OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE – 22 MCN 16 Early & Extended Ladder Outages for Installation of Lamprey Passage Improvements
COORDINATION DATE – October 19, 2022
PROJECT - McNary Dam
RESPONSE DATE – November 2, 2022

Description of the problem- Adult lamprey have difficulty entering the adult ladder entrances at mainstem facilities. Right angles and increased velocities at ladder entrances can present a challenge (or even a barrier) to successfully entering the ladder. Rounding of the weir crests can provide a continuous surface amenable to lamprey's "attach and burst" strategy to overcome such barriers.

Lamprey passage improvements are to be installed on entrance weirs WFE 2 and WFE 3 in the Washington shore ladder along with SFEW1 and SFEW2 in the Oregon shore ladder during the upcoming winter ladder outage season. However, to ensure these improvements are accomplished, an extended ladder outage is required by adding the month of December to the normal outage of January and February.

The above four telescoping weirs will be removed. The top weir sections will be taken off sight, where a contractor will add rounded crowns to the top of these sections and plating to the back of the weir tops. These improvements are similar to ones done at The Dalles Project.

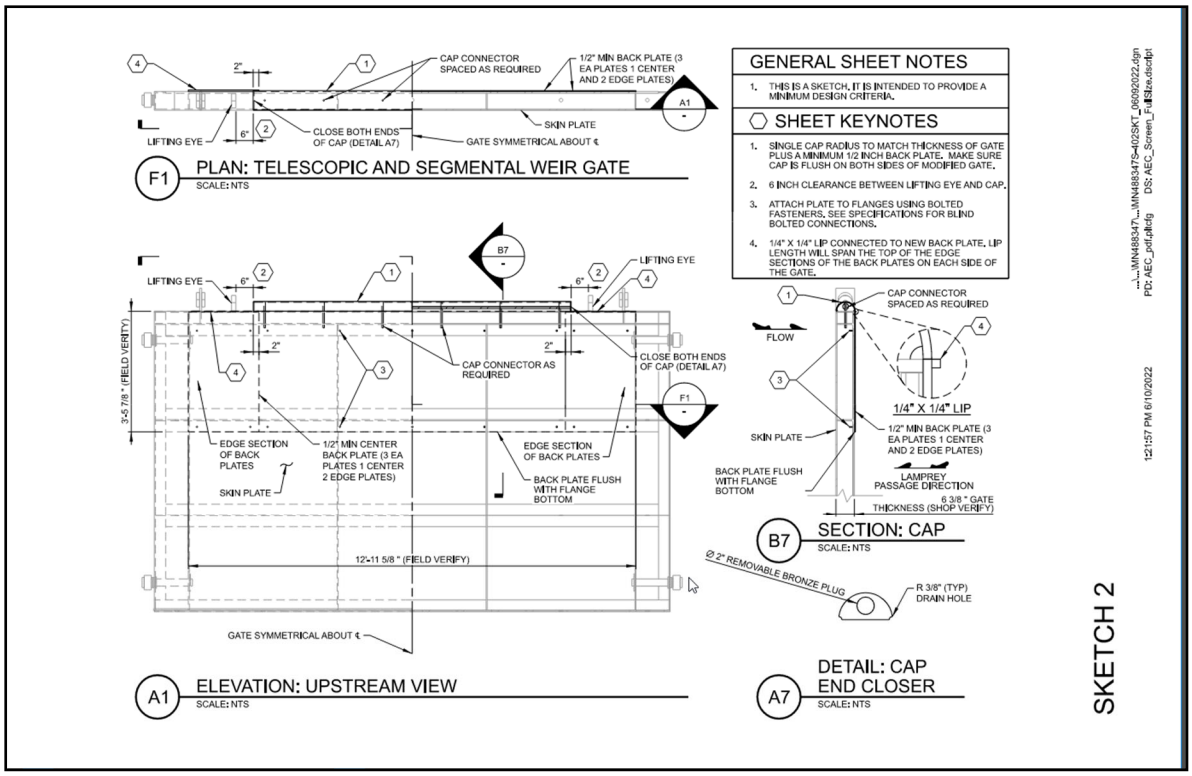
Here is the ladder outage schedules:

The Washington shore ladder will go to orifice flow on December 4, 2022. Ladder dewatering will begin December 5. The weir tops of WFE 2 and WFE3 will be staged at the maintenance yard and on December 12, the contractor will move them to their shop for modification (McNary general maintenance staff will need to support loading and unloading the weir tops.). Modified parts will be manufactured, assembled for fit and disassembled for transport back to McNary Dam. See plans below.

These tops will be returned by January 5, 2023, with general maintenance helping to off load. Weirs will be reassembled and reinstalled. The Washington shore ladder will be rewatered by January 12. The Washington ladder will be fully rewatered before the Oregon shore ladder outage.

Washington entrance with crane set up to remove weirs.

Example of Washington entrance weir with stop logs in place in front of the weir.



Washington weir modifications.

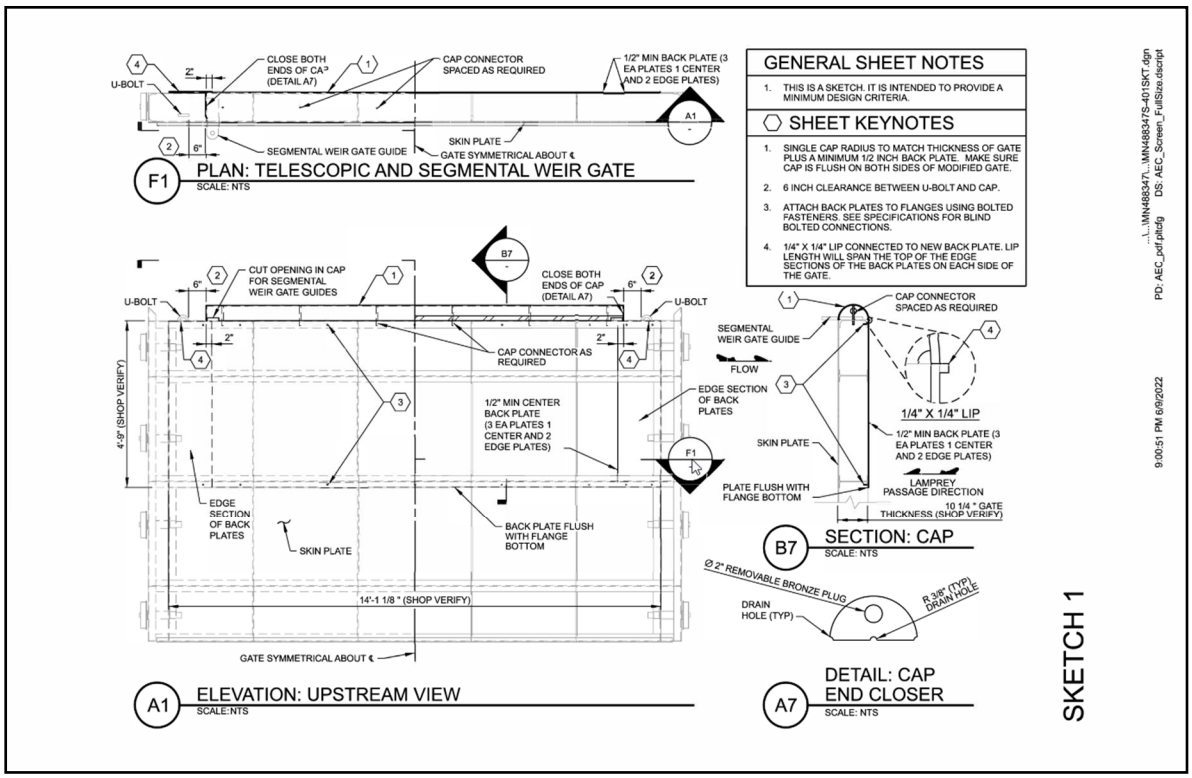
The Oregon shore ladder will go to orifice flow on January 16. Ladder dewatering will begin January 17. Remove Oregon ladder south entrance weirs only, remove top leaf of weirs, and stage in maintenance yard. The weir tops of SFEW 1 and SFEW2 will be picked up on January 23.

These weir tops will be returned by February 16. Weirs will be reassembled and reinstalled. Rewatering the Oregon shore ladder will begin and be completed by February 24. See photos and work description below.

Oregon ladder south entrance weir in the slot.

Removing an Oregon south entrance weir.

Oregon south entrance weir coming out of the slot.



Oregon weir modifications.

Type of outage required- Instead of a two-month winter outage, the ladders will have a three-month winter outage, six weeks for each ladder.

Impact on facility operation (FPP deviations)- The Washington shore ladder will be out of service for approximately one month earlier than normal.

Impact on unit priority- None.

Impact on forebay/tailwater operation- None.

Impact on spill- None.

Dates of impacts/repairs- Washington shore ladder will be out of service from December 4 to 31, 2022, which is beyond the normal time frame for the two-month winter ladder outages. The remainder of the Washington ladder outage will be January 1 to 12, 2023. (The Washington ladder is normally out the month of January.) Oregon shore ladder will be out of service January 16 to February 24, 2023. (The Oregon ladder is normally out of service the month of February.)

Length of time for repairs- Approximately 3 months total for both ladders. One month longer than normal.

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: There is no 10-year average data in December. Over the last ten years, the DART site provides two years of data for an average of 127 Chinook and 1330 steelhead in both ladders in December. The last ladder counts in December at McNary were in 2017. There were 99 Chinook adults (79 in WA ladder), 11 Chinook jacks (7 in the WA ladder), 210 steelhead adults (17 in the WA ladder) and 88 wild steelhead (10 in the WA ladder) counted in 2017 at McNary. The Chinook are late run fall fish. The steelhead are mostly overwintering. Also, there is a slight possibility of overwintering adult lamprey in the vicinity.
2. Statement about the current year's run (e.g., higher, or lower than 10-yearaverage): The fall Chinook run for McNary is currently tracking below the 10-year average at about 63% of average, and steelhead are similar with below average numbers and about 72%.
3. Estimated exposure to impact by species and age class (i.e., number or percentage of run exposed to an impact by the action): The numbers of adults impacted will be minimal as the project will have a single ladder available at all times. As a percentage of the run, less than 1% of the Chinook run would be expected in the tailrace of McNary that time of year. For steelhead, more fish would be expected and based on the 10-year average 1-2% may be present during the December period.

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.): The type of impact would be limited to possible delays as the fish search for the available ladder.

Summary statement - expected impacts: This will extend the period of one available ladder for passage from 2 to 3 months during the winter maintenance season.

Downstream migrants: Subyearling Chinook salmon are the predominant species during this time period, but the abundance is very low with no known impact.

Upstream migrants (including Bull Trout): Very **s**light delays for one extra month as fish search of the available ladder.

Lamprey: Minimal impact the fish are generally overwintering at this time.

Comments from agencies:

From: Tom Lorz <lort@critfc.org>
Sent: Wednesday, October 19, 2022 8:23 AM
To: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] Re: 22 MCN 16 MOC McNary Extended Fishway Outage

Thanks for the update, have you guys considered doing the Oregon ladder first. The Oregon ladder is more heavily used early season so if there is an unforeseen delay that would not impact the start of the Oregon ladder. Not sure if that is possible but would be preferred.

thanks

Tom Lorz
CRITFC

From: Peery, Christopher A CIV USARMY CENWW (USA)
Sent: Thursday, October 20, 2022 7:07 AM
To: Tom Lorz <lort@critfc.org>
Cc: St John, Scott J CIV USARMY CENWW (USA) <Scott.J.StJohn@usace.army.mil>
Subject: RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Tom,

We checked with the project and, unfortunately, the order that fishways will be dewatered this winter was determined because of maintenance being conducted on the tailrace crane in January that precludes being able to work on the Oregon shore first.

Chris

From: VANDYKE Erick S * ODFW
Sent: Wednesday, October 19, 2022 8:57 AM
To: Peery, Christopher A CIV USARMY CENWW (USA)
<Christopher.A.Peery@usace.army.mil>
Subject: RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Hi Chris,
Thanks for the update and planning dates. Can you share who was awarded the contract and where the weir top sections are to be worked on (shop location)? Do you know why the modified parts require disassembly for transport? I assume the staggering of Washington shore and Oregon shore is to assure at least one ladder is operating. If the Washington shore work is delayed or goes overtime will the work on Oregon shore weir tops be delayed until the next winter work window? Is adult ladder dewatering still limited or has that issue been resolved? Any information you can share would be appreciated.

Erick Van Dyke
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From: St John, Scott J CIV USARMY CENWW (USA) <Scott.J.StJohn@usace.army.mil>
Sent: Wednesday, October 19, 2022 4:35 PM
To: VANDYKE Erick S * ODFW <Erick.S.VANDYKE@odfw.oregon.gov>
Cc: Peery, Christopher A CIV USARMY CENWW (USA)
<Christopher.A.Peery@usace.army.mil>
Subject: RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Erick,

I'm still working on your last question regarding dewatering the fishway, but below are the rest of the responses.

Contract Awarded to Civil Built LLC in Walla Walla. The metal fabrication shop is Metal Craft NW also in Walla Walla.

Disassembly of the telescoping weir gate is required for hauling/handling of multiple gates at one time. The gates will need to be manageable at the metal shop for adding of the rounded weir caps and skin plating and the surface finishing (sandblasting and painting).

The requested extension on the front side of outage is to allow for ample time for the project staff to dewater and perform their maintenance with the addition of the supporting this contract. The staggering is to ensure one ladder is available for the entire IWW. The project staff and contractor feel comfortable that the time allotted through this extension request will allow this contracted work to be completed, and allow necessary time for dewatering and seasonal maintenance activities. Worst case scenario if this work can't be completed during this work window, it could be delayed until the next annual outage period.

Scott St. John
Fish Biologist
Natural Resources Management
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From: VANDYKE Erick S * ODFW <Erick.S.VANDYKE@odfw.oregon.gov>
Sent: Wednesday, October 19, 2022 5:46 PM
To: St John, Scott J CIV USARMY CENWW (USA) <Scott.J.StJohn@usace.army.mil>
Cc: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Thanks Scott,
Maybe my quick read misinterpreted the sections that will be transported and purpose of disassembly. I interpreted the tops section of each weir was being transported not the entire weir. Additionally, I assumed the shop would assemble the cap and plate to assure proper fit but remove it prior to transport back to McNary dam, which presumably will require USACE staff to reassemble it on site prior to reassembly of the telescoping sections. This would justify, at least in part, additional weeks need to complete the work to both weirs. Therefore, it seemed like a step that could potentially add time. As usual finding areas that reduce the OOS time could be an improvement that would be appreciated. I presume that the process could incorporate any early completion into refining the schedule if it comes to that (for example Washington shore returned to service earlier than expect, so move right to Oregon shore). I'll keep my eye out for the response on dewatering issues. Regards.
Erick

From: St John, Scott J CIV USARMY CENWW (USA) <Scott.J.StJohn@usace.army.mil>
Sent: Thursday, October 20, 2022 10:10 AM
To: VANDYKE Erick S * ODFW <Erick.S.VANDYKE@odfw.oregon.gov>
Cc: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
Subject: RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Erick,

Moving the weir to the shop is faster than trying to create a metal shop on the deck of the dam and construct large pieces of metal in the middle of winter. I do not know for sure why they will disassemble the weir to transport back to the dam. Those decision are up to the mechanics and engineers, but could be due to size or weight constraints which I could look into.

I have yet to hear back from the Project, but our Business Line Manager had indicated that McNary had figured out the dewatering process so that should not be a factor for this work.

Scott St. John
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From: VANDYKE Erick S * ODFW <Erick.S.VANDYKE@odfw.oregon.gov>
Sent: Thursday, October 20, 2022 10:51 AM
To: St John, Scott J CIV USARMY CENWW (USA) <Scott.J.StJohn@usace.army.mil>
Cc: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Scott,
You have misinterpreted my response as being critical of the decision to contract off site when it simply considered timelines and potential efficiencies that could be considered. The plan to OOS tagout, disassemble, then assemble, then disassemble, then reassemble and finally assemble for redeployment (return to service) contains time requirements that on paper appear repetitive. It is the responsibility of workgroup participants to explore these details, to ask questions that help understand why some efficiencies are not being selected at the planning stage. To date it seems that the planning documents build-in extra time before the actual events are occurring, this pattern has been noticed and deserves additional exploration to assure the timelines are including the importance of operable fish passage. If the mechanical and engineering steps provided the information on why all the assemble-disassemble steps were required, it seems appropriate that workgroup members would request that information be shared to perform their expected role of offering suggestion/in put. Please refrain from interpreting input as attacks on project staff when the request was for information. I appreciate the efforts to share what is known when it is available, thanks for the extra steps to gather what you can.
Erick

From: St John, Scott J CIV USARMY CENWW (USA)
Sent: Thursday, October 27, 2022 3:01 PM
To: 'VANDYKE Erick S * ODFW' <Erick.S.VANDYKE@odfw.oregon.gov>
Cc: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
Subject: RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Erick,

The crane contract will not impact the entrance gate work at McNary unless we dewater the Oregon ladder first. The work is scheduled to be completed by 21 December and the contractor plans to demobilize equipment that day.

Scott St. John
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From: VANDYKE Erick S * ODFW <Erick.S.VANDYKE@odfw.oregon.gov>
Sent: Thursday, October 27, 2022 3:38 PM
To: St John, Scott J CIV USARMY CENWW (USA) <Scott.J.StJohn@usace.army.mil>
Cc: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] RE: 22 MCN 16 MOC McNary Extended Fishway Outage

Thanks Scott. It is good news to hear one thing will not play into delaying returning the gate to service if completed earlier than scheduled. Thanks for bringing it up today and following up with the information.
Erick

Final coordination results: Approved

After Action update: The Washington ladder was out of service from December 5, 2022, to January 13, 2023. The Oregon ladder was out of service from January 17 to February 28, 2023. All lamprey passage improvements were installed as described above along with other maintenance.

Please email or call with questions or concerns.

Sincerely,
Bobby Johnson
Project Fisheries Biologist
McNary Lock and Dam
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