

## **Water Softeners Using Salt Increase the Cost of Recycled Water**

Self-regenerative water softeners, those which use salt, often create recycling and sewage treatment issues. Not only do they waste a significant amount of water, they increase the salinity of wastewater because they discharge brine, a salty waste derivative, in to the sewer. Salinity is commonly known as Total Dissolved Solids (TDS) and is strictly regulated by state and federal agencies. This extra salt has to be removed by very expensive treatment processes at the water reclamation plant that produces recycled water. This recycled water is much more costly to produce when the wastewater to be treated contains high levels of sodium.

The removal of Total Dissolved Solids (TDS) is one of the most costly elements in the recycled water treatment process. Ramona has two sewer districts that supply wastewater to the San Vicente Reclamation Plant and the Santa Maria Reclamation Plant where it is treated and becomes “recycled” or reclaimed water. A significant concern shared by both plants, is the expensive removal of the TDS in the treatment process required to meet the limitations set by the Regional Water Quality Control Board. The District’s Salt and Nutrient Management Plan guides RMWD in meeting this standard which benefits our watershed and the quality of groundwater.

TDS come from many sources in our homes. Common minerals associated with TDS include calcium, magnesium, potassium, sodium, bicarbonates, chlorides and sulfates. A gross cause of TDS is from water softeners using salt and swimming pool water dumped into our sewer. “The expensive process of removing the TDS to meet recycled water standards creates increased sewer fees for our customers,” says Jim Anderson, RMWD Wastewater Operations Superintendent. “The District is currently in the process of recovering more recycled water by installing a third Reverse osmosis system at the San Vicente Reclamation Plant. Total Dissolved Solids are a component in the brine, a by-product created when treating sewage. This system will decrease the brine produced and hauled to the city of San Diego for disposal through their outfall pipe to the ocean. Hauling the brine from Ramona to San Diego is a significant expense.”

Recycled water is primarily used for landscape and agricultural irrigation. High salinity levels in recycled water cause plant damage and plant stress. The salt can bind the soil in the summer at a time when plants need water the most.

RMWD Legislative Code prohibits the use of water softening units that discharge brine in to the public sewer.