

Fish Passage Plan (FPP) Change Form

Change Form # & Title: 24IHR005–Dewatering structure, bypass flume emergency unwatering
Date Submitted: 27-DEC-2023
Project: Ice Harbor
Requester Name, Agency: Ken Fone, USACE
Final Action: **FINALIZED 1-FEB-2024**

FPP SECTION: 3.2.2.5. Dewatering Structure; 3.2.2.6. Bypass Flume

JUSTIFICATION FOR CHANGE: Clarify that fish may need to be dipped from gatewells more frequently than every 2 days if fish density-related problems seem to be occurring.

Section 3.2.2.5 provides additional detail on actions to follow if the bypass flume must be unwatered in the event of a flume problem.

PROPOSED CHANGE: *Edits to existing FPP text in “track changes”.*

3.2.2.5. Dewatering Structure. The dewatering structure acts as a transition from the collection channel to the corrugated metal flume. An inclined screen allows excess water to be bled off, with all fish and remaining water transitioning into the corrugated metal flume. The excess water is discharged into the adult fish facility auxiliary water supply system and is also used as the water supply for the sampling facilities. The dewatering structure contains a trash sweep for cleaning the rectangular portion of the inclined screen, and an air blow back system for cleaning the transition (trapezoidal) section of the screen. The dewatering screen has a set of differential pressure sensors for determining head differential across the screen. If the sensors detect a 0.15’ differential it initiates continuous screen cleaning. If the sensors detect a differential of 0.30’ it closes all but 3 orifices (Unit 1 orifices remain open) in the juvenile collection channel. Both conditions trigger an alarm at the control panel and in the control room. If the trash sweep breaks and interferes with juvenile fish passage through the structure or if the inclined screen or other component of the structure is damaged, the orifices may need be closed and the collection channel dewatered to allow repairs to be made. If the orifices are closed and the collection channel dewatered, the traveling screens will remain in operation. Fish will be allowed to accumulate in the gatewells for up to 2 days. If repairs are expected to take longer than 2 days, a salvage program will be initiated to remove fish from gatewells, with a gatewell dip basket, until repairs can be made and the system watered up again. While the collection channel is out of service, Pproject personnel shall monitor gatewells for signs of fish problems or mortality. At the discretion of the Project Fisheries Biologist, fish may need to be dipped from the gatewells more frequently than every 48 hours. Spill may be provided as an alternative avenue for fish passage during the collection channel outage.

3.2.2.6. Bypass Flume. The bypass flume transports fish to the sampling facilities and to the tailrace below the project. If there is a problem with the flume that requires it to be dewatered, procedures will be taken similar to sections 3.1 and 3.2.2.5.

COMMENTS: None

RECORD OF FINAL ACTION: Finalized at the FPOM FPP meeting 1-Feb-2024