

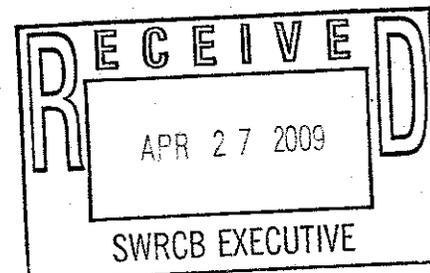
KEN ORTEGA
Public Works Director



Public Works Department - Public Works Administration
305 West Third Street • Oxnard, CA 93030 • (805) 385-8281 • Fax (805) 385-7907

April 27, 2009

Members of the State Water Resources Control Board
c/o Ms. Jeanine Townsend
Clerk to the State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814



RE: Comment Letter-Landscape Irrigation General Permit

Members of the State Water Resources Control Board:

This comment letter is being written in reference to the Draft General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water ("Draft General Permit"). The City of Oxnard ("City") thanks the State Water Resources Control Board ("State Board") for its leadership in developing this Draft General Permit as required by Water Code §13552.5 (AB 1481).

As described herein, the City's future is dependent upon its ability to fully utilize recycled water as a major part of resource as a water supply plan.

The City believes that the State of California's current and future water supply concerns mandate continued support of recycled water usage. Regulations and policies that impede this goal should be changed. The development of recycled water facilities must be encouraged so that recycled water may be made available, as the Legislation intended, to help meet the growing water requirements of the state.

1. City of Oxnard

The City is home to over 195,000 people. To serve this growing population, the City's Water Resources Division relies on imported surface water from the Calleguas Municipal Water District (CMWD), groundwater from the United Water Conservation District (UWCD), and groundwater from the City's own wells. Local groundwater comprises the greatest portion of the City's water supply. The City blends water from these three sources to achieve an appropriate balance between water quality, quantity, and cost.

As described in details below to meet its water supply needs through the year 2020, the City's Groundwater Recovery Enhancement and Treatment (GREAT) Program includes wastewater recycling, groundwater injection, storage and recovery, and groundwater desalination. Starting with treated wastewater that would otherwise be discharged to the Pacific Ocean, the GREAT Program produces a high-quality recycled water product which exceeds the current Title 22 standards. The City intends to use its recycled water for all potential recycle water uses, including agricultural irrigation, industrial processes, landscape irrigation, and groundwater injection for aquifer recharge and as a seawater intrusion barrier.

At the present time, the City estimates it is using approximately 15,000,000 gpd of recycled water for landscape irrigation. The City is indeed hopeful that it will be in a position to easily double its current usage for recycled water for landscape irrigation based on the final version of the Draft General Permit.

2. The City's Planned Use of Recycled Water is a Cornerstone of its Water Planning

Reflecting the above concerns, like many California municipalities, the City faces a number of challenges related to water resources. As a result, the City developed the GREAT Program, an innovative project with significant regional benefits. The GREAT Program combines wastewater recycling and reuse; groundwater injection, storage and recovery; and groundwater desalination to provide regional water supply solutions. Designed to meet the City's current and future water supply needs, the Program also initiates the delivery of over 20,000 acre feet of recycled water for agricultural irrigation and groundwater recharge, and may provide a brackish water byproduct that can be used to help restore vital local coastal wetlands.

The Los Angeles Regional Water Quality Control Board has approved Waste Discharge Requirements (WDR) for the City's use of recycled water for all uses besides the groundwater injection and recharge use. The City is actively working with partners United Water Conservation District, Calleguas Municipal Water District, Metropolitan Water District of Southern California, and the Fox Canyon Groundwater Management Agency to conduct detailed groundwater studies that would lead to future WDRs for this use of recycled water. These studies have been ongoing since before the State Board's issuance of its Recycle Water Policy and the ongoing studies will no doubt now include many of the Policy's requirements.

The development of the GREAT Program was made possible through a nearly decade-long cooperative effort with partner agencies throughout the region, including the United Water Conservation District, Calleguas Municipal Water District, Fox Canyon Groundwater Management Agency, and the Port Hueneme Water Agency. The ongoing communication has been vital to the program's overall success. Congresswoman, Lois Capps, of California's 23rd District introduced legislation to authorize a federal partnership for the GREAT Program. The City of Oxnard Water Recycling and Desalination Act of 2007, approved by Congress and signed by the President in early 2009, authorizes the Secretary of the Interior to participate in the design, planning, and construction of the GREAT Program.

(a) Advanced Level of Treatment

The GREAT Program includes the construction of the Advanced Water Purification Facility (AWPF), adjacent to the Oxnard Wastewater Treatment Plant. Design is nearing completion, and the City expects construction to start in late 2009. Treatment at the AWPF will include microfiltration (MF), reverse osmosis (RO) and advanced oxidation (AOX).¹ The City asserts that it will be producing a high-quality recycled water product suitable for use in industrial processes requiring highly-treated water, for irrigation of even high-value food crops, such as strawberries and for future groundwater injection, for aquifer recharge and to repel

¹ This treatment train produces water that exceeds the requirements of Title 22, including but not limited to § 60301.170, § 60301.220, § 60301.225, and § 60301.230.

seawater intrusion, as well as for traditional non-potable municipal uses, such as landscape irrigation.

The City determined to proceed with such treatment and expense not because it believes that many of the uses of recycled water cannot be safely performed with tertiary treated water. Instead, the City wanted to completely maximize its use of recycled water. Therefore, in lieu of creating multiple types of recycled water at multiple locations which would require multiple transport systems for delivery, the City opted for a more efficient approach. - one type of recycled water for all uses.

The advanced treated, recycled water from the AWPf is intended to be made available to agricultural users in the Oxnard Plain that are currently using local groundwater and surface water supplies. This recycled water will be of higher quality than much of the existing supply and will help relieve over-drafting of the local groundwater basin, which has led to seawater intrusion. In the winter, when irrigation demands drop off, the City plans to inject a recycled water/potable water blend into the groundwater basin to reduce the potential for that seawater intrusion into nearby agricultural areas.

In late 2004, the City Council certified the environmental impact report for the GREAT Program, and the Water Resources Division subsequently initiated design and construction of a wide variety of projects. These include the AWPf, the recycled water distribution system, recycled water Aquifer Storage & Recovery Pilot Well, Blending Station No. 1 Desalter, Blending Station No. 5, and the Blending Station No. 3 Desalter. Since then, the City has completed construction of Blending Station No. 5, which improves fire flows to South Oxnard, and the Blending Station No. 1 Desalter, which will allow the City to maintain its mineral water quality target, while using a greater percentage of highly mineralized groundwater. The City expects the AWPf to be operational in late 2010.

(b) Other benefits

By using recycled water in lieu of groundwater, the unused groundwater allocation will be transferred from agricultural users to the City. The City can then extract the groundwater from wells located in areas not in overdraft and easier to recharge primarily the El Rio Forebay Basin and the northern portion of Oxnard Plain Basin.

3. AB 1481 – History/Purpose

On October 15, 2007, AB 1481 was enrolled and added as Section 13552.5 to the Water Code. This bill requires the State Board, on or before July 31, 2009, to adopt a General Permit for landscape irrigation uses of recycled water for which the California Department of Public Health (“CDPH”) has established uniform statewide recycling criteria.

AB 1481 is an alternative to the current process of the Regional Board whereby the Regional Boards are required to approve, disapprove or create conditions for approval of an individual recycled water use. During discussion of the bill, it was recognized that the State Board is developing a statewide policy on recycled water, but this bill takes the further step of providing authority to the State Board to administer its own permit system outside of the Regional Board structure. It does not preclude “Regional regulation” but provides for an

alternative to those seeking to maximize the use of recycled water in regions with boards that do not foster the usage. It also allows those in regions with boards that support recycled water projects to continue obtaining permits from their Regional Board, should they wish to proceed through that process or to maintain a permit they already have.

The comments of the bills author, Assemblyman De La Torre, at the June 18, 2008 State Board Workshop are pertinent. He stated that the intent of the legislation was to:

- Simplify and expedite the process of obtaining permits to use recycled water.
- Increase the use of recycled water.
- Deter the “patch work” process that is presently going on through the various Regional Boards.

4. General Comments on the Draft General Permit

(a) Safety

There is a basic assumption in the Draft General Permit that the application of recycled water carries with it some “waste” that is a concern. This is certainly not the case with the recycled water to be supplied by the City, nor does the City believe it should be a matter of concern with tertiary treated water. That water is deemed safe by CDPH for the intended and permitted uses. The assumption in the Draft General Permit is difficult to understand in light of very clear statement in the Recycled Water Policy, which states:

When used in compliance with this Policy, Title 22 and all applicable state and federal water quality laws, the State Water Board finds that recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to potable water for such approved uses.

Suggested action: Review the entirety of the Draft General Permit with the above cited finding very clearly in mind and to reassess each part of the Draft General Permit to remove any unintended (or intended) bias against this resource.

At the June 18, 2008 State Board Workshop, Mr. Brian Bernados (CDPH) explained the extensive role that CDPH has in terms of assuring the quality of recycled water. His PowerPoint presentation was demonstrative of showing the depth of CDPH’s role in this process. In his comments at the Workshop, Mr. Bernados said something specifically worthy of quote: “The Department sets the standards for recycled water to protect public health.”

(b) Misstatements of Title 22

In many places, some commented on below, the Draft General Permit inaccurately or incompletely restates or paraphrases Title 22 requirements.

Suggested action: To the extent that there is a need to reference to a Title 22

section, that reference should specifically be made.

- (c) **Recognize that the Draft General Permit is meant to increase the use of recycled water as required under Water Code §13552.5 (AB 1481).**

The default position in the Draft General Permit is that its requirements could be significantly onerous so as to affect existing projects or those contemplated under both the Water Code and the Water Recycling Policy. The goal should not be to create impediments to use recycled water, rather it is the opposite.

Suggested action: Review the entirety of the Draft General Permit with an eye toward reducing any action that would create a true burden on the producer, distributor and/or user without a real and tangible benefit.

5. **Specific Comments on the Draft General Permit**

(a) **Finding # 3**

Finding # 3 sets forth a list of locations (by type) where recycled water could be used for landscape irrigation. The City believes that AB 1341 called for an expansive use of recycled water for landscape irrigation and note that the State Board has added several important areas to the list, such as commercial and industrial common areas. To meet the legislative requirements, the City believes further descriptions are needed.

Suggested change:

Any other area, not including hardscape, on which is planted or on which grows trees, shrubs, or grasses which are not used as or for the production of edible food, unless otherwise allowed, whether or not the land is in its natural or graded and contoured form; and

Any other real property that due to its nature or use should be considered as an area where landscape irrigation with recycled water can be employed.

The first is suggested as a general "catch all" for areas that may not fit into the carefully crafted descriptions. However, it also permits the City to use its recycled water in other ways if permitted to do so. Given the methodologies that will be applied by the City, it believes that there should not be a restriction on the use of its recycled water as might be interpreted from the wording of the Draft General Permit.

The second suggestion is to provide for a producer, distributor, or user to have flexibility to suggest new use areas as circumstances may dictate. Given that the City's water exceeds tertiary standards, if this option is not provided, it will have a tendency to inhibit innovation of additional uses within the City as may arise in the future just because the new use does not fit into an already defined and limiting list of uses.

(b) Finding #4(c). 5(d)

As with the Recycle Water Policy itself, and the requirements of Reclamation Permits, the producer/distributor is required to assure the user is complying with the Draft General Permit and all other applicable laws/rules/regulations. Finding 4(c) states:

The Producer and Distributor shall ensure that Users comply with the applicable uniform statewide reclamation criteria established pursuant to Title 22 Requirements.

Finding 5(d) states:

d. Unauthorized Discharges – Waste discharge requirements do not authorize discharges that threaten to create a nuisance, such as odors, vectors, etc. Unauthorized discharges include over-spray, irrigation and runoff from areas irrigated with recycled water or from decorative or storage ponds (hereafter “impoundments”) that contain recycled water.

There are several issues to discuss in light of this requirement, in order to create uniformity that would both protect the environment throughout the state and could protect producers/distributors from some liability when the user violates the criteria. Most critical would be the provision of uniform documentation relating to the myriad of issues outlined in the Draft General Permit so that the environment would not suffer as a result of one producer or distributor not communicating something of importance to those who may not be accustomed to dealing with recycled water. Those documents could be communicated during the process of arranging for service. It would also be very helpful to the City in communicating with its various departments who may themselves be “end users.”

Suggested action: The City believes the State Board should oversee a project to create these documents or at the minimum to hold a workshop on this issue of creating uniform documentation for producers and distributors. Alternatively, a stakeholder group could be formed to develop this set of documents and make recommendations to the State Board for its adoption.²

(c) Finding 7

This Finding states:

7. This General Permit is applicable to Use Areas where recycled water is used or conveyed for landscape irrigation and is not intended to regulate the treatment of municipal wastewater. Compliance with this General Permit does not relieve permit holders from the obligation to comply with applicable waste

² The subject of BMPs which are excluded from this comment by the City and are discussed elsewhere in this letter.

discharge requirements for wastewater treatment plants that produce recycled water.

A clearer statement is needed as to how the General Permit relates to existing individual and master permits. For example, the General Permit should state whether it authorizes Producers to rescind existing permits that apply to the landscape irrigation project.

Suggested Action: The State Board should clarify this Finding.

(d) Finding 8

The finding states in part:

To obtain coverage under this General Permit, the Distributor shall submit a complete Notice of Intent (NOI) form (Attachment B), Operations & Maintenance Plan, and appropriate application fee.

The General Permit should also explain the conditions under which a Producer may sign the NOI. Perhaps this was just an oversight.

Further, during the Landscape Irrigation Workshop and the various hearings on the Recycled Water Policy that participants asked the State Board to consider whether a Operations & Maintenance Plan ("O&M Plan") can be made to cover all of a provider/distributors usages. This would be a great cost saving to the City especially as it envisions a fairly wide range of uses for its recycled water. For example, if the City is going to employ the use of recycled water to irrigate its parks, it would be efficient to have one O&M Plan for all such usages. Likewise, there would be a benefit to having only one O&M Plan dealing with the irrigation of multiple parkway strips along roadways or roadway median strips. In other words, the State Board should permit the broadest possible scope of O&M Plans. The Draft General Permit is not clear if this is permissible or not.

Suggested action: The issue of including a Producer in this process should be made.

Suggested change: The City would suggest that language be added as follows:

An Operations and Maintenance Plan may address multiple similar Recycle Water Usage Areas so as to avoid the need to create such an Operations and Maintenance Plan for each separate Recycled Usage Area.

(e) Finding 10

This finding makes reference to comments made by the California Department of Public Health which were "conveyed" to the State Board. No doubt the finding is a summary of that conveyance.

Suggested action: As a basis for the conclusions and requirements in the Draft General Permit, the City believes that the documentation involved should be referenced specifically.

(f) Finding 26, Order – Prohibition A (8), Definition (g)

This Finding states:

In its June 26, 2008 comments, CDPH recommended that this General Permit not be applicable to landscape irrigation projects for use areas in which there is evidence that CECs are a concern (e.g., close to drinking water sources).

The Prohibition A(8) states:

The use of recycled water, pursuant to this General Permit, where there is evidence that Emerging Constituents/Chemicals of Emerging Concern (CECs) are a concern, as determined by CDPH, is prohibited.

Indeed, the CDPH did make the suggestion referenced in the Finding. However, nowhere has CDPH, either in the cited letter, or in its oral comments at the Workshop, clarified precisely what this means. Likewise, the State Board has not clarified precisely what its concerns are either.

Part of the problem is, there is no established and/or uniform list of what is a CEC, nor is there any demonstrative or applicable definition of what is meant by “close to a drinking water source.” This leaves the City to speculate what is being referenced. Clearly the City needs to be able to plan for the future and this vagary runs contrary to such an ability.

The Definition states:

g. Emerging Constituents/Chemicals of Emerging Concern (CECs): CECs are any synthetic or naturally occurring chemical or any microorganism that is not commonly monitored in the environment but has the potential to enter the environment and cause known or suspected adverse ecological and/or human health effects. In some cases, release of emerging chemical or microbial contaminants to the environment has likely occurred for a long time, but may not have been recognized until new detection methods were developed. In other cases, synthesis of new chemicals or changes in use and disposal of existing chemicals can create new sources of CECs. Chemicals that have been known to be discharged at given concentrations for which protective objectives have not been established; may also be identified as CECs.

This definition raises significant issues. As phrased the City believes that almost without question, virtually every known substance could and probably does qualify as a CEC. This is especially when such phrases are used such as, “not commonly monitored,” “cause known or suspected adverse ecological and/or human health effects.” Such a vague and uncertain standard

opens a plethora of problems for planning, operations and protection from liability.³

No City, let alone any other public or private entity, can or should put itself in a position (or be put into that position), where it is deciding what is and what is not a CEC. With that decision comes the responsibility for monitoring, perhaps warning, and perhaps dealing with the "problem" notwithstanding the lack of direction from the agency empowered to determine what is and is not suitable to be in recycled water. In California that agency is the CDPH.

Likewise, in terms of the State Board's purview, it is not only inviting an avalanche of criticism for permitting recycled water to "poison" the environment with CECs, but it potentially exposes the City (and others) to litigation based on the State Board's elevation of the issue. And importantly, whether or not a given CEC is truly harmful or not in any detected level, the CEC may be considered by a Regional Board, or by the State Board, as degrading the quality of water. Once that is established, it may very well be someone in the City's position who will bear the burden of dealing with the issue.

As the City's recycled water treatment will employ both reverse osmosis treatment and advanced oxidation treatment, beyond typical Title 22 treatment, if the City has a CEC in its finished recycled water, it is unlikely that it could be removed effectively without significant alteration to the systems or the processes used.

Suggested action: The City recommends that all references to CECs be deleted from the Draft General Permit.

At the very least, the City acknowledges that the Water Recycling Policy has set forth a program of research of CECs through an Advisory Panel. As that Panel makes some determinations their findings will be brought before the State Board for consideration. The City assumes that from those findings a decision made in public, with public input, can be made to require monitoring of a particular substance or add the substance to an action list. It would also allow the CDPH to provide its input and opinion as well. Therefore the City suggests alternatively:

Suggested action: The Draft General Permit should be revised to include a plan that permits the Advisory Panel to perform its work and bring before the State Board its findings. The State Board may thereafter hold hearings and reach conclusions with public input regarding specific CEC's that will require monitoring or other action when recycled water is used in compliance with the Draft General Permit.

³ In comments by the City to the first two drafts of the Recycle Water Policy, the City raised the issue that the assertions of liability in those drafts were without foundation and contrary to the law. The State Board disagreed with those comments but did drop any reference to liability in the adopted Recycled Water Policy. However, assuming the State Board is correct that there is liability to down stream users or to agencies of government for CEC contamination, this raises the level of concern about supplying any recycled water to anyone for any purpose whatsoever.

(g) Prohibition A(11) states:

The Prohibition states:

The application of recycled water within fifty (50) feet, and storage of recycled water within one hundred (100) feet of a domestic well, unless approved by CDPH, and the application of recycled water within fifty (50) feet of surface water is prohibited.

Title 22 §§ 60310 prohibits the use of recycled water within 50 feet of a domestic for irrigation well unless certain criteria are met. However, the Draft General Permit is inconsistent with Title 22 as it outright bans the "application" (which would encompass irrigation) with recycled water. This is improper.

Further, Title 22 §§ 60310's other restrictions permit the use but allows same with various caveats. The City presumes that the decision about such usage is not to be made by any Regional Board and that indeed the State Board is ceding all such decision making authority to the CDPH.

In addition to the lack of clarity regarding the distance to a drinking water source referenced earlier, Prohibition A(11) is the inconsistency with Title 22 which should be rectified as follows:

Suggested change: Nothing in General Permit shall be interpreted to mean that recycled water can not be used within fifty (50) feet, and storage of recycled water within one hundred (100) feet of domestic well unless all the requirements of Title 22 § 60310s are met. Further, the State Board, and any Regional Board shall defer any determination as to whether or not the said requirements are met to the CDPH.

(h) Finding 46(e), Order – C. Provisions 4, Best Management Practices II(A),(B)⁴

The Finding states:

[Producers and Distributors shall] [e]mploy trained personnel (e.g., recycled water supervisor).

What is not clear in this Finding is (1) whether or not there is an expectation that the recycled water supervisor who monitors Recycled Use Areas and must perform the various tasks outlined is expected to be an employee of the Producer and/or Distributor who must perform the various tasks outlined or (2) whether when read with the other portions of the Draft (as in Provision 4) the Producer and/or Distributor has to also make certain that such a person exists for the Recycled Water Use Areas as well as having its own responsible employee.

⁴ Also, Draft Negative Declaration 5(g) reference is made to the requirement that "[v]erification that the recycled water use supervisor has attended training regarding the safe and efficient operation and maintenance of recycled water use facilities" must be made.

The Provision states:

4. The Distributor shall require each User to designate a recycled water use supervisor for each Use Area, respectively. The recycled water use supervisor shall be responsible for the recycled water system within the Use Area. Specific responsibilities of the recycled water use supervisor, at a minimum, shall include...

The Best Management Practice states:

A. The recycled water use supervisor attends regular training regarding the safe and efficient operation and maintenance of recycled water use facilities.

B. The recycled water use supervisor ensures that all recycled water facilities are maintained, operated and repaired at all times in a manner that does not cause illness or injury to any person and in a manner that does not cause damage or injury to the real or personal property of any person or entity.

In reading Provision 4 with the BMPs above, the questions raised are:

- What is meant by regular training?
- Who is responsible to give the "regular training"?
- What constitutes appropriate training ?

It is clear that under the Draft General Permit, the onus for "misuse" is placed upon the producer and distributor of recycled water. Given that, a logical area of concern is who at the end users facility should be given the role of "recycled water use supervisor" and what are they supposed to know to assure that the misuse opportunities are minimized. From the City's perspective, it creates an issue of liability as to whether the standards it may set are deemed sufficient when some untoward event occurs. It is one thing for someone to make a mistake, but it is another to have a person performing the job be deemed lacking ability or training after the fact.

Suggested action: Thus, nowhere in the Draft General Permit is there any suggestion of what training that person should have, what the level of education should be if same is applicable, whether the person should also qualify under some already existing licensee or certification program etc. Obviously, *without* some minimum standards the degree of the ability to provide the services required by such a supervisor will differ from location to location, use area to use area.

Specifically as to BMP (b) the term "facilities" is used. The City assumes that this phrase, used only in this BMP is related to, or has the same meaning as the term "facility" does under Title 22 60301.310, that is: "Facility" means any type of building or structure, or a defined area of specific use that receives water for domestic use from a public water system as

defined in section 116275 of the Health and Safety Code.” If so, is this BMP meant to be interpreted that once the use of potable water is no longer necessary, the facility ceases to qualify as needing this protection. It is doubtful the State Board meant this.

Suggested action: This BMP needs clarification.

(i) Findings 46(a), Order – B. Specifications 4, Definitions (a)

The Finding states:

To mitigate or avoid environmental effects on water quality, this Permit (a) Requires application of recycled water at reasonable agronomic rates considering soil, climate, and nutrient demand....

The Specification states:

4. Application of waste constituents to the Use Area shall be at reasonable agronomic rates and shall consider soil, climate, and nutrient demand. Application rates shall ensure that a nuisance is not created. Degradation of groundwater, considering soil, climate, and nutrient demand, shall be minimized consistent with applicable provisions of the Recycled Water Policy.

The Definition states:

a. Agronomic Rate: The rate of application of recycled water to plants that is necessary to satisfy the plants' watering and nutritional requirements, considering supplemental water (e.g., precipitation) and supplemental nutrients (e.g., fertilizers), while preventing or strictly minimizing the amount of nutrients that pass beyond the plants' root zone.

As noted further above, the City's recycled water should not be of concern in regards to the requirements set forth. However, the draft General Permit would force the City to go through the same set of requirements, when it is not necessary. Further, as also noted earlier, the Water Recycling Policy indicates that tertiary treated water is safe for the specific uses. Given this clear and appropriate statement, the City is concerned that such requirements, as set forth in the Draft General Permit, will not serve to increase the use of recycled water.

More specifically, the issue of the reasonable agronomic rates which consider the soil, climate, and nutrient demand is a point of major concern. Does the State Board require that this calculation be accomplished for each Recycle Water Use Area? If so, this presents an issue for the City which has wide diversity in the soil, climate by location and by time of year and obviously nutrient demand by landscape type.⁵

⁵ Given the dictates of Order – C. Provisions 5, which provides for the criteria for the development on an O&M plan which includes the issue of agronomic rate application, it appears

Further, the City's research on the meaning of the term "agronomic rate" found a wide variety of definitions. Some definitions are not as restrictive as the that given in the Draft General Permit. Some are more precise and mathematically driven. Still others are very much in keeping with the particular environmental they are dealing with. The point is that the definition used in the Draft General Permit is nonspecific and therefore leads the City to believe that use of recycled water agronomic rate is in fact dependent on a Use Area by Use Area determination of what the rate would be. This is not necessarily an easy calculation to make given the diversity of use, soil, climate, seasons etc. The City believes that it would have to be done by a highly qualified professional which would add significantly to the cost of use due to the complexity.^{6,7} Unfortunately, the only "upper bound" on the rate is that it can not cause a nuisance, which given case law on the issue is a very unstable scale.

The City is also concerned with some inherent inconsistency within the definition given. The definition states that the agronomic rate is to: "...[prevent] or strictly minimizing the amount of nutrients that pass beyond the plants' root zone." Preventing would mean an absolute bar. Strictly minimizing certainly does not mean an absolute bar, but the term "strictly" is unclear and vague. What does this mean? Does it relate to the effort to limit migration or does it mean to the success of minimizing despite best efforts. Clarification is required.

Suggested change: The City would suggest changing only the Specification and Definition as follows:

Specification:

4. Application of waste constituents to Use Areas shall be at reasonable agronomic rates and shall consider such factors as soil, climate, and nutrient demand as may be reasonably necessary

that the specificity called for is requiring each Recycle Use Area, without regard to its similarity or usage, to be handled separately. These O&M Plans are extremely complex and will be very costly to create and verify, and re-verify over time. While the City understands the desirability of such plans, it is a very limiting prohibition over the expanded use of recycled water. This is particularly troublesome in light of Finding 1 "When used in compliance with the Recycled Water Policy, Title 22, and all applicable state and federal water quality laws, the State Water Board finds that recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to potable water for such approved uses."

⁶ In the Recycle Water Policy Section 7(b)(2), agronomic rates are discussed. "Each irrigation project shall be subject to an operations and management plan, that may apply to multiple sites, provided to the Regional Water Board that specifies the agronomic rate(s) and describes a set of reasonably practicable measures to ensure compliance with this requirement, which may include the development of water budgets for use areas, site supervisor training, periodic inspections, tiered rate structures, the use of smart controllers, or other appropriate measures."

⁷ Indeed, further complicating this issue is the fact that in the Best Management Practices - Management (S) it states that there is a requirement to: [d]etermine the optimum duration and frequency for irrigation cycles considering evapotranspiration, soil type, plant varieties being irrigated, climatic conditions, and any other factors affecting optimum irrigation efficiencies.

to meet the requirements of this General Permit and the applicable provisions of the Recycled Water Policy.

Definition:

a. Agronomic Rate: The reasonable rate of application of recycled water applied to plants necessary to satisfy the plants' watering and nutritional requirements, considering supplemental water (e.g., precipitation) if any, and supplemental nutrients (e.g., fertilizers) if any, while minimizing the amount of nutrients that pass beyond the plants' root zone.

(j) Order – A. Prohibitions 3

The Prohibitions states:

3. The use of recycled water, pursuant to this General Permit, for property zoned as “single family residential” is prohibited.

The City believes that the term “zoned” should be dropped as it is actually the usage, not the zoning, that may be important. That is, a property could be zoned under multiple categories and therefore this would preclude the use of recycled water on that basis even if no single family residence exists. Further, even if there are single family residences in place or contemplated, it would be in keeping with the overall approach of encouraging the use of recycled water for landscape irrigation that there be an “exemption” here for common areas in such single family developments.

Suggested change: *The use of recycled water, pursuant to this General Permit, for property being used for “single family residential” is prohibited, excluding common areas in any development or group of single family homes as may be consistent with this General Permit.*

(k) Order – A. Prohibitions 5

The Prohibition states:

5. The use of recycled water for landscape irrigation, pursuant to this General Permit, within a Groundwater Recharge Reuse Project is prohibited.

The City’s recycled water is intended to be used for groundwater recharge reuse projects because of its exceptional quality. As such, it would be inconsistent to state that the same water which is being used for recharge can not, under any circumstance, be used for landscape irrigation with that projects boundaries.

Further the City believes this outright prohibition makes sense when tertiary treated water is involved. A more appropriate concept would be to determine if there is an issue of whether or not the use of such water is going to negatively impact the actual recharged water in the ground.

Further, the issue here is what are the parameters for this. As an example, if the City wishes to use recycled water to irrigate landscape at a Groundwater Recharge Reuse Project⁸ but the Project water recharge water, nor output water, can not physically come in contact with the recycled water, would the General Permit preclude that?

Suggested change: 5. *The use of recycled water for landscape irrigation, pursuant to this General Permit, within a Groundwater Recharge Reuse Project is not prohibited if it can be reasonably demonstrated that its use will not significantly degrade the groundwater at the project.*

(l) Order – A. Prohibition 7

The Prohibition states:

7. The use of recycled water, pursuant to this General Permit, at use areas with an unusually complex plumbing scheme, as determined by CDPH, that results in a high risk of cross-connection contamination with potable water supplies, is prohibited.

The City believes that this should be stated be an eligibility criteria and should be discussed as part of the NOI. Notwithstanding that, the terms that need further definition so that there can be an appropriate analysis of “risk” are:

What is an unusually complex plumbing scheme?

What is the basis by which CDPH will make that determination and when?

What is a “high risk?”

Will CDPH be making the determination of high risk?

Suggested action: The State Board must clarify these terms and should be asking the CDPH to provide producers and distributors with some level of specific information that can be used to make this determination without needing to seek CDPH analysis.

(m) Order – A. Prohibition 13

The Prohibition states:

13. Use of any equipment or facilities that have been used to convey recycled water (e.g., tanks, temporary piping or valves, and portable pumps) also used for potable water supply conveyance, is prohibited.

This requirement would mean that there can be no efficiency brought to bear if duplicate equipment is needed because of this prohibition. Certainly there can be multiple uses if there is

⁸ The City acknowledges that a Groundwater Recharge Projects are referenced in the Recycle Water Policy but are not defined sufficiently so as to readily respond to this question further.

some assurance that the equipment is appropriately cleaned between uses.

Suggested action: Reasonable protocols, such as BMPs, should be developed, or at least permitted, to provide assurance that there would be no impact by such a more efficient use of equipment.

(n) Order – A. Prohibition 16

The Prohibition states:

16. The application of any material that results in a violation of the Safe Drinking Water and Toxic Enforcement Act (Health and Safety Code section 25249.5) is prohibited.

There are several comments the City puts forward on this Prohibition.

First, what is meant by the “application of any material”. That is, application to what? Where will it be measured? How will it be measured?

Second, what is meant by “resulting in a violation of ...”. Safe Drinking Water and Toxic Enforcement Act [Health and Safety Code section 25249.5] (“Prop 65”). Prop 65 requires businesses to notify Californians about significant amounts of chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. By providing this information, Proposition 65 enables Californians to make informed decisions about protecting themselves from exposure to these chemicals because businesses are required to provide a “clear and reasonable” warning before knowingly and intentionally exposing anyone to a listed chemical. Proposition 65 also prohibits California businesses from knowingly discharging significant amounts of listed chemicals into sources of drinking water. Therefore, the City requests clarification if the State Board is limiting its concern to the discharge issue only or both the warning and discharge issue. If it does relate to the warning issue, the Draft General Permit does provide for specific warnings to be used in line to with the Purple Pipe Manual.

Suggested Action: The State Board should clarify whether or not a Prop 65 warning is to also be included along with the signage required by Title 22?

Third, assuming the State Board is limiting itself to the discharge prohibitions in Prop 65, the City would like clarification if the State Board is prohibiting any action that could be considered an exceedence of the Proposition 65 safe harbor levels.⁹

Lastly, is the City correct in its interpretation that the Prohibition means that no recycled

⁹ These levels are defined as no significant risk levels (NSRLs) for carcinogens and maximum allowable dose levels (MADLs) for chemicals that cause reproductive toxicity. The NSRL is the daily intake level calculated to result in one excess case of cancer in an exposed population of 100,000, assuming lifetime (70-year) exposure at the level in question. The MADL is the level at which chemicals listed for reproductive toxicity would have no observable effect assuming exposure at 1,000 times that level. The NSRLs and MADLs are promulgated in Title 27, California Code of Regulations.

water that contains any Prop 65 regulated chemical in any detectable amount can be used as permitted through the Draft General Permit?

Suggested action: The City would appreciate the State Board should clarify the issues raised and reconsider this Prohibition in its entirety.

(o) Order – B. Specification 14

The Prohibition states:

14. Recycled water shall be managed to avoid contact with workers. Employees and eating areas shall be protected against any contact with recycled water spray, mist, and runoff.

With the City's recycled water, this does not seem to be an issue worthy of concern by the State Board. However, even with tertiary treated water, the real issue is the nature and duration of the contact, if there is in fact any real scientific reason for concern. It should be noted that Water Code § 13521 requires CDPH to establish recycling criteria:

The State Department of Health Services shall establish uniform statewide recycling criteria¹⁰ for each varying type of use of recycled water where the *use involves the protection of public health*. (Emphasis added).

Suggested action: Prohibitions should be referred to or left to CDPH to determine if they are necessary or not and should not be a matter for consideration in this Draft General Permit. If they are a matter of concern, CDPH has the authority to deal with the situation.

Further, as to this Prohibition, while this would appear to refer to those employees who incidentally could come in contact with recycled water, it may also relate to those who will be routinely working with such water.

Suggested action: The City would appreciate some clarification as to the limitation on this prohibition.

Suggested change: Alternatively, the City suggests that this Prohibition state:

14. Recycled water shall be reasonably managed so as to avoid contact with workers who during the normal course of their work would come in contact with recycled water spray, mist, and runoff. Worker eating areas shall be reasonably protected against contact with recycled water spray, mist, and runoff.

¹⁰ Water Code § 13520. states: As used in this article "recycling criteria" are the levels of constituents of recycled water, and means for assurance of reliability under the design concept which will *result in recycled water safe from the standpoint of public health, for the uses to be made*. (Emphasis added).

(p) Order – C. Provisions (3)

The Provision states:

3. CDPH may identify in its recommendations with respect to the proposed recycled water use any conditions upon which its approval of a proposed project is based. "Conditions of approval" submitted as part of CDPH's recommendations will be incorporated into a Notice of Applicability for the proposed recycled water use project.

The City is not aware of any commitment from CDPH as to its recommendations, the basis therefore or the timing of same. Of course, the State Board can not make such recommendations on behalf of the CDPH.

Suggested action: The City wishes clarification on how the State Board will coordinate with the CDPH so that there are no undue delays in the streamline permitting referenced in the Recycle Water Policy.

(q) Order – C – Provisions 5(c)

The Provision states:

5. Prior to commencing irrigation with recycled water, the Distributor shall submit an Operations and Maintenance Plan (O&M Plan) to the State Water Board. An O&M Plan shall contain the following elements:

a. An Operations Plan. A detailed operations plan for the Use Areas including methods and procedures for implementation of regulations regarding recycled water use and maintenance of equipment and emergency backup systems to maintain compliance with the conditions of this General Permit and CDPH requirements (i.e., identification of BMPs implemented to achieve and maintain compliance).

b. A general Irrigation Management Plan. The general Irrigation Management Plan shall include measures to ensure the use of recycled water occurs at an agronomic rate while employing practices to ensure irrigation efficiency necessary to minimize application of salinity constituents (by mass) to Recycled Water Use Areas. An individualized Irrigation Management Plan, based upon the general Irrigation Management Plan, shall be developed for each Recycled Water Use Area and shall account for the following:

i. Soil characteristics;

- ii. Recycled water characteristics (nutrients, including nitrogen and phosphorous content; specific ion toxicity, including chloride, boron, sodium, bicarbonate; and other parameters);
 - iii. Requirements of the plant species being irrigated (e.g., seasonal demand, climate, nutrient requirements);
 - iv. Climatic conditions; precipitation, evapotranspiration rate, wind;
 - v. Other supplemental nutrient additions (e.g., chemical fertilizers) used in the operation of the Use Area; and
 - vi. Management of impoundments used to store or collect recycled water.
- c. A copy of the approved Title 22 Engineering Report submitted to CDPH and any recommendations or "conditions of approval" provided by CDPH.
- d. A copy of the Producer's or Distributor's established rules and/or regulations as approved by CDPH for Producers, Distributors and Users governing the design and construction of recycled water use facilities and the use of recycled water in accordance with the criteria established in the Title 22 Requirements and this Permit.
- e. A copy of the written (and signed) agreement between the respective parties responsible for the producing, distributing, and using the recycled water.
- f. A copy of the duty statement for the recycled water use supervisor responsible for the Use Area.
- g. Verification that the recycled water use supervisor has attended training regarding the safe and efficient operation and maintenance of recycled water use facilities.

It should be obvious by the density and breadth of this provision that it requires multiple levels of documentation to be developed for each user site to be submitted to the State Water Board before a project may commence—i.e., the Operations Plan, General Irrigation Management Plan, Individualized Irrigation Plan, Title 22 Engineering Report. The "individualized management plan" is contrary to the Recycled Water Policy, which calls for each site to be "subject to" an O&M plan that can apply to *multiple* sites. In addition, the requirements to monitor daily, conduct weekly site investigations and submit for each use area would be excessive and unnecessary for many projects.

Suggested Action: This Provision needs to be reviewed in order to greatly minimize the scope of the reporting requirements. Further, this issue of the multiple sites must be dealt with.

(r) Order – C. Provisions 14

The Provision states:

14. The Distributor shall report any noncompliance that may endanger human health or the environment. The Distributor shall immediately report orally, or electronically if available, information of the noncompliance as soon as (1) the Producer or Distributor has knowledge of the discharge...

The phrase "noncompliance that may endanger human health or the environment" is extremely vague and broad and places the City in a position which is actually ceded to CDPH to determine. Notwithstanding that the City believes its recycled water would not cause such an impact if there were "noncompliance" it is not in the position to make such assessments.

Further, it is presumed that the first subparagraph refers to the basic requirement of reporting noncompliance that may endanger human health or the environment. The way they are written it would appear to be separate categories. One is absolute and one is based on knowledge.

Suggested change: The City suggests that this be rewritten as follows:

When the Producer or Distributor has knowledge of a discharge in non-compliance with this General Permit and when the Producer or Distributor has a reasonable belief that the discharge is an endangerment to human health or the environment, it shall immediately report orally, or electronically if available, information of the noncompliance.

(s) Monitoring and Reporting Program

(i) Typographic Error?

The first section is entitled "RECYCLED WATER USE AREA" which is a defined term. However, in the first paragraph a different term is used:

Further, the condition of application areas and impoundments are examined once per week following irrigation events and visual observations are written in a bound logbook unique for each *Recycled Water Area*. (Emphasis added)

Suggested action: The City assumes this is a typographic error and that the italicized words should be "Recycled Water Use Area" or "Use Area".

(ii) Document Retention

The Draft General Permit requires maintaining records for a set period of time. The City assumes that it does not have to keep the records in hard copy and could employ electronic archiving to eliminate the cost of storage etc.

Suggested action: Again, the City suggests that this is an issue that would benefit from a workshop and stakeholder input or work groups to come up with a plan for

uniform reporting and retention of data in an electronic media so as to avoid duplication and other use of resources best preserved.

(t) Definition (c)

The Definition states:

c. California Department of Public Health (CDPH): The primary State agency responsible for protection of public health and the regulation of drinking water. The Legislature has defined several specific regulatory responsibilities of CDPH related directly or indirectly to recycled water use activities including: establishment of statewide water reclamation criteria advising Regional Water Boards in the drafting of water reclamation requirements; review and approval of certain proposed water reclamation projects; abatement of contamination resulting from use of reclaimed water where public health is seriously threatened; and control of cross connections between potable and nonpotable water systems.

CDPH is a department of the State of California with certain legislatively granted powers. As a summary, in reference to the Draft General Permit, it could be argued that the definition provided is either too broad, or too narrow. It could also be argued that it is an attempt by the State Board to limit the context in which the Regional Boards are to give deference to the CDPH.

Suggested action: The City believes it is in the best interest of all involved to either eliminate the definition altogether as the CDPH and its authority are a matter of public record, or merely state that the initials CDPH stand for the California Department of Public Health.

(u) Definition (f)

The Definition states:

f. Drift: means the water that escapes to the atmosphere as water droplets from a cooling system (Title 22, section 60301.240).

This is a correct restatement of Title 22, section 60301.240. But as this Draft General Permit does not relate to a cooling system (and which systems are not permitted under the Draft General Permit to use recycled water) the City believes the definition is inapplicable and therefore possibly renders all the usage vague or unenforceable. Perhaps an alternative definition that could be used here would be:

Suggested change: The City suggests the following change to this Definition:

"Drift: mans the recycled water that escapes into the atmosphere as water droplets from appropriate applications under this General Permit."

(v) Definition (r)

The Definition states:

r. Recycled Water Use Area (Use Area): An area of contiguous recycled water use with defined boundaries or project area (e.g. a golf course, residential neighborhood, school yard, park, etc.).

The term contiguous can have a variety of meanings, including:

1. touching; in contact.
2. in close proximity without actually touching; near.¹¹

So that there is no misunderstanding, the City would suggest that the goal would be to use another term so that it would relate to Recycle Water Use Areas within a defined boundary. That is, there may be only parts of a freeway that are to be designated as Use Areas, but they are within a single boundary and they may not necessarily be in "close proximity." A golf course could have a variety of areas within the course boundaries that are near but all should be appropriately labeled Recycle Water Use Areas.

In fact, the definition supplied is not consistent with Title 22 § 60301.920 which states:

"Use area" means an area of recycled water use with defined boundaries. A use area may contain one or more facilities.

Suggested change: The City recommends that the Definition be changed to read:

Recycled Water Use Area (Use Area): An area where recycled water is to be used under this General Permit which is defined by its boundaries or project area (e.g. a golf course, residential neighborhood, school yard, park, etc.) so as to be consistent with Title 22 § 60301.920.

(w) Definition (u)

The Definition states:

u. Salt and Nutrient Management Plans: Salt and nutrient plans shall be tailored to address the water quality concerns in each basin/sub-basin and may include constituents other than salt and nutrients that impact water quality in the basin/sub-basin. Such plans shall address and implement provisions, as appropriate, for all sources of salt and/or nutrients to groundwater basins, including recycled water irrigation projects

¹¹ Dictionary.com Unabridged - Based on the Random House Dictionary, © Random House, Inc. 2009.
<http://dictionary.reference.com/browse/contiguous?qsrc=2888>

While this summary is appropriate, there is a definition and requirements set forth in the Recycle Water Policy which should take precedent so as to avoid any misinterpretations.

Suggested action: The City suggests that this Definition merely make reference to the term as used in the Recycle Water Policy.

(x) Best Management Practices II(C)

The Definition states:

C. Where feasible, different piping materials are used to assist in water system identification.

As to the "different piping materials", much of this is covered in the "Purple Pipe Manual," and there should be reliance thereon.

Suggested change: The City recommends that the Definition be changed to read:

C. All piping materials to be used for the purpose of transmitting and/or carrying recycled water shall conform with the Purple Pipe Manual.

(y) Best Management Practices III (D)

This Best Management Practice states:

D. Toilet and washing facilities are provided.

It is not clear if this relates to workers only or the public at large. The City assumes that this relates to workers performing services on or in Recycled Water Use Areas, and not the general public. Clearly, if the Recycle Water Use Area is a freeway medium, a public restroom should not be an issue.

Suggested action: The City wishes clarification of this BMP.

(z) Best Management Practices III (E)

This Best Management Practice states:

E. Precautions are taken to avoid contact of recycled water with food and food is not allowed into areas that are still wet with recycled water.

For the same reasons as set forth in the discussion immediately above, the City assumes this too relates only to workers performing services on or in Recycled Water Use Areas, and not the general public. Further, given the City's recycled water this is a questionable requirement.

Suggested action: The City wishes clarification of this BMP.

6. Conclusion

Again, the City wishes to thank the State Board and its staff for recognizing the value of this important resource to the State of California. We look forward to working with the State Board to clarify the issues raised herein and maximize the use of recycled water in the future.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ken Ortega', with a long horizontal flourish extending to the right.

Ken Ortega
Public Works Director