

**MEMORANDUM FOR THE RECORD**

**SUBJECT: 14BON36 MFR** – Fish recovery above the Cascades Island picket leads.

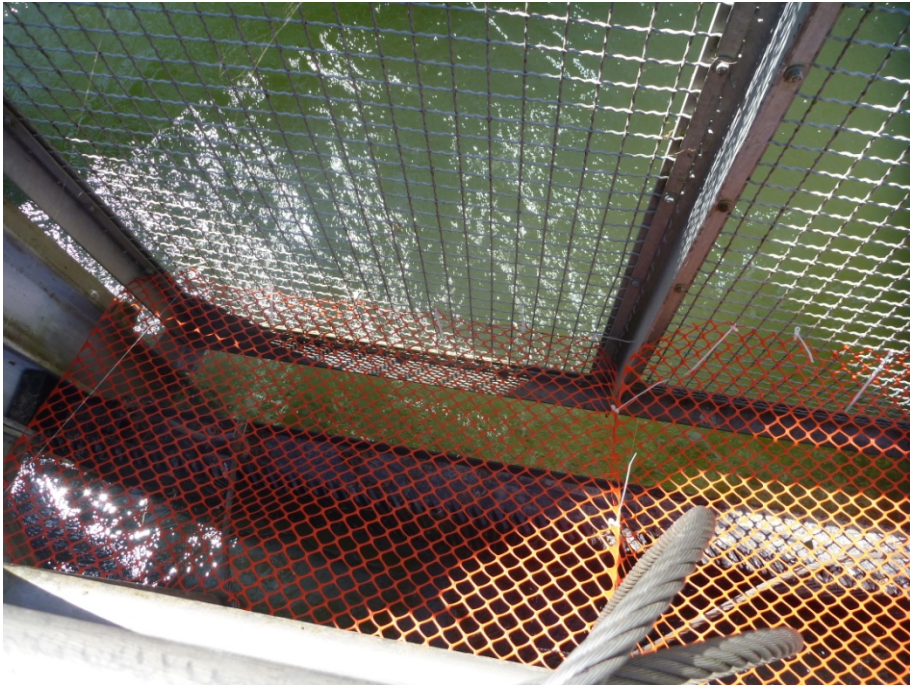
On 26 June 2014, a Project Biologist discovered numerous adult salmonids above the lower picket leads at Cascades Island. These picket leads serve as a barrier to fish coming from the north spillway entrance and divert them into the upstream migrant channel (UMT) and Washington shore exit. The Cascades Island exit is normally closed and is a dead-end for fish passage; however it was opened over the weekend to allow these fish the opportunity to exit volitionally. After hanging the appropriate clearances on 30 June, Fisheries Biologists lowered the water level in the exit section to an accessible level and salvaged any remaining fish on 01 July.

Bonneville Project has been modifying the lower picket leads at Cascades Island in an attempt to exclude lamprey from the Cascades Island exit section and AWS channel. There are three sections of picket leads, each section comprised of a front picket lead in a slot and a backer lead in a separate slot. Each picket lead is specific to its designated slot; they are not interchangeable either front-to-back or section-to-section. All front leads were in place except for the middle section, where the front lead was removed for modification and instead the back lead was in place. The gap between the front above-water screen and the back picket was large enough to allow the fish to jump over. Upon discovery, the gap was screened and has remained so since. (See pictures below.)

Roughly 10 lamprey mortalities were removed from the lower picket leads during the operation; they were generally in a decomposed condition. One Sockeye Salmon, one Steelhead Trout, and roughly 50 Pacific Lamprey were recovered, along with two carp and numerous peamouth. All fish were returned to the forebay in good condition.

Available information is provided below:

- A. Species – Sockeye Salmon (*Oncorhynchus nerka*), Steelhead Trout (*Oncorhynchus mykiss*), Pacific Lamprey (*Entosphenus tridentatus*)
- B. Origin – Unknown
- C. Length – Unknown
- D. Marks and tags – Unknown
- E. Marks and Injuries found on carcass – Unknown
- F. Cause and Time of Death – ~10 PL decomposed mortalities, unknown. Fish were found behind the picket leads ~15:00 on 26 June at which time the exit was opened. The fish salvage occurred at ~08:30 on 01 July.
- G. Future and Preventative Measures – The overhead picket lead gap has been screened.



Sincerely, Bonneville  
Fisheries