OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE- 19 MCN 05 Oregon ladder exit electrical upgrades
COORDINATION DATE- April 29, 2019
PROJECT- McNary Dam
RESPONSE DATE- May 6, 2019

Description of the problem:

Olsson Electrical, the station service upgrade contractor, would like to request a 4 hour outage of the Oregon fish ladder exit to convert the ladder exit system to the new transformer that has been installed by them. They will begin the conversion by having operations place a clearance on the existing fish ladder feeder located at the project town site. The existing conductors will be permanently removed from service by disconnecting them from the switch, located on the west end of the town site. They will then remove the existing conduit and conductors from the old fish ladder transformer to the transfer switch and install new conductors to the new transformer. They will test the conductors after installation and terminate at both ends. Once this is completed they will return the Oregon fish ladder exit to service on the new transformer. They will have all equipment and materials in place to insure a rapid conversion. A diesel generator cannot be used during this transformer cutover to power the exit.

This 4 hour cutover to the new transformer will increase reliability to our Oregon exit fish ladder loads as we will have redundant feeds to the switch gear. Also, the new transformer is an oil type transformer, which is more suitable for the outdoor location and will have a longer lifespan than the existing dry type transformer. This step is one of the final steps for Olsson before completing the contract in June. This is something that must be completed before they can remove the old transformer/town-site substation. Please see attached PDF file.

Type of outage required: On May 9, at about 0015 hours, the operator will switch the Oregon exit to orifice flow. At 0030 hours, the Oregon exit power outage would begin. Orifice flow is the safest way to operate the exit when there is no power available. By 0430 hours, the process to reverse the ladder and establish normal exit flows show have begun. The exit should be in automatic operation by 0500 hours on May 9, just in time for fish counters to begin work. All entrances and auxiliary water will remain unaffected by this outage.

Impact on facility operation: During this night outage, no PIT tag detection would occur. The ladder would be out of criteria. However, fish counting would be unaffected. A night time outage was chosen because fish passage is minimal at night.

Impact on unit priority: None.

Impact on forebay/tailwater operation: None.

Impact on spill: None.

Dates of impacts/repairs: May 9 from about 0000 to 0500 hours, the Oregon ladder exit will be switch into orifice flow, the power outage will occur and the ladder will be reestablished in criteria.

Length of time for repairs: the power outage will be for 4 hours at night.

Analysis of potential impacts to fish:

1. 10-year average passage by run during the period of impact:

   There is no 10 year average number of fish passing through the Oregon ladder on May 9 from 0000 hours to 0500 hours. Due to minimal night passage, fish counting does not occur during these hours.

2. Statement about the current year's run:

   The current run through the Oregon ladder compared to the 10-year average (2009 – 2018) Oregon ladder run, year-to-date is as follows:

   Chinook– 0.8%

   Steelhead – 14.4%

3. Estimated exposure to impact by species and age class:

   Due to no fish counting occurring at these hours, there is no data on which to estimate exposure. However, this would suggest the impact would be almost none existent.

4. Type of impact by species and age class:

   Again, due to no data being available and the fact no fish counting occurs at these hours, the impact on adult and jack spring Chinook and summer steelhead should be none existent.

The above data came for the FPC website: http://www.fpc.org

For data collection, I would like to acknowledge Kathleen Carter (PSMFC) and Alexis Bonoff (Anchor, QEA).

For the PDF file, I would like to acknowledge Brandon Powers, Electrical Engineer, McNary Project.

Summary statement - expected impacts on: With a night time ladder outage, there should be no impact on fish passage.

Downstream migrants: None.

Upstream migrants (including Bull Trout): None on spring Chinook and steelhead.

Lamprey: None, passage season has not yet begun.

Comments from agencies:

Final coordination results:

After Action update: At the Oregon shore ladder, the exit was in orifice flow from May 8 at 2326 hours to May 9 at 0430 hours. The exit was in automatic mode by 0515 hours. This was done to facilitate the exchange of the exit power supply from an old to a new system, which occurred from 0030 to 0430 hours. The exchange and ladder operations occur in an orderly manner. No issues occurred. The new electrical system will be much more reliable and future power outages will be much less likely.

Please email or call with questions or concerns.

Thank you,

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