COMMENTS ON THE DRAFT STATE WATER RESOURCES CONTROL BOARD

RECYCLED WATER POLICY AND THE DRAFT REPORT AND CERTIFIED REGULATORY PROGRAM ENVIRONMENTAL ANALYSIS RECYCLED WATER POLICY

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GENERAL

In general, the proposed recycled water policy establishes a protective framework for the state's groundwater. The State Water Resources Control Board (State Water Board) is commended for its efforts to develop a uniform and consistent set of guidelines for recycled water projects. It is clear that recycled water will become a commodity to be valued, rather than disposed of, in the not so distant future. The availability of fresh water in California is nearing a crisis level and we need to make every effort to reuse and recycle our water. The Legislative mandate is clear that we should encourage the development of recycled water facilities in an effort to meet the growing water requirements of California. Every effort should be made to promote the use of recycled water by reducing the regulatory hurdles faced by utilities, as an incentive to participate in recycled water projects.

SPECIFIC COMMENTS (Recycled Water Policy)

FINDINGS:

Article 9 We concur that a nutrient management plan should be developed to meet the agronomic needs of recycled water projects. These plans, if followed, should limit the amount of nitrogen entering the groundwater through crop uptake. However, the State Water Board is also recommending that recycled water only contain 3 mg/L of total nitrogen. While that concentration of nitrogen would be protective of groundwater, to treat wastewater to meet that discharge requirement would require an advanced wastewater treatment process. These processes are quite expensive to construct and sometimes difficult and costly to operate. If a wastewater treatment facility already has permit to discharge secondary treated wastewater, there would be little incentive to provide recycled water for irrigation purposes by having to spend up to millions of dollars to meet the more stringent discharge

requirements. If the nutrients (i.e., nitrogen and phosphorus) were left in the recycled water through the secondary treatment process, there would be no increased treatment costs, other than to meet the applicable high level disinfection requirements. Furthermore, there would be less need to add supplemental commercial fertilizer to the site to properly sustain the landscape or crops, if the nutrients are not removed from the wastewater in the treatment process.

Article 13 We concur that an irrigation site with an effective nutrient management plan would pose minimal threat to the groundwater. Therefore, groundwater monitoring should not be required for these projects, unless the Regional Water Board determines the need as a result of its salt management plan.

Article 16 As noted, recycled water has the potential to contain constituents that could adversely affect public health. Groundwater standards currently exist which are protective of public health, but do not exist for <u>all</u> contaminants. These standards are developed after significant research and public scrutiny before being implemented by the California Department of Public Health (CDPH). Since the responsibility to implement standards to protect public drinking water supplies lies with the CDPH, should a Regional Water Board have the authority to set standards to protect groundwater beyond those adopted by the CDPH? Do the Regional Water Boards have the scientific knowledge and technical resources to determine safe levels for these yet-to-be-determined constituents? While there is no question that public water supplies must be protected by adopting maximum contaminant levels (MCLs), perhaps the determination of these MCLs should be left to the USEPA and the CDPH.

<u>REQUIREMENTS:</u>

<u>III Salt Management</u>

The development and adoption of salt management plans are sound protective measures for the various basins in the state. However, for both new and existing recycled water projects, there is a significant investment in treatment and appurtenances necessary to provide that water. If a project is implemented and then later the Regional Water Board finds that the receiving groundwater does not meet its water quality objectives and adopts a salt management plan that severely limits the amount/concentration of wastewater discharge, it is possible that the discharger would be effectively

shut-off and forced to find an alternative site for reuse or disposal. The utility would have lost that initial capital investment in infrastructure and would now be forced to spend additional sums to dispose of its wastewater. This seems like a potential disincentive for a utility to enter into a recycled water project. If the Regional Water Board did restrict or eliminate the discharge to the site, the Regional Water Boards should be committed to assist the discharger in finding a suitable, cost-effective alternative for its discharge.

Perhaps the Regional Water Boards should prepare their salt management plans before a utility commits to investing in a recycled water project. This way the utility will have a greater assurance that its investment in the project will be protected.

SPEFIFIC COMMENTS (Draft Report and Certified Regulatory Analysis Recycled Water Policy)

Basin Plans

c) Here again, the onus falls primarily on the discharger to either upgrade its facilities to a higher level of treatment and continue to discharge or to find an alternative discharge location, if the Regional Water Board must implement a salt management plan but fails to do so within the specified time-frame. This could be viewed by the utility as a disincentive to enter into a recycled water project, not only due to the possibility of having its irrigation sites shut off, but even if it were willing to upgrade its facilities they would have to meet effluent limits yet to be determined. While none of us knows exactly what discharge limitations might ultimately be implemented following the development of the salt management plans, those unknown effluent limitations could require the utility to spend significant amounts of money for compliance. This seems like a moving target and presents a significant gamble for the utilities.

Perhaps there needs to be a mandatory requirement to provide recycled water, unless it is not economically feasible. Recycling goals and timelines could be established for facilities to eliminate their non-recycled water disposal alternatives. Even if stringent discharge limitations were adopted, the utilities would be able to better quantify its future expenses for a recycled water project.

Alternatives for Limitations on Salts

d) It was pointed out that it can be difficult for utilities to calculate the flow-weighted salt concentration of the public water supply because

often the utility is changing its water supply. This is particularly true when the summer demand is high and the supplies are reduced.

While it sounds simple for the wastewater utility to potentially regulate industrial users and self-generating residential water softeners, it would be extremely difficult to implement such controls on the residential sources. The residential community would not readily accept the added cost resulting from offsite regeneration. It would also be costly to the utility to inspect and monitor such a program.

Further, this alternative would still require significant groundwater monitoring to determine if the groundwater objectives are being met. Therefore, the same issues as noted in alternative "c," regarding monitoring wells, would be applicable to this alternative.

We feel alternative "e" would be a better selection. Since the Regional Water Boards will be required to develop and implement salt management plans anyway, the data for the prediction models would be available to determine the assimilative capacity of a basin. This would provide utilities with specific, known effluent limitations it could plan to meet, if it chose to participate in a recycled water project. With that information, the utility could make an informed decision knowing the associated costs and being relatively assured that a project would not suddenly be terminated and then be forced to find an alternative disposal site. The accuracy of the data collected under this alternative would be no less accurate than any data collected for any other alternative.

Alternatives for Managing Nitrates

We concur with the choice of alternative "a." It seems to make the most sense of all the alternatives. A nutrient management plan would ensure that the discharge site would receive the correct amount of nitrogen it needs with either the recycled water by itself, or with the addition of commercial fertilizers, if necessary.

The problem with alternative "b" is that it doesn't make sense to remove the nitrogen, just to have to add it back into the recycled water in the form of commercial fertilizers. Additionally, the cost of constructing and operating an advanced wastewater treatment facility can be prohibitive.

Groundwater Monitoring

We concur with the proposed policy in regards to the requirements for groundwater monitoring for recycled landscape irrigation projects.

Compliance with Water Quality Objectives

We understand the concerns expressed in the proposed recycled water policy with regard to maintaining water quality. Perhaps the Regional Water Board should consider establishing set-back requirements for the potentially affected waters (i.e. shallow domestic wells, surface waters, etc.). This would provide a uniform defined set of criteria that a utility considering a recycled water project could evaluate prior to implementation. These set-backs should minimize any potential health risks or contamination.

Narrative Toxicity Objectives

The proposed policy seems reasonable and protective.

Groundwater Recharge Reuse

It is stated that the CDPH is developing regulations for groundwater recharge reuse. What is the status of these regulations?

The proposed policy goes on to state that there are two conditions that apply only to groundwater recharge reuse projects. The first condition allows the Regional Water Boards to establish a groundwater limitation in lieu of an effluent limitation, provided there is adequate attenuation of the constituent in the soil matrix and there is groundwater monitoring. The problem is that it is very difficult to determine accurate soil matrix attenuation, due to having so many variables at a site (differing soil types, seasonal precipitation changes, other activities at the site, thorough mixing of the percolate with the groundwater, etc.). Presumably, any limitation based on site attenuation would be higher than an effluent limitation. Since this might reduce the amount of required treatment by the utility, this would provide a cost benefit and an incentive to participate in a groundwater recharge project. However, the more conservative approach would be to apply the state's primary and selected secondary drinking water standards to the discharger's effluent. Again, these are already well established limits and are technically achievable.