California Regional Water Quality Control Board

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

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TO: Ms. Jeanine Townsend, Acting Clerk to the Board
Executive Office
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

FROM: MICHAEL P. McCANN
Assistant Executive Officer (Acting)
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

DATE: October 26, 2007

SUBJECT: Comment Letter – Proposed Water Recycling Policy

Thank you for the opportunity to provide our comments on the proposed statewide Water Recycling Policy (Policy). The San Diego Regional Water Quality Board (Region 9) concurs with the staff recommendation to pursue development of this Policy, and offers the following comments to supplement and reinforce previously submitted comments on this topic.

GENERAL COMMENTS

Incidental Runoff

The Policy does not address the issue of incidental runoff from recycled water use sites. This can be a significant issue that should be addressed in the proposed Policy. The State Water Board Executive Director previously issued draft recommendations (dated February 24, 2004: attached to these comments) on this topic but the proposed Policy is mute on this topic.

Impoundment Requirements

The Policy should be revised to include requirements to avoid water quality impacts from recycled water impoundments. Appropriate requirements to consider may include selection of an appropriate site location with consideration of the proximity to flood plains for the protection of surface waters and installation of liner systems to protect underlying groundwater resources.

Soil Amendments

When recycled water is very low in nutrient concentrations, recycled water users often supplement with soil amendments at sites that support crops and/or landscaping. As a

result, infiltrating irrigation water may cause or contribute to exceedance of water quality objectives (creating a condition of pollution) in groundwater even though the recycled water (effluent) is in compliance with effluent limitations. A finding should be included that acknowledges this issue as it will be a significant consideration for nutrient management plans.

Intensity of Application

Although the Policy discusses the proper amount to be used at irrigation sites, it does not discuss the intensity of the application. Irrigation is typically very intense for short periods of time, which does not correspond with plant nutrient uptake rates. If the policy discourages/prohibits groundwater monitoring, it is critical that some application rate method that is protective of groundwater be developed and referenced in the Policy.

Marketing of Recycled Water

Seasonally, up to 90% of the water supply in the San Diego Region is imported from the Colorado River and Northern California. Despite the fact that a tremendous amount of energy is required to import this water and the sources are becoming more scarce, a significant amount of recycled water that is produced or could potentially be produced is still not productively used. This is partly attributed to the producers' lack of aggressive marketing as well as their unwillingness to bear the cost of creating effective distribution systems. The State Water Resources Control Board should explore this situation as a part of any policy development and, if appropriate, consider including policy provisions to promote more statewide reuses of recycled water, and more aggressively use its authority under the California Water Code to limit the wasting of potable water resources.

Producer vs. User Responsibilities

In the San Diego Region we have had recent experiences where some purveyors of recycled water would disconnect themselves from regulation of the use site activities to avoid responsibilities for use(s) of recycled water at the site. We believe that under most circumstances the purveyor and user should be considered as "co-dischargers" for regulatory purposes. The purveyor markets recycled water and the purveyor receives revenue from the user for the recycled water. Finally, the purveyor is in the unique position of being able to effectively oversee the use of the recycled water by the user, with the ability to terminate the reclaimed water supply to the user.

Emerging Chemicals

The Policy is silent on emerging chemicals in recycled (tertiary-treated) water.

- The most widely used sewage treatment and disinfection processes may create "treatment residues" (e.g., Nitrosodimethylamine or "NDMA") that may adversely impact beneficial uses of groundwater for public water supplies.

- Residual concentrations of synthetic chemicals may not be effectively removed from sewage effluents received by sewage treatment plants using the most commonly available treatment and disinfection technologies.
- The sources of residual concentrations of synthetic chemicals may include, but not be limited to, pharmaceuticals, personal care products, and illegal drugs/substances. Residual concentrations of these residual synthetic constituents may be derived from a number of sources located in urban, suburban and rural areas of California. The most commonly used processes, for treatment and disinfection of sewage effluents, may be unable to remove these synthetic compounds from tertiary wastewater effluents (recycled water). Without analytical results, it is not possible to determine if residual concentrations of synthetic chemicals are significant in tertiary-treated wastewaters.

- The Policy should be revised to address emerging chemicals in at least two ways:

  - Establish and require the recycled water producers/users perform a baseline analysis for "emerging chemicals" in recycled water. The Policy should include provisions for the State Water Resources Control Board to regularly review and publish a revised statewide list of "minimum" baseline waste constituents ("emerging chemicals") that are required to be included in the baseline analysis; or
  - "Emerging chemicals" should be explicitly excluded from the Policy, and these constituents should be regulated under our regional board authorities on a case-by-case basis.

SPECIFIC COMMENTS

Finding 2, Page 1
Finding 2 acknowledges common recycled water uses. Indirect potable use has been overlooked. Indirect potable use includes projects such as groundwater recharge, which is discussed extensively in the proposed Policy, as well as reservoir augmentation. Reservoir augmentation would support the Legislature's intent to undertake all possible steps to encourage the development of recycled water facilities so that recycled water may be made available to help meet the growing water requirements of the state, as stated in Finding 1. A reference to indirect potable use, in general, should be included in Finding 2.

Finding 16, Page 2
Finding 16 states, "Recycled water has the potential to contain constituents not typically found in surface water or groundwater, because it is usually produced from sewage."

The word "usually" should be removed from this sentence as recycled water is always produced from sewage.

Resolution Item 8, Page 4

Resolution Item 8 states, "A Regional Water Board shall only require groundwater monitoring for a recycled water irrigation project if it determines that site conditions such as shallow groundwater could cause an increased potential for the irrigated site to adversely affect public health or surface water quality." The text "such as shallow groundwater" should be removed from this sentence to avoid a limited interpretation. This language should also be expanded to allow for groundwater monitoring under other appropriate circumstances. All groundwater monitoring programs should be carried out as a well-planned effort with concrete objectives. A cost-effective monitoring program will enable producers/purveyors to understand the value of the monitoring data and reduce the perception that monitoring is a costly hindrance to promoting recycled water use.

If you have any questions regarding these comments, please contact John Odermatt (TEL: 858-637-5595 or jodermatt@waterboards.ca.gov) or Brian Kelley (TEL: 858-467-4254 or bkelley@waterboards.ca.gov).

State Water Resources Control Board

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VIA EMAIL

TO: Regional Board Executive Officers

/s/
FROM: Celeste Cantú
Executive Director
EXECUTIVE OFFICE

DATE: February 24, 2004

SUBJECT: INCIDENTAL RUNOFF OF RECYCLED WATER

This memorandum transmits State Water Resources Control Board (State Board) staff recommendations regarding regulatory management of incidental runoff. Incidental runoff refers to small amounts of runoff from intended recycle water use areas, over-spray from sprinklers that drifts out of the intended use area, and overflow of ponds that contain recycled water during storms. This discussion is limited to recycled water that has received tertiary filtration for pathogen removal as specified under Title 22.

Background

The State Legislature established the California Recycled Water Task Force (Task Force) in 2001. The mission of the Task Force was to evaluate the current framework of State and local rules, regulations, ordinances, and permits to identity opportunities for and obstacles to the safe use of recycled water in California. The Task Force consisted of 40 members representing State and local regulatory agencies, water and wastewater utilities, environmental groups, and federal resource agencies. The chairman of the Task Force was Richard Katz, who is also a State Board member.

In June 2003, the Task Force completed its review and issued its final report, titled "Water Recycling 2030, Recommendations of California's Recycled Water Task Force." Recommendation 4.2.1 of the report states that the State Board should convene a committee to review the legal requirements of federal and State statutes and regulations that relate to the regulation of incidental runoff of recycled water to determine the regulatory and enforcement options that are available to the regional boards. A stakeholder committee was convened in December 2003 for this purpose. Many of the committee's recommendations are included in this memorandum.

Framework for Regulation of Incidental Runoff

The Water Code defines recycled water as "water, which, as a result of treatment, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource" (Water Code section 13050(n)). A legislatively established objective is to use recycled water in place of fresh water to assist in meeting the future water requirements of the State. To implement this objective, the California Water Code has a stated goal of recycling one million acre-feet of water per year by 2010. The Water Code also states that the use of potable domestic water for non-potable uses, including, but not limited to, cemeteries, golf courses, parks, highway landscape areas, and industrial and irrigation uses, is a waste and unreasonable use of water if recycled water is available that meets specified conditions for its use.

In order to avoid nuisance problems, recycled water applied for irrigation is intended to remain on the irrigated areas. Nonetheless, 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 water or from decorative or storage ponds filled with recycled water, particularly during major storm events. The Task Force Report notes, however, that in some instances regional boards assume that any amount of incidental runoff requires the regional board to treat the runoff as a discharge of treated wastewater requiring an NPDES permit (referred to as the "one molecule rule").

This approach is problematic for several reasons. Most importantly, this permitting practice renders the use of recycled water undesirable for many parties. Customers are not willing to assume the cost and the potential liability associated with either securing an individual NPDES permit or ensuring that no incidental runoff will ever leave the permitted application area. Moreover, this approach does not properly acknowledge that recycled water quality is already regulated by both the regional boards and the Department of Health services, and must meet stringent requirements at the time it is applied to the site. Finally, the prohibition approach blurs the distinction between wastewater and recycled water that has been repeatedly recognized by the Legislature.

To further the goal of maximizing the use of recycled water, the water quality laws should be interpreted in a manner that is consistent with the intent of the Legislature to promote recycled water use. Consequently, incidental runoff from recycled water projects should be handled as follows:

1. Where reclamation requirements prohibit the discharge of waste to waters of the State and discharges are not expected to occur, occasional runoff should not trigger the need for either an individual NPDES permit or enforcement action.
2. If discharges from a reclamation project area occur routinely, such discharges can be regulated under a municipal storm water NPDES permit in most cases.
3. In limited cases, where necessary to address a water quality concern, discharges of recycled water to surface waters may be regulated under an individual NPDES permit.

An NPDES permit, however, should not be issued unless necessary to achieve water quality objectives.

Generally, parties using reclaimed water will want to operate in such a way as to avoid the need for an individual NPDES permit. The discussion below describes the framework for regulating incidental runoff from irrigation systems and from storage ponds without issuing such a permit.

Incidental Runoff Associated with Recycled Water Irrigation

Recycled water use facilities should be designed and operated to avoid runoff to waters of the State. The regional boards should work with recycled water users to help them achieve this goal. Nonetheless, incidental runoff is likely to occur at many facilities. Consequently, regional boards should include the following language in water recycling requirements.

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."

The language is modeled after the language included in the Master Reclamation Requirements issued by the San Francisco Bay Regional Board.

Releases from Recycled Water Ponds

A principal water quality concern with recycled water ponds is the presence of locally added pollutants, such as fertilizers and algaecides. These same issues exist with potable water ponds.

Recycled water ponds should be designed and operated not to spill during dry months. Spills should be prohibited during these times. Generally, wet weather regulatory strategies that do not require individual NPDES permits fall within the following categories.

1. The recycled water pond is designed not to spill during wet months. Under this circumstance, spills that occur under extreme weather conditions or emergencies should not be considered for enforcement.
2. Recycled water ponds can be drained and refilled with potable water or flushed with potable water prior to the onset of the wet season. Flushing will not displace all of the recycled water but the water quality threat is minimal.
3. Recycled water ponds designed to spill recycled water during the wet season can be regulated under Phase 1 municipal storm water permits or under a general storm water permit. These permits require reduction of pollutants to the maximum extent practicable. The permits also incorporate receiving water limitations requiring the implementation of an iterative process for addressing any exceeding of water quality objectives.

Thank you for your attention to this memorandum. If you have questions, please contact me at (916) 341-5615.