



Size: 80,000 gpd
Cost: \$1,670,000
Completion: April 1998



Treatment Plant Overview



Lab and Office



UV Dosing Tanks & Generator

BIGGS WASTEWATER FACILITIES

Biggs, Oregon

Project History

In 1989, the Biggs Service District was formed to address the problems associated with failing septic systems. With monies levied from property taxes, HGE was hired to complete a preliminary feasibility study of the problem, and offer solutions to the problem. HGE completed an engineering study recommending a community sanitary sewer system. This study provided information for the community to evaluate the direction it would like to pursue to allow development to come to Biggs Junction.

Funding

Several funding agencies contributed to the project. They included OECD - Water/Wastewater Financing Program, OECD - Regional Strategies, USDA Rural Development, and the US Department of Commerce, Economic Development Administration.

Project Description

The collection system consists of 2,664 feet of 10-inch and 8-inch gravity sewer with manholes and one 24-inch boring under Highway 97. The west side of Biggs Junction is serviced by a wet-well mounted duplex pump station. The west gravity system connects with the east gravity system with grinder pumps which serve properties on the east side of Spanish Hollow Creek. Sewage is pumped across the bridge to the east gravity system.

The wastewater treatment plant is a 80,000 gpd extended aeration facility. The entire plant is gravity flow from the collection system to the outfall on the Columbia River. The plant has several unique components, designed for ease of operation. The clarifier has no moving parts and returned activated sludge is transported by air lifts to a selector tank. The clarifier also controls the effluent by an orifice weir so that a design upflow rate cannot be exceeded. During extreme peak flows, mixed liquor from the aeration basins will flow over into equalization or surge tanks. Aeration of the system is accomplished by a 20-Hp blower, and a small 3-Hp submersible pump station lifts on-site wastewater to the headworks.

The outfall line is 1,230 feet of 6-inch HDPE with a submerged river discharge. The line was constructed along Spanish Hollow Creek. During construction, HGE, the contractor, and the Oregon Department of Fisheries and Wildlife (ODFW) worked together to minimize impacts to the stream habitat. Restoration of the stream and riparian area was accomplished to ODFW's satisfaction.