

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: Options to Control Use of Self-Regenerating Water Softeners by Residential Customers
DATE: December 15, 2009

NEED: For the City Council to provide direction regarding control of residential self-regenerating water softeners.

FACTS:

1. According to the City's June 2009 *Technical Basis for Local Wastewater Limits*, the Paso Robles Wastewater Treatment Plant (WWTP) receives and discharges to the Salinas River approximately 13,000 pounds of sodium and chloride per day. Residential customers generate 88% of the City's wastewater flow, 83% of sodium loading, and 86% of chloride loading..
2. These salts are not removed by the WWTP, thus pass through to the Salinas River. The City is regularly fined by the Regional Water Quality Control Board (Water Board) for violating salt discharge limits.
3. In October 2009, the City revised its sewer use ordinance to control salt discharges from industrial (non-domestic) customers. The City Council requested options to control salt discharges from residential customers.
4. Controlling use of self-regenerating water softeners (the type to which salt is added) is the most cost-effective manner to reduce salinity of the City's wastewater.
5. State Assembly Bill No. 1366, passed into law in October 2009, authorizes the City to control salt discharges from residential self-regenerating water softeners. However, before the City may take action, the Water Board must make a finding that control of residential salt discharges will contribute to the achievement of water quality objectives. The Water Board may consider this matter in May 2010.

**ANALYSIS &
CONCLUSION:**

While some salt is naturally present in the City water supply, the majority is added by self-regenerating water softeners. The City began a source control program to control salt discharges from industrial and commercial customers, but the program does not address salt discharges from residential customers.

With the passage of Assembly Bill No. 1366 in October 2009, the City may control residential water softeners. The following are several options for City Council to consider.

A **Low Level of Control** would involve the following measures:

1. Wait for softer Nacimiento water to come online, then;

2. Inform residents how to turn down the hardness setting of their self-regenerating water softeners, thus reduce salt discharge to the sewer system.
3. Revise the Municipal Code to:
 - Discourage installation of self-regenerating water softeners and encourage use of portable-exchange water softening systems, and;
 - Require that new residential self-regenerating water softener installations be plumbed to soften only the hot water supply. This will reduce the volume of water softened, thus reduce salt used for regeneration.

Impacts: Residents – very little to no expense. City – some expense for public education and inspection of water softener installations in new development.

A **Medium Level of Control** would include all of the low level control measures above, but the Municipal Code would be revised to prohibit installation of self-regenerating water softeners. City staff would ensure self-regenerating softeners are not installed in new construction.

A **High Level of Control** would prohibit installation of self-regenerating softeners and remove existing clock regeneration control softeners. Older clock type softeners waste a lot of salt because regeneration frequency is set by timer versus actual water use. California’s Health and Safety Code has not allowed clock regeneration control softeners since 2000, but softeners can last 20 years or more, so many clock regeneration control softeners likely remain. To remove existing clock regeneration control softeners, Assembly Bill No. 1366 would require the City to:

“...make available to owners of residential water softeners within its service area a program to compensate the owner of the residential self-regenerating water softener for the reasonable value of the removed residential self-regenerating water softener, as determined by the local agency.”

Staff estimates up to 15% of all residential customers, approximately 1,300, have clock regeneration control water softeners and would be eligible for such a buy back program. Other agencies pay customers an average of \$500 for residential self-regenerating water softener system buy back, plus \$150 for a plumber to remove each system. Using these figures, a buy-back program could cost \$850,000. Funding would come from the Sewer Operations Fund, requiring a sewer rate adjustment to cover the cost. Additionally, the Wastewater Division currently does not have adequate staff to administer a buy-back program.

POLICY

REFERENCE:

Water Quality Control Plan, Central Coast Basin

National Pollutant Discharge Elimination System (NPDES) Permit No. CA0047593, Waste Discharge Requirements for the Paso Robles Wastewater Treatment Plant

February 2007 Water Resources Plan Integration and Capital Improvement Program

2009 Recycled Water Policy

FISCAL

IMPACT:

Depends on the level of control selected. A low level of control would have little or no fiscal impact. A high level of control would cost at least \$850,000, requiring an adjustment to residential sewer rates.

OPTIONS:

- a. **Direct staff to pursue either a low, medium, or high level of control of residential self-regenerating water softeners.**
- b. **Amend, modify or reject the above option**

Prepared by:

Matt Thompson, Wastewater Division Manager