



Zone 7 Water Agency Stoneridge PFAS Treatment Plant

Zone 7 Water Agency (Zone 7) is installing an ion exchange (IX) treatment system at its Stoneridge Well to proactively address per- and polyfluoroalkyl substances (PFAS) found in its ground water. These substances are often referred to as “forever chemicals” and come from a variety of manmade sources.

This project consists of integrating IX PFAS Treatment System equipment into the existing Stoneridge Well site to reduce PFAS levels to below current applicable State response levels and future maximum contaminant levels.

PROJECT HIGHLIGHTS

- New IX Pressure Vessels to remove PFAS from well water.
- New Cartridge Filters to remove grit & fines from the well water to protect and prolong useful life of IX media.
- New Pump Station to regulate the pressure and pump water to distribution.
- New Electrical Building at Stoneridge to supply power to the new Pump Station and a new programmable logic controller (PLC).



Ion Exchange PFAS Treatment System installed at the Stoneridge Well, the first of its kind in Northern California

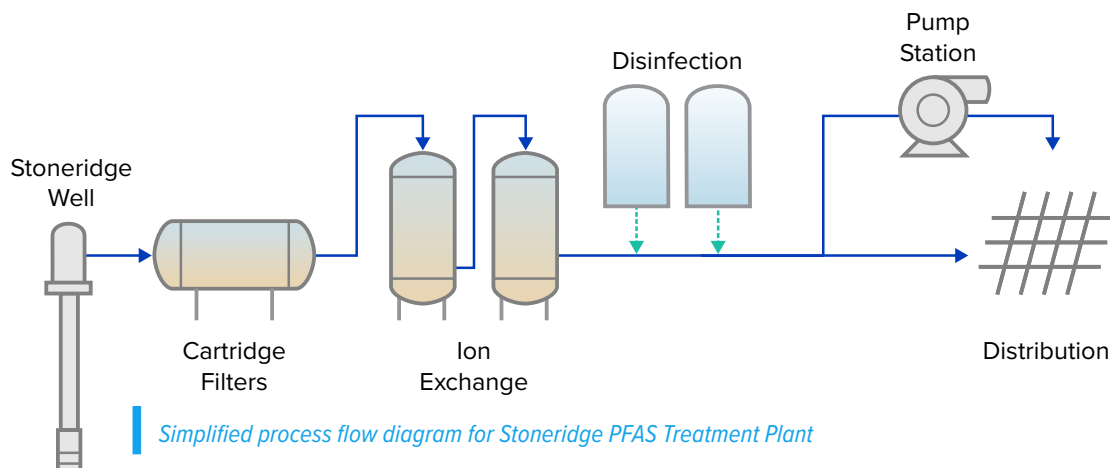
DESIGN CRITERIA

Cartridge Filter

Number of Units	2
Design Flow (per unit)	5000 gpm

IX Pressure Vessel

Number of Trains	3
Vessels per Train	2
Vessel Diameter	12 ft
Design Flow (per train)	1800 gpm
Design Flow (Total)	5400 gpm



Simplified process flow diagram for Stoneridge PFAS Treatment Plant

PROJECT HISTORY

The Stoneridge Well has been in service since August 1992, and has historically operated as needed to meet system demand. It produces approximately 5,000 gallons per minute (gpm). Since 1992, several improvements have been made to the Stoneridge Well facility, including upgrades to the chemical systems and the well pump.

Some PFAS at Stoneridge have been detected since late 2018, with two PFAS compounds, perfluorohexane sulfonic acid (PFHxS) and perfluorooctane sulfonic acid (PFOS), exceeding the response levels outlined by the State of California. While these levels require the agency to notify the public of their presence, they do not exceed current state and federal drinking water standards.

Zone 7 conducted bench top testing and determined that IX would be the best treatment option for the Stoneridge Well Site. Zone 7 approved the design/build contract for the Stoneridge PFAS Treatment Plant in October of 2022. Construction began in February of 2023. Plant will be commissioned in September of 2023.

ZONE 7 WATER AGENCY

About Us

Zone 7 provides high-quality treated drinking water to four water retailers serving over a quarter million residents and businesses. This water is delivered to the City of Livermore, City of Pleasanton, Dublin-San Ramon Services District and the California Water Service Company, along with some direct customers. Zone 7 performs better than most state and federal health standards, as a direct result of our more stringent internal water quality targets. In a typical year, more than three-quarters of the agency's water supply originates high in the Sierra Nevada mountains as snowmelt. The water flows downstream where it is pulled into infrastructure created by the State Water Project (SWP) that allows it to distribute or convey the water throughout the entire state. The SWP conveys the water through the California Delta, its first major stop where the water is divided between two major aqueducts. The majority of the water that comes to Zone 7 is conveyed via the South Bay Aqueduct to the Tri-Valley area. The rest of the agency's water comes from the groundwater basin or rain runoff from the local watershed. Zone 7 also supplies irrigation water to farms and vineyards and provides flood protection to all of eastern Alameda County. Zone 7's mission is to deliver safe, reliable, efficient and sustainable water and flood protection services, with a vision to enhance the quality of life, economic vitality and environmental health of the communities the agency serves.

ACKNOWLEDGEMENTS

Zone 7 Water Agency Board of Directors

- Sandy Figuers, President
- Dennis Gambs, Vice-President
- Dawn Benson
- Laurene Green
- Kathy Narum
- Sarah Palmer
- Angela Ramirez Holmes

Designed by:

Carollo Engineers

Prime Contractor and Construction Manager:

Conco-West, Inc.

