

Mission Statement.

We provide high-quality wastewater treatment and reclamation services professionally and competitively to preserve the environment and ensure the health, safety, and economic vitality of our community.

Who We Are.

The Fresno-Clovis Regional Wastewater Reclamation Facility is operated by the City of Fresno Wastewater Management Division and provides wastewater treatment services for the greater Fresno metropolitan area, including Clovis.

We are the seventh largest wastewater treatment facility in the state of California—treating about 71 million gallons of wastewater every day.



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The Seriousness of

Salt

Raising Awareness About the Increasing Salinity in our Wastewater.

WORKING WITH WATER.

The role of treating wastewater is no small job. The Regional Wastewater Reclamation Facility (RWRF) provides safe and reliable wastewater treatment to the community while using innovative technology to achieve compliance with strict federal, state and local regulations. Wastewater from homes, schools, restaurants, businesses and industry is cleaned and treated at the facility before it is returned safely to the environment.

Facing The Challenges Of The Modern World: Salt.

“Salt” is a generic term used to describe certain **“pollutants”** which cannot be removed from wastewater in an economically-feasible manner.

One challenge we face in treating wastewater is the salinity (salt) content found in it. The issue of salt has the potential to affect every home and business in the Central Valley.

An easy way to determine the amount of salts in water or wastewater is to measure its electrical conductivity (EC), or the ability of a liquid to conduct electricity. EC levels of pure water are insignificant. Water with a lot of free ions (calcium,

magnesium, sodium, chlorides, etc.) will show higher levels of EC.

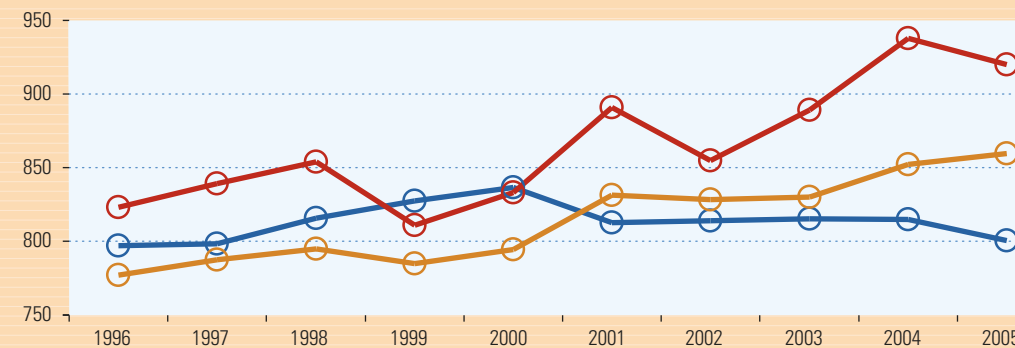
Daily tests conducted on the influent coming into the RWRF show that more and more salts are being released into our wastewater stream. These salts pass through the treatment process and make their way into the underground water where they will ultimately remain. These salts degrade our water quality.

The Shape Of Things.

One of the main contributing factors to the Valley's salt problem is the natural geographical landscape of the underground water, especially for communities located within the Tulare Lake Basin that are dependent on ground-water as their main water supply. This is an enclosed basin without a natural cleanout, which is why salts discharged onto the ground pass through and remain in the underground water. As we continue to pull from this aquifer for our water needs, salts keep circulating and concentrating even after we safely return the treated wastewater back to the environment. Eventually, excess salts will become so built-up in the groundwater that it will become unsuitable for human or agricultural use.

Increase in Salinity of Fresno/Clovis Wastewater (measured as electrical conductivity in $\mu\text{mhos/cm}$)

Overall, the problem of salinity in our wastewater has increased through the years, while our limit/regulations have become stricter.



RED LINE: “Monthly Maximum” at any point (in the case of 2005 our salinity reached 920 $\mu\text{mhos/cm}$).

ORANGE LINE: “Yearly Average” of wastewater with salinity (which for 2005 equaled 860 $\mu\text{mhos/cm}$).

BLUE LINE: “Discharge Limit” for salinity set by the Central Valley Regional Water Quality Board.

*Source Water + 500 $\mu\text{mhos/cm}$ is the limit imposed by the Board for RWRF effluent.

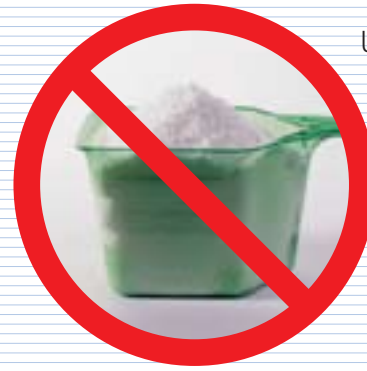
Solution to the Pollution.

Is there a salt solution?

There is no cost-effective way to filter the salt out of wastewater. Pollution prevention and education are the best measures for ensuring we have done our part to protect our water supply for today and for the generations to come.

Where Does This 'Salt' Come From?

Salts are a result of adding any type of chemicals to water in just about any daily household chore. It could be from detergents, soaps, shampoos, water softeners, and many other commonly used household products. It can also be from chemicals and disinfectants used in many different industrial



processes. Salts can also make their way to groundwater when applying fertilizers to lawns and flower beds as they wash down into the ground each time we irrigate.

Learn To Use Less.

Less soap, less detergent, less fertilizers, less irrigation, less cleaning supplies. Learning to use less of everything, every day, takes practice; but environmentally, it's well worth the change in habit, whether it's cutting back on dish or laundry soap, fertilizers for your lawn, or household cleaning products.

Using less can have a significant impact on the amount of salt that is ultimately discharged into our wastewater system. If you think about it, the less you use on your end, the less we have to deal with at our end.

The Truth About Water Softeners.

Salt-based water softeners are also part of the problem. The role of a water softener is to remove minerals by using common salt. Therefore, if you have a water softener unit in your home, ask yourself why? Even though the City of Fresno provides its customers with water that meets strict federal drinking water standards, the market is saturated with a variety of water treatment units that promise better water.

If your concern is taste, odor, color, or appearance you could choose a variety of filters that will serve that purpose without adding salt to the environment.

If your concern is aesthetic (water spots) or **scale**, consider a reverse osmosis (RO) system and have it serviced on a regular schedule.

If you still choose a salt-based water softener system, select an "on-demand system" that recharges as needed. This will use less salt and will also use less water during the recharge cycle. Brine (water and common salt) is discharged to the sewer each time a water softener recharges. Salt will pass through the wastewater treatment plant and will make its way back to the ground and into the groundwater. Overall, a water-softening unit has a negative impact on the environment.



How You Can Help... Choose Wisely.

- **Conservation is key.** Use less and put less down the drain.
- **Choose liquid** instead of powder laundry soap.
- **Buy dryer sheets** instead of liquid softeners.
- **Use mopping pads** instead of a traditional mop and bucket of water.
- **Sweep** instead of hosing down an outside area.
- **Avoid overwatering.**
- **Use compost** instead of chemicals and fertilizers on your lawn.
- **Live by example.** Teach your children about conserving water; everything that goes down the drain must be processed before being returned safely to the environment.
- **Educate others.** Removing salts at the RWRF is too costly. Choose pollution prevention. Less is better.
- Finally, use the option to **disconnect the salt-based water softener** unit at your home.



The issue of salt is serious.

Remember, the less salt discharged today will help maintain water quality within the basin for generations to come. Water is our greatest resource – let's work together to keep salt out of our wastewater, every day, in all that we do.