

Turbidity Monitoring Plan for Maintenance Forebay Flushing

Wallowa Falls Hydroelectric Project, FERC No. P-308

Purpose

The purpose of this Turbidity Monitoring Plan is to describe actions that PacifiCorp will undertake to monitor short-term turbidity increases in the portion of the East Fork Wallowa River below the Wallowa Falls dam (bypassed reach) associated with the routine maintenance flushing of the Wallowa Falls Hydroelectric Project (Project) forebay. The Turbidity Monitoring Plan will be implemented during all Project forebay flushing events.

Background

It is necessary to flush accumulated native sediment from the Project forebay to prevent damage to the hydroelectric generating unit and continue operation of the Project. PacifiCorp proposes to modify the historic practice of flushing entrained native sediment from the forebay during the summer low flow period to flushing sediment from the forebay during the peak-spring runoff in the month of June. Annual forebay flushing would result in the removal of accumulated sediment from forebay and the mobilization and transport of that sediment into the bypassed reach of the East Fork Wallowa River. Based on a volumetric survey of native sediment entrained in the forebay in August 2012, conducted by Haner, Ross and Sporseen, P.C, approximately 250 to 500 cubic yards of native material would be flushed annually. Forebay flushing is expected to occur relatively quickly, lasting no more than 24 to 72 hours.

Turbidity Monitoring

It is expected that there will be short-term increases in turbidity during forebay flushing events; monitoring of turbidity levels prior to, during, and following the flushing event will provide information on the magnitude and duration of increased turbidity levels in comparison to normal background levels.

Turbidity will be monitored continuously, using datasondes that record hourly values. Datasondes will be deployed at two monitoring points as follows:

- **Representative Background Point (M1):** A datasonde will be deployed in a relatively undisturbed area in the East Fork Wallowa River at least 100 feet upstream of the Project forebay. This datasonde will be deployed at least 24 hours prior to forebay flushing to record background turbidity levels in the East Fork Wallowa River. The datasonde will remain deployed for five days to ensure that background turbidity is recorded prior to, during and after the forebay flushing event.

- Downstream Monitoring Point (M2): A datasonde will be deployed in the lower bypassed reach of the East Fork Willowa River at the current lower stream gaging site. This datasonde will be deployed prior to the onset of forebay flushing and will remain continuously deployed for four days to ensure that turbidity effects during and after the forebay flushing event are recorded.

Reporting

For every forebay flushing event, PacifiCorp will prepare a brief Forebay Flushing Report that summarizes the dates that forebay flushing occurred, duration of the event, flushing methods used and turbidity monitoring results. This report will be submitted the Federal Energy Regulatory Commission and the Oregon Department of Environmental Quality within 60 days of a forebay flushing event.