CENWW-OD-G **January 09, 2020**

MEMORANDUM FOR THE RECORD 19 LGS 01 Adult Steelhead Mortality

SUBJECT: Little Goose adult steelhead mortality during dewatering of juvenile bypass system

Background

Little Goose Lock and Dam dewatered the juvenile bypass system on December 19. During dewatering, approximately 75 adult steelhead, 2 adult coho salmon, 5 juvenile Chinook salmon and 10 juvenile steelhead were found in the juvenile channel and crowded to the primary dewatering structure where they would be released to the river through the emergency bypass pipe. While waiting for clearances to be removed in order to operate the makeup water valve to bypass fish, the water level in the primary dewatering structure suddenly decreased, stranding fish on top of the release gate.

Once personnel exited the juvenile channel, the clearance was temporarily lifted and the makeup water valve was opened. The primary dewatering structure was refilled with water to allow fish to recover. Fish were then crowded and released to the tailrace through the emergency bypass pipe per the Walla Walla District unwatering plan for Little Goose Dam. Two adult steelhead of unknown origin did not recover. Staff were unable to retrieve the dead steelhead due to clearance constraints.

Path Forward

Little Goose Juvenile Fish Facility staff filled the emergency bypass pipe and primary dewatering structure on January 08 to look for potential issues that could have caused the sudden loss of water. One valve was found to have some minor leaking, but nothing else was found. Sticky valves, inaccurate valve indicators or debris could have caused the issue, but we were unable to recreate the event.

Estimated mortalities by species, and origin:

A. Species – Steelhead *Oncorhynchus mykiss*
B. Origin – Unknown
C. Length – Unknown
D. Marks and tags – Unknown
E. Marks and Injuries found on carcass – N/A
F. Cause and Time of Death – On December 19, steelhead holding in the primary dewatering structure prior to release were stranded out of water for a length of time.

G. Future and Preventative Measures – Continue to maintain valves within the fish bypass system to ensure proper operation during critical times.

Sincerely,

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