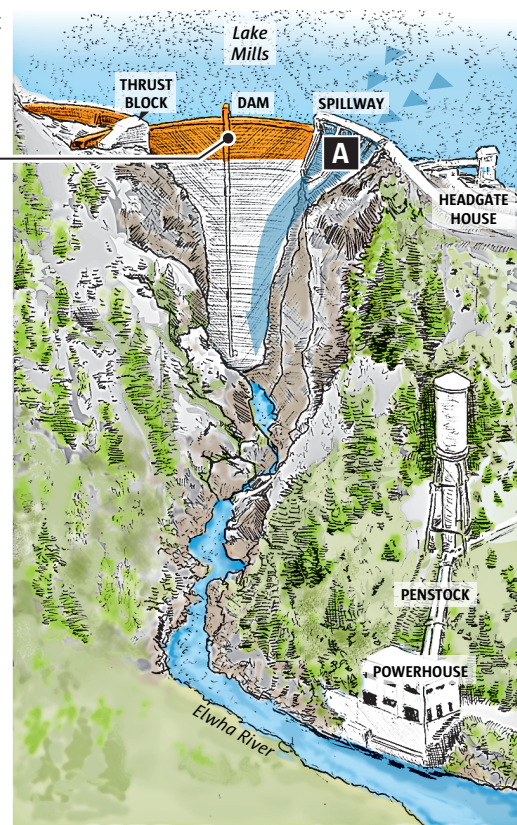


How the Elwha River dams will be removed

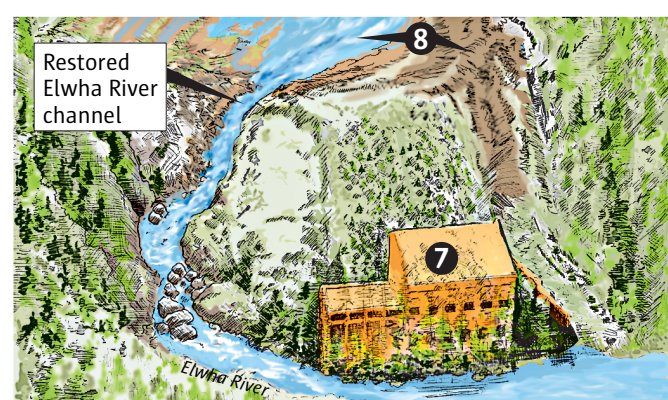
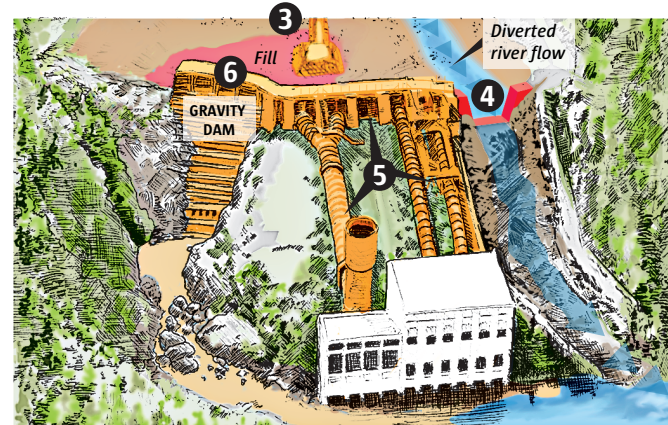
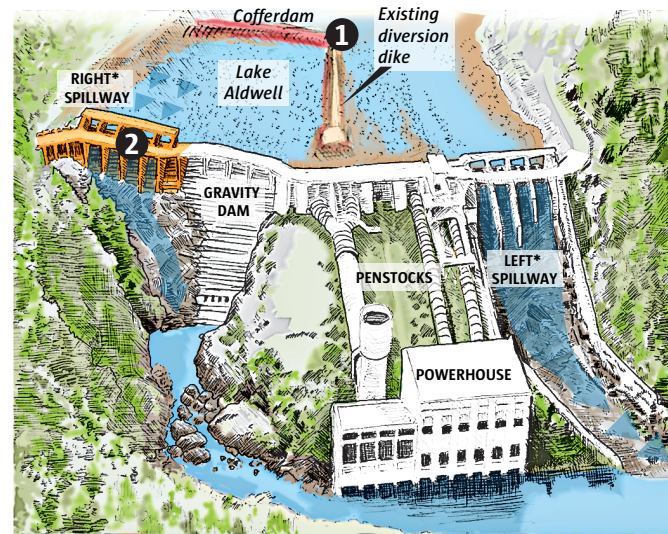
Different methods will be used to remove the Elwha and Glines Canyon dams on the Elwha River in stages, beginning in September. Dam removal will take up to three years, with pauses along the way to make the process safer and easier on fish in the river.

GLINES CANYON DAM



NOTE: The only remaining structures will be the spillway and the thrust block (a massive, reinforced block of concrete), which will become viewing platforms with interpretive signs about the restoration project.

ELWHA DAM



- 1 After Lake Aldwell is lowered 15 feet (to the bottom of the spillway gates) by releasing water through the left and right spillways, a cofferdam is built in front of the right spillway.
- 2 The right spillway concrete is removed.
- 3 The cofferdam is removed. The water level is dropped, drying the left forebay.
- 4 The left spillway is removed and a section of bedrock is blasted out. The river flows out the resulting channel.
- 5 The dam's middle section is removed, then the penstocks (pipes used to carry water to the powerhouse) are removed.
- 6 The original river channel is excavated, requiring the removal of 200,000 cubic yards of fill (fir trees, rock, earth and concrete) from behind the gravity dam. The gravity dam is removed.
- 7 The powerhouse is removed and the area is restored to a more natural terrain.
- 8 The diversion channel is filled in and the Elwha River flows into the opened original channel.

Sources: Olympic National Park Public Affairs Office, interactive-earth.com

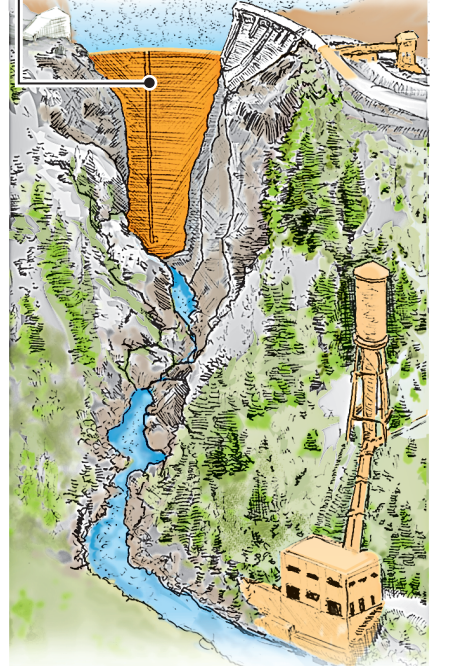
MARK NOWLIN / THE SEATTLE TIMES

* Right and left labels are in accordance with looking downstream, from behind the dam.

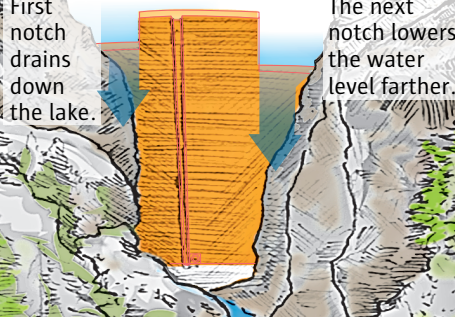
A The level of Lake Mills is lowered 17 feet to the bottom of the spill gates.

B The first 17 feet of the dam are removed down to the new water level.

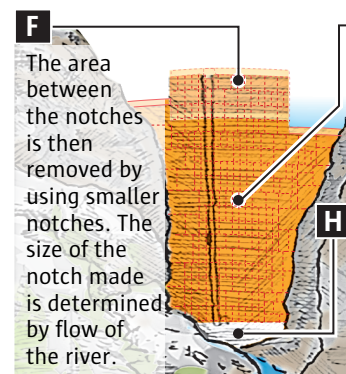
C The next 173 feet of the dam are removed by taking out notches on alternating sides. The headgate house, penstock (pipe used to carry water to the powerhouse) and the powerhouse are removed.



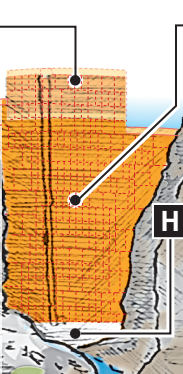
D First notch drains down the lake.



E The next notch lowers the water level farther.



F The area between the notches is then removed by using smaller notches. The size of the notch made is determined by flow of the river.



G The process continues down to the lowest layer.

H Once the lowest layer is removed, the river channel will be restored.