WATER RECLAMATION
SOLID WASTE MANAGEMENT

# COUNTY SANITATION DISTRICTS
## OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
*Chief Engineer and General Manager*

12/4/07 Bd. Mtg.
**Water Recycling Policy**
Deadline: 10/26/07 Noon

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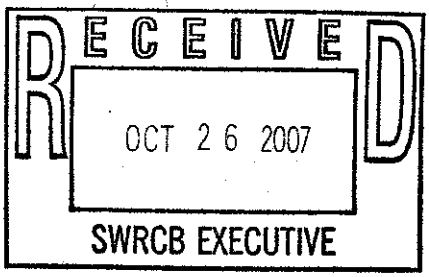


Ms. Jeanine Townsend
Acting Clerk to the Board
Executive Office
State Water Resources Control Board
Post Office Box 100
Sacramento, CA 95812-0100
*Via Electronic Mail*

Dear Ms. Townsend:

**Comment Letter – Proposed Water Recycling Policy**

The County Sanitation Districts of Los Angeles County (Districts) are pleased to offer the following comments regarding the State Water Resources Control Board's (State Board's) draft Water Recycling Policy (Policy). These comments supplement and expand upon the Districts' letter dated March 27, 2007, regarding development of the Policy, and testimony at the October 2, 2007 Workshop on this matter. 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, the Districts have delivered over 2 million acre-feet of recycled water for reuse.

The Districts wish to continue our longstanding water recycling operations while protecting the beneficial uses of the region's water resources in a reliable and cost-effective manner. A single, reasonable statewide policy that both encourages recycled water use and is protective of the State's water supplies is highly desirable. For this reason, the Districts strongly support the development of a policy framework that that enables recycled water use and provides regulatory consistency throughout the State. The Districts congratulate the State Board for taking the step to develop this Policy; however, we believe the current draft requires some substantive changes to achieve these goals. Without such changes, the Policy could have the unfortunate and unintended effect of deterring or discouraging reuse.

The Districts support the comments submitted by the WateReuse Association on the draft Policy and submit the following comments to supplement them. These comments reflect both the Districts' long involvement with and significant investment in the development of water recycling in our service area and

the unique institutional, regulatory and economic conditions that our agency experiences in Los Angeles County with regard to water recycling.

**General Comments**

The following are the Districts' main comments. Additional detailed comments on the policy are contained in Attachment 1.

***Groundwater Recharge***

- The Policy should require the Regional Boards to defer to the California Department of Public Health (CDPH) when setting standards to protect human health for groundwater supplies that have been augmented with recycled water. In particular, we believe it important that the Policy does not override the precedent-setting Order issued by the State Board for the Alamitos Barrier Recycled Water Project (Order No. 2006-0001) with regard to requirements for toxic constituents and the role of CDPH in issuing requirements for protection of public health. It is our understanding that it was the intent of State Board staff to make sure there were no conflicts, but we believe the current language does not achieve that intent. We have provided in our detailed comments suggested changes to the recitals and provisions to reflect Order No. 2006-001 and the State Board's desire to protect groundwater beneficial uses from impairment associated with chemicals of emerging concern.

- We believe it is important that the Policy not conflict with CDPH's current thinking regarding specific requirements for groundwater recharge projects, which have already been included in a number of permits issued for recharge projects. Suggestions have been provided in the detailed comments to address this concern.

- We recommend that the Policy be expanded to address salts and best practicable treatment and control for groundwater recharge projects. Suggested language has been provided in the detailed comments.

***Liability***

The Districts do not take lightly our legal responsibility to protect the environment and public health when it comes to the use of recycled water. However, we have serious issues with the language in the Policy that deals with liability.

- Some of the language regarding liability in the Policy appears to simply reiterate existing law and regulations. We understand it was not the State Board's intent to increase or decrease a recycled water user's liability under existing statute but the language in the draft Policy may be misunderstood by potential users. The language does little to enhance the Policy, and its inclusion in the Policy most likely will have a chilling effect on existing and future recycled water irrigation customers and will unduly alarm the general public over a product that has proven to be safe over years of use.

- Discussing liability associated with the use of recycled water for irrigation together with that for groundwater recharge in terms of liability is unsupportable because irrigation projects have a very low probability of impacting groundwater quality.

- Extending liability to include compounds that are currently unregulated will create an unlimited and open-ended liability that will also have a chilling effect on irrigation users unwilling to accept such a liability.

- The inclusion of a "financial means test" as a potential requirement is also inappropriate. The rationale that "landfills" have such tests ignores the fact that while some landfills have caused severe environmental impacts in the past, and then been abandoned, no such issues have arisen from the proper use of recycled water. Existing requirements calling for wellhead treatment or the provision of an alternative water supply are sufficient for groundwater recharge projects.

***Reuse vs. Disposal***

The Districts believe that the Policy, as written, does not go far enough in identifying water recycling as the beneficial use of a resource rather than the disposal of a waste. The State Legislature has identified recycled water as a resource that it expects to be put to beneficial use, however, several parts of the draft Policy contradict that position:

- Defining a "recycled water irrigation project" as only meeting a water supply need rather than a disposal need may result in some Regional Boards excluding particular reuse projects on the grounds that they represent both recycling and disposal. In many cases, water recycling projects are designed to meet a disposal need (where there are no nearby surface waters to discharge to or to comply with a TMDL to name a few examples) yet also meet a water supply need which benefits the people of the state. Some Regional Boards may also define a "water supply need" as an existing use of potable water that is displaced with recycled water. The Districts believe that all irrigation projects that put recycled water to a beneficial use should be covered under this policy.

- Applying stringent NPDES requirements (used to regulate the discharge of wastes) to irrigation site runoff is predicted to discourage both existing and potential landscape irrigation users of recycled water. Irrigation site runoff is more appropriately regulated under existing municipal stormwater permitting.

- Requiring the Regional Boards to continue issuing "Waste Discharge Requirements" for recycled water projects maintains the belief held by many in the regulatory community that recycled water is to be considered a "waste" instead of a resource and should be regulated as such.

In closing, the Districts would like to reiterate our support of the State Board's effort to develop a policy framework that responsibly promotes recycled water usage. If you have any questions about this letter or require additional information, please contact the undersigned at (562) 908-4288, extension 2801, or rtremblay@lacsd.org.

Very truly yours,

Stephen R. Maguin

Raymond Tremblay
Section Head
Monitoring Section

RT:lmb
Attachments

# ATTACHMENT 1
## Detailed Comments

***Recital 12***: *"Through control of industrial discharges and self-regenerating water softeners, a recycled water producer can limit to 300 milligrams/liter (mg/l) the increase of TDS from a community's source water supply to its produced recycled water."*

***Comment:*** This statement is not supported by scientific evidence and, based on the Districts' experience, is likely to be incorrect. While industrial discharges and residential self-regenerating water softeners are sources of salts in recycled water, salts are also contributed by the drinking water supply and non-softening residential uses of drinking water. The Districts are not aware of any evidence that controls of industries or residential self-regenerating water softeners are capable of limiting the TDS increase in recycled water to 300 mg/L in every instance. The difference in TDS concentrations between source water and recycled water depends on numerous factors, including variations in use of detergents and other consumer products by residents, swimming pool maintenance practices employed by residents, domestic and commercial water conservation measures, and the amount and types of industrial waste and commercial waste tributary to the treatment plant. With regard to controls on residential self-regenerating water softeners, there are statutory constraints on the extent to which controls can be applied. Per section 116786 of the California Health and Safety Code (HSC) Section, local agencies can only *prospectively* prohibit the installation of residential self-regenerating water softeners and then only after meeting very specific conditions. Consequently, the Districts recommend that this recital be stricken. Alternative language for TDS is provided with our comments regarding the provisions for irrigation and groundwater recharge.

***Recital 13***: *"Irrigation in amounts that do not exceed the amount needed for landscapes or crops - taking into account evapotranspirative demand, the distribution uniformity of the irrigation system, and leaching needed to prevent the buildup of salts in soil - creates a substantial delay in pollutants reaching groundwater, limiting the effectiveness of groundwater monitoring. Furthermore, it is usually unreasonable to require groundwater monitoring for irrigation projects using recycled water because these projects generally pose a threat to water quality similar to irrigation projects using surface water or groundwater, for which groundwater monitoring is not required."*

***Comment:*** The Districts believe that the use of recycled water for landscape irrigation typically poses no greater threat to groundwater quality that the use of surface water. Suggested changes to the recital are presented below.

> *"Irrigation in amounts that do not exceed the amount needed for landscapes or crops - taking into account evapotranspirative demand, the distribution uniformity of the irrigation system, and leaching needed to prevent the buildup of salts in soil - creates a substantial delay in pollutants reaching groundwater, limiting the effectiveness of groundwater monitoring. Furthermore, it is ~~usually~~ unreasonable to require groundwater monitoring for landscape irrigation projects using recycled water because these projects generally pose ~~a~~ little or no greater threat to water quality ~~similar to~~ than irrigation projects using surface water or groundwater, for which groundwater monitoring is not required."*

***Recital 16:*** *"Recycled water has the potential to contain constituents not typically found in surface water or groundwater, because it is usually produced from sewage. Hence, for groundwater recharge reuse projects, to protect public health, a Regional Water Board may need to establish a limitation for a constituent for which CDPH has not established an MCL."*

***Comment:*** This recital, which deals with establishing limits for chemicals of emerging concern (e.g., microconstituents), implies that CDPH is not adequately addressing this issue and thus Regional Boards must fill in the void to establish limits in groundwater recharge permits to protect public health. The recital also appears to contradict State Board Order 2006-0001 for the Alamitos Barrier Recycled Water Project. State Board Order 2006-0001 concluded that it is not appropriate for Regional Boards to include non-MCL, Notification Level-based limits in the groundwater recharge permit for that project, and additionally found that Regional Boards should follow CDPH recommendations with regard to protection of human health. Order 2006-0001 also reiterated previous State Board decisions that effluent limitations can be based on criteria that have not been adopted as water quality standards, so long as appropriate findings are made.[1] Thus, this recital should be modified to reflect the findings in Order 2006-0001 with regard to the role of CDPH and with regard to the steps Regional Boards must take to establish limits without established water quality standards. Suggested language to capture this intent is presented below.

> *"Recycled water has the potential to contain constituents for which drinking water MCLs, water quality criteria, or water quality objectives for the protection of human health have not yet been established. Regional Boards should follow recommendations provided by CDPH when it is determined that effluent limitations are needed for such constituents to protect municipal drinking water beneficial uses, and make appropriate findings in permits issued for groundwater recharge projects to support such limitations. ~~not typically found in surface water or groundwater, because it is usually produced from sewage. Hence, for groundwater recharge reuse projects, to protect public health, a Regional Water Board may need to establish a limitation for a constituent for which CDPH has not established an MCL.~~"*

***Recital 24****: "For recycled water irrigation projects, discharges of salts to groundwater can be reasonably controlled by implementing a nutrient management plan, applying recycled water in an amount that does not exceed the amount needed for the landscape or crops, and controlling salt discharges to collection systems from industrial facilities and self regenerating water softeners. These actions represent best practicable treatment or control for controlling salts for recycled water irrigation projects."*

***Comment:*** Per earlier comments regarding Recital 12, the Districts recommend that this recital be revised accordingly, as shown below.

> *"For recycled water irrigation projects where there is a concern regarding salt accumulation, discharges of salts to groundwater can be reasonably controlled by implementing a nutrient management plan, applying recycled water in an amount that does not exceed the amount needed for the landscape or crops, and ~~controlling salt discharges to collection systems from industrial facilities and self regenerating water softeners~~ implementing feasible salt reduction strategies. These actions represent best practicable treatment or control for controlling salts for recycled water irrigation projects."*

***Provision 5****: "For the purpose of this Policy, 'recycled water irrigation projects' are defined as those projects that use recycle water to meet a water supply need, instead of a disposal need."*

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[1] See, e.g. WQ 95-4 and WQO 2001-16. The State Water Board has held that "non-regulatory" limitations may be used to develop effluent limitations where appropriate findings are made. (See, e.g. WQO 2002-0015 (Vacaville) at p. 35 (permit may include limitations based on CDPH recommendations).)

***Comment:*** This provision limits the definition of "recycled water irrigation projects" to those that meet a water supply need rather than disposal. The Districts are concerned that some Regional Boards may interpret the term "disposal" to include many beneficial recycled water uses that also meet a disposal need. This would exclude many existing and future projects from coverage under this policy. The following are a few examples of water recycling projects the Districts are involved in where this may be the case:

- The La Cañada Water Reclamation Plant has no surface water discharge but rather supplies all the recycled water it produces for irrigation of a golf course. Because there is no nearby surface water body available for surface water discharge, the use of recycled water could be construed as primarily meeting a disposal need. However, the plant was in fact built specifically to act as a source of water for the golf course and therefore is clearly designed to meet a water supply need.

- The planned Newhall Ranch Water Reclamation Plant is located adjacent to the Santa Clara River. This plant is being designed such that there will be no river discharge during most of the year. Most of the recycled water from the new plant will be beneficially reused to offset the future potable water needs of the surrounding community, which has not yet been built. Use of recycled water from this plant could be misconstrued as primarily meeting a disposal need, since treated water discharged to the river requires a higher level of treatment than use of the treated water as recycled water.

- The Districts utilize recycled water in the Antelope Valley north of Los Angeles to grow fodder crops to feed dairy cattle, displacing potable water use for fodder crop production at other locations. Since the agricultural demand being satisfied by the recycled water did not previously exist at this location and a potable water supply is technically not being replaced, this cultivation of crops might not be considered a "recycled water irrigation project" under this Policy, despite the fact that it is a beneficial application of recycled water that meets a water supply need.

Projects such as these should be encouraged by the State and should not be excluded from the Policy, either intentionally or unintentionally. We believe a better approach would be to clearly define in the policy a recycled water irrigation project as one that uses recycled water to meet a water supply need for the maintenance of landscaping or agricultural crop production. Suggested language is presented below.

> *"For the purpose of this Policy, 'recycled water irrigation projects' are defined as those projects that use recycled water to meet a water supply need, ~~instead of a disposal need~~ for maintenance of landscaping or agricultural production."*

***Provision 7:*** *"Regional Water Boards shall require the following in waste discharge and water reclamation requirements for recycled water irrigation projects:"*

***Comment:*** The reference to recycled water as a "waste" is in direct conflict with the intent of the State Legislature, which has specifically categorized recycled water as a "resource". Therefore, this Policy should specifically state that irrigation with recycled water constitutes use of a resource and is not a discharge of waste requiring WDRs. Accordingly, the reference to "waste discharge requirements" in this provision should be deleted, as follows:

> *"Regional Water Boards shall require the following in ~~waste discharge and~~ water reclamation requirements for recycled water irrigation projects*

***Provision 7(a):*** *"The development and implementation of a nutrient management plan;"*

***Comment:*** The Districts do not believe it is appropriate to develop nutrient management plans for all reuse sites. For smaller urban irrigation sites such as schools, churches, and businesses, it is not practical to develop a specific nutrient management plan for each site since this would constitute an undue and unnecessary burden. Like salt management, nutrient management plans should be developed by Regional Boards on a watershed-wide or basin-wide basis, where nutrients or nitrates have been identified as a water quality issue. Where recycled water usage causes or contributes to a water quality impairment, recycled water projects should implement nutrient management practices consistent with a nutrient management plan addressing *all* relevant nutrient sources. Furthermore, in 1984 the State Water Board published a guidance manual entitled Irrigation with Reclaimed Municipal Wastewater, Report Number 84-1, which contains a chapter on nutrient management that, although somewhat outdated, contains a basic framework for balancing nutrient application with plant nutrient uptake. The Districts have used the technical information in this report as a basis to develop nutrient management practices for agricultural irrigation with recycled water. An updated version of this report with expanded information on irrigation of landscaping and crops could easily be developed on a statewide or regional basis to serve as a basis for development of nutrient management practices for recycled water usage . For these reasons, we recommend that Provision 7 (a) be amended to read:

*"The ~~development and~~ implementation of ~~a~~ nutrient management ~~plan~~practices;"*

***Provision 7(d):*** *"The monthly average TDS concentration in the recycled water to not exceed the monthly average TDS concentration of the source water supply, plus 300 mg/l. The monthly average TDS concentration of the source water supply shall be the flow-weighted monthly average TDS concentration of the public water supply of the service area that generates sewage from which the recycled water is produced."*

***Comment:*** This provision limits the level of TDS in recycled water used for irrigation to the source water (the potable water used in the area tributary to the water reclamation plant, or WRP) TDS concentration plus 300 mg/L, on a monthly average basis. In conjunction with the WateReuse Association, the Districts have been working on conducting a survey of recycled water producers throughout California to collect empirical data on the TDS increment typically added to source water at a wide variety of facilities. Based on the preliminary results from that survey, it appears that approximately 50% of recycled water producers have TDS levels greater than 300 mg/l above their potable water supplies. Another important insight from the survey is that in some areas, recycled water irrigation occurs in areas with underlying groundwater basins that have high TDS levels naturally and these basins are not usable for drinking water purposes. In other instances, areas have relatively low potable water supply TDS levels, and although the increment added during municipal and domestic use is over than 300 mg/l, the total TDS level in the recycled water also has not posed a water quality problem. Therefore, it appears to us that a more refined and multi-faceted interim approach for salt management needs to be included in the Policy. At a minimum, we strongly recommend that the State Board delete the 300 mg/l TDS increment as an across-the-board requirement, and that the following concepts be used in addressing this issue in the Policy:

- If a local salt management plan already exists, it should be used instead of the interim measures (e.g. the Santa Ana River Basin's TDS and Nitrogen Management Plan);
- If recycled water meets the numerical groundwater objective for TDS, no interim salt management requirements should be applied;
- If a maximum increment is to be implemented, it should 1) allow the total TDS to be considered, so that areas with low TDS potable water supplies are not unnecessarily burdened; and 2) it should be set at a level that most existing recycled water supplies can meet so that existing projects are not forced to shut off recycled water supplies. The underlying rationale for this point is that existing recycled water projects already have

permits issued by the Regional Boards, and there should be a presumption that the permits already in effect are protective of water quality; and

- Implementation of source control measures that reduce salts to the extent technologically and economically feasible should be allowed in lieu of compliance with any maximum TDS increment that is established.

The Districts and WateReuse Association are working hard to finalize the survey results and to fully develop recommendations for this provision. We anticipate that the survey and a complete set of recommendations will be submitted to the State Board by approximately November 2, 2007.

One additional area on which the Districts would like to comment in relation to the proposed TDS increment requirement is the difficulty of obtaining monthly average data. Each of the Districts' WRPs receives influent derived from as many as a dozen or more different domestic water purveyors, whose supplies of water may be groundwater, imported water, or some blend of the two. Data on flowrates and TDS concentrations are not available from the water purveyors on a monthly basis, but is rather usually only available on an annual basis after the purveyors have published their annual water quality report. While TDS values in water imported to southern California can be obtained on a monthly basis, many water purveyors only sample their wells on a once-in-three-years basis. Further complicating a monthly calculation is the fact that the Districts have a flexible sewerage system, whereby water can be diverted from one WRP to another as needed to accommodate changes in flow or maintenance. Therefore, the sewershed for our WRPs can change over time. Based on these factors, it would be difficult and impractical to implement a monthly average requirement. We also question the value added (in terms of water quality protection) by expending the resources to develop monthly average data, since salt balance issues tend to be long-term management issues, not acute short-term issues.

***Provision 7(e):*** *"compliance with the federal Code of Regulations, Chapter 40, Part 122, National Pollutant Discharge Elimination System."*

***Comment:*** This provision requires NPDES compliance for irrigation uses. Applying stringent NPDES requirements to irrigation sites is predicted to have a chilling effect on existing and potential landscape irrigation users of recycled water. This is an unnecessary and duplicative regulatory effort that will place an additional permitting burden on users of recycled water, when such a burden is not placed on those using other sources of irrigation water. Furthermore, regulation of incidental runoff from irrigation sites is adequately addressed in Los Angeles County by inclusion of incidental irrigation run-off of recycled water in the Municipal Separate Storm Sewer System (MS4) permit issued to Los Angeles County. If similar permits are not in place in other jurisdictions, it is recommended that they or some other enabling permit be adopted in lieu of issuance of NPDES permits to each site irrigating with recycled water. We suggest the following language change:

> *"~~compliance with the federal Code of Regulations, Chapter 40, Part 122, National Pollutant Discharge Elimination System~~ incidental amounts of recycled water runoff that occur as the result of normal irrigation operations shall be managed by irrigation Best Management Practices and permitted using existing mechanisms in the same manner as other types of irrigation runoff. These mechanisms include, but are not limited to, municipal stormwater permits, general permits, or master reclamation permits."*

***Provision 7(f):*** *"the use of recycled water to not cause or contribute to violations of water quality objectives."*

***Comment:*** The Districts are concerned that this provision could be interpreted to mean that recycled water usage may not increase the concentration of any groundwater constituent to a level above background, since any increase would be "contributing" to a level approaching a numeric or narrative

water quality objective. Since meeting this interpretation of the provision would most likely be unattainable for most reuse sites and, thus, preclude them from coverage under this Policy, we suggest the following language:

> *"the use of recycled water to not cause or contribute to impairment of a designated beneficial use of groundwater or ~~violations~~ exceedences of numeric groundwater quality objectives for non-salt related constituents."*

***Provision 8:*** *"A Regional Water Board shall only require groundwater monitoring for a recycled water irrigation project if it determines that site conditions such as shallow groundwater could cause an increased potential for the irrigated site to adversely affect public health or surface water quality."*

***Comment:*** The Districts agree with the intent of this provision, which is to limit groundwater monitoring for recycled water irrigation projects to very limited circumstances where such monitoring is warranted. Unfortunately, in implementing this policy Regional Boards may determine that most irrigation projects could cause "an increased potential" for an adverse effect and thus require groundwater monitoring. Such an outcome would not be consistent with the intended effect of this provision. The Districts believe that groundwater monitoring should be limited only to projects where there is a "significant" potential for an adverse impact to occur, not simply an "increased potential." For example, a small irrigation project over a shallow groundwater table could cause an "increased potential" for an adverse impact, but the small size of the project would make it highly unlikely that an actual adverse impact would occur.

The Districts are supportive of a size threshold, above which it can be presumed that groundwater monitoring for an irrigation project should occur. A reasonable value for such a size threshold is 1000 acres, based on a review of the Districts' irrigated sites. Few urban irrigation sites would exceed this acreage.

> *"A Regional Water Board shall only require groundwater monitoring for ~~a~~a recycled water irrigation project if the project includes irrigation of over 1000 acres or if it determines that site conditions such as shallow groundwater could cause a significant potential for adverse impact to ~~the irrigated site to adversely affect~~ public health or surface ~~public health or surface~~ water quality*

***Provision 10****: "For constituents for which CDPH has established an MCL, when interpreting a narrative objective for toxicity to develop a numeric effluent limitation for the constituent for protection of public health for a groundwater recharge reuse project, the Regional Water Board shall establish the effluent limitation at a concentration equivalent to the MCL. A Regional Water Board may establish a limitation that is more stringent than the MCL, if necessary to protect a designated beneficial use other than municipal or domestic use, such as agricultural use."*

***Comment:*** While the Districts are supportive of this provision, it needs to be amended slightly to reflect the current CDPH draft groundwater recharge regulations. These regulations specify that recycled water does not have to meet the secondary MCL for color. Recycled water produced by the Districts occasionally exceeds the secondary MCL for color, but meets all other MCLs. Color above the secondary MCL should not preclude groundwater recharge. Recommended language to implement this change is provided below.

> *"For constituents for which CDPH has established an MCL, with the exception of the secondary MCL for color, when interpreting a narrative objective for toxicity to develop a numeric effluent limitation for the constituent for protection of public health for a groundwater recharge reuse project, the Regional Water Board shall establish the effluent limitation at a concentration equivalent to the MCL. A Regional Water Board*

*may establish a limitation that is more stringent than the MCL, if necessary to protect a designated beneficial use other than municipal or domestic use, such as agricultural use."*

***Provision 11:*** *"For constituents for which CDPH has not established an MCL, a Regional Water Board may interpret a narrative objective for toxicity for protection of human health to establish an effluent limitation for the constituent for a groundwater recharge reuse project, only if it finds that: (a) the constituent is present in the recycled water; (b) the constituent is likely to be persistent in groundwater in the recharge area; (c) adequate information is available to characterize the toxicity of the constituent and establish an effluent limitation; and (d) approved analytical methods are available to measure the concentration of the constituent."*

***Comment:*** Per our comments regarding Recital No. 16, and to capture the intent of that recital, we recommend that a number of changes be made to this provision to reflect the findings in Order 2006-0001 with regard to the role of CDPH in establishing requirements for protection of public health for groundwater recharge projects. In addition, while this provision establishes the findings Regional Boards must follow to establish limits for constituents without water quality standards, the four conditions included in the provision do not directly address the primary need for establishing a limit; namely, that there is a linkage between a constituent that is reliably determined to be present in recycled water and the presence of the constituent in groundwater at concentrations what would impair the municipal drinking water supply beneficial use as a result of using recycled water for groundwater recharge. It is critical that any limits established by a Regional Board be established on such a basis, rather than on the basis of simply detecting a constituent and having enough toxicity information available to set a limit.

If the policy language is not revised, then it is likely that it would allow Regional Boards to independently establish a limit for just about any constituent that is detected in recycled water and/or groundwater, since there is considerable information in the literature regarding toxicity.

For some constituents, inclusion of this requirement as written could result in the need for application of advanced treatment. Should the policy language not be revised, as part of its environmental analysis the State Board should evaluate the potential impacts associated with advanced treatment including: (1) air emissions, including climate-changing greenhouse gases, associated with energy usage to operate advanced treatment facilities and, if trucks may be needed to transport brine, air quality impacts associated with increased heavy truck traffic resulting from offsite brine hauling; (2) traffic impacts, if trucks may be needed by facilities to haul brine to disposal facilities; (3) increased energy usage for the operation of advanced treatment facilities (e.g., membrane technology is a very energy intensive process that uses substantial amounts of electricity compared with normal wastewater treatment plant operations); (4) brine disposal, since approximately 15% of the quantity of wastewater treated using advanced treatment can be expected to end up as brine, which will contain concentrated levels of pollutants ordinarily found at very low levels in municipal wastewater. Since membrane treatment technology only separates and concentrates contaminants without destroying them, the application of this expensive technology would simply result in moving the contaminant or contaminants from one location to another, with no net reduction in the mass of pollutants being discharged. Moreover, ocean discharge of brine could have negative impacts on marine life and water quality in coastal waters due to the discharge of concentrated amounts of pollutants, and such environmental impacts must be analyzed. Therefore, the State Board would need to identify and analyze the costs and environmental impacts of alternative strategies and technologies for brine disposal.

However, we believe this type of analysis would not be necessary for the policy if it is revised per our comments. Suggested language is provided below.

*"For constituents for which CDPH has not established an MCL, a Regional Water Board shall defer to CDPH with regard to recommendations for effluent limitations for groundwater recharge projects when ~~may~~ interpreting a narrative objective for toxicity for protection of human health. ~~to establish an effluent limitation for the constituent for a groundwater recharge reuse project.~~ Upon the recommendation of CDPH, a Regional Board may establish a effluent limitation only if it finds that: (a) the constituent can be reliably measured in the recycled water and groundwater using approved analytical methods~~is present in the recycled water~~; and (b) is present in groundwater at concentrations that would impair the municipal drinking water supply beneficial use as a result of using recycled water for groundwater recharge ~~the constituent is likely to be persistent in groundwater in the recharge area; (c) adequate information is available to characterize the toxicity of the constituent and establish an effluent limitation; and (d) approved analytical methods are available to measure the concentration of the constituent~~."*

***Provision 17:*** *"Compliance with requirements based, in whole or in part, on this Policy does not exempt a discharger from liability for contamination of groundwater. If drinking water standards become more stringent after a Regional Water Board establishes requirements for a project, the discharger shall be liable, under Water Code section 13304 or other applicable provisions of law, for any past or continuing discharge that has caused, is causing, or threatens to cause groundwater to violate the new or more stringent drinking water standard(s). This liability may include the provision of an alternative water supply or wellhead treatment to any affected parties."*

***Comment:*** It is not clear why it is necessary for the Policy to address liability for potential contamination of groundwater from pollutants that may – or may not – be associated with recycled water, in particular. Many causes of action, including negligence, nuisance, or the federal Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), exist for activities that can lead to groundwater contamination, and together with other statutes, common law, and case law, these define liability for entities that undertake activities such as water recycling. As a public entity that supplies recycled water for widespread use in Los Angeles County, we take our legal responsibilities to protect public health and the environment seriously and recognize that liability may occur from a failure to do so. However, as most recycled water projects are carried out in partnership with other public and investor-owned water purveyors, it should also be recognized that we also have contractual agreements pertaining to recycled water, and these agreements typically include provisions relating to liability and indemnification. In developing a policy to encourage water recycling, we ask that the State Board recognize that there are many existing contractual relationships that may be affected by the policy, and we ask that the State Board take care not to abrogate existing recycled water agreements, which could have the opposite of the intended result by delaying or even reducing the amount of recycled water being used.

Additionally, it is our understanding that the State Board's primary intent is to highlight a recycled water permit-holder's responsibility should a groundwater basin be rendered unsuitable for drinking water purposes due to a water recycling project (including nonattainment with future drinking water standards for which no regulations currently exist). We believe that this concern should be focused on groundwater recharge projects, rather than irrigation projects, because irrigation projects have a very low probability of causing such a problem. Indeed, the language currently proposed in the Policy appears to be contrary to the intent of the policy to encourage a greater amount of water recycling in California, as it can be read to imply some *expansion* of liability as compared with current circumstances and because of the difficulty for public agencies to accept liability for compliance with regulations which are unknown and unforeseeable. Furthermore, because of this specter of unknown potential liability, if adopted as written, the policy will likely have a chilling effect on the development of new or expanded water recycling projects, due to an unwillingness by recycled water suppliers, purveyors, or users to take on what many may construe as expanded liability. One important aspect of this effect is that, through this proposed

provision, the Policy itself may add to the public perception that recycled water is somehow dangerous or scary, when in fact it has been found to be safe if used in compliance with water recycling regulations and permit conditions (e.g., California Water Code Section 13529).

Instead, the Districts strongly recommend that the State Board limit this provision such that it applies only to groundwater recharge projects, and amend the provision to use an approach that requires provision for "replacement water supplies." Such an approach is currently used in permits for several groundwater recharge projects. This approach would provide a specific course of action, thus ensuring an appropriate response to future groundwater contamination, rather than creating language in the Policy that may be misapplied and misinterpreted. Over the past several years, CDPH has recommended that groundwater recharge permits include requirements for actions to be undertaken should a groundwater recharge project result in impairment of a municipal drinking water supply beneficial use. Under this approach, groundwater recharge project sponsors are required to develop a plan that provides an alternative supply or treatment mechanism to any user of a potable drinking water source that as a result of the groundwater recharge project violates California drinking water standards or has been degraded to the degree that it is no longer a safe source of drinking water.[2] This requirement addresses existing and future MCLs or any contaminant that CDPH believes to be present in concentrations that render a groundwater basin unsuitable for public consumption. In accordance with these comments, we recommend that this provision be modified as follows:

> *"Nothing in this policy is intended to expand or limit ~~Compliance with requirements based, in whole or in part, on this Policy does not exempt a discharger from~~ liability under existing law for contamination of groundwater. ~~If drinking water standards become more stringent after a~~ Regional Water Boards shall include requirements in permits for groundwater recharge projects, consistent with CDPH recommendations, for adoption of a plan (subject to approval by CDPH) to provide ~~establishes requirements for a project, the discharger shall be liable, under Water Code section 13304 or other applicable provisions of law, for any past or continuing discharge that has caused, is causing, or threatens to cause groundwater to violate the new or more stringent drinking water standard(s). This liability may include the provision of~~ an alternative water supply or ~~wellhead treatment~~ CDPH-approved treatment mechanism for a groundwater basin that, as a result of using recycled water for groundwater recharge, is degraded such that it can no longer be used as a safe source of drinking water."*

***Provision 18**: "The Regional Water Board shall include at least the liability description in paragraph No. 17 in requirements for groundwater recharge reuse projects. In addition, Regional Water Boards may, at their discretion, require project owners to pass a financial means test or otherwise provide financial assurances of their ability to bear such liability. Regional Water Board staff shall consult with appropriate State Water Board staff prior to recommending specific language implementing any such financial means/assurance requirements."*

***Comment*:** We strongly recommend that Provision No. 18 be deleted. The draft Staff Report notes that the intent of this provision is to give Regional Boards the authority to require project owners to "provide financial assurances of their ability to bear liability, as is currently required for landfills." It is important

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[2] See, for instance, the 2004 permit issued to the Orange County Water District for its Groundwater Replenishment System project, which contains the following requirement: "Prior to the onset of operation, the producer shall have in place a resolution adopted by its governing board that it will be responsible for developing a plan for providing an alternative source of domestic water supply, or a CDHS approved treatment mechanism, to any user whose domestic water well is found to violate California Drinking Water Quality Regulations as a direct result of the GWRS or when CDHS makes an analysis and finding that the domestic water well is unsuitable for human consumption as a direct result of the GWRS. Such alternative sources can include water delivered for blending of the producing well, imported water, water produced at a wellhead treatment plant, and water produced from new wells."

to acknowledge that the financial assurance laws and regulations adopted for municipal solid waste landfills, as well as other activities with statutory requirements for the provision of financial assurances such as hazardous waste disposal facilities, surface mining and aquaculture, were developed in response to significant problems that occurred as a result of abandoned facilities and sites. Moreover, a whole legal/regulatory framework exists for the financial assurance to be established.[3] We do not believe this requirement, even though optional, is necessary for groundwater recharge projects, because they go through a very extensive regulatory review and public adoption process, and because, so far as we are aware, they are always carried out by public entities funded through enterprise activities (i.e., wastewater or water ratepayers), which ensure the availability of a source of funding. We also believe that, if the State Board believes financial assurances should be required for groundwater recharge projects, this is a matter for debate by the Legislature, since there is arguably no authority for this provision in the Water Code.

In the event that the State Board does not delete this provision, the State Board should establish criteria to for project sponsors to provide financial assurances through a regulatory process pursuant to the state Administrative Procedures Act ("APA"). Failure to adopt criteria would result in Regional Boards establishing financial assurances on a permit-by-permit basis with no assurance of consistency or uniformity. As a rule of standard general application for the implementation of the Policy and of the Porter-Cologne Act, any criteria adopted for the financial assurance provision would be a regulation subject to the APA. On a policy basis, it would be important to develop these requirements in the form of a regulation so that potential project sponsors could plan their projects appropriately and determine whether they would be able to meet the requirements, prior to expending significant resources on project development.

**Requested Additional Provisions**

The Districts believe that recycled water use would be encouraged by the inclusion of two additional provisions addressing groundwater recharge projects in the Policy.

**1. Salt Requirements.** The draft policy only addresses salts for irrigation projects. The policy would benefit from having a specific provision for salts in groundwater recharge projects to avoid uncertainty or inconsistent application of salt requirements. Such a provision should state that TDS be used as the primary surrogate for regulating salts, and follow the TDS regulatory strategy recommended in our comments for Provision 7(d).

**2. Best Practicable Treatment and Control**. The policy needs to explicitly include a provision with regard to best practicable treatment and control for groundwater recharge projects. Suggested language is provided below.

> *"For the purposes of this policy, for groundwater recharge projects, the CDPH findings of fact and conditions, which address source control, recycled water treatment, and project operation, are deemed to be best practicable treatment and control for protection of public health for the purposes of State Water Board Resolution No. 68-16."*

[3] In the case of municipal solid waste facilities, see for instance Cal. Public Resources Code §43600, 40 Code of Federal Regulations Part 258, and financial assurance regulations adopted by the California Integrated Waste Management Board.