

As Drought Worsens, Fresno Turns Attention To Wastewater

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Jim Quist farms 700 acres next to the one of the most secure water sources in Fresno County.

"It might be providence," Quist says, about what brought his grandfather to the property in 1933.

A portion of Quist's irrigation water was once raw sewage. Quist's farm is just across the road from the City of Fresno's wastewater treatment plant. It's been giving him water for 50 years.



"There's been times that we didn't like being here just because of the smell, but those things have gotten better through the years fortunately," Quist says with a laugh. He says the water quality has become more "employee friendly" over the years, too.

Public health codes prevent him from using it on food crops, but Quist says it's a big help for his alfalfa fields. The drought has forced cut backs on his surface water allotment, and the groundwater level is sinking. This reclaimed wastewater is free, and always available.

"It can make a huge difference having access to this water compared to pumping it out of the ground," says Quist. "It's a big help."

Inside Fresno's Wastewater Treatment Plant

Sixty million gallons of wastewater are pulled from sewer pipes and into the Fresno municipal wastewater

treatment plant every day.

"These are some of the largest pumps that you'll ever see," says Rick Staggs, Chief of Operations of the Wastewater Management Division, during a tour of the plant.

The first line of treatment is filtering out the garbage that comes through sewer lines from households, restaurants and other commercial facilities.

"[We find] two-by-fours, plastics, rags," says Staggs. He remembers one time workers found a "big wheel" toy and some cash.

"There's no new water being added in the planet. So it really comes down to how effectively we manage our current resources." - Conrad Braganza

The water is then piped into big pools, where material in the water floats to the top or settles to the bottom.

In the aeration basins, a biological process further breaks down organic compounds and contaminants. The fluid getting the final treatment looks like river water flowing through a flat fountain bed.

"We're basically taking what nature does and we're doing it at a much higher and faster level." says Conrad Braganza, Wastewater Reclamation Coordinator for the City of Fresno's Wastewater Management Division.

He says recycling water allows potable water to be saved for drinking, and lower quality water to be used for irrigation.

"There's no new water being added in the planet. So it really comes down to how effectively we manage our current resources," he says.

Fresno Plans to Expand Uses of Recycled Water

But right now the wastewater Fresno treats has very limited application – it is only used by farmers for non-food crops and to fill ponds to recharge underground aquifers.

The plant managers plan to treat to a higher level and disinfect the water so it can be used to irrigate schoolyards, golf courses, and cemeteries. At some point, farmers would be able to water food crops with it too.

"Once we treat to this higher level, it increases one, the number of uses for the water, it cuts down the city's dependence on clean water for non-potable uses and it basically makes us a sustainable city because we're not depleting our groundwater aquifer as much," says Braganza.

California state water managers call it a new water resource. They say they're in the process of loaning out hundreds of millions of dollars to water agencies like Fresno.

Lester Snow of the California Water Foundation wants more investment in recycled water. He says it's reliable, unlike the climate.



"We're getting more of our winter precipitation as rain instead of snow pack, so that kind of changes water supply availability. But also we're seeing much greater variability in the amount that we get," says Snow.

But Snow says recycled water is only one part of securing California's water future.

"We can do more through conservation, wastewater recycling, stormwater capture, managing our groundwater better, so there's a lot of pieces, but it's a significant piece of the solution," he says.

The Fresno plant has applied for a state loan to expand recycled water production. California wants all funded projects to be to be up and running within three years.

Graphic: Marnette Federis/Melody Stone