THE WONDROUS WORLD WATER

As the wholesale water supplier for the region, Zone 7 treats surface water imported from outside of the Tri-Valley via the South Bay Aqueduct at two water treatment plants. Our imported surface water supply originates as Sierra Nevada snowmelt and is conveyed by the State Water Project through the Delta. Patterson Pass Water Treatment Plant (PPWTP), the smaller of our two plants, has served the Tri-Valley community since 1962 and provides greater production capacity for high-demand months, operational redundancy to allow for the regular servicing of the main Del Valle Water Treatment Plant, and a critical backup in case of emergencies such as earthquakes.

Decades in the planning, the PPWTP Upgrades and Ozonation Project highlights the agency's efforts in long-term planning, fiscal responsibility, and commitment to water quality and public health. The Board approved the construction of this project in 2019, breaking ground in April 2019. The improvements to the plant and the installation of ozone treatment facilities cost approximately \$110 million for planning, design, and construction. The project was completed in spring 2022, on schedule and within budget.

Both PPWTP and Del Valle Water Treatment Plant now feature state-of-the-art ozone treatment process facilities. Ozone replaces chlorine as the main disinfectant, resulting in higher quality finished water provided to our customers.



PATTERSON PASS WATER TREATMENT PLANT

OZONATED WAVER

LOCATION Livermore TREATMENT CAPACITY 24 million gallons per day TREATMENT PROCESSES Ozonation Dual-media filtration

This investment in ozonation improves our water by treating taste and odor impacts from algae growth, reducing chlorine related byproducts, and destroying pathogens and other emerging contaminants of concern. These improvements ensure the water being delivered to our customers is cleaner, safer, and better tasting – straight from the tap.

In addition to the ozone facilities, PPWTP received important upgrades to replace aging equipment and increase treated water storage capacity with the addition of a new five-million-gallon storage tank, and now features double the amount of treated water production capability, going from 12 million gallons of water a day to 24 million gallons a day (MGD).

HOW IN THE WORLD DOES OZONE DISINFECT WATER?



Adding an electric spark to Oxygen (O₂) creates supercharged Ozone (O₂) molecules.



Contaminants in water may include bacteria, viruses, and algal byproducts that impact taste and odor.



Ozone is injected into the water as a gas at our new ozonation site in the Del Valle Water Treatment Plant. The Ozone seeks out and destroys contaminants in the water.



Ozonation leaves behind pure, high-quality water, without the byproducts left behind by other disinfectants.

The Patterson Pass Water Treatment Plant also uses a conventional dual-media filtration system to physically remove contaminants from surface water.

WHAT IN THE WORLD IS DUAL-MEDIA FILTRATION?





ADD MINERALS Iron or aluminum salts called coagulants are added to water containing unwanted particles. **COAGULATION** The particles then bind together or coagulate. **FLOCCULATION** Gentle mixing helps create larger particle groups called flocs.

SEDIMENTATION The heavy flocs settle, leaving clarified water. FILTRATION Clarified water is pushed through sand and gravel to remove remaining sediment.

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These treatment processes remove at least 90% of viruses and at least 99.7% of larger pathogens.

THE BENEFITS OF OZONE TREATMENT

- Improved taste and odor
- Reduction of chlorine related by-products
- More efficient treatment process
- Destroys pathogens and other emerging contaminants of concern
- Helps Zone 7 meet its goal of surpassing
 State and Federal water quality requirements
- Makes our water cleaner, safer and better tasting straight from the tap



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