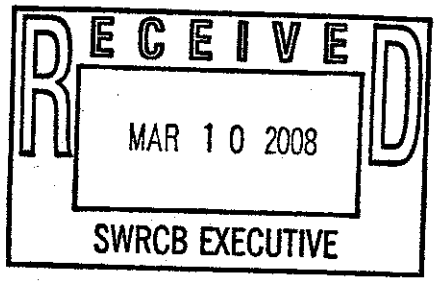
3/18/08 Bd, Mtg. Item 13
Recycle Water Policy
Deadline: 3/10/08 by 12 p.m.



March 10, 2008

Tam Doduc, Chair and Members
State Water Resources Control Board
1001 I Street
Sacramento, California 95814

VIA ELECTRONIC MAIL

Re: March 18, 2007 SWRCB Meeting, Agenda Item #13: Proposed Recycled Water Policy

Dear Chair Doduc and State Board Members:

On behalf of the California Coastkeeper Alliance, Lawyers for Clean Water, Santa Monica Baykeeper, and San Diego Coastkeeper, we are writing with regard to the State Water Resources Control Board's ("Water Board") above-described proposed Recycled Water Policy (Draft Policy). As we articulated in our letter to you dated March 6, 2008, our organizations and Heal the Bay, whose comments today we incorporate by reference, strongly support the goal of expanding water reuse in the state of California and meeting the near-term goal of one million acre-feet recycled water use per year - *consistent with* state and federal water quality law and policies. Over the past year, we have sent multiple sets of detailed comments and provided oral testimony with regard to our shared commitment to the state's adoption of an overarching recycled water policy that comprehensively addresses these goals and includes needed implementation recommendations. We incorporate these March 2007 and October 2007 letters by reference and enclose them with these comments.

We appreciate the Water Board's efforts in taking on the important task of developing a recycled water policy. However, we continue to have significant concerns with regard to the latest Draft Policy. As we have articulated consistently, **water recycling helps California meet its water needs only when water quality is protected.** The current Draft Policy not only fails to meet this fundamental, common-sense tenet, but it also fails to set out a strategy for meeting either the fast-approaching million acre-feet goal or subsequent, increased recycled water use goals. The need to promote recycled water use consistent with these statewide goals and with water quality laws and policies also is being compromised by the current, stepwise path of taking on a series of narrowly focused and blindered policies, rather than one overarching strategy that looks at recycled water use, movement, and regulation holistically. As discussed below, the chosen strategy of setting up a Draft Policy that facilitates recycled water use while turning a blind eye to all of the impacts of that increased use – particularly emerging contaminants – is mystifying in light of the concomitant desire to increase public acceptance of recycled water.

As we articulated in our March 6th letter, we urge the Water Board to delay adoption of the Draft Policy, and instead engage in a facilitated discussion with interested stakeholders on the development of a comprehensive recycled water policy, one that sets out a clear, overarching strategy and implementation plan to meet the fast-approaching million acre-feet goal and protect surface and ground water quality consistent with state and federal water quality laws and policies. This is the very point of developing a recycled water policy. This type of discussion has not been held to date; for example, the Recycled Water Task Force did not examine water quality issues in meaningful detail, which is why it has become a major issue in this proceeding. The debate and information exchange that a facilitated discussion would provide – an exchange that the full range of major stakeholders have requested – would be extremely valuable in crafting a Draft Policy that achieves all of these goals. This discussion also is particularly warranted in light of the fact that it is our understanding that this Draft Policy will in fact be a regulation, a point that has never been made entirely clear to the public, and so its adoption on the 18th may trigger underground regulation questions that will need to be addressed.

If the Board decides to move forward with addressing this Draft Policy at the March 18th meeting, however, we strongly urge the Board to revise the Draft Policy to:

- Set out a process by which the Water Board will meet the stated recycled water use goals that are articulated in both the California Water Plan and the Water Board's draft Strategic Plan, consistent with state and federal water quality laws and policies;
- Eliminate the use of regulatory forgiveness as an implementation vehicle for increased recycled water use;
- Establish regulated entity accountability for meeting state and federal water quality laws and policies, rather than (as the Draft Policy does) placing the burden on the regional water boards or on no one entity at all;
- Establish a clear process for ensuring that the Draft Policy meets the letter and intent of the state's Antidegradation Policy in Resolution 68-16; and
- Review and correct the Draft Policy's CEQA analysis.

Each of these issues is discussed further below and in Attachment 1 ("CEQA Analysis").

Establish a Process by which the Water Board Will Meet Stated Recycled Water Use Goals.

As noted in the Water Board's draft Strategic Plan, state goals call for a million acre-feet of recycled water use by 2010, with the potential to recycle an additional 1,400,000 to 1,670,000 acre-feet per year over 2002 levels by 2030. The Draft Policy completely fails to set out a path to achieve these goals, calling into question its status as a "recycled water policy." Instead, it only attempts to address one small slice of the range of important recycled water use issues, ignoring glaring questions such as emerging contaminants and compliance with water quality laws, both of which are critical to making the public comfortable with use of recycled water. As such, the Draft Policy provides no clear road to measurable increases in recycled water use consistent with water quality laws.

An actual "Recycled Water Policy" should address all of the potential variables involved in recycled water use and management – including but not limited to runoff to surface water, impacts of salt attenuation in the soil, and emerging contaminants. The Draft Policy need not solve all of these problems, but it should lay out all of these and other significant issues and describe a clear path for addressing them. We urge the Board to amend the Draft Policy to identify and fill in these gaps.

Eliminate the Use of Regulatory Forgiveness as an Implementation Vehicle for Increased Recycled Water Use.

One apparent impetus for the structure and substance of the Draft Policy is the argument made repeatedly by recycled water purveyors that recycled water is at a "disadvantage" because of less-regulated and less-costly source water. Rather than weakening water quality requirements on recycled water, as the Draft Policy proposes, we suggest that the state begin regulating source (particularly imported) water more rigorously, to ensure that *any and all* discharges to California's waters meet state and federal requirements and do not impact beneficial uses. Full regulation of all water releases as required by law is essential to overcome another oft-stated concern of recycled water purveyors: the need to convince the public that recycled water is "safe." One certain way to ensure that goal is <u>not</u> met is to relax water quality requirements on and regulation of recycled water to "incentivize" its use – as this Draft Policy does. We believe that this course of action is short-sighted and ultimately will delay, not advance, the use of recycled water in the state.

Examples of this problem abound throughout the Draft Policy. These include but are not limited to the following:

<u>Emerging Contaminants/Pharmaceuticals</u>

The Draft Policy completely ignores one of the most significant recycled water issues to scientists and the public: emerging contaminants. The Draft Policy cannot hope to increase public support for more use of recycled water without tackling this issue head-on. A nationwide Associated Press investigative report, coincidentally released today,[1] found a "vast array" of pharmaceuticals in the drinking water supplies of at least 40 million Americans in 24 major metropolitan areas, including Southern California. This is not simply a CDPH issue; fish and wildlife are affected as well. As the AP report notes, even the pharmaceutical industry admits that fact, stating: "There's no doubt about it, pharmaceuticals are being detected in the environment, and there is genuine concern that these compounds, in the small concentrations that they're at, could be causing impacts to human health or aquatic organisms."[2]

The chosen strategy of setting up a Draft Policy that facilitates increased recycled water use while turning a blind eye to all of the impacts of that increased use – particularly emerging contaminants – is mystifying in light of the concomitant desire to increase public acceptance of recycled water. Dealing with this critical issue later shortchanges the state's overall efforts to

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[1] Associated Press, "Drug Traces Common in Tap Water" (March 10, 2008), found at: http://www.nytimes.com/aponline/us/AP-PharmaWater-I.html?_r=1&oref=slogin.
[2] *Id.*, quote by Mary Buzby, Director of Environmental Technology, Merck & Co., Inc.

increase the use of recycled water – which still must pass muster at the local level – and will more likely slow, rather than accelerate, use of this important resource.

Nitrogen

Nitrogen limits of 3 mg/l in the Draft Policy ignore well-settled science on the impacts of that level of nitrogen on surface water (*e.g.*, creating algal blooms and other problems). This includes both runoff directly to surface water and movement of the contaminant to surface water through groundwater. The Water Board cannot set such a high level of nitrogen as "acceptable" and expect to address this problem effectively later through a general permit on irrigation runoff to surface water.[3] Moreover, the Draft Policy ignores potential impacts on waters listed as impaired by nitrogen (and possibly other contaminants), and the issue of whether developing or adopted TMDLs will need to be revised as a result. This needs careful consideration before the recommended nitrogen limits are adopted. A blanket statement that water quality standards will not be violated in the face of such likely violations will not suffice.

Salts

The Draft Policy allows potentially major discharges of salts for up to a decade, ignoring attendant attenuation in soils and known associated problems. The Draft Policy and Staff Report readily admit that the proposed 550 mg/l was chosen simply because it is a level "that most recycled water producers can currently meet." The Water Board's mandate is to protect the environment from contaminants. To ignore potentially significant attenuation of salts over a decade in favor of making the regulated community more comfortable is to ignore that clear mandate.

The Draft Policy does state that it does not authorize discharges that cause or contribute to violations of water quality objectives. However, simply reciting this mantra, while at the same time setting up a process that threatens water health and limits the regional boards' and the public's ability to reverse associated degradation, is insufficient to protect California's waters. Moreover, the Draft Policy itself appears to contradict this statement in Paragraph III.A.4., which states that if the regional boards do not implement a salt management plan by the five- to ten-year deadline, then "all discharges of recycled water shall meet effluent limits established by the regional water board to ensure the discharge does not cause or contribute to a violation of salt or

[3] As discussed further below, the state arguably should also consider performing an antidegradation analysis for such potential impacts, even if they are to be ostensibly addressed later. State antidegradation policy, which incorporates federal antidegradation policy, requires that California "maintain existing Beneficial Uses of navigable waters, preventing their further degradation." *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700, 705 (1994); *see also* SWRCB Resolution No. 68-16; 40 C.F.R. § 131.12. Under the policy, the state must make an "antidegradation finding" if water quality is reduced as a consequence of an action taken by the Water Board. Consequently, the policy's applicability "need not be triggered by a discharge or any particular 'activity'." U.S. EPA, Region IX letter to Edward Anton, Acting Executive Director, SWRCB (May 26, 2002). Rather, an antidegradation analysis must be conducted and antidegradation effects must be considered whenever there is the potential for an increase in the emissions of a pollutant, "even if there is no other indication that the receiving waters are polluted." *Antidegradation Administrative Procedure Update*, at 4 (July 2, 1990); *see also In re Rimmon C. Fay*, SWRCB WQO 86-17 at 21 (Nov. 20, 1986). The Policy's allowable increase in pollutant loads into surface waters through recycled water runoff may be sufficient to trigger the state's Antidegradation Policy, and consideration should be given to whether an analysis of these potential impacts should be done.

nutrient WQOs." This directive to comply post-deadline implies that it was acceptable to violate those objectives in the interim, creating a conflict with the earlier commitment to WQOs. Certainly there is no clear, overarching, unwavering commitment to meeting WQOs and preventing antidegradation, again calling into question the viability of this Draft Policy in assuaging public concerns about the quality of recycled water.

Toxics

This problem also arises in the Draft Policy's section on toxics (Section IV), which ties the regional water boards' hands even more than in the first draft by saying that they not only must interpret narrative objectives for toxicity for municipal or domestic uses to equal CDPH's MCL for that constituent (if there is one), but they also *shall* interpret narrative objectives for toxicity to equal CDPH's "recommended" limits pursuant to Water Code 13523(a). This new language ignores existing provisions in the law that provide an opportunity for public review and comment on these recommendations, as well as regional water board discretion to adopt them, and instead mandates their use without the public comment and regional board discretion that is now allowed.[4] An offline discussion with CDPH through the MOU process does nothing to assuage this problem. In addition to raising questions about compliance with existing law, these provisions tying the regional boards' hands and cutting out the public also raise questions about underground regulations. Moreover as a public policy matter, a Draft Policy that attempts to make an illegal end-run around statutory rights of the public and its regional water board to assess the *recommendations* of the CDPH on *toxics* again increases, not decreases, public distrust of how toxics in recycled water are regulated, and so slows, not increases, the state's progress in using this water for important public needs.

In the same vein, Paragraph IV.B. severely ties the regional water boards' hands in regulating toxics (again, an issue of no small import to the public) even in the case where there is no MCL or recommended limit. Placing strict limits on how the regional boards can protect the state's waterways from toxics will not engender increased public support for recycled water use.

These and other examples of regulatory rollbacks and excessive limits on the regional boards' ability to meet their mandate to protect the waters of the state both reduce public confidence in recycled water and threaten the health of our waterways. They also set a seriously problematic precedent for weakening controls on other purportedly "important" water uses. And these provisions do all this over at least five years and – given the vague language of the virtually automatic extension – more likely ten years or even more.[5] The Draft Policy thereby reinforces each year for up to a decade or more its ongoing regulatory relief precedent, increasing the likelihood that it will be tapped again.

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[4] Water Code Sec. 13523(a): "Each regional board, after consulting with and receiving the recommendations of the State Department of Health Services and any party who has requested in writing to be consulted, *and after any necessary hearing*, shall, *if in the judgment of the board*, it is necessary to protect the public health, safety, or welfare, prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water." (Emphasis added.) This cannot be contravened through regulation; legislative changes must be made to accomplish the proposed Draft Policy language.

[5] Paragraph III.A.3. states that the interim regulatory relief provisions can extend for the five years that is expected to be needed to prepare a salt management plan, and then to ten years if a regional board finds only that "significant progress has been achieved but that additional time is necessary for plan adoption." No definitions or objective, measurable milestones are given or required for "significant progress" and "necessary."

Establish Discharger Accountability for Meeting State and Federal Water Quality Laws and Policies.

The Draft Policy excises any direct accountability by recycled water purveyors for creating salt management plans, for applying recycled water in amounts that do not exceed the amounts needed, for releasing water with a TDS content above the maximum, or for using recycled water in a way that does not cause or contribute to violations of WQOs (*see* deleted sections on pages 8-9 of the Draft Policy, which had placed these requirements in WDRs). Instead, the Draft Policy blurs the source of ultimate accountability, making it far less likely that the even minimal provisions in this Draft Policy will be followed.

For example, *at best* the Draft Policy shifts the entire burden to the regional water boards to prepare and implement salt management plans - raising additional questions as to the need for regulatory relief for purveyors while the regional boards are doing the lion's share of the work. In this era of extreme fiscal restraint, there are far less assurances that such important tasks will be accomplished by the boards in five or even ten years.

However, this is unfortunately "at best"; in fact, the Draft Policy uses passive tense and vague language with respect to many of its most meaningful "requirements." For example, the Interim Requirements in Paragraph III.B. state that the regional boards "*shall not impose* more stringent salt management requirements than the following..." (then listing the nitrogen, TDS and other provisions). (Emphasis added.) This is entirely different from saying that the regional boards "*shall impose*" specific requirements that protect beneficial uses, and so provides little in the way of real direction to the regional boards and little in the way of assurances that beneficial uses will *in fact* be protected. Writing into purveyor WDRs a mandate to prepare salt plans and take other actions to comply with water quality laws creates an accountability trail that does not now exist in the Draft Policy. This accountability is essential if we are to meet our very specific recycled water goals, which again is an issue that the Draft Policy does not tackle.

Establish a Clear Process for Ensuring that the Draft Policy Meets the Letter and Intent of the State's Antidegradation Policy.

We discussed our concerns with the Draft Policy's lack of attention to the letter and intent of the state's Antidegradation Policy in detail in our October 2007 comments (enclosed) and oral testimony to the Water Board. In summary, we do not support the Draft Policy's blanket, unsupported statement that generic compliance with the Draft Policy, state law, and the Basin Plans equates with compliance with State Board Resolution No. 68-16. In fact, among other things, the Draft Policy allows violations of antidegradation requirements for salts for up to a decade.[6] As a general matter, approval of a blanket conclusion that simply requiring compliance with the law (which is of course required in any event) is equivalent to an antidegradation analysis would create disturbing precedent for all future applications of 68-16.

[6] Paradoxically, the argument has been made that the increases in salt loads are not an issue because the salt will not reach the groundwater during the time frame of the interim requirements. If that is indeed the case, then there should be no concern with strengthening the antidegradation requirements.

Moreover, it again does not increase public confidence in the quality of recycled water, and will more likely slow than speed the use of this important resource.

For example, Resolution No. 68-16 requires a finding that the technologies or controls established be the "best practicable" treatment or control (BPTC). Before the Water Board can assess whether an increase in TDS over the source water supply represents BPTC, the Water Board must analyze the various levels recycled water purveyors are capable of meeting using the best practicable treatment method. It cannot simply pick the level of treatment that feels acceptable to most people; *i.e.* "a difference [over source water levels] that most recycled water producers can currently meet." Until this exercise is completed, the Water Board cannot purport to know what the best practicable treatment or control is, or specifically whether a particular increase in salt concentration over the source supply is BPTC. Similarly, it is insufficient to rely on the assumption that CDPH's recommendations for design and operation of groundwater recharge and reuse projects constitutes BPTC. Information to support this claim must be provided, not simply asserted.

The Draft Policy apparently also fails to protect those waters most vulnerable – pristine groundwater basins. The Draft Policy states that for those groundwater basins where "the evidence does not support a finding under Section III.A. that a salt management plan is required" (*e.g.* pristine, unthreatened groundwater basins) the regional board "shall not impose salt limitations for recycled water projects, except as necessary to ensure compliance with WQOs." The Draft Policy does not mention Resolution 68-16 here, while it does mention it in a parallel section earlier in the Policy, which appears to allow degradation of these pristine basins inconsistent with Resolution 68-16 as long as WQOs for salts are not violated. If this was not the intent, the Draft Policy needs to be clarified. If it was the intent, we strongly question the need to degrade the limited number of pristine groundwater basins in the state for any reason, particularly to (ironically) increase water supply.

Finally, we question the intent of Paragraph VI.C., which states that "[w]hen the State Water Board approves a salt management plan for a specific groundwater basin, the salt-and nutrient-related antidegradation findings of that plan shall supersede the antidegradation findings of this Policy for that groundwater basin. The salt management plans must also include a description of the best practicable treatment or control measures necessary to ensure that recycled water projects do not result in a salt or nutrient-related condition of pollution or nuisance." This provision surprisingly appears to allow Resolution 68-16 to be interpreted differently pre- and post- salt management plans. Putting aside the obvious precedential implications of changing interpretations of 68-16 based solely on the presence or absence of plans, what is the basis of authority for such differing actions? Has the public interest changed? Has the BPTC changed? Has the state of the affected water body changed? Antidegradation analysis requires more than a check-off for "salt plan" or "no salt plan."

Review and Correct the Policy's CEQA Analysis.

We have numerous, significant concerns with regard to the adequacy of the CEQA analysis for the Draft Policy. The analysis must be more fully supported and expanded to be legally adequate. Among other things, the FED fails to adequately describe the environmental setting of the Draft Policy (the Project); fails to identify, analyze and provide adequate mitigation of numerous significant and potentially significant adverse environmental effects of the Project;

and fails to adequately consider and mitigate the Project's cumulative impacts. Each of these issues is examined in more detail in Attachment 1. We urge the Board to take the time to address these critical issues to ensure compliance with CEQA and ensure that the Draft Policy encourages the use of recycled water consistent with the protection of water quality.

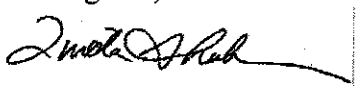
All of these concerns are exacerbated by the apparent inattention given to responding to the comprehensive and significant public concerns raised with regard to the last, similar version of the Draft Policy. Under section 3779 of Title 23 of the California Code of Regulations, which is part of the State Water Resources Control Board's specific regulations for the implementation of CEQA, "[t]he board shall prepare written responses to comments containing significant environmental points raised during the evaluation process, if such comments are received at least fifteen days before the date the board intends to take action on the proposed activity."[7] The purpose of this requirement is to provide public with a meaningful way to participate in the environmental assessment of proposed projects.

However, the State Board failed to respond to the public's significant concerns over this Policy until over four months after the last round of comments on a similar Policy, over a month after the Draft Policy was posted, and literally only a few working hours before public comment period on the Draft Policy expired. It is unsettling at best that the response to comments was provided so late as to effectively preclude interested stakeholders from evaluating the responses and providing input on them. This does not appear to be an effort by the State Board to provide the public with a meaningful way to participate in the environmental assessment of the Draft Policy, and calls into question the extent to which those comments were considered, thus thwarting the goals of CEQA. In light of the delayed responses to comments provided months ago, we reiterate our call for a delay in adoption and further discussion of these important issues. As noted above, this is particularly warranted in light of the fact that it is our understanding that this Draft Policy will in fact be a regulation, a point that has never been made entirely clear to the public, and so its adoption on the 18th may trigger underground regulation questions that will need to be addressed.

* * *

Reuse and recycling of California's limited water resources will be essential to meet the ever-growing demand for water in the state, including water needs for a healthy environment. Nonetheless, the laudable goal of encouraging reuse and recycling must be tempered by a vigorous commitment to protect and enhance water quality in the process. We again urge you to spend focused time with stakeholders in further discussion of all of the elements involved in addressing these critical issues before adopting this Draft Policy. We look forward to working with you further on this important matter.

Best regards,



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[7] 23 C.C.R. § 3779(a).

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Attachment: CEQA Assessment
Enclosures: March 2007 and October 2007 Comment Letters to the SWRCB from CCKA *et al*

ATTACHMENT 1:

CEQA ASSESSMENT

Under the California Environmental Quality Act (CEQA), a state or local agency must initiate environmental review prior to carrying out or approving any discretionary action that may have a significant impact on the environment.[8] If the agency finds that a project may have a significant effect on the environment, the agency must prepare an EIR.[9]

CEQA provides a limited exemption from its EIR requirement for certain certified state agency regulatory programs whose written documentation containing environmental information serves as a functional equivalent of an EIR.[10] To qualify for a certification of exemption from the EIR requirements of CEQA, however, the regulatory program must "[i]nclude[] protection of the environment among its principal purposes."[11] The draft State Recycled Water Policy process and documentation falls within the purview of section 15251(g) of Title 14 of the California Code of Regulations as a certified state regulatory program exempt from the EIR requirements of CEQA.[12] Consequently, the draft Recycled Water Policy documentation and process serve as functionally equivalent to an EIR documentation and process under CEQA.[13]

While an environmental impact report ("EIR") is not required for certified regulatory programs, the Board's decision to adopt a Draft Recycled Water Policy must still comply with the policies and provisions of CEQA from which it is not specifically exempted.[14] Thus the broad policies expressed in CEQA at Pub. Res. Code § 21000 and the substantive standards of CEQA at Pub. Res. Code § 21001 as well all other provisions of CEQA apply to review and approval of the Draft Policy.[15] This includes CEQA directives that an agency consider the cumulative impacts of its project approvals,[16] provide timely and adequate responses to comments made by the public,[17] and consider feasible alternatives to the proposed action.[18]

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[8] *See Friends of Westwood, Inc. v. City of Los Angeles,* 191 Cal. App.3d at 267, 269-270.

[9] Pub. Res. Code § 21100(a); *Bozung v. Local Agency Formation Com.* (1975) 13 Cal. 3d 263, 277-279. CEQA defines a "significant effect" as a "substantial, or potentially substantial, adverse change." Pub. Res. Code, § 21068. This means that an activity has a significant effect if it "has the potential to degrade the quality of the environment." See also 14 Cal. Code Reg. § 15382; *Santa Monica Chamber of Commerce v. City of Santa Monica* (2002) 101 Cal. App. 4th 786, 795; *Azusa Land Reclamation Co. v. Main San Gabriel Basin Watermaster, supra,* 52 Cal. App.4th at 1192. (Citing Pub. Res. Code § 21083.) (emphasis added.)

[10] Pub. Res. Code § 21080.5(a); *Sierra Club v. State Bd. of Forestry, supra,* 7 Cal. 4th at 1229-1230; *Citizens for Non-Toxic Pest Control v. Department of Food & Agriculture* (1986) 187 Cal. App. 3d 1575, 1584.

[11] Pub. Res. Code § 21080.5(d)(1)(A).

[12] 14 Cal. Code Reg. § 15251(g).

[13] *See Mountain Lion Foundation v. Fish & Game Commission* (1997) 16 Cal. 4th 105, 113.

[14] *See* Pub. Res. Code § 21080.5(c) (Certified regulatory programs are exempt from the provisions of Chapter 3 (commencing with section 21100) , Chapter 4 (commencing with section 21150), and section 21167 (timetable for judicial review)). *See also Mountain Lion Foundation v. Fish & Game Commission* 16 Cal. 4th 105, 114 (1997); *Sierra Club v. State Board of Forestry* 7 Cal. 4th at 1228, 1230, 1231.

[15] *See Sierra Club v. State Board of Forestry* (1994) 7. Cal. 4th 1215, 1229, 1230; *Ultramar, Inc. v. South Coast Air Quality Management District* (1993) 17 Cal.App.4th 689, 699; *EPIC v. Johnson* 170 Cal.App.3d at 609-611. *Accord Schoen v. CDF, supra,* 58 Cal. App. at 565-567; *Friends of Old Trees v. CDF, supra,* 52 Cal. App. 4th at 1394. *Laupheimer v. State of California* (1988) 200 Cal.App.3d 440, 462; *Gallegos v. State Bd. of Forestry, supra,* 76 Cal. App.3d at 952; *Natural Resources Defense Council, Inc. v. Arcata Nat'l. Corp.* (1976) 59 Cal.App.3d 959, 963, 969.

[16] *EPIC v. Johnson, supra,* 170 Cal. App. 3d at 625

[17] *Id.* at 622; *Dunn-Edwards Corp. v. Southcoast Air Quality Management District* (1993) 19 Cal. App. 4th 519, 534; Pub. Res. Code § 21080.5(d)(2)(D).

[18] *Friends of Old Trees v. Dept. of Forestry and Fire Protection, supra,* 52 Cal. App. 4th at 1404-1405. *See also* §§ 21080.5(d)(3), 21080.5(d)(2)((A)

The guiding principle in the review of projects under CEQA is that CEQA must be interpreted so as to afford the fullest possible protection to the environment.[19] EIRs and their functional equivalents under certified programs demonstrate to an apprehensive citizenry that the agency has analyzed and considered the ecological implications of its action.[20] These CEQA policies are also included in the State Water Resources Control Board's regulations at 23 Cal. Code Reg. 3775 *et seq.*

The proposed Recycled Water Policy is accompanied by a staff report and a Certified Regulatory Program Environmental Analysis. The major part of the CEQA environmental analysis is contained in the Environmental Checklist form which follows the staff report.

The FED of the Draft Recycled Water Policy Fails to Adequately Describe the Environmental Setting of the Project

The first step in evaluating the impacts of a project is to assess the existing environmental and physical setting. The CEQA Guidelines specifically require an EIR or an FED, such as the one prepared for the draft Recycled Water Policy, to describe the environmental setting of the proposed project.[21] "Knowledge of the regional setting is critical to the assessment of environmental impacts" and "[s]pecial emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project.[22]" The Environmental Checklist Form in Appendix G of the CEQA Guidelines, which is partially utilized by the FED for the draft Recycled Water Policy[23] also contains a specific requirement for a description of the setting of the project.[24]

California courts have consistently underscored the importance of this CEQA requirement to describe and assess the existing environmental setting of the proposed project. In *San Joaquin Raptor v. County of Stanislaus,*[25] the Court of Appeal applied CEQA Guidelines § 15125 to set aside an EIR for a housing subdivision for failing to adequately describe the existing environmental setting of the site. The Court found that in the absence of such a description, it is "impossible for the [FEIR] to accurately assess the impacts the project will have on wildlife and wildlife habitat or to determine appropriate mitigation measures for those impacts." [26]

The Court in *San Joaquin Raptor* also cited *Remy et al., Guide to the Cal. Environmental Quality Act* (Guide to CEQA) (7th ed. 1993) as follows:

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[19] *Laurel Heights* 47 Cal.3d at 390; *Friends of Mammoth v. Board of Supervisors* (1972) 8 Cal.3d 247, 259.
[20] *Sierra Club,* 7 Cal. 4th at 1229; *EPIC v. Johnson,* 170 Cal.App.3d at 609-11. *See also* Pub. Res. Code § 21080.5(d)(3)(i)-(ii) (written documentation for a certified regulatory program shall include a description of activity, alternatives, and mitigation measures to minimize significant environmental impacts, and shall be available for a reasonable time for review and comment by the general public.)
[21] 14 C.C.R. § 15125.
[22] 14 C.C.R. § 15125 (c).
[23] *See* Recycled Water Policy Draft Staff Report and Certified Regulatory Program Environmental Analysis at 11.
[24] CEQA Guideline, Appendix G, Environmental Checklist Form, Item 9.
[25] *San Joaquin Raptor v. County of Stanislaus* 27 Cal. App. 4th at 722-223.
[26] *Id. See also* CEQA Guidelines § 15125 ("An EIR must include a description of the environment in the vicinity of the project, as it exists before the commencement of the project, from both a local and regional perspective. The description shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives.") (a) Knowledge of the regional setting is critical to the assessment of environmental impacts. Special emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project."

> The Guide to CEQA explains the significance of adequate consideration of the existing environmental setting: "Because the concept of a significant effect on the environment focuses on changes in the environment, this section requires an EIR to describe the environmental setting of the project so that the changes can be seen in context. The description of the pre-existing environment also helps reviewers to check the Lead Agency's identification of significant effects." (Guide to CEQA, *supra*, p. 579.)[27]

The Court concluded:

> We must interpret the Guidelines to afford the fullest possible protection to the environment." (*Kings County Farm Bureau v. City of Hanford*, supra, 221 Cal.App.3d at 720.) Careful review of the administrative record demonstrates that the FEIR's description and consideration of the site and surrounding area is so incomplete and misleading that it fails to meet the standard set forth in State CEQA Guidelines section 15125.[28]

The Third District Court of Appeal in *Communities for a Better Environment v. California Resources Agency*[29] recently upheld the principle that in order to assess the cumulative impacts of a project an accurate description of the environmental setting is essential, noting that, in assessing cumulative impacts, an agency must take into consideration past impacts on the environment to determine whether additional impacts may be significant.[30]

Contrary to these requirements for a comprehensive discussion of the environmental setting of the project, the Recycled Water Policy FED is devoid of any meaningful description and analysis of existing environmental impacts and conditions of California's polluted surface and ground waters. The FED states that the proposed policy focuses on development of salt and nutrient management plans, use of recycled water for irrigation and groundwater recharge reuse.[31] The only semblance of environmental setting description in the FED can be found in the extremely cursory discussion of water quality impairments due to exceedances of the salt and nitrite water quality objectives in groundwater basins in California.[32] The FED, however, does not provide any details as to the actual violations of salt water quality objectives and the groundwater basins where these violations are occurring, nor does it provide any analysis of the current conditions in these groundwater basins such as any connection to other groundwater basins or surface waters.

Although the proposed Recycled Water Policy attempts to provide guidance on the implementation of toxicity water quality objectives for groundwater recharge reuse projects, it contains absolutely no description of existing toxicity impairments in the water bodies of California.

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[27] *San Joaquin Raptor v. County of Stanislaus* 27 Cal. App. 4th at 722-223.
[28] *Id.*
[29] 103 Cal. App. 4th 98 (2002).
[30] *Id.* at 117 (proposed guidelines "would turn cumulative impact analysis on its head by diminishing the need to do a cumulative impact analysis as the cumulative impact problem worsens.")
[31] Draft Staff Report and Certified Regulatory Program Environmental Analysis, Recycled Water Policy, at p. 1.
[32] *Id.* at 3.

Furthermore, the FED for this purportedly statewide Recycled Water Policy does not even mention water quality impairments for other constituents, such as metals, in California's groundwater basins. In addition, the FED does not discuss impaired surface waters which fail to meet designated beneficial uses and thus can be further negatively impacted following the implementation of the proposed Recycled Water Policy. Finally, the FED contains no mention of such groundwater basins which are relatively pristine and thus are "rare or unique" to California and should be given "a special emphasis" as required by the CEQA Guidelines.[33]

Notably absent from the FED is also a thorough discussion of sensitive species and natural communities which may be affected by the implementation of the Recycled Water Policy. In the "Biological Resources" section of the Environmental Checklist, the FED simply states that "direct environmental effects from the use of recycled water, in accordance with the proposed Policy, on sensitive species, sensitive natural communities, and wetlands would be less than significant."[34] In the same section, however, the FED admits that the "[u]se of recycled water could increase incidental runoff, soil salinity, and saturate soils" and consequently "may impact adjacent natural habitat and potentially sensitive species and plant."[35] These contradictory statements beg for a description of the wetlands, sensitive species and sensitive natural communities that may be affected. Unfortunately, once again this required by CEQA description of environmental setting in which the Recycled Water Policy is proposed to be implemented is missing. Instead, the FED speaks in general terms and promises that biological resources will be protected despite the fact that one of the interim waste discharge and water reclamation requirements on which it relies for biological resources protection, the TDS concentration in recycled water, has been increased almost twice (!) from the already-high last iteration of the proposed Policy.[36] It is astounding that such a relaxation of water quality standards is proposed at a time when scientific studies provide more and more evidence of the dangerous effects of reclaimed water on aquatic life and resources. It is far more worrisome, however, that the proposed Recycled Water Policy is not supported by a thorough analysis of the existing environmental impacts on sensitive species and other biological resources as required by CEQA.

These are only examples of the incomprehensible lack of an informed discussion of the environmental setting for the proposed statewide Recycled Water Policy. Other elements that should be addressed in the environmental setting description of the project required by CEQA are beneficial uses of the groundwater and surface waters of California, connection between groundwater basins and surface waters, existing recycled water projects and their impacts on the quality of groundwater basins and surface waters not only for human use but also in terms of other beneficial uses among many others.

The complete absence of a discussion of the environmental setting for the Recycled Water Policy makes is impossible for the State Water Resources Control Board to make an informed and supported determination of the environmental impacts of the policy. As a result,

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[33] 14 C.C.R. § 15125 (c).

[34] Draft Recycled Water Policy, Staff Report and Certified Regulatory Program Environmental Analysis at 13.

[35] *Id.*

[36] *Id.* at 14 (the monthly average concentration of TDS in recycled water for all recycled water projects in within a basin shall not exceed the monthly average concentration of the source water supply plus 550 mg/l).

the FED is inadequate under CEQA on its face. The State Water Resources Control Board cannot and should not adopt the Recycled Water Policy in its current state. The fact that the policy is perceived to be needed to kick-start the implementation of recycled water recharge reuse and irrigation projects is not an excuse for ignoring existing water quality standards and beneficial uses of the waters in our state.

The FED Did Not Properly Consider Public Comments.

Under section 3779 of Title 23 of the California Code of Regulations, which is part of the State Water Resources Control Board's specific regulations for the implementation of CEQA, "[t]he board shall prepare written responses to comments containing significant environmental points raised during the evaluation process, if such comments are received at least fifteen days before the date the board intends to take action on the proposed activity."[37] Pursuant to CEQA, "[a]ll persons and public agencies involved in the environmental review process [are] responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment."[38] The purpose of this requirement is to provide public with a meaningful way to participate in the environmental assessment of proposed projects.

California Coastkeeper Alliance, Santa Monica Baykeeper, Lawyers for Clean Water and others have submitted two letters listing numerous significant environmental concerns with the draft Recycled Water Policy. Most of these comments apply to the current version of the Policy as well. The first comment letter was dated March 27, 2007 and the second was sent out on October 26, 2007, after the Recycled Water Policy Workshop held by the State Water Resources Control Board on October 2, 2007 in Los Angeles, CA. The State Water Resources Control Board originally planned to adopt the draft Recycled Water Policy on December 4, 2007, and was later postponed to January 15, 2008, February 19, 2008 and is now scheduled for March 18, 2008. [39]The first draft Response to Comments on the Proposed Recycled Water Policy was posted on the State Board's website on March 7, 2008 – the Friday before the Monday, March 10, 2008 deadline for final comments on the draft Recycled Water Policy, which was posted on the State Board's website on February 4, 2008.

In other words, the State Board failed to respond to the public's significant concerns over this Policy until over four months after the last round of comments, over a month after the latest draft of the Recycled Water Policy was posted, and only a few working hours before public comment period on the latest draft expired. It is unsettling that the response to comments was provided so late as to effectively preclude interested stakeholders from evaluating the responses and providing comments upon them. This on its face does not appear to be an effort by the State Board to provide the public with a meaningful way to participate in the environmental assessment of the Policy, and thus thwarts the goals of CEQA.

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[37] 23 C.C.R. § 3779(a).

[38] Pub. Res. Code § 21003 (f).

[39] *See* Notice of Revised Board Adoption Hearing (November 16, 2007); Second Notice of Revised Board Adoption Hearing (December 18, 2007); Third Notice of Revised Board Adoption Hearing (February 4, 2008).

Moreover, the fact that the State Board's written response to public comments was provided so long after the draft Recycled Water Policy was posted on the State Board website calls into question the extent to which staff fully considered those comments while drafting the Policy itself. If this had been indeed done, then State Board staff should have provided its written responses together with the draft Recycled Water Policy and draft staff report and CEQA analysis. The late response to comments appears as an afterthought and diminishes the significance of public participation in the environmental impact analysis and evaluation of the proposed Recycled Water Policy.

The Draft Recycled Water Policy Fails to Identify, Analyze and Provide Adequate Mitigation of Numerous Significant and Potentially Significant Adverse Environmental Effects of the Project.

CEQA requires that EIRs and functionally equivalent documents identify and analyze all significant and potentially significant adverse environmental effects of the project. CEQA defines "significant effects" as a "substantial, or potentially substantial, adverse change."[40] This means that an activity has a significant effect if it "has the potential to degrade the quality of the environment."[41]

The CEQA Guidelines require a mandatory finding of significance for projects that will cause "substantial adverse effects on human beings, either directly or indirectly," as well as projects with "potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species." 14 Cal. Code Reg. § 15065. *See also* CEQA guidelines, Appendix G, § XVII ("Mandatory Findings of Significance.")

For example, the Hydrology and Water Quality section of the Environmental Checklist of the FED lists no potentially significant environmental impacts.[42] The FED finds that the impact of the proposed Recycled Water Policy that will lead to a violation of any water quality standards or waste discharge requirement is less than significant with mitigation incorporated.[43] The same finding applies to the Recycled Water Policy's impact on water quality degradation in general.[44] The remaining potential impacts of the proposed Recycled Water Policy on hydrology or water quality are either considered to be less than significant or none.[45]

The analysis supporting these conclusions is insufficient and lacks depth. Most importantly, the analysis does not discuss the full range of violations of water quality standards that may result from the implementation of the Recycled Water Policy as proposed, but focuses only on salt. There is absolutely no discussion of other contaminants that can degrade water quality in California's water bodies as a result of irrigation and recharge reuse projects using recycled water under the proposed Policy. In addition, the suggestion that there is adequate

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[40] Pub. Res. Code, § 21068. (emphasis added.) *See also* Pub. Res. Code § 21083(a); *Santa Monica Chamber of Commerce v. City of Santa Monica* (2002) 101 Cal. App. 4th 786, 795.
[41] 14 Cal. Code Reg. § 15382; *Azusa Land Reclamation Co., supra,* 52 Cal. App.4th at 1192.
[42] Draft Recycled Water Policy, Staff Report and Certified Regulatory Program Environmental Analysis at 18.
[43] *Id.* Item 8 (a).
[44] *Id.* Item 8 (d).
[45] *Id.* Items 8 (b), (c), (e), (f), (g), (h), (i).

mitigation to water quality degradation because groundwater recharge reuse projects must be evaluated by the CDHP is misplaced. The CDHP is the agency that controls the quality of drinking water, and any determination that it makes will not necessarily result in the best protection for all of the beneficial uses of a water body of surface or groundwater.

For these and other reasons, the impacts determinations and analysis in the FED are incomplete and inadequate.

The FED Fails to Adequately Consider and Mitigate the Cumulative Impacts of the Policy.

The CEQA Guidelines require a mandatory finding of significance for a project with "possible environmental effects, which are individually limited but cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."[46]

The FED concludes that the proposed Recycled Water Policy will result in cumulative environmental impacts that are less than significant with mitigation.[47] The FED states that the support for this conclusion should be found in the discussion in Item 8 (a) of the Hydrology and Water Quality section of the Environmental Checklist. However, Item 8(a) quite simply contains no discussion of the cumulative effects of the policy because, as already explained above, the analysis under Item 8(a) focuses only on salt impairments, and moreover does not address the considerable obstacles to ensuring that even those impairments are addressed under the Policy (such as the relative lack of groundwater monitoring data and obstacles in the Policy for gathering more data). It also does not even reference the other potential impacts resulting from this Policy in and of itself (such as cumulative impacts on biological resources).

Moreover, in order to assess the cumulative impacts of a project, an accurate description of the environmental setting is essential. That is, in assessing cumulative impacts, an agency must take into consideration past impacts on the environment to determine whether additional impacts may be significant. As noted above, the environmental setting discussion is inadequate, lending no support for the similarly nonexistent cumulative impacts analysis.

Finally and most notably, the Policy completely fails to assess the cumulative impacts of the other, ostensibly planned policies and permits that will follow this Policy and complete the comprehensive recycled water policy to be unveiled at an undetermined later time. For example, the Policy ignores the potential impacts on surface water of allowing recycled water irrigation with 3 mg/l of nitrogen, which is well-known to cause significant impacts in surface waters that received recycled water runoff. The state cannot divide up a whole project into pieces and analyze each piece individually to avoid the required cumulative assessment of the impacts of its recycled water program. (This is another reason that the state should prepare a comprehensive policy, as called for by many stakeholders.) Accordingly, the Policy contravenes CEQA's requirement that cumulative impacts be identified, considered and mitigated.

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[46] 14 Cal. Code Reg. § 15065(c). *See also Communities For a Better Environment v. California Resources Agency* (2002) 103 Cal. App. 4th 98, 114 ("environmental damage often occurs incrementally from a variety of small sources.") *Kings County Farm Bureau v. City of Hanford,* 221 Cal.App.3d 692, 720-721 (1990).
[47] Draft Recycled Water Policy, Staff Report and Certified Regulatory Program Environmental Analysis at 24.

March 27, 2007

Tam Doduc, Chair and Members
State Water Resources Control Board
1001 I Street
Sacramento, California 95814

VIA EMAIL: commentletters@waterboards.ca.gov

Re: March 20, 2007 SWRCB Meeting, Agenda Item #8: Comments on Development of Statewide Water Recycling Policy

Dear Chair Doduc and State Board Members:

California Coastkeeper Alliance, Santa Monica Baykeeper, and Lawyers for Clean Water are pleased to submit these comments in response to the State Water Resources Control Board's ("State Board") request for public input on the development of a statewide Water Recycling Policy. We thank the State Board for taking on the important task of developing a Water Recycling Policy. Developing a statewide policy is a critical component in fostering effective and efficient use of California's scarce and precious water resources. We look forward to working with the State Board to craft a Water Recycling Policy that encourages recycled water use without sacrificing water quality in the process.

A statewide Water Recycling Policy on an issue as significant as the use of recycled water in a state with water demand outpacing supply must be comprehensive to be effective. Over the past few years the State Board and staff, the Recycled Water Task Force,[1] and the various regional boards have identified several issues that a statewide Water Recycling Policy should address. We agree that the issues identified by these groups, and reiterated in the agenda item description and discussion available on the State Board website ("Agenda Description"), are vital to the development of an effective Water Recycling Policy. However, an essential issue is absent – namely how the Recycled Water Policy will ensure protection of water quality and, in particular, address and comply with the Clean Water Act. Inclusion of the mandates of the Clean Water Act in overall statewide Water Recycling Policy is required by state and federal law and will provide the Regional Boards with the guidance they need to make appropriate and consistent decisions on recycled water projects that fulfill their legal mandates.

[1] The Recycled Water Task Force was established by Assembly Bill 331 (2001) to evaluate, among other things, the framework of State statutes and regulations applicable to recycled water projects.

Our comments first explain the need for the statewide Water Recycling Policy to acknowledge that recycled water projects will impact surface waters and then discuss how Clean Water Act requirements will be met. Next, we explain why modifying the Anti-degradation Policy, or weakening it through the Water Recycling Policy to encourage the use of recycled water, is inappropriate, since the Anti-degradation Policy already establishes an appropriate balance for weighing conflicting needs and uses for water with protecting water quality. We also provide our general comments on the issues identified in the Agenda Description: Irrigation Projects and Salts; Groundwater Recharge Reuse; Impoundments; Agency Coordination; and Aquifer Storage and Recovery Projects. The theme running through each of our comments, and which the statewide Water Recycling Policy must embody, is this: **water recycling helps California meet its water needs only when water quality is protected.**

Statewide Water Recycling Policy Must Address Clean Water Act Requirements

The Agenda Description seems to be limited to providing direction to the regional boards on how to interpret state statutes and regulations. We are confused as to why the Agenda Description only focuses on state law issues implicated by a Recycled Water Policy that, as explained below, will address discharges to surface water as well as to groundwater. Adopting an approach that limits the discussion to state law relegates federal law requirements regarding water quality, particularly those established by the Clean Water Act, to the background and thus ignores essential issues that must be addressed in a policy designed to guide regional board decision making. Unless the statewide Water Recycling Policy includes guidance regarding federal requirements that the regional boards must follow when permitting recycled water projects, the policy will not generate the consistent and appropriate application of legal requirements, which is the primary purpose of adopting the Water Recycling Policy in the first place. Further, a statewide Water Recycling Policy that does not address federal law will not help ensure that the regional boards are complying with their mandate under the Clean Water Act to regulate discharges to surface waters with National Pollution Discharge Elimination System ("NPDES") permits.[2]

When the State Board sought and was granted approval to administer the Clean Water Act's NPDES program in California, it made assurances to the U.S. Environmental Protection Agency ("EPA") that it would do so consistent with the requirements of the Clean Water Act. Central to the implementation of an effective NPDES program is requiring that discharges to waterways be regulated in compliance with NPDES permits.[3] In fact, the Clean Water Act provides that "each State desiring to administer its own permit program for discharges into navigable waters" must establish a program to "issue permits which apply, and insure compliance with, any applicable requirements of sections 1311, 1312, 1316, 1317, and 1343 of

[2] We recognize that the NPDES program is administered under Sections 13770-13777 of the Porter-Cologne Act. However, these provisions of state law require that the State Board and regional boards act in conformance with federal law. More to the point for these comments, the Agenda Description fails to raise for discussion those issues related to discharge of recycled water to surface water under either federal law or its Porter-Cologne counterpart.
[3] 33 U.S.C. § 1342(b).

the [Clean Water Act]."[4] Section 1311(a) mandates that discharges to waters of the United States are prohibited unless authorized by, and in compliance with, an NPDES permit.[5]

Even under state law, the requirements related to recycled water projects require consideration of the Clean Water Act's mandate. In pertinent part, the Porter-Cologne Act states the Regional Board "shall … issue waste discharge requirements … which apply and ensure compliance with all applicable provisions of the [Clean Water Act]."[6] As explained above, the Clean Water Act requires the permitting authority to issue NPDES permits when regulating discharges to waters of the United States. It follows that the Regional Boards' obligation under the Porter-Cologne Act is to regulate discharges to waters of the United States with NPDES permits.

With this legal framework in mind, the question becomes whether recycled water projects have the potential to result in discharges to waters under the jurisdiction of the Clean Water Act. If the answer to this question is yes, then the statewide Recycled Water Policy must ensure that these discharges are regulated in compliance with the Clean Water Act's mandates.

To answer the central question, there is no doubt that the owners and/or operators of certain recycled water projects will release discharges of recycled water to waters within the jurisdiction of the Clean Water Act. For example, the Recycled Water Task Force acknowledges this at Section 4.2 of *Water Recycling 2030* when discussing the use of recycled water for irrigation and as landscaping features:

> Incidental runoff or overspray of minor amounts of irrigated water at the edges of irrigated areas is difficult to prevent. It is also difficult to prevent runoff of rainwater from areas irrigated with recycled water or from aesthetic ponds on golf courses filled with recycled water, especially during major storm events.[7]

The State Board similarly acknowledged the unavoidable discharge of recycled water from recycled water projects in a memo released to the regional board executive officers in 2004 entitled "Incidental Runoff of Recycled Water" ("2004 Memo").[8] Specifically, the 2004 Memo states:

> While incidental runoff or over-spray of minor amounts of recycled water can be minimized, it cannot be completely prevented. Similarly, it is not possible to entirely prevent the runoff of rainwater from areas irrigated with recycled

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[4] *See id.*
[5] 33 U.S.C. § 1311(a).
[6] Cal. Water Code § 13377
[7] *Water Recycling 2030: Recommendations of California's Recycled Water Task Force*, California Department of Water Resources at 42 (June 2003).
[8] Memorandum from State Water Resources Control Board Executive Director Celeste Cantú to Regional Board Executive Officers, Subject: "Incidental Runoff of Recycled Water," (February 24, 2004).

> water or from decorative or storage ponds filled with recycled water, particularly during major storm events.[9]

We agree with both the Recycled Water Task Force and the State Board in their assessment that many types of recycled water projects will result in the discharge of recycled water to surface waters. We do not, however, agree that using clever terminology to describe these discharges as "incidental" does anyone, especially the public and the environment, any good. As acknowledged, many irrigation and landscaping projects that involve the use of recycled water will require regulation under federal law. We add to this list of recycled water projects that discharge to Clean Water Act regulated water bodies, those discharges to groundwater aquifers that are hydrologically connected to surface waters.[10]

Both state and federal law require that the discharge of pollutants from a point source to a water of the United States must be regulated by an NPDES permit.[11] Despite this mandate, and the State Board's acknowledgement that recycled water will discharge to surface waters, the Agenda Description follows the Task Force and 2004 Memo's desire of avoiding federal law. In fact, the 2004 Memo states that compliance with the Clean Water Act's NPDES permitting requirements are "undesirable" and should be avoided. Since many water recycling projects will result in discharges to water bodies within the jurisdictional reach of the Clean Water Act, the statewide Water Recycling Policy must address this issue if it is to provide useful guidance and mandates to the regional boards.

The statement in the 2004 Memo that undefined "incidental runoff" can somehow avoid NPDES permitting requirements runs contrary to the State Board's mandate to protect water quality in the state. In the 2004 Memo, it was suggested that including a safe harbor for discharges of "incidental runoff" in water recycling requirements would remove the discharge of recycled water from the purview of the NPDES program. Specifically the 2004 Memo directed regional boards to include the following provision:

> the incidental discharge of recycled water to waters of the State is not a violation of these requirements if the incidental discharge does not unreasonably affect the beneficial uses of the water, and does not result in exceeding an applicable water quality objective in the receiving water.[12]

The problem with this statement is that there is no Clean Water Act safe harbor for "incidental runoff," even if it does not "unreasonably affect" beneficial uses or cause an exceedence of water quality objectives. This directive to the regional boards from the State Board's Executive Director, as well as the absence of permitting considerations in the Agenda Description, is troublesome and a major concern. As set forth by state and federal law and recited herein, the

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[9] 2004 Memo at 2.
[10] *See e.g. N. Cal. River Watch v. City of Healdsburg*, 457 F.3d 1023 (9th Cir. 2006).
[11] 33 U.S.C. §§ 1311(a), 1342; Cal. Water Code §§ 13770-13777.
[12] 2004 Memo at 3.

discharge of pollutants from a point source to navigable waters must be regulated by an NPDES permit.[13]

It also has been stated by some stakeholders that the water used for recycling projects is already regulated by the waste water treatment plants' (WWTP) NPDES permit, is treated pursuant to the NPDES permit to meet drinking water standards, and is thus "clean" and need no additional permitting. As explained below, the WWTP's NPDES permit, however, typically regulates neither the use of the effluent for recycled water projects, nor the discharge of the recycled water at a location different than that for the WWTP. Additionally, a WWTP permit is unlikely to have have effluent limitations for all pollutants present in the effluent, and may not require treatment to remove pollutants for which the permit does set limits. Thus, a WWTP NPDES permit typically does not regulate the effluent for recycled water uses and does not include limitations to ensure that the effluent is protective of the environment when used for such projects.

First, prior to discharge, the effluent from WWTPs is supposed to meet certain numeric and narrative criteria regarding the level of pollutants allowable in the discharge. These effluent limitations are based, at least in part, on the beneficial uses of water body into which they are discharged, and accordingly depend upon the specific water body receiving the discharge. However, when that effluent is transported for use in a recycled water project, the discharge location will most likely be different than that designated in the WWTP permit. Since each water body has its own specific characteristics, and so often different beneficial uses, the WWTP cannot be said to be protective of or regulate the recycled water discharge to the new receiving water.

The following example clarifies this point. A WWTP may discharge effluent with levels of copper that are appropriate to that treatment plant's receiving water. That same effluent, when used in a recycled water project, may either be discharged to a different receiving water that is impaired for copper or, during the recycled water use, may pick up additional copper. In the first situation, since copper is a bioaccumalative pollutant, the discharge of copper would be prohibited. In the second situation the discharge from the recycled water project could have copper levels above protective water quality standards even if the receiving water is not impaired. In both instances, the effluent limitations on the original WWTP discharge would be insufficient to protect water quality as required by the Clean Water Act.

In addition, some WWTP permits that incorporate California Toxics Rule- ("CTR") based effluent limitations have compliance schedules, and thus even if the permit contains CTR limitations, the effluent is currently discharged containing pollutants at levels above these protective limits (making additional discharges even more problematic). There are numerous other examples of problems with relying on the existing WWTP permit to address all uses of recycled water. Relying on the NPDES permit for the WWTP (or other source of the recycled

[13] 33 U.S.C. §§ 1311(a) and 1342 (requiring permits for the discharge of pollutants without qualification as to the quantity of pollutants discharged).

water) to protect water quality for recycled water uses is insufficient. There is no end-run around the requirement that discharges of pollutants from point sources to waters of the United States require NPDES permits.

To help guide the development of the Water Recycling Policy, we recommend that the statewide policy should require that discharges to waters of the United States be permitted with NPDES permits, or with WDRs if the discharge is to groundwater not hydrologically connected to surface waters.[14] As the agency delegated to implement the NPDES program in California, the State Board must issue permits that will ensure compliance the Clean Water Act's prohibition on discharges of pollutants to waters of the United States. An NPDES permit is required even in cases where the permit terms prohibit discharges to surface waters. The Water Recycling Policy needs to be consistent with the Clean Water Act's goal of eliminating the discharge of pollutants to waters of the United States.[15]

A State Board Water Recycling Policy that encourages regional boards to regulate these discharges without NPDES permits must be avoided. In instances where a discharge to surface water is regulated, the responsibility lies with the regulating agency to regulate this discharge with an NPDES permit. Failing to do so jeopardizes the authority delegated to the state to implement the NPDES. It also leaves the discharger exposed to Clean Water Act liability for discharging pollutants to waters of the United States without an NPDES permit.

Overall, we are concerned that a statewide Water Recycling Policy that fails to require NPDES permits when appropriate will be a policy that encourages the use of recycled water at the expense of water quality. Not only is this inconsistent with the mandates of the Clean Water Act and the Porter-Cologne Act, it is shortsighted. Trading the short-term benefit of increased water supply for possible long-term degradation of water quality jeopardizes the availability of clean, useful water in the future. An appropriate statewide Recycled Water Policy will protect water quality and water supply in the long-term by requiring NPDES permits for those projects that need them.

Anti-degradation Policy

Perhaps the issue identified in the Agenda Description that should be of most concern for the public is the suggestion that the state Anti-degradation Policy could potentially itself be modified, or be weakened by the Water Recycling Policy, to encourage water recycling at the expense of water quality. The Anti-degradation Policy already establishes the appropriate balance between the legitimate need to develop and use water resources with the need to maintain water quality. Specifically, the Anti-degradation Policy insists on the maintenance of water quality now and into the future. When complied with, this mechanism has been largely

[14] The appropriate method to permit these projects may well be with general NPDES permits that apply to specific sub-classes of recycled water projects such as landscape irrigation, agricultural irrigation, or groundwater recharge to hydrologically connected aquifers.

[15] 33 U.S.C. § 1251(a)(1) (establishing the goal of eliminating the discharge of pollutants to waters of the United States by 1985).

effective in guiding decisions related to projects for almost 40 years. The Anti-degradation Policy has never been modified before, and the desire to encourage water recycling does not create the need to do so now.

The Agenda Description poses the question of whether the statewide Water Recycling Policy itself should define two terms in the Anti-degradation Policy – "maximum benefit to the people of the State" and "best practical treatment or control." There are two issues raised by this question that we find troubling and which cut against using this statewide Water Recycling Policy as a venue for defining terms in the Anti-degradation Policy.

First, defining terms in the statewide Anti-degradation Policy, which applies to all decisions made by the State Board and regional boards, in a document that only applies to certain types of decisions by these entities, could result in further confusion, rather than clarity, regarding the meaning of these terms. It could also lead to situation where these terms have different meanings in different contexts, when the purpose of the Anti-degradation Policy is to foster uniformity in decision making.

Second, to the extent the Water Recycling Policy does try to define these terms, it should only do so if the definition incorporates the appropriate references to already applicable legal standards. For example, any definition of "best practical treatment or control" with respect to recycled water must reference and be consistent with the technology-forcing standards already applicable to the treatment of wastewater.[16] Similarly, reference to also-applicable legal standards such as BAT and BCT will necessarily limit the definition of terms such as "maximum benefit to the people of the State," since the foundation for these standards already prescribes the extent of consideration of economic and social costs and benefits.[17]

Finally, entertaining the idea that modifying the Anti-degradation Policy or its application may be necessary to encourage water recycling projects runs contrary to the purpose of the Anti-degradation Policy itself. The Anti-degradation Policy already provides adequate opportunity to weigh potential benefits of certain projects against potential costs to water quality. This policy has withstood almost 40 years of decision making on a wide variety of projects, and modification of it – or its intent – at this point would create confusion rather than clarity, and potentially lead to other situations involving further whittling of the Policy's goal of protecting the waters of the state now and in the future. Most significantly, the need to modify the Anti-degradation Policy in the context of recycled water projects is illusory, since water recycling today is only sensible if it does not degrade water quality for the future. Our recommendation therefore is to not modify or otherwise weaken California's Anti-degradation Policy, including through the Water Recycling Policy.

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[16] We also note that the applicable technology-based standards are designed to change over time as better technologies are developed to control pollutants in discharges. Any attempt to define these terms must embrace this concept and provide requirements for improved standards as technology improves.

[17] For example, BAT does not allow for comparison of costs against effluent reduction benefits, but rather only allows for consideration of costs to the extent these costs are economically achievable. *See* 33 U.S.C. §§ 1311(b)(2)(A) and 1314(b)(2)(B).

Irrigation Projects and Salts

The Agenda Description asks what the State Water Board should do "to protect groundwater basins in the state from the accumulation of salt, including nitrate." This is an important question that transcends the issue of recycled water management. The Porter-Cologne Act at Water Code § 13260 requires reports of waste discharge, and waste discharge requirements as appropriate, for any discharge of waste "that could affect the quality of the waters of the state." Section 13050 defines "waters of the state" to include "any surface water or groundwater, including saline waters, within the boundaries of the state." (Emphasis added.)

Despite the clarity of this directive, little if anything has been done to implement Porter-Cologne with respect to any discharges that could affect groundwater from pollutants, including discharges of salts (including nitrates) associated with recycled water. Instead, the practice to date has generally been to allow the discharges (often unquestioned and unexamined), hope for the best, and pay extremely high sums of money to clean up the pollution later (if attempts are made to clean up the pollution at all). Our recommendation is that the State Board comply with Porter-Cologne and protect groundwater contamination from salts/nitrates associated with recycled water through waste discharge requirements, either general or individual, and associated groundwater monitoring.[18] This recommendation is consistent not only with the law but also with the above-stated theme of these comments, which is that water recycling helps California meet its water needs only when water quality is maintained.[19]

The Agenda Description also asks in particular whether the State Board should require recycled water users to prepare nutrient management plans to control the discharge of nitrates to groundwater. Nutrient management plans for projects that propose to irrigate with recycled water are critical to preventing further degradation of groundwater resources and should be required in a statewide Water Recycling Policy. A nutrient management plan requirement would be consistent with the strategy employed by the Santa Ana Regional Board, and proposed by the Central Valley Regional Board, to address the reuse of wastewater by dairy farmers to grow crops for their herds.[20] It also would equalize the playing field by requiring all irrigators who use recycled water to take responsibility for properly managing the impact their practices have on nitrate levels (and other pollutant loadings) in groundwater. A failure to require nutrient management planning will leave the public to foot the bill for continued nitrate contamination, as is the case in Orange County, where the county estimates it will end up paying $2.6 million

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[18] Note that we suggest use of WDRs here rather than NPDES permits only when the discharge is to groundwater that is not hydrologically connected to waters of the U.S.

[19] We also request that the State Board take on the overall task of rectifying the state's historic and ongoing failure to implement Porter-Cologne's clear requirements on discharges of all other pollutants that could affect the quality of the state's groundwater.

[20] *See General Waste Discharge Requirements for Concentrated Animal Feeding Operations (Diaries and related Facilities) Within the Santa Ana Region, Order No. 99-11, NPDES No. CAG018001*, California Regional Water Quality Control Board, Santa Ana Region (August 20, 1999); *Tentative Waste Discharge Requirements General Order No. ___ for Existing Milk Cow Dairies*, California Regional Water Quality Control Board, Central Valley Region (November 22, 2006).

dollars per year to remove nitrates and salts from groundwater contaminated by nitrates. *See* Orange County Water District, *Issue Paper on Impacts of the Chino Dairy Industry on Local Water Supplies*. With proper nutrient management, including groundwater monitoring, costs like this can be avoided.

Groundwater Recharge Reuse

The Agenda Description poses the question "what requirements should be placed on groundwater recharge reuse projects to protect the public from toxic constituents." From our perspective, there are a handful of general measures that the statewide Water Recycling Policy should require to achieve this goal. First, recycled water discharged for the purpose of recharging groundwater for ultimate reuse should have to meet both drinking water standards and any other water quality criteria applicable to the ultimate use of the water prior to being discharged, for all constituents. A precautionary approach that does not introduce chemicals and pollutants into the groundwater in the first place is the surest way to avoid exposure of the public and the ecosystem to these constituents and prevent extremely costly cleanups later.

Second, monitoring recycled water both prior to reuse and prior to discharge, particularly for toxic constituents, should be required. By keeping track of the types and quantities of constituents that have been discharged, decision-makers will be prepared to assess whether a particular reuse project is protective of human health and the environment over time. This is particularly important in the face of constantly changing information about the risks associated with exposure to toxic constituents. If we actually know what is being released into the environment, as opposed to guessing through a mass balance or other rough estimation technique done without monitoring, we will be better prepared to effectively address future discovered problems. Monitoring will provide an understanding of how the toxic constituents may be interacting with one another and with other discharges in the groundwater table.

Third, the statewide Water Recycling Policy should require that the regional board staff work closely with the Department of Health Services ("DHS") to develop appropriate effluent limits for various toxic constituents. Many toxic constituents have Maximum Contamination Limits ("MCLs") already established and set forth in Title 22 of the California Code of Regulations. However, those that do not may still represent a significant threat to public health, and the presence of these toxic pollutants in recycled water must be appropriately addressed. For these pollutants, the statewide Water Recycling Policy should require regional board staff to work closely with DHS to develop appropriate effluent limitations that would apply to both the discharge of the recycled water into the project and to any subsequent use or release of the water from the project. Finally, the MCL's in Title 22 are not based on and are not necessarily protective of the environment; the Water Recycling Policy should ensure that the state and regional boards implement their ultimate responsibility to protect all beneficial uses through all appropriate standards and permit limits.

Impoundments

The Agenda Description acknowledges that impoundment of recycled water can degrade underlying groundwater and asks what requirements should be placed on these impoundments to protect groundwater quality. We agree that this is an important issue that the statewide Water Recycling Policy must address. We expect that the appropriate requirements will vary depending on the quality of the water being stored as well as the soil permeability of where the water is being stored. With that general principle in mind, we have the following comments on how the statewide Water Recycling Policy should direct regional boards to act.

Requiring monitoring of the discharges to the impoundments as well as monitoring to ensure the effectiveness of impoundment is necessary. Because the concern is that impounded water will cause pollutants to leach into groundwater, the recycled water impoundments must be monitored to know the potential to degrade underlying groundwater. Monitoring and limitations must also ensure that possible public use of the water while it is impounded (*e.g.* contact by members of the public) will not create a public health risk. Additionally, since many of these impoundments will become habitat for aquatic and riparian organisms and species, limitations and monitoring should be required that will protect the use of these impoundments by these species.

We also recommend that the statewide Water Recycling Policy recognize that impoundments containing recycled water are storage/disposal facilities for the various pollutants, including heavy metals, pharmaceuticals, nitrogen-based compounds, and salts, in the recycled water. The lining requirements for storage/disposal of solid waste impoundments, set forth in Title 27 of the CCR, should be considered by the regional board with respect to surface impoundments of recycled water. In areas where soils are particularly porous, more stringent lining of impoundments should be required. Further, when the impounded recycled water has high levels of salts and the underlying groundwater is already degraded by the presence of salts, leachate collection systems and related monitoring should be required to prevent any further degradation of groundwater.

Monitoring of groundwater beneath these surface impoundments is the only way to ensure that the underlying groundwater is not being degraded. We recognize there are costs associated with groundwater monitoring, but it is inappropriate to shift these costs onto future generations of groundwater users by not monitoring and thus not preventing further and sometimes unexpected or unforeseen (and generally costly) degradation before it becomes a significant problem. This is yet another example of the requirements that the statewide Water Recycling Policy must include to ensure that the use of recycled water does not shift the costs of, and pollution associated with, its use onto future generations.

We also have an additional comment on impoundments that the Agenda Description fails to raise. Namely, the statewide Water Recycling Policy should address issues related to overflows of impoundments that are used for storage of water to be recycled. In many regions, treated wastewater is stored during the wet season for later reuse in the dry season for irrigation

and other projects when other water supplies are low. However, these impoundments often overflow and/or leak and thus discharge the pollutants in the water they contained. The statewide Water Recycling Policy should therefore require permit effluent limitations applicable to any overflow and/or leaks from these facilities. The statewide Water Recycling Policy should also require appropriate design and engineering of these storage facilities to ensure that overflow and/or leakage is minimized if not totally prevented.

Agency Coordination

The issue presented by the Agenda Description is whether the statewide Water Recycling Policy should leave some issues related to groundwater recharge with recycled water to DHS, since DHS is preparing regulations for groundwater recharge reuse projects. We agree that coordination with DHS should be encouraged in the statewide Water Recycling Policy. However, the mandates of DHS and the State Board are quite different, and as such the State Board should not relinquish or delegate its responsibility for addressing all issues related to groundwater recharge reuse projects. Similarly, the State Board cannot rely on DHS requirements alone as adequate to protect the environment and comply with state and federal laws.

DHS's mandate is to create water quality requirements protective of human health while the State Board's (and regional boards') mandate is to protect water quality for all beneficial uses. For example, copper, which is relatively benign to humans, is extremely toxic to many aquatic organisms. As such, regulations from DHS related to copper in recharge/reuse projects may place little or no restriction on the levels of copper. If the State Board were to fail to address this issue on the assumption that DHS had it taken care of, then the State Board would fail to comply with its mandate. Specifically, if it were foreseeable that there would be subsequent contact with the recharge/reuse water by aquatic organisms, then the State Board's failure to insure compliance with water quality standards for copper would allow for an unacceptable degradation of water quality.

It is the State Board's obligation to set a statewide Water Recycling Policy that requires it and the regional boards to fulfill all aspects of their mandate to protect water quality. We've seen examples of the State Board and regional boards failing to achieve this mandate in other contexts,[21] and we do not want to see that failure repeated here. The hypothetical example we provided above explains why deferring to another agencies' determinations regarding water quality is inappropriate.

Aquifer Storage and Recovery

Recycled water used for irrigation or direct recharge impacts aquifers throughout California. Just as increased use of recycled water is important to help some of the offset the

[21] For example, the regional boards routinely fail to evaluate the effect of timber operations on water quality, despite the fact that these operations clearly implicate the regional boards' responsibilities. This failure leads to unnecessary and sometimes severe degradation of water quality associated with timber harvesting.

enormous costs of moving water from one area of the State to another, it also can be important to the health of aquifers, which are critical to reducing California's dependence on the Colorado River and State Water Project. In other words, a clean and dependable water supply relies not only on the increased use of recycled water but also on clean and usable aquifers. Accordingly, a state policy regarding recycled water should fully protect existing water quality objectives for groundwater aquifers.

As an example, in January of 2007, the Los Angeles Regional Water Quality Control Board adopted two Water Recycling Requirements (WRR) permits for the Los Angeles Department of Water and Power's (DWP) Los Angeles Glendale and Donald C. Tillman Plants. These Plants discharge to the San Fernando groundwater basin, which is the part of the San Fernando Aquifer that supplies 15% of Los Angeles' drinking water. Chloride levels in the San Fernando Basin where the Tillman Plant discharges are currently 31 mg/l, and the water quality objective is 100 mg/l. The Glendale Plant discharges to the San Fernando Basin Narrows Area, currently at chloride levels of 31 mg/l with a groundwater chloride objective of 150 mg/l. In response to a request by the City of Los Angeles, and in a highly irregular move by the Los Angeles Regional Board, the LADWP was granted a permit renewal with effluent limits <u>in excess of</u> the water quality objectives (190 mg/l). In exchange for this permit irregularity, the regional board's proposed permit in January had requirements of a mass balance analysis <u>and</u> monitoring of groundwater, in a nod to ensuring that the chloride levels do not increase further in the groundwater. Because of this two-pronged approach, the staff did not pursue an anti-degradation analysis, although it was clearly warranted in this instance, particularly since there currently are no other WRR permits that have elevated effluent limits in Los Angeles. (Los Angeles County Sanitation District, another WRR permit holder in the Basin, meets its effluent limits end-of-pipe and does not discharge effluent that does not meet water quality objectives.) Unfortunately, the LADWP vigorously opposed the regional board's January proposed permit requirements for monitoring, advocating instead for solely a mass balance risk analysis, despite the almost pristine state of this critical aquifer. The final adopted permit eliminated the much-needed monitoring.

It is a generally accepted fact that contaminated ground water is very difficult and costly to clean up. The particularly discouraging example of the San Gabriel Aquifer in Los Angeles is a bellwether for current decision-making regarding effluent limits in permits that impact groundwater. In 1991, the U.S. Environmental Protection Agency estimated that if a cleanup of the San Gabriel Aquifer was technologically possible, it would take thirty to fifty years at a cost of $200,000,000 to $400,000,000. Ultimately, an agreement to begin clean-up was established in 2002 and efforts are ongoing. Another closely watched example of groundwater management is the Chino Basin, where it has been general practice to replenish the groundwater with *de-salted* water in order to protect the aquifer, and years of extensive monitoring have guided various uses and recharge projects throughout the Basin.

The juxtaposition of uses and water quality objectives or effluent guidelines throughout the state illustrates the importance of aquifer protection and monitoring. A one–size-fits-all effluent limitation is not advisable when various groundwater aquifers may have differing

abilities to assimilate pollutants depending on the region and method of recycled water application. For example, in the above-cited example of the San Fernando Basin, effluent limits based on the existing water quality objective of 100 mg/l for chloride may be reasonable; however, with a current level of 31 mg/l in the aquifer, it certainly is not advisable to jump to 190 mg/l. Effluent limitations should be established such that groundwater quality is protected, and attenuation/assimilation of pollutants must be closely monitored to avoid unintended consequences that may result in costly and perhaps irreversible contamination. It is simply not clear that a paper exercise risk analysis in exchange for an extensive monitoring program will sufficiently protect the drinking water source for millions of California residents.

Conclusion

We would again like to thank the State Board for bringing the long overdue and important development of a statewide Recycled Water Policy to the public for comment. The development of such a policy is essential, not only to provide guidance to regional boards and create more consistent and predictable permitting of recycled water projects, but also to ensure that encouragement of recycled water projects is properly balanced with protection of existing and future water quality. There is no doubt that reuse and recycling of California's limited water resources will be essential to meet the ever-growing demand for water in the state. Nonetheless, the laudable goal of encouraging reuse and recycling must be tempered by a vigorous commitment to protect and enhance water quality in the process.

Sincerely yours,

Linda Sheehan
Executive Director
California Coastkeeper Alliance

Tracy Egoscue
Executive Director
Santa Monica Baykeeper

Layne Friedrich
Drevet Hunt
Lawyers for Clean Water, Inc.

October 26, 2007

Tam Doduc, Chair and Members
State Water Resources Control Board
1001 I Street
Sacramento, California 95814

VIA EMAIL: commentletters@waterboards.ca.gov

Re: Statewide Water Recycling Policy

Dear Chair Doduc and State Board Members:

On behalf of the California Coastkeeper Alliance and its 12 Waterkeeper members, including Santa Monica Baykeeper, San Diego Coastkeeper, and Russian Riverkeeper, as well as Lawyers for Clean Water, Inc., we thank the State Water Resources Control Board (State Board) and staff for this opportunity to present comments on the Draft Recycled Water Policy (Policy). We present our comments first noting that we stand behind the State Board in its effort to encourage the reuse of California's scarce supply of water. California's booming population and global climate change are increasing pressure on our already overtaxed water supplies. We agree that developing a Policy that will encourage the efficient and effective reuse of these water supplies is an essential step in relieving these pressures. But we urge you to take this step with caution. A decision here will have lasting effects on California's water future. It should therefore not be made in haste, with potential water shortages pushing a Policy that puts future water supplies at risk. That is why we ask that the State Board demand a more robust, clear and comprehensive Policy, one that will encourage the highest and best use of recycled water consistent with guaranteeing the full protection and enhancement of existing water quality. Given the significance of the issue, and the scope of our comments, **we ask that the State Board direct staff to amend the Policy as described below and re-circulate it for an additional round of public review before a final draft Policy is set for Board adoption.**

We first want to thank the State Board and staff for incorporating many of our previous comments into this Policy. For example, we generally support the Policy's discussion of nutrient management plans for irrigation projects[1] and measures to help prevent salts (particularly nitrates) from polluting our soils and aquifers.[2] We also generally support the liability provisions in the Policy, which state that "compliance with requirements based, in whole or in part, on this Policy does not exempt a discharger from liability for contamination of groundwater," even if the liability arises from violations of drinking water standards that became more stringent after the requirements for the project were established.[3]

However, the Policy – the State Board's first significant attempt to provide formal direction on this critical issue – can and must aim higher. Rather than ignoring potential problems, the State Board will encourage the highest and best use of recycled water only if this Policy pays full attention to the quality of recycled water in light of its potential uses and impacts. Recycled water can contain numerous pollutants that pass through the treatment process, including but not limited to metals, salts (including nitrates), pesticides, pharmaceuticals, endocrine disruptors, organic pollutants, chlorine disinfection byproducts, and other contaminants. Some of the contaminants in recycled water, such as chlorine disinfection byproducts and pharmaceuticals, exist only rarely in groundwater, and so would immediately degrade any affected waterways. Conversely, salts such as nitrates already contaminate many groundwater basins and exist in relatively high levels in recycled water, which can then exacerbate existing groundwater pollution problems.

Recycled water is and will continue to be used for crop irrigation, other irrigation (soccer fields, golf courses, landscaping), for recharge of depleted groundwater aquifers, and as a barrier to seawater increasingly drawn into aquifers by inland pumping. Increasingly, water recycling is being explored for indirect potable reuse. Some Regional Water Boards issue permits to these projects containing safeguards to protect adjacent waterways that may be affected. However, other projects go forward with relatively little oversight. In part this happens due to a misconception that because recycled water has been treated to meet certain California Department of Public Health standards, it cannot negatively impact other uses of surface water and groundwater. This is where the Clean Water Act and Porter-Cologne fill the gap and protect the quality of all of California's waters for all uses. Without the additional, and mandatory, safeguards provided by these laws, water intended for habitat, agricultural, industrial and other uses will suffer. The Policy will play a critical role in providing guidance to all Regional Water Boards, the regulated community, and the public on how these water quality laws will be implemented in full to protect these and other beneficial uses of California waters.

Our comments focus on four areas with an emphasis on developing a useful and complete Water Recycling Policy. First, we describe the need for the Policy to address a broader array of clean water issues related to the use of recycled water. Given the connectivity among water

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[1] Resolution ¶ 7(a).
[2] Resolution ¶ 6.
[3] Resolution ¶¶ 17 and 18.

bodies, and between water quality and water supply, we believe that the Policy as drafted will not effect the goal of increased use of recycled water in a manner that protects existing waterways. Second, we explain the inadequacy of the simple assertion that recycled water projects that comply with this Policy and applicable laws will comply with antidegradation requirements, in particular State Board Resolution No. 68-16. Third, we recommend clarifications of the Policy needed to dispel apparent contradictions and ensure consistency in application of the Policy. Fourth, we provide comments on specific issues raised by the Policy as drafted. These specific comments will be presented in the order they arise in the Policy and include suggestions for improving the Policy. The recurring theme throughout these comments, and one that carries over from comments provided in scoping process, is that **using recycled water to increase supply is only effective when the water quality of existing resources is protected.**

I. The Water Recycling Policy Must Address All Issues Implicated, Including: the Nature of the Water Resource to Be Used, All Surface Water and Groundwater Impacts, and the Need to Protect All Beneficial Uses

The Policy's stated purpose is to provide "a statewide approach that fosters a consistent application of requirements to the use of recycled water … in order to encourage and broaden its usage."[4] The Policy's text declares that "uniform interpretation of these requirements is needed to reduce uncertainty in the design requirements for recycled water projects" and that "this uncertainty has created an obstacle to achieving the full potential for water reuse."[5] However, the Policy as written fails to provide the clear direction needed to achieve not only a "reliable local water supply" and "substantial energy savings", but also the consistent protection of all beneficial uses of all affected waterways.

There are three ways in which the Policy, by failing to be comprehensive in its scope and its foundation, fails to provide the clear direction it sets out to achieve. First, to provide the necessary foundation for the nine Regional Water Quality Control Boards (Regional Boards) to regulate recycled water projects consistently and effectively, the Policy must include a complete and candid discussion of what recycled water is, where it comes from, and the pollutants and constituents it may contain. Second, the Policy's scope must be expanded to address the range of surface water and groundwater impacts of recycled water use. Third, the Policy should be more explicit in demanding, in the Resolution section not the Findings, that all beneficial uses, not just domestic and municipal supply, must be taken into consideration and protected by NPDES permits for discharges impacting waters of the U.S., or by waste discharge requirements (WDRs) and waste reclamation requirements (WRRs) for other discharges.

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[4] Finding No. 4. Indeed, given the overarching mandate of the State and Regional Boards, the chief purpose of the Policy should be to encourage recycled water use consistent with protecting the quality of affected waterways pursuant to state and federal law.

[5] *Id.*

A. The Policy Must Acknowledge Where Recycled Water Comes from and the Constituents It Contains

The Policy must begin with a clear discussion about what recycled water is – its source water, typical treatment for different uses, and the contaminants that may be present after treatment. Without laying this foundation, the Policy cannot help overcome one of the primary obstacles to recycled water use – community concern that the water is somehow unsafe.[6] Unless and until the Policy is explicit about these issues, the Policy will fall short of providing the public with the assurances needed to embrace its use.

It is our experience that there are different perceptions of what recycled water is and what it can contain; these different perceptions are part of the reason for the difficulty in regulating recycled water use consistently and with the full health of local waterways in mind. It is also perhaps the reason that the Policy somewhat inexplicably is focused on regulating salts.[7] We see little to be gained, and much to be lost, in a Policy that ignores the important issue of providing the Regional Boards and the public with full information about precisely what the Policy regulates. A passing reference in Finding No. 16 that "recycled water has the potential to contain constituents not typically found in surface water or groundwater, because it is usually produced from sewage" is insufficient.

Instead, the Policy should be specific. What are the constituents referenced in Finding No. 16? Where do they come from (*i.e.*, what is the source water)? What pollutants do and do not pass through conventional treatment processes? Why is it important that the Regional Board include regulation of these constituents when issuing NPDES permits, WDRs and/or WRRs for recycled water projects? By failing to include an up-front and thorough discussion of the source and composition of recycled water, the Policy creates the false impression that the only important concerns with recycled water use are protecting groundwater from degradation from salts and nitrates, and making sure that groundwater recharge reuse projects do not negatively impact drinking water supplies.

In fact, recycled water use can implicate a range of beneficial uses not addressed in the Policy. In addition to nitrates, phosphates and other salts, the constituents in recycled water that threaten beneficial uses and overall water quality include:

- Pharmaceuticals, including antibiotics and estrogenic compounds
- Antibiotic-resistant pathogens (including re-growth of pathogens in the environment)
- Metals, including barium, chromium, iron, manganese

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[6] *Water Recycling 2030: Recommendations of California's Recycled Water Task Force*, Executive Summary at xii (June 2003); *Facing the Yuck Factor: How Has the West Embraced Water Recycling? Very (Gulp) Cautiously*, High Country News, Vol. 39, No. 17 (September 17, 2007).

[7] It is our understanding that the intent behind the absence of language on regulation of other pollutants was to allow the Regional Boards latitude in how to address those pollutants. However, without explicit language in the Resolution in this regard, Regional Boards could also interpret the Policy as providing guidance on how to manage pollutants other than salts. Clarity in language is essential to achieving clarity in interpretation, especially in a growing area such as use of recycled water.

- Chlorine disinfection byproducts
- Organic compounds not removed in conventional disinfection process

To protect the water quality of our state, it is the State Board's obligation to work to solve the issues presented by the presence of all contaminants in recycled water head-on.[8] That task begins with a forthright explanation of where recycled water comes from and all the aspects of recycled water that the Regional Boards, the public, and the recycled water purveyors need to be cognizant of when permitting recycled water projects. The Policy discusses the impacts to our groundwater that could be caused by high salinity commonly found in recycled water.[9] The same needs to be done for all the other constituents (or classes of constituents) found in recycled water. In so doing, the State Board will give the Regional Boards the background they need to ensure that the NPDES permits, WDRs and/or WRRs they adopt will be protective of water quality.

B. The Policy Must Address the Inevitable Surface Water and Groundwater Impacts of Recycled Water Use

In earlier comments on the development of a recycled water policy (see attached for ease of reference), we explained in detail why the Clean Water Act, and the State's obligations under the Porter-Cologne, mandate the State Board and Regional Boards to address runoff from recycled water projects to waters of the United States with NPDES permits.[10] We appreciate that the State Board and staff appear to have set course towards development of an NPDES permit for discharges of runoff from recycled water projects,[11] which would be consistent with AB 1481 (De La Torre), recently signed into law by the Governor. To have greater import, these conclusions should be included in the Policy (*i.e.* the Resolution), as opposed to the Draft Staff Report or the Findings, along with strong direction to the Regional Boards to issue NPDES permits to control polluted discharges from recycled water projects. An even larger concern, however, is that the Policy entirely avoids a central issue raised by the use of recycled water – the impact its use will have on surface water quality – and only addresses some of the potential impacts that recycled water projects could have on groundwater quality.

The Policy's focus appears to be to guide the Regional Boards in issuing WDRs and WRRs for recycled water projects that may impact groundwater quality. However, the Policy itself essentially ignores the protection of surface water quality. We fail to see any logical or practical reason for this failure, and have concerns about the regulation that will fill this void given the limited direction that exists in the Policy. As Porter-Cologne states, "the quality of <u>all the waters of the state</u> shall be protected for use and enjoyment by the people of the state … [and] the statewide program for water quality control can be most effectively administered

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[8] Cal. Water Code § 13000.

[9] *See e.g.* Findings No. 5, 6, 8, 9, 11-13.

[10] We explained in our previous comments that the Memorandum from State Water Resources Control Board Executive Director Celeste Cantú to Regional Board Executive Officers, Subject: "Incidental Runoff of Recycled Water," (February 24, 2004), establishes an illegal regulatory regime under the Clean Water Act. For an explanation of the illegality the conclusions in this memo, please see our previous comments at pages 2 to 6.

[11] *See* Draft Staff Report at 1.

regionally, within a framework of statewide coordination and policy."[12] The Policy – not the Staff Report or Findings – must include specific direction on surface waters.

Our point is not one based on legal technicalities. We are deeply concerned that by not including guidance sufficient to protect surface water quality, the Policy will at best continue the asserted status quo of complex permitting, and at worst send a message that surface water protection is a low priority for the State and Regional Boards. Regional Boards, which still have to comply with their mandate to protect surface water quality, would under the Policy be left with the additional action of having to defend their mandated regulatory actions to a regulated community pointing to the explicit absence of surface water protections in the Policy.[13] To "overcome the uncertainty [that] has created an obstacle to achieving full potential for water reuse,"[14] the Policy must be reworked to address surface water impacts of recycled water projects.

We see three obvious situations where the Policy must provide explicit guidance for protecting surface water quality. The first is when recycled water is used for irrigation and there is a potential for runoff from the areas to which it is applied. The second is when recycled water is stored in surface impoundments[15] with the potential to overflow.[16] The third is when either through irrigation, storage in an impoundment, or in a groundwater recharge project, the recycled water will discharge to groundwater that is hydrologically connected to surface waters. We will explain below how the specific aspects of the Policy should be improved to provide a clear interpretation of requirements the Regional Boards must execute to protect surface water quality consistent with federal and state law. Without addressing surface water impacts, the Policy is incomplete and will not guarantee that water quality is protected as recycled water use becomes an ever more important element of California's water supply.

The Policy also falls short of effectively ensuring the protection of our groundwater resources. For example, with respect to irrigation projects, the Policy entirely fails to direct the Regional Boards on how to address constituents other than salts.[17] This is particularly problematic when recycled water is used for irrigation above an otherwise pristine aquifer where contamination with any constituent, not just salts, would present a serious and significant decrease in water quality.[18] Groundwater is too precious a resource for the State Board to address in an incomplete manner.

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[12] Cal. Water Code § 13000 (emphasis added).
[13] In addition, Regional Boards also may be pressured to await a general NPDES permit for runoff from recycled water irrigation projects rather than requiring compliance with the law now.
[14] Finding No. 4.
[15] During the workshop in Los Angeles on October 2, 2007, staff explained that the Policy's express exclusion of surface impoundments was meant to apply to recycled water in impoundments within the wastewater treatment process, before it is discharged and made available for reuse as recycled water. Our comments here are addressed at surface impoundments outside the treatment process, such as landscape features at golf courses and cemeteries.
[16] This is a particular concern in the winter, as recycled water continues to be generated despite the rain that reduces its utility for irrigation and contributes to impoundment overflows.
[17] As discussed below, we have concerns that even the discussion of salt pollution prevention lacks clarity and clear enforceable mechanisms, casting its utility into question.
[18] *See infra,* Section IV(B)(3).

C. The Policy Must Stress the Importance of Protecting All Beneficial Uses

Closely tied to the need for the Policy to address surface water as well as all groundwater impacts is the need for the Policy to make certain that all beneficial uses, not just domestic and municipal supply, will be protected. Currently the only explicit reference to beneficial uses other than domestic and municipal supply in the Policy is in Resolution ¶ 10, which states that "a Regional Water Board may establish a limitation that is more stringent that the MCL, if necessary to protect designated beneficial use other than municipal or domestic use, such as agricultural use." Otherwise, the Policy only implies protection of beneficial uses by requiring that WDRs and WRRs for "recycled water irrigation projects," where applicable, include prohibitions on causing or contributing to violations of water quality objectives.[19]

To be effective, and to faithfully interpret both the Clean Water Act and Porter-Cologne, the Policy must be modified to explicitly require the establishment of limitations to protect all designated beneficial uses in NPDES permits, WDRs and WRRs for all recycled water projects, not just groundwater recharge/reuse projects. To start, the "may" must be changed to "shall" in Resolution ¶ 10 cited above, and the command should be made into a stand alone resolution paragraph that applies to all recycled water projects. This will make it clear that the protection of water quality is an essential element in regulating any recycled water project. Additionally, the findings should be expanded to make it clear that the Regional Boards must (a) issue and enforce NPDES permits for discharges to waters of the United States, as defined, and WDRs and WRRs for other discharges, and (b) ensure that such permits/WDRs/WRRs include limitations – including discharge prohibitions as needed – to protect all beneficial uses.

II. The Policy's Blanket Statement Establishing Compliance with State Board Resolution No. 68-16 Is Insufficient

State Board Resolution No. 68-16 requires the establishment of waste discharge requirements which "will result in best practicable treatment or control of the discharge to assure that (a) 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." As drafted, the Policy asserts "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."[20]

We do not support the Policy's blanket, unsupported statement that generic compliance with the Policy, state law, and the Basin Plans equates to compliance with State Board Resolution No. 68-16. As a general matter, approval of a blanket conclusion that simply requiring compliance with the law (which is of course required in any event) is equivalent to an antidegradation analysis would create disturbing precedent for all future applications of

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[19] Resolution ¶¶ 7(f) and 13, Finding No. 26; *see also* Cal. Water Code §§ 13050(h) and 13241 (identifying WQOs as consisting of beneficial uses and the criteria needed to protect them). As discussed more below, however, even this requirement appears to be of limited utility in the Policy due to the lack of clarity on when WDRs/WRRs must be applied, and to the confusingly limited definition of "recycled water irrigation projects."

[20] Resolution ¶ 16.

Resolution No. 68-16. More specifically, the "analyses" of what constitutes best practicable treatment or control (BPTC) for irrigation projects or groundwater recharge reuse projects are entirely inadequate to inform the State Board's decision on this issue. In addition, conditions vary throughout the State, and the analysis that must be completed under State Board Resolution No. 68-16 should not be presumed satisfied with a one-size-fits-all proclamation in this Policy. We address each of these specific points below.

The "analysis" provided does not support the assertion of what constitutes BPTC for irrigation projects and groundwater recharge reuse projects. For irrigation projects, Finding No. 24 establishes BPTC as "a nutrient management plan, applying recycled water in an amount that does not exceed the amount needed for landscape or crops, and controlling salt discharges to collection systems from industrial facilities and self regenerating water softeners." This suite of requirements as established by the Policy cannot be considered BPTC for the following reasons.

First, the described NMP – when required – does not establish any standards that a recycled water users must meet or even provide any indication of the standards and requirements the Regional Boards must require in a NMP.[21] Without these details, it is impossible to assess whether a naked requirement to develop and implement an NMP will satisfy Resolution No. 68-16's BPTC requirement.[22]

Second, neither the Draft Staff Report nor the Policy provides any support for the conclusory and incorrect assertion that controlling salt dischargers by requiring that recycled water used for irrigation projects not exceed the source supply's TDS levels by more than 300 mg/l[23] represents BPTC. Rather, the staff report itself lays out the reason that the 300 mg/l "control measure" by definition cannot be BPTC, stating that it "was selected as being a difference that the majority of recycled water producers can currently meet."[24] In other words, this at most represents the average of what is practicable – **not** the "best" practicable control.[25]

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[21] For more detail *see infra*, Section IV(B)(1).

[22] The second requirement for BPTC in irrigation projects, not applying more water than is needed for crops and landscape, makes practical sense. However, putting aside for the moment the significant and unaddressed implementation questions, without citations to any scientific studies or other source material to demonstrate how and why this will protect groundwater resources, it is impossible to assess whether this represents BPTC for an irrigation project.

[23] Resolution ¶ 7(d).

[24] Staff Report at 5.

[25] The catch-all "requirement" (assuming it is applied, *see* Section III) that a project cannot cause or contribute to violations of water quality objectives cannot save the Policy's reliance on the 300 mg/l increase standard as BPTC. *See* Resolution ¶ 7(f); Draft Staff Report at 4-5. Specifically, alternative (b) for controlling salts, which is set forth at page 4 of Draft Staff Report and establishes that recycled water TDS limitations should be established to ensure the percolate complies with water quality objectives, is the same standard required by the catch-all backstop to the 300 mg/l standard (which also requires that in no case may the use of recycled water cause or contribute to a violation of water quality standards, *see* Draft Staff Report at 4-5). As such, the 300 mg/l standard adds nothing to the standard suggested in alternative (b). We suspect that the only result of the 300 mg/l standard will be significant resistance from the recycled water producers to any requirement that needs to be more stringent than 300 mg/l in order to protect beneficial uses. In any event, we support establishment of an upper limit for TDS increases over the source water supply, regardless of whether the affected groundwater may be capable of assimilating greater TDS levels without exceeding water quality objectives.

Resolution No. 68-16 requires a finding that the technologies or controls established be the "best practicable." (Emphasis added.) Before the State Board can assess whether an increase in TDS over the source water supply represents BPTC, the State Board must analyze the various levels recycled water purveyors are capable of meeting using the best practicable treatment method. It cannot simply pick the level of treatment that feels acceptable to most people. Until this exercise is completed, the State Board cannot purport to know what the best practicable treatment or control is, or specifically whether a particular increase in salt concentration over the source supply is BPTC. As a result, the State Board cannot declare that the requirements for irrigation projects that the Regional Boards must establish will result in "the best practicable treatment or control of the discharge to ensure that pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained."[26] Moreover, the State Board should not necessarily establish such a standard as BPTC applicable to all recycled water irrigation projects in the state.

This same lack of analysis undermines the assertion that the BPTC requirement of Resolution No. 68-16 will be satisfied for groundwater recharge reuse project since "CDPH [California Department of Public Health] provides recommendations for the design and operation of these projects."[27] Neither the Draft Staff report nor the Policy provides any analysis to give public, the Regional Boards, or the State Board itself the ability to evaluate whether CDPH's recommendations are BPTC, or even what CDPH's recommendations might be. What is known is that CDPH recommendations do not assess whether and how the project will impact all beneficial uses of affected surface water and groundwater. Without the required analysis, it is impossible to say that degradation of the impacted water bodies caused by recycled water use will be consistent with the "maximum benefit of the people of the State," as required by Resolution No. 68-16.

Finally, we have grave concerns about implications of the conclusory assertion that "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."[28] Such a blanket declaration opens the door for Regional Boards to rubber-stamp any recycled water project – or indeed potentially other types of projects deemed "worthy" – without conducting the required careful examination of whether a specific project will degrade water quality in violation of the letter and intent of the anti-degradation policy. Even if the anti-degradation policy allows for some diminution of water quality, the amount of diminution that reflects the maximum benefit to the people of the state needs to be assessed on a project-specific basis in light of all uses of the particular respective waters, both recycled and impacted.[29] The Policy's rubber-stamp, "one-size-fits-all" approach is entirely at odds with the

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[26] State Board Resolution No. 68-16.
[27] Finding No. 25.
[28] Resolution ¶ 16.
[29] Requiring a project specific anti-degradation analysis is not only necessary to ensure that State Board Resolution No. 68-16 is complied with, but as a practical matter there is nothing to be gained through a one-size-fits-all approach proposed in the Policy. We imagine that an anti-degradation analysis for a relatively small recycled water project would be correspondingly simple to prepare while a complex or large project would require a more complex analysis.

three-pronged admonition in Resolution No. 68-16 that "existing high quality water will be maintained until it is shown 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." The Policy's proposed "anti-degradation off-ramp" will create a dangerous precedent of skirting around a mandated and essential analytical path, and in doing so will not serve to relieve the existing public perception that recycled water use should be viewed with concern.

III. Additional Clarity and Structure Are Needed to Ensure the Policy Protects Water Quality and Provides Clear Requirements for Recycled Water Use

Our third general comment is that the Policy would benefit significantly from increased clarification and structural modifications. During the workshop in Los Angeles on October 2, 2007 (October 2 Workshop) there appeared to be consensus that the Policy needed clarification and some restructuring to: (1) ensure that it would be implemented to protect all waters consistently and effectively, and (2) include explicitly those elements of the Policy that had been only implied.

Our concern with the Policy as written and structured is that it leaves the regulators, the regulated community and the public without a clear understanding of the State Board's priorities and recommendations. As just one example, one significant point of confusion is how and when monitoring of groundwater would be required for recycled water projects. Staff informed those present at the October 2 Workshop that the prohibition on Regional Boards from requiring groundwater monitoring for irrigation projects unless certain conditions are met[30] was only meant to apply until the salt implementation plan contemplated in Resolution ¶ 6 was completed. But from the text of the Policy, this is not clear. Even if this were explained, however, we would have concerns about artificially prohibiting the Regional Boards from requiring monitoring simply because a salt implementation plan had not been written. Given the ambiguity of the Policy, it is almost impossible for the public to raise such critical concerns. The language of the Policy needs to state exactly what is intended and what must be completed to increase the consistency in interpretation that it seeks.

Adding to the confusion is that there is no mention of monitoring requirements for groundwater recharge reuse projects, except when attenuation is expected to occur.[31] Based on the language on groundwater monitoring for irrigation projects (*i.e.*, the Regional Board may only require it in limited circumstances),[32] it would appear that without similar language for recharge reuse projects, the Policy establishes a predisposition against requiring monitoring in those cases. During the October 2 Workshop, however, staff indicated that this was not the intention, and that a Regional Board may in fact impose monitoring requirements on groundwater recharge reuse projects. If the ability to require monitoring was in fact intended (as we would recommend), then again this must be stated clearly. By being silent on an issue, the Policy will likely result in different requirements in different regions.

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[30] Resolution ¶ 8.
[31] *See* Resolution ¶ 12.
[32] Resolution ¶ 8.

In addition to stating clearly what is and is not intended and recommended, the Policy also would benefit from headings within the Policy (in both the findings and the resolution paragraphs), to avoid confusion about which findings and requirements apply to each category of recycled water project. This simple modification would make the Policy far more user-friendly and more straightforward to apply, and would dispel some of the apparent contradictions that currently exist.[33]

Additional amendments should be made to clarify those elements of the Policy that are stated but are vague or ambiguous. For example, the Policy's definition of "recycled water irrigation project" is unnecessarily ambiguous, which in turn directly impacts the application of WDRs/WRRs, and their required elements (such as the requirement to not cause or contribute to violations of WQOs), in Resolution ¶ 7. There is no explanation of why the definition of "recycled water irrigation project" includes only "those projects that use recycled water primarily to meet a water supply need, instead of a disposal need," or a definition of what is "supply" versus "disposal." The requirement of having to make such a potentially quite subjective finding before issuing WDRs/WRRs will likely lead the Policy away from, not toward, clear and consistent application of the law. Such ambiguities in the Policy must be eliminated for the Policy to be effective.

Given the difficulty with ensuring the State Board's exact intentions and direction under the Policy as written, we urge staff to make the needed clarifications and provide additional needed direction, and then redistribute the Policy for an additional round of public comment before bringing it before the Board. We believe that the significance of this issue calls for thorough public review of the Board's intent and specific guidelines, which would be more likely after the Policy has been clarified and otherwise amended.

IV. Specific Actions Needed to Improve the Water Recycling Policy

A. The Policy Should Require Revision of Implementation Plans to Address Threats to Water Quality Objectives from Pollutants Other than Salts, and Require It Be Done in Less Than 10 Years

We applaud the State Board for requiring the Regional Boards to adopt revised implementation plans for those groundwater basins within their regions for which water quality objectives for salts are being, or are threatening to be, violated.[34] However, the focus on addressing issues related to salts, though commendable, is too narrow. A prudent policy, and one that is required by law, would expand this provision to require revision of all implementation

[33] *Compare* Finding No. 13 (unreasonable to require groundwater monitoring to judge impacts of irrigation projects on groundwater since the "substantial delay in pollutants reaching groundwater limits the effectiveness of monitoring) *with* Finding No. 17 (groundwater limitations, along with groundwater monitoring will provide adequate water quality protection when attenuation is expected to occur in groundwater recharge reuse projects).
[34] Resolution ¶ 6. Resolution ¶ 6 needs to be clarified to require the adoption of revised (or new) implementation plans if there are Basin Plans that currently do not have implementation plans for all groundwater basins within the applicable region. As currently written, Resolution ¶ 6 only appears to require revision of existing plans.

plans, or adopt an implementation plan if one does not exist, for all groundwater basins within a region where any water quality objectives are being or are threatened to be violated.[35] For example, industrial contaminants, not salts, represent an equally significant (if not more significant) threat to the San Fernando groundwater basin, and since recycled water also contains numerous industrial contaminants, it would be appropriate to require an implementation plan to protect this groundwater basin from industrial contaminants in addition to salts.[36] We request revision of the Policy to modify Resolution ¶ 6 to require adoption or revision of implementation plans for all groundwater basins within the various regions to protect all beneficial uses from threats from any pollutant or contaminant.

We also see no reasoned basis in the Draft Staff Report, the Findings, or the Policy itself for extending the deadline to develop these implementation plans until January 1, 2018. Indeed, these documents emphasize the already-degraded state of many groundwater basins, which should prompt a far more expedited deadline to prevent further contamination.[37] The Draft Staff Report notes that the Santa Ana Regional Board recently amended its plan to include a program of implementation for achieving water quality objectives for salts.[38] This process took eight years to complete and fund, without an order from the State Board to get it done.[39] We also direct your attention to the Salt Management Plan, prepared by Zone 7 (the local agency responsible for managing groundwater resources in the Livermore-Amador Valley) in response to an order from the Regional Water Quality Control Board, San Francisco Bay Region.[40] Such plans provide ample guidance and experience for the various Regional Boards to draw on when adopting (or revising) future implementation plans. Given the experience with doing these plans already, and given the degraded status of many of our groundwater basins, we see no reason that the Policy should set a deadline longer than three years.[41]

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[35] Cal. Water Code §§ 13240, 13241, and 13242 (requiring establishment of implementation plans to achieve all water quality objectives).

[36] *See Groundwater Assessment Study*, Metropolitan Water District of Southern California, Ch. IV, p. IV-2-13, Table 2-5, and Figures 2-9 through 2-11 (September 2007).

[37] *See e.g.*, Finding No. 8; Draft Staff Report at 2.

[38] Draft Staff Report at 2; *Resolution Amending the Water Quality Control Plan for the Santa Ana River Basin to incorporate an Updated TDS and Nitrogen Management Plan for the Santa Ana Region*, Resolution No. R8-2004-001, Regional Water Quality Control Board, Santa Ana Region.

[39] *Resolution Amending the Water Quality Control Plan for the Santa Ana River Basin to incorporate an Updated TDS and Nitrogen Management Plan for the Santa Ana Region*, Resolution No. R8-2004-001, Regional Water Quality Control Board, Santa Ana Region.

[40] *Salt Management Plan*, Alameda County Flood Control and Water Conservation District, Zone 7 (May 2004) (approved by San Francisco Regional Board by letter dated September 24, 2007) (copies of these documents can be obtained online at http://www.zone7water.com/index.php?option=com_content&task=view&id=79&Itemid=352).

[41] If the concern here is that some groundwater basins (e.g. San Joaquin Valley) are larger or more complex than others and thus staff or the State Board believes it may take longer than three years to complete a management plan for these basins, then that should be noted and addressed specifically. Using the exception, i.e. the basin that is large and complex, to make the rule for all groundwater basin planning, no matter how complex, is inappropriate and further threatens our limited supply of groundwater.

B. The Policy Should Be Sufficiently Prescriptive and Take a Precautionary Approach to Regulating Irrigation Projects that Use Recycled Water

The approach taken by the Policy to address irrigation projects that use recycled water needs improvement not only to ensure that water quality is protected, but also to provide consistency in the interpretation of requirements applicable to recycled water use.

1. The Nutrient Management Planning Requirement Must Be Fleshed Out

We support the Policy's requirement to develop nutrient management plans (NMP) for groundwater discharges. However, as currently drafted, it is unclear when or where NMPs would be required, and how they would be implemented and enforced.[42] There are several key procedural and logistical aspects of the NMP development and implementation that need to be addressed. These include:

- Who shall be responsible for development and implementation of the NMP?
- Is it required to be prepared by a certified nutrient management planner?
- Are there any training requirements, technical or otherwise, that the person who develops the nutrient management plan and is responsible for its implementation must meet?
- How will violations be tracked and determined?
- If it is violated, how will it be enforced, and who will be liable for correcting violations and remediating damage caused?
- Will it be incorporated into the WDRs?
- Will it be a public document, subject to public review and later access?

These are all questions that, unless answered, will likely lead to significant disparities in NMP requirements imposed by different Regional Boards throughout the state.

Equally, if not more, problematic is the lack of standards or requirements that an NMP must meet to ensure that water quality is protected according to the law. Specifically, the definition of "nutrient management" in Resolution ¶ 3 provides that 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 water and groundwater resources, protect air quality …, and maintain or improve the physical, chemical, and biological condition of soil."[43] These broad generalizations about the purposes of nutrient management do not tell Regional Boards what standards must be met to achieve protection of beneficial uses. Likewise, the bare description of what nutrient management is ("the act of managing the amount, source, placement, form, and timing of the application of plant nutrients and soil amendments")[44] does not provide

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[42] As drafted, the Policy only directs a Regional Board to require an NMP if WDRs or WRRs are issued, but as explained above, the confusion created by the definition of "recycled water irrigation project" and lack of explicit direction to require WDRs or WRRs for all irrigation projects that use recycled water leaves considerable ambiguity about when an NMP must be required.

[43] Resolution ¶ 3.

[44] *Id.*

any better guidance for the Regional Boards on how to assess whether a particular NMP will be acceptable and effective in achieving the stated goals.

The requirement in the Policy that recycled water be applied in an amount that does not exceed the amount needed for the landscape or crops is closer to the type of prescriptive requirement that must be included to direct Regional Boards on what must be required in NMPs. However, details are critical to the success of such a provision and these details are lacking. We encourage the Board to review the NMP requirements established by the Central Valley Regional Board in its recently adopted general WDR Order for Existing Milk Cow Dairies ("Dairy WDR") for the type of standards and elements that a nutrient management planning requirement should prescribe.[45] We do not advocate here for the State Board itself to establish technical standards for nutrient management for all conceivable projects that may use recycled water. Rather, we suggest that the Policy must prescribe the types of technical standards that Regional Boards should establish and the specific protections that those standards must achieve.

In sum, while we are pleased to see that a nutrient management planning requirement is included in the Policy, it must have more detail and be more prescriptive, and enforcement mechanisms must be made more clear, to protect the health of affected waterways and achieve the Policy's goal of permit clarity.

2. Compliance with Title 22 Recycling Criteria Is Insufficient to Protect Ecological and Public Health

The Policy requires that recycled water used for irrigation projects meet the Title 22 Recycling Criteria.[46] Simply requiring compliance with these standards will not necessarily protect public health or water quality. The Title 22 Recycling Criteria are not standards designed to protect terrestrial organisms that may contact the water, nor are they standards that will protect the water resources ultimately impacted, the groundwater beneath or the surface waters downstream from the recycled water irrigation projects. The deficiencies of the Policy in addressing the latter issue are discussed in greater detail in Section IV(B)(3). Here we address the lack of protection Title 22 Recycling Criteria provide to those ecosystems and organisms that use and contact the water before it percolates to groundwater. We also address the important point that compliance with Title 22, Recycling Criteria will be ineffective even to protect public health, as it purports to do.

The Policy should, but does not, address the impacts of recycled water on the ecological communities that will be impacted by its use in irrigation projects. The Title 22 Recycling Criteria are intended to prevent adverse public health impacts of recycled water use. They are designed with the humans in mind. But irrigation projects that use recycled water impact ecological communities, not just humans. The soil biota where recycled water is applied are affected. So too are the animals that will eat the soil biota, bugs, and lower life forms that metabolize the pollutants in the recycled water. Many of the constituents in recycled water

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[45] *See Waste Discharge Requirements General Order for Existing Milk Cow Diaries*, California Regional Water Quality Control Board, Central Valley Region, Order No. R5-2007-0035. Section C and Attachment C.
[46] Resolution ¶ 7(b).

bioaccumulate,[47] or are specifically designed to be effective at very low levels on reproductive, endocrine, nervous, or other physiological systems.[48] In an era when we understand the disastrous effect that introduction of bioaccumulative constituents can have on entire ecosystems, and when it is undeniable that recycled water contains these constituents, it is irresponsible for the State Board to consider issuing a Policy that does not even address this issue.[49]

On a related issue, plants take up many of the metals and other constituents in recycled water, yet the Policy provides no direction to ensure effective control of heavy metals and other potential harmful constituents in recycled water used to grow crops for human consumption. The source of this oversight is the absence of any discussion in the Policy of what recycled water actually is.[50] There is no principled basis for failing to address the plant uptake issue in this Policy by resorting to an unsubstantiated assertion that all water used for irrigation contains pollutants similar to those in recycled water. The question before the State Board is "what is an appropriate Policy for the use of recycled water." An answer to this question requires a rigorous examination of what recycled water is and the development of a Policy that addresses all the issues implicated. An appropriate Policy will demand characterization of the recycled water before it is spread throughout the environment and will require development and implementation of a management plan that will address all constituents and their impacts.

We are similarly concerned that the requirement that irrigation projects comply with Title 22 Recycling Criteria will also fail to protect against even those negative public health impacts these criteria are specifically designed to prevent. Foremost of our concerns is that these criteria still allow for the introduction of some level of pathogens into the environment.[51] Recycled water comes primarily from sewage treatment plants,[52] which in addition to pathogens, also contain all the antibiotics and other agents designed to kill pathogens.[53] As such, it is likely some of the pathogens that make it through the treatment process will be anti-biotic resistant. It is essential to remember here that recycled water is used to irrigate parks and recreation areas where the general public goes to relax and lie in the grass.[54] Thus, in order to ensure that public

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[47] http://www.epa.gov/ppcp/faq.html; http://toxics.usgs.gov/highlights/pharm_soils/index.html

[48] http://www.epa.gov/ppcp/faq.html

[49] Resolution ¶ 11 reserves the right for Regional Boards to issue requirements for groundwater recharge reuse projects that may impact beneficial uses other than domestic and municipal supply. To address the shortcomings of Title 22 Recycling Criteria in protecting water quality from irrigation project impacts, this provision must be adopted into the framework for irrigation projects and it must be made mandatory and strengthened to note the various ecosystems that must be addressed. *See supra*, Section IV(B)(3).

[50] *See supra*, Section (I)(A).

[51] Title 22 C.C.R. § 60301.230(b) (defines disinfected tertiary recycled water- which is the most stringent level required the Title 22 Recycling Criteria – to be water in which "The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters").

[52] Finding No. 16.

[53] *See Reduction of pathogens, indicator bacteria, and alternative indicators by wastewater treatment and reclamation processes*, Joan B. Rose, et al. WERF paper # 00-PUM-2T, 2004.

[54] One important additional possible pathway for exposure to the various contaminants in water that meets Title 22, Recycling Criteria is through the watering of vineyards and fruit trees to prevent frost. People who live in regions where this occurs relate that when this is taking place, the mist that is generate just sits in the air and effectively acts to aerosol all the contaminants that are in the water. The prospect this presents for exposure to the contaminants in

health and recreation uses are protected,[55] the Policy must require that water used for any purpose where contact with humans is possible should be treated to remove all pathogens, even if that means requiring treatment beyond the levels currently required by Title 22 Recycling Criteria. Currently, neither the Draft Staff Report nor the Policy explain that these issues are implicated or analyze the effectiveness of the chosen method of addressing them.

3. The Policy Should Provide Direction on Limitations on All Constituents as Needed to Protect Water Quality

Perhaps the most glaring omission from the Policy with respect to irrigation projects is the absence of any guidance or requirement to establish limitations for recycled water irrigation projects (or other projects) to address pollutants other than salts that may affect water quality. We acknowledge that the Policy obligates Regional Boards to require "the use of recycled water to not cause or contribute to violations of water quality standards,"[56] and "compliance with the federal Code of Regulations, Chapter 40, Part 122, [NPDES]."[57] However these simple restatements of the law, without more, do not provide the guidance necessary to assure protection of water quality.

Inexplicably, the requirements found in Resolution ¶ 7 that must be included for regulated irrigation projects fail to require protection of either groundwater or surface waters from any pollutant other than salts. By contrast, for groundwater recharge reuse projects, recycled water that may reach a drinking water source must meet the MCLs established by CDPH before it is discharged.[58] The purpose of such a requirement is obvious when addressing a groundwater recharge reuse project – namely, it is necessary to ensure that contaminants that will degrade a drinking water source should not be introduced at levels that will jeopardize that use. Achieving this purpose is just as obvious when the water (and the pollutants it contains) may percolate to groundwater aquifer beneath irrigation projects. We fail to see any reason for excluding such a requirement when recycled water will be used for irrigation, even if, as Finding No. 13 suggests, the constituent's arrival in the groundwater source is delayed.

The same can be said about the omission of any obligation for the Regional Boards to require, or even consider whether to require, limitations on concentrations of constituents for which CDPH has not established MCLs (sometimes referred to as "emerging contaminants") in

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Title 22 water, even tertiary treated water (which may not even be required for this particular use) is obvious and should be addressed by this Policy.

[55] *See, e.g.*, "Brentwood soccer fields have fungus," *Contra Costa Times* (Sept. 30, 2007) ("the decision to water the fields with recycled water, [which] has a higher saline content than potable … made the grass thirstier [and] … water pooled on the fields, and the salt bound up with the dense clay soil, further preventing drainage. Standing water plus summer's heat and humidity fueled a prime breeding ground for the fungus that has turned large swaths of once-lush grass into crisp brown sod," which has "render[ed] it nearly unusable for sports teams").

[56] We note that a lack of clarity (fueled in large part by the subjective definition of "recycled water irrigation project") with respect to application of WDRs/WRRs to irrigation projects adds additional uncertainty about whether and when prohibitions against causing or contributing to water quality objectives will be required. *See supra*, Section I(C).

[57] Resolution ¶ 7(e) and 7(f).

[58] *Compare* Resolution ¶ 7 *with* Resolution ¶ 10.

recycled water to be used for irrigation. The effects of these emerging contaminants, many of which are mentioned above, on both human and ecological health are just now being understood.[59] A policy that will guide the use of recycled water in California for years if not decades would be shortsighted if it failed to provide a mechanism for Regional Boards to take protective measures in the face of these unknown problems.

A simple example from the Santa Rosa area, where there is currently a proposal to use wastewater effluent to irrigate wine grapes in the Alexander Valley, illustrates the problem. As it passes through the Alexander Valley, the Russian River crosses alluvial deposits that are excellent for growing grapes. The groundwater beneath these soils is relatively pristine, free for the most part of industrial contaminants, salts, and other problems that plague many other groundwater basins in the state. The population pressures in this area are on par if not greater than in the rest of California, and it is expected that it will not be long before these groundwaters will be an important source of drinking water for this growing population. The passage of water from the surface to the groundwater in this area is quick and, in fact, there is considerable communication between the Russian River itself and the groundwater.

Under the Policy as drafted, when the Regional Board issues the WDRs for a project to irrigate wine grapes in the Alexander Valley, it will be obligated to require: (1) an NMP; (2) that water must not be overapplied; (3) that the Title 22 Recycling Criteria must be followed to protect the public health from contact with the water; and (4) that the TDS concentration in the water applied must be no greater than 300 mg/L greater than the source supply.[60] Putting aside for the moment the limitations of the Policy with regard to these requirements, discussed in detail above, <u>there are no explicit requirements regarding appropriate limitations to protect the groundwater resources from any constituents in the recycled water other than salts</u>. The simple command that the use of recycled water not cause or contribute to violations of water quality objectives is insufficient.[61] Porter-Cologne requires regulation, now, of any discharge that "could affect" the quality of the state's waters.[62] In this example, to be effective the Policy must include requirements that the water used for irrigation meet both MCLs and standards to protect all other beneficial uses. In general, the Policy must demand that the use of recycled water in irrigation projects be subject to requirements to effectively control the discharge of all pollutants, including emerging contaminants, to prevent degradation of impacted waterways. These requirements must include numeric criteria necessary to meet the all beneficial uses.[63]

There is a second issue that the Regional Board will face here and which the Policy as written will be ineffective in guiding. It is almost assured that in the Alexander Valley example the recycled water will reach surface waters, whether as runoff from the irrigated vineyards or through the subsurface hydrological connection between the Russian River and the underlying groundwater. And yet the Policy provides no guidance to guarantee the protection of this water quality. Admittedly the Policy calls for compliance with NPDES permit regulations, but it

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[59] http://www.epa.gov/ppcp/faq.html; http://toxics.usgs.gov/highlights/pharm_soils/index.html
[60] Resolution ¶ 7.
[61] *See* Resolution ¶ 7(f).
[62] Cal. Water Code §§ 13260, 13267.
[63] *Compare* Resolution ¶ 7 *with* Resolution ¶ 11

pointedly does not require compliance with the Clean Water Act itself, nor does it state that any point source discharge of recycled water that will reach waters within the jurisdictional reach of the Clean Water Act must be permitted with an NPDES permit. The State Board fails to protect water quality or provide clarity with a Policy that does not explicitly state that Regional Boards shall establish effluent limitations to protect all beneficial uses of the receiving waters in an NPDES permit when an irrigation project will result in a discharge to surface waters. Effluent limitations must be established for both the beneficial uses to be protected while the water is used for irrigation, and for the beneficial uses of the water that ultimately receives the discharge, incidental or otherwise. There is nothing to be gained by leaving any ambiguity about when a discharger must comply with state and federal laws designed to protect surface water quality.

C. The Policy Should Require Monitoring of Groundwater Impacts of Both Irrigation and Groundwater Recharge Reuse Projects That Use Recycled Water

The Policy as currently drafted does not provide needed direction on groundwater monitoring. First, it unnecessarily restricts groundwater monitoring of irrigation projects.[64] Second, it provides almost no direction regarding monitoring for groundwater recharge and reuse projects. In general, a monitoring program is essential not only to assessing the effectiveness of the requirements imposed on a project to protect water quality, but also to collect data and information so that if a problem is detected, the source of the problem can be more efficiently identified and remedial measures can be quickly implemented. It is also essential to the development of the implementation plans referenced in the Policy. The Policy's unnecessary restrictions and lack of clarity on monitoring undermines both benefits of a monitoring program and the ability of the Regional Boards to protect water quality.

With respect to irrigation projects, the prohibition on imposing monitoring requirements absent the limited conditions identified in Resolution ¶ 8 is misguided and circular.[65] We see no point in tying the hands of a Regional Board if it determines that there is a benefit to requiring monitoring but does not yet have the information needed to determine whether site conditions "could cause an increased potential for the irrigated site to adversely affect public health or surface water quality"[66] - information that monitoring could provide. For example, a Regional Board may determine that it is beneficial to require monitoring to evaluate whether the assumptions made about the project are correct and the controls developed to prevent pollution are working. In addition, if monitoring is allowed (or even better required) for all irrigation projects that use recycled water,[67] and it is later discovered that a persistent organic chemical

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[64] *See supra,* Section III.

[65] The term "shallow groundwater" used in Resolution ¶ 8 is both vague and unnecessarily restrictive. Shallow groundwater is neither defined in the Policy nor is it a term with a common, well understood meaning. Further, if the point is that groundwater monitoring can be required when an irrigation project could cause an impact to public health or surface water quality, then that is all that needs to be said. Inserting the words "shallow groundwater" only confuses the matter.

[66] Resolution ¶ 8.

[67] We see no defensible grounds for the statement in the Policy used to justify not requiring groundwater monitoring for irrigation projects. In particular, it is not "unreasonable" to require monitoring simply because the threat posed to water quality from irrigation projects that use surface water or groundwater is the same as that posed by projects that use recycled water. Finding No. 13. The appropriate conclusion that an agency charged with protecting an

commonly found in recycled water has fouled our aquifers, the Regional Board and the public would already have the data needed to respond to the problem.

Second, with respect to groundwater recharge reuse projects, the Policy provides no direction where direction should be provided. As we stated in our scoping period comments, monitoring recycled water both prior to reuse and prior to discharge, particularly for toxic constituents, should be required. By keeping track of the types and quantities of constituents that have been discharged and where they end up in the groundwater table, decision-makers will be prepared to assess whether a particular project is protective of human health and the environment over time. This is particularly important in the face of constantly changing information about the risks associated with exposure to toxic constituents. If we actually know what is being released into the environment, as opposed to guessing through a mass balance or other rough estimation technique done without monitoring, we will be better prepared to effectively address future discovered problems. Monitoring will also provide an understanding of how the toxic constituents may be interacting with one another and with other discharges in the groundwater table.

As explained above, based on the approach taken towards groundwater monitoring for irrigation projects, the Policy appears to disfavor monitoring altogether, even for groundwater recharge reuse projects. If this is not the case, which is what we heard during the October 2 Workshop, the Policy must be modified to reflect this position. Without clarification, we anticipate that any monitoring requirements later imposed will receive significant pushback from project proponents. If a Regional Board thinks monitoring is important, a statement in the Policy from the State Board that supports this decision would eliminate a great deal of the expected resistance.

D. The Policy Should Be More Precautionary in Its Approach to Groundwater Recharge Reuse Projects

Though all projects that use recycled water require a precautionary approach, groundwater recharge reuse projects present challenges that demand a heightened level of precaution. The simple fact that a groundwater recharge reuse project has as its express purpose to provide a future supply of water for drinking and bathing, or irrigating our crops and lawns means that we must be extraordinarily careful about the quality of water used for these projects. In essence, these projects raise all the issues posed by the immediate reuse of recycled water for irrigation, plus the additional concern of insuring that we protect quality of this exact water for

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invaluable natural resource should reach when faced with that situation is to require monitoring for all projects that pose a threat to water quality. The rationale provided in the Draft Staff Report is similarly meritless. Draft Staff Report at 5-6. Specifically, the assumption that irrigation projects cover larger areas than recharge projects is unfounded since percolation ponds often cover large areas. Moreover, the suggestion that impacts to groundwater can be estimated by preparing a salt/water balance only confirms the rationale for needing to implement an NMP and other management measures to prevent degradation; it says nothing about whether monitoring is able to provide useful information. The conclusion in points (c) and (d) on page 6 simply assert that because there is the possibility for faulty engineering, we should not require monitoring. Finally, the statement in (e) is just a restatement of the conclusion in Finding No. 13, which as explained above is really just an argument for requiring monitoring anytime there is a threat to water quality.

these uses well into the future. In particular, we need to protect the environment from the threats we understand now and those we are just beginning to understand. The Policy gets us part of the way there, but it provides inadequate flexibility for the Regional Boards to protect against future threats before they become a problem.

We support the requirement that recycled water must meet the applicable MCLs for all constituents prior to discharge into a recharge reuse project. This requirement is a critical step in ensuring that water recycling does not compromise water quality.[68] But the Policy falls short with respect to those constituents for which CDPH has not established an MCL. Resolution ¶ 11, which places significant restraints on a Regional Board's ability to impose limitations for constituents for which there is no MCL, presents two significant barriers to providing a reliable and useful source of water in the future. First, placing the burden on the Regional Board to establish the presence of the constituent and demonstrate its toxicity is improper. The responsible approach, and the only approach that will ensure protection of our groundwater resources, is to burden the discharger with demonstrating that the constituent is safe, or not present if it is not shown to be safe.[69] At the very least, the burden of characterizing the waste stream must lie with the discharger. Second, if the burden is not shifted as suggested, requiring the Regional Board to demonstrate both that a constituent will be persistent in groundwater, and that there is adequate information to characterize the toxicity and establish an effective limitation is to close the barn door after the animals have already escaped. At a minimum, the Policy should be clear that the law requires the Regional Boards to regulate those constituents without MCLs that demonstrate any combination of persistence or toxicity.

V. <u>The Liability Provisions in the Policy Are Important Tools to Protect Water Quality</u>

We fully support the liability provisions established by the Policy. Resolution ¶ 17 provides that compliance with this Policy does not exempt a discharger from liability for contamination of groundwater, even if water quality standards necessarily become more stringent after requirements for a particular project have been set by a Regional Board.[70] Both components of this provision are essential to ensuring water quality protection, because together they place the ultimate cost of ensuring that the utmost care is taken to prevent pollution and degradation of the environment where it belongs – with the entity granted the privilege of disposing pollutants in a public resource. There is no question that recycled water is a valuable

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[68] We would add that to meet the mandate of ensuring protection of all designated beneficial uses, the language in Resolution ¶ 10 must be modified to state that "a Regional Water Board <u>shall</u> establish a limitation that is more stringent than the MCL, whenever necessary to protect a designated beneficial use." *See, supra,* Section I(C) (discussing that this language should be made mandatory and it should be included as a stand alone resolution paragraph applicable to all recycled water projects).

[69] This recommendation is distinct from that adopted by the Los Angeles Regional Board for the Los Alamitos Barrier Project to the extent the WDRs for that project imposed effluent limitations on a constituent that was not present in the discharge. Our argument is for requiring the discharger, not the Regional Board, to characterize their waste stream and should they demonstrate that a particular constituent(s) is not present, then an effluent limitation would not be necessary.

[70] We can imagine no reasonable basis, and the Policy provides none, for not expanding this provision to include any fouling of surface waters as well as groundwater (including surface water hydrologically connected to groundwater). This is yet another way in which the Policy fails to protect surface water quality.

commodity. There is no reason why the costs associated with its use, most importantly the potential pollution of our groundwater and surface waters, should be borne by anyone other than the organizations and people who gained the most financially from the pollution.

Further, holding dischargers accountable is fair even if the pollution permitted is only later understood to be harmful. In fact, putting ultimate responsibility on the dischargers is an effective last resort, and in the case of some pollutants the only means, to push them to develop and take necessary measures to protect the resource. For example, we are just coming to understand many of the detrimental impacts associated with spreading pharmaceuticals throughout the environment, but the Policy as drafted ties the hands of the Regional Boards to require effluent limitations for many of these constituents.[71] As such, it is only by placing ultimate liability for spreading these pharmaceuticals (and other unregulated contaminants) into the environment that the State Board can encourage dischargers to study and control their waste discharges to protect public health and the environment.[72]

Overall, though the liability provisions must be expanded to protect surface waters as well, we support placing ultimate responsibility for any harm caused on those granted the privilege of spreading pollutants in the environment.

VI. Conclusion

We again provide our support for the general principle that recycled water use is a useful and important tool for helping California solve some of its water supply issues. However, a solution to California's water supply issues is no solution at all if it puts the quality of our state's waters in jeopardy. Accordingly, we support aspects of the Policy that address certain groundwater issues (such as salt management and protecting municipal and domestic uses in groundwater recharge projects), and we support the Policy's appropriate allocation of liability to the dischargers. However, we think that the lack of attention paid to several essential and closely related issues, as well as the described lack of clarity, will seriously impair the Policy's implementation and effectiveness. In particular, the Policy needs to provide the foundation regarding what recycled water is and the issues raised by its use, address pollutant limitations needed to protect groundwater and surface waters impacted by pollutants other than salts in recycled water, and either address recycled water releases to surface water (whether direct or through hydrologically connected groundwater) or be clear in the Resolution section of the Policy that such releases are subject to NPDES permitting that will be administered by the Regional Boards. The Policy also needs to address antidegradation consistent with State Board Resolution No. 68-16 (*i.e.*, rather than simply provide a conclusion unsupported by analysis).

Rather than ignoring potential problems through a surface glance at recycled water contaminants and regulatory requirements and hoping for the best, the State Board will

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[71] *See* Resolution ¶ 11 (placing an unnecessarily rigorous burden on the Regional Boards before they may regulate constituents for which CDPH has not established an MCL).

[72] A polluter pays principle is not substitute for a precautionary regulatory approach. However, where the Policy falls short on adopting a precautionary approach, it must establish a polluter pays principle to drive polluters to take measures to protect our resources.

encourage the highest use of recycled water only if full attention is paid to the quality of recycled water in light of its potential uses and impacts. For example, the East Bay Municipal Utility District sells recycled water to the Chevron Refinery for use in cooling towers. In response to articulated refinery needs, EBMUD has agreed to treat the recycled water past tertiary treatment, which is normally the maximum level of treatment used. In turn, Chevron will significantly increase the amount of recycled water that it uses in its operations. Similar attention to the needs of both recycled water customers and those impacted by use of this resource will ensure the safety and reliability of - and continued market for - recycled water.

As it has led the country on greenhouse gas control, California can and should lead the nation again in developing recycled water as an important, reliable water supply that will both protect and improve the health of California's invaluable natural waters. To achieve this goal and resolve the important issues raised in this letter, we request that the State Board direct staff to amend and re-circulate the Policy for an additional round of public review before a final draft Policy is set for adoption.

Thank you for your attention to these comments. We look forward to working with you to ensuring the use of recycled water a safe, reliable, water source for California.

Sincerely yours,

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attachment

ATTACHMENT 1

March 27, 2007

Tam Doduc, Chair and Members
State Water Resources Control Board
1001 I Street
Sacramento, California 95814

VIA EMAIL: commentletters@waterboards.ca.gov

Re: March 20, 2007 SWRCB Meeting, Agenda Item #8: Comments on Development of Statewide Water Recycling Policy

Dear Chair Doduc and State Board Members:

California Coastkeeper Alliance, Santa Monica Baykeeper, and Lawyers for Clean Water are pleased to submit these comments in response to the State Water Resources Control Board's ("State Board") request for public input on the development of a statewide Water Recycling Policy. We thank the State Board for taking on the important task of developing a Water Recycling Policy. Developing a statewide policy is a critical component in fostering effective and efficient use of California's scarce and precious water resources. We look forward to working with the State Board to craft a Water Recycling Policy that encourages recycled water use without sacrificing water quality in the process.

A statewide Water Recycling Policy on an issue as significant as the use of recycled water in a state with water demand outpacing supply must be comprehensive to be effective. Over the past few years the State Board and staff, the Recycled Water Task Force,[1] and the various regional boards have identified several issues that a statewide Water Recycling Policy should address. We agree that the issues identified by these groups, and reiterated in the agenda item description and discussion available on the State Board website ("Agenda Description"), are vital to the development of an effective Water Recycling Policy. However, an essential issue is absent – namely how the Recycled Water Policy will ensure protection of water quality and, in particular, address and comply with the Clean Water Act. Inclusion of the mandates of the Clean Water Act in overall statewide Water Recycling Policy is required by state and federal law and will provide the Regional Boards with the guidance they need to make appropriate and consistent decisions on recycled water projects that fulfill their legal mandates.

[1] The Recycled Water Task Force was established by Assembly Bill 331 (2001) to evaluate, among other things, the framework of State statutes and regulations applicable to recycled water projects.

Our comments first explain the need for the statewide Water Recycling Policy to acknowledge that recycled water projects will impact surface waters and then discuss how Clean Water Act requirements will be met. Next, we explain why modifying the Anti-degradation Policy, or weakening it through the Water Recycling Policy to encourage the use of recycled water, is inappropriate, since the Anti-degradation Policy already establishes an appropriate balance for weighing conflicting needs and uses for water with protecting water quality. We also provide our general comments on the issues identified in the Agenda Description: Irrigation Projects and Salts; Groundwater Recharge Reuse; Impoundments; Agency Coordination; and Aquifer Storage and Recovery Projects. The theme running through each of our comments, and which the statewide Water Recycling Policy must embody, is this: **water recycling helps California meet its water needs only when water quality is protected.**

Statewide Water Recycling Policy Must Address Clean Water Act Requirements

The Agenda Description seems to be limited to providing direction to the regional boards on how to interpret state statutes and regulations. We are confused as to why the Agenda Description only focuses on state law issues implicated by a Recycled Water Policy that, as explained below, will address discharges to surface water as well as to groundwater. Adopting an approach that limits the discussion to state law relegates federal law requirements regarding water quality, particularly those established by the Clean Water Act, to the background and thus ignores essential issues that must be addressed in a policy designed to guide regional board decision making. Unless the statewide Water Recycling Policy includes guidance regarding federal requirements that the regional boards must follow when permitting recycled water projects, the policy will not generate the consistent and appropriate application of legal requirements, which is the primary purpose of adopting the Water Recycling Policy in the first place. Further, a statewide Water Recycling Policy that does not address federal law will not help ensure that the regional boards are complying with their mandate under the Clean Water Act to regulate discharges to surface waters with National Pollution Discharge Elimination System ("NPDES") permits.[2]

When the State Board sought and was granted approval to administer the Clean Water Act's NPDES program in California, it made assurances to the U.S. Environmental Protection Agency ("EPA") that it would do so consistent with the requirements of the Clean Water Act. Central to the implementation of an effective NPDES program is requiring that discharges to waterways be regulated in compliance with NPDES permits.[3] In fact, the Clean Water Act provides that "each State desiring to administer its own permit program for discharges into navigable waters" must establish a program to "issue permits which apply, and insure compliance with, any applicable requirements of sections 1311, 1312, 1316, 1317, and 1343 of

[2] We recognize that the NPDES program is administered under Sections 13770-13777 of the Porter-Cologne Act. However, these provisions of state law require that the State Board and regional boards act in conformance with federal law. More to the point for these comments, the Agenda Description fails to raise for discussion those issues related to discharge of recycled water to surface water under either federal law or its Porter-Cologne counterpart.
[3] 33 U.S.C. § 1342(b).

the [Clean Water Act]."[4] Section 1311(a) mandates that discharges to waters of the United States are prohibited unless authorized by, and in compliance with, an NPDES permit.[5]

Even under state law, the requirements related to recycled water projects require consideration of the Clean Water Act's mandate. In pertinent part, the Porter-Cologne Act states the Regional Board "shall ... issue waste discharge requirements ... which apply and ensure compliance with all applicable provisions of the [Clean Water Act]."[6] As explained above, the Clean Water Act requires the permitting authority to issue NPDES permits when regulating discharges to waters of the United States. It follows that the Regional Boards' obligation under the Porter-Cologne Act is to regulate discharges to waters of the United States with NPDES permits.

With this legal framework in mind, the question becomes whether recycled water projects have the potential to result in discharges to waters under the jurisdiction of the Clean Water Act. If the answer to this question is yes, then the statewide Recycled Water Policy must ensure that these discharges are regulated in compliance with the Clean Water Act's mandates.

To answer the central question, there is no doubt that the owners and/or operators of certain recycled water projects will release discharges of recycled water to waters within the jurisdiction of the Clean Water Act. For example, the Recycled Water Task Force acknowledges this at Section 4.2 of *Water Recycling 2030* when discussing the use of recycled water for irrigation and as landscaping features:

> Incidental runoff or overspray of minor amounts of irrigated water at the edges of irrigated areas is difficult to prevent. It is also difficult to prevent runoff of rainwater from areas irrigated with recycled water or from aesthetic ponds on golf courses filled with recycled water, especially during major storm events.[7]

The State Board similarly acknowledged the unavoidable discharge of recycled water from recycled water projects in a memo released to the regional board executive officers in 2004 entitled "Incidental Runoff of Recycled Water" ("2004 Memo").[8] Specifically, the 2004 Memo states:

> While incidental runoff or over-spray of minor amounts of recycled water can be minimized, it cannot be completely prevented. Similarly, it is not possible to entirely prevent the runoff of rainwater from areas irrigated with recycled

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[4] *See id.*
[5] 33 U.S.C. § 1311(a).
[6] Cal. Water Code § 13377
[7] *Water Recycling 2030: Recommendations of California's Recycled Water Task Force,* California Department of Water Resources at 42 (June 2003).
[8] Memorandum from State Water Resources Control Board Executive Director Celeste Cantú to Regional Board Executive Officers, Subject: "Incidental Runoff of Recycled Water," (February 24, 2004).

> water or from decorative or storage ponds filled with recycled water, particularly during major storm events.[9]

We agree with both the Recycled Water Task Force and the State Board in their assessment that many types of recycled water projects will result in the discharge of recycled water to surface waters. We do not, however, agree that using clever terminology to describe these discharges as "incidental" does anyone, especially the public and the environment, any good. As acknowledged, many irrigation and landscaping projects that involve the use of recycled water will require regulation under federal law. We add to this list of recycled water projects that discharge to Clean Water Act regulated water bodies, those discharges to groundwater aquifers that are hydrologically connected to surface waters.[10]

Both state and federal law require that the discharge of pollutants from a point source to a water of the United States must be regulated by an NPDES permit.[11] Despite this mandate, and the State Board's acknowledgement that recycled water will discharge to surface waters, the Agenda Description follows the Task Force and 2004 Memo's desire of avoiding federal law. In fact, the 2004 Memo states that compliance with the Clean Water Act's NPDES permitting requirements are "undesirable" and should be avoided. Since many water recycling projects will result in discharges to water bodies within the jurisdictional reach of the Clean Water Act, the statewide Water Recycling Policy must address this issue if it is to provide useful guidance and mandates to the regional boards.

The statement in the 2004 Memo that undefined "incidental runoff" can somehow avoid NPDES permitting requirements runs contrary to the State Board's mandate to protect water quality in the state. In the 2004 Memo, it was suggested that including a safe harbor for discharges of "incidental runoff" in water recycling requirements would remove the discharge of recycled water from the purview of the NPDES program. Specifically the 2004 Memo directed regional boards to include the following provision:

> the incidental discharge of recycled water to waters of the State is not a violation of these requirements if the incidental discharge does not unreasonably affect the beneficial uses of the water, and does not result in exceeding an applicable water quality objective in the receiving water.[12]

The problem with this statement is that there is no Clean Water Act safe harbor for "incidental runoff," even if it does not "unreasonably affect" beneficial uses or cause an exceedence of water quality objectives. This directive to the regional boards from the State Board's Executive Director, as well as the absence of permitting considerations in the Agenda Description, is troublesome and a major concern. As set forth by state and federal law and recited herein, the

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[9] 2004 Memo at 2.
[10] *See e.g. N. Cal. River Watch v. City of Healdsburg*, 457 F.3d 1023 (9th Cir. 2006).
[11] 33 U.S.C. §§ 1311(a), 1342; Cal. Water Code §§ 13770-13777.
[12] 2004 Memo at 3.

discharge of pollutants from a point source to navigable waters must be regulated by an NPDES permit.[13]

It also has been stated by some stakeholders that the water used for recycling projects is already regulated by the waste water treatment plants' (WWTP) NPDES permit, is treated pursuant to the NPDES permit to meet drinking water standards, and is thus "clean" and need no additional permitting. As explained below, the WWTP's NPDES permit, however, typically regulates neither the use of the effluent for recycled water projects, nor the discharge of the recycled water at a location different than that for the WWTP. Additionally, a WWTP permit is unlikely to have have effluent limitations for all pollutants present in the effluent, and may not require treatment to remove pollutants for which the permit does set limits. Thus, a WWTP NPDES permit typically does not regulate the effluent for recycled water uses and does not include limitations to ensure that the effluent is protective of the environment when used for such projects.

First, prior to discharge, the effluent from WWTPs is supposed to meet certain numeric and narrative criteria regarding the level of pollutants allowable in the discharge. These effluent limitations are based, at least in part, on the beneficial uses of water body into which they are discharged, and accordingly depend upon the specific water body receiving the discharge. However, when that effluent is transported for use in a recycled water project, the discharge location will most likely be different than that designated in the WWTP permit. Since each water body has its own specific characteristics, and so often different beneficial uses, the WWTP cannot be said to be protective of or regulate the recycled water discharge to the new receiving water.

The following example clarifies this point. A WWTP may discharge effluent with levels of copper that are appropriate to that treatment plant's receiving water. That same effluent, when used in a recycled water project, may either be discharged to a different receiving water that is impaired for copper or, during the recycled water use, may pick up additional copper. In the first situation, since copper is a bioaccumalative pollutant, the discharge of copper would be prohibited. In the second situation the discharge from the recycled water project could have copper levels above protective water quality standards even if the receiving water is not impaired. In both instances, the effluent limitations on the original WWTP discharge would be insufficient to protect water quality as required by the Clean Water Act.

In addition, some WWTP permits that incorporate California Toxics Rule- ("CTR") based effluent limitations have compliance schedules, and thus even if the permit contains CTR limitations, the effluent is currently discharged containing pollutants at levels above these protective limits (making additional discharges even more problematic). There are numerous other examples of problems with relying on the existing WWTP permit to address all uses of recycled water. Relying on the NPDES permit for the WWTP (or other source of the recycled

[13] 33 U.S.C. §§ 1311(a) and 1342 (requiring permits for the discharge of pollutants without qualification as to the quantity of pollutants discharged).

water) to protect water quality for recycled water uses is insufficient. There is no end-run around the requirement that discharges of pollutants from point sources to waters of the United States require NPDES permits.

To help guide the development of the Water Recycling Policy, we recommend that the statewide policy should require that discharges to waters of the United States be permitted with NPDES permits, or with WDRs if the discharge is to groundwater not hydrologically connected to surface waters.[14] As the agency delegated to implement the NPDES program in California, the State Board must issue permits that will ensure compliance the Clean Water Act's prohibition on discharges of pollutants to waters of the United States. An NPDES permit is required even in cases where the permit terms prohibit discharges to surface waters. The Water Recycling Policy needs to be consistent with the Clean Water Act's goal of eliminating the discharge of pollutants to waters of the United States.[15]

A State Board Water Recycling Policy that encourages regional boards to regulate these discharges without NPDES permits must be avoided. In instances where a discharge to surface water is regulated, the responsibility lies with the regulating agency to regulate this discharge with an NPDES permit. Failing to do so jeopardizes the authority delegated to the state to implement the NPDES. It also leaves the discharger exposed to Clean Water Act liability for discharging pollutants to waters of the United States without an NPDES permit.

Overall, we are concerned that a statewide Water Recycling Policy that fails to require NPDES permits when appropriate will be a policy that encourages the use of recycled water at the expense of water quality. Not only is this inconsistent with the mandates of the Clean Water Act and the Porter-Cologne Act, it is shortsighted. Trading the short-term benefit of increased water supply for possible long-term degradation of water quality jeopardizes the availability of clean, useful water in the future. An appropriate statewide Recycled Water Policy will protect water quality and water supply in the long-term by requiring NPDES permits for those projects that need them.

Anti-degradation Policy

Perhaps the issue identified in the Agenda Description that should be of most concern for the public is the suggestion that the state Anti-degradation Policy could potentially itself be modified, or be weakened by the Water Recycling Policy, to encourage water recycling at the expense of water quality. The Anti-degradation Policy already establishes the appropriate balance between the legitimate need to develop and use water resources with the need to maintain water quality. Specifically, the Anti-degradation Policy insists on the maintenance of water quality now and into the future. When complied with, this mechanism has been largely

[14] The appropriate method to permit these projects may well be with general NPDES permits that apply to specific sub-classes of recycled water projects such as landscape irrigation, agricultural irrigation, or groundwater recharge to hydrologically connected aquifers.

[15] 33 U.S.C. § 1251(a)(1) (establishing the goal of eliminating the discharge of pollutants to waters of the United States by 1985).

effective in guiding decisions related to projects for almost 40 years. The Anti-degradation Policy has never been modified before, and the desire to encourage water recycling does not create the need to do so now.

The Agenda Description poses the question of whether the statewide Water Recycling Policy itself should define two terms in the Anti-degradation Policy – "maximum benefit to the people of the State" and "best practical treatment or control." There are two issues raised by this question that we find troubling and which cut against using this statewide Water Recycling Policy as a venue for defining terms in the Anti-degradation Policy.

First, defining terms in the statewide Anti-degradation Policy, which applies to all decisions made by the State Board and regional boards, in a document that only applies to certain types of decisions by these entities, could result in further confusion, rather than clarity, regarding the meaning of these terms. It could also lead to situation where these terms have different meanings in different contexts, when the purpose of the Anti-degradation Policy is to foster uniformity in decision making.

Second, to the extent the Water Recycling Policy does try to define these terms, it should only do so if the definition incorporates the appropriate references to already applicable legal standards. For example, any definition of "best practical treatment or control" with respect to recycled water must reference and be consistent with the technology-forcing standards already applicable to the treatment of wastewater.[16] Similarly, reference to also-applicable legal standards such as BAT and BCT will necessarily limit the definition of terms such as "maximum benefit to the people of the State," since the foundation for these standards already prescribes the extent of consideration of economic and social costs and benefits.[17]

Finally, entertaining the idea that modifying the Anti-degradation Policy or its application may be necessary to encourage water recycling projects runs contrary to the purpose of the Anti-degradation Policy itself. The Anti-degradation Policy already provides adequate opportunity to weigh potential benefits of certain projects against potential costs to water quality. This policy has withstood almost 40 years of decision making on a wide variety of projects, and modification of it – or its intent – at this point would create confusion rather than clarity, and potentially lead to other situations involving further whittling of the Policy's goal of protecting the waters of the state now and in the future. Most significantly, the need to modify the Anti-degradation Policy in the context of recycled water projects is illusory, since water recycling today is only sensible if it does not degrade water quality for the future. Our recommendation therefore is to not modify or otherwise weaken California's Anti-degradation Policy, including through the Water Recycling Policy.

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[16] We also note that the applicable technology-based standards are designed to change over time as better technologies are developed to control pollutants in discharges. Any attempt to define these terms must embrace this concept and provide requirements for improved standards as technology improves.

[17] For example, BAT does not allow for comparison of costs against effluent reduction benefits, but rather only allows for consideration of costs to the extent these costs are economically achievable. *See* 33 U.S.C. §§ 1311(b)(2)(A) and 1314(b)(2)(B).

Irrigation Projects and Salts

The Agenda Description asks what the State Water Board should do "to protect groundwater basins in the state from the accumulation of salt, including nitrate." This is an important question that transcends the issue of recycled water management. The Porter-Cologne Act at Water Code § 13260 requires reports of waste discharge, and waste discharge requirements as appropriate, for any discharge of waste "that could affect the quality of the waters of the state." Section 13050 defines "waters of the state" to include "any surface water or groundwater, including saline waters, within the boundaries of the state." (Emphasis added.)

Despite the clarity of this directive, little if anything has been done to implement Porter-Cologne with respect to any discharges that could affect groundwater from pollutants, including discharges of salts (including nitrates) associated with recycled water. Instead, the practice to date has generally been to allow the discharges (often unquestioned and unexamined), hope for the best, and pay extremely high sums of money to clean up the pollution later (if attempts are made to clean up the pollution at all). Our recommendation is that the State Board comply with Porter-Cologne and protect groundwater contamination from salts/nitrates associated with recycled water through waste discharge requirements, either general or individual, and associated groundwater monitoring.[18] This recommendation is consistent not only with the law but also with the above-stated theme of these comments, which is that water recycling helps California meet its water needs only when water quality is maintained.[19]

The Agenda Description also asks in particular whether the State Board should require recycled water users to prepare nutrient management plans to control the discharge of nitrates to groundwater. Nutrient management plans for projects that propose to irrigate with recycled water are critical to preventing further degradation of groundwater resources and should be required in a statewide Water Recycling Policy. A nutrient management plan requirement would be consistent with the strategy employed by the Santa Ana Regional Board, and proposed by the Central Valley Regional Board, to address the reuse of wastewater by dairy farmers to grow crops for their herds.[20] It also would equalize the playing field by requiring all irrigators who use recycled water to take responsibility for properly managing the impact their practices have on nitrate levels (and other pollutant loadings) in groundwater. A failure to require nutrient management planning will leave the public to foot the bill for continued nitrate contamination, as is the case in Orange County, where the county estimates it will end up paying $2.6 million

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[18] Note that we suggest use of WDRs here rather than NPDES permits only when the discharge is to groundwater that is not hydrologically connected to waters of the U.S.

[19] We also request that the State Board take on the overall task of rectifying the state's historic and ongoing failure to implement Porter-Cologne's clear requirements on discharges of all other pollutants that could affect the quality of the state's groundwater.

[20] *See General Waste Discharge Requirements for Concentrated Animal Feedig Operations (Diaries and related Faiclities) Within the Santa Ana Region, Order No. 99-11, NPDES No. CAG018001*, California Regional Water Quality Control Board, Santa Ana Region (August 20, 1999); *Tentative Waste Discharge Requirements General Order No. ___for Existing Milk Cow Dairies*, California Regional Water Quality Control Board, Central Valley Region (November 22, 2006).

dollars per year to remove nitrates and salts from groundwater contaminated by nitrates. *See* Orange County Water District, *Issue Paper on Impacts of the Chino Dairy Industry on Local Water Supplies*. With proper nutrient management, including groundwater monitoring, costs like this can be avoided.

Groundwater Recharge Reuse

The Agenda Description poses the question "what requirements should be placed on groundwater recharge reuse projects to protect the public from toxic constituents." From our perspective, there are a handful of general measures that the statewide Water Recycling Policy should require to achieve this goal. First, recycled water discharged for the purpose of recharging groundwater for ultimate reuse should have to meet both drinking water standards and any other water quality criteria applicable to the ultimate use of the water prior to being discharged, for all constituents. A precautionary approach that does not introduce chemicals and pollutants into the groundwater in the first place is the surest way to avoid exposure of the public and the ecosystem to these constituents and prevent extremely costly cleanups later.

Second, monitoring recycled water both prior to reuse and prior to discharge, particularly for toxic constituents, should be required. By keeping track of the types and quantities of constituents that have been discharged, decision-makers will be prepared to assess whether a particular reuse project is protective of human health and the environment over time. This is particularly important in the face of constantly changing information about the risks associated with exposure to toxic constituents. If we actually know what is being released into the environment, as opposed to guessing through a mass balance or other rough estimation technique done without monitoring, we will be better prepared to effectively address future discovered problems. Monitoring will provide an understanding of how the toxic constituents may be interacting with one another and with other discharges in the groundwater table.

Third, the statewide Water Recycling Policy should require that the regional board staff work closely with the Department of Health Services ("DHS") to develop appropriate effluent limits for various toxic constituents. Many toxic constituents have Maximum Contamination Limits ("MCLs") already established and set forth in Title 22 of the California Code of Regulations. However, those that do not may still represent a significant threat to public health, and the presence of these toxic pollutants in recycled water must be appropriately addressed. For these pollutants, the statewide Water Recycling Policy should require regional board staff to work closely with DHS to develop appropriate effluent limitations that would apply to both the discharge of the recycled water into the project and to any subsequent use or release of the water from the project. Finally, the MCL's in Title 22 are not based on and are not necessarily protective of the environment; the Water Recycling Policy should ensure that the state and regional boards implement their ultimate responsibility to protect all beneficial uses through all appropriate standards and permit limits.

Impoundments

The Agenda Description acknowledges that impoundment of recycled water can degrade underlying groundwater and asks what requirements should be placed on these impoundments to protect groundwater quality. We agree that this is an important issue that the statewide Water Recycling Policy must address. We expect that the appropriate requirements will vary depending on the quality of the water being stored as well as the soil permeability of where the water is being stored. With that general principle in mind, we have the following comments on how the statewide Water Recycling Policy should direct regional boards to act.

Requiring monitoring of the discharges to the impoundments as well as monitoring to ensure the effectiveness of impoundment is necessary. Because the concern is that impounded water will cause pollutants to leach into groundwater, the recycled water impoundments must be monitored to know the potential to degrade underlying groundwater. Monitoring and limitations must also ensure that possible public use of the water while it is impounded (*e.g.* contact by members of the public) will not create a public health risk. Additionally, since many of these impoundments will become habitat for aquatic and riparian organisms and species, limitations and monitoring should be required that will protect the use of these impoundments by these species.

We also recommend that the statewide Water Recycling Policy recognize that impoundments containing recycled water are storage/disposal facilities for the various pollutants, including heavy metals, pharmaceuticals, nitrogen-based compounds, and salts, in the recycled water. The lining requirements for storage/disposal of solid waste impoundments, set forth in Title 27 of the CCR, should be considered by the regional board with respect to surface impoundments of recycled water. In areas where soils are particularly porous, more stringent lining of impoundments should be required. Further, when the impounded recycled water has high levels of salts and the underlying groundwater is already degraded by the presence of salts, leachate collection systems and related monitoring should be required to prevent any further degradation of groundwater.

Monitoring of groundwater beneath these surface impoundments is the only way to ensure that the underlying groundwater is not being degraded. We recognize there are costs associated with groundwater monitoring, but it is inappropriate to shift these costs onto future generations of groundwater users by not monitoring and thus not preventing further and sometimes unexpected or unforeseen (and generally costly) degradation before it becomes a significant problem. This is yet another example of the requirements that the statewide Water Recycling Policy must include to ensure that the use of recycled water does not shift the costs of, and pollution associated with, its use onto future generations.

We also have an additional comment on impoundments that the Agenda Description fails to raise. Namely, the statewide Water Recycling Policy should address issues related to overflows of impoundments that are used for storage of water to be recycled. In many regions, treated wastewater is stored during the wet season for later reuse in the dry season for irrigation

and other projects when other water supplies are low. However, these impoundments often overflow and/or leak and thus discharge the pollutants in the water they contained. The statewide Water Recycling Policy should therefore require permit effluent limitations applicable to any overflow and/or leaks from these facilities. The statewide Water Recycling Policy should also require appropriate design and engineering of these storage facilities to ensure that overflow and/or leakage is minimized if not totally prevented.

Agency Coordination

The issue presented by the Agenda Description is whether the statewide Water Recycling Policy should leave some issues related to groundwater recharge with recycled water to DHS, since DHS is preparing regulations for groundwater recharge reuse projects. We agree that coordination with DHS should be encouraged in the statewide Water Recycling Policy. However, the mandates of DHS and the State Board are quite different, and as such the State Board should not relinquish or delegate its responsibility for addressing all issues related to groundwater recharge reuse projects. Similarly, the State Board cannot rely on DHS requirements alone as adequate to protect the environment and comply with state and federal laws.

DHS's mandate is to create water quality requirements protective of human health while the State Board's (and regional boards') mandate is to protect water quality for all beneficial uses. For example, copper, which is relatively benign to humans, is extremely toxic to many aquatic organisms. As such, regulations from DHS related to copper in recharge/reuse projects may place little or no restriction on the levels of copper. If the State Board were to fail to address this issue on the assumption that DHS had it taken care of, then the State Board would fail to comply with its mandate. Specifically, if it were foreseeable that there would be subsequent contact with the recharge/reuse water by aquatic organisms, then the State Board's failure to insure compliance with water quality standards for copper would allow for an unacceptable degradation of water quality.

It is the State Board's obligation to set a statewide Water Recycling Policy that requires it and the regional boards to fulfill all aspects of their mandate to protect water quality. We've seen examples of the State Board and regional boards failing to achieve this mandate in other contexts,[21] and we do not want to see that failure repeated here. The hypothetical example we provided above explains why deferring to another agencies' determinations regarding water quality is inappropriate.

Aquifer Storage and Recovery

Recycled water used for irrigation or direct recharge impacts aquifers throughout California. Just as increased use of recycled water is important to help some of the offset the

[21] For example, the regional boards routinely fail to evaluate the effect of timber operations on water quality, despite the fact that these operations clearly implicate the regional boards' responsibilities. This failure leads to unnecessary and sometimes severe degradation of water quality associated with timber harvesting.

enormous costs of moving water from one area of the State to another, it also can be important to the health of aquifers, which are critical to reducing California's dependence on the Colorado River and State Water Project. In other words, a clean and dependable water supply relies not only on the increased use of recycled water but also on clean and usable aquifers. Accordingly, a state policy regarding recycled water should fully protect existing water quality objectives for groundwater aquifers.

As an example, in January of 2007, the Los Angeles Regional Water Quality Control Board adopted two Water Recycling Requirements (WRR) permits for the Los Angeles Department of Water and Power's (DWP) Los Angeles Glendale and Donald C. Tillman Plants. These Plants discharge to the San Fernando groundwater basin, which is the part of the San Fernando Aquifer that supplies 15% of Los Angeles' drinking water. Chloride levels in the San Fernando Basin where the Tillman Plant discharges are currently 31 mg/l, and the water quality objective is 100 mg/l. The Glendale Plant discharges to the San Fernando Basin Narrows Area, currently at chloride levels of 31 mg/l with a groundwater chloride objective of 150 mg/l. In response to a request by the City of Los Angeles, and in a highly irregular move by the Los Angeles Regional Board, the LADWP was granted a permit renewal with effluent limits <u>in excess of</u> the water quality objectives (190 mg/l). In exchange for this permit irregularity, the regional board's proposed permit in January had requirements of a mass balance analysis <u>and</u> monitoring of groundwater, in a nod to ensuring that the chloride levels do not increase further in the groundwater. Because of this two-pronged approach, the staff did not pursue an anti-degradation analysis, although it was clearly warranted in this instance, particularly since there currently are no other WRR permits that have elevated effluent limits in Los Angeles. (Los Angeles County Sanitation District, another WRR permit holder in the Basin, meets its effluent limits end-of-pipe and does not discharge effluent that does not meet water quality objectives.) Unfortunately, the LADWP vigorously opposed the regional board's January proposed permit requirements for monitoring, advocating instead for solely a mass balance risk analysis, despite the almost pristine state of this critical aquifer. The final adopted permit eliminated the much-needed monitoring.

It is a generally accepted fact that contaminated ground water is very difficult and costly to clean up. The particularly discouraging example of the San Gabriel Aquifer in Los Angeles is a bellwether for current decision-making regarding effluent limits in permits that impact groundwater. In 1991, the U.S. Environmental Protection Agency estimated that if a cleanup of the San Gabriel Aquifer was technologically possible, it would take thirty to fifty years at a cost of $200,000,000 to $400,000,000. Ultimately, an agreement to begin clean-up was established in 2002 and efforts are ongoing. Another closely watched example of groundwater management is the Chino Basin, where it has been general practice to replenish the groundwater with *de-salted* water in order to protect the aquifer, and years of extensive monitoring have guided various uses and recharge projects throughout the Basin.

The juxtaposition of uses and water quality objectives or effluent guidelines throughout the state illustrates the importance of aquifer protection and monitoring. A one–size-fits-all effluent limitation is not advisable when various groundwater aquifers may have differing

abilities to assimilate pollutants depending on the region and method of recycled water application. For example, in the above-cited example of the San Fernando Basin, effluent limits based on the existing water quality objective of 100 mg/l for chloride may be reasonable; however, with a current level of 31 mg/l in the aquifer, it certainly is not advisable to jump to 190 mg/l. Effluent limitations should be established such that groundwater quality is protected, and attenuation/assimilation of pollutants must be closely monitored to avoid unintended consequences that may result in costly and perhaps irreversible contamination. It is simply not clear that a paper exercise risk analysis in exchange for an extensive monitoring program will sufficiently protect the drinking water source for millions of California residents.

Conclusion

We would again like to thank the State Board for bringing the long overdue and important development of a statewide Recycled Water Policy to the public for comment. The development of such a policy is essential, not only to provide guidance to regional boards and create more consistent and predictable permitting of recycled water projects, but also to ensure that encouragement of recycled water projects is properly balanced with protection of existing and future water quality. There is no doubt that reuse and recycling of California's limited water resources will be essential to meet the ever-growing demand for water in the state. Nonetheless, the laudable goal of encouraging reuse and recycling must be tempered by a vigorous commitment to protect and enhance water quality in the process.

Sincerely yours,

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