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CASE STUDY

Odessa Groundwater Replacement Project | Odessa, WA

BILCO Hatches Allow Access To Powerful Pumps for Water Replacement

A recently-completed project in Washington state will benefit users of an aquifer that has been falling rapidly for the past 40 years.

A new pumping station will provide water for up to 10,500 acres for users of the Odessa Aquifer. The project started in 2016 and was redesigned in 2017-2018 due to a grant to allow for additional capacity. Construction was completed late in summer 2020, and became operational in the spring of 2021.

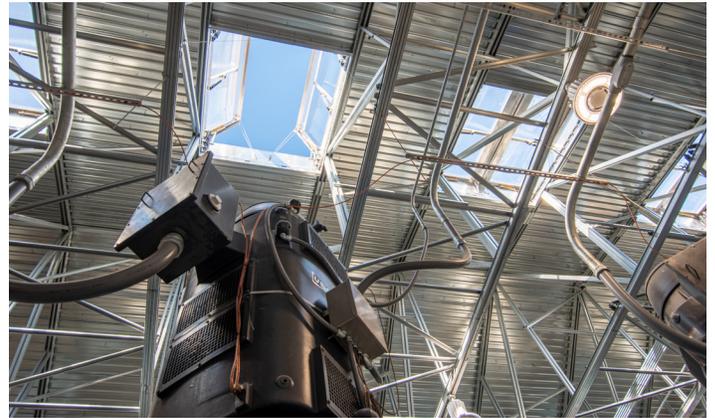
The first pump distribution system in the Odessa Groundwater Replacement Project includes more than seven miles of pipes, six pumps and a pump house. The water system, called EL47.5 for its distance from the start of the East Low Canal, cost \$20.8 million. It is the first of nine proposed pressurized pipeline systems being built to deliver Columbia Basin Project surface supplies to replace ground water use on 87,000 acres across Grant, Adams and Lincoln counties.

EL47.5 is just one piece in the Odessa Groundwater Replacement Program and is part of the larger Columbia Basin Project, which currently serves approximately 680,000 acres. The Odessa Ground Water Replacement Project, at an estimated cost of approximately \$400 million, will have a profound economic and environmental impact on the community, where the primary industry is farming.

The aquifer has been in precipitous decline since 1980, falling more than 200 feet as farmers, municipalities and homeowners drilled deeper wells to reach the diminishing water supply. The U.S. Bureau of Reclamation said more than 700 irrigation wells were drilled in the region, with some wells reaching down nearly 2,000 feet.

The heart of the EL47.5 project is a 12,800 square foot pumping station, which will reduce groundwater depletion by up to 73 million gallons per day.

The station includes one pump of 700 horsepower, and 5 pumps of 1,250. The powerful system can deliver more than 63,000 gallons per minute. The station has a delivery capacity of 10,500 acres, pumping water at 140 cubic feet per second. Water is delivered to people who purchased long term contracts.



Teams will access the pumps through roof hatches manufactured by The BILCO Company. The custom hatches are fabricated with polycarbonate dome covers for natural daylight and engineered lift assistance for easy, one-hand operation. They are also modified for hand winch operation, allowing them to be easily opened and closed from inside the building.

The aluminum hatches, which were supplied by Anderson Specialties, meet unique size requirements. "They were proposed by the contractor and met the specs that we required," said Jon Erickson of the East Columbia Basin Irrigation District. "They were also important because they allowed pump and motor access by crane."

The system will be critical in helping landowners, particularly farmers, receive a steady source of water. "It's nearly 200,000 people and over a dozen, maybe two dozen small communities that really represent the fiber and the structure of the Columbia Basin and agriculture and farm communities as we know them," said Vicky Scharlau, Executive Director of the Columbia Basin Development League.



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