

MEMORANDUM FOR THE RECORD 19 LGS 02 Sample Holding Tanks

SUBJECT: Holding Tanks for Condition Sampling

Background

Little Goose Lock and Dam watered up the juvenile fish facility (JFF) on March 27 and 28. The JFF began collection for condition sampling at 07:00 on April 01. On April 02 Oregon Department of Fish and Wildlife and Anchor QEA personnel began to crowd fish for sampling. During the sample they noticed that there were not any fish in holding tank "A" and only 13 fish holding tank "B", even though the electronic counters indicated a total of 49 and 81 fish, respectively. Once the fish were removed from both holding tanks, the tanks were drained for inspection. It was determined that the small perforated screens, 2 per tank, were not reinstalled after winter maintenance. Therefore, fish that were being held for condition sampling were routed back to the river. Screens were replaced and the issue did not occur again on April 04.

When the holding tanks were drained for inspection, numerous Pacific lamprey macrophthalmia were noticed beneath the supply water perforated plate in holding tank "B". The perforated plate was removed and 16 macrothalmia mortalities were removed. We determined that the lamprey macrophthalmia were transported through the supply water and were forced against the perforated plate. Both supply pipes were flushed thoroughly and no additional lamprey were recovered.

Path Forward

The perforated screens that were not replaced will be added to the initial water up SOP at Little Goose. These screens are only removed to thoroughly clean holding tanks and had not been removed in previous years.

Sample holding tanks were drained and supply water perforated plates inspected on April 04 and no additional juvenile lamprey mortalities were seen.

Relevance to Pacific lamprey

The juvenile Pacific lamprey found in the supply water for Little Goose JFF are thought to have entered the system near the primary dewatering structure. During winter maintenance, the primary dewatering structure was dewatered for preventative maintenance and inspection. No damage was observed to the bar screen and all gaps between the screens were sealed. Occasionally a few juvenile lamprey are found within the overflow section of the dewatering structure, outside of the flume section, during winter maintenance. These lamprey are believed to have climbed the short wall of the structure, ultimately ending up in the water that is supplied to the JFF and the adult fish channel.

Estimated mortalities by species, and origin:

- A. Species – Pacific lamprey *Entosphenus tridentatus*
- B. Origin – N/A
- C. Length – N/A
- D. Marks and tags – N/A
- E. Marks and Injuries found on carcass – Numerous round shaped lesions were found from water pressure forcing the macropthalmia against the perforated plate.
- F. Cause and Time of Death – Could have occurred between March 27 and April 02 while the facility was fully watered up and operating.
- G. Future and Preventative Measures – An additional step for initial water up at the Little Goose JFF will be added to the O&M manual.

Image 1: Holding tank “B” drain and missing perforated screen.

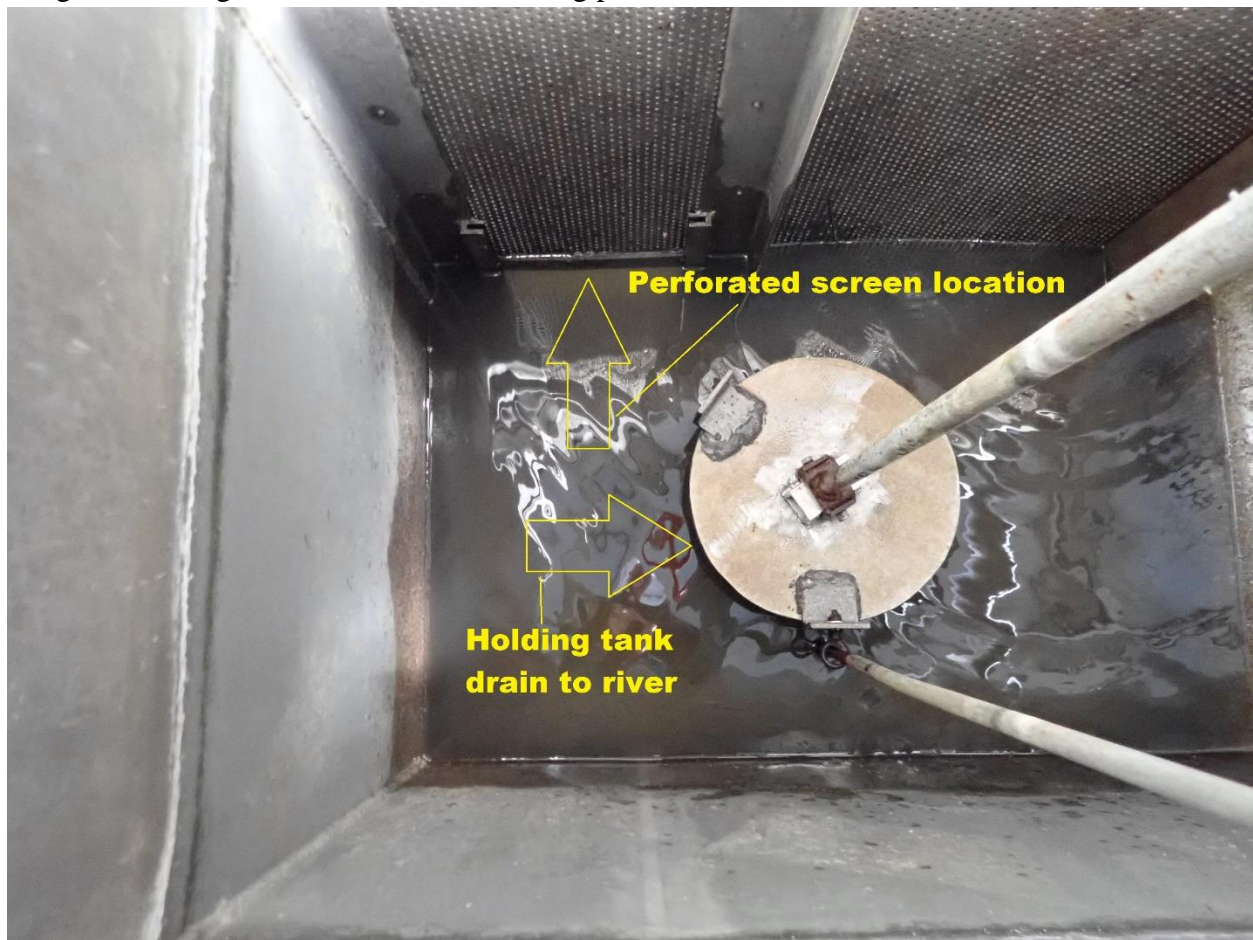


Image 2: Missing perforated screens in sample tank "B".



Image 3: Perforated plate covering holding tank supply water with juvenile lamprey mortalities.



Image 4: Round lesions observed on lamprey macrophthalmia.



Image 5: Lamprey macrophthalmia mortalities.



Sincerely,
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