

What can you do to help reduce your salt impacts to the Delta?

Reduce water use in your home

The less water you treat through a water softener, the less salt you put down the drain.

Choose liquid over powder detergents

Fillers on powder detergents add unnecessary salts to the wastewater produced when laundering clothes.

Choose environmentally friendly cleaning products

Environmentally friendly cleaning products do not contain chlorine and sodium, two of the most harmful contributors to salinity.

Minimize the amount of household cleaning products used in your home

Avoid excess application of household or personal cleaning products when possible.

Choose dryer sheets over liquid fabric softeners

Avoid adding additional salts to the water used on your laundry.

Disconnect self-regenerating salt-based water softeners at your home (if possible)

If you must use a self-regenerating water softener, make sure it is set for the appropriate hardness level. Also reduce the number of backwash cycles. Finally, do not treat water through your softener that does not require softening. (For example, there is no reason to soften water that is used for landscape irrigation.)

How You Can Treat Your Water Without Using a Self-Regenerating Water Softener

The City provides its customers with water that meets strict federal, state and local standards. Use of water treatment systems is not necessary. If you still choose to have a water treatment system, select the one appropriate for your needs and less impacting to the environment.

If the hardness of your water is causing problems in your home, you can use a portable exchange water softener to provide soft water for your use without causing excess salt to be discharged from your home.

Several other commercially available products advertised for hardness treatment may or may not effectively soften water. Unproven water softening technologies include: magnetic water treatment, electrolysis, electronic inaudible waveforms, catalytic alloys, and carbon filtration. Even if these technologies do not effectively reduce hardness of your water, many of them may prevent scale formation, at least temporarily. For example, electronic inaudible wave technology will keep particles from attaching to metal surfaces and thereby prevent scale formation. Using one of these alternative technologies may be adequate to meet your needs.

Depending on your other water quality desires, you may also consider filtration, activated carbon, reverse osmosis, or nanofiltration systems for treatment of the water used in your home. (Note these technologies are not intended reduce water hardness.) The City of Lodi does not endorse any particular water treatment unit, nor does the City provide assurances regarding the effectiveness of any unit.



This publication is intended to educate the public on the environmental impacts associated with excess salt discharges from individual homes and to offer ways to minimize these discharges. It is also intended to partially satisfy pollution prevention and salinity management goals set by the Central Valley Regional Water Quality Control Board.

MANAGING SALINITY IN OUR WASTEWATER

Salinity is a measure of the dissolved salts or ionic substances present in water. The amount of salts discharged to waters of the Sacramento-San Joaquin Delta and the underlying groundwater are controlled by the State Water Resources Control Board and its Central Valley Regional Board, whose responsibility is to protect the use of these waters as a source for municipal drinking water, agricultural and environmental uses.

Why Salt is Bad for Water

Chemical compounds contributing to salinity, such as sodium and chloride, affect the growth of many agricultural crops in higher concentrations. Excess salinity in the Delta also has the potential to degrade the quality of the groundwaters and surface waters that serve as the municipal water supply for millions of people. This degradation has many impacts, including serious limitations on both water conservation and water recycling – essential tools to help meet California's future water needs. Moreover, excess salinity in water can harm aquatic life and cause damage to ecosystems.

The salinity control program developed for the Central Valley identifies water softeners and agricultural practices as the primary sources of salinity to the San Joaquin River Basin. Moreover, there is increased attention to high salinity waters coming from municipal wastewater treatment plants.

Salt management in the Delta starts with You!

Salinity in Lodi

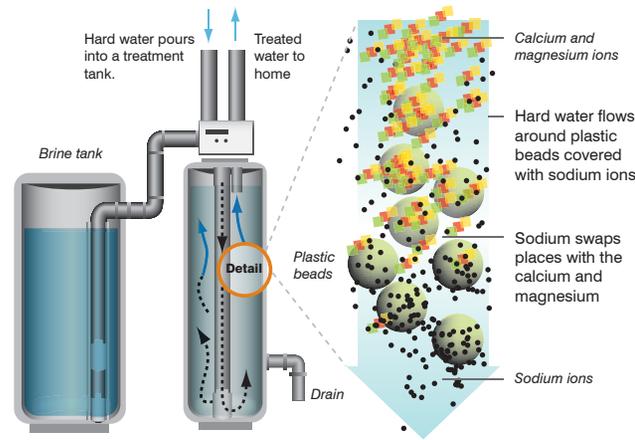
The water used for daily activities such as washing dishes & clothes, bathing, flushing toilets, and other uses in Lodi reaches the City of Lodi Water Pollution Control Facility (WPCF). This wastewater contains salinity in addition to other constituents. The WPCF treats the wastewater and discharges it to the Sacramento-San Joaquin Delta. Salinity reduction by treatment, while feasible, is very expensive and uses a great deal of electrical energy; consequently the preferred “treatment” is to reduce the amount of salt added by water users.

Salinity discharged from the WPCF must be below a certain level set by the State. A potentially significant source of salinity to the WPCF is from automatic water softeners employing brine (salty water) to regenerate the resin that eliminates hardness in the treated water that is delivered to your home. Removal of salinity at the WPCF is expensive and would necessitate additional, costly, wastewater treatment facilities—resulting in greatly increased wastewater fees. However, with your help, the City may be able to reduce the amount of salinity in the wastewater, and decrease the amount of salinity in the Delta, without adding expensive treatment measures.

Water Softening Process

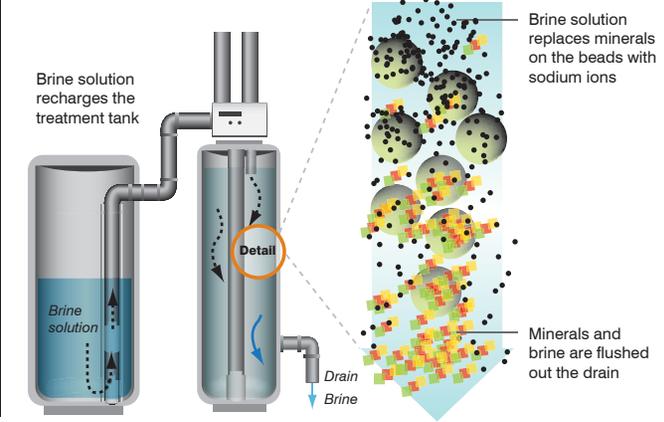
1 Switching minerals out

Calcium and magnesium ions in hard water are replaced with sodium ions, softening the water.



2 Recharging the unit

Plastic beads are soaked in a strong brine solution to remove the calcium and magnesium buildup and restore the sodium.



How You Can Help Reduce Salinity Impacts

If you have a self-regenerating water softener, also known as an automatic water softener, the most significant thing you can do is to stop discharging the brine into the sewer system. If your water is too hard for daily use, you can switch to portable exchange water softening systems. These systems require vendors to periodically come to your house to exchange the softening resin with a new one. The resins are then taken to a central location where they are regenerated for future use.

Another possible solution, which may not solve but can greatly reduce the problem, is to **use less salt**. Most softener owners use at least twice as much salt to soften water as is necessary. Set your water softener for the correct hardness level. The majority of water softeners have multiple hardness settings and can be set for a specific level of hardness. Setting the softener for the proper hardness will save you money on salt, conserve on water use and lessen your impact on the environment. Check with your water softener vendor to find out how to set your softener for the correct hardness value.

It has also been found that many softeners are set to recharge or backwash too frequently. Instead of a daily or every other day recharge cycle, a five-day cycle may be used to achieve the proper softening level.

You can also take steps to reduce some of the more potentially harmful salts discharged from laundry detergents, chlorine bleaches, and fabric softeners by switching to environmentally friendly detergents and cleaners that do not contain chloride and sodium.

What Type of Water Softener Do You Have?



If you add potassium chloride or salt (sodium chloride) to your water softener, or have a service do so for you, then you have an automatic or self-regenerating water softener. If your water conditioning service regularly changes out the resin tank of your water softener, then you have

a portable exchange water softener. Check with your vendor if you have someone that regularly visits your house to service your system, but are not certain what services they are providing.

