



## Central Valley Regional Water Quality Control Board

### The 2013 Joint Triennial Review of the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin

To meet requirements of the Federal Clean Water Act section 303(c) and Water Code section 13240, the Central Valley Regional Water Quality Control Board (Regional Water Board) reviews the water quality standards contained in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and in the Water Quality Control Plan for the Tulare Lake Basin (Basin Plans) every three years. The Basin Plans are the foundation for the Regional Water Board's water quality regulatory programs. The Basin Plans designate beneficial uses for both surface and ground water bodies in the Central Valley, establishes water quality objectives to protect those beneficial uses, contains implementation plans that describe the actions necessary to achieve water quality objectives, and describes the surveillance and monitoring activities needed to determine regulatory compliance and assess the health of the Basins' water resources. While the triennial review is used to direct the Regional Water Board's basin planning activities, it is not the venue to amend the basin plan.

The Triennial Review consists of solicitation for comments on water quality issues in the Central Valley that may need to be addressed through basin plan amendments and preparing a work plan for each Basin Plan which describes the actions the Regional Water Board may take over the next three years to investigate and respond to the issues. The solicitation includes holding public workshops to receive verbal comments. After public input is received, the Regional Water Board develops and adopts by resolution a priority list of potential issues that may result in basin plan amendments. The priority list is used to direct basin planning efforts over the next three years. Implementation of the work plan depends upon the Regional Water Board's program priorities, resources, and other mandates and commitments. Crucial to successful implementation of the actions is adequate support of the Regional Water Board's basin planning activities.

The list of issues far exceeds the staff resources allocated to planning activities. Existing resources only allow a small portion of the highest priority issues to be addressed. By prioritizing the activities, the Regional Water Board identifies unfunded issues that the Regional Water Board will actively seek funding and will accept funding to accomplish. Attachments 1A and 1B summarize the status of the high priority issues from the last Triennial Reviews.

One of the primary goals of the federal Clean Water Act is that navigable water bodies should have sufficient water quality to provide for the protection and propagation of fish, shellfish, and wildlife, and to provide for recreation in and on the water. Pursuant to 40 Code of Federal Regulations section 131.20, water bodies that do not meet this goal must be evaluated as part of a periodic review process to determine whether those uses are attainable. Therefore, for any water body which is not designated with these uses, the Regional Water Board invites new information that indicates whether or not these uses are attainable.

For the 2013 Triennial Review, the Regional Water Board will hold two public workshops. The workshops are scheduled for 24 October 2012 in Fresno and either 5, 6 or 7 December 2012 in Rancho Cordova. The Rancho Cordova workshop will be held as part of the regularly scheduled Board meeting. Regional Water Board members will be conducting both workshops but no action will be taken on the Triennial Review during these workshops. The Board may provide direction to staff at either workshop.

Since the reviews of both Basin Plans are occurring concurrently, the public may provide comments on either Basin Plan at either of the public workshops. Written comments for either Basin Plan will be accepted at the Fresno or Rancho Cordova office. Staff will compile comments into the appropriate Basin Plan. Comments applicable to both Basin Plans will be included in the record for each Basin Plan. In the comments, please provide a detailed description of the issue, a brief statement of reasons for the addition or deletion of an issue, and recommendation on the priority that should be given to that particular issue. Attachment 2 contains an outline of the information submittal.

## **ATTACHMENT 1A**

### **Sacramento River and San Joaquin River Basins**

The following is the status of the high priority issues identified in the last Triennial Review (Resolution No. R5-2011-0074):

#### **Issue 1: Salt and Nitrate Management for Surface and Ground Waters**

**Description:** Salt management is the most serious long-term water quality issue in the Sacramento and San Joaquin River Basins. More salt enters than leaves the San Joaquin River Basin resulting in unavoidable degradation of groundwater. Without a plan to remove salts from the basin the degradation will continue. The Sacramento River Basin receives sufficient precipitation to supply the water needs of the area as well as dilute the majority of salinity impacts. However, some problem areas have been identified and a portion of the salts originating in the waters of the Sacramento River watershed eventually reach the Delta pumps and contribute to salinity problems in the San Joaquin Valley and other regions of the State. In addition, large areas, primarily on the eastern side of the San Joaquin River Basin are experiencing elevated levels of nitrate in the groundwater with many supply wells exceeding the primary MCL for nitrate as nitrogen (10-mg/L) for the protection of drinking water supplies.

**Status:** During this Triennial Review period, the Central Valley Water Board and the State Water Board, as part of a stakeholder effort, are developing a comprehensive salt and nitrate management plan for the Central Valley. The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a strategic initiative to address problems with salinity and nitrates in the surface waters and ground waters of the Central Valley. CV-SALTS will include basin plan amendments that establish regulatory structure and policies to support basin-wide salt and nitrate management. The regulatory structure will have five key elements: (1) refinement of the agricultural supply (AGR), municipal and domestic supply (MUN) and groundwater recharge (GWR) beneficial uses; (2) revision of water quality objectives for these uses; (3) establishment of policies for assessing compliance with the beneficial uses and water quality objectives; (4) establishment of management areas where there are large scale differences in baseline water quality, land use, climate conditions, soil characteristics and existing infrastructure and where short and long term salt and/or nitrate management is needed; and (5) an overarching framework to provide consistency for the development of management plans within the management areas to facilitate implementation efforts and insure a sustainable future. For the Sacramento River and San Joaquin River Basins, CV-SALTS plans to implement pilot projects to: assess MUN in the receiving waters characterized as agricultural drains and agriculturally dominated water bodies for the Cities of Willows, Colusa, Live Oak and Biggs in order to provide a case study for potential beneficial use refinement and development of appropriate objectives; and revise salt and boron water quality objectives in the San Joaquin River and develop an implementation program to insure the objectives are met.

Staff has also started working on a variance policy to provide controlled exceptions from meeting water quality based effluent limits for salinity constituents until the Central Valley Salt and Nitrate Management Plan is adopted. The variance will help provide a regulatory atmosphere that is conducive for dischargers to participate in CV-SALTS and insure that ultimate regulatory requirements are consistent with the sustainable policy.

## **Issue 2: Effluent Dominated Water bodies**

**Description:** Effluent dominated water bodies are either ephemeral or low-flowing streams that are predominately made up of municipal and/or industrial wastewater for all or part of a year. Since such water bodies have limited dilution available, permit requirements are typically more stringent for discharges to such water bodies in order to protect beneficial uses and comply with objectives. Issues include the determination of appropriate beneficial uses and water quality objectives for these water bodies and costs of compliance.

**Status:** During this Triennial Review period, as part of CV-SALTS (see Issue 1), staff has started work on assessing the municipal and domestic supply beneficial use (MUN) in receiving waters characterized as agriculturally dominated water bodies for the Cities of Willows, Colusa, Live Oak and Biggs. A similar effort has not been initiated for effluent dominated water bodies. Stakeholders have requested that effluent dominated water bodies be included in the effort to assess the beneficial uses of agriculturally dominated water bodies.

---

## **Issue 3: Agricultural Dominated Water bodies**

**Description:** In agricultural environments, a complex network of modified natural and constructed channels convey irrigation supplies to farms and export agricultural drainage water to natural streams. Stakeholders have commented that fully protecting all the designated beneficial uses would result in loss of the agricultural functionality of the water body. Strategies and policies are needed to provide appropriate protection for these water bodies.

**Status:** During this Triennial Review period, as part of CV-SALTS (see Issue 1), staff has started work on re-evaluation of beneficial uses and water quality objectives for agricultural water bodies.

---

#### **Issue 4: Beneficial Use Designations**

**Description:** Where the Central Valley Water Board has evidence that a beneficial use neither exists nor likely can be feasibly attained, the Central Valley Water Board must initiate appropriate basin plan amendments to consider dedesignating the beneficial use.

**Status:** During this Triennial Review period, as part of CV-SALTS (see Issue 1), staff has started work on assessing the municipal and domestic supply beneficial use (MUN) in the receiving waters characterized as agricultural drains for the Cities of Willows, Colusa, Live Oak and Biggs; and re-evaluation of beneficial uses and water quality objectives for agricultural water bodies. In addition, staff has also been working with the Meridian Beartrack Company to evaluate groundwater beneficial uses at the Royal Mountain King Mine site in Calaveras County.

---

#### **Issue 5: Delta Issues**

**Description:** Staff from the Central Valley, San Francisco Bay and State Water Boards formed a Bay-Delta Team to coordinate activities to protect the beneficial uses of the Bay-Delta. The three Water Boards adopted resolutions supporting short-term and long-term actions to protect beneficial uses in the Bay-Delta, and then adopted the June 2008 Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Strategic Workplan). As the Bay-Delta Team implements the Strategic Workplan, it may become necessary to amend the Basin Plan to address specific issues.

**Status:** During this Triennial Review period, the Bay-Delta Team, in cooperation with multiple agencies and interested stakeholders, has been evaluating the role of ammonia on the Sacramento-San Joaquin Delta and Suisun Bay ecosystem. Recent studies and analysis indicate ammonia may be impacting Delta species. The Delta Stewardship Council's Delta Plan includes recommendations to the Water Boards to develop and implement nutrient criteria for the Delta. Staff has started developing plans to determine current water quality conditions and to evaluate what role nutrients play in determining algae species and abundance.

---

#### **Issue 6: Dissolved Oxygen Problems in the San Joaquin River near Stockton**

**Description:** Low dissolved oxygen concentrations in the San Joaquin River in the vicinity of Stockton annually impact or threaten to impact beneficial uses. Low dissolved oxygen levels can kill or stress salmon and other species present in this portion of the Delta. The San Joaquin River is on the Clean Water Act section 303(d) list of impaired

water bodies due to low dissolved oxygen. In addition, this part of the Delta was listed as a Toxic Hot Spot under the Bay Protection and Toxic Cleanup Program and a Cleanup Plan was adopted to address this issue. The magnitude and frequency of the dissolved oxygen problem has decreased with improvements to the Stockton Wastewater Treatment Facility, but periodic low dissolved oxygen problems continue.

**Status:** During this last Triennial Review period, staff has been working with interested parties to implement the control program to achieve dissolved oxygen objectives in the Stockton Deep Water Ship Channel. Funding was found for the long term operation of an aerator for the Port of Stockton which was a key part of the control program. For other water bodies in the south Delta, studies indicate that the low dissolved oxygen is most likely due to excess loadings of oxygen demanding substances, including excess nutrients. The issue of nutrients in the Delta is being addressed in Issue 5.

---

#### **Issue 7: Pesticide Control Efforts**

**Description:** Various pesticides have been detected at toxic levels in the Sacramento River and San Joaquin River Basins. Pesticides of concern are organochlorine (OC) pesticides in water column, sediment and biota; the organophosphorus (OP) pesticides diazinon and chlorpyrifos in surface water bodies, and replacement products such as pyrethroids.

**Status:** During this last Triennial Review period, staff has been working on a basin-wide diazinon and chlorpyrifos control program.

---

#### **Issue 8: Mercury Load Reduction Program**

**Description:** Mercury is a problem in waterways because it accumulates in aquatic organisms to levels that pose a threat to predator species and people that eat fish. Elevated mercury levels can be expected in areas where mercury was mined (Coast Range), where mercury was used to extract gold (Sierra Nevada and Cascade Range), and in downstream water bodies. Because of elevated mercury levels in fish tissue, numerous water bodies, including the Delta, have been included on the Clean Water Act section 303(d) list of impaired water bodies. The Clean Water Act requires that states establish total maximum daily load limits (TMDL) for section 303(d) listed water bodies. Health advisories have been issued for the Delta, the Lower American River, Lake Natoma, and other water bodies in the Central Valley due to mercury levels in fish.

**Status:** During this last Triennial Review period, a mercury control program for the Sacramento-San Joaquin Delta waterways was approved and went into effect. Staff started working on a mercury control program for the American River but that effort was rolled into the larger statewide effort to develop a mercury control program for reservoirs throughout the State.

---

**Issue 9: Drinking Water Policy**

**Description:** The Central Valley waters provide drinking water supplies to more than 65 percent of California's population so there is a need to update the Basin Plan drinking water policy to assure the reasonable protection of Central Valley source water. In 2004, the Regional Water Board resolved to develop a drinking water policy based on the best available science that is cost-effective and feasible to implement. In 2010, the Regional Water Board resolved to bring a final drinking water policy to the Board in three years.

**Status:** During this Triennial Review period, staff worked with stakeholders to summarize the activities of the Workgroup and to develop basin plan amendment language and a staff report to support the amendments.

**Issue 10: Protection of Central Valley Fisheries and other Aquatic Life**

**Description:** Concerns have been expressed that the water quality objectives for dissolved oxygen and temperature do not provide adequate protection for aquatic life, particularly salmonids. Concerns have also been expressed that the aquatic life beneficial use designations are incorrect or need to be refined to more accurately reflect the appropriate aquatic life that are expected to be present in appropriately sized stream reaches.

**Status:** During this Triennial Review period, no activity was conducted on this issue.

---

**Issue 11: Secondary MCLs as Water Quality Objectives**

**Description:** Stakeholders have requested that the use of secondary MCLs as water quality objectives to protect the municipal and domestic supply beneficial use (MUN) be re-evaluated.

**Status:** During this Triennial Review period, CV-SALTS has begun review of the use of secondary MCLs as water quality objectives as related to key salinity constituents. The project has developed a white paper reviewing criteria utilized to evaluate effects of salinity on municipal and domestic supply and has used the white paper as the basis for policy discussions on various narrative and numeric replacements for the secondary MCLs. It is anticipated that the final Salt and Nitrate Management Plan proposed by CV-SALTS will contain recommendations for revised salt objectives to be utilized for the protection of MUN.

## **ATTACHMENT 1B Tulare Lake Basin**

The following is the status of the high priority issues identified in the last Triennial Review (Resolution No. R5-2010-0023):

### **Issue 1: Salt and Nitrate Management Plan**

**Description:** Elevated salinity and nitrates in surface and ground waters in California's Central Valley is an increasing problem affecting much of California. As surface and ground water supplies become scarcer, and as wastewater streams become more concentrated, salinity and nitrate impairments are occurring with greater frequency and magnitude.

**Status:** During this Triennial Review period, the Central Valley Water Board and the State Water Board, as part of a stakeholder effort, are developing a comprehensive salt and nitrate management plan for the Central Valley. The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a strategic initiative to address problems with salinity and nitrates in the surface waters and ground waters of the Central Valley. CV-SALTS will include basin plan amendments that establish regulatory structure and policies to support basin-wide salt and nitrate management. The regulatory structure will have five key elements: (1) refinement of the agricultural supply (AGR), municipal and domestic supply (MUN) and groundwater recharge (GWR) beneficial uses; (2) revision of water quality objectives for these uses; (3) establishment of policies for assessing compliance with the beneficial uses and water quality objectives; (4) establishment of management areas where there are large scale differences in baseline water quality, land use, climate conditions, soil characteristics and existing infrastructure and where short and long term salt and/or nitrate management is needed; and (5) an overarching framework to provide consistency for the development of management plans within the management areas to facilitate implementation efforts and insure a sustainable future. For the Tulare Lake Basin, CV-SALTS plans to implement pilot projects to demonstrate refinement of beneficial uses in the groundwater in the Tulare Lake Bed; beneficial uses and water quality objectives for agricultural water bodies; and development of a management plan to assist areas with inadequate economic capacity to address high levels of nitrate contamination in drinking water.

Staff has also started working on a variance policy to provide controlled exceptions from meeting water quality based effluent limits for salinity constituents until the Central Valley Salt and Nitrate Management Plan is adopted. The variance will help provide a regulatory atmosphere that is conducive for dischargers to participate in CV-SALTS and insure that ultimate regulatory requirements are consistent with the sustainable policy.

---

## **Issue 2: Beneficial Use Designations**

**Description:** Where the Central Valley Water Board has evidence that a beneficial use neither exists nor likely can be feasibly attained, the Central Valley Water Board must initiate appropriate basin plan amendments to consider de-designating the beneficial use.

**Status:** CV-SALTS has identified the need to evaluate the appropriate beneficial uses in agriculturally dominated water bodies. Central Valley Water Board staff is working in conjunction with CV-SALTS to evaluate the agricultural dominated water bodies and focus on determining the appropriate beneficial uses for all agricultural dominated water bodies. Staff is also working with CV-SALTS to evaluate the beneficial uses for ground water beneficial uses in the Tulare Lakebed.

---

## **Issue 3: Groundwater Assessment and Control Programs**

**Description:** The Basin Plan describes various groundwater quality problems that exist throughout the region and includes numerous policies that address prevention and cleanup of groundwater quality problems. The Tulare Lake Basin is a closed basin and degradation of groundwater by salts is unavoidable without a plan for removing salts from the basin. The Basin Plan recognizes the solution is to manage the rate of degradation by minimizing the salt loads to the groundwater body. A major effort is needed to assess the current conditions, determine the factors contributing to present groundwater impacts, and develop policies that can be used to correct existing problems and prevent future problems.

**Status:** During this Triennial Review period, the Central Valley Water Board approved a Groundwater Quality Protection Strategy or “Roadmap” with Resolution No. R5-2010-0095. The Roadmap identifies current and future actions to protect groundwater quality, abate degradation, and improve and restore water quality in Central Valley groundwater. Almost all identified current and future actions can be implemented through the existing programmatic structure of the Central Valley Water Board and through improved partnerships with other agencies or organizations. The only basin planning actions identified in the Roadmap are the CV-SALTS efforts and the policy for onsite waste water treatment facilities as basin planning priorities. These efforts are included in Issue No. 1 (Salt and Nitrate Management Plan) and the State Water Board recently adopted regulations for the operation of onsite wastewater treatment systems.

## ATTACHMENT 2

Comments should include the following information, as appropriate:

1. **Submitting Organization:** Provide the name of the organization, entity or person submitting the data, information, documents or evidence for consideration.
2. **Contact Person:** Provide the name, address, phone number(s), and e-mail address for the contact person that can answer questions about the information provided.
3. **Affected Waterbody(ies) and Watershed(s):** Identify the specific waterbody(ies) and watershed(s) affected by the data, information or evidence.
4. **Affected section of the Basin Plan:**
  - a. **Affected Beneficial Use:** If applicable, identify the beneficial use(s) listed in the Basin Plan that is addressed by the data, information or evidence. Alternatively, if the information relates to a beneficial use not currently designated in the Basin Plan, identify the waterbody(ies) to which the beneficial use(s) should apply.
  - b. **Affected Water Quality Objective:** If applicable, identify the water quality objective for which the data, information, or evidence is being submitted. If the data, information, or evidence relates to more than one water quality objective, please list all water quality objectives to which the information pertains.
  - c. **Affected Implementation Program:** If applicable, identify the existing implementation program that needs modification or a description of a new implementation program that should be developed. Implementation programs include any necessary monitoring and surveillance to determine the effectiveness of the implementation program.
5. **Concise Summary of Suggested Revisions:** Describe the suggested basin plan amendments based upon the data, information or evidence submitted.
6. **Supporting Data, Information or Evidence:** For each comment, list any existing documents, data, information, and/or specific evidence (with references to particular pages as appropriate) that the Regional Water Board should consider and provide copies of the documents, data, information, and/or evidence referenced (electronically, where possible).

7. Concise Summary of Data, Information or Evidence: Describe in one or two sentences the essence of the data, information, or evidence submitted to support the suggested revisions to the Basin Plan.
8. Stakeholder Support for Suggested Revisions to the Basin Plan: If applicable, please explain any widespread stakeholder support for the suggested revisions. Also, if available, please list supportive stakeholder(s) with phone or email contact(s).
9. Financial Support for Suggested Revisions to the Basin Plan: If applicable, please describe any substantial resources that have been invested in developing technical information to support the requested revisions. Also, if applicable, please describe any substantial resources that are likely to augment Regional Water Board resources to develop the requested revisions.
10. Any additional information that the Regional Water Board should consider.