

**OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE**

COORDINATION TITLE- 16BON02
COORDINATION DATE- 25 January 2016
PROJECT- Bonneville Dam
RESPONSE DATE- 11 February 2016

Description of the problem- The crowder at Bonneville’s Bradford Island Count Station has a gap of approximately 1.5” underneath it. The crowder is cycled through its range daily and operated by the counters on an as-needed basis during passage season. Lamprey have regularly been observed suctioned to the ladder floor immediately in front of the crowder. They then get run over by it during routine crowder operations, causing injury or death. Smaller lamprey have a tendency to wiggle under the crowder and then get trapped in the area behind it. In addition to injuring lamprey, fish counters report that lamprey suctioned to the ladder floor in the crowder area interfere with their ability to count accurately.

To address these issues, we are in the process of installing perforated aluminum plating to the bottom of the fishway in front of the crowder and a rubber strip to the bottom of the front of the crowder (Figures 1 and 2). The plating (1/8” thick, 1/8” holes staggered at 3/16”) prevents lamprey from being able to suction to the bottom. Thus they will have to swim through the counter window area, ameliorating the counting issue and preventing lamprey from laying in the path of the crowder. The rubber strip will prevent lamprey from getting underneath the crowder. It will be cut from ~1/2” thick heavy duty rubber, will be bolted to the front bottom of the crowder using rounded top bolts (same as those used on the rest of the front of the crowder) to avoid any sharp edges. The ends of the strip will be rounded off, also to avoid sharp edges. It will sit flush on the perf plating. All perf plating edges will be rounded or beveled.

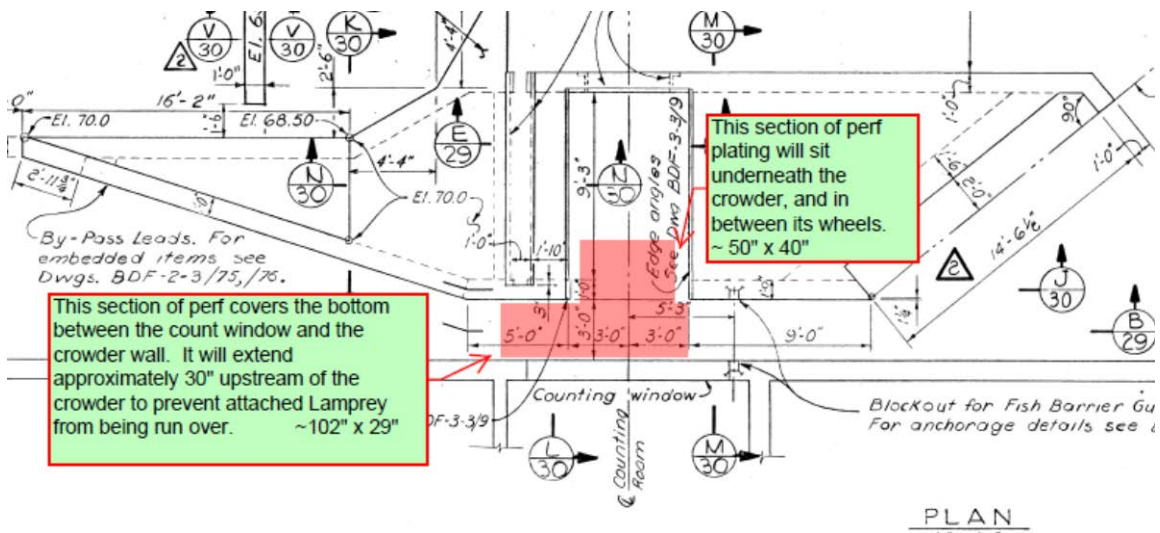


Figure 1. Area where the Bradford Island count station modifications will be occurring.

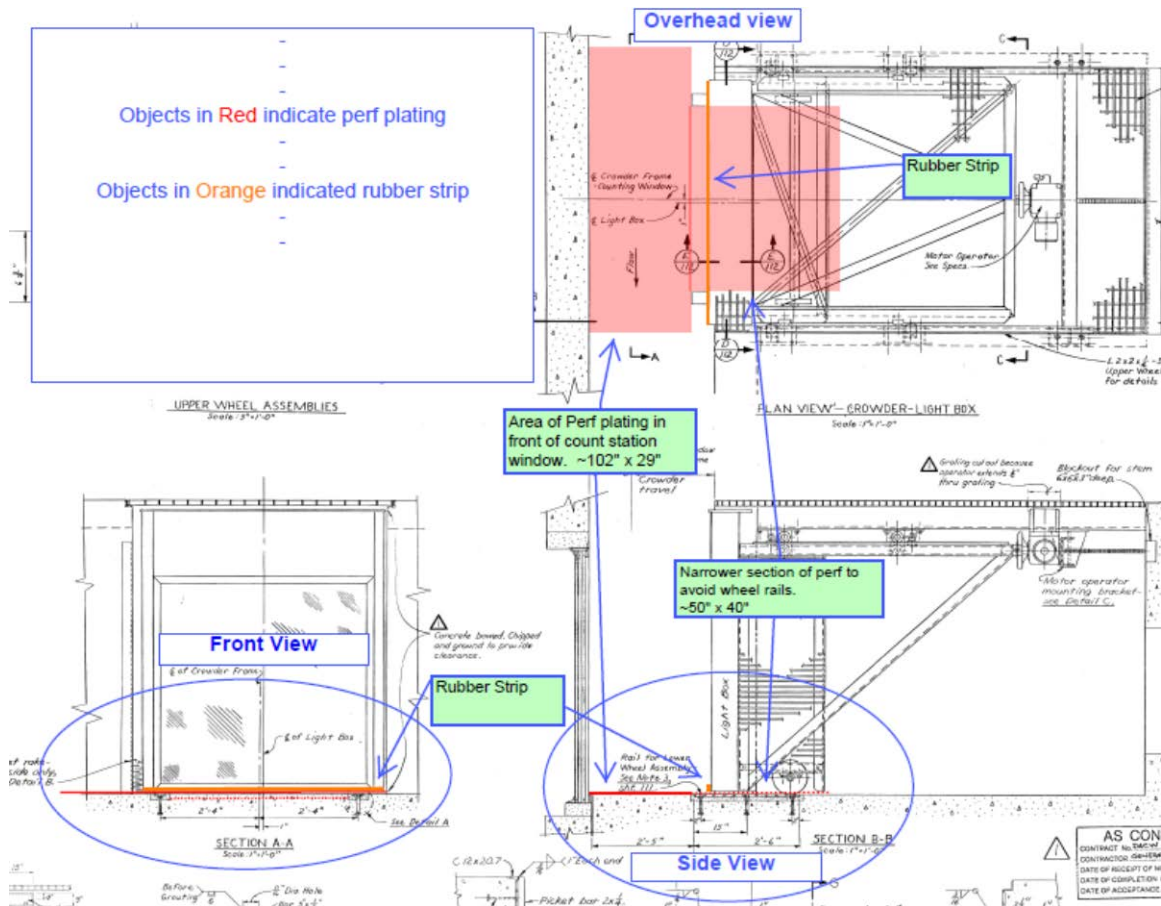


Figure 2: Close-up view of the proposed count station modifications.

Type of outage required- None. The Bradford Island ladder is already dewatered as part of regular winter maintenance.

Impact on facility operation- Neither the perforated plate, nor the rubber strip will impact the operation of the count station crowder or brush. The hydrology of the area will also not be affected (Stephen Schlenker, email in comment section).

Dates of impacts/repairs- Work will be completed by the time Bradford Island Ladder gets watered up in late February.

Length of time for repairs- Estimated two days.

Expected impacts on fish passage- The modifications will have no anticipated impact on salmonids. For lamprey, the changes are expected to prevent unnecessary mortalities both below the crowder due to crushing and behind it due to blocked egress.

Comments from agencies-

-----Original Message-----

From: Schlenker, Stephen J NWP

Sent: Monday, December 14, 2015 2:05 PM

To: Derugin, Andrew G NWP <Andrew.G.Derugin@usace.army.mil>

Cc: Tackley, Sean C NWP <Sean.C.Tackley@usace.army.mil>; Bissell, Brian M NWP <Brian.M.Bissell@usace.army.mil>

Subject: FW: Bonneville Count Stations (UNCLASSIFIED)

Andrew,

As discussed today, I don't expect these plates to cause hydraulic issues with salmon through the count station.

Recommend small holes with high porosity, and taper the upstream and downstream edges.

Recommend some at least some extension (2'?) past the count window so that the edges are not in the vicinity of the crowder zone.

Thanks

Steve S. 503-808-4881

Final results – Approved at the 2/11/16 FPOM meeting.

Please email or call with questions or concerns.

Thank you,

Ida

Ida Royer

NWP Operations Division Fishery Section

Columbia River Coordination Biologist

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