

MEMORANDUM FOR THE RECORD 22 LGS 07 MFR Orifice Plug Smolt Mortality**SUBJECT:** Little Goose Dam Orifice Plug Smolt Mortality

Narrative: The lower Snake River recently increased in flow, well above the 10-year average (Figure 1). During the increase in river flow, Little Goose Dam experienced orifice plugs on two separate occasions. The first orifice plug was found in orifice 1A1 on June 8 at approximately 16:00 and resulted in 131 dead smolts (Table 1). The second orifice plug occurred during the early morning of June 12 and resulted in 164 dead smolts (Table 2). Orifice plugs have been infrequent and minimal debris has been observed in the immediate forebay this season (Image 1). Little Goose Dam staff backflush and rotate orifices at least 3 times per day during normal conditions, and have increased inspection frequency with the recent river conditions. Both occurrences were caught and resolved quickly.

Table 1. Smolt mortality by species and mark, June 8, 2022.

Species and Clip Type	Count	CWT	PIT Tags
Clipped Yearling Chinook	1	0	
Unclipped Yearling Chinook	4	2	
Clipped Subyearling Chinook	52	0	3DD.003D9E2E28
Unclipped Subyearling Chinook	70	3	
Clipped Sockeye	0	0	
Unclipped Sockeye	0	0	
Clipped Coho	3	0	
Unclipped Coho	1	0	
Total	131	5	

Table 2. Smolt mortality by species and mark, June 12, 2022.

Species and Clip Type	Count	CWT	PIT Tags
Clipped Yearling Chinook	1	0	
Unclipped Yearling Chinook	0	0	
Clipped Subyearling Chinook	74	0	3DD.003D9E84F0, 3DD.003D9D7F8D, 3DD.003D9E41B4, 3DD.003D9D1096, 3DD.003D9D81E3, 3DD.003D9DA9AC
Unclipped Subyearling Chinook	85	0	
Clipped Sockeye	0	0	
Unclipped Sockeye	2	0	
Clipped Coho	1	0	
Unclipped Coho	1	0	
Total	164	0	

- A. Species – *Onchorhynchus tshawytscha*, *O. nerka* and *O. kisutch*
- B. Origin – Hatchery and natural
- C. Length – N/A
- D. Marks and tags – Fish were scanned for PIT tags.
- E. Marks and Injuries found on carcass – Descaling
- F. Future and Preventative Measures – Orifice monitoring and backflushing to clear debris was increased and occurs every two hours. Monitoring will continue and be adjusted as needed.
- G. Photos: Image 1 below.

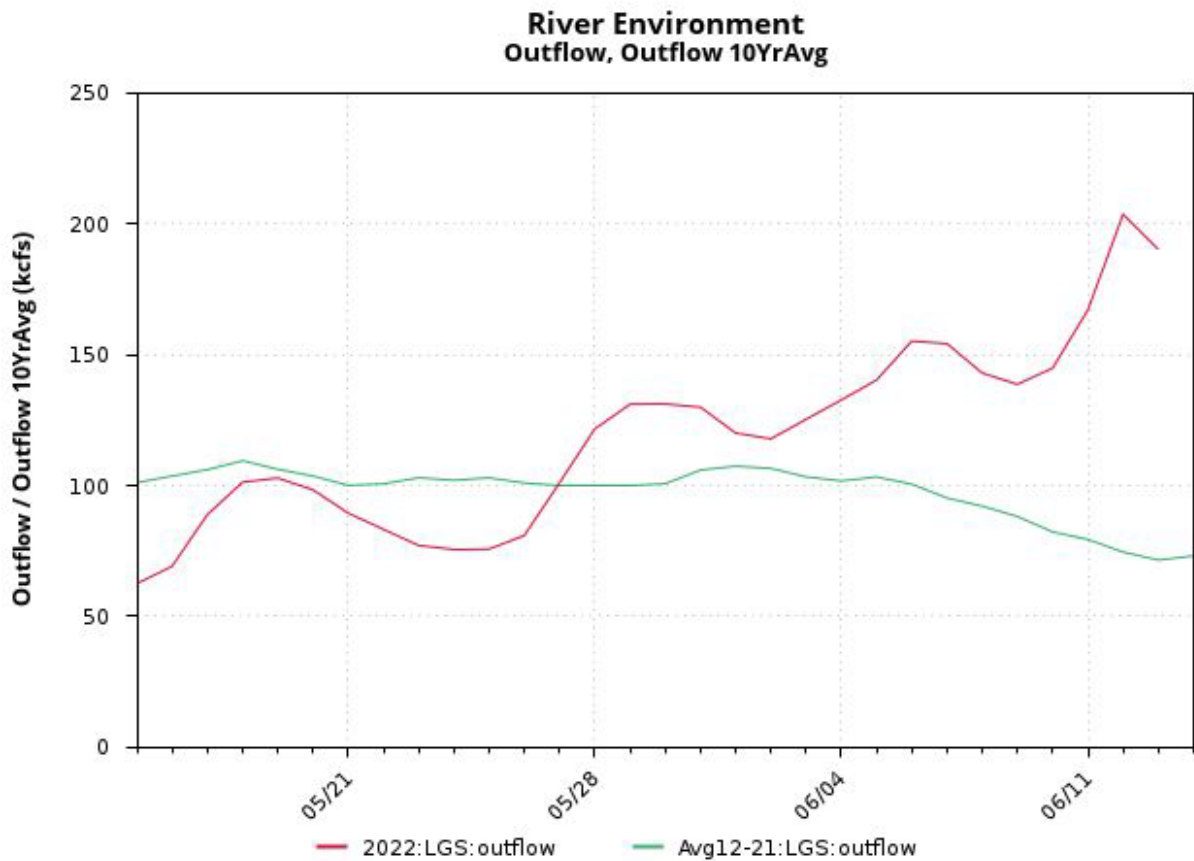


Figure 1: Little Goose Dam outflow (kcfs), 2022 and 10-year average (2012-2021).



Image 1. Little Goose Dam immediate forebay on June 14, 2022.

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