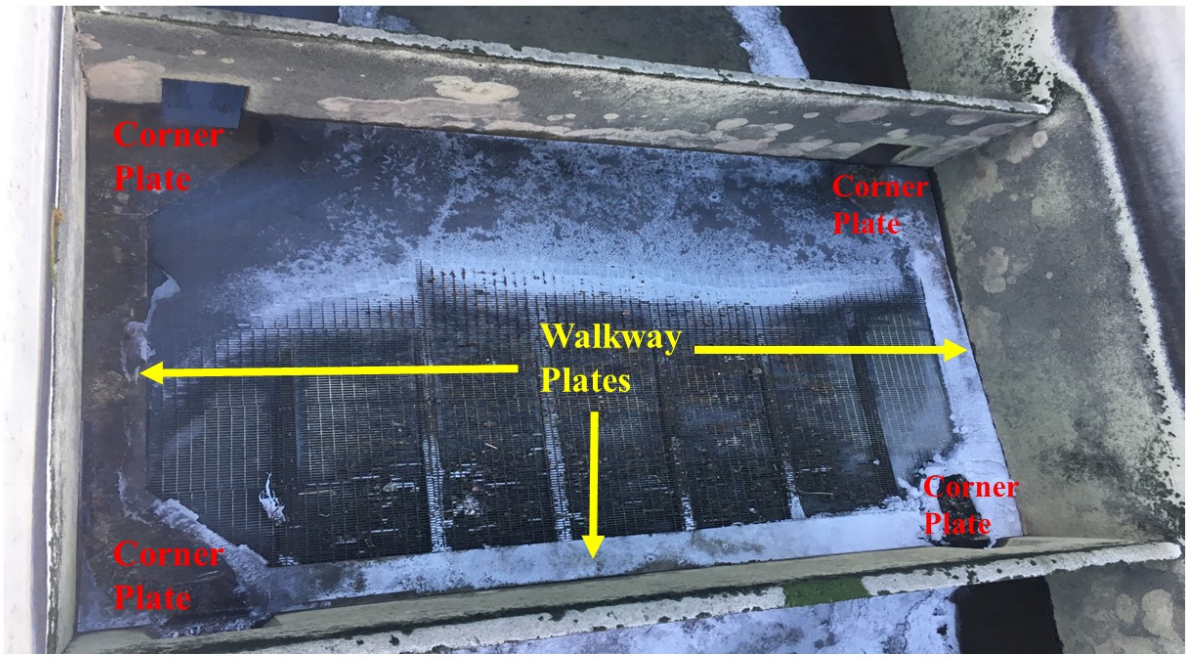
OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE - 17 MCN 04 Oregon Ladder Lamprey Plating Removal
COORDINATION DATE – 06 February 2017
PROJECT- McNary
RESPONSE DATE - 13 February 2017

Description of the problem: The McNary Project is seeking approval to remove plating over diffusers 12 and 14 grating in the Oregon shore ladder that was originally installed to serve as passage aides for adult Pacific lamprey (Figure 1). Lamprey plates decrease flow area at diffusers and increase pressure on grates and increase the likelihood of grating failure.

Figure 1. Arial Photo of Diffuser in OR Ladder



The lamprey passage plating was installed in the Oregon shore ladder during the 2010 winter outage. They were intended to provide attachment locations for adult lamprey moving upstream through the ladders. However, there has been no evidence the plating have been used by lamprey (Steve Juhnke, NWW Lamprey Program Lead). Because of this, 2017 Washington shore ladder lamprey improvements did not include adding the plating over diffusers. When recently asked, Mr. Junke agreed that there was no reason the plating could not be removed from the Oregon shore fishway.

Yearend reports, show Oregon shore diffuser 11 supports failed in 2005 and 2010. Though the diffuser was not covered with plating, this reflects the amount of force along the west ladder wall. After installations in 2010, diffuser 14 walkways were repaired in 2011, diffuser 11 supports were repaired in 2013 and diffuser 13 supports along with

plating was repaired in 2014. For 2017, one corner plate at diffuser 14 needs to be reattached.

A complicating issue is the auxiliary water supply conduit's intake and discharge valves. This conduit supplies diffusers 7 to 14. The Operations & Maintenance manual states the intake valve should not be used to dewater the ladder, yet the project has been doing so for as long as I can remember. The project began to move away from this practice in 2016. Unfortunately, the discharge valves, that should be used to dewater the ladder, are well beyond the time for rehabilitation so they cannot be used to dewater the ladder either.

This winter, the intake valve was closed to dewater the ladder, so District engineers could examine the discharge valves and develop a path forward for rehabilitation. At this time, it is very uncertain how often the project will dewater the Oregon ladder in this section in the future. Remove the plating during the current outage will hopefully reduce the risk of future grating failures and the number of times the project has to risk dewatering the ladder.

Despite four days of effort, the project staff was not able to dewater fully to the south junction pool due to leakage pass the conduit's intake valve. On February 3, the auxiliary water supply bulkheads were installed upstream of the conduit's intake valve. On February 4, we were able to dewater the south junction pool and perform a fish rescue. However, these bulkheads closed off the wildlife park's water supply, which will affect wintering waterfowl and fish stocked by the Natural Resources staff.

Type of outage require: Work will be performed during regular winter maintenance period.

Dates of impacts/repairs – February 01 - 28, 2017; scheduled Oregon Ladder outage.

Length of time for repairs – Several days.

Impact on fish facility (*Fishway, JFF, etc.*) **operation -** Removing plating will decrease risk of diffuser failure in Oregon shore fishway.

Impact on project operations (*unit priority, forebay/tailwater operation and/or spill*)

None

Analysis of potential impacts to fish

1. 10-year average passage during the dates of impact for adults and juveniles for each affected listed species.

   In 2013 (The only year winter count data is available from 2004 to 2016), 88 steelhead passed through the count stations(s) at McNary Dam in February or

roughly averaging 3 fish per day. Passage will be available through the Washington-shore fishway.

The 10-Year annual average for Pacific lamprey counted passing McNary Dam is 1,503.

2. Statement about the current year's run (e.g., higher or lower than 10-year average).

   NA

3. Estimated exposure to impact for adults and/or juveniles, as appropriate, by species (number or percentage of the 10 yr average that occurs during dates of action).

   None

4. Type of impact for adults and/or juveniles, as appropriate, by species (increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.).

   No anticipated impacts to passage during the plating removal. No anticipated future impacts to Pacific lamprey passage from proposed actions.

Final judgement on scale of expected impacts (negligible, minor, significant**) on;**

a. **Downstream migrants** -- None
b. **Upstream migrants (including Bull Trout)** -- None
c. **Lamprey** – Negligible

Comments from agencies

Final coordination results

Approved by FPOM 2/9/2017. From meeting minutes: "MCN Lamprey Sidewalk Removal – FPOM concurred with this action".

After action update

Plates were removed.

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

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