



August 22, 2011

**Public Comment**  
**Central Coast Onsite Amendments**  
**Deadline: 8/25/11 by 12:00 noon**

Jeanine Townsend  
Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95812-2000



**RE: Comment Letter – Central Coast Onsite Amendments**  
**– Resolution No. R3-2011-0004**

Dear Jeanine Townsend,

The Water Quality Association (WQA) is a not-for-profit international trade association representing the residential, commercial and industrial water treatment industry. WQA maintains a close dialogue with other organizations representing different aspects of the water treatment industry in order to best serve consumers, government officials, and industry members. WQA is a resource and information source, a voice for the industry, an educator for professionals, a laboratory for product testing, and a communicator to the public.

Resolution No. R3-2011-0004 was brought to our attention and we wish to submit comment on the proposed revisions. Due to the late nature of notification, these comments have not been presented before the Central Coast Water Board. For future notifications, we ask that a process be put in place to notify key industry stakeholders when changes impact the industry. If the process is already in place, then we ask that WQA is added to the list of stakeholders for any changes related to water treatment devices.

Our comment is related to the revision on page 16 of resolution No. R3-2011-0004, which changes water softener discharge recommendations into prohibition of discharge into onsite systems. We oppose the addition that prohibits softener discharge into septic systems because it does not provide a realistic solution to any issue that is allegedly attributed to water softener discharge.

If the prohibition is being made due to ground or surface water degradation, diverting softener discharge will not change this issue. Sodium and chloride would still route to the same water sources regardless of whether they go through a septic system or not. In reality, the contamination may be worse with diversion due to less interaction with microbes that may utilize some of the contaminants.

If the intent of the prohibition is to ban softeners from use, then it should be taken into account that water softeners provide more than just an aesthetic reduction in hardness to provide silky hair or supple skin. The reduction of water hardness reduces energy usage by up to 57% for appliances in the home (2009 Battelle Institute Study), allows the use of up to 70% less detergent for dishwashing (2011 Scientific Services Study), and reduces laundry detergent usage by 50% or more (2011 Scientific Services Study). Furthermore, softened water protects pipes and fixtures in the home from scale formation and cation exchange resin in a softener can provide reduction of most heavy metals such as Arsenic and Chromium-6. With softener bans, all of these advantages are lost and will potentially create new problems such as increased landfill build up of appliances, pipes and fixtures, as well as, eliminated protection against heavy metals and increased waste stream concentrations of detergents and chemicals.



Lastly, if the prohibition is due to septic failures, it shall be pointed out that there is no robust research indicating that softener discharge impedes septic tank performance. To the contrary, reputable research has demonstrated that properly set softeners do not pose a threat to septic performance. Two robust studies that support softener discharge in septic tanks were conducted by the University of Wisconsin-Madison and NSF International.

The findings from these principal studies were that water softener waste stimulates biological action in anaerobic or aerobic systems, the volume and flow rate of softener wastes do not cause deleterious problems in anaerobic or aerobic systems, and discharge does not interfere with percolation. Even with these studies, questions are still raised with respect to impacts of softener discharge on septic tank performance.

For this reason and new research related to activated sludge systems, the water treatment industry is funding a new study with Dr. Novak at Virginia Tech to evaluate further allegations. The study objective is to evaluate the effect of cation ratios (monovalent:divalent) for residential anaerobic applications with respect to various aspects of stratification. A range of ratios will be tested to simulate various softener settings from high salt efficiency to low salt efficiency. It is presumed that the results of the study will mimic the results found with activated sludge systems that show with high monovalent:divalent cation ratios, negative effects may be noted in regards to stratification. If this is found to be the case for residential applications, then operational guidelines will be set to eliminate negative impacts on septic systems. In turn, regulations would need to focus on installer education or certification and enforcement of salt setting requirements that are imposed such as the 4000 grains per pound of salt efficiency requirement for California.

In light of the old and upcoming research, we ask that the Central Coast Water Board does not prohibit softener discharge to onsite systems. Technical regulations shall be justified with science and at this point in time, science shows that redirecting softener discharge or eliminating softener usage in hard water areas may cause more problems than it would attempt to solve. Additionally, science has not fully characterized the implication of softener discharge in septic systems as a cause for septic failures. If softeners are causing septic problems, then the solution lies with installer education or certification and enforcement of current regulations for softener efficiency rather than prohibition of discharge to onsite systems. This would need to be clearly detailed in the regulation such that softener bans are not implied or allowed by local regulators that may not understand the full impact of such decisions.

If you would like to discuss this matter in more detail, feel free to contact me with the information provided below.

Sincerely,

A handwritten signature in cursive script that reads "Paula P. Undesser".

Paula Undesser, BS, MS, CWS-VI  
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