OFFICIAL COORDINATION REQUEST FOR NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE - 19 LWG 08 JFF Concrete and Rock Removal COORDINATION DATE – August 30, 2019 PROJECT - Lower Granite Lock and Dam RESPONSE DATE – September 12, 2019

Description of the problem – The Lower Granite Lock and Dam Juvenile Bypass System (JBS) was recently upgraded to improve downstream fish passage. Construction of the JBS upgrade began in October 2014 and funded upgrades and modifications are being completed during the fall of 2019.

As part of the JBS construction there are several actions reaming to clean up and stabilize the surrounding areas. Two actions are being proposed to be completed in September 2019 which are concrete and rock removal in two separate locations (Figure 1). In general this type of work was previously coordinated in the 18 LWG 05 MOC through FPOM with a restriction to complete work that produces noise and vibrations near the fish ladder performed between 6 pm to 6 am during the fish passage season. However, this specific work was not described. The purpose of this MOC is to outline the work in more detail and highlight potential impacts to fish due to deviations (work within 100 feet of the fish ladder) from the Fish Passage Plan (FPP).

The purpose of the concrete removal is to replace degraded concrete near the fish ladder and rock removal along the cut slope to install a retaining wall. The schedule is set to accommodate contract closeout on 15 December, 2019. Therefore working backwards all work has to be completed by 15 November.

The proposed work described below is currently planned to happen in late-September through October. The duration of work is 1/2 day for concrete removal and up to 5 days for rock removal. The exact schedule is being developed and we will have more details at the September FPOM meeting.

Type of outage required

Impact on facility operation (FPP deviations) – No impact to facility operation. Work is within 100 feet of the fish ladder.

Impact on unit priority – None anticipated

Impact on forebay/tailwater operation - No changes to FPP requirements

Impact on spill - None anticipated

Dates of impacts/repairs -late September-October 2019

Length of time for repairs – Up to 1/2 day for concrete removal and 5 days for rock removal.

Analysis of potential impacts to fish

Chinook and Coho salmon are present during this time frame as well as steelhead. Potential adult delay may occur during concrete removal and resulting noise and vibration due to the proximity of the work to the fish ladder. However, this will be mitigated by working from 6:00 pm to 6:00 am when salmonid entry into the fish ladder is minimal. No impacts to juvenile salmonid passage is expected. Adult lamprey passage will be mostly complete during the time that work will be completed.

Statement about the current year's run (e.g., higher or lower than 10-year average) The 2019 adult fall Chinook run is likely to be lower than the 10-year average run based on predictions made by NMFS and spring and summer run Chinook salmon numbers. The same is true for both wild and hatchery steelhead.

Summary statement - expected impacts on:

Downstream migrants – No impact to downstream migrants.

Upstream migrants (including Bull Trout) - Chinook and Coho salmon are present during this time frame as well as steelhead. Potential adult delay may occur during concrete removal, from resulting noise and vibration, due to the proximity of the work to the fish ladder. Specific numbers or percentage of fish impacted will be based on when the work actually occurs. Large numbers of fall Chinook salmon are passing in September and not in October, however large numbers of steelhead are passing during both September through October. However, this will be mitigated by working from 6:00 pm to 6:00 am when salmonid entry into the fish ladder is minimized. No impacts to juvenile salmonid or bull trout passage is expected.

Lamprey – Adult lamprey passage will mostly be complete during the time that work will be occurring. Therefore no significant impacts to adult or juvenile lamprey anticipated.

Comments from agencies

Final coordination results

After Action update

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

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Figure 1. Lower Granite Dam rock removal will occur in the location depicted with a solid red line in the top panel. Concrete removal will occur where the red star is located in the top panel. The lower panel shows a plan view of the location for rock and concrete removal.



Figure 2. Historical adult fall Chinook salmon passage during the period of potential impacts.



Figure 3. 10-year average time of day for adult Chinook salmon passage during the period of potential impacts.



Figure 4. Historical adult coho salmon passage during the period of potential impacts.



Figure 5. 10-year average time of day for adult coho salmon passage during the period of potential impacts.



Figure 6. Historical adult steelhead passage during the period of potential impacts.



Lower Granite Dam Steelhead 10-Yr Means by Hour

Figure 7. 10-year average time of day for adult steelhead passage during the period of potential impacts.



Figure 8. Historical adult lamprey passage during the period of potential impacts.



Count season 1 March to 31 December. 24 Hr counts during 2013 to 2017; 1 June to 30 September

Figure 9. 10-year average time of day for adult lamprey passage during the period of potential impacts.