

**2013 Diversion Screen and Vertical Barrier Screen (VBS) monitoring for juvenile lamprey impingement**  
**Units 1 and 2 at Rocky Reach Dam**

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From April through August 2013 during the operation of the RR Juvenile Fish Bypass System, the Diversion screens system in units 1 and 2 are cleaned at least once per week. The diversion screens are positioned at 45 degree angles within the intakes and cover only the upper one-third of the intake slot. The screens guide juvenile fish into the Rocky Reach Juvenile Bypass system. Within each of the intake slots, diversion screens cover a depth between 71-88 (17') and feet below the surface elevation of the forebay at 707 ft msl.

The frequency of diversion screen cleaning increases when debris loads increase, monitored by water level differentials. The screen cleaner consists of a brush car that is deployed via cables from a stationary frame on the transformer deck. The brush car is fitted with brushes that move vertically up and down the surface of the VBS screens. Approximately 30 minutes are required to complete the cleaning cycle in each intake slot (three slots per unit) of Units 1 and 2. Video cameras are mounted on the north and south ends of the brush car. Video is captured and recorded by DVD recorders for each pass of the brush car up and down the screens.

During the 2013 screen-monitoring period for juvenile lamprey (mid-May through mid-June), the screens in both units were cleaned a total of seven times (13 May, 17 May, 23 May, 28 May, 31 May, 7 June, and 14 June). The total video footage time for the seven cleaning events in 2013 was 15 hours, 45 minutes. Chelan PUD fisheries biologist (Thad Mosey) reviewed the video recording of these cleaning events. No juvenile lampreys were confirmed to be impinged on screens. For the entire period, only two individual "shapes" were reported as possible juvenile lamprey, but determination was inconclusive and described by the reviewing biologist as 50/50 at best.

Monitoring conducted in 2011 also found no juvenile lamprey impinged on diversion or VBS screens. Based on bi-annual monitoring approved by the RRF, the next screening monitoring year will be 2015 at Rocky Reach.