

**Project Identifier:** SS-2

**CIP Budget:** \$6,000,000

**Project Name:** New Groundwater Well Supply in  
South High Service Level (Well No. 7)

**Funding Source:** Debt

**PROJECT DESCRIPTION:** This project includes drilling a new groundwater well supply and constructing a well facility in the South High Service Level. The new well will target the Grande Ronde Aquifer at approximately 1,400 - 1,800 feet below ground surface with a target production capacity of 1,400 – 2,100 gpm (2-3 MGD).

The well will pump to the distribution system on the suction side of the South High Booster Station through a 16-inch transmission main to fill the South High Reservoir. The well will be located inside a well house that will contain a line shaft vertical turbine pump and all IDAPA-required appurtenances, including check, isolation, pressure relief, and combination air valves; a magnetic flow meter; and pump-to-waste piping. Chemical feed pumps, equipment, and bulk storage for 12.5% sodium hypochlorite solution will be installed for chlorine dosing to meet the distribution system's free chlorine residual.

A new 480-volt, three-phase electrical service will be installed to provide power to the well facility. The well pump will operate on a VFD, and a submersible pressure transducer will be installed in the well to allow the pumping rate to be modulated to control drawdown by variable speed pumping. A standby generator and associated automatic transfer switch are proposed provide backup power during power outages. The facility will link to the City's SCADA system to provide remote communication and control and to process operational data collection.

**NEED OR JUSTIFICATION:** Surface water accounts for approximately 75% of the water produced annually by the PWS. The majority of groundwater production is associated with Well No. 6 and Well No. 1A, which pump to the West and Low Systems, respectively. Most of the increase in growth and customer demand over the next several years is anticipated to occur in the Community Park development served by the South High Reservoir and Booster Station. Providing water to the Southeast and South Central Service Levels requires inefficient long-distance pumping through three sequential booster stations, and upgrading transmission and booster pumping capacity to provide the supply capacity needed to accommodate growth in the southern portion of the distribution system is cost-prohibitive. Constructing a new well in the South High service level will:

1. Reduce dependency on surface water and provide redundancy for the rehabilitated membrane WTP.
2. Provide a localized groundwater supply to ensure adequate supply is available to new development in the Southeast and South Central Service Levels.
3. Reduce demand and free up capacity at the 21<sup>st</sup> Street Booster Station.
4. Eliminate the need to increase pumping and transmission capacity to the South High Reservoir.