



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

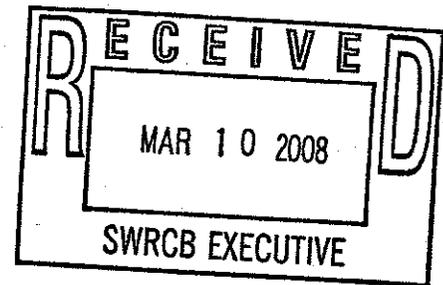
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STEPHEN R. MAGUIN
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March 10, 2008

Via Electronic Mail and U.S. Mail

Tam Doduc
Chair, and Members
State Water Resources Control Board
1001 I Street
Sacramento, CA 95812-0100
Attn: Jeanine Townsend, Clerk to the Board



Dear Chair Doduc and Members:

Comment Letter – Proposed Recycled Water Policy

The County Sanitation Districts of Los Angeles County (Districts) appreciate the opportunity to provide comments regarding the State Water Resources Control Board's (State Board's) proposed Recycled Water Policy (Policy). As background, the Districts provide for the wastewater and solid waste management needs of over five million people in 78 cities and unincorporated areas within Los Angeles County. As part of that program, the Districts operate ten water reclamation plants that currently provide some 94,000 AFY of recycled water to over 530 sites for a variety of uses, including landscape irrigation, agricultural irrigation, industrial processing, environmental enhancement, and groundwater recharge. Since the inception of our program in 1962, we have delivered over 2 million acre-feet of recycled water.

It is the Districts' desire to work jointly with all interested parties, including the State Board, to promote and expedite increased usage of recycled water to meet the state's water needs. To this end, we would like to thank the State Board for the numerous improvements made in the Policy relative to the previous version. In particular, we are in support of changes that clarified that the policy does not increase or decrease liability under existing law; removed financial assurance requirements for groundwater recharge projects; modified the definition of an irrigation project to include projects that serve a disposal need as long as the primary purpose of the project is to meet an irrigation water supply need; removed the requirement that, for groundwater recharge projects, the discharger have legal control over the attenuation area between discharge points and groundwater monitoring points in order to prevent the use of domestic water supply wells in the that area; replaced the requirement for nutrient management plans with a requirement to implement nutrient management practices; increased the incremental total dissolved solids (TDS) allowance during the interim periods when salt management plans are being prepared; and added a stipulation that groundwater monitoring in support of salt management plans only be required of recycled water producers if a similar burden is required of other parties that may be contributing salt loadings to underlying groundwater. We believe that these changes are important steps toward accomplishing the goal of encouraging increased usage of recycled water.

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Additionally, we strongly support the purpose of the Policy, as stated in the Draft Staff Report and Certified Regulatory Program Environmental Analysis, which is to address "the need to reduce uncertainty regarding regulatory requirements for recycled water use" and to address "the need to establish a uniform interpretation of these requirements." However, while we support the concept of adoption of a Policy that will provide a framework to enable recycled water usage and provide regulatory consistency throughout the state, because we believe the Policy still incorporates provisions that will have the unintended effect of discouraging reuse or even eliminating most irrigation reuse, we cannot support adoption of the Policy. We provided comments on two of these issues in our October 27, 2007 comment letter on the previous version of this policy: authority for Regional Boards to set effluent limits to protect public health where the California Department of Public Health (CDPH) has not set an MCL, and use of monthly averages to determine the allowable TDS increment. We reiterate our prior comments on these two issues. Additionally, the Policy contains several new provisions that are highly detrimental to encouraging recycled water use, and comments on these provisions are detailed below.

Interpretation of Narrative Toxicity Limits

Of primary concern is the expansion of the Policy to require that recycled water used for irrigation meet maximum contaminant levels (MCLs) that have been established for drinking water. These limitations would be applied at end-of-pipe, without consideration of exposure, attenuation, or dilution. While the Districts currently meet MCLs at end-of-pipe at our water reclamation plants on an annual average basis, setting irrigation recycled water limits at MCLs will put all existing and future irrigation reuse at risk, as MCLs change in the future. It is important to note that state law does not currently require recycled water used for non-potable applications to meet MCLs.

The expansion of the Policy to require that recycled water used for irrigation meet MCLs was apparently done to protect public health, to protect underlying groundwater, or both. The Districts support these intentions, but do not believe that imposition of MCLs on irrigation recycled water is the appropriate means of accomplishing either. As an example, consider n-nitrosodimethylamine (NDMA). The state is currently considering adoption of an MCL for this compound. The public health goal (PHG) for NDMA, set by the state Office of Environmental Health Hazard Assessment (OEHHA), is 3 ng/L. Typical recycled water can contain relatively high levels of NDMA, at concentrations of 100-2000 ng/L. While it is difficult to predict the MCL that will be set by the state, it is likely that the MCL will be established at a concentration lower than typical recycled water concentrations. Under the Policy, this would mean that all direct, non-potable reuse of recycled water would come to a halt. While additional treatment such as ultraviolet disinfection (UV) and hydrogen peroxide treatment can be used to lower NDMA concentrations, the cost of this treatment will preclude many recycled water uses.

However, scientific studies have already established that there is significant attenuation of NDMA in the environment due to photolysis and biodegradation.¹ In particular, one such study specifically addressed the leaching of NDMA in turfgrass soils during recycled water irrigation.² The study concluded

¹ For example, see P.H. Howard, R.S. Boethlink, W.M. Jarvis, and E.M. Michalenko, Handbook of Environmental Degradation Rates, Lewis Publishers, Chelsea, MI (1991); W.A. Mitch, J.O. Sharp, R.R. Trussell, R.L. Valentine, L. Avez-Cohen, and D. Sedlack, *N-Nitrosodimethylamine (NDMA) as a Drinking Water Contaminant, A Review*, Environmental Engineering Science, 20(5):389-403 (2003); R. P. Bradley, S. Carr, R. Baird, and F. Chapelle, *Biodegradation of N-nitrosodimethylamine in Soil from a Water Reclamation Facility*, Bioremediation Journal, 9(2):155-120 (2005); W.C. Yang, J. Gan, W.P. Liu, and R. Green, *Degradation of N-Nitrosodimethylamine (NDMA) in Landscape Soils*, Journal of Environmental Quality, 34(1):336-341 (2005); D. Gunnison, M.E. Zappi, C. Teeter, J.C. Pennington, and R. Bajpai, *Attenuation Mechanisms of N-Nitrosodimethylamine at an Operating Intercept and Groundwater Treatment System*, Journal of Hazardous Materials, 73:179-197.

² J. Gan, S. Bondarenko, F. Ernst, and W. Yang, *Leaching of N-Nitrosodimethylamine (NDMA) in Turfgrass Soils during Wastewater Irrigation*, J. Environ. Qual., 35:277-284 (2006).

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that is unlikely that NDMA will contaminate groundwater as a result of turfgrass irrigation with recycled water. Therefore, the available scientific evidence indicates that it would be inappropriate to stop recycled water application for irrigation due to concerns over NDMA.

A more appropriate approach to protect underlying groundwater during irrigation would be to require that MCLs be met in groundwater, as the Policy proposes for groundwater recharge. While it would be inappropriate to require groundwater monitoring for MCLs at every site where recycled water is used for irrigation, compliance with MCLs in groundwater could be demonstrated through regional monitoring programs.

Similarly, it is not appropriate for MCLs to be used as standards to protect public health associated with recycled water irrigation. First, it is the responsibility of CDPH to establish criteria for recycled water to protect public health. Such standards have been established and are specified in the Title 22 Water Recycling Criteria adopted by CDPH. Because the primary risk associated with incidental contact with recycled water is related to pathogens, the Title 22 Water Recycling Criteria focus on pathogen reduction. MCLs, by contrast, are set for chemical contaminants that may be detrimental to human health. MCLs are developed using a risk assessment methodology based on a lifetime of consumption of the water. It is highly inappropriate to use MCLs to protect the public from the incidental contact with recycled water that may occur during landscape irrigation, as risks associated with incidental contact in no way relate to risks associated with a lifetime consumption of water.

For NDMA in particular, the PHG is based on a one in one million lifetime cancer risk through oral exposure via drinking water. During consideration of the PHG for NDMA, OEHHA determined that neither inhalation nor dermal exposure contribute significant amounts of exposure relative to the oral route.³ Again, the available scientific evidence indicates that it would be inappropriate to stop recycled water application for irrigation due to concerns over NDMA.

Finally, if the State Board does not amend the Policy to remove the requirement that MCLs be met in recycled water used for irrigation, it must prepare an analysis of the reasonably foreseeable environmental impacts associated with this requirement. Based on the evidence provided above, reasonably foreseeable impacts include a cessation of most irrigation reuse, along with associated impacts on water supply, energy usage, and climate change. Reasonably foreseeable impacts also include installation of advanced treatment for the recycled water that does continue to be used for irrigation, along with associated impacts.

Constraints on Control of Residential Self Regenerating Water Softeners

Finding No. 24 of the Policy lists certain actions that represent best practicable treatment or control (BPTC) measures for salts for recycled water irrigation projects during the interim period during which salt management plans are being developed. Among these measures is "controlling salt discharges to collection systems from industrial facilities and self regenerating water softeners." While publicly-owned treatment works (POTWs) have authority to regulate salt discharges from industrial facilities, they do not have direct authority to regulate residential self regenerating water softeners. While public outreach programs discouraging use of residential self regenerating water softeners can be implemented, state law strictly limits the conditions under which bans on residential self regenerating water softeners can be imposed.⁴ With the exception of the Santa Clarita Valley, where a ban on existing residential self regenerating water softeners can be imposed after numerous steps have been taken (including a public election and a implementation of a

³ "Given the low volatility and skin permeability of NDMA, neither inhalation nor dermal exposure routes contribute significant amounts of exposure relative to the oral route." Public Health Goals for Chemicals in Drinking Water, N-Nitrosodimethylamine, December 2006, Office of Environmental Health Hazard Assessment.

⁴ Health and Safety Code Sections 116786-7.

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residential self regenerating water softener rebate program), bans must be prospective in nature, only prohibiting the installation of new residential self regenerating water softeners. Even these bans are difficult to enact, requiring an independent study that quantifies all sources of salinity, an assessment of the technological and economic feasibility of alternatives to the ban, and a finding that the ban is a necessary means of achieving compliance with discharge or recycling requirements. Many communities simply do not have the resources to perform the required analyses, and the difficulty of enacting a ban is evidenced by the fact that only a small handful of communities around the state have succeeded.

Given these statutory constraints on regulation of residential self regenerating water softeners, it is important that the state recognize that banning such water softeners should not be regarded as a "practical" standard in all cases. While action on residential self regenerating water softeners can be important for salt reduction, the term "control" should be interpreted to include such actions readily within the authority of POTWs, such as public outreach and take-back programs.

Clean Water Act Authorities

The Scope and Applicability portion of the Policy includes the statement, "Recycled water projects, including associated storage, shall comply with the Clean Water Act and its implementing regulations [Code of Federal Regulations, Chapter 40, Part 122], National Pollutant Discharge Elimination System." We believe that, as written, this statement could cause confusion and potentially be misinterpreted to mean that it is the intent of the State Board to regulate discharges to both groundwater and surface water from recycled water projects under the Clean Water Act. To avoid any such confusion, we recommend that this sentence be amended to clarify that it only applies to discharges to surface waters from recycled water projects.

Incidental Runoff

While the Policy does not address regulation of incidental runoff from sites using recycled water, the draft accompanying resolution contains language directing State Board staff to develop and propose for adoption an NPDES permit for incidental runoff from recycled water systems, using the Los Angeles Regional Water Quality Control Board's Municipal Separate Stormwater Sewer System (MS4) permit (LA MS4 permit) as a possible model. While we heartily agree that incidental runoff is best regulated using the approach in the LA MS4 permit, we do not believe that it is necessary to develop and adopt an NPDES permit to implement this approach. The LA MS4 permit allows non-stormwater discharges into the stormwater system and surface water bodies of flows incidental to urban activities including recycled and potable landscape irrigation runoff. Because such discharges are already regulated under this MS4 permit, no additional NPDES permitting should be necessary for incidental recycled water landscape irrigation runoff where this permit applies. We recommend that State Board staff be directed to regulate incidental runoff from recycled water landscape irrigation sites under the MS4 permitting system to the maximum extent possible.

Groundwater Monitoring for Landscape Irrigation

The Policy appears to authorize Regional Boards to require irrigation projects to conduct groundwater monitoring for salts, as necessary for development of salt management plans. While we understand the need for such monitoring, we believe that such monitoring should be required only on a regional basis, instead of being required for each irrigation project.

Purpose and Scope of the Policy

Finally, we are concerned that the underlying purpose of the Policy, to promote recycled water usage by providing a uniform regulatory framework for recycled water usage, may not have been kept in

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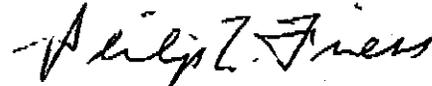
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mind as the Policy was developed. The Notice of Opportunity for Public Comment describes the "ultimate goal" of the Policy as "to provide an incentive for development of salt (including nutrient) management plants in groundwater basins that are threatened by salts." This is a very different goal than a goal of providing regulatory consistency to enable recycled water usage. While buildup of salts in groundwater basins is a serious issue that needs to be addressed, we believe that it is inappropriate to make addressing this buildup the "ultimate goal" of a Policy that was originally envisioned as a vehicle to promote recycled water usage.

In closing, the Districts would like to reiterate their support of the State Board's intent to develop a policy framework that promotes recycled water usage. However, we do not believe that the Policy will accomplish this goal and thus should not be adopted. Nonetheless, if the State Boards moves forward with adoption of the Policy we recommend that changes be made as discussed in this letter. In particular, we are very concerned that the Policy as written will result in the unintended consequence of significantly reducing recycled water usage, including causing a cessation of most irrigation reuse in the future. If you have any questions about this letter or require additional information, please contact me at (562) 908-4288, extension 2501 or pfriess@lacsd.org or Raymond Tremblay, Monitoring Section Head, at (562) 908-4288, extension 2801 or rtremblay@lacsd.org.

Very truly yours,

Stephen R. Maguin



Philip L. Friess
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