

Drinking Water Policy for Surface Waters

Draft Policy Outline

September 2011

Background

As directed in Resolution R5-2010-0079, Central Valley Water Board staff is developing a proposed Drinking Water Policy to include additions and modifications to three chapters of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan): Water Quality Objectives, Implementation, and Surveillance and Monitoring. The policy provisions will apply to surface waters only. This policy is the culmination of almost ten years of work, during which staff has worked closely with the Central Valley Drinking Water Policy Workgroup (Workgroup) to complete necessary technical studies. The Workgroup is comprised of a diverse group of stakeholders which encompasses water supply, wastewater, storm water, agriculture interests and includes other state and federal agencies. Staff will continue to work with the Workgroup to develop the proposed policy and the supporting technical information

The Basin Plan includes existing provisions (beneficial use designations, water quality objectives, implementation measures) that protect drinking water uses. The proposed policy will augment and modify those existing provisions and will provide direction for future action, building off the approach and findings developed by the Workgroup.

Drinking Water Policy Elements

Below are some proposed Policy elements as well as some background information regarding the current Basin Plan.

Water Quality Objectives

The existing Basin Plan includes a number of water quality objectives and provisions that address drinking water, including the following.

1. "Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses." (III – 3.0)
2. "The Regional Board acknowledges that specific treatment requirements are imposed by state and federal drinking water regulations on the consumption of surface waters under specific circumstances." (III – 3.0).

Changes to the Water Quality Objectives chapter to address drinking water constituents are being considered.

- Changes to this chapter may include a new narrative water quality objective for the pathogens, *Cryptosporidium* and *Giardia*, to protect all beneficial uses. New narrative objectives developed as a part of the

Policy will be linked to the Basin Plan Implementation Chapter for clarification regarding implementation.

Implementation Chapter

The Implementation Chapter of the Basin Plan includes a number of Policies and Plans adopted by the State Water Board (IV-8.00) and the Central Valley Water Board (IV – 14.00). Within this Chapter, staff proposes adding a Drinking Water Policy for Surface Waters with the following elements:

- A policy statement recognizing the importance of protecting the municipal beneficial use and sources of drinking water for the Sacramento-San Joaquin Delta and its tributaries.
- Summary of current Basin Plan elements that address drinking water protection, such as:
 - Water quality objectives are developed to protect all applicable beneficial uses, including the MUN beneficial use unless otherwise stated.
 - Implementation Chapter contains a number of policies relevant to drinking water protection:
 - ✓ Resolution No. 68-16, Policy with Respect to Maintaining High Quality of Water in California (IV – 8.00).
 - ✓ Resolution No. 88-63, Sources of Drinking Water Policy (IV – 9.00).
 - ✓ Antidegradation Implementation Policy (IV – 15.01).
 - ✓ Policy for Application of Water Quality Objectives (IV – 16.00).
 - ✓ Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California; a.k.a. State Implementation Plan or SIP (IV-26.02)
- A very concise summary of Workgroup findings (most of the details will be in the accompanying resolution and staff report) such as the following:
 - Source evaluation and modeling results to date do not support initial concern that water quality would decline over time.
 - Monitoring and studies may be needed to fill data gaps, to ensure that modeling predictions are accurate and to further refine modeling efforts.
 - Workgroup findings pertain to organic carbon, *Cryptosporidium*, *Giardia*, salt and nutrients that were identified as the constituents of concern early in the process.

- Clarification for interpreting narrative objectives associated with drinking water protection, including the following:
 - New narrative objective(s) will be linked to the Basin Plan Implementation Chapter to provide context, clarification for implementation, and to protect all designated beneficial uses.
 - Water quality objectives developed for the policy would apply to surface waters in the Sacramento and San Joaquin Basins downstream of major dams.
 - Existing narrative objective for chemical constituents includes drinking water chemical constituents of concern, including organic carbon.

- Recognition of the following:
 - The multi-barrier approach for protecting public health which balances source water protection and water treatment.
 - On-going Water Board efforts to address other drinking water constituents of concern including salts, nutrients, and emerging constituents.

Surveillance and Monitoring

The Drinking Water Policy will include a monitoring component to improve the knowledge of existing conditions and trends, to refine models, and also to support implementation of the Drinking Water Policy. The following monitoring is being considered for inclusion in the Drinking Water Policy:

- Monitoring to ensure that Workgroup findings are accurate, that drinking water constituents do not increase over time to levels that adversely affect beneficial uses. This monitoring effort could also be used to assess compliance with antidegradation requirements.
- Conducting focused, limited-term studies within the Delta.
- Gathering information needed for future model refinement
- Coordinating all monitoring efforts described in the Drinking Water Policy with the Delta Regional Monitoring Program (RMP) to maximize the value of this work.

Drinking Water Policy for Surface Waters

Draft Policy Workplan/Funding Proposal

September 2011

Introduction

The Sacramento River and San Joaquin River watersheds and the Sacramento-San Joaquin Delta provide drinking water for over two thirds of the people in California. Most of Southern California, a major portion of the San Francisco Bay Area, parts of the Central Coast, and many Central Valley communities rely on these watersheds for their drinking water. The Sierra tributaries to the Sacramento and San Joaquin rivers are high quality sources of drinking water. As the water flows out of the foothills and into the valley, pollutants from a variety of urban, industrial, agricultural and natural sources affect the quality of the water. The Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) has designated the municipal and domestic supply (MUN) Beneficial Use for many waterways in the Central Valley. Water quality objectives are used as a regulatory tool to protect designated beneficial uses. The Water Quality Control Plan for the Sacramento and San Joaquin rivers (Basin Plan) establishes both numeric and narrative water quality objectives to protect human health. However, numeric water quality objectives are not in place for a number of pollutants that may adversely affect drinking water supplies such as organic carbon, salt, nutrients and specific pathogens. There is also no narrative water quality objective for pathogens and a lack of clarity in the chemical constituents narrative water quality objective for organic carbon.

In August 2000, CALFED issued a Record of Decision (ROD) requiring the California Bay-Delta Authority with the assistance of Department of Public Health (DPH) to coordinate a comprehensive source water protection program. One element of this source water protection program is to establish a Drinking Water Policy for the Delta and upstream tributaries. In a May 2002 Implementation Memorandum of Understanding for the CALFED Drinking Water Quality Program, the Central Valley Water Board, in consultation with DPH, State Water Resources Control Board (State Water Board) and US Environmental Protection Agency (US EPA), was given primary responsibility for development of a Drinking Water Policy for the Delta and its tributaries.

The Central Valley Drinking Water Policy Workgroup (Workgroup) was formed to provide a stakeholder-based platform for development of the policy. The Workgroup is comprised of federal and state agencies, drinking water agencies, and wastewater, municipal storm water and agricultural interests. In 2003,

California Urban Water Agencies and Sacramento Regional County Sanitation District began reimbursing Central Valley Water Board staff costs for one half of a staff person per year to lead the Workgroup in the development of the policy. This reimbursement continues into the current fiscal year.

In July 2004, the Central Valley Water Board adopted Resolution No. R5-2004-0091 which formally recognized that it would not meet the completion date specified in the CALFED ROD, but communicated the Board's continued support for development of a Drinking Water Policy. In July 2010, the Central Valley Water Board adopted Resolution No. R5-2010-0079 titled *Establishment of a Drinking Water Policy for the Sacramento-San Joaquin Delta and Upstream Tributaries*. This Resolution was adopted as a means of documenting progress to date and to set deadlines for completion of future work needed in the development of the policy. Resolution No. R5-2010-0079 directs staff to bring a Drinking Water Policy to the Board for action no later than July 2013.

This Workplan lays out the technical and administrative process to amend the Basin Plan with a Drinking Water Policy that may include appropriate narrative water quality objectives. Additional technical work may be completed in the future if funding is available to inform future amendments to the policy.

One half person-year of Central Valley Water Board staff time for Fiscal Year 2011-2012 will be funded jointly by California Urban Water Agencies and Sacramento Regional County Sanitation District to complete the tasks described in this Workplan for the current fiscal year. Completion of all tasks listed in this Workplan is dependent upon funding availability for Central Valley Water Board staff time in Fiscal Year 2012-2013.

Tasks

In cooperation with the Workgroup, staff will complete the following tasks to support the development of a Drinking Water Policy:

1. Coordinate with all interested stakeholders through the Workgroup to develop a Basin Plan Amendment and accompanying Resolution and Staff Report to protect drinking water.
2. Perform technical analysis to support consideration of a new narrative water quality objective for pathogens, *Cryptosporidium* and *Giardia*, to protect all beneficial uses.
3. Assess status of ongoing planning efforts relevant to drinking water in the Delta and its tributaries.
4. Present Basin Plan Amendment to the Central Valley Water Board for Approval

1. Coordinate with all interested stakeholders through the Workgroup to develop a Basin Plan Amendment and accompanying Resolution and Staff Report to protect drinking water.

The Implementation chapter of the current Basin Plan includes a number of Policies and Plans adopted by the State Water Board (IV – 8.00) and the Central Valley Water Board (IV – 14.00). Staff will work with the Workgroup to develop a Drinking Water Policy to be included in the appropriate Chapters of the Basin Plan. Staff will meet regularly with the Workgroup for the duration of the project to discuss technical and policy-related issues.

Staff will work with the Workgroup to summarize the technical work completed to support the Drinking Water Policy for inclusion in the Resolution and Staff Report to accompany the Basin Plan Amendment. Staff will further coordinate with the Workgroup to develop language to be included in the Drinking Water Policy. The Drinking Water Policy may include new narrative objectives, clarifications of existing narrative objectives, a statement regarding the importance of a multi-barrier approach to drinking water protection, a summary of Workgroup findings, and a summary of existing Basin Plan elements that address drinking water. Staff will draft a Staff Report to support the Policy and develop other documentation as necessary to act as the Substitute Environmental Documentation as required by the Water Board's Certified Regulatory Program Regulations (23 CCR § 3777). Staff will also ensure that the Drinking Water Policy complies with the federal and state Antidegradation Policies. Staff will also coordinate with the Workgroup to identify appropriate monitoring program elements to support the Drinking Water Policy.

Expected Completion: Ongoing for duration of project – Projected project end date July 2013

2. Perform Technical analysis to support consideration of a new narrative water quality objective for pathogens, *Cryptosporidium* and *Giardia*, to protect all beneficial uses.

The Central Valley Water Board has the authority to adopt water quality objectives, and develop implementation plans, under California Water Code Sections 13240, 13241, and 13242. To develop a new water quality objective the Central Valley Water Board must consider the following factors (CWC 13241):

- Past, present, and probable future beneficial uses of water.
- Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
- Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
- Economic considerations.

- The need for developing housing within the region.
- The need to develop and use recycled water.

In developing an accompanying implementation plan for achieving water quality objectives, the Central Valley Water Board must consider the following(CWC 13242):

- A description of the nature of actions which are necessary to achieve the objective, including recommendations for appropriate action by any entity, public or private.
- A time schedule for the actions to be taken.
- A description of surveillance to be undertaken to determine compliance with the objective.

Staff will coordinate with the Workgroup to determine the feasibility of the new water quality objective for the pathogens *Cryptosporidium* and *Giardia*. Staff, in cooperation with the Workgroup, will consider all available information collected to date to complete the analyses required by the California Water Code. These efforts may include:

- Consideration of concurrent Basin Planning efforts to modify existing beneficial uses of water bodies.
- Assess the current state of knowledge about the pathogens *Cryptosporidium* and *Giardia*. These pathogens were not modeled with the other drinking water constituents of concern by the Workgroup. Staff, in cooperation with the Workgroup, will consider available data and literature, including the Pathogen Conceptual Model developed for the Workgroup in 2007, to support the possible development of a new narrative water quality objective for the pathogens *Cryptosporidium* and *Giardia*.
- Evaluation of costs and efficiencies of management practices to control discharges of the pathogens *Cryptosporidium* and *Giardia*.

In developing potential new water quality objectives or clarifying existing water quality objectives, staff will coordinate with the Workgroup to also develop language governing the implementation of the new or modified water quality objectives.

Expected Completion: April 2012

3. Assess status of ongoing planning efforts relevant to drinking water in the Delta and its tributaries.

Staff and the Workgroup recognize multiple ongoing planning efforts to address drinking water constituents of concern in the Delta and its tributaries. The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS)

effort is addressing salinity and nitrate problems in the Central Valley. The State Water Board has undertaken efforts to address both nutrients and constituents of emerging concern (CEC). With the support of US EPA, the State Water Board is working to develop nutrient numeric endpoints (NNE) to regulate nutrient levels in the State's waters, with the primary goal of maintaining nutrient levels that support the health of aquatic systems. The nutrient numeric endpoints are also intended to limit excessive growth of macrophytes or phytoplankton, potentially harmful algal blooms leading to oxygen declines, imbalance of aquatic species, potential impacts to municipal and domestic supplies, and a general decline in aquatic resources. In accordance with the Recycled Water Policy, the State Water Board has established an Advisory Panel to address questions about regulating CECs. The Panel's primary charge is to provide guidance for developing monitoring programs that assess potential CEC threats from various water recycling practices, including groundwater recharge/reuse and urban landscape irrigation.

The proposed Drinking Water Policy will not address salinity, nutrients, or constituents of emerging concern directly. The broader CV-SALTS and NNE efforts will include provisions to protect the municipal and domestic beneficial use. The Recycled Water Policy's Advisory Panel on CECs will help with future efforts to address CECs in drinking water. Staff will monitor these planning efforts and include a summary of progress to date in the Staff Report accompanying the Basin Plan Amendment.

Expected Completion: Ongoing for duration of project – Projected project end date July 2013

4. Present Basin Plan Amendment to the Central Valley Water Board for Approval

1. Submit draft Basin Plan Amendment (BPA) and Staff Report for Workgroup review. The work conducted under this Workplan tasks will be used to develop these documents.

Expected Completion: April 2012

2. External scientific peer review of BPA and Staff Report (if needed). Staff will respond to comments.

Expected Completion: December 2012

3. Distribute BPA, Staff Report and Substitute Environmental Documentation (SED) for 45-day public comment. Also, provide the notice of public hearing. This step begins the formal public comment period.

Expected Completion: February 2013

4. Respond to public comments.

Expected Completion: May 2013

5. Prepare for Central Valley Water Board Meeting and distribute response to comments.

Expected Completion: May 2013

6. Central Valley Water Board Meeting to consider adoption of BPA.

If adopted, then the amendment must be approved by the State Water Board, the Office of Administrative Law and U.S. EPA. If not adopted, staff could be redirected to revise aspects of the project or abandon the project.

Expected Completion: July 2013

If approved, then:

7. Assemble administrative record.

In practice, assembling the administrative record occurs concurrently with the other steps. The administrative record must be indexed, in chronological order, fully paginated, and include, at a minimum:

- Copies of all hearing notices and notices of filing, signed and dated;
- Draft and final staff report(s) including rationale for any changes between version of the reports;
- The completed CEQA checklist;
- Documentation of peer review, including all correspondence, peer reviewers' comments and staff responses;
- Copies of written public comments and written responses;
- Board Hearing and Meeting agendas;
- Hearing agenda items (summary, draft resolution and amendment, attachments, etc.);
- Copies of all hearing exhibits, by staff or the public;
- Direct transcript, or electronic recording and transcription of the electronic recording of the adoption hearing and any additional Board meetings;
- Typed interested parties lists;
- Copies of all documents that were relied on by the Board in adoption of the amendment. If only a portion of the document is relevant to the case, such as an article in a scientific journal, only the relevant portion, along with the title page, need be included. A document was relied on if you would want it to be available in court to support the amendment;
- The amendment as adopted; and
- The signed resolution.

Schedule for Draft Policy Workplan

Task	Expected Completion Date
1. Coordinate with all interested stakeholders through the Central Valley Drinking Water Workgroup to develop a Basin Plan Amendment with accompanying Resolution and Staff Report to protect drinking water.	<i>Ongoing for duration of project – Projected project end date July 2013</i>
2. Technical analysis to support consideration of a new narrative water quality objective for pathogens, <i>Cryptosporidium</i> and <i>Giardia</i> , to protect all beneficial uses.	<i>April 2012</i>
3. Assess status of ongoing planning efforts relevant to drinking water in the Delta and its tributaries.	<i>Ongoing for duration of project – Projected project end date July 2013</i>
4. Present Basin Plan Amendment to the Central Valley Water Board for approval	July 2013