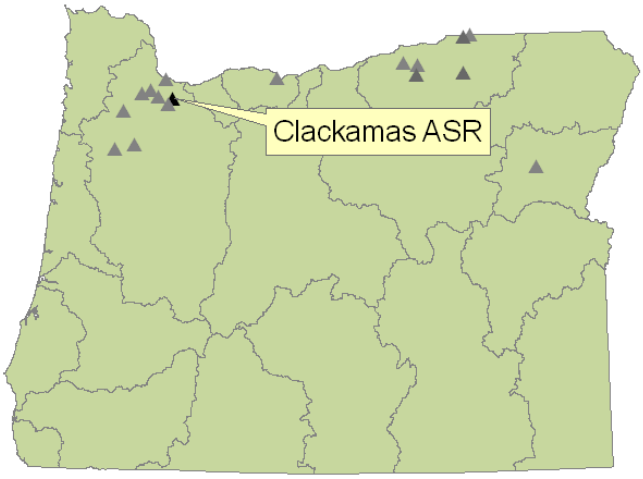
Oregon Underground Storage: Clackamas River Water ASR

Project Background

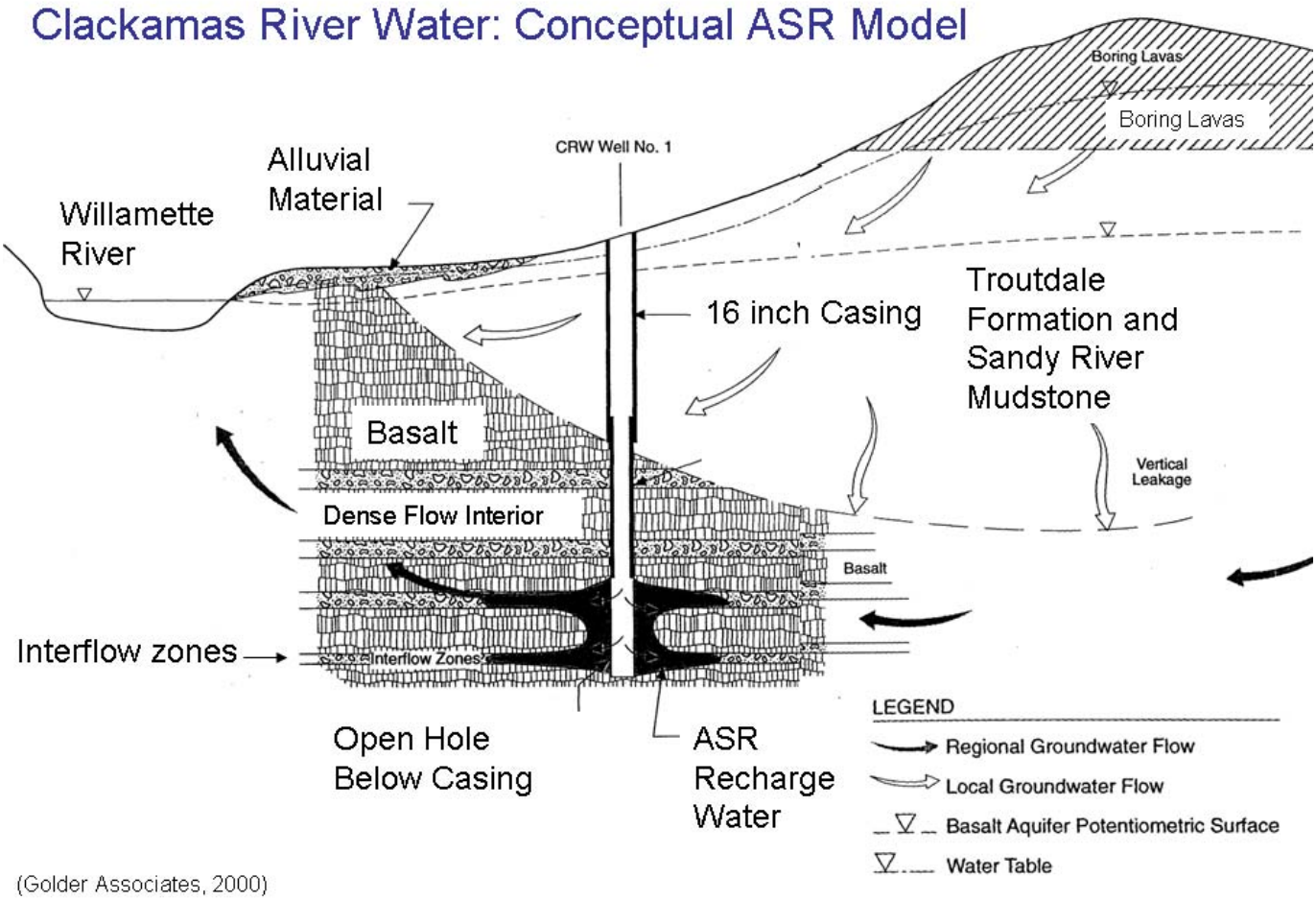
- Clackamas River Water is a community water supplier in the northern Willamette Valley.



- Clackamas River Water acquired an ASR limited license in 2001 and renewed in it 2006 (ASR LL #003).

- The area receives more than 40 inches of precipitation annually, mostly in the winter months.

- **Source Water:** Water from the Clackamas River is purchased from other water suppliers during low-demand winter months, and injected into the basalt aquifer.



(Golder Associates, 2000)

A schematic cross-section of Clackamas River Water's ASR site illustrates a complex hydrogeologic setting. Dense basalt flow interiors confine the more permeable sedimentary and broken basalt interflow zones. These horizontal zones are the primary target for ASR at this site.

- **Aquifer:** The storage zone is located in the Grande Ronde and Wanapum Formations of the Columbia River Basalt Group.

- **ASR:** The project provided supplemental municipal supply in the first test cycles. Testing began in 2001, and injected up to 124 million gallons per year. Injection was suspended in 2003, due to source water cost increases. Water levels responded as shown below, with a characteristic rise and fall of water levels in the well through injection and recovery.