USACE Portland District (NWP) FFDRWG Update Form
23 April 2015

PROJECT INFORMATION

Project Title	B2 AWS Fish Unit Trash Rake Improvements
SCT Reference Number	
Project Manager (PM)	Eric Stricklin (NWP, 503-808-4757)
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Biologist/Coordination	Jon Rerecich (NWP, 503-808-4779)

PROJECT DESCRIPTION

The U.S. Army Corps of Engineers (Corps), Regional fisheries agencies, and tribes have been concerned with deficiencies in the Auxiliary Water Supply (AWS) system for the adult fishway at the Bonneville Second Powerhouse (B2). The basis for concern has largely been due to improved fish passage data as well as events since 2001 when debris accumulation occurred in and upstream of the AWS that significantly impaired the operation and performance of the AWS system.

Current operations during periods of elevated debris in the Columbia River have required that the Fish Units that supply water to the AWS system be shut down for short durations. This procedure enables project personnel to float the debris away from the Fish Units in order to maintain a safe range of head loss across the trash racks. There is evidence that shutting the units down is detrimental to salmonid and lamprey passage due to the inability to maintain fish ladder operating criteria.

DDR recommendations for design changes and actions:

Construction:

1. Existing rake should be modified to improve its ability to strip and retain matted grasses from the surface of the intake racks.

Operations and Maintenance:

2. Rake as needed to maintain acceptable rack differentials.
3. Maintain design bathymetry in front of the Fish Units by maintenance dredging the forebay. Develop criteria to initiate action to dredge based on results of annual monitoring of sediment accumulation.
4. Rake as needed based on rate of debris accumulation and known high debris periods.
5. Conduct annual sediment buildup monitoring upstream of the fish units following peak spring river flows based on bathymetry and soundings so that a dredging contract can be executed for the next in water work period.

6. Monitor water height differential at each trash rack before and after cleanings and floating of debris. These events should be logged with date, time, duration, and any other information deemed necessary by the operator.
7. Annually remove intake racks and manually remove wedged in woody debris.
8. Biennial rack inspection of the structure, coating system, and damage repair.
9. Periodically exercise Auxiliary Water Supply (AWS) system diffuser gates that are not used regularly.
10. Continue to operate with the existing trash racks and maintain intake rack bar to bar spacing of 0.875 inch until new evidence requires a change.
11. Float debris only in emergency situations.

CURRENT SCHEDULE

Bonneville Project rake modifications are nearly complete.

PROGRESS AND KEY ISSUES (List)

Update from BON project – Brushes, cap plate, and UHMW plate, and perforated plate have been installed. ROV will be used to fine tune adjustments to the UHMW plate. Perforated plate to contain debris was installed on 9 April. Still needs a few stitch welds on the top mounted perforated plate and final touchup painting on welds. Rake should be completed and ready for use by 23 April 2015.

Photos of what the project has done to date.

FFDRWG REVIEW NEEDED AT MEETING? (If YES, list discussion topics below)

No review is required at this time. FFDRWG and FPOM will be updated as progress and operations coordination is needed. ROV inspection will need to be coordinated for a later date.