

**Technical Advisory Committee
AGENDA**

**Wednesday, April 6th 2011
From 1:30 PM to 3:00 PM**

Teleconference Dial (218) 339-4600 Code: 927571#

1. Welcome and Introductions 5 min
2. [Lower San Joaquin River Committee Letter](#) 30 min
Dennis to introduce, Action: Discuss letter and provide direction next steps
3. [Lower San Joaquin River Committee Project Request](#) 40 min
Dennis to introduce, Action: Recommendations to the LSJR and Executive Committees
4. Committee's Discussion on Technical Project Manager Needs 15 min
5. Adjourn and set next meeting _____ if needed 5 min

Mission of the CVSLG:

The mission of the Central Valley Salinity Leadership Group is to work closely, in a collaborative manner to create a comprehensive Central Valley Salinity Management Plan.

Mission of the CVSLG Technical Advisory Committee:

The mission of the Technical Advisory Committee is to provide guidance and direction for the ongoing compilation and management of data, studies and technical information needed to develop a comprehensive Central Valley Salinity Management Plan.

Lower San Joaquin River Committee of CV-SALTS



10 December 2010

Mona Shulman, Chair
Executive Committee
CV-SALTS
c/o Pacific Coast Producers
631 N Cluff Avenue
Lodi, CA 95240-0756

SUBJECT: RECONSIDERATION OF BENEFICIAL USE DESIGNATIONS

As part of its effort to prepare a Basin Plan Amendment for establishing water quality objectives for salinity and boron, the Lower San Joaquin River (LSJR) Committee of CV-SALTS conducted a preliminary review of present designations of beneficial use for the San Joaquin River from Mendota Dam to Vernalis. The LSJR Committee identified two (2) designations that need further analysis to determine whether a change in designation is warranted. After discussion, it was decided that the LSJR Committee would prepare the necessary background documents to determine the appropriateness of the designation for Municipal and Domestic Supply (MUN) and for Industrial Process Supply (PROC). Please find attached to this letter a brief explanation of the two designations the LSJR Committee has committed to reviewing (Attachment).

We would appreciate the Executive Committee concurrence that the LSJR Committee should undertake a review of the designations for MUN and PROC. The extent of our review of the MUN designation will depend on advice received from the questions the LSJR Committee is posing to legal counsel at the State Water Resources Control Board. The questions deal with flexibility available under the Sources of Drinking Water Policy (SWRCB Resolution 88-63). The LSJR Committee will consider this advice in developing a work plan for the designation review.

If you have any questions regarding this request, please contact Dennis Westcot at (530) 758-8633.

A handwritten signature in black ink that reads 'Dennis Westcot' with a long horizontal flourish extending to the right.

Dennis W. Westcot
Co-Chair
Lower San Joaquin River
Committee of CV-SALTS

A handwritten signature in blue ink that reads 'David Cory' in a cursive style.

David Cory
Co-Chair
Lower San Joaquin River
Committee of CV-SALTS

cc: Daniel Cozad, Executive Director, CV-SALTS (*sent via electronic mail*)

**Beneficial Use Designations for Review by the Lower San Joaquin River
Committee
(FOR DISCUSSION ONLY)**

**Reconsider Municipal and Domestic Supply (MUN) as a Potential
Beneficial Use**

Designation Needing Review: Municipal and Domestic Supply (MUN) is designated as a potential beneficial use of the San Joaquin River for the reaches from the Mendota Dam to Vernalis (Mendota Dam to Sack Dam, Sack Dam to Mouth of Merced River and Mouth of Merced River to Vernalis). Information presented shows the potential beneficial use (P) designation for MUN for the Lower San Joaquin River from the Mendota Dam to Vernalis may not exist or have the potential to exist.

Preliminary Information Available to the LSJR Committee:

- Flow in the San Joaquin River from the Mendota Dam to Vernalis is highly regulated and made up primarily of operational releases for irrigation use, groundwater accretions from poor quality groundwater and agricultural return flows of varying quality (RWQCB Salt and Boron TMDL Staff Report);
- River flow in this reach is highly variable and may not provide sufficient volume for municipal or domestic supply;
- Surveys of this River reach in 1950, 1975 and again in 1985 showed that no municipal or domestic supply use or diversions were being made;
- There are no known water right permits or applications pending for municipal or domestic supply use;
- This River reach may be over appropriated at the present time and unlikely that any new use would be permitted;
- New flow requirements for Delta restoration may make new or expanded water right permits on the San Joaquin River unlikely;
- Even though the beneficial use has been listed as “potential” for almost 40 years, there is no known record of an entity or a plan in the works for such a use;
- The State Water Board’s WQ 85-1 Technical Committee did a complete review of beneficial use on the San Joaquin River in 1985 from the Salt Slough inflow to Vernalis. This Committee reported that no municipal or domestic supply uses existed and such a use was unlikely and therefore the designation should be considered for removal from the Basin Plan; and
- The California Department of Public Health, which regulates municipal and domestic water supply systems, has stated in correspondence to Stanislaus County Department of Environmental Health that they will not permit a municipal or domestic use of the Lower San Joaquin River under any conditions.

Impact from Salinity: When evaluated against MCL's for salt in drinking water as established by the California Department of Public Health, the MUN beneficial use would be impacted by the salinity levels presently found in the Lower San Joaquin River.

Conduct a Survey to Determine if the Industrial Process Supply (PROC) Beneficial Use Exists

Designation Needing Review: Industrial Process Supply (PROC) is designated as an existing (E) beneficial use for the entire Lower San Joaquin River from Mendota Dam to Vernalis. Information available to the LSJR Committee shows that use of the Lower San Joaquin River for industrial processing may not be an existing use. A survey of the River needs to be conducted to determine if PROC is an existing (E) beneficial use, only exists as a potential (P) or limited (L) use or should be de-designated as a beneficial use.

Preliminary Information Available to the LSJR Committee:

- Flow in the San Joaquin River from the Mendota Dam to Vernalis is highly regulated and made up primarily of operational releases for irrigation use, groundwater accretions from poor quality groundwater and agricultural return flows of varying quality (RWQCB Salt and Boron TMDL Staff Report);
- River flow in this reach is highly variable and may not provide sufficient volume for an industrial supply source;
- Surveys of this River reach in 1950, 1975 and again in 1985 showed that no such uses or diversions were being made of the River for industrial process supply although none of these surveys confirmed whether incidental use is being made as part of the agricultural harvest and processing;
- There are no known water right permits or applications pending for industrial process supply use;
- This River reach may be over appropriated at the present time and unlikely any new use would be permitted;
- New flow requirements for Delta restoration may make new or expanded water right permits on the San Joaquin River unlikely; and
- Even though the beneficial use has been listed as "existing" for almost 40 years, the two known processing plants along the river have been out of business for decades and the sites have been removed or are abandoned and there is no known plan in the works to restore these sites.

Impacted from Salinity: This beneficial use may be impacted by salinity changes as each industrial process may require different water quality needs.

Lower San Joaquin River Committee of CV-SALTS



12 January 2011

Mona Shulman, Chair
Executive Committee
CV-SALTS
c/o Pacific Coast Producers
631 N. Cluff Avenue
Lodi, CA 95240-0756

SUBJECT: NEED FOR WATER QUALITY CRITERIA INFORMATION

As part of our effort to prepare a Basin Plan Amendment for establishing water quality objectives for salinity and boron, the Lower San Joaquin River (LSJR) Committee of CV-SALTS conducted an initial review of two draft reports on water quality criteria for boron and salinity. These two reports were prepared by staff of the Regional Board in the late 1990s however neither were subjected to public or peer review. These two reports, along with water quality criteria for crop tolerance and drinking water supplies were to serve as the baseline scientific criteria for recommending water quality objectives.

The LSJR Committee feels that additional work to update the two draft Regional Board staff reports is needed. These reports need to be updated into a form that can undergo public and peer review. They are not in that form at the present time. Unfortunately, the LSJR Committee does not have funding available to complete such work. The CAA funding made available to the LSJR Committee does not allow expenditures for such a review. This conclusion is based on the resolution approving the funds by the State Water Board.

The two reports were initially developed for the establishment of water quality objectives on the Lower San Joaquin River; however the information within them will be useful to all the efforts within the Central Valley and thus the entire CV-SALTS effort. It seems prudent and more cost effective if the effort to update these two reports was done under the broader CV-SALTS umbrella rather than only in the LSJR Committee. We would hope this effort could be directly managed by the CV-SALTS Technical Committee with a defined completion date to enable the LSJR Committee to complete its work in a timely manner.

We would appreciate the Executive Committee concurrence that the Technical Committee should undertake and manage a review of scientific water quality criteria for boron and salinity for selected beneficial uses. The uses most critical to the LSJR Committee would be fish and other aquatic life uses, wildlife uses including waterfowl, and non-irrigation agricultural uses such as stock watering and animal drinking water. The LSJR Committee feels that the animal drinking water evaluation will also provide valuable information for wildlife as it may have similar tolerances. In the absence of other information, the LSJR Committee would assume any findings for animal drinking water would apply to wildlife as well.

Lower San Joaquin River Committee of CV-SALTS

A recent review of criteria for human health and drinking water uses (both municipal and domestic) was recently conducted as part of the development of a drinking water policy and the LSJR Committee has reviewed this work and feels this recent analysis is sufficient for the CV-SALTS effort and should not be repeated.

The remaining water quality criteria need is for irrigated agriculture. The present Crop Tolerance study that was conducted by Regional Board staff is not completed. The LSJR Committee members will be reviewing this document at a future meeting to determine what additional work is needed to complete this study. We will consult with you and the Technical Committee on how best to complete this study.

Fortunately many of the references that were used in the original draft Regional Board staff reports on salinity and boron are still available and we can arrange with the Regional Board to make copies of those available to who ever conducts the update study.

To assist in implementation of an updated review, LSJR Committee members have prepared an initial draft scope of work for both the wildlife and aquatic life use and the animal drinking water reviews (Attachment #1 and #2, respectively). These would be needed by the Technical Committee to initiate, manage and conduct the study suggested above.

The LSJR Committee has made an estimate of the cost to conduct the animal drinking water evaluation at \$29,000 and the aquatic life criteria evaluation at a level likely twice that of the animal drinking water evaluation. A more accurate estimate could be obtained during the RFP process used by the Technical Committee.

If you have any questions regarding this request, please contact Dennis Westcot at (530) 758-8633.



Dennis W. Westcot
Co-Chair
Lower San Joaquin River
Committee of CV-SALTS



David Cory
Co-Chair
Lower San Joaquin River
Committee of CV-SALTS

cc: Daniel Cozad, Executive Director, CV-SALTS (*sent via electronic mail*)

Central Valley Salinity Coalition (CVSC)
Evaluation of Wildlife and Aquatic Life Water Quality Criteria for
Salinity and Boron
Exhibit 1
Scope of Work
10 December 2010

The objective of this project is for the CVSC to hire an entity (herein referred to as Consultant) to identify 1) water quality criteria that could be used to establish water quality objectives and 2) water quality objectives, standards, goals, and policies that have been established to protect wildlife (WILD) and aquatic life beneficial uses (BIOL, Freshwater Habitat/WARM, COLD). The Consultant will accomplish these objectives through literature and internet searches and through interviews with resource management specialists and university researchers in California, other states, and if needed, other countries. Once Tasks 1 - 5 are completed, the consultant will present the results to a CV-SALTS Technical Work Group before work is initiated on Task 6. For each of the tasks, a reference list will be prepared and provide to the CVSC along with a copy of each reference listed. Task 6 will be further defined in conjunction with the Technical Work Group after completion of Tasks 1 through 5.

**Task 1 Review California Regional Water Board Basin
Plans and Policies**

The objective of this task is to determine if any of the nine Regional Water Boards have adopted numerical or narrative objectives with translators for protection of wildlife and aquatic life beneficial uses for the constituents listed in Table 1. The consultant will review each of the Water Quality Control Plans (Basin Plans) prepared by the nine Regional Water Boards for the constituents listed below. The consultant will develop a standard format for summarizing the information from each Basin Plan.

Table 1. Constituents of Concern for Wildlife and Aquatic Life Beneficial Uses

Constituent Class	Specific Constituents
Dissolved Minerals	Total Dissolved Solids (TDS), Specific Conductance (EC), Sodium (Na), Chloride (Cl), Sulfate (SO ₄), Calcium (Ca), Magnesium (Mg)
Trace Elements	Boron (B)
Nutrients	Nitrogen species (total, total Kjeldahl, organic, nitrate, nitrite, ammonia) Phosphorus species (total, dissolved)

Numerical Objectives or Criteria – The consultant will conduct a review of each Basin Plan to determine if numerical water quality objectives for protection of wildlife and

aquatic life beneficial uses have been established for any of the constituents listed in Table 1. If numerical objectives have been established, the consultant will conduct interviews or research to identify the scientific findings upon which the objectives were based.

Narrative Objectives – The consultant will conduct a review of each of the Basin Plans to determine if water quality criteria are being used to translate narrative objectives into numerical effluent limitations or objectives to protect wildlife and aquatic life beneficial uses. If needed, the consultant will conduct interviews or research to identify the scientific basis used to translate narrative objectives into numerical effluent limitations or objectives.

Nutrient Criteria – The consultant will research whether nutrient criteria have been developed in any of the Basin Plans for protection of wildlife and aquatic life beneficial uses.

Deliverable – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 2 Review Procedures, Policies, and Guidance Used by Other California Agencies

The objective of this task is to establish whether the California Department of Fish and Game (CDFG) and the University of California (UC) have developed guidelines for salinity, boron or nutrients for protection of wildlife and aquatic life beneficial uses. CDFG is responsible for protecting wildlife and aquatic life in California and UC conducts innovative research leading to the development of criteria needed for protecting wildlife and aquatic life beneficial uses.

Procedure Review - The consultant will conduct a review of all guidelines on salinity, boron and nutrients used by CDFG and UC for protecting wildlife and aquatic life beneficial uses.

Deliverables – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 3 Review Procedures, Policies, and Guidance Used by the U. S. Environmental Protection Agency (US EPA), U. S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) and the U. S. Geological Survey (USGS)

The objective of this task is to gain an understanding of methodologies used by US EPA to establish ambient water quality criteria for the protection of wildlife and aquatic life beneficial uses and procedures and guidelines used by the USFWS, NMFS and USGS for water quality protection for wildlife and aquatic life beneficial uses for the constituents listed in Table 1.

Water Quality Criteria for Wildlife and Aquatic Life Beneficial Uses – The consultant will conduct research and interviews to identify if US EPA, USFWS, NMFS or the USGS have published salinity, boron or nutrient source water guidance or water quality criteria for the protection of wildlife and aquatic life beneficial uses. Document the references used in this review including source books such as the Blue Book, Red Book or Gold Book.

Deliverables – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 4 Conduct a Review of Water Quality Criteria Available in Peer Reviewed Articles

The objective of this task is to review the peer-reviewed literature to determine if scientific information is available for the constituents listed in Table 1 upon which criteria for protection for wildlife and aquatic life beneficial uses can be established.

Conduct an Extensive Literature Search – The consultant will conduct internet and other database searches for information on water quality impacts to wildlife and aquatic life beneficial uses for constituents listed in Table 1. Focus in this task is to be on peer-reviewed journal articles, other published research and reviews conducted by organizations such as the National Academy of Science.

Deliverable – The consultant will prepare a memorandum summarizing the information found in the literature search along with an extensive reference list. The reference list should include all articles reviewed, even those not used or cited in the summary; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 5 Prepare a Complete Reference List of All Documents Considered

The objective of this task is to prepare for the Basin Plan Administrative Record all documents reviewed or considered even when not used in the final analysis.

Develop an Exhaustive Reference List – The consultant will develop an extensive reference list of any and all documents used in this review even when the documents were not used in the final analysis.

Deliverables – The consultant will prepare a list of all references considered or reviewed. The list will be prepared in a format used for scientific articles and include the author (s), article title, cited source or location of the article, publication date and other information that would enable a reviewer to locate the document in a scientific journal, library or internet site. The consultant will make available copies of all documents reviewed during the course of this study in the order that they are shown in the reference listing.

Task 6 Develop a Range of Potential Water Quality Goals and Policies

The objective of this task is to analyze the information obtained in Tasks 1 through 5 to develop a range of water quality criteria that are potentially applicable to the Central Valley. This task will be defined in more detail after completion of Tasks 1 through 5 but will likely include development of a range of potential water quality criteria and their relevance to the Central Valley for each of the constituents listed in Table 1.

Schedule

Tasks 1 through 5 are to be completed within three months of the date of authorization to proceed. The Consultant should provide a schedule showing completion dates for each task. The schedule should take into consideration that the CV-SALTS Technical Work Group meets monthly and will require two weeks for review of Consultant draft submittals. The schedule for completion of Task 6 will be determined in conjunction with the CV-SALTS Technical Work Group.

Funding Needed (est.)

Task 1: \$2,000

Task 2: \$2,000

Task 3: \$10,000

Task 4: \$25,000

Task 5: \$3,000

Task 6: \$10,000

Total: \$52,000

Central Valley Salinity Coalition (CVSC)
Evaluation of Animal Drinking Water Quality Criteria for
Salinity and Boron
Exhibit 1
Scope of Work
10 December 2010

The objective of this project is for the CVSC to hire an entity (herein referred to as Consultant) to identify 1) water quality criteria that could be used to establish water quality objectives and 2) water quality objectives, standards, goals, and policies that have been established to protect animal¹ drinking water supplies. The Consultant will accomplish these objectives through literature and internet searches and through interviews with regulatory agency staff, animal extension specialists and university researchers in California, other states, and if needed, other countries. Once Tasks 1 - 5 are completed, the consultant will present the results to a CV-SALTS Technical Work Group before work is initiated on Tasks 6 and 7. For each of the tasks, a reference list will be prepared and provide to the CVSC along with a copy of each reference listed. Task 8 will be further defined in conjunction with the Technical Work Group after completion of Tasks 1 through 7.

**Task 1 Review California Regional Water Board Basin
Plans and Policies**

The objective of this task is to determine if any of the nine Regional Water Boards has adopted numerical or narrative objectives with translators for protection of animal drinking water for the constituents listed in Table 1. The consultant will review each of the Water Quality Control Plans (Basin Plans) prepared by the nine Regional Water Boards for the constituents listed below. The consultant will develop a standard format for summarizing the information from each Basin Plan.

Table 1. Constituents of Concern for Animal Drinking Water

Constituent Class	Specific Constituents
Dissolved Minerals	Total Dissolved Solids (TDS), Specific Conductance (EC), Sodium (Na), Chloride (Cl), Sulfate (SO ₄), Calcium (Ca), Magnesium (Mg)
Trace Elements	Boron (B) ²
Nutrients	Nitrogen species (total, total Kjeldahl, organic, nitrate, nitrite, ammonia) Phosphorus species (total, dissolved)

¹ Throughout this document, animal will refer to all classes of animals including cattle, dairy cattle, sheep, swine, goats, horses, poultry and other types of domestic livestock.

² Molybdenum (Mo) has already been reviewed by the Regional Board and a full report is available.

Numerical Objectives or Criteria – The consultant will conduct a review of each Basin Plan to determine if numerical water quality objectives for protection of animal drinking water have been established for any of the constituents listed in Table 1. If numerical objectives have been established, the consultant will conduct interviews or research to identify the scientific findings upon which the objectives were based.

Narrative Objectives – The consultant will conduct a review of each of the Basin Plans to determine if water quality criteria are being used to translate narrative objectives into numerical effluent limitations or objectives to protect animal drinking water supplies. If needed, the consultant will conduct interviews or research to identify the scientific basis used to translate narrative objectives into numerical effluent limitations or objectives.

Nutrient Criteria – The consultant will research whether nutrient criteria have been developed in any of the Basin Plans for protection of animal drinking water sources.

Deliverable – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 2 Review Procedures, Policies, and Guidance Used by Other California Agencies

The objective of this task is to gain an understanding of the procedures used by the California Department of Food and Agriculture (CDFA) and the University of California Cooperative Extension Service (UC Coop Ext) when developing guidelines to maintain the safety of an animal drinking water supply. CDFA is responsible for protecting animal health and the UC Coop Ext is responsible for researching and establishing guidelines for protecting animal health and animal drinking water.

Procedure Review - The consultant will conduct a review of guidelines or procedures used by CDFA and UC Coop Ext for protecting the quality of animal drinking water supplies.

Deliverables – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 3 Review Procedures, Policies, and Guidance Used by the U.S. Environmental Protection Agency (US EPA)

The objective of this task is to gain an understanding of methodologies used by US EPA to establish ambient water quality criteria for the protection of animal drinking water supplies.

Water Quality Criteria for Animal Drinking Water – The consultant will conduct research and interviews to identify if US EPA has published source water or water quality criteria for the protection of animal drinking water supplies. Document the references used in this review including source books such as the Blue Book, Red Book or Gold Book.

Deliverables – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 4 Identify Water Quality Criteria, Goals, Guidelines or Policies Adopted by Other States

The objective of this task is to determine if other states with conditions similar to California have adopted animal drinking water quality criteria, objectives, guidance, guidelines or goals for the constituents listed in Table 1 or have adopted policies to protect animal drinking water supplies. In addition this task will look at guidance or research results prepared by University or State Cooperative Extension Services in other states for protection of animal drinking water.

Identify List of States to Contact – In conjunction with the CV-SALTS Technical Work Group, the consultant will identify a list of states to be considered. This list will consist of states that are known to be progressive in the protection of source water quality based on the experience of the Work Group and the Consultant. Initial efforts will concentrate in the Western States.

Conduct Research and Interviews – The consultant will search state extension service or university websites for state regulations, guidelines or research findings on the impact of the constituents listed in Table 1 on animal drinking water or health. Where needed, the consultant will conduct interviews with researchers or extension advisors in the designated states to identify any objectives, criteria, guidelines or policies that have been adopted. The consultant will document the basis for the objectives, criteria or guidelines found.

Deliverables – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting;

respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 5 Identify Water Quality Goals or Policies Adopted by Other Countries or International Organizations

The objective of this task is to determine if other countries with similar climatic conditions to California or organizations such as the Food and Agricultural Organization of the UN (FAO) have adopted water quality criteria, objectives, guidelines or goals for the animal drinking water constituents listed in Table 1 or have adopted policies to protect animal drinking water supplies.

Identify Contact List – In conjunction with the Technical Work Group, the consultant will identify a list of countries and organizations to contact. This list will consist of countries that are known to be progressive in the protection of source water quality based on the experience of the Work Group and the Consultant.

Conduct Research and Interviews – The consultant will conduct internet searches and if needed, interviews with agency staff or specialists in the designated countries and organizations to identify any objectives or criteria that have been adopted for protection of animal drinking water supplies.

Deliverables – The consultant will prepare a memorandum summarizing the information obtained in this task; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 6 Conduct a Review of Water Quality Criteria Available in Peer Reviewed Articles

The objective of this task is to review the peer-reviewed literature to determine if scientific information is available for the constituents listed in Table 1 upon which criteria for animal drinking water quality can be established.

Conduct an Extensive Literature Search – The consultant will conduct internet and other database searches for information on water quality impacts to animals from the constituents listed in Table 1. Focus in this task is on peer-reviewed journal articles, other published research and reviews conducted by organizations such as the National Academy of Science.

Deliverable – The consultant will prepare a memorandum summarizing the information found in the literature search along with an extensive reference list. The reference list should include all articles reviewed, even those not used or cited in the summary; present the results at a CV-SALTS Technical Work Group meeting; respond to Work Group comments on the memorandum; and prepare a final memorandum.

Task 7 Prepare a Complete Reference List of All Documents Considered

The objective of this task is to prepare for the Basin Plan Administrative Record any and all documents reviewed or considered even when the documents were not used in the final analysis.

Develop an Exhaustive Reference List – The consultant will develop an extensive reference list of any and all documents used in this review even when the documents were not used in the final analysis.

Deliverables – The consultant will prepare a list of all references considered or reviewed. The list will be prepared in a format used for scientific articles and include the author (s), article title, cited source or location of the article, publication date and other information that would enable a reviewer to locate the document in a scientific journal, library or internet site. The consultant will make available copies of all documents reviewed during the course of this study in the order that they are shown in the reference list.

Task 8 Develop a Range of Potential Water Quality Goals and Policies

The objective of this task is to analyze the information obtained in Tasks 1 through 6 to develop a range of water quality criteria that are potentially applicable to the Central Valley. This task will be defined in more detail after completion of Tasks 1 through 6 but will likely include development of a range of potential water quality criteria and their relevance to the Central Valley for each of the constituents listed in Table 1.

Schedule

Tasks 1 through 7 are to be completed within three months of the date of authorization to proceed. The Consultant should provide a schedule showing completion dates for each task. The schedule should take into consideration that the CV-SALTS Technical Work Group meets monthly and will require two weeks for review of Consultant draft submittals. The schedule for completion of Task 8 will be determined in conjunction with the CV-SALTS Technical Work Group.

Funding Needed (estimated)

Task 1: \$2,000

Task 2: \$2,000

Task 3: \$3,000

Task 4: \$3,000

Task 5: \$5,000

Task 6: \$9,000

Task 7: \$2,000

Task 8: \$3,000

Total: \$29,000