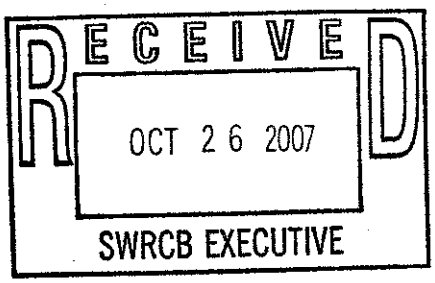
WATEREUSE ASSOCIATION

CALIFORNIA SECTION

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

October 26, 2007



Via Electronic and U.S. Mail

Tam Doduc, Chair, and Members
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

ATTN: Jeanine Townsend, Acting Clerk to the Board,
(commentletters@waterboards.ca.gov)

SUBJECT: **Comment Letter: Water Recycling Policy**

Dear Chair Doduc and Members of the Board:

The California Section of the WateReuse Association is pleased to submit comments on the State Water Board's draft Water Recycling Policy. The California Section of the WateReuse Association is a non-profit organization with a mission to promote responsible stewardship of California's water resources by maximizing the safe, practical, and beneficial use of recycled water. We applaud the State Water Board for its leadership in undertaking this policy and offer our comments in the spirit of assisting the Board in achieving its goals to facilitate recycled water use and improve consistency in the permitting process.

Our detailed comments and suggested language revisions are included in the attachment. We hope the Board will revise the Policy in accordance with these recommendations. This letter focuses on some of the major legal and policy issues that have been raised during the workshop and other discussions regarding the draft Policy.

Recycled Water is a Valuable Resource.

California has the potential to recycle up to 1.5 million-acre feet of water annually by the year 2030. (*Water Recycling 2003*, Recommendations of California's Recycled Water Task Force, at p. xi.) This resource would free up potable water supplies to meet approximately 30

percent of the water demand associated with projected population growth. (*Ibid.*) The Legislature has established a goal of recycling one million acre-feet of the water by 2010. (Water Code §13577.) The Legislature has declared that the people of the State have a "primary interest" in the development of recycled water facilities, and that the State should "take all possible steps" to encourage the development of such facilities in order to meet the State's water needs. (Water Code §§13510, 13512.)

Losing existing recycled water customers, and discouraging new ones, with unnecessary regulatory requirements will result in increased discharges of wastewater effluent to the waters of the state. Water recycling provides both water quality benefits--reducing discharge to surface waters—and water supply benefits by reducing demand for limited fresh water resources. The Water Code defines recycled water not as a waste but as "water, which, as a result of treatment, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource." (Water Code §13050(n).)In order to achieve the State's recycling goals and realize these benefits, it is imperative that the State Water Board consistently view recycled water as a valuable resource rather than a waste discharge. Water should be judged not by its history, but by its quality.

Some of the recitals and terminology used in the draft Policy unintentionally perpetuate this view of recycled water as waste. (e.g. Recitals 11, 16, 19 and 20; the use of the term "effluent limitation" to refer to recycled water quality.) We have offered suggested revisions to ensure that the language of the Policy reflects the intent to view recycled water as a valuable resource to be beneficially used.

The Draft Policy is Consistent with the Anti-degradation Policy (Resolution 68-16).

We support the State Water Board's decision to address up front recycled water anti-degradation issues in the Policy in order to facilitate project permitting. With regard to irrigation, as noted above, irrigation with recycled water is a use of water, not a disposal of waste. The essence of the recycling ethic is that a waste that would otherwise be disposed of is transformed into a useful product. We do not believe that anti-degradation approaches designed to address waste discharges to surface water or land are appropriate for irrigation projects that comply are operated in a manner that results in only incidental amounts of water reaching groundwater no greater than those from irrigation generally.

That said, to the extent that the anti-degradation policy is implicated by irrigation projects, we support the approach taken in the Policy, which is that irrigation projects that apply recycled water in accordance with best practices in quantities required for the landscape or crops at the site are consistent with best practicable treatment and control and in the maximum benefit

to the people of the State. To the extent that outdoor irrigation collectively, regardless of the type of water used, has the potential to affect groundwater quality, the Policy calls for addressing this in the only meaningful way, through basin-wide plans. Upon completion, those plans may require changes in practices by various irrigators in order to meet the regional goals. The Policy wisely includes provisions for interim permitting of recycled water irrigation activities and we support this strategy in concept.

With regard to recharge projects, the Recycled Water Criteria require recycled water to be of a quality that protects public health, whereby the California Department of Public Health (CDPH) makes recommendations for a project to the Regional Water Board on an individual case-by-case basis. CDPH is also required to hold a public hearing prior to making the final determination regarding the public health aspects of each project also taking into consideration State Board Resolution No. 68-16. Under the Water Code, projects can only proceed if CDPH determines that that the proposed recharge will not degrade the quality of the water in the receiving aquifer as a water supply for domestic purposes. In advance of the public hearing, project proponents are required to provide a completed Engineering Report to CDPH and the Regional Water Board that consists of a comprehensive investigation and evaluation of the project, its impacts on existing and potential uses of the groundwater basin, and the proposed means for achieving compliance with CDPH and Regional Water Board requirements. After the public hearing, CDPH issues findings of fact and conditions that constitutes its recommendations to the Regional Water Board in establishing permit requirements. The findings of fact and conditions address source control, recycled water treatment, and operation of these projects, which for the purposes of State Water Board Resolution No. 68-16 are deemed to be consistent with best practicable treatment or control. Given this extensive review and analysis, the State Water Board has appropriately determined that recharge projects that comply with the Policy are consistent with the anti-degradation policy.

Reliance on the California Department of Public Health with Regard to Public Health Protection is Appropriate.

We support the State Water Board's intent to strike the proper balance in the Policy with regard to reliance on the CDPH with regard to establishing requirements for human health protection. CPDH is the State agency tasked with protecting our drinking water supplies and ensuring that water is safe for human consumption. It sometimes seems as if the Regional Water Boards are uncomfortable with relying on CDPH, yet the Legislature has assigned CDPH a prominent role in the regulation of water recycling. As the State Water Board has noted, it is especially appropriate where policy considerations favor a recycling project, to follow CDPH recommendations with regard to human health and, in particular, use of notification levels in permitting. (Order WQ 2006-001, *In the Matter of the Petition of the Water Replenishment*

District of Southern California, at p. 7.) The Policy does not foreclose a Regional Water Board from raising concerns or issues with CDPH; rather, it requires that the meet and confer process outlined in the memorandum of agreement between the agencies be utilized.

Any Provision for Liability Associated with Groundwater Contamination Should Expressly State that it Does Not Alter Liability Under Existing Law.

While we do not believe that the Policy needs to include a provision associated with groundwater contamination, we agree with what we believe to be the State Water Board's intent – namely, that the liability provision does not alter liability under existing law. The attachment to this letter suggests specific revisions to ensure that the Board's intent not to expand or constrict liability is clearly expressed in the Policy.

The Financial Assurances Provision of the Draft Policy is Unnecessary and Should be Removed.

As proposed, the Policy would allow Regional Water Boards to require owners of groundwater recharge reuse projects to provide financial assurances of their ability to bear liability for groundwater contamination. This provision is inappropriate for a variety of reasons and would unnecessarily curtail groundwater recharge reuse projects contrary to the Legislature's and, we believe, the State Water Board's intent.

For example, requiring financial assurances in this instance would interfere with the legislative budgeting processes of local governments. As an initial matter, there is no state statutory requirement that cities adopt budgets, and courts are generally without power to interfere in the budget process. (*Scott v. San Bernardino* (1996) 44 Cal.App.4th 684, 690.) Developing a budget requires a local government to weigh complex public needs and set priorities for the use of the municipality's finite financial resources to address those needs. (*Id.* at 692.) The financial assurances provision of the draft policy would allow the Regional Water Boards to assume a supervisory role over local budgeting that is superior to that of either the Legislature or judiciary.

We are also concerned that requiring financial assurances would be inconsistent with the Water Code's prohibition against Regional Water Board's determining the method of permit compliance. (Wat. Code, § 13360.) Such a requirement places the Regional Water Boards in the role of judging whether the amount of local revenue to be devoted to permit compliance and liability comports with the agency's notion of adequate financial assurances.

Further, it is inappropriate to require financial assurances for groundwater recharge reuse projects absent a *legislative* mandate. State requirements for financial assurances arise from statute where the Legislature has recognized that particular activities pose unique threats to the environment or public health. For example, the Legislature requires financial assurances for reclamation of mining sites, restoration of finfish aquaculture habitat, and operations of solid waste and hazardous waste disposal facilities. (Pub. Resources Code, §§ 2770, 2773.1, 43040; Fish & G. Code, § 15409; Health & Saf. Code, § 25205, 25355.2.) Indeed, the draft staff report intimates that groundwater recharge reuse projects are like landfill operations. Not only does this ignore statutes that the Legislature enacted to maximize the use of the "valuable resource" of recycled water, including a finding that the use of recycled water is safe, but it also ignores that recycled water poses no unique threat to water quality as compared to other water supply sources. (Wat. Code, §§ 13050(n) (recycled water is "a valuable resource"), 13527(f).)

Accordingly, we respectfully request that the State Water Board delete this provision from the Policy.

The Requirements for Irrigation Must be Modified if the Goals of the Policy are to be Realized.

WateReuse supports the State Water Board's general approach to the regulation of salts and nutrients as outlined in the Policy. We appreciate the emphasis on basin-wide planning and understand the desire to establish a "backstop" or performance based limit on salts in recycled water to ensure that projects can go forward without significantly increasing salt levels in the interim. The establishment of a 300 mg/l increment for TDS, is problematic, and if implemented, would cause existing projects to shut down and would preclude others from coming on line. Instead, as described in our detailed comments, we recommend a step-wise approach to establishing these interim limitations. We have completed a survey of current recycled water programs and have data from 70 programs. We are compiling the data on source water quality, TDS increments and successful local management strategies. Our early analysis indicates that:

- Source water quality data is typically available in annual averages, not monthly averages;
- A 300 mg/l TDS increment is unworkable for many current recyclers;
- A step-wise approach to interim permitting where basin objectives and in-situ groundwater quality are considered would provide the opportunity for some flexibility and avoid a one-size fits all solution.
- The Policy must make clear that the TDS limitations do not preclude the blending of recycled water with another *lower quality* water source (e.g. Colorado River water).

We share the Board's desire to move forward expeditiously with adoption of the Policy, and believe that a workable alternative approach to addressing TDS can be developed in the relatively short term. Therefore, we respectfully request the opportunity to complete our data analysis and work with State Water Board to craft a slightly more flexible interim permitting scheme.

The other irrigation issue of continuing concern is the approach to regulation of incidental amounts of recycled water. The staff report states that the State Water Board does not intend to address incidental runoff in this Policy. At a minimum, therefore, the existing language in Operating Paragraph 7(e) should be deleted. However, WateReuse believes that any update of the State's Recycled Water Policy must address reasonable regulation of incidental runoff of recycled water, to the maximum extent possible within existing regulatory schemes.

At its most fundamental level, water recycling results in the reduction of discharges to waters of the State, which is the overarching goal of the Clean Water Act. A reasonable regulatory scheme for irrigation runoff is absolutely necessary if the State Water Board wishes to encourage reduction of discharges. While we acknowledge that a strict reading of the Clean Water Act applies to all forms of urban runoff, impractical requirements for control of "all molecules" of recycled water make it simply impossible to implement recycled water irrigation projects in some localities. This impediment to recycled water use has so frustrated agencies and users that a specific Recycled Water Task Force Recommendation was addressed to the issue.

> *Task Force Recommendation 4.2: Investigate within the current legal framework, alternative approaches to achieve more consistent and less burdensome regulatory mechanisms affecting incidental runoff of recycled water from use sites.*

We are concerned that if the Policy does not address incidental runoff in some manner, we will continue to lack clear guidance on the appropriate regulatory scheme for irrigation runoff that happens to be recycled water.

WateReuse believes that there are adequate existing regulatory schemes for managing irrigation runoff in compliance with the Clean Water Act, including both existing municipal separate storm sewer system (MS4) and low-threat discharge permits. The Policy should clearly state that for the purposes of complying with the NPDES regulations, incidental runoff can and should be covered within existing regulatory schemes for irrigation water to the maximum extent practicable. WateReuse believes that the Policy should discourage unique regulatory schemes for irrigation water that happens to be recycled water, just as it discourages requirements for monitoring wells for irrigation projects.

As currently written, one could interpret the draft Policy to mean that irrigation projects using recycled water should be permitted under the NPDES program. WateReuse does not and cannot support the development of a General NDPES permit exclusively for irrigation runoff that happens to be recycled water. This is an unnecessary and duplicative regulatory effort that will place an additional permitting burden on water recyclers, when such a burden is not placed on other sources of irrigation water.

The Draft Policy Should Clearly Distinguish Between Irrigation and Recharge Projects.

During the workshop on October 2, 2007, it became apparent that many commenters were unsure whether certain provisions in the draft policy were intended to apply only to irrigation projects, recharge projects, or both. WateReuse believes it is critical to clearly delineate those requirements in the Policy that apply to irrigation and those that apply to recharge. A requirement such as groundwater monitoring that is appropriate for groundwater recharge, which involves intentionally adding large amounts of water to an aquifer, is neither necessary nor practical for an irrigation project.

In closing, we wish to emphasize our appreciation for the State Water Board's commitment to the State's water recycling goals, and to express our support for the overall tenor and approach set forth in the Policy. We believe that with our suggested language changes, the adoption of this Policy will be a tremendous step toward increasing predictability and consistency in the permitting process and increasing California's use of this sustainable and safe water supply.

Sincerely,

Bill Jacoby
President

BJ/jp

Attachments:

Attachment No. 1: Detailed Comments
Attachment No. 2: Proposed Policy Language

ATTACHMENT NO. 1: DETAILED COMMENTS

Comments on Draft Water Recycling Policy
State Water Resources Control Board
October 26, 2007

1. STRUCTURE OF THE WATER RECYCLING POLICY

Comment 1-1: The State Water Resources Control Board ("State Water Board" or "Board") should reorder provisions in the draft Water Recycling Policy ("Policy") and add headings to clarify how the Board is making findings and which operative provisions apply to each type of water recycling activity. Accordingly, we suggest the following basic structure, arrangement, and sections.

Recommended Restructuring:

Recitals

- Recital Paragraph Nos. 1, 2, and 3 should be expanded to refer to State Water Board Resolution No. 77-1 and clearly outline the legislative direction and people's primary interest in recycled water. This will ensure that these recitals directly support the finding in Paragraph 26 regarding maximum benefit to the people of the State. Specific suggested language is included in Comment 4-1 below.

- Recital Paragraph Nos. 5-9, 11, 18, 22, and 23 should be collected and edited to present a consistent, cohesive description of the requirements of the Anti-Degradation Policy (State Water Board Resolution No. 68-16) and potential concerns related to water quality. Specific suggested language is included in Comment 4-2 below.

- Recital Paragraph Nos. 10, 12-15, 17, 19, 20, and 21 should be collected, edited and expanded to present a consistent, cohesive description of the recycled water regulatory and management scheme. These recitals directly support the findings in Paragraphs 24 and 25 regarding best practicable treatment or control ("BPTC"). Specific suggested language is included in Comment 4-3 below.

- The Board should make the finding necessary to indicate that existing regulatory schemes are currently available to regulate runoff of irrigation water under the Clean Water Act (33 U.S.C. 1251 et seq.). Specific suggested language is included under Comment 5-5.

- Recital Paragraph No. 4 should be moved towards the end of the recital section. The general logic of the recitals would be as follows, and the "clean" version of the proposed Policy attached to this letter follows this order:

    - A statement of the benefits of recycled water
    - An acknowledgement of anti-degradation requirements
    - A description of BPTC
    - The findings of maximum benefit and use of BPTC
    - A statement that given the benefits of recycled water and compliance with the Anti-Degradation Policy, consistent statewide regulation of recycled water is desirable

Operative Provisions

- Definitions: Edited versions of Operative Paragraph Nos. 1-5 should be collected under this general section. Section 2 of these comments provide the specific language.

- Provisions that Apply to All Recycled Water Projects: Operative Paragraph Nos. 16 and 20 apply to all recycled water projects and could be collected under this section, or, alternatively, in the recitals. Specific suggested language is included under Section 3 of these comments. Also see Comments 4-3 and 4-5.

- Provisions for Recycled Water Irrigation Projects: Edited versions of Operative Paragraph Nos. 7-9 should be collected in this section. Specific in Section 5 of these comments.

- Provisions for Groundwater Recharge Projects: Edited versions of Operative Paragraph Nos. 10-15 should be collected under this section. Specific suggested language is included in Section 6 of these comments.

- Revisions related to Liability: Operative Paragraph No. 17 should be revised and included under this section. Comment 7-1 contains the language recommended. Operative Paragraph No. 18 should be deleted (see Comment 7-2).

- Updates to Policy: Consider adding the following language at the end of the Policy:

[#.] It is the intent of the State Water Board to periodically review and revise this Policy as appropriate.

- Construction: Consider adding the following language regarding construction or interpretation of the Policy:

Add to the General Policies and Provisions section:

> [#.] This Policy is to be liberally construed to facilitate the use of recycled water and thereby expand the available water supply within the State to the greatest extent feasible.

Add as the last provision of the Policy:

> [#.] To the extent of any conflict between State Water Board Resolution No. 77-1 and this Policy, this Policy supersedes any conflicting provision contained in State Water Board Resolution No. 77-1. (Note that this provision would replace current Operative Paragraph No. 20.)

2. DEFINITIONS

Draft Policy Language, Operative Paragraph No. 2: "For the purpose of this Policy, a 'groundwater recharge reuse project' means a project that uses recycled water and that has been planned and is operated for the purpose of recharging a groundwater basin for use as a source of domestic supply or for the purpose of controlling salt water intrusion."

Comment 2-1: This definition should be modified to include recharge for agricultural use as well as domestic.

Proposed Policy Language:

> For the purpose of this Policy, a "groundwater recharge reuse project" means a project that uses recycled water and that has been planned and is operated for the purpose of recharging a groundwater basin for use as a source of domestic or agricultural supply or for the purpose of controlling salt water intrusion.

Draft Policy Language, Operative Paragraph No. 3: "For the purpose of this Policy, 'nutrient management' is the act of managing the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. It is done to budget and supply nutrients for plant production, properly use manure or organic by-products as a plant nutrient source, minimize degradation of surface and ground water resources, protect air quality by reducing nitrogen emissions (ammonia and NOx compounds) and the formation of atmospheric particulates, and maintain or improve the physical, chemical and biological condition of soil."

Comment 2-2: This definition should allow recycled water users to work cooperatively in the development of best management practices for nutrients without imposing unique management and reporting requirements for irrigation water that

happens to be recycled water. Also see discussion regarding nutrient management plans under Comment 5-1.

Proposed Policy Language:

> For the purpose of this Policy, "nutrient management practices" ~~is the act of managing~~ are measures implemented to manage the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. ~~It is done~~The purpose of nutrient management practices is to budget and supply nutrients for plant production, properly use manure or organic by-products as a plant nutrient source, minimize degradation of surface and ground water resources, protect air quality by reducing nitrogen emissions (ammonia and NOx compounds) and the formation of atmospheric particulates, and maintain or improve the physical, chemical and biological condition of soil.

Draft Policy Language, Operative Paragraph No. 5: "For the purpose of this Policy, 'recycled water irrigation projects' are defined as those projects that use recycled water primarily to meet a water supply need, instead of a disposal need."

Comment 2-3: The definition of "recycled water irrigation project" should capture the Legislature's intent to facilitate water recycling and recycled water's myriad beneficial uses. For example, the Water Codes states that it is in the "primary interest" of the people of the state to maximize the reuse of reclaimed water and develop water recycling facilities to supplement existing water supplies. (Wat. Code, §§ 461, 13510.) Moreover, Water Code section 13050(n) establishes that recycled water is a "valuable resource" suitable for direct beneficial or controlled uses. Thus, irrigation with recycled water is not a disposal of waste, but rather a beneficial use of water like any other.

We believe this provision was intended to distinguish irrigation with recycled water from discharges of treated wastewater to land. However, the definition as currently drafted suggests that water supply augmentation must be the impetus for the project and does not recognize that water recycling programs may originally be implemented in part to comply with discharge limitations, but nonetheless offer very real and increasing water supply benefits as potable water becomes more valuable and scarce. The South Bay Water Recycling Program and Santa Rosa Subregional Water Reuse System are just two such instances where the impetus for implementing the programs was compliance with discharge requirements that prompted projects resulting in a valuable and reliable augmentation to the local water supply.

Proposed Policy Language:

For the purpose of this Policy, "recycled water irrigation projects" are defined as those projects that use recycled water ~~primarily to meet a water supply need, instead of a disposal need~~in accordance with the Water Recycling Criteria and in order to meet agronomic needs. A single recycled water project includes any incremental additions or modifications made in conformance with the associated recycled water program for which the provisions of the California Environmental Quality Act (commencing with Public Resources Code section 21000) have been satisfied. Such additions or modifications include, but are not limited to, the use of recycled water pursuant to the provisions of this Policy for newly established or existing playgrounds, parks, median strips, and other landscapes or crops.

Additional Provisions Recommended:

Comment 2-5: The Policy should define the term "incidental runoff of recycled water."

Proposed Policy Language:

[#]. For the purpose of this Policy, "incidental runoff of recycled water" means minor amounts of recycled water that escape use areas that are managed in a manner consistent with the Water Recycling Criteria and landscape or crop needs.

Comment 2-6: The Policy should define the term "salts."

Proposed Policy Language:

[#]. For the purpose of this Policy, "salts" are chemicals that contain the cations sodium, boron, calcium, magnesium, and potassium and the anions bicarbonate, carbonate, chloride, nitrate, phosphate, sulfate, and fluoride. Salts are commonly measured by water quality parameters that quantify combinations of ions, such as total dissolved solids (TDS), electroconductivity, and hardness.

3. GENERAL POLICIES AND PROVISIONS

Draft Policy Language, Operative Paragraph No. 6: "By January 1, 2018, the Regional Water Boards shall adopt revised implementation plans, consistent with Water Code section 13242, for those groundwater basins within their regions where water quality objectives for salts are being, or are threatening to be, violated."

Comment 3-1: We believe the State Water Board's intent is to address various sources of salts in groundwater basins collectively, and to do so with the relevant stakeholders as participants in that process. We suggest the following revision to explicitly reflect this intent in Operative Paragraph No. 6.

Proposed Policy Language:

> By January 1, 2018, the Regional Water Boards shall adopt revised implementation plans, consistent with Water Code section 13242, for those groundwater basins within their regions where water quality objectives for salts are being, or are threatening to be, ~~violated~~exceeded. Such plans shall address and implement provisions, as appropriate, for all sources of salt to groundwater basins, including recycled water irrigation projects and groundwater recharge reuse projects. Such plans shall be developed through a locally driven, collaborative basinwide planning process that is open to all stakeholders.

Additional Provisions Recommended:

Comment 3-2: Water recycling provides both water quality benefits--reducing discharge to surface waters—and water supply benefits by reducing demand for limited fresh water resources. The Water Code defines recycled water not as a waste but as "water, which, as a result of treatment, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource." (Water Code §13050(n).) To achieve the State's recycling goals and realize these benefits, it is imperative that the State Water Board consistently view recycled water as a valuable resource rather than a waste discharge. We recommend adding the following general policy language.

Proposed Policy Language:

> [#]. It is the policy of the State of California to encourage strongly the use of recycled water. Recycled water is a valuable resource for the people of the State and is not "waste" for purposes of Water Code section 13050(d).

Comment 3-3: Resolution No. 77-1 is not only the foundation for the proposed Policy, but includes a number of findings that are just as relevant today as they were when the policy was adopted 30 years ago. Therefore, to ensure that these important statements are carried forward, we recommend adding the following general policy language:

Proposed Policy Language:

> [#.] The State Water Board readopts the policies contained in recitals 1-4 and 6 of Resolution No. 77-1 as the basic framework to guide decisions relating to the use of recycled water.

Comment 3-4: The Policy moves in the right direction with regard to the role of CDPH, and we believe it is important to highlight the expertise of CDPH and acknowledge the safety of recycled water that meets CDPH requirements. We recommend adding the following general policy language:

Proposed Policy Language:

> [#.] The State Water Board and Regional Water Boards will to the greatest extent feasible, rely on technical expertise within CDPH in evaluating recycled water projects. In reliance on such expertise, the State Water Board and Regional Water Boards shall presume that the use of recycled water in a manner or for a purpose that complies with the regulations adopted by CDPH is safe.

Comment 3-5: We agree with the use of TDS as a surrogate for salts in recycled water permitting, which will lead to greater consistency in permit practices. We suggest that the following provision be added to clarify that TDS is intended to be the surrogate for salts.

Proposed Policy Language:

> [#.] In implementing this Policy, the State Water Board and Regional Water Boards shall use TDS as the surrogate for regulating salts from projects using recycled water.

Comment 3-6: Irrigation and groundwater recharge with recycled water are not disposal of waste. Water Code section 13050(n) defines "recycled water" as "a valuable resource." As reflected in that section, the essence of the recycling ethic is that a waste that would otherwise be disposed of is transformed into a useful product. Approaches designed to address waste discharges to surface water or land are not appropriate for irrigation projects that comply with Title 22 and where the amount of water that may reach groundwater is no greater than that from irrigation generally.

Proposed Policy Language:

> [#.] Because recycled water projects meet a water supply need and do not constitute a discharge of waste, these types of projects shall generally be regulated under water recycling requirements rather than waste discharge requirements.

4. ANTI-DEGRADATION REQUIREMENTS

Draft Policy Language, Recital Paragraph Nos. 1, 2, and 3: (Recital Paragraph No. 1.) "The Legislature has declared its intent that the state undertake all possible steps to encourage the development of recycled water facilities so that recycled water may be made available to help meet the growing water requirements of the state."

(Recital Paragraph No. 2.) "The use of recycled water can provide a reliable local water supply for non-potable urban use, agricultural irrigation, and industrial uses, that is not as vulnerable to some of the risks associated with imported water supplies such as droughts, delivery system failures by earthquakes or levee breaks, pumping restrictions to protect endangered species, and uncertain precipitation changes caused by global climate change."

(Recital Paragraph No. 3.) "The use of recycled water versus imported water often results in substantial energy savings and corresponding reduction in greenhouse gas emissions."

Comment 4-1: Paragraph Nos. 1, 2, and 3 should be expanded to clearly outline the legislative direction and the people's primary interest in recycled water so that they directly support the finding regarding maximum benefit to the people of the State.

Proposed Policy Language:

1. The Legislature has declared its intent that the ~~s~~State undertake all possible steps to encourage the development of recycled (reclaimed) water facilities so that recycled water will ~~may be made available to~~ help meet the existing and increasing ~~growing~~ water requirements of the ~~s~~State. The use of recycled water for irrigation, industrial and commercial processes, salt water barriers and drinking water augmentation provides benefits to the people of the State including:

(a) Expanding the State's limited water supply by providing an additional supply source for beneficial uses;

(b) Reducing diversions of surface water, particularly diversions from the Sacramento-San Joaquin Delta and the Colorado River, by providing an alternative water supply source for beneficial uses;

(c) Reducing environmental conflicts as a result of diversions because the amount and timing of diversions can be more flexibly managed;

(d) Reducing the use of groundwater by providing an additional supply source for beneficial uses;

(e) Improving water supply reliability because as a locally produced supply.~~2. The use of~~ recycled water ~~can provide a reliable local water supply for non-potable urban use, agricultural irrigation, and industrial uses, that~~ is not as vulnerable to some of the risks associated with imported water supplies, such as droughts, delivery system failures by earthquakes or levee breaks, pumping restrictions to protect endangered species, and uncertain precipitation changes caused by global climate change~~.~~; and

(f) Reducing~~3. The use of recycled water versus imported water often results in substantial~~ energy use ~~savings~~ and corresponding reduction in greenhouse gas emissions because the recycled water source is locally produced using significantly fewer energy resources than those required to divert, pump, convey and store fresh water imported from the Sacramento-San Joaquin Delta or Colorado River.

[#.] The State Water Resources Control Board (State Water Board) adopted Resolution No. 77-1 as a policy statement to implement the Legislature's declaration that the people of the State have a primary interest in reclaiming (recycling) water.

Draft Policy Language, Recital Paragraph Nos. 5-9, 11, 18, 22, and 23: These provisions generally relate to salts in groundwater, Water Code requirements for implementation plans designed to achieve water quality objectives, groundwater degradation, and the State Anti-Degradation Policy contained in State Water Board Resolution No. 68-16.

Comment 4-2: Paragraph Nos. 5-9, 11, 18, 22 and 23 need to be collected and edited to present a consistent, cohesive description of the requirements of State Water Board Resolution No. 68-16 and potential concerns related to water quality. Specifically, we suggest that the Policy acknowledge the State Water Board Resolution No. 68-16 in the findings so that subsequent recitals can clearly support the requirements of the resolution. We also suggest that the language regarding water quality objectives be written a little more broadly rather than specifically focusing on salts, which are sometimes, but not always, the concern. We suggest deleting Paragraph Nos. 5, 9 and 11 of the recitals for this reason and expanding discussion in other paragraphs to acknowledge the legitimate concerns. Finally, we suggest that the potential water quality risks associated with irrigation be acknowledged for all types of irrigation water. This Policy focuses on recycled water, but the basin-wide planning recommendations appropriately recognize that meaningful water quality management can only occur when all inputs are reviewed. Thus, we respectfully request that the State Water Board make revisions to Paragraph Nos. 5-9, 11, 18, 22 and 23 as suggested herein so that the revised recital section contains Recital Paragraph Nos. 3 through 7 as follows:

Proposed Policy Language:

~~23.~~[#.] The Legislature has also declared its intent that waters of the State shall be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the State. The State Water Board adopted Resolution No. 68-16 as a policy statement to implement this legislative intent. Resolution No. 68-16 requires~~, in part,~~ that:

(a) ~~w~~Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality water will be maintained until it is demonstrated to the

~~s~~State that any changes will be consistent with the maximum benefit to the people of the ~~s~~State, will not unreasonably affect beneficial uses of such water, and will not result in water quality less than prescribed in the policies;~~.~~

(b) Activities involving the disposal of waste that could impact high quality waters are required to implement~~22. State Water Board Resolution No. 68-16 requires, in part, that any activity that produces waste that is discharged to existing high quality waters to meet waste discharge requirements which result in~~ best practicable treatment or control of the discharge necessary to ensure that: (a) pollution or nuisance will not occur, and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

~~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.~~ [#.] All waters (recycled water, groundwater and surface water) may contain unregulated constituents and contaminants of emerging concern or microbiological agents as a result of anthropogenic sources, atmospheric deposition, non-point source discharges, agricultural practices and treated wastewater discharges.

~~8.~~[#.] ~~Many~~Some groundwater basins in the State contain constituents that ~~California have groundwater that violates~~ exceed or threatens to ~~violate~~exceed water quality objectives ~~for salts including nitrate~~ established in the applicable Water Quality Control Plans (Basin Plans), and ~~the~~not all Basin Plans ~~do not have~~ include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives or beneficial uses. These conditions can be caused by natural soils/conditions, discharges of waste, irrigation using surface water, groundwater or recycled water and water supply augmentation using surface or recycled water. Regulation of recycled water alone will not address the conditions.

~~6.~~[#.] When recycled water, surface water, or groundwater is used for irrigation, ~~the salts~~some constituents in the water may be~~are~~ concentrated in the percolate ~~that flows~~ from the surface of the irrigated site to groundwater because much of the water applied evapotranspires, thereby leaving most of the ~~salt~~constituent in the soil~~, where it eventually leaches~~. However, certain constituents readily attenuate in soils, the vadose zone or groundwater, either by biodegradation, adsorption onto particles, chemical precipitation or dilution thus reducing but not necessarily eliminating leaching to the groundwater in the percolate. Under certain circumstances, this can cause an aquifer to become degraded and polluted. ~~In arid parts of the state where there is little precipitation available to dilute salts, this effect has caused or threatened to cause violations of groundwater quality objectives for salts in areas that are or were irrigated.~~

~~18.~~[#.] ~~In some circumstances, a proposed groundwater~~Groundwater recharge using recycled water or surface water~~reuse project~~ may contribute salts or change the geochemical equilibrium in an aquifer, thereby causing the dissolution of constituents, such as arsenic, from the geologic formation into groundwater. This can cause an aquifer to become degraded and polluted.

~~7.~~[#.] Water Code section 13242 requires a program of implementation for achieving water quality objectives. The program of implementation must~~which~~ includes, but is not limited to: (a) a description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate actions by any entity, public or private~~,~~; (b) a time schedule of actions to be taken~~,~~; and (c) a description of the surveillance to be undertaken to determine compliance with the objectives.

Draft Policy Language, Recital Paragraphs Nos. 10, 12-15, 17, 19, 20 and 21: These provisions generally relate to the Water Recycling Criteria contained in Title 22 of the California Code of Regulations, salts and TDS, MCLs adopted by the Department of Public Health ("CDPH"), attenuation and groundwater monitoring, waste wells and wellhead treatment, and procedures for resolving conflicts between the Regional Water Boards and CDPH.

Comment 4-3: These paragraphs should be reorganized, edited, and expanded to present a consistent, cohesive description of the recycled water regulatory and management scheme. Recital Paragraph No. 12 should be deleted, as it is not accurate to state that salts may be controlled using these mechanisms. Recital Paragraph 19 should be revised to reflect conditions in which the Water Code allows the injection of recycled water into an aquifer. Recital Paragraph No. 20 should be deleted, as Water Code section 13304 refers to persons who violate waste discharge requirements and cause contamination, which is not implicated in the Policy. (See also comment 7-1 regarding Operative Provision 17.) These recitals should directly support the findings in Paragraph Nos. 24 and 25 regarding BPTC. Recital Paragraph No. 17, which describes attenuation, needs to be expanded to account for other possible attenuation mechanisms. Accordingly, we suggest that these Recital Paragraphs be revised and renumbered appropriately:

Proposed Policy Language:

~~14.~~[#.] The California Department of Public Health (CDPH) (formerly known as the Department of Health Services or DHS) is responsible for establishing maximum contaminant levels (MCLs) for constituents in drinking water to protect the health of the public who drink water supplied by water utilities. These MCLs are adopted through an extensive scientific and public review process.

[#.] Water Code section 13550 requires that CDPH also establish uniform statewide recycling criteria for each type of use of recycled water where the use involves the protection of public health.

~~10.~~[#.] The California Code of Regulations, Title 22, Division 4, Chapter 3, Water Recycling Criteria (Water Recycling Criteria), ~~specify~~ prescribe specific treatment ~~processes for ensuring proper disinfection of recycled water. They also specify~~ requirements based upon the proposed reuse and ~~for limiting public contact with recycled water to~~ protection of public health.

a. The Water Recycling Criteria address uses ranging from irrigation in areas with limited public contact through indirect potable reuse of water.

b. The Water Recycling Criteria also specify use area, design, operational, personnel, maintenance, reporting and reliability requirements.

c. For recycled water irrigation projects, the use area requirements included in the Water Recycling Criteria in combination with irrigation practices ~~13. Irrigation in amounts~~ that result in irrigation in amounts that do not exceed the ~~amount~~quantity 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~~-~~, which creates a substantial delay in or mitigates 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.~~

~~15.~~d. For groundwater recharge reuse projects, the Water Recycling Criteria require recycled water to be of a quality that protects public health, whereby CDPH makes recommendations for a project to the Regional Water Board on an individual case-by-case basis. CDPH is also required to hold a public hearing prior to making the final determination regarding the public health aspects of each project, also taking into consideration State Water Board Resolution No. 68-16. Per Water Code section 13540, projects can only proceed if CDPH determines that the proposed recharge will not degrade the quality of the water in the receiving aquifer as a water supply for domestic purposes. In advance of the public hearing, project proponents are required to provide a completed Engineering Report to CDPH and the Regional Water Board that consists of a comprehensive investigation and evaluation of the project, its impacts on existing and potential uses of the groundwater basin, and the proposed means for achieving compliance with CDPH and Regional Water Board requirements. After the public hearing, CDPH issues findings of fact and conditions that constitute its recommendations to the Regional Water Board in establishing permit requirements. The findings of fact and conditions address source control, recycled water treatment, and operation of these projects, which for the purposes of State Water Board Resolution No. 68-16 are deemed to be consistent with best practicable treatment or control. MCLs and other requirements or

recommendations provided by CDPH provide reasonable protection of groundwater quality for the beneficial use of municipal supply.

~~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~~

~~17.~~[#.] Certain constituents readily attenuate in soils, the vadose zone, or groundwater, either by biodegradation, ~~or by~~ adsorption onto particles, chemical precipitation or dilution. Hence, for groundwater recharge reuse projects, when hydrogeologic conditions are appropriate, it is not necessary to establish effluent limitations for these constituents. Groundwater limitations, along with groundwater monitoring, provide adequate water quality protection.

~~19.~~[#.] Water Code section 13540 requires, in part, for any waste well that injects waste into a subterranean water bearing stratum, when a Regional Water Board finds that the water quality does not preclude controlled recharge by direct injection, and~~that~~ CDPH finds, after a public hearing and consideration of State Water Board Resolution No. 68-16, that the proposed recharge will not degrade the quality of the water in the receiving aquifer as a water supply for domestic purposes, recycled water may be injected into the aquifer. ~~Such findings issued by CDPH are conditional.~~

~~20. Water Code section 13304 allows a Regional Water Board to issue a cleanup and abatement order to any person who has caused a condition of pollution or nuisance and such orders may include a requirement to provide replacement water or wellhead treatment.~~

~~21.~~[#.] In 1996, CDPH and the ~~State Water Resources Control Board (~~State Water Board~~)~~ signed a Memorandum of Agreement on the use of recycled water that describes procedures for issuing water reclamation requirements and for resolving conflicts between CDPH and the Regional Water Boards.

Draft Policy Language, Recital Paragraph Nos. 25 and 26: These provisions relate to irrigation and groundwater recharge reuse projects and anti-degradation requirements of State Water Board Resolution No. 68-16.

Comment 4-4: To further strengthen the findings with respect to State Water Board Resolution No. 68-16, we recommend that the State Water Board revise Recital Paragraph Nos. 25 and 26 as follows.

Proposed Policy Language:

~~24.~~ [#] For recycled water irrigation projects, irrigation designed and operated in an amount or manner to prevent salt buildup and as needed for landscape or crops, and in conformance with the Water Recycling Criteria represents best practicable treatment or control and ensures prevention of pollution and nuisances for the purposes of State Water Board Resolution No. 68-16. ~~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.~~

~~25.~~[#.] The use of recycled water for groundwater recharge in accordance with ~~For groundwater recharge reuse projects,~~ CDPH requirements and ~~provides~~ recommendations for the ~~design and operation of these projects. These recommendations have been consistent with best practicable treatment or control~~ protection of municipal supply beneficial uses is consistent with best practicable treatment or control and ensures prevention of pollution and nuisances for the purposes of State Water Board Resolution No. 68-16.

~~26.~~[#.] Recycled water irrigation projects and groundwater recharge reuse projects provide benefits to the people of the ~~s~~State. These benefits include extending the ~~s~~State's limited water supply to provide water to its growing population, reducing diversions of surface water, and reducing use of groundwater supply. These benefits outweigh the costs associated with limited potential for lowering of water quality, as mitigated through best practicable treatment or control, that would be caused by a recycled water ~~irrigation~~ project~~, provided that the lowering does not cause a violation of a water quality objective~~.

Draft Policy Language: Operative Paragraph No. 16: "Water recycling irrigation projects and groundwater recharge reuse projects that comply with this Policy, the Porter-Cologne Water Quality Control Act, and the applicable Basin Plan, shall be considered to have met the requirements of State Water Board Resolution No. 68-16."

Comment 4-5: It is important that the recitals provide factual support for how compliance with the Policy and regulations will satisfy the requirements of State Water Board Resolution No. 68-16. However, consistent with the revised recitals, we believe that this provision should be slightly revised for recycled water projects so that the Policy

and Title 22 are the driving forces for conformance with 68-16. Accordingly, we suggest the following language:

Proposed Policy Language:

> Recycled w~~W~~ater ~~recycling~~ irrigation projects and groundwater recharge reuse projects that comply with this Policy~~, the Porter-Cologne Water Quality Control Act, and the applicable Basin Plan~~ and the Water Recycling Criteria, ~~shall be considered to have met~~ are consistent with the requirements of State Water Board Resolution No. 68-16.

5. SPECIFIC COMMENTS ON PROVISIONS RELATED TO IRRIGATION WITH RECYCLED WATER

Draft Policy Language, Operative Paragraph No. 7: "Regional Water Boards shall require the following in waste discharge and water reclamation requirements for recycled water irrigation projects: (a) the development and implementation of a nutrient management plan; (b) compliance with the California Code of Regulations, Title 22, Division 4, Chapter 3, Recycling Criteria; (c) the recycled water to be applied in an amount that does not exceed the amount needed for the landscape 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; (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; (e) compliance with the federal Code of Regulations, Chapter 40, Part 122, National Pollutant Discharge Elimination System; and (f) the use of recycled water to not cause or contribute to violations of water quality objectives."

Comment 5-1: We believe the State Water Board should significantly revise Operative Paragraph No. 7 to address our concerns as detailed below. First, the Policy does not define what a "nutrient management plan" would entail nor does it acknowledge that controls on nutrients are not required for every recycled water activity. Thus, the Policy would need to define what a "plan" would involve and the criteria for requiring that a plan be developed. It is also important to remember that the Policy is already addressing nutrient management on a regional basis as part of the salt implementation plans to be developed by 2018. Thus for the purposes of this paragraph, we would recommend that condition (a) emphasize the use of best management practices for nutrients by replacing "plan" with "practices."

Second, the 300 mg/l increment for TDS above source water is not workable and will preclude many beneficial projects. We understand the Board's desire to have a "backstop" for salt levels, and want to work with the State Water Board to develop an alternative approach. This is one of the most important issues in the Policy for the recycling community, and also one of the most challenging to resolve. For this reason,

we have not included specific recommended Policy language at this time. However, our working concept is a step-wise approach that recognizes that if the recycled water meets an applicable numeric groundwater objective for TDS, no additional regulation for TDS is needed. It may also be helpful to include a specific approach to TDS where the groundwater objective is narrative as well as to use the TDS increment approach for those projects that do no comply with the objective for TDS.

Using an annual average TDS rather than monthly average for the increment may be appropriate given the variability of many agencies' water supplies and the fact that salt buildup from groundwater recharge due to irrigation is at best incidental. In addition, changes in groundwater as a result of percolation of water tend to be gradual and protracted. Thus, an annual average will provide appropriate assurances of water quality. The Board should use the incremental TDS, above source water approach only in instances where recycled water quality exceeds the groundwater objectives for TDS, and the appropriate increment should be higher than the 300 mg/l currently proposed. There are numerous sources of salts in recycled water, including industrial discharges, residential uses, residential self-regenerating water softeners, and water conservation measures. There is no evidence that controls on industries or residential self-regenerating water softeners can limit the TDS increase in source water to 300 mg/l in every instance. With regard to controls on residential self-regenerating water softeners, there are statutory constraints on the extent that control can be levied. 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. Our member agencies are committed to practicing good source control measures, but some find incremental TDS increases of significantly greater than 300 mg/l in recycled water even where salt control practices have been implemented. Finally, our members recently conducted a statewide survey to collect TDS data related to wastewater effluent and supply water from which recycled is derived. We are currently compiling this data, which can guide the Board as to an appropriate standard and what impact the standard would have on water recycling programs. We expect to provide our data and analysis based on the survey to the State Water Board and its staff in the next two weeks.

Third, the reference to the federal NPDES regulations in Operative Paragraph No. 7 is confusing and may be misconstrued to require NPDES permits for every water recycling project regardless of whether there could be a discharge of pollutants to waters of the United States. Moreover, existing regulatory schemes are adequate for managing irrigation runoff in compliance with the Clean Water Act, including both the existing municipal separate storm sewer system and low-threat discharge permits. Generally, existing regulatory schemes can and should cover incidental runoff or the result will be to unnecessarily burden and hinder irrigation projects that put recycled water to beneficial use and augment water supply. (See e.g., Wat. Code, § 13550 ("use of potable domestic water for nonpotable uses, including but not limited to, cemeteries, golf courses, highway landscaped areas, and industrial and irrigation uses, is a waste or an unreasonable use of the water.")

Proposed Policy Language:

~~7.~~(a) In the absence of an adopted regional salt management plan, a Regional Water Boards shall require the following in ~~waste discharge and~~ water reclamation requirements for recycled water irrigation projects:

~~(a)~~(i) ~~t~~The development and implementation of ~~a~~ nutrient management ~~plan~~practices;

~~(b)~~(ii) ~~c~~Compliance with the California Code of Regulations, Title 22, Division 4, Chapter 3, Water Recycling Criteria;

~~(c)~~(iii) ~~t~~The recycled water to be applied in an amount or manner that does not exceed the ~~amount~~quantity needed for the landscape or crops, taking into account evapotranspirative demand, plant uptake, the distribution uniformity of the irrigation system, and leaching needed to prevent the buildup of salts in soil;

~~(d)~~(iv) Limitations on TDS concentrations in recycled water established as follows:

[TO BE DETERMINED BASED ON DATA IN CONSULTATION WITH STATE WATER BOARD]

~~(e) compliance with the federal Code of Regulations, Chapter 40, Part 122, National Pollutant Discharge Elimination System; and (f)~~ (v) ~~t~~The use of recycled water ~~to~~ not to cause or contribute to exceedances of groundwater ~~violations of water~~ quality objectives for non-salt related constituents or cause the impairment of a designated beneficial use of groundwater.

Draft Policy Language, Operative Paragraph No. 8: "A Regional Water Board shall only require groundwater monitoring for a recycled water irrigation project if the Board 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 5-2: The staff report appropriately describes the technical reasons why groundwater monitoring should not be required for recycled water irrigation projects. Moreover, recycled water is a "valuable resource" under the Water Code when used for irrigation. (Wat. Code, § 13050(n).) Monitoring requirements that would not typically be imposed on irrigation projects are not warranted for projects simply because they use recycled water. We recognize, however, that there may be instances where a recycled water project does not comply with the requirements set forth in Paragraph No. 7, but the project nonetheless has sufficient merit to proceed. In these cases, and where other site-specific conditions warrant, a Regional Water Board may require some monitoring to confirm that there are no significant adverse effects.

Proposed Policy Language:

~~8.~~(b) In the event that an irrigation project cannot comply with all of the requirements set forth in subparagraph [(a)], ~~A~~a Regional Water Board ~~shall only require~~may allow the project to be implemented and may establish other appropriate requirements for the project, including a requirement for groundwater monitoring ~~for a recycled water irrigation project~~ if ~~it~~ the Regional Water Board determines that site conditions such as shallow groundwater could cause an increased potential for the irrigated site to adversely affect ~~public health~~ beneficial uses or surface water quality.

Draft Policy Language, Operative Paragraph No. 9: "A Regional Water Board shall not require for recycled water irrigation projects salt management measures other than those listed in paragraph No. 7 prior to January 1, 2018, unless such measures are part of a salt implementation plan adopted pursuant to paragraph No. 6."

Comment 5-3: While we generally support this provision, we suggest the following revision to ensure that this Policy will not supersede any provisions of an existing regional salt management plan.

Proposed Policy Language:

~~9.~~(c) For recycled water irrigation projects, a~~A~~ Regional Water Board shall not require ~~for recycled water irrigation projects~~ salt management measures other than those listed in subparagraphs (a) and (b) above ~~No. 7~~ prior to January 1, 2018, unless such measures are part of a salt implementation plan adopted pursuant to paragraph ~~No. 6~~ [#] above or included within an existing regional groundwater management plan already in place at the time of adoption of this Policy.

Draft Policy Language, Operative Paragraph No. 19: "If CDPH and the Regional Water Board disagree on proposed water reclamation requirements or waste discharge requirements for a water recycling project, the Regional Water Board shall follow the conflict resolution process prescribed in the 1996 'Memorandum of Agreement between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water.'"

Comment 5-4: The Policy should reflect that the Legislature delegated the task of establishing requirements to protect human health to CDPH. Accordingly, we recommend the following revision:

Proposed Policy Language:

~~19.~~[#.] The Regional Water Board shall defer to CDPH with regard to requirements for the protection of human health. If CDPH and the Regional Water Board disagree on proposed ~~water reclamation~~permit requirements ~~or waste discharge requirements~~ for a water recycling project, the Regional Water Board shall follow the conflict resolution process prescribed in the 1996 "Memorandum of Agreement between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water.

Additional Provisions Recommended:

Comment 5-5: As discussed with respect to Operative Provision No. 7, site management practices and existing permitting schemes for urban runoff are adequate to address incidental runoff from recycled water irrigation projects. Such permit schemes include the municipal separate storm sewer system permit and some regional low-threat discharge permits. A reasonable regulatory scheme for irrigation runoff is absolutely necessary if the Board desires to facilitate water recycling in accordance with the Water Code. Thus, the Policy should clearly state that incidental runoff can and should be covered within existing regulatory for irrigation water. The Policy should discourage unique regulatory burdens for irrigation water that happens to be recycled water. Accordingly, we suggest that the Policy contain the following provision:

Proposed Policy Language:

New Recital Paragraph [#.] Minor amounts of recycled water that escape use areas that are managed in a manner consistent with the Water Recycling Criteria and landscape or crop needs constitute incidental irrigation runoff. The State Water Board has developed a range of regulatory schemes for assuring federal Clean Water Act compliance for irrigation runoff, including the Municipal Separate Storm Sewer System (MS4) permitting system.

New Operating Paragraph [#.] Incidental recycled water runoff shall be managed and permitted using existing mechanisms in the same manner as other types of irrigation runoff, including, but not limited to, municipal separate storm sewer system permits, general permits, or master reclamation permits.

6. SPECIFIC COMMENTS ON PROVISIONS RELATED TO GROUNDWATER RECHARGE WITH RECYCLED WATER

Draft Policy Language, Operative Paragraph No. 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 6-1: The Water Recycling Criteria allow CDPH to approve and make recommendations for groundwater projects on a case-by-case basis for protection of public health. The current CDPH practice is to rely on the agency's draft groundwater recharge regulations when making such recommendations. Unfortunately, the language in this provision conflicts with the current CDPH draft groundwater recharge regulations that do not require recycled water to meet the secondary MCL for color, and allow for compliance for certain constituents to be met in the vadose zone or in groundwater. While Operative Paragraph No. 12 will allow alternative compliance in groundwater, it would be helpful to modify this provision to be consistent with CDPH's approach. Accordingly, we suggest the following changes to Operative Paragraph No. 10:

Proposed Policy Language:

~~10.~~[#.] Notwithstanding the terms of subparagraph (#) below, f~~F~~or constituents for which CDPH has established an MCL, with the exception of color, when interpreting a narrative objective ~~for toxicity~~ to develop a numeric ~~effluent limitation~~ constituent level for the constituent for protection of public health for a groundwater recharge reuse project, the Regional Water Board shall establish the ~~effluent limitation~~ constituent level at a concentration equivalent to the MCL. A Regional Water Board may establish a groundwater 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.

Draft Policy Language, Operative Paragraph No. 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 6-2: Changes should be made to this recital and operating provision to reflect the findings in Order 2006-0001 with respect to the role of CDPH in establishing requirements for protection of public health for groundwater recharge projects. In addition, the provision's four conditions for Regional Water Board findings do not directly address the primary need for establishing a limit; namely, that there is a link between a chemical that is reliably determined to be present in recycled water and that as a result of the recharge project reaches groundwater in amounts that could impair the municipal drinking water supply beneficial use. It is critical that any findings made by a Regional Water Board in establishing limits do so only under this context and not simply on the basis of detection and having information to set a limit.

As currently drafted, the provision may be interpreted to allow a Regional Water Board to independently establish a limit for just about any chemical detected in recycled water and/or groundwater since there is considerable information in the literature regarding toxicity. For some chemicals, this requirement could result in the application of advanced treatment. Should the Board not revise the provision as suggested, the Board's environmental analysis should evaluate the potential impacts associated with advanced treatment including: (1) air emissions associated with energy usage to operate advanced treatment facilities and, if trucks are used to transport brine, air quality impacts associated with increased heavy truck traffic resulting from offsite brine hauling; (2) traffic impacts, if trucks are used by facilities to haul brine to disposal facilities; (3) increased energy usage for the operation of advanced treatment facilities (membrane technology is a very energy intensive process that uses substantial amounts of energy 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. If the brine is disposed of in the ocean, for instance, 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 concentrations 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, the environmental impacts of which must be analyzed. Therefore, the State Water Board would need to identify and analyze the costs and environmental impacts of alternative strategies and technologies for disposing of brine.

However, we believe this type of analysis would not be necessary for the Policy if revised per our comments regarding CDPH's role in establishing limits to protect public health and the types of findings a Regional Water Board should make to establish a link between the use of recycled water and a beneficial use impairment. For these reasons, we suggest the following language:

Proposed Policy Language:

~~11.~~[#.] For constituents for which CDPH has not established an MCL, a Regional Water Board shall defer to CDPH with regard to recommendations for constituent levels for groundwater recharge projects when ~~may~~ interpreting a narrative objective for protection of human health. ~~to establish an effluent limitation for the constituent for a groundwater recharge reuse project,~~ Upon the recommendation of CDPH to establish a constituent level at a specific concentration for a specific constituent, a Regional Water Board may establish a constituent level for that constituent at the concentration(s) recommended by CDPH 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) the constituent is present in groundwater at concentrations as determined by CDPH, after public hearing and comments, 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.~~

Draft Policy Language, Operative Paragraph No. 12: "For groundwater recharge reuse projects, if a Regional Water Board finds that attenuation of a constituent will occur within soil, the vadose zone or groundwater, in lieu of establishing an effluent limitation, the Regional Water Board may establish a groundwater limitation for the constituent. If a groundwater limitation is established, the Regional Water Board shall require monitoring of the constituent in groundwater. The groundwater shall comply with the limitation at specified monitoring points. The discharger shall have legal control over the attenuation area between the discharge points and the monitoring points to prevent the use of domestic or municipal wells within the attenuation area."

Comment 6-3: Per our comments for Operative Paragraph No. 10, this provision would benefit from some minor edits to make it consistent with the current CDPH draft groundwater recharge regulations that CDPH considers when it makes case-by-case recommendations for groundwater recharge projects. CDPH currently allows alternative compliance points for nitrogen and disinfection byproducts. In addition, CDPH has provided recommendations on operational requirements for protection zones in terms of setback distances and retention times that are included in the findings of fact and conditions for groundwater recharge projects. We suggest that the State Water Board revise the provision as follows:

Proposed Policy Language:

12.[#.] ~~For groundwater recharge reuse projects, if a Regional Water Board finds that attenuation of a constituent will occur within soil, the vadose zone or groundwater~~, If CDPH recommends establishing a groundwater or vadose zone limitation for constituents that are attenuated in the soil, vadose zone or groundwater, in lieu of establishing an ~~effluent~~ recycled water constituent limitation, the Regional Water Board ~~may~~ shall establish a ~~groundwater~~ limitation for the constituent based on the CDPH recommendation. If a vadose zone or groundwater limitation is established, the Regional Water Board shall require monitoring of the constituent at the specified monitoring points for determining compliance with established limitations ~~in groundwater~~. The groundwater shall comply with the limitation at specified monitoring points. If CDPH recommends creating an attenuation area between the point of recharge by injection or surface spreading, and the point of extraction of groundwater for use as a drinking water supply, the Regional Water Board shall include a requirement in the permit that ~~T~~the discharger take appropriate actions to prevent the use of groundwater for drinking water within the ~~shall have legal control over the attenuation area between the discharge points and the monitoring points to prevent the use of domestic or municipal wells within the~~ attenuation area.

Draft Policy Language, Operative Paragraph Nos. 14 and 15: These provisions address the responsibilities of the Regional Water Boards and CDPH for groundwater recharge projects that use injection wells and spreading basins.

Comment 6-4: The State Water Board should revise these two provisions to reflect more accurately the duties and responsibilities of CDPH and the Regional Water Boards. We also recommend that the two provisions be combined into one provision. Accordingly, we suggest that the State Water Board combine and revise these provisions as follows.

Proposed Policy Language:

> [#.] For groundwater recharge reuse projects, after a public hearing, CDPH issues findings of fact and conditions for each project, including whether a proposed recharge will or will not degrade the quality of water in the receiving water pursuant to Water Code section 13540. CDPH provides such findings of fact and conditions as recommendations to the Regional Water Board for issuing the permit for a project. ~~that use injection wells, the Regional Water Board shall require that the discharger comply with conditions established by CDPH when making its findings of non-degradation in accordance with Water Code section 13540, or, if~~ The Regional Water Board shall defer to the recommendations of CDPH. If the Regional Water Board disagrees with ~~the conditions~~other CDPH recommendations regarding the project, the Regional Water Board shall follow the conflict resolution process prescribed in the 1996 "Memorandum of Agreement between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water."

Additional Provisions Recommended: We believe the State Water Board may wish to include two additional provisions for groundwater recharge projects in the Policy.

Comment 6-5: The draft Policy only addresses salts for irrigation projects. The Policy could benefit from having specific provisions for salts for groundwater recharge projects to avoid uncertainty or inconsistent application of salt requirements. We propose the following language.

Proposed Policy Language:

[#.]. If a salt implementation plan adopted pursuant to paragraph X above is adopted prior to January 1, 2018, or a regional salt management plan is already in place at the time of adoption of this Policy, then a Regional Board shall only require the salt management measures included in those plans. Before January 1, 2018, in regions where a comprehensive salt implementation plan has not yet been developed, the Regional Water Boards shall require the following for groundwater recharge reuse projects:

(i) Compliance with the California Code of Regulations, Title 22, Division 4, Chapter 3, Water Recycling Criteria;

(ii) [TO BE DETERMINED BASED ON DATA IN CONSULTATION WITH STATE WATER BOARD]

(iii) The use of recycled water shall not cause or contribute to exceedances of groundwater quality objectives for non-salt related constituents or cause the impairment of a designated beneficial use of groundwater.

Comment 6-6: The Policy should include a provision with regard to best practicable treatment or control for groundwater recharge projects.

Proposed Policy Language:

[#.] For the purpose 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 or control for protection of public health for the purposes of State Water Board Resolution No. 68-16.

7. ADDITIONAL COMMENTS

Draft Policy Language, Operative Paragraph No. 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 7-1: As modified below, this provision should apply to both recycled water irrigation projects and groundwater recharge reuse projects. It is our understanding

that the State Water Board does not intend to modify existing liability under state law for recycled water projects. Rather, the Board intends to recognize project-related responsibility should changes in drinking water standards or groundwater quality render a basin unsuitable for drinking water uses. As currently drafted, this provision could be misconstrued (and, indeed has been read by many commenters) to expand liability. Thus, changes are warranted to clarify the impact of this provision. The Policy should also acknowledge that for groundwater recharge projects, CDPH makes recommendations that have been included in a number of groundwater recharge permits[1] that establish specific actions that must be taken should such a project cause groundwater to be impaired for a municipal drinking water supply beneficial use. Groundwater recharge project sponsors are required to develop a CDPH approved plan that provides an alternative 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 so that it is no longer a safe source of drinking water. This requirement addresses existing and future MCLs or any contaminant that CDPH believes to be present in concentrations that render a groundwater unsuitable for public consumption. Thus, the Policy should be revised to reflect that it does not intend to alter existing liability and to reflect current CDPH requirements for groundwater recharge projects. We suggest the following language.

Proposed Policy Language:

[#.] ~~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.~~ (a) Nothing in this Policy is intended to expand or limit liability under existing law for contamination of groundwater. (b) For groundwater recharge reuse projects, Regional Water Boards may only include permit requirements based on recommendations provided by CDPH with regard to response actions that must be taken should the use of recycled water cause a producing potable water well to be degraded so that it can no longer be used as a safe source of drinking water.

Operative Paragraph No. 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

[1] The permits have been issued for the Inland Empire Utilities Agency's Chino Basin Groundwater Recharge Project; Orange County Water District's Groundwater Replenishment System; West Basin Municipal Water District's West Coast Basin Barrier Project, and the Water Replenishment District of Southern California's Alamitos Barrier Recycled Water Project.

State Water Board staff prior to recommending specific language implementing any such financial means/assurance requirements."

Comment 7-2: The draft staff report notes that the intent of this provision is to give Regional Water Boards the authority to require project owners to "provide financial assurances of their ability to bear liability, as is currently required for landfills." Notably, the laws and regulations adopted for landfills with regard to financial assurance were in response to significant problems that occurred as a result of abandoned sites. Moreover, in contrast to the present situation, the costs and financial assurances associated with landfills can be specifically derived. Indeed, an entire legal/regulatory framework exists for establishing the financial assurance, including section 43600 of the Public Resources Code, Part 258 of Title 40 of the Code of Federal Regulations, and regulations adopted by the California Integrated Waste Management Board. The financial assurances requirement in the draft Policy is vague and unsupported by any specific statutory mandate or regulatory framework. Accordingly, the financial assurance requirement in the draft Policy, even though optional, is neither necessary nor appropriate for groundwater recharge projects that go through a very extensive regulatory review and public adoption process. The capital requirements and nature of recharge projects is such that agencies without adequate financial means will be unable to undertake such projects despite their benefits. Thus, we recommend that Operative Paragraph No. 18 be deleted.

Comment 7-3: The Regional Basin Plans may be inconsistent with portions of the Policy adopted by the State Water Board. Therefore, the Policy should include a provision that requires the Regional Water Boards to review and update their Basin Plans within a specified time frame. This will ensure that the Basin Plans are consistent with this Policy and that the Policy takes effect as intended. Accordingly, we suggest that the Policy contain the following additional provision.

Proposed Policy Language:

[#.] Within two years from the effective date of this Policy, each Regional Water Board shall review its Basin Plan and revise that Basin Plan as necessary to conform to this Policy. Each Regional Board shall submit any revisions of its Basin Plan to the State Water Board no later than January 30, 2010.

Comment 7-4: Throughout the Policy, the term "effluent limitation" is used to define levels of constituents in recycled water. This is a term used for permitted discharges of wastewater and is not appropriate in the context of water being put to beneficial use.

Proposed Policy Language:

[#.] Throughout the Policy, replace the term "effluent limitation" with "constituent level.

ATTACHMENT NO. 2: PROPOSED POLICY LANGUAGE

State Water Resources Control Board
Resolution No. 2007-___

Water Recycling Policy (Policy)

WHEREAS:

1. The Legislature has declared its intent that the State undertake all possible steps to encourage the development of recycled (reclaimed) water facilities so that recycled water will help meet the existing and increasing water requirements of the State. The use of recycled water for irrigation, industrial and commercial processes, salt water barriers and drinking water augmentation provides benefits to the people of the State including:

(a) Expanding the State's limited water supply by providing an additional supply source for beneficial uses;

(b) Reducing diversions of surface water, particularly diversions from the Sacramento-San Joaquin Delta and the Colorado River, by providing an alternative water supply source for beneficial uses;

(c) Reducing environmental conflicts as a result of diversions because the amount and timing of diversions can be more flexibly managed;

(d) Reducing the use of groundwater by providing an additional supply source for beneficial uses;

(e) Improving water supply reliability because, as a locally produced supply, recycled water is not as vulnerable to some of the risks associated with imported water supplies such as droughts, delivery system failures by earthquakes or levee breaks, pumping restrictions to protect endangered species, and uncertain precipitation changes caused by global climate change; and

(f) Reducing energy use and corresponding reduction in greenhouse gas emissions because the recycled water source is locally produced using significantly fewer energy resources than those required to divert, pump, convey and store fresh water imported from the Sacramento-San Joaquin Delta or Colorado River.

2. The State Water Resources Control Board (State Water Board) adopted Resolution No. 77-1 as a policy statement to implement the Legislature's declaration that the people of the State have a primary interest in reclaiming (recycling) water.

3. The Legislature has also declared its intent that waters of the State shall be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the State. The State Water Board adopted Resolution No. 68-16 as a policy statement to implement this legislative intent. Resolution No. 68-16 requires that:

(a) Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality water will be maintained until it is demonstrated to the State that any changes will be consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses of such water, and will not result in water quality less than prescribed in the policies;.

(b) Activities involving the disposal of waste that could impact high quality waters are required to implement best practicable treatment or control of the discharge necessary to ensure that: (a) pollution or nuisance will not occur, and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

4. All waters (recycled water, groundwater and surface water) may contain unregulated constituents and contaminants of emerging concern or microbiological agents as a result of anthropogenic sources, atmospheric deposition, non-point source discharges, agricultural practices and treated wastewater discharges.

5. Some groundwater basins in the State contain constituents that exceed or threaten to exceed water quality objectives established in the applicable Water Quality Control Plans (Basin Plans), and not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives or beneficial uses. These conditions can be caused by natural soils/conditions, discharges of waste, irrigation using surface water, groundwater or recycled water and water supply augmentation using surface or recycled water. Regulation of recycled water alone will not address these conditions.

6. When recycled water, surface water, or groundwater is used for irrigation, some constituents in the water may be concentrated in the percolate from the surface of the irrigated site to groundwater because much of the water applied evapotranspires, thereby leaving most of the constituent in the soil. However, certain constituents readily attenuate in soils, the vadose zone or groundwater, either by biodegradation, adsorption onto particles, chemical precipitation or dilution thus reducing but not necessarily eliminating leaching to the groundwater in the percolate. Under certain circumstances, this can cause an aquifer to become degraded and polluted.

7. Groundwater recharge using recycled water or surface water may contribute salts or change the geochemical equilibrium in an aquifer, thereby causing the dissolution of constituents, such as arsenic, from the geologic formation into groundwater. This can cause an aquifer to become degraded and polluted.

8. Water Code section 13242 requires a program of implementation for achieving water quality objectives. The program of implementation must include, but is not limited to: (a) a description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate actions by any entity, public or private; (b) a time schedule of

actions to be taken; and (c) a description of the surveillance to be undertaken to determine compliance with the objectives.

9. The California Department of Public Health (CDPH) (formerly known as the Department of Health Services or DHS) is responsible for establishing maximum contaminant levels (MCLs) for constituents in drinking water to protect the health of the public who drink water supplied by water utilities. These MCLs are adopted through an extensive scientific and public review process.

10. Water Code section 13550 requires that CDPH also establish uniform statewide recycling criteria for each type of use of recycled water where the use involves the protection of public health.

11. The California Code of Regulations, Title 22, Division 4, Chapter 3, Water Recycling Criteria (Water Recycling Criteria), prescribe specific treatment requirements based upon the proposed reuse and protection of public health.

(a) The Water Recycling Criteria address uses ranging from irrigation in areas with limited public contact through indirect potable reuse of water.

(b) The Water Recycling Criteria also specify use area, design, operational, personnel, maintenance, reporting and reliability requirements.

(c) For recycled water irrigation projects, the use area requirements included in the Water Recycling Criteria in combination with irrigation practices that result in irrigation in amounts that do not exceed the quantity needed for landscapes or crops, taking into account evapotranspirative demand, the distribution uniformity of the irrigation system, plant uptake and leaching needed to prevent the buildup of salts in soil, which creates a substantial delay in or mitigates pollutants reaching groundwater.

(d) For groundwater recharge reuse projects, the Water Recycling Criteria require recycled water to be of a quality that protects public health, whereby CDPH makes recommendations for a project to the Regional Water Board on an individual case-by-case basis. CDPH is also required to hold a public hearing prior to making the final determination regarding the public health aspects of each project, taking into consideration State Board Water Resolution No. 68-16. Per Water Code section 13540, projects can only proceed if CDPH determines that that the proposed recharge will not degrade the quality of the water in the receiving aquifer as a water supply for domestic purposes. In advance of the public hearing, project proponents are required to provide a completed Engineering Report to CDPH and the Regional Water Board that consists of a comprehensive investigation and evaluation of the project, its impacts on existing and potential uses of the groundwater basin, and the proposed means for achieving compliance with CDPH and Regional Water Board requirements. After the public hearing, CDPH issues findings of fact and conditions that constitute its recommendations to the Regional Water Board in establishing permit requirements. The findings of fact and conditions address source control, recycled water treatment, and operation of these projects, which for the purposes of State Water Board Resolution No. 68-16 are deemed to be consistent with best practicable treatment or

control. MCLs and other requirements or recommendations provided by CDPH provide reasonable protection of groundwater quality for the beneficial use of municipal supply.

12. Minor amounts of recycled water that escape use areas that are managed in a manner consistent with the Water Recycling Criteria and landscape or crop needs constitute incidental irrigation runoff. The State Water Board has developed a range of regulatory schemes for assuring federal Clean Water Act compliance for irrigation runoff, including the Municipal Separate Storm Sewer System (MS4) permitting system.

13. Certain constituents readily attenuate in soils, the vadose zone, or groundwater, either by biodegradation, adsorption onto particles, chemical precipitation or dilution. Hence, for groundwater recharge reuse projects, when hydrogeologic conditions are appropriate, it is not necessary to establish constituent levels for these constituents. Groundwater limitations, along with groundwater monitoring, provide adequate water quality protection.

14. Water Code section 13540 requires, in part, for any waste well that injects waste into a subterranean water bearing stratum, when a Regional Water Board finds that the water quality does not preclude controlled recharge by direct injection, and CDPH finds, after a public hearing and consideration of State Water Board Resolution No. 68-16, that the proposed recharge will not degrade the quality of the water in the receiving aquifer as a water supply for domestic purposes, recycled water may be injected into the aquifer.

15. In 1996, CDPH and the State Water Board signed a Memorandum of Agreement on the use of recycled water that describes procedures for issuing water reclamation requirements and for resolving conflicts between CDPH and the Regional Water Boards.

16. For recycled water irrigation projects, irrigation designed and operated in an amount or manner to prevent salt buildup and as needed for landscape or crops, and in conformance with the Water Recycling Criteria, represents best practicable treatment or control and ensures prevention of pollution and nuisances for the purposes of State Water Board Resolution No. 68-16.

17. The use of recycled water for groundwater recharge in accordance with CDPH requirements and recommendations for the protection of municipal supply beneficial uses is consistent with best practicable treatment or control and ensures prevention of pollution and nuisances for the purposes of State Water Board Resolution No. 68-16.

18. Recycled water irrigation projects and groundwater recharge reuse projects provide benefits to the people of the State. These benefits include extending the State's limited water supply to provide water to its growing population, reducing diversions of surface water, and reducing use of groundwater supply. These benefits outweigh the costs associated with limited potential for lowering of water quality, as mitigated through best practicable treatment or control, that would be caused by a recycled water project.

19. Recycled water irrigation projects and groundwater recharge reuse projects that comply with this Policy and the Water Recycling Criteria, are consistent with the requirements of State Water Board Resolution No. 68-16.

20. A statewide approach that fosters a consistent application of requirements to the use of recycled water is desirable in order to encourage and broaden its usage. Although some variation throughout the state is desirable because of differing climatic and hydrologic conditions and differences in water recycling projects, much of this variation is due to differing interpretations of similar requirements in the Regional Water Quality Control Board's (Regional Water Board) Water Quality Control Plans (Basin Plans). Uniform interpretation of these requirements is needed to reduce uncertainty in the design requirements for recycled water projects. This uncertainty has created an obstacle to achieving the full potential for water reuse.

21. To comply with the California Environmental Quality Act, the State Water Board adopted a certified regulatory environmental program study on December 4, 2007.

THEREFORE BE IT RESOLVED:

1. *General Policies*

(a) It is the policy of the State of California to encourage strongly the use of recycled water. Recycled water is a valuable resource for the people of the State and is not "waste" for purposes of Water Code section 13050(d).

(b) The State Water Board readopts the policies contained in recitals 1-4 and 6 of Resolution No. 77-1 as the basic framework to guide decisions relating to the use of recycled water.

(c) The State Water Board and Regional Water Boards will, to the greatest extent feasible, rely on technical expertise within CDPH in evaluating recycled water projects. In reliance on such expertise, the State Water Board and Regional Water Boards shall presume that the use of recycled water in a manner or for a purpose that complies with the regulations adopted by CDPH is safe.

(d) This Policy is to be liberally construed to facilitate the use of recycled water and thereby expand the available water supply within the State to the greatest extent feasible.

2. *Definitions*

(a) For the purpose of this Policy, "distribution uniformity" is the ratio of the average irrigation volume applied to the driest quarter of the field (or grid) and the average volume applied across the whole field (or grid). Distribution uniformity measures how uniformly an irrigation system applies water to a crop or landscape.

(b) For the purpose of this Policy, a "groundwater recharge reuse project" means a project that uses recycled water and that has been planned and is operated for the purpose of recharging a groundwater basin for use as a source for domestic or agricultural supply or for the purpose of controlling salt water intrusion.

(c) For the purpose of this Policy, "incidental runoff of recycled water" means minor amounts of recycled water that escape use areas that are managed in a manner consistent with the Water Recycling Criteria and landscape or crop needs.

(d) For the purpose of this Policy, "nutrient management practices" are measures implemented to manage the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. The purpose of nutrient management practices is to budget and supply nutrients for plant production, properly use manure or organic by-products as a plant nutrient source, minimize degradation of surface and ground water resources, protect air quality by reducing nitrogen emissions (ammonia and NOx compounds) and the formation of atmospheric particulates, and maintain or improve the physical, chemical and biological condition of soil.

(e) For the purpose of this Policy, "recycled water" has the same meaning as in Water Code section 13050(n).

(f) For the purpose of this Policy, "recycled water irrigation projects" are defined as those projects that use recycled water in accordance with the Water Recycling Criteria and in order to meet agronomic needs. A single recycled water project includes any incremental additions or modifications made in conformance with the associated recycled water program for which the provisions of the California Environmental Quality Act (commencing with Public Resources Code section 21000) have been satisfied. Such additions or modifications include, but are not limited to, the use of recycled water pursuant to the provisions of this Policy for newly established or existing playgrounds, parks, median strips, and other landscapes or crops.

(g) For the purpose of this Policy, "salts" are chemicals that contain the cations sodium, boron, calcium, magnesium, and potassium and the anions bicarbonate, carbonate, chloride, nitrate, phosphate, sulfate, and fluoride. Salts are commonly measured by water quality parameters that quantify combinations of ions, such as total dissolved solids (TDS), electroconductivity, and hardness.

3. *Salinity Management Plans*

By January 1, 2018, save in regions where a regional salt implementation plan has been developed as of the date of this Policy, the Regional Water Boards shall adopt revised implementation plans, consistent with Water Code section 13242, for those groundwater basins within their regions where water quality objectives for salts are being, or are threatening to be, exceeded. Such plans shall address and implement provisions, as appropriate, for all sources of salt to groundwater basins, including recycled water irrigation projects and groundwater recharge reuse projects. Such plans shall be developed through a locally driven, collaborative basinwide planning process that is open to all stakeholders.

4. *Provisions that Apply to All Recycled Water Projects*

(a) In implementing this Policy, the State Water Board and Regional Water Boards shall use TDS as the surrogate for regulating salts from projects using recycled water.

(b) Because recycled water projects meet a water supply need and do not constitute a discharge of waste, these types of projects shall generally be regulated under water recycling requirements rather than waste discharge requirements.

5. *Additional Provisions that Apply to Recycled Water Irrigation Projects*

In addition to the provisions of paragraph 4 above, recycled water irrigation projects shall meet the following requirements:

(a) In the absence of an adopted regional salt management plan, a Regional Water Board shall require the following in water reclamation requirements for recycled water irrigation projects:

(i) The development and implementation of nutrient management practices;

(ii) Compliance with the California Code of Regulations, Title 22, Division 4, Chapter 3, Water Recycling Criteria;

(iii) The recycled water to be applied in an amount or manner that does not exceed the quantity needed for the landscape or crops, taking into account evapotranspirative demand, plant uptake, the distribution uniformity of the irrigation system, and leaching needed to prevent the buildup of salts in soil;

(iv) Limitations on TDS concentrations in recycled water established as follows: [TO BE DETERMINED BASED ON DATA IN CONSULTATION WITH STATE WATER BOARD]

(v) The use of recycled water not to cause or contribute to exceedances of groundwater quality objectives for non-salt related constituents or cause the impairment of a designated beneficial use of groundwater.

(b) In the event that an irrigation project cannot comply with all of the requirements set forth in subparagraph (a) above, a Regional Water Board may allow the project to be implemented and may establish other appropriate requirements for the project, including a requirement for groundwater monitoring if the Regional Water Board determines that site conditions such as shallow groundwater could cause an increased potential for the irrigated site to adversely affect beneficial uses or surface water quality.

(c) For recycled water irrigation projects, a Regional Water Board shall not require salt management measures other than those listed in subparagraphs (a) and (b) above prior to January 1, 2018, unless such measures are part of a salt implementation plan adopted pursuant to paragraph 3 above or included within an existing regional groundwater management plan already in place at the time of adoption of this Policy.

(d) Incidental recycled water runoff shall be managed and permitted using existing mechanisms in the same manner as other types of irrigation runoff, including, but not limited to, municipal separate storm sewer system permits, general permits, or master reclamation permits.

(e) The Regional Water Board shall defer to CDPH with regard to requirements for the protection of human health. If CDPH and the Regional Water Board disagree on proposed permit requirements for a water recycling project, the Regional Water Board shall follow the conflict resolution process prescribed in the 1996 "Memorandum of Agreement between the

Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water."

6. *Additional Provisions that Apply to Groundwater Recharge Reuse Projects*

In addition to the provisions of paragraph 4 above, groundwater recharge reuse projects shall meet the following requirements:

(a) Notwithstanding the terms of subparagraph (b) below, for constituents for which CDPH has established an MCL, with the exception of color, when interpreting a narrative objective to develop a numeric constituent level for the constituent for protection of public health for a groundwater recharge reuse project, the Regional Water Board shall establish the constituent level at a concentration equivalent to the MCL. A Regional Water Board may establish a groundwater 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.

(b) For constituents for which CDPH has not established an MCL, a Regional Water Board shall defer to CDPH with regard to recommendations for constituent levels for groundwater recharge projects when interpreting a narrative objective for protection of human health. Upon the recommendation of CDPH to establish a constituent level at a specific concentration for a specific constituent, a Regional Water Board may establish a constituent level for that constituent at the concentration(s) recommended by CDPH only if it finds that: (a) the constituent can be reliably measured in the recycled water and groundwater using approved analytical methods; and (b) the constituent is present in groundwater at concentrations as determined by CDPH, after public hearing and comments, that would impair the municipal drinking water supply beneficial use as a result of using recycled water for groundwater recharge.

(c) If CDPH recommends establishing a groundwater or vadose zone limitation for constituents that are attenuated in the soil, vadose zone or groundwater, in lieu of establishing a recycled water constituent limitation, the Regional Water Board shall establish a limitation for the constituent based on the CDPH recommendation. If a vadose zone or groundwater limitation is established, the Regional Water Board shall require monitoring of the constituent at the specified monitoring points for determining compliance with established limitations. The groundwater shall comply with the limitation at specified monitoring points. If CDPH recommends creating a protection area between the point of recharge by injection or surface spreading, and the point of extraction of groundwater for use of a drinking water supply, the Regional Water Board shall include a requirement in the permit that the discharger take appropriate actions to prevent the use of groundwater for drinking water within the protection area.

(d) If a salt implementation plan adopted pursuant to paragraph 3 above is adopted prior to January 1, 2018 or a regional salt management plan is already in place at the time of adoption of this Policy, then a Regional Water Board shall only require the salt management measures included in those plans. Before January 1, 2018 in regions where a comprehensive salt implementation plan has not yet been developed, the Regional Water Boards shall require the following for groundwater recharge reuse projects.

(i) Compliance with the California Code of Regulations, Title 22, Division 4, Chapter 3, Water Recycling Criteria;

(ii) [TO BE DETERMINED BASED ON DATA IN CONSULTATION WITH STATE WATER BOARD]

(iii) The use of recycled water not to cause or contribute to exceedances of groundwater quality objectives for non-salt related constituents or cause the impairment of a designated beneficial use of groundwater.

(e) For groundwater recharge reuse projects, after a public hearing, CDPH issues findings of fact and conditions for each project, including whether a proposed recharge will or will not degrade the quality of water in the receiving water pursuant to Water Code section 13540. CDPH provides such findings of fact and conditions as recommendations to the Regional Water Board for issuing the permit for a project. The Regional Water Board shall defer to these recommendations of CDPH. If the Regional Water Board disagrees with other CDPH recommendations regarding the project, the Regional Water Board shall follow the conflict resolution process prescribed in the 1996 "Memorandum of Agreement between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water."

(f) For the purpose 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 or control for protection of public health for the purposes of State Water Board Resolution No. 68-16.

7. *Liability*

(a) Nothing in this Policy is intended to expand or limit liability under existing law for contamination of groundwater.

(b) For groundwater recharge reuse projects, Regional Water Boards may only include permit requirements based on recommendations provided by CDPH with regard to response actions that must be taken should the use of recycled water cause a producing potable water well to be degraded so that it can no longer be used as a safe source of drinking water.

8. *Revisions of Basin Plans to Conform to Policy*

Within two years from the effective date of this Policy, each Regional Water Board shall review its Basin Plan and revise that Basin Plan as necessary to conform to this Policy. Each Regional Water Board shall submit any revisions of its Basin Plan to the State Water Board no later than January 30, 2010.

9. *Updates to Policy*

It is the intent of the State Water Board to periodically review and revise this Policy as appropriate.

10. *Consistency with Resolution No. 77-1*

To the extent of any conflict between State Water Board Resolution No. 77-1 and this Policy, this Policy supersedes any conflicting provision contained in State Water Board Resolution No. 77-1.