

MEMORANDUM FOR THE RECORD – 19 LGS 04 MFR Bypass

SUBJECT: Daily collection for transportation via direct loading began at Little Goose on April 23 at 07:00. Due to an unforeseen weld failure in a pipe which feeds the barge aerators, Little Goose Staff were forced to load fish into raceways until repairs could be made. On April 24 at approximately 02:15 and 04:15 raceway capacity was met on B-side and A-side fish, respectively. Upon meeting raceway capacity, all fish were routed through secondary bypass. At 13:00 all fish were routed through primary bypass in order for fish facility staff to load raceways into the transport barge. Secondary bypass for B-side fish utilizes the same transport pipe as the barge loading pipe and therefore fish could not be routed through secondary bypass during barge loading. Once additional staff arrived for night separator coverage and empty raceways were available, fish facility staff resumed the daily sample and collection at 19:00, loading fish into raceways. At approximately 20:00, fish facility staff assisted with tying up the empty barge and prepping it for direct loading. Personnel oriented the numerous valves to begin direct loading at 23:00, but unfortunately did not move the gates located at the barge dock. Fish were unintentionally bypassed from 23:00 on April 24 until 03:00 on April 25 when staff utilized a 14 foot ladder to visually inspected gates for debris issues.

During bypass an estimated 222,111 juvenile salmon and steelhead were routed back to the river. The number of fish routed via primary bypass was estimated using the proportion of time the facility was in primary bypass as a proportion of the SMP passage estimate for the sample period ending on April 25, 2019. The numbers by species and the origin for the juvenile salmon and steelhead that were routed back to the river rather than collected for transportation was estimated to be:

Bypass Type	Clipped Yearling Chinook	Unclipped Yearling Chinook	Clipped Steelhead	Unclipped Steelhead	Coho	Total Bypass
Primary	15,200	3,467	34,933	8,000	400	62,000
Secondary	26,629	5,686	103,958	22,674	982	160,111

- A. Species – Chinook salmon *Oncorhynchus tshawytscha*, Steelhead *Oncorhynchus mykiss* and Coho salmon *Oncorhynchus kisutch*
- B. Origin – Hatchery and Wild
- C. Length – N/A
- D. Marks and tags – N/A
- E. Marks and Injuries found on carcass – N/A
- F. Cause and Time of Death – N/A
- G. Future and Preventative Measures – N/A
- H. Pictures – N/A

Sincerely,
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