



WASTEWATER UPDATE

Salts: A Major Concern

What is Salinity?

The Central Valley Regional Water Quality Control Boards "Salinity in the Central Basin, An Overview" points out the growing concerns and problems the effects of salinity are having on the Central Basin. Although the City of Anderson's Wastewater Treatment Plant effluent contribution of TDS (Total Dissolved Solids) and other constituents is minimal, it is every City's responsibility to address the issue. The State Water Resources Control Board has directed the City of Anderson to adopt a Salinity Evaluation and Minimization Plan. This plan can be viewed on the City's Web site under Public Works Wastewater Division at: <http://www.ci.anderson.ca.us/pubworks.asp>

Throughout history, salinity has threatened mankind's existence. Ancient civilizations disappeared as salt poisoned their land and water. Today, salinity increases are silently choking off our water supply while draining away hundreds of millions of dollars in salinity damages each year. The most under-recognized water quality problem by the public in California is salinity. Referred to as TDS, salinity is the concentration of dissolved salts in water. Salts are added to water supplies by consumers, irrigated agriculture, confined animal waste practices, and other human, industrial, and natural processes. Salt accumulation can degrade water quality, limiting the use of water for agricultural, industrial, municipal, and other purposes. The resulting financial impact on the nation is enormous.

Sodium really has no redeeming value in the environment outside of saltwater or brackish water ecosystems. It has been declared as the biggest contaminant affecting water supplies in California, the nation and the world. Water with salinity levels above 1,000 mg/l is of questionable use for irrigation, residential and industrial customers. As salinity increases, laundry detergents work less efficiently, plumbing fixtures and home appliances wear out faster and industry incurs higher treatment costs for boilers, cooling towers and manufacturing processes, and farmers experience reduced crop yields. Evidence of salt concentration increases and reduced crop yield is already occurring in the Sacramento, San Joaquin and Tulane basins. Additional information on the effects of salts can be viewed by visiting, Salinity in the Central Basin, An Overview: http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/initial_development/swrcb-02may06-ovrvw-rpt.pdf

Where does salt come from?

The major sources come from industry, commercial operators and domestic households. Each of these sectors contributes to the salinity problem through their use of raw materials, process chemicals, cleaning chemicals, raw foodstuffs, cooking additives, dishwashing and laundry detergents, personal toiletries and domestic water softeners. Many powdered laundry and dishwasher detergents contain large amounts of fillers, which do not add any detergent action to the product, but can account for up to **40% of the sodium salts in domestic wastewater**. As well, detergents and other active ingredients are usually present in the form of sodium salts to improve their solubility in water. Conventional wastewater treatment processes do not remove dissolved salts.

Everyone can contribute in helping

And it's easy! By simply changing a few habits, we can all play a part in protecting our landscape by reducing our salt use in the home and business:

1. Choose liquid laundry detergents over powders – this can reduce the amount of sodium in domestic wastewater by more than 200 grams per wash.
2. If using laundry powders, choose concentrated powders.
3. Don't use more detergent than the manufacturer recommends, or even try less.
4. Try to reduce the amount of detergent used by washing full loads in both the dishwasher and the washing machine (this will also save water)
5. Use low-salt cleaning products. Significant amounts of salt in household wastewater come from soap, laundry detergents and cleaners. Consider using liquid and low-salt products. Bleach is high in salt content.
6. Limit garbage disposal use. Limiting the use of garbage disposals is kind to the environment and to household plumbing too – less salt down the drain and fewer clogged pipes. Rather than using the garbage disposal, discard food waste in the trash.
7. Minimize the use of salt and other food additives in cooking.
8. If you have a domestic water softener, consider removing it. The Municipal water supply does not need to be softened; hardness is in the moderate range at 100 mg/l. so there is really no need for a water softener.
9. Conserve water. Saving water also reduces the amount of salt that goes down the drain. . Don't let the water run while doing dishes, brushing your teeth, shaving or washing your hands. Check your household plumbing for leaks and fix all that you find.

For the latest on Salt in the Central Basin visit: http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/index.shtml