outage required

Impact on facility operation
The east ladder will not be operated in full criteria as specified in the Fish Passage Plan. The east entrance will be open and in criteria but the west and south entrance will be closed.

Impact on unit priority
None

Impact on forebay/tailwater operation
None

Impact on spill
None

Dates of impacts/repairs
Jan 22 – Feb 28?

Length of time for repairs

Analysis of potential impacts to fish

1. 10-year average passage by run during the period of impact for adults and juvenile listed species, as appropriate for the proposed action and time of year:

   Winter counts for the month of January 2013 were 6 steelhead and 4 chinook. Winter counts for the month of February 2013 were 73 steelhead and 2 chinook. No count data is available for lamprey for January, but they are commonly seen in fish ladder dewatering during winter. (Annual Fish Passage Report 2016)
2. Statement about the current year's run (e.g., higher or lower than 10-year average): **Approximately 25% of ten year average.**
3. Estimated exposure to impact by species and age class (i.e., number or percentage of run exposed to an impact by the action): **steelhead, chinook and possible lamprey.**
4. Type of impact by species and age class (increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.): **Potential passage delay for adult salmonids and lamprey**.

Summary statement - expected impacts on:

Downstream migrants – No expected impact

Upstream migrants (including Bull Trout) – January is the lowest migration month for salmonids. February shows slight increase in steelhead passage only, but still well under 1% of total in all years that data was collected. Since this outage will result in reduced attraction flow from normal and there are very few salmon passing, delay should be minimal. The east entrance which is the most used entrance will be in criteria. The benefits for completing this work will be increased insurance that fish units will continue to provide full criteria during future year's passage periods.

Lamprey –Possible passage delay due to presence in system, but unable to evaluate due to lack of data.

Comments from agencies – Bellerud request video monitoring of the count station while using the AWS backup system.

Final coordination results –FPOM concurred with this action at the December FPOM meeting.

After Action update The AWS contingency plan was put in place Jan 17. Criteria was maintained at the east entrance during this time, but only worked for ~3 weeks until AWS was forced out of service due to actuator vibration and attachment bolt concerns Feb 8. AWS returned to service ~1400 on Mar 21 after the bolt issues were resolved. AWS was again forced out Mar 31 due to valve room flooding, after only 10 days of operation. AWS returned to service again ~1600 Apr 2, but this time manually due to failed motors from the flooding. Fish units returned to service ~1230 on Apr 8, about 7 weeks beyond the original scheduled return. Due to the contingency plan failure, the east fishway had reduced or no attraction flow for the first 5 weeks of adult fish passage season. Fish passage was monitored and fortunately spring chinook passage was much later than normal.
North fishladder was dewatered Jan 22 for annual maintenance. It remained out of service into the start of adult passage season. The north ladder was returned to service by Mar 1. Attraction spill 1.5K was used for north fishway in the mornings while the AWS remained out of service and the east was without attraction flow.
Fortunately Chinook passage was late in 2019. Only 42 adult chinook passed Bonneville in March. Also 482 Steelhead passed Bonneville in March. However overall impact to passage was not measurable.

Please email or call with questions or concerns.
Thank you,
Erin

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