

## **Grand Coulee Penstock Stoplogs**

Stoplogs are composed of several sections of metal frames that slide into place on the upstream side of the G1 through G18 penstocks on the forebay side of the dam. One set of stoplogs is required to seal off the forebay from a generator penstock so work can be completed on the unit's coaster gates, coaster gate bypass valves or any work in the penstock above those gates and valves. This proposed investment would procure an additional set of stoplogs to support planned upgrade work on multiple units and provide a redundant set for general use.

The left and right powerhouses each contain nine main generating units. These units are more than 70 years old and are scheduled for a series of upgrades and refurbishments in the coming years. Fifteen of the generators will be receiving replacement stator windings and associated rotor repairs and all units will be modified with static excitation systems and digital style governor controls. Additionally, the penstocks will be recoated, penstock bypass valves replaced along with various modifications to instrumentation and monitoring systems. Stoplogs are required for much of this work. Without a second set of stoplogs, the modernization project will need to be extended by approximately seven years. The longer schedule will increase BPA's lost generation risk while older generators wait longer than planned for their modernization. Beyond supporting the modernization work, the additional set of stoplogs will provide the outage planning flexibility beyond the horizon of the modernization work. The additional stoplogs also provide the capability to de-water a unit during an emergency.