

# **Staff Report**

April 21, 2011

## **Status of Implementation of the Recycled Water Policy**

This report describes the status of the implementation of the Recycled Water Policy. This policy was adopted by the State Water Resources Control Board (State Water Board) on February 3, 2009, and it went into effect on May 14, 2009. The purpose of the Recycled Water Policy is to increase the use of recycled water from municipal wastewater sources that meet the definition of Water Code section 15050(n), in a manner that implements state and federal water quality laws.

### **Increase in Use**

The Recycled Water Policy establishes goals and mandates for recycled water use. The goals are to increase the use of recycled water by at least one million acre-feet per year by 2020 and by at least two million acre-feet per year by 2030. The baseline year for measuring this increase is 2002. The mandates are to increase the use of recycled water from the amount used in 2009 by 200,000 acre-feet per year by 2020 and by 500,000 acre-feet per year by 2030.

Estimates for statewide recycled water use are in the report "Water Recycling 2030, Recommendations of California's Recycled Water Task Force", which was published in June 2003. This report estimated use in 2002 to be between 450,000 and 580,000 acre-feet per year.

State Water Board staff has updated this estimate and recently released a report based on a survey of recycled water used in 2009. This report estimated that use has increased to about 724,000 acre-feet per year. The report was based on a survey sent to publicly owned water agencies that produce and distribute recycled water. The response from the survey, however, was incomplete – only 118 out of 573 agencies responded. Non-responding agencies were assumed to be distributing the same amount of recycled water in 2009 as they were using in 2001. Hence, actual recycled water use may be higher than estimated by the survey. The estimated increase in recycled water use since 2001 is 231,000 acre-feet per year, an increase of 47 percent. The breakout by use is shown in the table below.

Based on the experience of the 2009 survey and the earlier surveys, staff has concluded that these types of surveys consume significant resources and do not generate reliable information because of lack of participation. To generate accurate information on recycled water use, the State Water Board or the Regional Water Quality Control Boards (Regional Water Boards) would have to require submittal of recycled water use information in monitoring and reporting programs, preferably in an electronic format.

## Recycled Water Use in California in 2009

Use	Acre-Feet/Year	Percent of Total Use
Agricultural Irrigation	210,000	29%
Other	149,000	20%
Landscape Irrigation	129,000	18%
Seawater Barrier	57,000	8%
Commercial/Industrial	52,000	7%
Recreational Impoundment	50,000	7%
Groundwater Recharge	35,000	5%
Wildlife Habitat	29,000	4%
Geothermal/ Energy Production	13,000	2%
<b>Total</b>	<b>724,000</b>	<b>100%</b>

### Permit Issuance Time

The Recycled Water Policy requires permits for recycled water projects eligible for permit streamlining to be considered for adoption within 120 days (about four months) from the date the application is deemed complete. If the project meets the streamlining criteria and is eligible to be enrolled under a general order, then the requirement is that enrollment occurs within 60 days.

Since the Recycled Water Policy was approved, the Regional Water Boards reported the receipt of one application for new water recycling facilities meeting the eligibility criteria for permit streamlining. This was an application for a master reclamation permit submitted by the Tehachapi-Cummings Water District. The initial application was submitted in June 2010, but a complete application was not received until November 2010. The order was adopted in April 2011. The District will take tertiary treated water from the California Correctional Institution, Tehachapi, and deliver it to 560 acres of sod farms and 160 acres of a golf course. The District will look to increase deliveries to other farmlands over time.

On July 7, 2009, the State Water Board adopted a general permit for landscape irrigation use of municipal recycled water. Since adoption, the State Water Board has received one complete application for enrollment under this order submitted by the Delta Diablo Sanitation District. Delta Diablo submitted a complete application on November 21, 2009. For this application, the State Water Board issued a conditional notice of applicability on January 26, 2010, which it revised on July 23, 2010. An issue that delayed issuance of the notice of applicability was implementation of the requirement in the Recycled Water Policy and general permit requirements that recycled water be applied at an agronomic rate. Delta Diablo proposed application rates for nitrogen considered by staff to be more than the agronomic rate. To resolve the issue, Delta Diablo agreed to monitor soil nitrate content to evaluate if excess nitrogen is being applied. To streamline future applications, staff is preparing guidance on how to prepare nutrient management plans for landscapes irrigated with recycled water.

## **Salt/Nutrient Management Plans**

The Recycled Water Policy states that local water and wastewater entities, together with local salt/nutrient contributing stakeholders, will fund locally driven and controlled, collaborative processes open to all stakeholders that will prepare salt and nutrient management plans for each basin/sub-basin in California, including compliance with CEQA and participation by Regional Water Board staff. The policy provides a deadline for submitting these plans of May 14, 2014, although the Regional Water Board may provide a two-year extension if it finds that the stakeholders are making substantial progress towards completion of the plan. The attachment shows a timeline distributed by State Water Board staff to the Region Water Board Executive Officers in a memorandum dated August 28, 2009, for competing salt/nutrient management plans.

Various salt/nutrient management plan stakeholder groups have established themselves in California to implement this part of the Recycled Water Policy, as described below.

### **Central Coast Water Board Region**

The Central Coast Water Board region has several active salt/nutrient management stakeholder groups. These include the following groups.

Santa Maria River Valley – Groundwater Basin 3-12  
Lead Organization: City of Santa Maria

Paso Robles Area – Groundwater Basin 3-4.08  
Lead Organization: City of Paso Robles

Seaside Area - Groundwater Basin 3-4.08  
Lead Organization: Monterey County Water Resources Agency

Pajaro Valley - Groundwater Basin 3-2  
Lead Organization: Pajaro Valley Water Management Agency

Llaga Area - Groundwater Basin 3-3.01  
Lead Organization: Santa Clara Valley Water District

Hollister Area - Groundwater Basin 3-3.03/San Juan Bautista Area Groundwater Basin 3-3.04  
Lead Organization: San Benito County Water District

Los Osos Valley - Groundwater Basin 3-8  
Lead Organization: San Luis Obispo County, Golden State Water, S&T Municipal Water Company

These groups have applied for and received Integrated Regional Water Management Planning grant funds.

Central Coast Water Board staff held three meetings to encourage the development of stakeholder groups. State Water Board staff participated in these meetings.

### **Central Valley Water Board Region**

For the Central Valley, stakeholders have established the Central Valley Salinity Coalition, which has a planning process called the Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS). The State Water Board has allocated five million dollars from the Clean-up and Abatement Account as seed money for this effort, and stakeholders have provided over one million dollars in monetary resources and in-kind services to date, an amount anticipated to increase substantially over the next three years. State Water Board staff is participating in this effort.

The Central Valley Salinity Coalition has established itself as a non-profit corporation, set up several committees, produced several studies, and defined its process for the completing a salinity plan. The CV-SALT plan will address salinity in groundwater and surface water within the Central Valley, but will not specifically address groundwater quality in foothill areas.

### **Colorado River Water Board Region**

The Colorado River Water Board issued a region-wide notification of the salt/nutrient management provisions in the Recycled Water Policy to stakeholders in its region and initiated meetings with several stakeholder groups. The region has one active stakeholder group, sponsored by the Coachella Valley Water District, which is raising grant money, principally Integrated Regional Water Management Planning grants, to fund the development of a salt/nutrient management plan for the Coachella Groundwater Basin (7-21). State Water Board staff participated in one of the meetings held by the Coachella Valley Water District.

### **Lahontan Water Board Region**

Earlier this year, the Antelope Valley Integrated Regional Water Management Group was awarded a grant from the Department of Water Resources to update its Integrated Regional Water Management Plan. This update will include a Salt/Nutrient Management Plan (Plan) for the Antelope Valley Groundwater Basin (6-44). This effort is sponsored by the Antelope Valley State Water Contractors Association. Lahontan Water Board staff is working with the Antelope Valley Integrated Regional Water Management Group to develop a scope of work for the Salt/Nutrient Management Plan that can be taken to the Lahontan Water Board for its consideration before the actual plan development starts. Lahontan Water Board Staff has presented the salt/nutrient management provisions in the Recycled Water Policy to other stakeholders in the region at integrated regional water management meetings in 2011.

## **Los Angeles Water Board Region**

Los Angeles Water Board staff convened a region-wide stakeholder workshop in November 2010 to introduce and discuss the salt/nutrient management planning requirements and to initiate the development process. State Water Board staff participated in this workshop.

In addition, at the request of stakeholders, staff made presentations at stakeholder meetings (San Fernando Valley, Raymond and San Gabriel, Upper Santa Clara, and Lower Santa Clara Basins) to provide information on the Recycled Water Policy and its salt/nutrient management planning requirements and answer related questions.

Some groundwater basin stakeholder groups have made significant progress towards this effort, initiating plans and developing related technical reports. These include:

San Fernando Valley – Groundwater Basin 4-12

Lead Organization – Los Angeles Department of Water and Power

Central West Basin – Groundwater Basin 4-11

Lead Organization - Water Replenishment District of Southern California, West Basin Municipal Water District, City of Los Angeles Department of Water and Power

Pleasant Valley – Groundwater Basin 4-6

Lead Organization – Fox Canyon Groundwater Agency, City of Oxnard

Las Posas Valley – Groundwater Basin 4-8

Lead Organization - Fox Canyon Groundwater Agency, City of Oxnard

Oxnard – Groundwater Basin 4-4.02

Lead Organization - Fox Canyon Groundwater Agency, City of Oxnard

San Gabriel Valley– Groundwater Basin 4-13

Lead Organization – Raymond and San Gabriel Basin Water Master, County of Los Angeles Sanitation Districts

Raymond Basin – Groundwater Basin 4-23

Lead Organization – Raymond and San Gabriel Basin Water Master, and County of Los Angeles Sanitation Districts

Planning has also been initiated in the Lower and Upper Santa Clara Basins.

While no basin-wide process has been initiated for the Malibu Valley Basin, a salt/nutrient management plan for a single facility within the basin, Malibu La Paz, in Malibu, was recently developed to comply with the requirements of its waste discharge requirements granted in 2010.

A formal salt/nutrient management planning process has yet to be initiated by stakeholders of the Santa Monica Hollywood Basin. Los Angeles Water Board staff is working with stakeholders to identify a lead agency for this basin and formally begin the process.

Los Angeles Water Board staff from different programs has been assigned as project leads for each group. These programs include the Municipal, Industrial and Groundwater Permitting, Underground Storage Tanks, Site Cleanup, and Total Maximum Daily Load (TMDL) Programs. Each project lead is to provide basin-specific technical guidance and oversight of individual plans. This cross program staff effort is being coordinated by Basin Planning staff, which will provide policy guidance and facilitate consistency in technical work products.

### **North Coast Water Board Region**

There is one salt/nutrient management stakeholder group in the North Coast Water Board region, sponsored by the City of Santa Rosa, addressing the Santa Rosa plain basin, groundwater basin 1-55.01. The North Coast Water Board is planning to address salinity within the other groundwater basins in its region in a pending basin plan amendment. According to a May 13, 2010 letter from Geoffrey Hales, Chairman of the North Coast Water Board, the basin plan amendment will include an action plan to address groundwater requiring sampling for salts, nutrients and constituents of emerging concern; development of monitoring well networks; water recycling and storm water recharge; and implementation measures for discharges of waste to land. The North Coast Water Board has held one CEQA scoping meeting on this amendment. Salinity is less of a problem in the North Coast Water Board region, because of its high amount of rainfall.

### **San Diego Water Board Region**

The San Diego Water Authority, assisted by the Southern California Salinity Coalition, is leading an overall stakeholder process on behalf of its member water supply agencies. The authority and the coalition worked with San Diego Water Board staff and numerous stakeholders to prepare guidelines for salt/nutrient management planning applicable to the San Diego Water Board region. The salt/nutrient management plans under development include:

Lower Santa Margarita River Basin - Groundwater Sub-basins 902.10 and 902.20  
Lead Organization: United States Marine Corps

San Vicente/Gower Basin - Groundwater Sub-basin 907.23  
Lead Organization: Ramona Municipal Water District

Although final commitments have not been made, other agencies have indicated an interest in leading the development of salt/nutrient management plans. Commitments, in part, are pending receipt of Integrated Regional Water Management Planning grants.

San Pasqual Basin - Groundwater Basin 9-10  
Lead Organization: City of San Diego

El Monte/Santee Basin – Groundwater Sub-basins 907.12 and 907.15  
Lead Organization: Helix Water District

Escondido Basin - Groundwater Basin 9-9  
Lead Organization: City of Escondido

San Luis Rey Basin - Groundwater Basin 9-7  
Lead Organization: Valley Center Municipal Water District

San Marcos Basin (Harmony Grove) - Groundwater Basin 9-32  
Lead Organization: Rincon Del Diablo Municipal Water District

Murrieta Basin – Groundwater Sub-basin 902.30  
Lead Organization: Rancho California Water District

Auld Basin – Groundwater Sub-basin 902.40  
Lead Organization: Rancho California Water District

Pechanga Basin – Groundwater Sub-basin 902.50  
Lead Organization: Rancho California Water District

### **San Francisco Bay Water Board Region**

Within the San Francisco Water Board region, the Santa Clara Valley Water District is leading a stakeholder effort for groundwater basins in northern Santa Clara County, and held its first stakeholder meeting on March 24, 2011. San Francisco Water Board staff will be meeting with staff from the Zone 7 Water Agency, Santa Clara Valley Water District, San Francisco Public Utilities Commission, and Alameda County Water Districts to discuss planning efforts for basin within their service areas.

### **Santa Ana Water Board Region**

The Santa Ana Water Board adopted salt/nutrient management requirements as part of its water quality control plan for groundwater basins within its region before the State Water Board adopted its Recycled Water Policy. Hence, the Recycled Water Policy exempted the Santa Ana Water Board from the requirement to develop a salt/nutrient management plan.

### **Constituents of Emerging Concern**

Section ten of the Recycled Water Policy requires the State Water Board to convene a “blue-ribbon” advisory panel, composed of a human health toxicologist, an environmental toxicologist, an epidemiologist, a biochemist, and a civil engineer within

90 days of adoption of the policy to guide further actions related to constituents of emerging concern. Within one year from appointment, the policy states that the panel shall submit a report describing the current state of scientific knowledge regarding the risks of emerging constituents to public health and the environment. Within six months after receipt of the report, the policy requires the State Water Board to hold a public hearing to consider recommendations and to endorse the recommendations as appropriate, after making necessary modifications.

The State Water Board contracted with the Southern California Coastal Water Research Project to set up and manage the advisory panel, which was convened on May 4, 2009. The advisory panel completed a draft report on April 16, 2010 and issued a final report on June 25, 2010. On December 19, 2010, the report, along with staff recommendations, was presented at a State Water Board hearing.

State Water Board staff is reviewing written and oral comments it received and is drafting an amendment to the Recycled Water Policy prescribing monitoring requirements for constituents of emerging concern in recycled water used for groundwater recharge/reuse and irrigation, and is working with the California Department of Public Health to consider its monitoring recommendations. After opportunity for public review, the amendment would be considered for adoption in 2012.

## **Incentives**

### **Funding**

The Recycled Water Policy requires staff to request 20 million dollars of funding from the Department of Water Resources for the development of salt/nutrient management plans. In a memorandum, dated October 27, 2009, staff requested this funding. In a subsequent meeting, Department of Water Resources staff stated that funds were not available to specifically fund this task. The Department of Water Resources, however, did include in its grant guidance for Integrated Regional Water Management Planning grants salt/nutrient management planning as an item that could be funded as part of the regional plans, and some salt/nutrient management planning stakeholder groups have taken advantage of this funding source.

As required by the Recycled Water Policy, the memorandum sent to the Department of Water Resources also requested that the Department of Water Resources provide priority funding for projects that have major water recycling components or that recharge groundwater with storm water.

The Recycled Water Policy states that the State Water Board shall promote the use of the Clean Water State Revolving Fund (CWSRF) for water reuse and storm water use/recharge projects to water purveyors, storm water agencies, and water recyclers. The CWSRF funds a broad range of infrastructure projects in California, including reuse of wastewater and storm water. Since inception of the program, California has invested about \$5 billion into California's water quality infrastructure. About 17 percent of this

financing has been for advanced wastewater treatment with about half of that invested in reuse projects that provide recycled wastewater to end users. About two percent of CWSRF financing has gone to eliminate, reduce, or reuse urban storm drain runoff. Although this represents a small investment in reducing and reusing urban runoff, the CWSRF continues to look for viable financing opportunities for reuse of storm drain runoff. The introduction of grants into the program by the United States Environmental Protection Agency has made it easier to finance storm water projects. The CWSRF actively promotes its funding opportunities, including wastewater and storm water reuse, through funding fairs, participation in relevant conferences, and outreach through the Regional Water Boards.

### **Storm Water**

The Recycled Water Policy states that the State Water Board encourages the Regional Water Boards to require less stringent monitoring and regulatory requirements for storm water treatment and use projects than for projects involving untreated storm water discharges. Implementation of this requirement is difficult to evaluate, since facilities that take clean storm water runoff, not needing treatment, and use this runoff to recharge groundwater, generally do not receive waste discharge requirements.

### **TMDLs**

The Recycled Water Policy requires that TMDL allocations be assigned in a manner that provides an incentive for greater water recycling. Since the adoption of the Recycled Water Policy, the TMDLs adopted have primarily involved storm water and pathogens. State Water Board staff is not aware of any allocations to municipal wastewater treatment plants designed to provide an incentive to recycle water.

## ATTACHMENT

### Recommended Schedule for Completing Salt/Nutrient Management Plans

Milestone	Target Date
Identification and notification of stakeholders	October 2010
Regional Water Board meeting or workshop with stakeholders	November 2010
Identification and prioritization of basins/sub-basins	January 2011
Identification of salt/nutrient sources	June 2013
Compilation of existing basin specific data, including groundwater monitoring data	June 2013
Collection of additional data necessary to complete the develop the plan	June 2013
Completion of draft salt/nutrient management plan	December 2013
Completion of draft CEQA documents	December 2013
Anti-degradation analysis	December 2013
Opportunities for public comment	
Submittal of the completed salt/nutrient management plan to the Regional Water Board	By May 2014
Regional Water Board adopts plan	By May 2015
Regional Water Board submits administrative record to the State Water Board	Within 2 months of adoption
State Water Board approves BPA	Within 4 months of receipt
State Water Board submits administrative record to Office Of Administrative Law	With 2 months of adoption
Office of Administrative Law approves BPA	30 working days after State Water Board submittal