Lower San Joaquin River Committee

Agenda Lower San Joaquin River Committee Meeting

Teleconference Only (712) 432-0360 Participant Code: 927571#

Thursday July 14, 2016 from 11:00 AM – 12:50 PM

	Item	Action	Time/Lead
1	**Welcome, Introductions, Agenda Revisions/Approval, Notes, Announcements** a. Introductions b. Review/revise/approve agenda c. Review/revise/approve notes from May 5, 2016 d. Announcements e. Review status of Action Items from May 5, 2016 meeting i. Karna to have document available next month, will distribute to small subgroup next week		11:00 – 11:15 All
2	**Real Time Management Program – update**	Informational Item	11:15 – 11:30 Michael Mosley (USBR) Nigel Quinn (LBNL)
3	**Technical Services Update** a) Basin Plan Amendment update 1. DRAFT Executive Summary 2. Proposed Amendment Language	Informational item **DOCUMENTS ARE DRAFTS AND NOT TO BE DISTRIBUTED**	11:30 – 12:30 Jim Brownell
4	**Project Schedule** August 17 Regional Water Board Workshop	Informational item	12:30 – 12:45 All
5	**Review Action Items, Items for Executive Committee and Future Agenda Items**		12:45 – 12:50 All

LSJR Committee Members												
Name	Stakeholder Group	28-May	25-Jun	23-Jul	27-Aug	30-Sep	29-Oct	21-Jan	7-Apr	5-May	14-Jul	
John Beam	Grassland WD/RCD			✓	✓	✓	✓		✓	✓		
Sherman Boone	East Stanislaus RCD											
Jamie Meek	East Stanislaus RCD	✓				✓						
Shawn Carmo	Grassland Water District											
Jeanne Chilcott	CV-RWQCB											
David Cory	San Joaquin Valley Drainage Authority	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Daniel Cozad	CV-SALTS											
Jose Faria	Calif Department of Water Resources											
Tim Nelson	State Water Resources Control Board	✓				✓	✓	✓	✓			
Karna Harrigfeld	Stockton East Water District		✓	✓	✓	✓	✓	✓	✓	✓		
John Herrick	South Delta Water Agency											
Jamil Ibrahim	MWH Americas, Inc											
Jobaid Kabir	US Bureau of Reclamation											
Parry Klassen	East San Joaquin Water Quality Coalition											
Tess Dunham	Wastewater Association/Ag industry											
Debra Liebersbach	Turlock Irrigation District		✓	✓		✓	✓	✓	✓			
Jim Brownell	CV-RWQCB		✓	✓	✓	✓	✓	✓	✓	✓		
Richard Meyerhoff	CDM Smith											
Brandon Nakagawa	San Joaquin County											
Ric Ortega	Grassland Water District											
Nigel Quinn	LBNL - USBR	✓	✓	✓	✓		✓	✓	✓	✓		
Rudy Schnagl	CV-RWQCB											
Mona Shulman	Pacific Coast Producers											
	US Bureau of Reclamation											
Ernest Taylor	Calif Department of Water Resources											
Diana Waller	USDA - NRCS											
Debbie Webster	Central Valley Clean Water Association	✓	✓	✓	✓	✓	✓	✓	✓			
Dennis Westcot	San Joaquin Tributary Authority	✓		✓	✓	✓	✓	✓	✓			
Amanda Carvajal	Merced County Farm Bureau											
Michael Mosley	USBR		✓	✓	✓	✓	✓	✓	✓			
Thaddeus Hunt	State Water Resources Control Board			✓	✓		✓	✓	✓			
Anne Littlejohn	CV-RWQCB	✓	✓	✓	✓	✓	✓		✓			
Roberta Howe	Calif Department of Water Resources											
Erich Delmas	City of Tracy											
Tom Orvis	Stanislaus Farm Bureau											
Mike Johnson	LSJR Committee Manager	✓	✓	✓	✓	✓	✓	✓	✓			
Karen Ashby	LWA	✓	✓	✓	✓	✓	✓	✓	✓			
Bobby Pierce	West Stanislaus Irrigation District	✓		✓								
Peter Rietkerk	Patterson Irrigation District			✓								
Joe Tapia	Calif Department of Water Resources			✓				✓				
Tom Grovhoug	LWA	✓		✓	✓	✓						
Richie Aranda	Stockton East Water District											
Larry Lindsey	State Water Resources Control Board											
Danielle Moss	LWA		✓		✓	✓						
John Clancy	San Joaquin Tributary Association											
Penny Carlo	Carollo Engineers											
Mike Trouchon	LWA		✓	✓	✓	✓						
Dan Roberts	Twin Oaks Irrigation District				✓							
Joel Herr												
John Dickey	Plantierra											
Joe McGahan	SJVDA											
Diane Madsen	SJVDA											
Gabriel Delgado												
Dan Steiner												

Lower San Joaquin River Committee

Minutes from May 5, 2016 Meeting of the CV-SALTS Lower San Joaquin River Committee

1. **Welcome, Introductions, Agenda Revisions/Approval, Notes, Announcements**
   - Meeting called to order by Co-Chair, David Cory.
   - 05-05 participants are listed on the Attendance Roster.
   - Review/approve notes from April 7, 2016 – Karna Harrigfeld moved, and Nigel Quinn seconded and the 04/07/16 notes were approved.
   - Announcements – None.
   - The committee reviewed the status of April action items and Announcements/Updates. All action items were completed.

2. **Real Time Management Program - Update**
   - Michael Mosley presented the DRAFT Annual Work Plan, FY2017.
     - Committee members were requested to submit comments on the work plan to Michael no later than June 9th. Comments should be submitted directly to Michael Mosley with a cc to Mike Johnson.
     - An update on the work plan will be put on the agenda for discussion at the next meeting.
     - To better integrate the LSJRC participation with the TRT, Mike Johnson and Nigel Quinn will work on developing a long-term planning matrix to systematically document tasks, goals, and timelines going forward.
       - Mike Johnson will contact Karna Harrigfeld about doing a presentation on work done previously with the districts.

3. **Technical Services Update**
   - Jim Brownell – Working on finalizing comments and Response to Comments on the Crop Tolerance Report and Addendum.
     - Most work is focused on preparations for the August 17th workshop. Notice for the workshop will go out 5/6.
     - The committee will discuss the format for the workshop discussion at the next meeting.

4. **Presentation – Steady-state and transient modeling of root zone salinity**
   - Nigel Quinn presented "Developing Water Quality Objectives for Salinity Diversions to Agriculture using Srteady-state and Transient Models" to the committee.

5. **Presentation – Long-term Decline of Ungauged Inflows and the Beginning of Seepage Losses from the Lower San Joaquin River**
   - Joel Herr provided this presentation for the committee.

6. **Project Schedule**
   - This item was covered under Agenda Item 3 above.

7. **Review Action Items: Items for Executive Committee and Future Agenda Items**
   - The next scheduled committee meeting is 6/9. The only action items are those noted under Item 2.

EXECUTIVE SUMMARY

The purpose of this Staff Report is to provide the rationale and supporting documentation for proposed amendments to the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) to establish salinity water quality objectives (WQOs) in the Lower San Joaquin River (LSJR) in Reach 83 from the confluence of the Merced River to Vernalis. This report proposes amendments to the Basin Plan to add:

- Salinity water quality objectives (WQOs) that are protective of beneficial uses in the LSJR. An electrical conductivity (EC) at 25 degrees Celsius[1] water quality objective of 1,550 micro Siemens per centimeter (µS/cm) as a 30-day running average is proposed, except during Extended Dry Periods[2] when the objective will be 2,470 µS/cm as a 30-day running average and 2,200 µS/cm as the average of the previous four consecutive quarterly samples.

- An implementation program to achieve proposed salinity WQOs and a performance goal of 1,350 µS/cm during certain months and water year types, based on modeling results of expected water quality.

- A monitoring and surveillance program to evaluate the effectiveness of the implementation program.

These proposed amendments provide protection of designated existing or potential beneficial uses in this section of the Lower San Joaquin River, including the two most sensitive to salinity impacts: Agricultural Supply (AGR) and Municipal and Domestic Supply (MUN). In addition, use of an implementation EC performance goal promotes achievement of the best possible water quality under variable conditions.

In Revised *Water Right Decision 1641* (March, 2000), the California State Water Resources Control Board (State Board) directed the Central Valley Regional Water Quality Control Board (Central Valley Water Board) to develop and adopt salinity objectives and a program of implementation for the main stem of the San Joaquin River upstream of Vernalis (State Board 2000). In 2004, the Central Valley Water Board adopted and in 2006 the US EPA approved, a Control Program (TMDL) addressing electrical conductivity and boron in the San Joaquin River at Airport Way (Vernalis). The TMDL is implemented through waivers of waste discharge requirements (WDRs) or WDRs to apportion load

[1] An EC measurement made or corrected to 25 °C is equivalent to specific conductance

[2] An Extended Dry Period is defined using the State Water Board's San Joaquin Valley "60-20-20" Water Year Hydrologic Classification1 to assign a numeric indicator to a water year type as follows:

- Above Normal – 4
- Below Normal – 3
- Dry – 2
- Critically Dry – 1
- Wet – 5

The indicator values will be used as follows to determine when an Extended Dry Period is in effect:

- An Extended Dry Period shall begin when the sum of the current year's 60-20-20 indicator value and the previous two year's 60-20-20 indicator values total six (6) or less.
- An Extended Dry Period shall be deemed to exist for one water year (12 months) following a period with an indicator value total of six (6) or less.

allocations to different geographic subareas in the valley. As an alternative to strict load allocations, the TMDL encourages discharger participation in a real-time management program as a means to attain salinity water quality objectives, while maximizing the export of salts out the watershed to help protect the region's agricultural production and long term sustainability. The Control Program also required a second phase TMDL to prepare and implement new salinity and boron objectives for the San Joaquin River, upstream of Vernalis.

An initial CEQA scoping meeting for a basin planning effort to develop the upstream water quality objectives in the LSJR was held on 11 May 2005. However, staff turnover and budgetary constraints limited progress on the project. A second CEQA scoping meeting was held on 30 March 2009 and limited the geographic scope of the project to the section of the river upstream of Vernalis to the Merced River. Staff released a draft report, *Salt Tolerance of Crops in the Lower San Joaquin River (Merced to Stanislaus River Reaches)* (LSJR Crop Tolerance Report) in March 2010 that presented the application of crop salt sensitivity parameters needed to establish EC water quality criteria in the LSJR (Central Valley Water Board, 2016). At that same time, the Central Valley Water Board requested that the Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS) continue the effort on the upstream San Joaquin River beneficial use and salt and boron objectives evaluation and work on the policy and science to develop a basin plan amendment that would address those issues. CV-SALTS is a collaborative stakeholder driven and managed program to develop sustainable salinity and nitrate management planning for the Central Valley. The proposed WQOs herein are the result of a stakeholder-driven effort led by the LSJR Committee, which is a subcommittee of the CV-SALTS. It includes members of irrigation, water, and resource conservation districts, city, county, state and federal agencies, producers, growers, irrigators, water quality and watershed coalitions, drainage authorities, clean water and wastewater associations, consultants of various organizations and other interested parties.

Between May 2010 and the end of 2015, the LSJR Committee developed recommendations for EC WQOs that are protective of beneficial uses in the Lower San Joaquin River and an implementation plan for consideration by the Central Valley Water Board. The Committee began by conducting reviews of beneficial uses and water quality data for the LSJR, and concluded that the Agricultural Supply (AGR) beneficial use is the most sensitive to salinity, followed by the potential Municipal and Domestic Use (MUN) beneficial use. The Committee also decided there was not enough information available to support a change to the current boron WQOs for the LSJR and instead focused their efforts on the EC WQOs. Next, the Committee developed agricultural use policies to assist with development of EC WQOs and vetted them with the CV-SALTS Executive Committee. The policies recommend key components to consider when determining reasonable protection of AGR and include a leaching fraction to represent irrigation practices when site-specific data are not available, crop yield values acceptable to stakeholders under certain conditions, and metrics for identifying the most salt sensitive commercial crop that requires protection. In addition, an Extended Dry Period definition was developed to assist with establishing reasonable salinity objectives in the LSJR during time periods when water supplies are constrained.

The LSJR Committee then established EC water quality criteria for consideration as WQOs protective of AGR for this Basin Plan Amendment by entering existing and recently acquired scientific data, and applying the recommended policies into the Hoffman Model, a peer-reviewed steady-state soil water salinity model used in the LSJR Crop Tolerance Report. The proposed EC WQO of 1,550 µS/cm is

derived from the model by applying a 95 percent almond crop yield, during a 5th percentile annual rainfall year utilizing a leaching fraction of 15 percent. In conformance with the water quality objectives and sampling regimes established in the San Joaquin River at Vernalis for the protection of agricultural uses of water entering the Delta, the LSJR Committee recommended maintaining the same water quality compliance period of a maximum 30-day running average of mean daily electrical conductivity (State Water Resources Control Board, 2000). The proposed WQO likewise falls within the recommended range (900 to 1600 µS/cm) of the Title 22 of the California Code of Regulation's Secondary Maximum Contaminant Level (MCL) for specific conductance, which is considered protective of the MUN use in the Basin Plan. The preferred project alternative also incorporates EC WQOs during an Extended Dry Period that are reflective of a lower crop yield expectation of at least 75 percent. During these periods, an EC WQO of 2,470 µS/cm as a maximum 30-day running average is proposed as reasonably protective of irrigation supply water. A concurrent EC WQO of 2,200 µS/cm as the average of the previous four consecutive quarterly samples is also proposed for an Extended Dry Period to reasonably protect the potential MUN beneficial use by equaling the short term Title 22 Secondary Maximum Contaminant Level (MCL) for specific conductance.

The Watershed Analysis Risk Management Framework (WARMF) watershed modeling tool, using historic conditions to simulate salt loading in the LSJR, was applied to evaluate the ability of different implementation strategies to meet the proposed salinity WQOs. The preferred implementation plan selected by the LSJR Committee includes the execution of current and currently planned activities to manage irrigation return flows to the LSJR. An estimated 55,305 acres of the San Joaquin River Basin have the rights to divert and use water and subsequently drain back into this stretch of the river. A key activity within the selected implementation plan is the completion of the Grassland Bypass Project, which will lead to zero discharge of agricultural return flows from the Grassland Subarea to tributaries of the LSJR. The planned activities in the watershed are predicted to result in the LSJR reaching compliance with the proposed EC and existing boron WQOs for this stretch of the river by the end of 2019. The proposed objectives are also predicted to reduce the reliance on New Melones fresh water releases to meet the salt and boron objectives downstream at Vernalis.

Watershed analyses also suggested that the selected implementation plan might result in the attainment of an EC value of 1,350 µS/cm in the LSJR, relative to certain seasonal and water year conditions. However, these findings were not conclusive and, as a result, the LSJR Committee stakeholders recommended that an EC value of 1,350 µS/cm be established as an implementation performance goal during specific months of the irrigation season of certain water year types to promote the best possible water quality. The Staff Report includes a monitoring plan to verify compliance with the LSJR EC and boron WQOs and attainment of the EC performance goal. The LSJR Committee proposed that the Central Valley Water Board use future monitoring data to reevaluate the EC WQOs ten years after adoption of the Basin Plan Amendment and determine whether or not an adjustment to lower the WQOs is appropriate.

This Staff Report also evaluates the proposed Basin Plan Amendment's consistency with existing federal and state laws, regulations and policies, contains an environmental analysis that complies with the applicable requirements of the California Environmental Quality Act (CEQA) and includes antidegradation and economic analyses that evaluate potential impacts of this project. The Board's Basin Planning Program is considered a certified regulatory program, which means that the Board is exempt from the requirement to prepare an environmental impact report for basin planning activities

under the California Environmental Quality Act. (Pub. Res. Code, § 21080.5; Cal. Code Regs., tit. 14, § 15251(g).) The Board's environmental review of the proposed Basin Plan Amendments is instead contained in this Staff Report, which is considered to be "substitute environmental documentation" or "SED".

REFERENCES

Central Valley Water Board. (2016). *Revisions to the 2010 Salt Tolerance of Crops in the Lower San Joaquin River (Merced to Stanislaus River Reaches) and 2016 Addendum.*

State Water Resources Control Board. (2000). *Revised Water Right Decision 1641 In the Matter of: Implementation of Water Quality Objectives for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.*

PROPOSED AMENDMENT LANGUAGE

The proposed changes to the Basin Plan are as follows. Text additions to the existing Basin Plan language are underlined. Text deletions to the existing Basin Plan are in ~~strikethrough~~.

CHAPTER 1 INTRODUCTION

Modify the Basin Plan under the heading, "2. Grassland" (page I-3.00), as follows:

2. Grassland

The Grassland Subarea drains approximately 1,370 square miles on the west side of the LSJR in portions of Merced, Stanislaus, and Fresno Counties. This subarea includes the Mud Slough, Salt Slough, and Los Banos Creek watersheds. The eastern boundary of this subarea is generally formed by the LSJR between the Merced River confluence and the Mendota Dam. The Grassland Subarea extends across the LSJR, into the east side of the San Joaquin Valley, to include the lands within the Columbia Canal Company. The western boundary of the subarea generally follows the crest of the Coast Range with the exception of lands within San Benito County, which are excluded.

The hydrology of the watershed is presently determined by the primary land uses; managed wetlands and agriculture. The wetlands are important habitat for migratory waterfowl using the Pacific Flyway. The alluvial fans of the western and southern portions of the watershed contain salts and selenium which can be mobilized through irrigation practices and can impact beneficial uses of surface waters and groundwater if not properly regulated.

Modify the Basin Plan under the heading, "3. East Valley Floor" (page I-3.00), as follows:

3. East Valley Floor

This subarea includes approximately 413 square miles of land on the east side of the LSJR that drains directly to the LSJR between the Airport Way Bridge near Vernalis and the Salt Slough confluence. The subarea is largely comprised of the land between the major east-side drainages of the Tuolumne, Stanislaus, and Merced Rivers. This subarea lies within central Stanislaus County and north-central Merced County. Numerous drainage canals~~, including the Harding Drain~~ and natural drainages~~,~~ occur in ~~drain~~ this subarea. The subarea is comprised of the following minor subareas:

Modify the Basin Plan under the heading, "Salinity" (page III-6.02), as follows:

Electrical Conductivity and Total Dissolved Solids-- Special Cases in the Sacramento and San Joaquin River Basins Other Than the Delta

The objectives for electrical conductivity and total dissolved solids in Table III-3 apply to the water bodies specified. To the extent of any conflict with the general Chemical Constituents water quality objectives, the more stringent shall apply.

Electrical conductivity water quality objectives for Reach 83 of the San Joaquin River have been set to protect the Agricultural (AGR) and potential Municipal and Domestic Supply (MUN) beneficial uses by irrigation season and water year type.

Modify the Basin Plan under the heading, "Salinity" (Table III-3 on page III-7.00), as follows:

Table III-3

ELECTRICAL CONDUCTIVITY AND TOTAL DISSOLVED SOLIDS

PARAMETER	WATER QUALITY OBJECTIVES	APPLICABLE WATER BODIES
Electrical Conductivity (at 25°C)	Shall not exceed 230 micromhos/cm (50 percentile) or 235 micromhos/cm (90 percentile) at Knights Landing above Colusa Basin Drain; or 240 micromhos/cm (50 percentile) or 340 micromhos/cm (90 percentile) at I Street Bridge, based upon previous 10 years of record.	Sacramento River (13, 30)
	Shall not exceed 150 micromhos/cm (90 percentile) in well-mixed waters of the Feather River.	North Fork of the Feather River (33); Middle Fork of the Feather River from Little Last Chance Creek to Lake Oroville (36); Feather River from the Fish Barrier Dam at Oroville to Sacramento River (40)
	Shall not exceed 150 micromhos/cm from Friant Dam to Gravelly Ford (90 percentile).	San Joaquin River, Friant Dam to Mendota Pool (69)
	Shall not exceed 1550 micromhos/cm (as a 30-day running average) except during Extended Dry Periods [1] when objective shall not exceed 2470 micromhos/cm (as a 30-day running average) and 2200 micromhos/cm (as the average of the previous four quarterly samples)	San Joaquin River, Mouth of Merced River to Vernalis (83)
Total Dissolved Solids	Shall not exceed 125 mg/l (90 percentile)	North Fork of the American River from the source to Folsom Lake (44); Middle Fork of the American River from the source to Folsom Lake (45); South Fork of the American River from the source to Folsom Lake (48, 49); American River from Folsom Dam to Sacramento River (51)
	Shall not exceed 100 mg/l (90 percentile)	Folsom Lake (50)
	Shall not exceed 1,300,000 tons	Goose Lake (2)

[1] See Chapter IV-32.00 for definition of an Extended Dry Period.

Modify the Basin Plan under the heading, "Control Program for Salt and Boron Discharges into the Lower San Joaquin River (LSJR)" (pages IV-32.00 through IV-32.07), as follows:

Control ~~p~~Program for Salt and Boron Discharges into the Lower San Joaquin River (LSJR)

The goal of the salt and boron control program is to achieve compliance with salt and boron water quality objectives without restricting the ability of dischargers to export salt out of the San Joaquin River basin.

For the purpose of this control program, nonpoint source land uses include all irrigated lands and nonpoint source discharges are discharges from irrigated lands.

Irrigated lands are lands where water is applied for producing crops and, for the purpose of this control program, includes, but is not limited to, land planted to row, field and tree crops as well as commercial nurseries, nursery stock production, managed wetlands, and rice production.

This control program is phased to allow for implementation of existing water quality objectives, while providing the framework and timeline for implementing future water quality objectives.

The salt and boron control program establishes ~~salt load limits~~ 1) a method for determining the maximum allowable salt loading to the LSJR from discharges to achieve compliance with salinity water quality objectives (WQOs) at the Airport Way Bridge near Vernalis ~~with salt and boron water quality objectives for the LSJR~~ and 2) WQOs and an implementation program for salinity between the mouth of the Merced River and the Airport Way Bridge. ~~The Regional Water Board establishes a method for determining the maximum allowable salt loading to the LSJR. Load allocations are established for nonpoint sources and waste load allocations are established for point sources.~~

Salt Loading and the Vernalis Water Quality Objectives

Load allocations to specific dischargers or groups of dischargers are proportionate to the area of nonpoint source land use contributing to the discharge. Control actions that result in salt load reductions will be effective in the control of boron.

Load allocations are established for nonpoint sources and waste load allocations are established for point sources.

~~The salt and boron control program establishes timelines for: 1) developing and adopting salt and boron water quality objectives for the San Joaquin River upstream of the Airport Way Bridges near Vernalis; 2) a control program to achieve these objectives; and 3) developing and adopting a groundwater control program.~~
Per the amendments to the Basin Plan for control of salt and boron discharges into the lower San Joaquin River (LSJR) basin, approved by the Regional Water Board in Resolution No. 88-195, Resolution No. 2004-0108, and Resolution No. R5-2016-XXX and incorporated herein, the Regional Water Board will take the following actions, as necessary and appropriate, to implement this control program:

1. The Regional Water Board shall use waivers of waste discharge requirements or waste discharge requirements to apportion load allocations to each of the following seven geographic subareas that comprise the LSJR:

   a. San Joaquin River Upstream of Salt Slough
   b. Grassland
   c. Northwest Side
   d. East Valley Floor
   e. Merced River
   f. Tuolumne River
   g. Stanislaus River

   These subareas are described in Chapter 1 and in more detail in Appendix 41.

2. Dischargers of irrigation return flows from irrigated lands are in compliance with this control program if they

meet any of the following conditions:

a. Cease discharge to surface water
b. Discharge does not exceed 315µS/cm electrical conductivity (based on a 30-day running average)
c. Operate under waste discharge requirements that include effluent limits for salt
d. Operate under a waiver of waste discharge requirements for salt and boron discharges to the LSJR

3. The Regional Water Board will adopt ~~a~~ waivers of waste discharge requirements or waste discharge requirements for salinity management, or incorporate into ~~an~~ existing agricultural waivers or waste discharge requirements, the conditions required to participate in a Regional Water Board approved real-time management program. Load allocations for nonpoint source dischargers participating in a Regional Water Board approved real-time management program are described in Table IV-4.4. Additional waiver conditions or waste discharge requirements will include use of Regional Water Board approved methods to measure and report flow and electrical conductivity. Participation in a Regional Water Board approved real-time management program and attainment of salinity and boron water quality objectives at the Airport Way Bridge near Vernalis and upstream in the LSJR to the confluence with the Merced River will constitute compliance with this control program.

4. The Regional Water Board will adopt waste discharge requirements with fixed monthly base load allocations specified as effluent limits for nonpoint source discharges that do not meet conditions specified in a waiver of waste discharge requirements for salinity management. Entities operating under WDRs or that will be required to operate under WDRs in order to comply with other programs, may participate in a Regional Water Board approved real-time management program in lieu of additional WDRs for salinity if they meet the conditions specified in the waiver of WDRs for salinity management, as described in item 3.

5. Fixed monthly base load allocations and the method used to calculate real-time load allocations are specified in Table IV-4.4.

6. Waste Load Allocations are established for point sources of salt in the basin. NPDES permitted discharges shall not exceed the salinity water quality objectives established for the LSJR at the Airport Way Bridge near Vernalis unless the discharger is a member of a Regional Water Board approved RTMP or a pollutant trading program consistent with the Salt and Boron Control Program. The Regional Water Board will revise NPDES permits to incorporate ~~TMDL allocations~~ the requirements of the Salt and Boron Control Program when the permits are renewed or reopened at the discretion of the Regional Water Board.

7. Supply water credits are established for irrigators that receive supply water from the Delta Mendota Canal (DMC) or the LSJR between the confluence of the Merced River and the Airport Way Bridge near Vernalis as described in Table IV-4.4.

8. Supply water Load Allocations are established for salts in irrigation water imported to the LSJR Watershed from the Sacramento/San Joaquin River Delta as described in Table IV-4.4.

   Per Resolution No. R5-2014-0150, ~~T~~the Regional Water Board ~~will attempt to enter into~~ adopted a revised Management Agency Agreement (MAA) with the U.S. Bureau of Reclamation, replacing a 2008 MAA to address salt imports from the DMC to the LSJR watershed. The MAA ~~shall~~ includes provisions requiring the U.S. Bureau of Reclamation to:

   a. Meet DMC load allocations; or
   b. Provide mitigation and/or dilution flows to create additional assimilative capacity for salt in the LSJR equivalent to DMC salt loads in excess of their allocation.

   The Regional Water Board shall request a report of waste discharge from the U.S. Bureau of Reclamation to ~~address~~ meet DMC ~~discharges~~ load allocations if a MAA ~~is not established by 28 July 2008~~ meeting the provisions identified above does not remain in place.

9. The Regional Water Board will review and, if necessary, update the load allocations and/or waste load allocations by 28 July 2012 and every 6 years thereafter. Any changes to waste load allocations and/or load allocations can be made through subsequent amendment to this control program. Changes to load allocations will be implemented through revisions of the applicable waste discharge requirements or waivers of waste discharge requirements. Changes to waste load allocations will be implemented through revisions of the applicable NPDES permits.

10. The Regional Water Board encourages real-time water quality management and pollutant trading of waste load allocations, load allocations, and supply water allocations as a means for attaining salt and boron water quality objectives while maximizing the export of salts out of the LSJR watershed. This control program shall in no way preclude basin-wide stakeholder efforts to attain salinity water quality objectives in the LSJR so long as such efforts are consistent with the control program.

11. The established waste load allocations, load allocations, and supply water allocations represent a maximum allowable level. The Regional Water Board may take other actions or require additional reductions in salt and boron loading to protect beneficial uses.

12. Salt loads in water discharged into the LSJR or its tributaries for the express purpose of providing dilution flow are not subject to load limits described in this control program if the discharge:

    a. complies with salinity water quality objectives for the LSJR at the Airport Way Bridge near Vernalis;
    b. is not a discharge from irrigated lands; and
    c. is not provided as a water supply to be consumptively used upstream of the San Joaquin River at the Airport Way Bridge near Vernalis.

13. Entities providing dilution flows, as described in item 12, will obtain an allocation equal to the salt load assimilative capacity provided by this flow. This dilution flow allocation can be used to: 1) offset salt loads discharged by this entity in excess of any allocation or; 2) trade, as described in item 10. The additional dilution flow allocation provided by dilution flows will be calculated as described in Table IV-4.4.

~~14. It is anticipated that salinity and boron water quality objectives for the San Joaquin River from Mendota Dam to the Airport Way Bridge near Vernalis will be developed and considered for adoption in the second phase of this TMDL, according to time schedule in Table IV-4.1.~~

~~Table IV-4.1: Schedule for developing water quality objectives for salt and boron in the LSJR from Mendota Dam to the Airport Way Bridge near Vernalis~~

~~Milestone~~	~~Date~~
~~Staff report on criteria needed to protect beneficial uses~~	~~October 2004~~
~~Staff report and Regional Water Board workshop on water quality objectives that can reasonably be achieved~~	~~June 2005~~
~~Draft second phase TMDL with water quality objectives and program of implementation for LSJR from Mendota Dam to Airport Way Bridge near Vernalis~~	~~September 2005~~
~~Board Hearing for consideration of adoption~~	~~June 2006~~

Water Quality Objectives Upstream of Vernalis

~~15. Salinity and boron water quality objectives for the San Joaquin River from Mendota Dam to the Airport Way Bridge near Vernalis will be implemented using the implementation framework described in this 'Control Program for Salt and Boron Discharges into the Lower San Joaquin River' or other implementation mechanisms, as appropriate.~~

1. Per the amendment to the Basin Plan for control of salt and boron discharges into the lower San Joaquin River (LSJR) basin between the Airport Way Bridge near Vernalis and the mouth of the Merced River, approved by the Regional Water Board in Resolution No. 2016-XXXX, and incorporated herein, the following actions will be implemented:

   a. The Regional Water Board will determine nonpoint source discharge compliance with electrical conductivity (EC) and boron WQOs using data collected at Crows Landing. Daily average EC data will be utilized to calculate the 30-day running averages for EC compliance; weekly boron concentration data will be utilized to calculate the monthly average and maximum boron concentrations for compliance.
   b. An EC Performance Goal has been established to determine the potential for the LSJR EC 30-day running average values to be consistently less than the WQO during the irrigation seasons of Wet, Above Normal, Below Normal, and Dry Water Years specified in Table IV-4.01.

Table IV-4.1: Electrical Conductivity Performance Goal Periods

WY Type	Irrigation Season		Non-irrigation Season
	Mar-Jun	Jul-Oct	Nov-Feb
Wet	1350 µS/cm		
Above Normal	1350 µS/cm		
Below Normal	1350 µS/cm		
Dry	1350 µS/cm		
Critical			

   c. The Regional Water Board will evaluate attainment of the EC Performance goal using data collected at Crows Landing, Maze Road Bridge and Airport Way Bridge near Vernalis.
   d. Ten years after Regional Water Board adoption of the Basin Plan Amendment, and based on the evaluations described in this subparagraph above, the Regional Water Board will consider opening the Basin Plan for revisions to the LSJR EC WQOs.
   e. During an Extended Dry Period, the electrical conductivity WQO will be 2470 µS/cm (30-day running average) to protect the AGR beneficial use. In addition, during an Extended Dry Period the electrical conductivity WQO for protection of the potential MUN beneficial use shall be 2200 µS/cm as the average of the previous four (4) consecutive quarterly samples.

      An Extended Dry Period is based in part on the water year type numeric indicator identified in the State Water Board's San Joaquin Valley "60-20-20" Water Year Hydrologic Classification[1] as follows:

      - Above Normal – 4
      - Below Normal – 3
      - Dry – 2
      - Critically Dry – 1
      - Wet – 5

      The indicator values will be used as follows to determine when an Extended Dry Period is in effect:

      - An Extended Dry Period shall begin when the sum of the current year's 60-20-20 indicator value and the previous two year's 60-20-20 indicator values total six (6) or less.
      - An Extended Dry Period shall be deemed to exist for one water year (12 months) following a period with an indicator value total of six (6) or less.

[1] The method for determining the San Joaquin Valley Water Year Hydrologic Classifications is defined in the State Water Board Revised Water Right

Decision 1641, March 2000, Figure 2, page 189. This method uses the best available estimate of the 60-20-20 San Joaquin Valley water year hydrologic classification at the 75% exceedance level using the best available data published in the California Department of Water Resources' ongoing Bulletin 120 series.

2. NPDES permitted discharges shall not cause the exceedance of the boron or salinity WQOs established for the LSJR at agricultural diversion locations downstream of the confluence with the Merced River **(this and other items pending legal review)**

3. The Regional Water Board will revise NPDES permits to incorporate the requirements of the upstream water quality objectives when the permits are renewed or reopened at the discretion of the Regional Water Board.

~~16. A groundwater control program for sources of salt discharges into the LSJR will be developed by June 2020 if water quality objectives in the LSJR are not being attained.~~

Implementation Priority and Schedules

Salt Loading and the Vernalis Water Quality Objectives

~~17.~~The Regional Water Board will focus control actions on the most significant sources of salt and boron discharges to the LSJR. Priority for implementation of load allocations to control salt and boron discharges will be given to subareas with the greatest unit area salt loading (tons per acre per year) to the LSJR (Table IV-4.2). The priorities established in Table IV-4.2 will be reviewed by 28 July 2012 and every 6 years thereafter.

Table IV-4.2: Priorities for implementing load allocations[1]

Subarea	Priority
San Joaquin River Upstream of Salt Slough	Low
Grassland	High
Northwest Side	High
East Valley Floor	Low
Merced River	Low
Tuolumne River	Medium
Stanislaus River	Low
Delta Mendota Canal[2]	High

[1] Priorities based on the unit area salt load from each subarea and mass loading from the DMC
[2] Delta Mendota Canal is not a subarea

~~*Time Schedules for Implementation*~~

~~18~~1. The Regional Water Board will incorporate base load allocations into waste discharge requirements and real-time load allocations into conditions of waiver of waste discharge requirements by 28 July 2008. Dischargers regulated under a waiver of waste discharge requirements for dischargers participating in a real-time management program for the control of salt and boron in the LSJR shall comply with the waiver conditions within 1 year of the date of adoption of the waiver.

~~19~~2. Existing NPDES point source dischargers are low priority and subject to the compliance schedules for low priority discharges in Table IV-4.3. New point source discharges that begin discharging after the date of the adoption of this control program must meet the requirements of the Control Program for Salt and Boron Discharges into the Lower San Joaquin River upon the commencement of the discharge.

Table IV-4.3: Schedule for Compliance with the load allocations for salt and boron discharges into the LSJR

Priority	Year to implement[1]	
	Wet through Dry Year Types	Critical Year Types
High	8	12
Medium	12	16
Low	16	20
[1]number of years from the effective date [28 July 2006] of this control program		

~~16~~3. A groundwater control program for sources of salt discharges into the LSJR will be developed by June 2020 if water quality objectives in the LSJR are not being attained.

Water Quality Objectives Upstream of Vernalis

1. The electrical conductivity water quality objectives for the San Joaquin River from its confluence with the Merced River to the Airport Way Bridge near Vernalis will be implemented by 1 January 2020.

Table IV-4.4 Summary of Allocations and Credits

BASE SALT LOAD ALLOCATIONS

Base Load Allocations (thousand tons of salt)

Year-type[1]	Month / Period												
	Jan	Feb	Mar	Apr 1 to Apr. 14	Pulse Period [2]	May 16 to May 31	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wet	41	84	116	23	72	31	0	0	5	45	98	44	36
Abv. Norm	44	84	64	26	71	14	0	0	0	44	58	35	32
Blw. Norm	22	23	31	11	45	8	0	0	0	38	41	34	30
Dry	28	39	25	5	25	1	0	0	0	25	31	27	28
Critical	18	15	11	0	0	0	0	0	0	19	30	26	23

REAL-TIME SALT LOAD ALLOCATIONS

Nonpoint source dischargers operating under waiver of waste discharge requirements must participate in a Regional Water Board approved real-time management program and meet real-time load allocations. Loading capacity and real-time load allocations are calculated for a monthly time step. The following method is used to calculate real-time load allocations. Flows are expressed in thousand acre-feet per month and loads are expressed in ~~thousand~~ tons per month.

Loading Capacity (LC) in ~~thousand~~ tons per month is calculated by multiplying flow in thousand acre-ft per month by the salinity water quality objective in µS/cm, a unit conversion factor of 0. 8293, and a coefficient of 0.85 to provide a 15 percent margin of safety to account for any uncertainty.

$$LC = Q * WQO * 0.8293 * 0.85$$

where:
LC = total loading capacity in ~~thousand~~ tons per month
Q = flow in the San Joaquin River at the Airport way Bridge near Vernalis in thousand acre-feet per month
WQO = salinity water quality objective for the LSJR at Airport Way Bridge near Vernalis in µS/cm

The sum of the real-time Load Allocations (LA) for nonpoint source dischargers are equal to a portion of the LSJR's total Loading Capacity (LC) as described by the following equation:

$$LA = LC - L_{BG} - L_{CUA} - L_{GW} - \Sigma WLA$$

Where:
LA = sum of the real-time Load Allocations for nonpoint source dischargers
L_{BG} = loading from background sources
L_{CUA} = consumptive use allowance
L_{GW} = loading from groundwater
ΣWLA = sum of the waste load allocations for all point sources

Background loading in ~~thousand~~ tons is calculated using the following equation:

$$L_{BG} = Q * 85\ \mu S/cm * 0.8293$$

Table IV-4.4 Summary of Allocations and Credits (continued)

Consumptive use allowance loading is calculated with the following equation:

$L_{CUA} = Q * 230\ \mu S/cm * 0.8293$

Monthly groundwater Loading (L_{GW}) (in thousand tons)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
15	15	30	32	36	53	46	27	16	13	14	15

Waste load allocations for individual point sources are calculated using the following equation:

$WLA = Q_{PS} * WQO * 0.8293$

where:
WLA = waste load allocation in ~~thousand~~ tons per month
Q_{PS} = effluent flow to surface waters from the NPDES permitted point source discharger (in thousand acre-feet per month)
WQO = salinity water quality objective for the LSJR at Airport Way Bridge near Vernalis in µS/cm

APPORTIONING OF SALT LOAD ALLOCATION

An individual discharger or group of dischargers can calculate their load allocation by multiplying the nonpoint source acreage drained by the load allocation per acre.

$$\text{LA per acre} = \frac{\text{LA}}{\text{Total nonpoint source acreage}}$$

As of 1 August 2003, the total nonpoint source acreage of the LSJR Basin is 1.21-million acres. Nonpoint source land uses include all irrigated agricultural lands (including managed wetlands). Agricultural land includes all areas designated as agricultural or semi-agricultural land uses in the most recent land use surveys published by the California Department of Water Resources. California Department of Water Resources land use surveys are prepared and published on a county-by-county basis. Multiple counties or portions of counties may overlay a given subarea. The land use surveys must be used in combination with a Geographic Information System to quantify the agricultural land use in each subarea. Nonpoint source land areas will be updated every 6 years though an amendment to the Basin Plan if updated California Department of Water Resources land use surveys have been published. The following land use surveys (or portions thereof) are used to quantify agricultural land use in the LSJR watershed.

County	Year of most recent land use survey[1]
Merced	1995
Madera	1995
San Joaquin	1996
Fresno	1994
Stanislaus	1996

[1]-as of 1 August 2003

Acreage of managed wetlands is based on the boundaries of the federal, private and state owned wetlands that comprise the Grassland Ecological Area in Merced County. Agricultural lands (as designated in DWR land uses surveys) within the Grassland Ecological Area are counted as a agricultural land use and not as managed wetlands. All other lands within the Grassland Ecological Area are considered to be managed wetlands.

CONSUMPTIVE USE ALLOWANCE

In addition to the base load allocations or real-time load allocations shown above, a consumptive use allowance (L_{CUA}) is provided to each discharger:

L_{CUA} in tons per month = discharge volume in thousand acre-feet per month * 230 µS/cm * 0.8293

Table IV-4.4 Summary of Allocations and Credits (continued)

SUPPLY WATER CREDITS

A supply water credit is provided to irrigators in the Grassland and Northwest Side Subareas that receive water from the DMC. This DMC supply water credit is equal to 50 percent of the added salt load, in excess of background, delivered to Grassland and Northwest Side subareas. The following fixed DMC supply water credits apply to dischargers operating under base load allocations:

DMC supply water credits (thousand tons)

Year-type[1]	Month / Period												
	Jan	Feb	Mar	Apr 1 to Apr. 14	Pulse Period [2]	May 16 to May 31	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NORTHWEST SIDE SUBAREA													
Wet	0.0	0.2	0.0	0.7	1.4	0.7	2.0	2.6	2.6	1.0	0.9	0.6	0.0
Abv. Norm	0.0	0.0	0.0	0.8	1.9	1.0	2.3	2.3	2.6	1.2	0.8	0.3	0.0
Blw. Norm	0.0	0.0	0.0	1.0	2.6	1.5	3.4	4.2	3.3	2.5	1.9	0.8	0.0
Dry	0.0	0.0	0.0	0.1	0.3	0.2	0.3	0.5	0.5	0.2	0.2	0.0	0.0
Critical	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRASSLAND SUBAREA													
Wet	2.1	5.9	13.9	7.8	17.3	8.8	22.6	20.8	23.2	17.2	16.0	10.4	3.7
Abv. Norm	1.2	4.8	9.4	10.4	24.7	13.6	27.6	20.3	24.5	23.9	16.6	7.5	2.6
Blw. Norm	1.4	5.7	13.8	12.5	29.5	15.9	32.6	29.2	29.8	32.9	25.3	12.8	4.5
Dry	2.2	6.7	15.9	11.1	23.4	11.2	22.9	23.1	24.0	28.0	23.7	13.0	5.3
Critical	3.3	8.9	17.2	10.2	24.1	13.3	33.3	32.5	31.8	27.5	28.7	13.6	5.9

The following method is used to calculate real-time DMC supply water credits in ~~thousand~~ tons per month and applies to dischargers operating under real-time load allocations.

Real-time CVP Supply Water Credit = Q_{CVP}* (C_{CVP} - C_{BG}) * 0.8293*0.5

Where:
Q_{CVP} = volume of water delivered from CVP in thousand acre-feet per month[3]
C_{CVP} = electrical conductivity of water delivered from CVP in µS/cm[3]
C_{BG} = background electrical conductivity of 85 µS/cm

For irrigators in the Northwest Side Subarea an additional supply water credit is provided to account for salts contained in supply water diverted directly from the LSJR (LSJR diversion water credit). The LSJR diversion credit is equal to 50 percent of the added salt load (in excess of background) in supply water diverted from the San Joaquin River between the confluence of the Merced River and the Airport Way Bridge near Vernalis. The following fixed LSJR supply water credits apply to dischargers operating under base load allocations:

LSJR supply water credits (thousand tons)

Year-type[1]	Month / Period												
	Jan	Feb	Mar	Apr 1 to Apr. 14	Pulse Period [2]	May 16 to May 31	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wet	0.0	0.6	9.2	6.2	9.4	11.0	17.2	23.5	20.5	9.5	1.3	0	0
Abv. Norm	0.0	0.8	5.0	7.4	12.3	11.2	21.8	24.9	20.3	10.7	1.5	0	0
Blw. Norm	0.0	0.6	5.5	7.0	14.4	13.4	27.3	33.1	24.9	13.9	2.4	0	0
Dry	0.0	0.7	5.3	6.4	11.1	10.7	27.5	34.0	20.3	11.4	2.4	0	0
Critical	0.0	0.8	4.5	5.1	14.8	10.6	25.2	28.5	22.3	8.7	2.5	0	0

Table IV-4.4 Summary of Allocations and Credits (continued)

The following method is used to calculate Real-time LSJR supply water credits in ~~thousand~~ tons per month and applies to dischargers operating under real-time load allocations.

Real-time LSJR Supply Water Credit = $Q_{LSJR\ DIV}$* ($C_{LSJR\ DIV}$ -C_{BG}) * 0.8293 * 0.5

Where:
$Q_{LSJR\ DIV}$ = volume of water diverted from LSJR between the Merced River Confluence and the Airport Way Bridge near Vernalis in thousand acre-feet per month[4]
$C_{LSJR\ DIV}$ =electrical conductivity of water diverted from the LSJR in µS/cm[4]
C_{BG} = background electrical conductivity of 85 µS/cm

SUPPLY WATER ALLOCATIONS

The U.S. Bureau of Reclamation DMC load allocation (LA_{DMC}) is equal to the volume of water delivered from the DMC (Q_{DMC}) to the Grassland and Northwest side Subareas at a background Sierra Nevada quality of 85 µS/cm.

$LA_{DMC} = Q_{DMC}$ * 85 µS/cm * 0.8293

DILUTION FLOW ALLOCATIONS

Entities providing dilution flows obtain an allocation equal to the salt load assimilative capacity provided by this flow, calculated as follows:

$A_{dil} = Q_{dil}*(C_{dil}-WQO)*0.8293$

Where:
A_{dil} = dilution flow allocation in ~~thousand~~ tons of salt per month
Q_{dil} = dilution flow volume in thousand acre-feet per month
C_{dil} = dilution flow electrical conductivity in µS/cm
WQO = salinity water quality objective for the LSJR at Airport Way Bridge near Vernalis in µS/cm

[1] The water year classification will be established using the best available estimate of the 60-20-20 San Joaquin Valley water year hydrologic classification (as defined in Footnote 17 for Table 3 in the State Water Resources Control Board's *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*, ~~May 1995~~December 2006) at the 75% exceedance level using data from the Department of Water Resources Bulletin 120 series. The previous water year's classification will apply until an estimate is made of the current water year.

[2] Pulse period runs from 4/15-5/15. Period and distribution of base load allocation and supply water credits between April 1 and May 31 may change based on scheduling of pulse flow as specified in State Water Board Revised Water Rights Decision 1641. Total base load allocation for April 1 through May 31 does not change but will be redistributed based on any changes in the timing of the pulse period

[3]Methods used to measure and report the volume and electrical conductivity of water delivered from the CVP to irrigated lands must be approved by the Regional Water Board as part of the waiver conditions required to participate in a Regional Water Board approved real-time management program

[4] Methods used to measure and report the volume and electrical conductivity of water diverted from the SJR between the confluence of the Merced and the Airport Way Bridge near Vernalis must be approved by the Regional Water Board as part of the waiver conditions required to participate in a Regional Water Board approved real-time management program

Modify the Basin Plan by adding a new heading and text to the bottom of page V-5.00, as follows:

Salt and Boron Discharges into the Lower San Joaquin River

The amendments to the Basin Plan that established electrical conductivity and boron WQOs for discharges into the lower San Joaquin River (LSJR) between the Airport Way Bridge near Vernalis and the mouth of the Merced River was approved by the Regional Water Board in Resolution No. 88-195 and Resolution No. 2016-XXXX, incorporated herein. The Regional Water Board will review data collected at the Crows Landing, Maze Road Bridge and Airport Way Bridge near Vernalis on the San Joaquin River to determine compliance with the LSJR electrical conductivity WQOs and attainment of the Performance Goal. Daily average electrical conductivity measurement calculations will be utilized to calculate the 30-day running average for WQO compliance and Performance Goal attainment. The Regional Water Board will review boron concentration data collected weekly at Crows Landing and Vernalis for comparison of single sample maximum monthly concentrations with the maximum WQOs and to calculate the monthly average concentrations for comparison with the monthly average WQOs.

CV-SALTS Meeting Calendar

2016

1 January

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1						1	2
2	3	4	5	6	7	8	9
3	10	11	12	13	14	15	16
4	17	18	19	20	21	22	23
5	24	25	26	27	28	29	30
6	31						

2 February

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
6		1	2	3	4	5	6
7	7	8	9	10	11	12	13
8	14	15	16	17	18	19	20
9	21	22	23	24	25	26	27
10	28	29					

3 March

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
10			1	2	3	4	5
11	6	7	8	9	10	11	12
12	13	14	15	16	17	18	19
13	20	21	22	23	24	25	26
14	27	28	29	30	31		

4 April

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
14						1	2
15	3	4	5	6	7	8	9
16	10	11	12	13	14	15	16
17	17	18	19	20	21	22	23
18	24	25	26	27	28	29	30

5 May

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
19	1	2	3	4	5	6	7
20	8	9	10	11	12	13	14
21	15	16	17	18	19	20	21
22	22	23	24	25	26	27	28
23	29	30	31				

6 June

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
23				1	2	3	4
24	5	6	7	8	9	10	11
25	12	13	14	15	16	17	18
26	19	20	21	22	23	24	25
27	26	27	28	29	30		

7 July

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
27						1	2
28	3	4	5	6	7	8	9
29	10	11	12	13	14	15	16
30	17	18	19	20	21	22	23
31	24	25	26	27	28	29	30
32	31						

8 August

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
32		1	2	3	4	5	6
33	7	8	9	10	11	12	13
34	14	15	16	17	18	19	20
35	21	22	23	24	25	26	27
36	28	29	30	31			

9 September

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
36					1	2	3
37	4	5	6	7	8	9	10
38	11	12	13	14	15	16	17
39	18	19	20	21	22	23	24
40	25	26	27	28	29	30	

10 October

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
40							1
41	2	3	4	5	6	7	8
42	9	10	11	12	13	14	15
43	16	17	18	19	20	21	22
44	23	24	25	26	27	28	29
45	30	31					

11 November

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
45			1	2	3	4	5
46	6	7	8	9	10	11	12
47	13	14	15	16	17	18	19
48	20	21	22	23	24	25	26
49	27	28	29	30			

12 December

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
49					1	2	3
50	4	5	6	7	8	9	10
51	11	12	13	14	15	16	17
52	18	19	20	21	22	23	24
53	25	26	27	28	29	30	31

Notes/Key

Light Red conflicts

January is a Thursday/Friday

Wed/Thurs 4th or 3rd

Dark Green Exec Comm Policy

Fridays at 1:00 pm

Lt. Green Hatch Exec Comm Admin

or State Board Presentation

Yellow Salty 5

Lower SJ River Committee

Regional Board Breifing

TAC Meeting

Regional Board Presentation 6/22

Wednesday Meetings are DRAFT

May be held by Webinar or

in person in Sacramento half day