OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE- 20 MCN 02 LMI testing of spillway gates
COORDINATION DATE- 5/29/2020
PROJECT- McNary
RESPONSE DATE- 6/8/2020

Description of the problem: McNary Spillway Hoists are believed to be operating in an overloaded condition. Walla Walla District Engineers require a study to determine the operational weight being experienced by spillway hoists operating during spill conditions. To successfully capture the true load experienced by hoists during spill, Load Moment Indicators (LMIs) need to be installed by a contractor on the schedule listed below. This study will tell us exactly how overloaded the hoists are and how much load the new replacement hoists need to be capable of supporting. Our current hoists are an extreme safety concern so this testing is critical.

Load testing must occur during spill season to capture the dynamic load experienced during active spill, because that's when the hoists see the highest loading. We were initially planning to install the LMIs back in March so we could document high flow loading experienced during spring spill conditions, but the isolation requirements initiated due to the Covid virus response postponed our efforts.

If we delay installation for after this spill season, we will not be able to document spill season load data for another year. An additional year delay will, extend the length of exposure of personnel to hoists operating in an overloaded condition, delay the analysis of load data required for plans and specifications, engineering design, and contracting efforts required for re-designing new hoists121868 to replace these existing spillway Cranes and Hoists. This unsafe condition needs to be resolved as soon as possible. Approval to temporarily modify the spill pattern is critical in order to get the contractor on site while the spill season is still occurring.

Type of outage required

Impact on facility operation (FPP deviations): None on adult or juvenile passage facility.

Impact on unit priority: None on unit priority.

Impact on forebay/tailwater operation: None on water elevations.

Impact on spill: Spill schedule outage for installation of LMIs is listed below. Although the spill gates will be tagged out of service, they will be dogged open at a level appropriate for the flow at the time of the outage. All other bays in the spillway will still

be adjusted automatically to compensate for lack of change in the affected spill gates. There will be no overall change in spill volume. Since this will occur during summer spill season, over a four day period, spill volumes should not be affected dramatically. However, once sensors have been successfully installed and tested, there will be a requirement to momentarily lower gates 11 and 12 to "closed on seal" and "full open" to calibrate the LMIs at Zero and minimum operational load.
The following schedule is for install and calibration of load sensors for this study:

July 6 - Monday:
- McNary take spill bays 10-13 out of service and prep spillway hoists on bays 11-12 for LMI install.
- Contractor begins installing Load Moment Indicator (LMI) on hoists 11-12

July 7 - Tuesday:
- Contractor completes installation of LMIs on 11-12.
- McNary reassemble hoists
- McNary full cycle gates 11-12 for sensor calibration.
- McNary return spill bays 10-13 to service by COB

July 8 - Wednesday:
- McNary take spill bays 15-18 out of service and prep spillway hoists on bays 16-17 for LMI install.
- Contractor begin LMI install on 16-17

July 9 - Thursday:
- Contractor complete installation of LMIs on 16-17.
- McNary reassemble hoists
- McNary full cycle gates 16-17 for sensor calibration.
- McNary return spill bays 15-18 to service by COB.

Dates of impacts/repairs: Listed in schedule.

Length of time for repairs: Listed in schedule.

Analysis of potential impacts to fish

1. With the bays selected, there should be no impact on adult fish passage.
2. Subyearling Chinook are predominately the juvenile species passing during this time frame. With spillgates dogged off and spill volume along with pattern matching very closely to FPP Table MCN-9, there should be very little impact on smolt passage through the spillway. The calibration of the LMIs, with the gates being fully closed and open, could possibly alter passage of a very small percentage of subyearling Chinook for the brief time the calibration is occurring.

Summary statement - expected impacts on:

Downstream migrants: Possibly a very slight alteration in passage during LMI calibration.

Upstream migrants (including Bull Trout): None

Lamprey: None

Comments from agencies

Final coordination results

After Action update: the load monitoring system in now in-place and the last of the gates returned to service at approximately 11:00 on Thursday, July 9.

However, for contractor and employed safety, during install they did deviate from the original schedule.

Monday the 6th, morning: as planned gates 10-13 were dogged in the open position and locked out.
Tuesday the 7th, afternoon: as planned those gates were released and returned to service, with the exception of gate 13 for the work described below.
Wednesday the 8th, morning: as planned 15-18 were dogged in the open position and locked out. However, the contractor needed to also install junction boxes and flex conduit on bay 14. Therefore bays 13-14 also had to be dogged in the open position and locked out. The extent and effects of this work had not been previously understood, which is why it had not been included in the original schedule.
Thursday the 9th, morning: All gates were returned to service, earlier than originally planned.

Please email or call with questions or concerns.

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