AGENDA
Public Meeting
Central Valley Regional Water Quality Control Board

Thursday, October 13, 2011– 9:00 a.m.
Central Valley Regional
Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

The purpose of this meeting is for the Board to obtain testimony and information from concerned and affected parties and to make decisions based on the information received.

Persons who want to submit written comments or evidence on any agenda item must comply with the Notice of Public Hearing for the item and the Meeting Procedures described at the end of the listing of Agenda items. Persons wishing to speak at the meeting should complete an attendance card and provide it to staff. Although filling out the attendance card is voluntary, we do appreciate receiving a card from all persons in attendance.

Persons applying for, or actively supporting or opposing, waste discharge requirements before the Board must comply with legal requirements if they or their agents have or propose contributing more than $250 to a Board member for an election campaign. Contact the Board office for details if you fall into this category.

Items showing times will begin no sooner than indicated. Items are numbered for identification purposes only and may not be considered in order. They may, however, be delayed by previous items. Items scheduled for the first day of a multi-day meeting may be delayed or continued to the next day of the meeting. The Board may conduct any scheduled hearing as a Panel Hearing as allowed by law in the event of a lack of a Board member quorum. In the event that a Panel Hearing is held, final action on that item will not be taken until a Board member quorum is present. Closed Session business is normally conducted during the lunch break, although the Board may adjourn to Closed Session at any time. Depending on the extent of Closed Session items, the lunch break may be lengthy. The Board Chair will announce prior to any Closed Session the anticipated time that the public session will resume.

Technical questions regarding agenda items should be directed to the responsible staff person whose name and direct phone number are indicated by the agenda item. If no staff person is listed, or for general questions and requests for agenda material, please contact Kiran Lanfranchi-Rizzardi at (916) 464-4839.

The facility is accessible to people with disabilities. Individuals requiring special accommodations are requested to contact Ms. Rizzardi at (916) 464-4839 at least 5 working days prior to the meeting. TTY users may contact the California Relay Service at 1-800-735-2929 or voice line at 1-800-735-2922.

Board agendas and the approved minutes of Board meetings are posted on the Board's website at http://www.waterboards.ca.gov/centralvalley/board_info/meetings/

Copies of the items to be considered by the Board are posted on the Board's website at http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/ organized by agenda item number.

A listing of pending applications for Water Quality Certifications, pursuant to section 401 of the Federal Clean Water Act, may be obtained from the Board's website at http://www.waterboards.ca.gov/centralvalley/public_notices/ or by calling the office mainline at 916) 464-3291

Electronic presentations for board meetings: Power Point and other electronic presentations are frequently presented at the Regional Water Board Meetings. Please e-mail presentations to the Board Webmaster at: webmaster5@waterboards.ca.gov at least 24 hours in advance, or bring your files either on a USB Flash drive, or CD ROM and give them to Board Staff prior to the start of the meeting. Providing the electronic files in advance will allow the Board Meeting to proceed without any interruption.

TIME LIMITATIONS

In order to move the Board meeting along in a timely manner, and assure time for adequate consideration of items later in the Agenda, the Chair may enforce maximum time limitations on each item. The goal is to complete all presentations, cross-examination, Board deliberation and voting within the allotted time. Allotted times are listed on the agenda following each item. Please consider the allotted time when preparing your presentations. Items with specific times listed will not be heard before that time but may be heard later.

ELECTRONIC PRESENTATIONS FOR BOARD MEETINGS

Power Point and other electronic presentations are frequently presented at the Regional Water Board Meetings. Please e-mail presentations to the Regional Board Webmaster at: webmaster5@waterboards.ca.gov at least 24 hours in advance, or bring your files either on a USB Flash Drive, or CD ROM and give them to Board Staff prior to the start of the meeting. Providing the electronic files in advance will allow the Board Meeting to proceed without any interruption.

THURSDAY, OCTOBER 13 – 9:00 A.M.

1. Introductions, Pledge of Allegiance and approval of the 514th and 515th Board meeting minutes.
2. Meeting Rules and Procedures.
3. Board Member Communications – Board Members and the State Board Liaison Member may discuss meetings, communications, correspondence, or other items of general interest relating to matters within the Board's jurisdiction. There will be no voting or formal action taken.
4. Public Forum – *Any member of the public may address the Board on any matter within the Board's jurisdiction and not scheduled for consideration at this meeting, or pending before the Board* (3 minute time limit per subject) 9:00.A.M.
5. Executive Officer's Report (http://www.waterboards.ca.gov/centralvalley/board_info/exec_officer_reports/)
6. Discuss 2012 Board Meeting Calendar
7. The Board will be asked to approve items 19 through 23 with no discussion if no one is here to testify about them. See pages 3 & 4 for a description of the items.

WASTE DISCHARGE REQUIREMENTS

8. Tejon-Castac Water District, Tejon Industrial Complex New East Wastewater Treatment Facility, Kern County – *Consider of New Waste Discharge Requirement* [Dale Harvey (559) 445-6190] **(Time Limit 30 Minutes)**

ENFORCEMENT

9. Glenn & Marie Chaney Trust and Tom Chaney, Chris Chaney Dairy, Fresno County – *Consideration of Administrative Civil Liability Complaint and Recommended Administrative Civil Liability Order* [Ken Landau (916) 464-4726] **(Time Limit 15 Minutes)**
10. James G. Sweeney and Amelia M. Sweeney, Sweeney Dairy, Tulare County – *Consideration of Administrative Civil Liability Complaint and Recommended Administrative Civil Liability Order* [Ken Landau (916) 464-4726] **(Time Limit 30 Minutes)**
11. David Albers, Vintage Dairy, Fresno County – *Consideration of Administrative Civil Liability Complaint and Recommended Administrative Civil Liability Order* [Ken Landau (916) 464-4726] **(Time Limit 15 Minutes)**
12. Barry, Arnold and Clara Van Leeuwen, JAB Dairy, Stanislaus County – *Consideration of Administrative Civil Liability Complaint and Recommended Administrative Civil Liability Order* [Ken Landau (916) 464-4726] **(Time Limit 15 Minutes)**
13. Leno Bettencourt, Bettencourt & Sons Dairy, Stanislaus County – *Consideration of Administrative Civil Liability Complaint and Recommended Administrative Civil Liability Order* [Ken Landau (916) 464-4726] **(Time Limit 15 Minutes)**
14. Frank Pimentel, Fialho & Sons Dairy, San Joaquin County – *Consideration of Administrative Civil Liability Complaint and Recommended Administrative Civil Liability Order* [Ken Landau (916) 464-4726] **(Time Limit 15 Minutes)**

NPDES PERMITS AND TIME SCHEDULE ORDER

15. City of Willows, Wastewater Treatment Plant, Glenn County – *Consideration of NPDES Permit Renewal and Adoption of Time Schedule Order* [Greg Cash (530) 224-3208] **(Time Limit 30 Minutes)**

PLANNING

16. Triennial Review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins – *Consideration of a Resolution to Adopt the Triennial Review Work Plan and Approve the Response to Comments* [Betty Yee (916) 464-4643] **(Time Limit 60 Minutes)**

BASIN PLANNING

17. Long-term Irrigated Lands Regulatory Program – *Consideration of Adoption of Proposed Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide Estimates of Total Costs and Sources of Financing for the Long-Term Irrigated Lands Program* [Adam Laputz (916) 464-4848] **(Time Limit 45 Minutes)**

PLANNING

18. Update on Drinking Water Policy Development – *Informational item only* [Jay Simi (916) 464-4833] **(Time Limit 60 Minutes)**

UNCONTESTED CALENDAR

Uncontested items are expected to be routine and non-controversial; recommendations will be acted on without discussion. If any interested party, Board, or staff member requests discussion, the item may be removed from the Uncontested Items Calendar and taken up in the regular agenda order, or in an order determined by the Board Chair – 9:00 a.m.

19. **CEASE AND DESIST ORDER**

    a) County of Yolo Planning And Public Works Department, Yolo County Central Landfill, Yolo County – *Consideration of A Cease and Desist Order*

20. **NPDES PERMITS**

    a) River Highlands Community Services District and County of Yuba, Hammonton Gold Village Wastewater Treatment Plant, Yuba County, Order R5-2002-0101, NPDES CA0081574 (renewal)

21. **WASTE DISCHARGE REQUIREMENTS**

    a) Hathaway, LLC, Reuse of Oil Field Production Wastewater for Irrigation, Kern County – *Consideration of: A. Resolution Adopting a Negative Declaration and Approving an Initial Study, and B. Resolution Adopting a Conditional Waiver of Waste Discharge Requirements and Monitoring and Reporting Program* (new)

22. **NPDES/WDR RESCISSIONS**

    a) Golden Slide Placer Mine, Almonike Enterprises and U.S. Forest Service Tahoe National Forest, Sierra County, Order 90-072
    b) United States Department of the Interior, Bureau of Reclamation, Lake Berryessa Marina Resort Wastewater Treatment Facility, Napa County, Order 90-150
    c) United States Department of the Interior, Bureau of Reclamation, Rancho Monticello Resort, Napa County, Order 98-085
    d) United States Department of the Interior, Bureau of Reclamation, Putah Creek Resort, Napa County, Order 5-00-020
    e) Gallo Glass Company, Sisk Ranch Site, Stanislaus County, Waste Discharge Requirements Order 5-00-138
    f) Teichert Aggregates, Teichert Sloughhouse Facility, Sacramento County, Order 5-00-212
    g) Sconza Candy Company, Stanislaus County, Order R5-2002-011, NPDES CA004146
    h) John Taylor Fertilizers Co., Yuba City Facility, Enhanced Bioremediation Project, Sutter County, Order R5-2004-0055
    i) Contra Costa Water District and Victoria Island, LP, Alternative Intake Project Dewatering Discharge to Land, San Joaquin and Contra Costa Counties, Order R5-2008-0048

23. **CHANGE OF NAME AND OR OWNERSHIP**

a) Unimin Corporation, Unimin Byron Sand Plant, Contra Costa County, Order 92-157
b) Renwood Vineyard Properties, Ltd., Renwood Winery, Amador County, Order R5-2002-0075
c) Alpine Packing Company, Inc., Wastewater Treatment System, San Joaquin County, Order R5-2002-0225
d) Chevreaux Family Trust, 1973, Chevreaux Concrete, Inc., Chevreaux Aggregates, Inc., Chevreaux Aggregates Facility, Placer and Nevada Counties, Order R5-2003-0176
e) Grizzly Lake Resort Improvement District, Plumas County, Order R5-2007-0019

CLOSED SESSION

The Board may meet in closed session to consider personnel matters [Authority: Government Code section 11126(a)]; to deliberate on a decision to be reached based upon evidence introduced in a hearing [Authority: Government Code section 11126(c) (3)]; or to discuss matters in litigation, including discussion of initiated litigation, significant exposure to litigation, or decisions to initiate litigation [Authority: Government Code section 11126(e)]. Litigation items that may be discussed are listed below by the type of item:

Litigation filed against the Regional and/or State Water Board:

a. Bell Carter NPDES Permit- Environmental Law Foundation v. CVRWQCB (Tehama County Sup.Ct.)
b. Preston Avery, an Individual, and Lois Avery, an Individual, and as Trustees of the Avery Family Revocable Trust of July 14, 2000 v. State Water Resources Control Board of the State of California, et al. (Sacramento Co. Sup. Ct. No. 06CS00399)
c. Dairy General Waste Discharge Requirements- Asociacion de Gente Unida por el Agua et al. v. CVRWQCB (Sacramento County Sup. Ct. Case No 2008-00003604); Baykeeper et al v. CVRWQCB (Sacramento County Sup. Ct.) Case No. 2008-00003603)
d. Dixon Commercial Park CAO – DCP v. SWRCB, (Sacramento Co. Sup. Ct, Case No. 06CS00299), and ConAgra Foods and Monfort, Inc. v. CVRWQCB, (Solano Co. Sup. Ct, Case No. FCS027420)
e. El Dorado Irrigation District NPDES Permit – California Sportfishing Protection Alliance v. CVRWQCB (Sacramento County Case No. 34-2009-80000309)
f. Greener Globe Landfill WDRs – CVRWQCB v. A Greener Globe Corp., et al., (Placer Co. Sup. Ct. No. SCV11383
g. City of Lodi, White Slough Facility NPDES Permit – Central Valley Clean Water Assn v. CVRWQCB and SWRCB (San Joaquin Sup. Ct. Case No. 39-2009-00224077-CU-WM-STC)
h. City of Manteca v.SWRCB et at. (Sacramento Co.Sup. Ct. No.34-2011-80000-831)
i. Tehama Market ACL – Garland v.CVRWQCB (CA. Third District Ct. of Appeal. Case No. C067130)
j. Toxic Hot Spots – San Francisco Baykeeper, Inc., et al. v. SWRCB, et al., (Sacramento Co. Sup. Ct. No. 99CS02722)
k. City of Tracy v. SWRCB (San Joaquin Co. Sup.Ct. No. 39-2011-00256340-CU-JR-STK
l. Tracy WWTP NPDES Permit R5-2007-0036-Environmental Law Foundation and CSPA v CVRWQCB (Sacramento Superior Ct. No. 34-2009-00047273)
m. Vacaville NPDES Permit – City of Vacaville et al v. CVRWQCB and SWRCB (Ca. Ct. of Appeal, 1st DCA Case No. A127207)

Litigation filed by the Board against other parties:

a. Aerojet Cleanup – CVRWQCB, et al. v. Aerojet-General Corp., et al, (Sacramento Co. Sup. Ct. No. 286073, consolidated with Nos. 288302 and 291981); CVRWQCB, et al. v. Aerojet-General Corp., et al., (EDCal No. CIV-S-86-0064-EJG) consolidated with U.S. v. Aerojet-General Corp., et al., (EDCal No. CIV-S-86-0063-EJG)
b. Bonzi- California Regional Water Quality Control Board, Central Valley Region v. Ma-Ru Holding Company et al.; Stanislaus County Superior Court Case No. 643740
c. Iron Mountain Mine Cleanup – State of Calif., CVRWQCB, et al. v. Iron Mountain Mines, Inc., et al., (EDCal No. CIV-S-91-1167-DFL-PAN) and U.S. v. Iron Mountain Mines, Inc., et al., (EDCal No. S-91-0768 DFL/JFM)
d. CVRWQCB et al. v. Original Sixteen to One Mine, Inc., et.al (Sierra Co. Sup.Ct. no. 7019)

Petitions for Review of Board Actions filed with State Water Resources Control Board.

a. City of Auburn Wastewater Treatment Plant, Placer County Petition of California Sportfishing Protection Alliance, Waste Discharge Requirements Order R5-2011-003 (Amending Waste Discharge Requirements Order R5-2010-0090) [NPDES Permit CA0077712]
b. Discovery Bay Wastewater Treatment Plant, Order No. R5-2008-0179- Petitions of San Luis & Delta-Mendota Water Authority et al., and California Sportfishing Protection Alliance, SWRCB/OCC Nos. A-1982 and A-1982(a)
c. Vacaville Easterly WWTP – Petition of City of Vacaville for review of NPDES Permit R5-2008-0055 and TSO No. R5-2008-0056, Solano County- SWRCB/OCC File A-1932

d. Sacramento Regional Wastewater Treatment Plant – Petitions by Sacramento County Sanitation District and by California Sportfishing Protection Alliance, NPDES Permit.R5-2010-0114, SWRCB/OCC No. A –2144
e. Dept. of Parks and Recreation, Carnegie State Vehicular Recreation Area- Petition of California Sportfishing Protection and Alliance and Public Employees for Environmental Responsibility, SWRCB/OCC No. A-2098
f. Short-Term Renewal of Irrigated Lands Conditional Waiver – Petitions by California Sportfishing Protection Alliance et al., and by Southern San Joaquin Valley Water Quality Coalition et al., Resolution R5-2011-0032 Approving a Short-Term Renewal of the Coalition Group Conditional Waiver of Waste Discharge Requirements for Discharges From Irrigated Lands, SWRCB/OCC Nos. A-2173(a) and A-2173(b)
g. Nevada County Sanitation District No. 1, Lake of the Pines, Wastewater Treatment Plant, Waste Discharge Requirements Order No. R5-2009-0031, SWRCB/OCC File No. A-2019
h. City of Live Oak, NPDES Permit R5-2011-0034 and TSO No. R5-2009-0012-01, Sutter County, SWRCB/OCC File Nos. A-2172(a) and 2172(b)

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

MEETING PROCEDURES

GENERAL MEETING RULES

The Central Valley Regional Water Quality Control Board (Central Valley Water Board, or Board) and staff welcome information on issues and matters within the Board's jurisdiction, but comments and submittals at the meeting should be concise and directed to specifics of the item under discussion to enable the Board to be fully informed and take appropriate action.

Persons wishing to speak at the meeting are asked to complete an attendance card and provide it to staff. Although filling out the attendance card is voluntary, we do appreciate receiving a card from all persons in attendance.

Any person planning to make a presentation to the Board that requires the use of visual aids (such as overheads, slides, or video projector) should contact the assigned staff person to make arrangements before the meeting date in order to avoid unnecessary delays during the meeting.

If the Meeting Procedures in this agenda conflict with a specific Notice of Public Hearing or Hearing Procedures for a specific item, the Notice of Public Hearing or specific Hearing Procedures will control.

All interested persons may speak at the Board meeting, and are expected to orally summarize their written submittals. Testimony and policy statements should be presented in writing prior to the meeting and only a summary of pertinent points presented orally. Oral presentations (e.g., direct testimony, policy comments, cross examination and closing statements) will be limited in time by the Board Chair. A timer may be used and speakers are expected to honor the time limits. Oral presentations must be relevant. Where speakers can be grouped by affiliation or interest, such groups will be expected to select a spokesperson and not be repetitive. The Board will accommodate spokespersons by granting additional time if other group members will not also be speaking.

Any person may submit comments in writing on any agenda item. Written comments shall not be read into the record unless allowed by the Board Chair. Persons who want to submit written materials for any agenda item must provide such written documents to the Board office in advance of the meeting, which must be by the date and time specified in the applicable Notice of Public Hearing and/or Hearing Procedures. Materials received by the deadline and in compliance with the Notice of Public Hearing and/or Hearing Procedures will be included in the administrative record. Staff may provide written responses to comments. Late written materials will not be provided to Board members or included in the administrative record, unless the Chair allows the late submission. A party requesting to submit late materials must demonstrate good cause for the late submission, and the Chair must find that the late submission would not prejudice the Central Valley Water Board or any designated party. The Chair may modify this rule if a party shows severe hardship. Late submissions that consist of evidence (as opposed to policy statements) will generally be deemed prejudicial unless all designated parties and Board staff have time to consider the evidence before the meeting. Written materials or other documents submitted at the Board meeting must be provided first to Board counsel who will advise the Board regarding acceptance into the record.

PROCEDURE FOR UNCONTESTED (CONSENT) AGENDA ITEMS (see also 23 CCR 647.2(f))

Uncontested or consent agenda items are items for which there appears to be no controversy and which can be acted upon by the Board with limited or no discussion. Such items have been properly noticed and all interested parties consent to the staff recommendation. The Board Chair will recognize late revisions submitted by staff and will then call for a motion and vote by the Board.

If any Board member or member of the public raises a question or issue regarding the item that requires Board discussion, the item may be removed from the consent calendar and considered in its numerical order on the agenda, or in an order determined by the Board Chair. Anyone wishing to contest a consent item on the agenda must appear in person at the Board meeting and explain to the Board the reason the item is contested.

PROCEDURE FOR INFORMATION ITEMS (see also 23 CCR 649 et.seq.)

Information items are items presented to the Board for discussion only and for which no Board action or vote is taken. The Board may, however, provide direction to staff. The Board usually will hear a presentation by staff, and comments by

interested persons shall also be allowed. Members of the public wishing to address the Board on the topic under discussion should submit an attendance card beforehand indicating their request to speak to the Board. Time limits may be imposed on interested persons.

PROCEDURE FOR ACTION ITEMS (see also 23 CCR 649 et.seq.)

Contested agenda items are items to which the parties involved have not consented and the staff recommendation is in dispute. The procedure that applies to such items depends on the nature of the matter. Matters before the Board may be quasi-legislative or quasi-judicial (adjudicative proceedings). Such items may require a public hearing and all interested persons will be provided an opportunity to make comments.

Contested agenda items that are adjudicative, not quasi legislative, are governed by the rules for adjudicative proceedings. The regulations setting forth the procedures for adjudicative proceedings are codified in Title 23 California Code of Regulations Division 3. Adjudicative proceedings before the Central Valley Water Board are governed by these regulations as authorized by chapter 4.5 of the Administrative Procedure Act (commencing with section 11400 of the Government Code). The regulations provide that, with certain exceptions, adjudicative proceedings will be conducted in accordance with sections 800-805 of the Evidence Code and section 11513 of Chapter 5 of the Government Code. (Other provisions of chapter 5 do not apply). A copy of those regulations and chapter 4.5 of the Administrative Procedure Act, section 11513 of the Government Code, and sections 801-805 of the Evidence Code can be found at http://www.waterboards.ca.gov/laws_regulations/

An **adjudicative proceeding** is a hearing to receive evidence for determination of facts pursuant to which the Board formulates and issues a decision. A decision determines a legal right, duty, privilege, immunity, or other legal interest of a particular person or persons. Examples of adjudicative proceedings include hearings to receive evidence concerning the issuance of waste discharge requirements or National Pollutant Discharge Elimination System (NPDES) permits; concerning cease and desist orders; and concerning orders setting administrative civil liability. Adjudicative hearings are not conducted according to the technical rules of evidence, and the Board will accept any evidence or testimony that is reasonably relevant. The Notice of Public Hearing will set for the process for the hearing.

All persons testifying must state their name, address, affiliation, and whether they have taken the oath before testifying.

PROCEDURE FOR CONTESTED HEARINGS IN ADJUDICATIVE MATTERS (WASTE DISCHARGE OR WATER RECYCLING REQUIREMENTS, NPDES PERMITS AND INVESTIGATION OR ENFORCEMENT ORDERS [CWC §§ 13267, 13300-13308, 13383])

All persons interested in a specific item should consult the Hearing Procedures issued for that item to see if any of the following information is inapplicable. Contact Board staff if you do not know whether there are Hearing Procedures for the item or if you need a copy. If the following conflicts with a specific Notice of Public Hearing or Hearing Procedures, the Notice of Public Hearing or specific Hearing Procedures will control. All administrative civil liability orders are subject to specific Hearing Procedures.

Designated parties may request these procedures: to call and examine witnesses; to have witnesses testify under oath; to receive a witness list from other designated parties; to introduce exhibits; to cross-examine opposing witnesses; to impeach any witness; to rebut the evidence against him or her; to make or oppose evidentiary objections; to make opening or closing statements; or to have a prehearing conference with the Board's advisors. A request for these hearing procedures must be received by the Executive Officer at least five working days before the hearing, and must specify the procedures the designated party is requesting.

Designated parties are any persons named in the proposed order. All other persons wishing to address the Board or provide comments are interested persons and not designated parties. Such interested persons may request status as a designated party for purposes of an item by submitting such request in writing to staff assigned to the matter, no later than two weeks after the draft order is available for public comment. The request must explain the basis for status as a designated party and, in particular, how the person is directly affected by the discharge.

Central Valley Water Board staff will designate a prosecution team to serve as a designated party for prosecutorial matters, such as administrative civil liability. Advisory staff in prosecutorial matters, and all staff in non-prosecutorial matters, are not designated parties but are present to assist the Board.

The order of testimony for adjudicative hearings generally will be as follows, unless modified by the Board Chair:

- Testimony (and cross-examination, if provided) of Board staff

- Testimony (and cross-examination, if provided) of discharger
- Testimony (and cross-examination, if provided) of other designated parties
- Statements of interested persons
- Closing statement by designated parties other than discharger
- Closing statement by discharger
- Closing statement by staff
- Recommendation by Executive Officer (as appropriate)
- Close hearing
- Deliberation and voting by Board

Closing statements shall be for the purpose of summarization and rebuttal, and are not to be used to introduce new evidence or testimony, or to restate direct testimony. After considering evidence, testimony, and comments, the Regional Board may choose to adopt an order regarding a proposed agenda item. Persons wishing to introduce exhibits (i.e., maps, charts, photographs) must leave them with the Board's Assistant Executive Officer. If you plan to use visual aids such as PowerPoint slides, contact staff prior to the meeting to arrange for equipment set-up. You must provide a printed or electronic copy of any visual aids. Photographs or slides of large exhibits are acceptable.

All Board files, exhibits, and agenda material pertaining to adjudicative proceedings on the agenda are hereby made a part of the record.

OTHER INFORMATION

Quasi-legislative matters include rulemaking and some informational proceedings. These matters may include hearings for the adoption or amendment of regulations; water quality control plans or state policy for water quality control and hearings to gather information to assist the Board in formulating policy for future action. They are not adjudicative proceedings and are subject to different procedures. (See PROCEDURE FOR ACTION ITEMS, above, and Cal. Code Regs., title 23, § 649 et. Seq.)

Any person affected adversely by certain actions or failures to act of the Board may petition the State Water Resources Control Board (State Water Board) according to California Water Code section 13320 and Title 23 California Code of Regulations section 2050 et seq. The petition should be addressed to the Office of Chief Counsel at the State Water Board The State Water Board must receive the petition within 30 days of the date of the Board meeting at which the Board acted or failed to act. Copies of the law and regulations applicable for filing petitions (and cited above) will be provided upon request and are available at http://www.waterboards.ca.gov/laws_regulations

Any questions or comments regarding these procedures may be directed to:

Kiran Lanfranchi-Rizzardi, Administrative Assistant
11020 Sun Center Drive, #200
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e-mail: klanfranchi@waterboards.ca.gov

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

The primary duty of the Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges. Specific responsibilities and procedures of the Boards and the State Water Resources Control Board are contained in the Porter-Cologne Water Quality Control Act.

BOARD MEMBERS	CITY OF RESIDENCE	APPOINTMENT CATEGORY	TERM EXPIRES
Dan Odenweller	Stockton	County Government	9/30/2011
Karl E. Longley	Fresno	Water Quality	9/30/2013
Katherine Hart	Granite Bay	Recreation, Fish or Wildlife	9/30/2012
Lyle Hoag	Fair Oaks	Public	9/30/2013
Sandra Meraz	Alpaugh	Water Supply	9/30/2014
Vacant	Vacant	Water Quality	Vacant
Vacant	Vacant	Municipal Government	Vacant
Vacant	Vacant	Irrigated Agriculture	Vacant
Vacant	Vacant	Undesignated Public	Vacant

Pamela C. Creedon, *Executive Officer*
Kiran Lanfranchi-Rizzardi, *Administrative Assistant*
David Coupe, Sr.*Staff Counsel*
Patrick Pulupa, *Staff Counsel*
Alex Mayer, *Staff Counsel*

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Joe Karkoski
Linda Bracamonte
Robert Busby
Wendy Wyels

Seniors:
Anne Olson
Brett Stevens
Charlene Herbst
Cori Condon
Dan Radulescu
Duncan Austin
Elizabeth Lee
Gayleen Perreira
James Munch
Jeanne Chilcott
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Matt Scroggins
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Supervisor:
Bryan Smith

Seniors:
Angela Wilson
George Day
Greg Cash
Clint Snyder

ITEM: 6

SUBJECT: Board Meeting Calendar for 2012

BOARD ACTION:

- *Schedule first meeting of 2012.*
- *Discuss preferences for consideration of adoption of remaining 2012 calendar at the December 2011 Board meeting*

BACKGROUND:

Number of Meetings Per Year. The California Water Code requires that the Board meet at least six times per year. Historically the Board met more than six times per year, but in 2009, the Board scheduled only six regular Board meetings. Six Board meetings require less preparation time by staff for Board meetings and there are fewer schedule conflicts for Board members, but each Board meeting will address more issues. With the six Board meeting schedule, most Board meetings have not been overly long, and the Board retains the option of scheduling additional Board meetings or hearing panels to address special issues as needed.

Recommendation: continue with a six meetings per year schedule.

Meeting Days of the Week/Furloughs. Traditionally this Board has met on Fridays, with meetings starting on Thursdays when workload warranted. Furloughs closed State offices for parts of 2009, impacting scheduled Board meetings, so meetings were announced for three possible days (Wednesday/Thursday/Friday) to allow flexibility around furlough days. At this time it does not appear that closure of State offices is likely, so it is proposed that Board meetings be announced for only Thursdays and Fridays.

Recommendation: plan meetings only for Thursdays and Fridays.

Other Conflicts. Board members, staff and the public have professional and personal commitments that are considered in developing Board meeting schedules. Not every conflict can be accommodated, and many conflicts are not known at this time. The consideration is not just for the Board meeting dates, but for submittal of documents to the Board for agenda items, and preparation of the agendas. Examples of conflicts include:

1) State Board meetings
2) Holidays
3) Holy days of obligation, and
4) Periods of high vacation activity (such as Spring Break).

Recommendation: Do our best to recognize and address conflicts in setting the Board meeting schedules. Some conflicts can be accommodated by the order of scheduling items within a Board meeting.

RECOMMENDATION:

- Establish the date of the first Board meeting for 2012. February 2/3, 2012 is recommended.
- Provide guidance in developing a recommended 2012 schedule for consideration at the December 2011 meeting. A recommended schedule of meetings for 2012 follows.

In the event the Board does not have a quorum for the December 2011 meeting, the Executive Officer will need to establish dates for 2012 Board meetings.

TENTATIVE SCHEDULE OF BOARD MEETINGS FOR 2012

- **February 2/3**
- **March 29/30**
- **June 7/8**
- **August 2/3**
- **October 4/5**
- **December 6/7**

Mgmt. Review_____
Legal Review_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

ITEM: 8

SUBJECT: Tejon-Castac Water District, Tejon Industrial Complex New East Wastewater Treatment Facility, Kern County

BOARD ACTION: Consideration of Waste Discharge Requirements.

BACKGROUND: Tejon-Castac Water District (District) has completed the construction of a new East Wastewater Treatment Facility (WWTF) on the East side of Interstate 5 at Laval Road. Tertiary disinfected effluent is discharged to storage ponds and 13-acres Use Area. The current design flow is 0.1 million gallons per day (mgd) and will be expanded in phases to build out capacity of 0.8 mgd. The proposed waste discharge requirements include a total nitrogen effluent limit of 10 mg/L based on the WWTF design; and effluent, pond, source water, sludge/biosolids and Use Area monitoring. Additionally, the proposed waste discharge requirements include two monthly average electrical conductivity (EC) effluent limits, an incremental limit of source water plus 500 µmhos/cm that applies to all discharges to land and an overall cap limit of 2,000 µmhos/cm for discharges within the White Wolf Subarea.

ISSUE: The District has commented that the incremental increase EC limit of source water plus 500 µmhos/cm included in the Tulare Lake Basin Plan should not apply to the discharge since it is located within the White Wolf Subarea and requests that the limit be removed from the waste discharge requirements and rather only the 2,000 µmhos/cm EC limit be included in the waste discharge requirements. The incremental increase EC limit and the cap are distinct and separate limits intended to achieve separate goals: (1) to maximize salt reduction, and (2) to protect the groundwater resource, respectively.

Mgmt. Review _____
Legal Review _____
13 October 2011

11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair

1685 E Street, Fresno, California 93706
(559) 445-5116 • Fax (559) 445-5910
http://www.waterboards.ca.gov/centralvalley

Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown Jr.
Governor

Mr. Babs Makinde
P.O. Box 1000
Lebec, CA 93243

26 April 2011

NOTICE
TENTATIVE WASTE DISCHARGE REQUIREMENTS
FOR
TEJON-CASTAC WATER DISTRICT
TEJON INDUSTRIAL COMPLEX NEW EAST
WASTEWATER TREATMENT FACILITY
KERN COUNTY

Enclosed are tentative Waste Discharge Requirements for the Tejon Industrial Complex New East Wastewater Treatment Facility in Kern County. To conserve resources, this letter transmits a paper copy of the proposed Order to the Discharger only.

Beginning on **27 April 2011**, interested parties may download the proposed Order from the Regional Water Board's Internet website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/.

Persons wishing to comment on this matter must submit their testimony, evidence, and/or comments in writing to the California Regional Water Quality Control Board – Central Valley Region no later than **5 p.m. on 27 May 2011**. Written materials received after 5 p.m. on 27 May 2011 will not be accepted and will not be incorporated into the administrative record if doing so would prejudice any party.

If you have any questions regarding the tentative Order, or if you do not have Internet access and wish to request paper copies, please contact Denise Soria at (559) 444-2488 or via email at dsoria@waterboards.ca.gov.

Original signed by

W. DALE HARVEY
Senior Engineer
RCE No. 55628

Enclosures: Tentative Special Order (Discharger only)
Standard Provisions, 1 March 1991

cc: See next page

cc: Mr. David Coupe, Office of Chief Counsel, State Water Resources Control Board, Sacramento (via email)
California Department of Public Health, Office of Drinking Water, Fresno
California Department of Fish and Game, Region IV, Fresno
California Department of Water Resources, San Joaquin District, Fresno
Kern County Environmental Health Services Department, Bakersfield
Kern County Planning Department, Bakersfield
Kern County Water Agency, Bakersfield
Mr. Dean Brown, Tejon Industrial Corp., Lebec

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2011-____
FOR
TEJON-CASTAC WATER DISTRICT
TEJON INDUSTRIAL COMPLEX NEW EAST
WASTEWATER TREATMENT FACILITY
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board), finds that:

1. The Tejon-Castac Water District (hereafter Discharger) owns and operates the Tejon Industrial West wastewater treatment facility (West WWTF) on the West side of Interstate Five (I-5) at Laval Road. Waste Discharge Requirements (WDRs) Order R5-2008-0004 regulates the West WWTF and allows a monthly average discharge flow of 0.1 million gallons per day (mgd) of wastewater to two ponds (total storage capacity of 2.39 acres) and to 14 acres of Use Area.

2. The West WWTF provides sewerage for businesses at the Tejon Industrial Complex West. Such businesses include a hotel, gas stations, shower and restroom areas, convenience stores, and industrial warehouses.

3. On the East side of I-5, the TravelCenter of America WWTF (Existing East WWTF) is regulated by WDRs Order No. 5-01-002 that allows a monthly average discharge flow of 0.070 mgd of undisinfected secondary treated wastewater to four evaporation/percolation ponds.

4. The Existing East WWTF provides sewerage for a convenience store, gas station, laundry and shower facility, two restaurants, truck fueling station, maintenance shop, and a truck wash (Blue Beacon).

5. On July 2009, the Discharger submitted a Report of Waste Discharge (RWD) for a proposed new WWTF (New East WWTF) on the East side of I-5 at Wheeler Ridge Road that will have an initial design flow of 0.1 mgd. It is proposed that the New East WWTF will serve the discharge from the TravelCenter of America Complex as well as part of the flow from the Tejon Industrial Complex West (located on the West side of I-5). The New East WWTF will be expanded in phases to a build out capacity of 0.8 mgd.

6. The Existing East WWTF will continue to serve the Blue Beacon truck wash until it is relocated within the Tejon Industrial Complex East. The relocation is expected to take place in April 2011, at which time Blue Beacon will be connected to the New East WWTF. The Existing East WWTF will be used for emergency purposes only and will continue to be regulated under Order No. 5-01-002.

7. New WDRs reflecting the new facility are needed to ensure the discharge will comply with Central Valley Water Board Plans and policies.

Wastewater Treatment Facility

8. The New East WWTF consists of: two fine screens (one millimeter), screw compactor, mixed anoxic basin, pre-aeration basin, two membrane bioreactor (MBR) basins, aerated sludge tanks, one ultraviolet disinfection unit, chlorine injection system, one 0.9 million gallon (MG) lined storage pond, one 2 MG unlined storage/percolation pond, and approximately 13 acres of Use Area on the east side of I-5. A site map of the WWTF is shown on Attachment A and a process flow schematic is shown on Attachment B, both of which are attached hereto and made part of this Order by reference.

9. The WWTF will produce an effluent anticipated to meet coliform levels of 2.2 Most Probable Number per 100 milliliter (MPN/100 mL).

10. The Discharger proposes to expand the New East WWTF in increments of 0.1 mgd until it reaches an ultimate design flow of 0.8 mgd. Discharge Specification D.1 further outlines conditions the Discharger has to comply with before increasing its flow to the next increment.

11. The Tejon Industrial Complex East will serve the same types of businesses as that of the Tejon Industrial Complex West. Therefore, the influent wastewater quality for the New East WWTF is expected to be similar to that of the West WWTF.

12. Average wastewater influent and effluent characteristics, based on self-monitoring data from January 2008 through November 2010 for the West WWTF, are as follows:

Constituent/Parameter	Units	Influent	Effluent
Daily Flow	mgd	0.056	---
pH	pH Units	---	7.53
Electrical Conductivity (EC)	µmhos/cm	---	1,301
Biochemical Oxygen Demand (BOD)	mg/L	536	21
Total Suspended Solids (TSS)	mg/L	441	30

13. According to the RWD, the New East WWTF will produce an effluent with average BOD and TSS concentrations of 10 mg/L, and an average total nitrogen concentration of less than 10 mg/L.

14. Sludge produced at the WWTFs is and will continue to be hauled off site for disposal at an authorized facility.

15. A water balance included in the July 2009 RWD, and calculated based on a 100-year wet year, indicates that a storage capacity of 2.9 MG and approximately 4.73 acres of Use Area would provide enough storage/disposal capacity for a discharge flow of 0.2 mgd. Treated wastewater will be primarily stored in the lined pond prior to being applied to the Use Area. Additional storage capacity will be provided by the unlined pond during winter months when recycled water disposal is not needed.

Sanitary Sewer Overflows

16. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the treatment facility. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage/conveyance facilities.

17. On 2 May 2006, the State Water Resources Control Board (hereafter State Water Board) adopted General Sanitary Sewer Systems Order (State Water Board Water Quality Order No. 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems"). The General Order requires all public agencies that own or operate sanitary sewer systems greater than one mile in length to comply with this order. The Discharger's collection system for both the West and New East WWTF is greater than one mile in length; therefore, the Discharger applied for, and the collection systems for both WWTF's are covered by, the General Order.

Water Recycling

18. Domestic wastewater contains pathogens harmful to humans that are typically measured by means of total or fecal coliform, as indicator organisms. The California Department of Public Health (CDPH), which has primary statewide responsibility for protecting public health, has established statewide criteria in Title 22, California Code of Regulations (CCR), Section 60301 et seq., (hereafter Title 22) for the use of recycled water and has developed guidelines for specific uses.

19. On 3 February 2009, the State Water Board adopted Resolution No. 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Recycled Water Policy). The Recycled Water Policy promotes the use of recycled water to achieve sustainable local water supplies and reduce greenhouse gases.

20. On 23 April 2009, the Central Valley Water Board adopted Resolution No. R5-2009-0028, *In support of Regionalization, Reclamation, Recycling and Conservation for Wastewater Treatment Plant* (Regionalization Resolution). The Regionalization Resolution encourages water recycling, water conservation, and regionalization of wastewater treatment facilities. It requires dischargers to document:

a. Efforts to promote new or expanded wastewater recycling opportunities and programs;

b. Water conservation measures; and

c. Regional wastewater management opportunities and solutions (e.g. regionalization).

21. Title 22, Section 60323, requires recyclers of treated municipal wastewater to submit an engineering report detailing the use of recycled water, contingency plans, and safeguards. The Discharger has submitted a Title 22 Engineering Report to CDPH, but it has not been approved yet. A provision requiring the Discharger to submit a written copy of the letter from CDPH approving the Title 22 Engineering Report prior to the application of recycled water is included in this Order.

Site-Specific Conditions

22. The Use Area consists of approximately 13 acres of which only a net of 5 acres will be utilized to grow turf grass.

23. Nitrogen uptake rates for different types of turf grass range between 225 and 260 lb/acre/year, based on the *Western Fertilizer Handbook, 9th Edition.*

24. Of the permitted flow of 0.1 mgd, approximately 0.017 mgd are needed for crop demand. At an average nitrogen concentration of 10 mg/L, the total nitrogen loading to the 5-acres of Use Area will be about 103 lbs/acre/year, which will not exceed the nutrient loading at agronomic rates, based on the current cropping pattern. The remainder of the flow will be discharged to the unlined storage/percolation pond.

25. At an average BOD concentration of 10 mg/L, the BOD loading to the 5-acres of Use Area will be less than 1 lb/acre/day.

26. The WWTF and Use Area are in an arid climate characterized by dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during spring and fall months, but summer months are dry. Average annual precipitation and evaporation in the discharge area are about 6 inches and 84 inches, respectively, according to information published by the California Department of Water Resources (DWR).

27. Soils in the vicinity of the WWTF are predominately Cerini Loam, followed by Guijarral Sandy Loam, according to the Web Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Services. Both Cerini Loam and Guijarral Sandy Loam have been assigned a land capacity classification of 2e. These soils have moderate limitations that restrict the choice of plants or require moderate conservation practices. The main problem for these types of soils is the hazard of erosion unless close-growing plant cover is maintained.

28. Land uses in the vicinity of the WWTF are primarily agricultural. There are two commercial developments near the WWTF. The Tejon Industrial Complex West located southwest of the WWTF, and the New Tejon Industrial Complex East located south of the WWTF. The primary crops grown in the vicinity of the WWTF, according the Kern County 2006 Land Use Map published by DWR, are almonds; onion and garlic; and vineyards. These are followed by oranges, tomatoes, melons, squashes, and cucumbers.

29. According to the Federal Emergency Management Agency maps (Map Number 06029C3150E), the WWTF is located within Zone X, an area outside the 1% annual chance of inundation (i.e. 100-year floodplain) with water depths of one foot or less.

30. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System General Industrial Storm Water Permit for the WWTF because all storm water runoff is retained onsite and does not discharge to a water of the United States.

Groundwater Considerations

31. Tecuya and Salt Creeks in the southwestern portion of the White Wolf Subarea exhibit Total Dissolved Solids (TDS) concentrations of 2,000 mg/L (approximate EC of 3,000 µmhos/cm) and 10,000 mg/L (approximate EC of 15,000 µmhos/cm), respectively. It appears that runoff from these creeks has affected groundwater in their fan areas, according to Resolution No. 70-178, *Water Quality Control Plan for Groundwater in the White Wolf Subarea*.

32. Resolution No. 70-178, further discusses that groundwater in the western and southwestern portion of the White Wolf Subarea adjacent to Tecuya Creek is of a sodium sulfate character where TDS concentrations ranges from 600 mg/L (approximate EC of 900 µmhos/cm) to 2,000 mg/L (approximate EC of 3,000 µmhos/cm).

33. Oil fields are major dischargers in the White Wolf Subarea. Five oil fields are located within or partially within the subarea. The North Tejon oil field is located in section 19 of Township 11 North, Range 19 West of SBB&M, and extends underneath the New East WWTF. Produced water from the North Tejon oil field has been characterized as having TDS concentrations over 37,000 mg/L (EC of 57,000 µmhos/cm), chloride over 22,000 mg/L, and boron of 50 mg/L.

34. Regional maps in the Water Supply Report developed by the Kern County Water Agency and published in 2007 indicate the depth to groundwater is approximately 500 feet below ground surface (bgs) and TDS concentrations range between 1,000 mg/L and 1,500 mg/L in the unconfined aquifer, which is equivalent to an EC range of 1,500 µmhos/cm and 2,300 µmhos/cm (EC=TDS/0.65).

35. The District receives source water from the State Water Project (SWP), and two emergency supply wells. The quality of SWP source water from 2008 through 2010 based on Consumer Confidence Reports is tabulated below:

Constituent/Parameter	Units	2008	2009	2010
EC	µmhos/cm	517	650	510
TDS	mg/L	278	360	280
Nitrate (as NO_3)	mg/L	5	4.8	4.8
Chloride (Cl)	mg/L	74	98	61

36. The quality of source water from the two emergency supply wells (TA well and Rose replacement well) in 2010 is as follows:

Constituent/Parameter	Units	TA Well	Rose Replacement Well
EC	µmhos/cm	1,360	1,170
TDS	mg/L	953	760
Nitrate (as NO_3)	mg/L	1.26	---
Cl	mg/L	44.4	32

Basin Plan, Beneficial Uses, and Water Quality Objectives

37. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004* (Basin Plan) designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State Water Board. In accordance with to Section 13263(a) of the California Water Code (CWC), these requirements implement the Basin Plan.

38. The Basin Plan specifies that municipal and domestic wastewater dischargers will be required to reclaim and reuse wastewater whenever reclamation is feasible.

39. The WWTF and Use Area are in Detailed Analysis Unit (DAU) No. 258 and immediately adjacent to DAU No. 261, within the Kern County Basin hydrologic unit. The Basin Plan identifies the beneficial uses of groundwater in both DAUs as municipal and domestic supply, agricultural supply, and industrial service supply. The Basin Plan also identifies DAU No. 258 as having industrial process supply beneficial uses.

40. The WWTF and Use Area are in the Arvin-Wheeler Ridge Hydraulic Area (No. 557.30) of the South Valley Floor Hydrologic Unit, as depicted on interagency hydrologic maps prepared by the DWR in August 1986. The nearest surface water is the Tecuya Creek. Surface water drainage from the WWTF and Use Area is by sheet flow onto several square miles of agricultural fields and would likely never reach a surface water except under severe flooding conditions.

41. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as domestic or municipal supply to meet the maximum contaminant levels (MCLs) specified in Title 22 of CCR. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

42. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

43. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including:

    a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC of the effluent discharged to land shall not exceed the EC of the source water plus 500 µmhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.

    b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 µmhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

44. Maximum salinity limits for most wastewater discharges for most areas are those described in Finding 43.b. One exception is the White Wolf Subarea, where the subject discharge takes place. Relaxation of applicable effluent salinity limits in the White Wolf subarea is based on the class of irrigation water underlying the discharge.

45. The Basin Plan specifies that irrigation water (underlying groundwater in this case), with an EC between 1,000–3,000 µmhos/cm, chlorides between 175–350 mg/L, sodium between 60–75 (percent base constituents), and boron between 0.5–2 mg/L, be considered Class II irrigation water. Based on the quality from the Discharger's backup source water well, underlying groundwater is considered Class II for EC. It is likely that the source water well is of better quality than first-encountered groundwater. Information in the Kern County Water Agencies 2007 Water Supply Report suggests unconfined groundwater underlying the facility has an EC between 1,500 µmhos/cm and

2,300 µmhos/cm. The Basin Plan requires that discharges to land in areas overlying Class II or poorer groundwater shall not exceed an EC of 2,000 µmhos/cm.

Antidegradation Analysis

46. State Water Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Water of the State") (hereafter Resolution No. 68-16) prohibits degradation of groundwater unless it has been shown that:

    a. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;

    b. The degradation will not unreasonably affect present and anticipated future beneficial uses;

    c. The Discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation; and

    d. The degradation is consistent with the maximum benefit to the people of the State.

47. Constituents of concern in the discharge that have the potential to degrade groundwater include salts and nutrients. This Order establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated uses of groundwater and includes groundwater limitations that apply water quality objectives established in the Basin Plan to protect beneficial uses. The discharge will not unreasonably affect present and anticipated future beneficial uses of groundwater because:

    a. For salinity, the Basin Plan specifies that the incremental EC of a discharge cannot exceed the EC of the source water plus 500 µmhos/cm. The Basin Plan also specifies that discharges to the White Wolf Subarea cannot exceed an effluent EC limit of 2,000 µmhos/cm. With a source water EC of 510 µmhos/cm, except for emergencies, the average discharge EC of 1,301 µmhos/cm exceeds the incremental increase Basin Plan limit for EC of source water plus 500 µmhos/cm. However, the discharge as proposed meets the Basin Plan discharge limit for EC of 2,000 µmhos/cm in the White Wolf Subarea. Underlying groundwater has an EC that ranges from 1,500 µmhos/cm to 2,300 µmhos/cm. Therefore, the EC of the discharge is less than the EC of underlying groundwater. EC degradation, should it occur, will not result in water quality that exceeds applicable water quality objectives for the White Wolf Subarea.

    b. For nitrogen, the new WWTF is designed to remove total nitrogen and this Order includes effluent limits that require the effluent total nitrogen to be 10 mg/L or less. Application of wastewater at agronomic rates for both nutrient and hydraulic loading

should preclude degradation of groundwater by nitrogen. Therefore, any degradation that results from the discharge will result in groundwater quality that complies with applicable water quality objectives and protects beneficial uses.

c. This Order includes extensive influent and effluent requirements to verify that the discharge does not cause violations of water quality objectives or impairment of beneficial uses.

48. Degradation of groundwater, should it occur, by constituents of concern (e.g. EC and nitrate) released with discharge from a municipal wastewater utility after effective source control, treatment, and control, is consistent with maximum benefit to the people of the State. Approximately 6,000 new jobs will be created at full build out of the Tejon Industrial Complex East. The project also supports the local economy by purchasing construction materials from local merchants and by hiring local contractors. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and therefore sufficient reason to accommodate growth and any groundwater degradation provided terms of the Basin Plan are met.

Treatment and Control Practices

49. The WWTF described in Finding Nos. 8 through 15, will provide treatment and control of the discharge that incorporates:

a. Tertiary treatment of wastewater to Title 22 2.2 MPN/100mL for Total Coliform Organisms;

b. UV Disinfection;

c. Nitrogen reduction of wastewater to less than the Nitrate MCL for drinking water;

d. Application of wastewater at rates that will not exceed reasonable agronomic demand in the areas where effluent will be recycled;

e. Sludge hauled off-site;

f. Certified operators to ensure proper operation and maintenance;

g. Source water and discharge monitoring; and

h. Salinity minimization.

The preceding treatment and control measures represent BPTC.

CEQA

50. Kern County Planning Department adopted a Final Environmental Impact Report (EIR) (SCH # 2001101133) for the New East WWTF in accordance with the California Environmental Quality Act (CEQA) and filed a Notice of Determination on 10 November 2005.

51. Acting as a responsible agency pursuant to CEQA, the Central Valley Water Board concurs with the conclusion in the EIR that the discharge will not have a significant impact on water quality. This Order includes effluent limits for BOD, TSS, EC, and nitrogen. Compliance with these limits and the associated monitoring and reporting requirements will mitigate any potentially significant impacts to water quality to a less than significant level.

Title 27

52. CWC Section 13173 defines designated waste as either:

    a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Section 25143 of the Health and Safety Code.

    b. Non-hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the water of the state as contained in the appropriate water quality control plan.

53. Pursuant to Section 20090(a) of Title 27 CCR, the discharge of domestic sewage or treated wastewater associated with municipal wastewater treatment plants is exempt from Title 27, provided any resulting degradation of groundwater is in accordance with the Basin Plan and the waste need not be managed as a hazardous waste.

54. None of the wastes regulated by the proposed Order are hazardous wastes or required to be treated as hazardous wastes. As described under the Antidegradation Analysis section above, the authorized discharge of treated wastewater to land will not cause exceedances of Basin Plan requirements or applicable water quality objectives, and are thus exempt from Title 27 pursuant to Section 20090(a).

Other Regulatory Considerations

55. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in Title 40, Code of Federal Regulations, Part 503, Standards for the Use or Disposal of Sewage Sludge, which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and

establishes stabilization and disinfection criteria. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to EPA.

General Findings

56. Pursuant to CWC Section 13263(g), the discharge of waste is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

57. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

58. CWC Section 13267(b) states that:

> In conducting an investigation specified in subdivision (a), the Central Valley Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Central Valley Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Central Valley Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

59. The technical reports required by this Order and monitoring reports required by the attached Monitoring and Reporting Program (MRP) No. R5-2010-___ are necessary to assure compliance with these waste discharge requirements. The Discharger operates the WWTF that discharges the waste subject to this Order.

Public Notice

60. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

61. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

62. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that pursuant to Sections 13263 and 13267 of the California Water Code, Tejon-Castac Water District and its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. Discharge of waste to surface waters or surface water drainage courses is prohibited.

2. Bypass or overflow of untreated wastes, except as allowed by Standard Provision E.2 in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, is prohibited.

3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated', as defined in CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

B. Effluent Limitations

1. Effluent shall not exceed the following limitations:

Constituent	Units	Monthly Average	Daily Maximum
BOD_5[1]	mg/L	10	20
TSS[2]	mg/L	10	20

[1] Five day biochemical oxygen demand (BOD_5)
[2] Total suspended solids (TSS)

The arithmetic mean of BOD_5 and TSS in effluent samples collected over a monthly period shall not exceed 10 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (90 percent removal).

2. The 12-month rolling average EC of the discharge shall not exceed the 12-month rolling average EC of the source water plus 500 µmhos/cm. Compliance with this effluent limitation shall be determined monthly. The Discharger shall comply with this limit in accordance with Provision H.22.

3. The monthly average EC of the discharge shall not exceed 2,000 µmhos/cm.

4. The Total Nitrogen of the discharge shall not exceed a monthly average of 10 mg/L.

5. The median concentration of total coliform organisms in disinfected tertiary recycled water shall not exceed the following (Title 22, Section 60301.230):

a. a most probable number (MPN) of 2.2 total coliform bacteria per 100 milliliters utilizing the bacteriological results of the last seven days for which the analyses have been completed;

b. an MPN of 23 total coliform bacteria per 100 milliliters in more than one sample in any 30-day period; and

c. an MPN of 240 total coliform bacteria per 100 milliliters at any time.

C. Ultraviolet (UV) Disinfection System Specifications

1. The Discharger shall provide continuous, reliable monitoring of flow, UV intensity, UV dose, and turbidity.

2. The Discharger shall operate the UV disinfection systems to provide a minimal UV dose of 82 millijoules per square centimeter (mJ/cm^2) at all times. UV dose equations approved by CDPH must be used as part of the automatic UV disinfection control system for calculating UV dose.

3. The equation to be used as part of the automatic UV disinfection control system for calculating UV dose shall be the following:

   $$RED_{calc} = 10^{[2.2414 - 0.7663 \times \log(Q) + 0.5534 \times \log(0.636 \times S)]}$$

   Where:
   S = Measured UV sensor value (mW/cm^2)
   RED = RED calculated with the UV dose-monitoring equation (mJ/cm^2)
   Q = Flow rate (gallons per minute [gpm])

4. The quartz sleeves and cleaning system components shall be visually inspected per the manufacturer's operation manual for physical wear (scoring, solarization, seal leaks, etc.) and to check the efficacy of the cleaning system.

5. The quartz sleeves shall be cleaned at fixed intervals to ensure the minimum required UV dose delivery is consistently achieved. Cleaning intervals shall not be established based on the presence of coliform organisms.

6. Lamps shall be replaced per the manufacturer's recommendation, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.

7. The Discharger shall comply with all of CDPH's acceptance conditions for the UV disinfection system in use at the WWTF.

8. Prior to initial discharge to the ponds, the Discharger shall submit to the Executive Officer a copy of the letter from CDPH stating that all the UV disinfection system pre-operation acceptance conditions specified by CDPH have been satisfied.

9. The facility shall be operated in accordance with an approved operations plan, which specifies clearly the operational limits and responses required for critical alarms. The operations plan must be approved by CDPH. The operations plan is part of the Engineering Report, Appendix G, which shall become and enforceable part of the permit. A copy of the approved operations plan shall be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies.

10. A quick reference plant operation data sheet shall be posted at the treatment plant and include the following information:

    a. The alarm set points for tertiary turbidity, high flow, and UV dose.

    b. The values of high turbidity, high flow, and low UV dose, when flow must be diverted to waste.

    c. The required frequency of calibration for all monitoring equipment measuring turbidity, flow, and UV intensity.

    d. The required frequency of mechanical cleaning/wiping and equipment inspection.

    e. The UV lamp age tracking procedures and replacement intervals.

11. The UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. Conditions that shall divert flow include: inability to meet the minimum UV dose, intensity sensor failure, multiple lamp failure, or reactor failure.

12. There shall be no bypassing of untreated or partially treated wastewater from the plant or any intermediate unit processes to the point of use.

13. Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to the Central Valley Regional Water Board, California Department of Public Health, and the local health officer.

14. The plant shall be provided with a sufficient number of qualified personnel to operate the filtrations and disinfection facility effectively so as to achieve the required level of treatment at all times. The number and type of operational personnel shall be described in the operations plan that is part of the Engineering Report, Appendix G, which shall become an enforceable part of the permit.

15. A preventive maintenance program shall be provided to ensure that all equipment is kept in reliable operating conditions. A preventive maintenance program is a required part of the Engineering Report operations plan, Appendix G, which shall become an enforceable part of the permit.

16. UV intensity sensors and flow meters must be properly calibrated to ensure proper disinfection.

17. The plant shall have a minimum of one reference UV intensity sensor on site at all times. Measurements made by each duty UV intensity sensor shall be checked at least monthly using a reference UV intensity sensor. For all UV intensity sensors in use, the ratio of the duty UV sensor intensity to the reference UV sensor intensity must be less than or equal to 1.2. If the calibration ratio is greater than 1.2, the failed duty UV sensor must be replaced by a properly calibrated sensor and recalibrated by a qualified facility. The reference UV intensity sensors shall be recalibrated at least annually by a qualified facility using a National Institute of Standards and Technology (NIST) traceable standard.

18. Flow meters measuring the flow through a UV reactor must be verified to determine accuracy at least monthly via checking the flow reading against other flow determination methods.

19. Equivalent or substitutions of equipment are not acceptable without an adequate demonstration of equivalent disinfection performance.

D. Discharge Specifications

1. The monthly average discharge flow shall not exceed

   a. 0.1 mgd until Provision 21.a is satisfied.

   b. 0.2 mgd until Provision 21.b is satisfied.

   c. 0.3 mgd until Provision 21.c is satisfied.

   d. 0.4 mgd until Provision 21.d is satisfied.

   e. 0.5 mgd until Provision 21.e is satisfied.

   f. 0.6 mgd until Provision 21.f is satisfied.

   g. 0.7 mgd until Provision 21.g is satisfied.

2. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

3. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.

4. Effluent storage ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the winter. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

5. On or about **1 October** of each year, available effluent pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification D.4.

6. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

    a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, and herbicides.

    c. Dead algae, vegetation and other debris shall not accumulate on the water surface.

    d. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April to 30 June bird nesting season.

7. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of groundwater limitations.

E. Recycling Specifications

The following specifications apply to the Use Area under the ownership or control of the Discharger:

1. Recycled water shall be managed in conformance with the regulations contained in Title 22, Division 4, Chapter 3, CCR.

2. All reclamation equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities. All reclamation distribution system piping shall be purple or adequately wrapped with purple tape.

3. Recycled water controller, valves, and similar appurtenances shall be affixed with recycled water warning signs, and shall be equipped with removable handles, locking mechanisms, or some other means to prevent public access or tampering. The contents of the signs shall conform to Title 22, CCR, Section 60310. Quick couplers and sprinkler heads, if used, shall be of a type, or secured in a manner, that permits operation only by authorized personnel. Hose bibbs that the public could use shall be eliminated.

4. Public contact with recycled water shall be controlled using signs and/or other appropriate means. Signs of a size no less than four inches high by eight inches wide with proper wording (shown below) shall be placed at all areas of public access and around the perimeter of all areas used for effluent disposal or conveyance to alert the public of the use of recycled water. All signs shall display an international symbol similar to that shown in Attachment C, which is attached hereto and made part of this Order by reference, and present the following wording:

"RECYCLED WATER – DO NOT DRINK"

"AGUA DE DESPERDICIO RECLAMADA – POR FAVOR NO TOME"

5. Disinfected tertiary recycled water is approved for use on food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop; parks and playgrounds; school yards; residential landscaping; unrestricted access golf courses; and any other irrigation use not specified in Title 22, Section 60304, and not prohibited by other sections of the CCR.

6. The Discharger shall maintain the following setback distances from areas irrigated with recycled water:

Setback Distance (feet)	To
50	Edge of land application area to domestic well
100	Wastewater/recycled water storage reservoir to domestic well
50	Application areas to surface water

7. Recycled water shall not be allowed to escape from the authorized Use Area by airborne spray or by surface flow except in minor amounts such as that associated with good irrigation practices.

8. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.

9. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

10. Workers shall be educated regarding proper hygienic procedures to ensure personal and public safety.

11. Potable water supply piping and recycled water piping shall not have any cross-connections. Supplementing recycled water with potable water shall not be allowed except through an air-gap separation or, if approved by the CDPH, a reduced pressure principle backflow device.

12. Areas irrigated with recycled water shall be managed to prevent nuisance conditions or breeding of mosquitoes. More specifically:

    a. All applied irrigation water must infiltrate completely within a 48-hour period;

    b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation; and

    c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.

13. Application of waste constituents to the Use Area shall be at reasonable agronomic rates to preclude creation of pollution, nuisance, or degradation of groundwater, considering soil, climate, and nutrient demand. The annual nutrient loading of the Use Area, including the nutritive value of organic and chemical fertilizers and recycled water, shall not exceed crop demand.

F. Sludge Specifications

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has undergone sufficient treatment and testing to quality for reuse pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land recycling.

1. Sludge and solid waste shall be removed from screens, sumps, aeration basins, ponds, clarifiers, etc. as needed to ensure optimal plant operation.

2. Treatment and storage of sludge generated by the WWTF shall be confined to the WWTF property.

3. Any handling and storage of residual sludge, solid waste, and biosolids on property of the WWTF shall be temporary (i.e., no longer than two years) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations of this Order.

4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements will satisfy this specification.

5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water board or the State Water Board or a local (e.g., county) program authorized by a regional water board. In most cases, this means the General Biosolids Order (State Water Board Water Quality Order No. 2004-12-DWQ, "General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Recycling Activities"). For a biosolids use project to be authorized by the General Biosolids Order, the Discharger must file a complete Notice of Applicability for each project.

6. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

G. Groundwater Limitations

1. Release of waste constituents from any treatment or storage component associated with the discharge shall not cause or contribute to groundwater:

   a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality whichever is greater:

      (i) Nitrate as nitrogen of 10 mg/L.

      (ii) Total Coliform Organisms of 2.2 MPN/100 mL.

      (iii) For constituents identified in Title 22, the MCLs quantified therein.

   b. Containing taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

H. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements,* dated 1 March 1991 (Standard Provisions), which are part of this Order.

2. The Discharger shall comply with MRP No. R5-2011-____, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer. The submittal date of Discharger self-monitoring reports shall be no later than submittal dates specified in the MRP.

3. The Discharger shall keep at the WWTF a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.

4. The Discharger shall not allow pollutant-free wastewater to be discharged into the WWTF collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means storm water (i.e., inflow), groundwater (i.e., infiltration), cooling waters, and condensates that are essentially free of pollutants.

5. The Discharger must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.

6. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code Sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professionals(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to California Water Code Section 13267.

7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when

the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

8. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

9. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

10. As a means of discerning compliance with Discharge Specifications D.3, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive days. Should the DO be below 1.0 mg/L during a weekly sampling event, the Discharger shall take all reasonable steps to correct the problem and commence daily DO monitoring in the affected ponds until the problem has been resolved. If unpleasant odors originating from affected ponds are noticed in developed areas, or if the Discharger received one or more odor complaints, the Discharger shall report the findings in writing within 5 days of the date and shall include a specific plan to resolve the low DO results to the Central Valley Water Board within 10 days of that date.

11. The Discharger shall maintain and operate all ponds sufficient to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California civil engineer certifies (based on design, construction, and condition of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain in each pond permanent markers with calibration that indicates the water level at design capacity and enables determination of available operational freeboard.

12. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.

13. All wastewater discharged shall be oxidized, coagulated (if necessary), filtered, and disinfected pursuant to CDPH reclamation criteria, CCR, Title 22, Division 4, Chapter 3, (Title 22), or equivalent. The maximum filtration rate shall not exceed 5 gpm/ft.

14. The chlorine disinfection process following filtration shall provide a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow.

15. When coagulation is used, the turbidity of disinfected tertiary recycled waster that is passed through undisturbed soil or a filter media shall not exceed the following (Title 22, Section 60301.320);

    a. an average of 2.0 NTU within a 24-hour period;

    b. 5.0 NTU more than five percent of the time within a 24 hour period; and

    c. 10 NTU at any time.

16. When coagulation is not used, (i.e., direct filtration mode):

    a. The turbidity of the influent to the filtration unit (prior to filtration) shall not exceed 5.0 NTU for more than 15 minutes and never exceed 10 NTU; and

    b. The effluent turbidity (following filtration) shall not exceed 2.0 NTU at any time.

17. The turbidity of disinfected tertiary recycled water that is passed through a microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane shall not exceed the following (Title 22, Section 60301.320):

    a. 0.2 NTU more than five percent of the time within a 24 hour period, and;

    b. 0.5 NTU at any time.

18. The use of recycled water shall comply with the provisions of Title 22 CCR. Further, the District and/or Users must obtain written approval from the Executive Officer prior to use of recycled water for uses other than those specified in this Order.

19. The Use Area parcels shall be graded to prevent ponding along public roads or other public areas and prevent runoff onto adjacent properties.

20. **By 15 April 2012,** the Discharger shall submit a Title 22 Engineering Report in accordance with CCR Title 22 Section 60323. The Discharger shall not recycle its effluent until CDPH has approved the Discharger's Title 22 Engineering Report and a written copy of the approval letter from CDPH is provided to the Central Valley Water Board.

21. **At least 60 days prior** to initiating an increase in the monthly average flow for the following increments, the Discharger shall submit an engineering certification showing that the WWTF has sufficient treatment, storage, and disposal capacity to comply with the other terms and conditions of this Order. Each subpart of this Provision will be considered satisfied following written acknowledgement from the Executive Officer that its criteria have been met.

    a. From 0.1 mgd up to 0.2 mgd.

    b. From 0.2 mgd up to 0.3 mgd.

    c. From 0.3 mgd up to 0.4 mgd.

    d. From 0.4 mgd up to 0.5 mgd.

    e. From 0.5 mgd up to 0.6 mgd.

    f. From 0.6 mgd up to 0.7 mgd.

    g. From 0.7 mgd up to 0.8 mgd.

22. Salinity Minimization. The Discharger shall comply with Effluent Limitation B.2 according to the following compliance schedule:

Task		Compliance Date
a.	Submit a technical report in the form of a work plan and time schedule to identify sources of effluent salinity and a time schedule to implement mitigation measures to reduce salinity and ensure that the discharge consistently meets Effluent Limitation B.2.	**12 January 2012**
b.	Commence work plan.	**30 days** following Executive Officer

		approval of Task a, but in no case later than **15 April 2012**.
c.	Submit progress reports.	Monthly.
d.	Provide a technical report documenting all mitigation measures identified and implemented.	**15 October 2013**
e.	Achieve consistent compliance with Effluent Limitation B.2.	**15 April 2014**

Technical reports submitted pursuant to the Provision shall be prepared in accordance with Provision H.6 and are subject to Executive Officer approval as to adequacy.

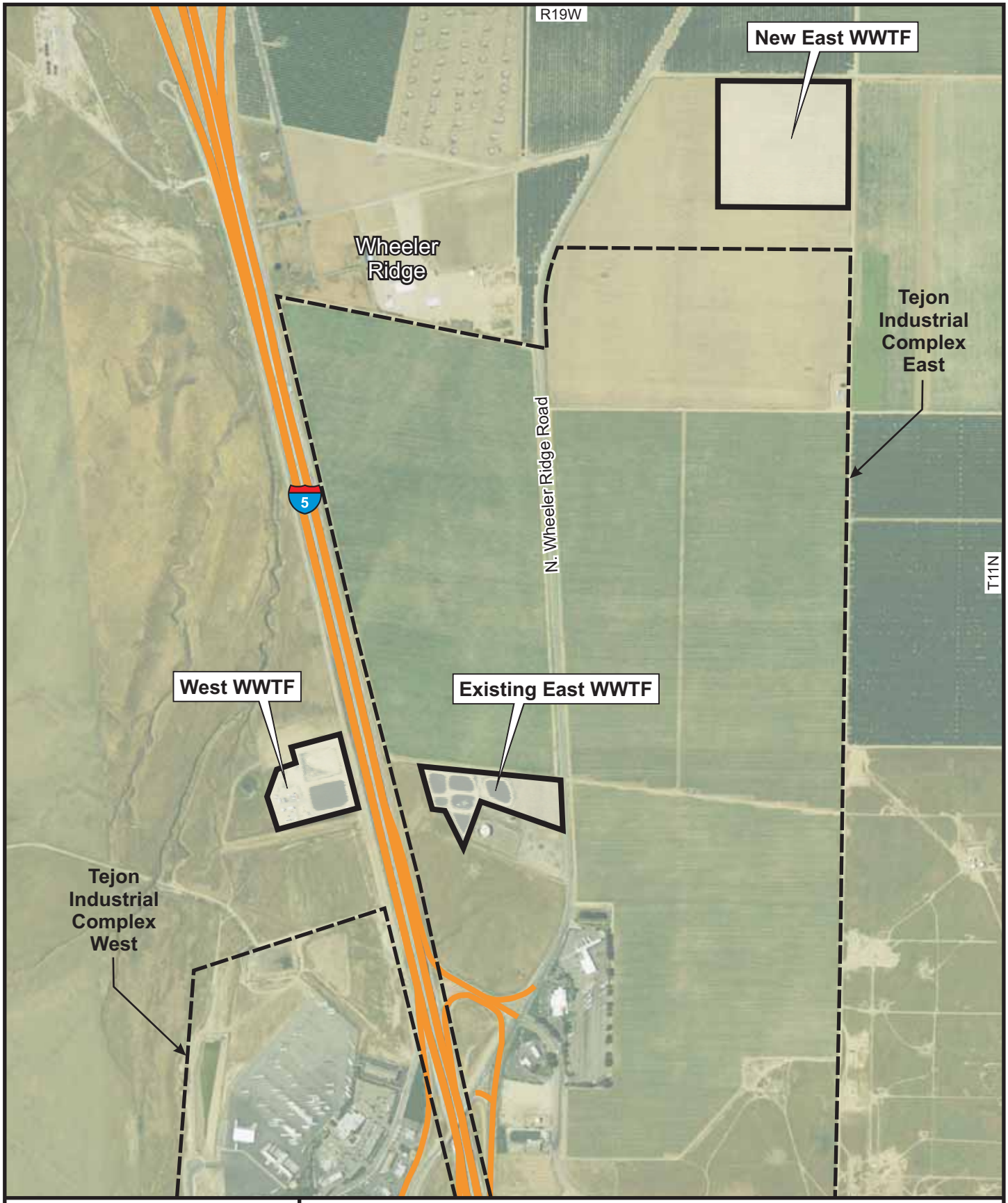
23. If the Central Valley Water Board determines that waste constituents in the discharge have reasonable potential to cause or contribute to an exceedance of an objective for groundwater, this Order maybe reopened for consideration of addition or revision of appropriate numerical effluent or groundwater limitations for the potential constituents.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

_____
PAMELA C. CREEDON, Executive Officer

Order Attachments:
A Site Location Map
B Flow Schematic
C Recycled Water Signage
Monitoring and Reporting Program No. R5-2011-____
Information Sheet
Standard Provisions (1 March 1991)

DMS/WDH: 9/6/2011



Map Source:
NAIP Aerial Photograph (2005)

Sections 30 & 31, T11N, R19W, SBB&M

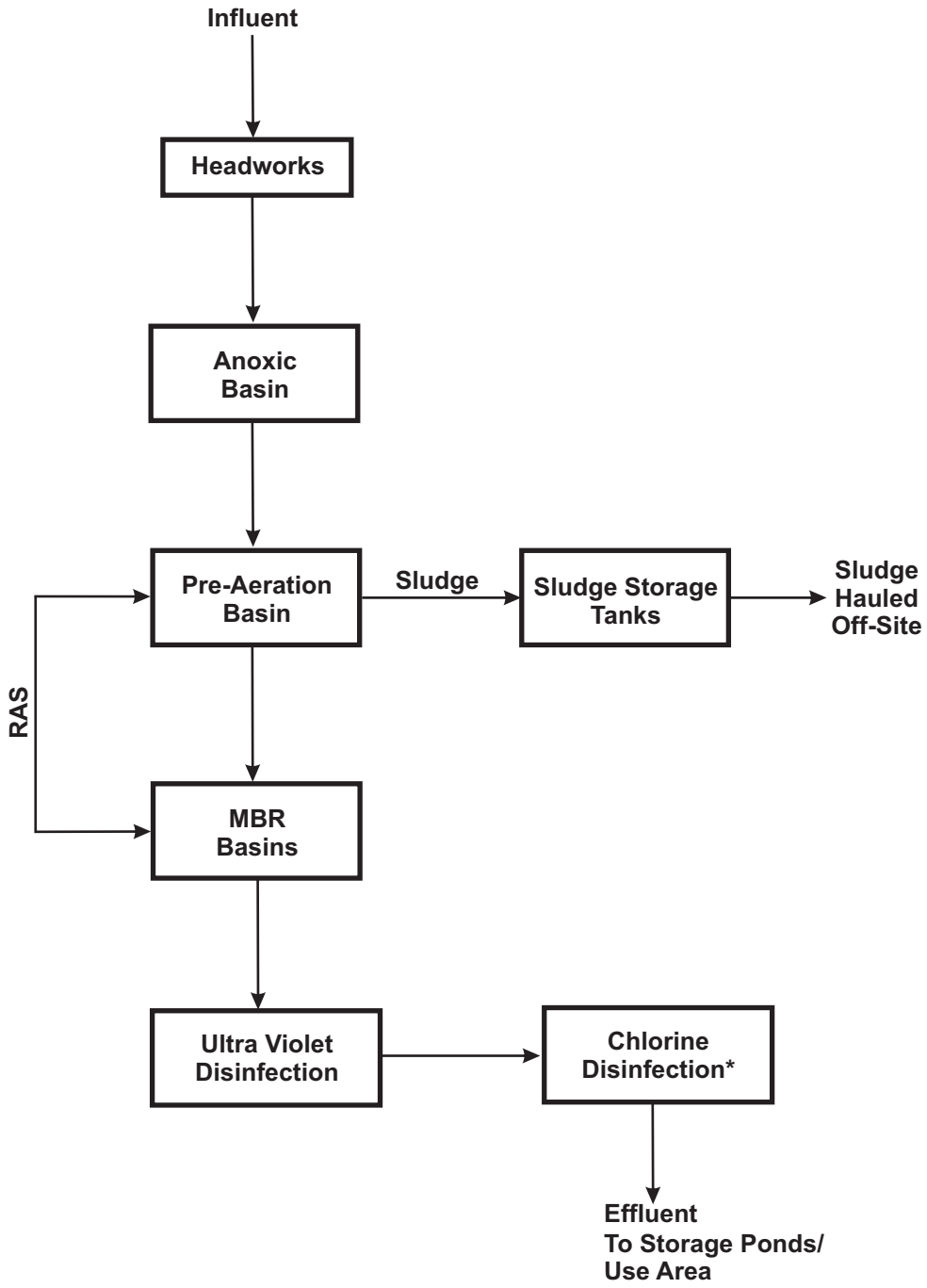
SCALE IN FEET

0 500 1,000 2,000

SITE MAP

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2011-____
FOR
TEJON-CASTAC WATER DISTRICT
TEJON INDUSTRIAL COMPLEX NEW EAST
WASTEWATER TREATMENT FACILITY
KERN COUNTY

ATTACHMENT A



*Interim chlorine disinfection until UV unit is validated by CDPH. Chlorination will continue after UV validation to control algae.

NOT TO SCALE

PROCESS FLOW DIAGRAM

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2011-____
FOR
TEJON-CASTAC WATER DISTRICT
TEJON INDUSTRIAL COMPLEX NEW EAST
WASTEWATER TREATMENT FACILITY
KERN COUNTY

ATTACHMENT B

NONPOTABLE WATER INTERNATIONAL SYMBOL

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2011-____

FOR

TEJON-CASTAC WATER DISTRICT

TEJON INDUSTRIAL COMPLEX NEW EAST

WASTEWATER TREATMENT FACILITY

KERN COUNTY

ATTACHMENT C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2011-____
FOR
TEJON-CASTAC WATER DISTRICT
TEJON INDUSTRIAL COMPLEX NEW EAST
WASTEWATER TREATMENT FACILITY
KERN COUNTY

This monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) Section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with ***Standard Provisions and Reporting Requirements for Waste Discharge Requirements***, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 8 and a list of the constituents required for the monitoring of Priority Pollutants is included in Table 1, which is on page 9.

TENTATIVE ORDER

INFLUENT MONITORING

Influent samples shall be collected at the inlet of the headworks of the WWTF. Time of collection of the sample shall be recorded. Influent monitoring shall include at least the following:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	EC	µmhos/cm	Grab
Weekly	BOD_5	mg/L	24-hour composite
Weekly	TSS	mg/L	24-hour composite
Monthly	Monthly Average Discharge Flow	mgd	Computed

EFFLUENT MONITORING

Effluent samples shall be collected at a point in the system following treatment and before discharge to the effluent storage ponds or Use Area. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Turbidity	NTU	Metered[1]
Continuous	Chlorine, Total Residual[2]	mg/L	Metered
Daily[3]	Total Coliform Organisms	MPN/100 mL	Grab
Weekly	pH	pH Units	Grab
Weekly	EC	µmhos/cm	Grab
Weekly	BOD_5	mg/L	24-hour composite
Weekly	TSS	mg/L	24-hour composite
Monthly	TDS	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	Computed
Monthly	Chloride	mg/L	24-hour composite
Monthly	Sodium	mg/L	24-hour composite
Quarterly	General Minerals	mg/L	24-hour composite
Once every 5 years[4]	Priority Pollutants (see Table 1)	Varies[5]	Varies

[1] In accordance with the requirements of Title 22, Section 60301.320, the Discharger shall report: a) the 24 hour average effluent turbidity; b). the percentage of time the effluent is greater than 5 NTU within a 24-hour period; and c). the instantaneous maximum effluent turbidity. If coagulation is not being used, the instantaneous maximum filter influent turbidity shall also be reported.

[2] The minimum total chlorine residual concentration for each calendar day shall be reported in the monthly self monitoring reports. The CT values (the product of total chlorine residual and modal contact time measured at the same point) for the following conditions shall be reported in the monthly self monitoring reports for each calendar day: (1) the modal contact time at the peak daily flow rate and the corresponding chlorine residual at the time; (2) the minimum total chlorine residual concentration and the corresponding modal contact time; (3) the maximum total residual chlorine concentration and the corresponding modal contact time; and (4) the modal contact time at the minimum daily flow rate and the corresponding total chlorine residual concentration

[3] Excluding weekends and holidays.

[4] Beginning in July 2011.

[5] mg/L or µg/L, as appropriate.

POND MONITORING

Permanent markers (e.g., staff gages) shall be placed in all ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard. Effluent storage pond monitoring shall include at least the following:

Frequency	Constituent/Parameter	Units	Sample Type
Weekly	DO[1]	mg/L	Grab
Weekly	Freeboard	Feet[2]	Grab

[1] Should the DO be below 1.0 mg/L during a weekly sampling event, the Discharger shall take all reasonable steps to correct the problem and commence daily DO monitoring in the affected ponds until the problem has been resolved.

[2] To nearest tenth of a foot

The Discharger shall inspect the condition of the ponds weekly and record visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether grease, dead algae, vegetation, scum, or debris are accumulating on the pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.). A summary of the entries made in the log shall be included in the subsequent monitoring report.

SOURCE WATER MONITORING

For each source (either well or surface water supply), the Discharger shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements. Alternatively, the Discharger may establish representative sampling stations within the distribution system serving the same area as is served by the WWTF.

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly	Flow-Weighted EC	µmhos/cm	Computed average
Annually	General Minerals	mg/L	Computed average

BIOSOLIDS/SLUDGE MONITORING

Sludge shall be sampled for the following constituents:

Arsenic	Copper	Nickel
Cadmium	Lead	Selenium
Molybdenum	Mercury	Zinc

Monitoring shall be conducted: using the methods in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846) and updates thereto, as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4). The constituents listed above shall be monitored at the following frequency, depending on volume generated:

Volume Generated (dry metric tons/year)	Frequency
0 to 290	Annually
290 to 1,500	Quarterly
1,500 to 15,000	Bimonthly (six samples per year)
Greater than 15,000	Monthly

The Discharger shall demonstrate that treated sludge (i.e., biosolids) meets Class A or Class B pathogens reduction levels by one of the methods listed in 40 CFR, Part 503.32. The Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR, Part 503.33(b).

USE AREA MONITORING

The Discharger shall perform the routine monitoring and loading calculations for each discrete irrigation area within the Use Area. Data shall be collected and presented in tabular format in accordance with Table 2.

In addition, the Discharger shall inspect the Use Area on a weekly basis. Evidence of erosion, field saturation, runoff, of the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and included as part of the quarterly monitoring reports.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report:	**1 May**
Second Quarter Monitoring Report:	**1 August**
Third Quarter Monitoring Report:	**1 November**
Fourth Quarter Monitoring Report:	**1 February**

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The following information is to be included on all monitoring and annual reports, as well as report transmittal letters, submitted to the Central Valley Water Board:

Discharger Name
Facility Name
MRP Number
Contact Information (telephone number and email)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. Monitoring data or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. If the chief plant operator is not in direct line of supervision of the laboratory function for a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

At any time henceforth, the State or Central Valley Regional Water Board may notify the Discharger to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html) or similar system. Until such notification is given, the Discharger shall submit hard copy monitoring reports.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater reporting

1. The results of influent, effluent, and pond monitoring specified on page 2 and 3.

2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flow.

3. For each month of the quarter, calculation of the 12-month rolling average EC of the discharge using the EC value for that month averaged with the EC values for the previous 11 months.

4. For each month of the quarter, calculation of the monthly average effluent BOD and TSS concentrations, and calculation of the percent removal of BOD and TSS compared to the influent.

5. A summary of the notations made in the pond monitoring log during each quarter. Copies of log pages covering the quarterly reporting period shall not be submitted unless requested by Central Valley Water Board staff.

Source water reporting

1. The results of source water monitoring specified on page 3.

2. For each month of the quarter, calculation of the flow-weighted 12-month rolling average EC of the source water using monthly flow data and the source water EC values for the most recent four quarters.

B. Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Wastewater treatment facility information

3. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal.

4. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations.

5. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).

6. A statement whether the current operation and maintenance manual, sampling plan, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.

7. The results of an annual evaluation conducted pursuant to Standard Provision E.4 and a figure depicting monthly average discharge flow for the previous five calendar years.

Biosolids/Sludge monitoring

1. Annual production totals in dry tons or cubic yards.

2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.

   a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.

   b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.

   c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).

   d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.

Use Area reporting

1. The type of crop(s) grown in the Use Area, and the quantified hydraulic and nitrogen loading rates in accordance with Table 2.

2. A summary of the notations made in the Use Area monitoring log during each quarter. The entire contents of the log do not need to be submitted.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

_____
(Date)

DMS/WDH: 9/12/2011

GLOSSARY

BOD_5	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected at least every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis for General Minerals shall include at least the following:

Alkalinity	Chloride	Sodium
Bicarbonate	Hardness	Sulfate
Calcium	Magnesium	TDS
Carbonate	Potassium	

General Minerals analyses shall be accompanied by documentation of cation/anion balance.

Table 1. Priority Pollutant Scan

Inorganics[1]	***Organics***	3-Methyl-4-Chlorophenol	Hexachlorobenzene
Antimony	Acrolein	Pentachlorophenol	Hexachlorobutadiene
Arsenic	Acrylonitrile	Phenol	Hexachlorocyclopentadiene
Beryllium	Benzene	2,4,6-Trichlorophenol	Hexachloroethane
Cadmium	Bromoform	Acenaphthene	Indeno(1,2,3-c,d)pyrene
Chromium (III)	Carbon tetrachloride	Acenaphthylene	Isophorone
Chromium (VI)	Chlorobenzene	Anthracene	Naphthalene
Copper	Chlorodibromomethane	Benzidine	Nitrobenzene
Lead	Chloroethane	Benzo(a)Anthracene	N-Nitrosodimethylamine
Mercury	2-Chloroethylvinyl Ether	Benzo(a)pyrene	N-Nitrosodi-n-Propylamine
Nickel	Chloroform	Benzo(b)fluoranthene	N-Nitrosodiphenylamine
Selenium	Dichlorobromomethane	Benzo(g,h,i)perylene	Phenanthrene
Silver	1,1-Dichloroethane	Benzo(k)fluoranthene	Pyrene
Thallium	1,2-Dichloroethane	Bis(2-chloroethoxy) methane	1,2,4-Trichlorobenzene
Zinc	1,1-Dichloroethylene	Bis(2-chloroethyl) ether	
Cyanide	1,2-Dichloropropane	Bis(2-chloroisopropyl) ether	***Pesticides***
Asbestos	1,3-Dichloropropylene	Bis(2-Ethylhexyl)phthalate	Aldrin
	Ethylbenzene	4-Bromophenyl phenyl ether	alpha-BHC
Dioxin Congeners	Methyl Bromide	Butylbenzyl Phthalate	beta-BHC
2,3,7,8-TCDD	Methyl Chloride	2-Chloronaphthalene	gamma-BHC (Lindane)
1,2,3,7,8-PentaCDD	Methylene Chloride	4-Chlorophenyl Phenyl Ether	delta-BHC
1,2,3,4,7,8-HexaCDD	1,1,2,2-Tetrachloroethane	Chrysene	Chlordane
1,2,3,6,7,8-HexaCDD	Tetrachloroethylene (PCE)	Dibenzo(a,h)Anthracene	4,4'-DDT
1,2,3,7,8,9-HexaCDD	Toluene	1,2-Dichlorobenzene	4,4'-DDE
1,2,3,4,6,7,8-HeptaCDD	1,2-Trans-Dichloroethylene	1,3-Dichlorobenzene	4,4'-DDD
OctaCDD	1,1,1-Trichloroethane	1,4-Dichlorobenzene	Dieldrin
2,3,7,8-TetraCDF	1,1,2-Trichloroethane	3,3'-Dichlorobenzidine	alpha-Endosulfan
1,2,3,7,8-PentaCDF	Trichloroethylene (TCE)	Diethyl phthalate	beta-Endosulfan
2,3,4,7,8-PentaCDF	Vinyl chloride	Dimethyl phthalate	Endosulfan Sulfate
1,2,3,4,7,8-HexaCDF	2-Chlorophenol	Di-n-Butyl Phthalate	Endrin
1,2,3,6,7,8-HexaCDF	2,4-Dichlorophenol	2,4-Dinitrotoluene	Endrin Aldehyde
1,2,3,7,8,9-HexaCDF	2,4-Dimethylphenol	2,6-Dinitrotoluene	Heptachlor
2,3,4,6,7,8-HexaCDF	2-Methyl-4,6-Dinitrophenol	Di-n-Octyl Phthalate	Heptachlor epoxide
1,2,3,4,6,7,8-HeptaCDF	2,4-Dinitrophenol	1,2-Diphenylhydrazine	Polychlorinated biphenyls
1,2,3,4,7,8,9-HeptaCDF	2-Nitrophenol	Fluoranthene	Toxaphene
OctaCDF	4-Nitrophenol	Fluorene	

[1] With the exception of wastewater samples, samples placed in an acid-preserved bottle for metals analysis must first be filtered. If filtering in the field is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain of custody form) to immediately filter then preserve the sample.

[2] Samples to be analyzed for volatile compounds and phthalate esters shall be grab samples; the remainder shall be 24-hour composite samples.

Table 2. Use Area Monitoring

Recycled Water Monitoring Data For Year: _____								
Parcel No. _____ of _____ acres								
		Water application				Nitrogen application		
		Water required	Effluent used	Other water used	Total irrigation water	As fertilizer	As effluent*	Total nitrogen applied
Month	Crop	(AF)	(AF)	(AF)	(AF)	(lbs/acre)	(lbs/acre)	(lbs/acre)
October								
November								
December								
Subtotal:								
January								
February								
March								
Subtotal:								
April								
May								
June								
Subtotal:								
July								
August								
September								
Subtotal:								
Annual Total:								
* calculated as (AF effluent/acre) x (2.72) x (X mg/l total nitrogen) = lbs nitrogen/acre								

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS FOR WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.

2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.

3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   a. Violation of any term or condition contained in this Order;

   b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

   c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;

   d. A material change in the character, location, or volume of discharge.

4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:

   a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.

   b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.

   c. The addition of a major industrial, municipal or domestic waste discharge facility.

   d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.

6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.

7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.

8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:

    a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,

    b. Copy any records required to be kept under terms and conditions of this Order,

    c. Inspect at reasonable hours, monitoring equipment required by this Order, and

    d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.

9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.

11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.

12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** *[Note: Current phone numbers for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.]* as soon as it or its agents

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

   This plan shall:

   a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.

   b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.

   c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

   The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:

   a. <u>For a corporation</u>: by a principal executive officer of at least the level of senior vice-president.

   b. <u>For a partnership or sole proprietorship</u>: by a general partner or the proprietor.

   c. <u>For a municipality, state, federal or other public agency</u>: by either a principal executive officer or ranking elected or appointed official.

   d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;

      (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;

      (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

      (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.

5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

   California Regional Water Quality Control Board
   Central Valley Region
   11020 Sun Center Drive, #200
   Rancho Cordova, CA 95670-6114
   Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.
   or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).

2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

   Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

a. the date, exact place, and time of sampling or measurements,
b. the individual(s) who performed the sampling of the measurements,
c. the date(s) analyses were performed,
d. the individual(s) who performed the analyses,
e. the laboratory which performed the analysis,
f. the analytical techniques or methods used, and
g. the results of such analyses.

4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.

5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.

6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:

   a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.

   b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.

2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.

4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.

2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:

   a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); <u>and</u>

      (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; <u>or</u>

   b. (1) by-pass is required for essential maintenance to assure efficient operation; and

      (2) neither effluent nor receiving water limitations are exceeded; and

      (3) the discharger notifies the Board ten days in advance.

   The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

a. an upset occurred and the cause(s) can be identified;

b. the permitted facility was being properly operated at the time of the upset;

c. the discharger submitted notice of the upset as required in paragraph B.1. above; and

d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.

5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

6. Definitions

a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.

b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.

c. The monthly average concentration is the arithmetic mean of measurements made during the month.

d. The "daily maximum" **discharge** is the total discharge by volume during any day.

e. The "daily maximum" **concentration** is the highest measurement made on any single discrete sample or composite sample.

f. A "grab" sample is any sample collected in less than 15 minutes.

g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;

   (1) at equal time intervals, with a maximum interval of one hour

   (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

   The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the inddustrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent that the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:

(1) Complied with baseline monitoring report requirements (where applicable);

(2) Consistently achieved compliance;

(3) Inconsistently achieved compliance;

(4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);

(5) Complied with schedule to achieve compliance (include the date final compliance is required);

(6) Did not achieve compliance and not on a compliance schedule;

(7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:

(1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;

(2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;

(4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.

(5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;

(6) Restriction of flow to the treatment plant; or

(7) Disconnection from discharge to the treatment plant.

g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.

h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

i. A summary of public participation activities to involve and inform the public.

j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers

INFORMATION SHEET

INFORMATION SHEET – ORDER NO. R5-2011-____
TEJON-CASTAC WATER DISTRICT
TEJON INDUSTRIAL COMPLEX NEW EAST
WASTEWATER TREATEMENT FACILITY
KERN COUNTY

Background

Currently the Tejon-Castac Water District (hereafter Discharger) owns and operates the Tejon Industrial Complex West wastewater treatment facility (West WWTF) located on the west side of Interstate Five (I-5) at Laval Road. Waste Discharge Requirements (WDRs) Order R5-2008-0004 regulates the West WWTF and allows a monthly average discharge flow of 0.1 million gallons per day (mgd) of wastewater to two ponds (total storage capacity of 2.39 acres) and to 14-acre of Use Area on the west side of I-5. The West WWTF provides sewerage service for a hotel, gas stations, restaurants, shower and restroom areas, convenience stores, and industrial warehouses.

On July 2009, the Discharger submitted a Report of Waste Discharge for a proposed new WWTF (New East WWTF) on the East side of I-5 that will have an initial design flow of 0.1 mgd. The New East WWTF will serve the same types of businesses as that of the West WWTF. Therefore, the influent wastewater quality for the New East WWTF will be similar to that of the West WWTF. According to the RWD, the New East WWTF will produce an effluent with average biochemical oxygen demand (BOD) and total suspended solids (TSS) concentrations of 10 mg/L, and an average total nitrogen concentration of less than 10 mg/L.

The New East WWTF consists of: two 1 mm fine screens, a screw compactor, a mixed anoxic basin, a pre-aeration basin, two membrane bioreactor (MBR) basins, aerated sludge tanks, one ultraviolet disinfection unit, one 0.9 million gallon (MG) lined storage pond, one 2 MG unlined storage pond, and approximately 13 acres of Use Area on the east side of I-5.

The Discharger proposes to expand the New East WWTF in phases to a build out design capacity of 0.8 mgd in increments of 0.1 mgd. Discharge Specification D.1 outlines the conditions that the Discharger needs to comply with before increasing the flow.

Groundwater Conditions

Tecuya and Salt Creeks in the southwestern portion of the White Wolf Subarea exhibit total dissolved solids (TDS) concentrations of 2,000 and 10,000 mg/L, respectively. It appears that runoff from these creeks have affected groundwater in their fan areas, according to Resolution No. 70-178, *Water Quality Control Plan for Groundwater in the White Wolf Subarea*.

Resolution No. 70-178, further discusses that groundwater in the western and southwestern portion of the White Wolf Subarea adjacent to Tecuya Creek is of a sodium sulfate character where TDS concentrations range from 600 to 2,000 mg/L.

Oil fields are major dischargers in the White Wolf Subarea. Five oil fields are located within or partially within the subarea. The North Tejon oil field is located in section 19 of Township 11 North, Range 19 West of SBB&M, and extends underneath the New East WWTF. Produced water from the North Tejon oil field has been characterize as having TDS concentrations over 37,000 mg/L, chloride over 22,000 mg/L, and boron of 50 mg/L.

Depth to groundwater is approximately 500 feet below ground surface (bgs). The TDS and Electrical Conductivity (EC) range from 1,000 mg/L to 1,500 mg/L and 1,500 µmhos/cm to 2,300 µmhos/cm (calculated EC=TDS/0.65), respectively, in the unconfined aquifer, according to water quality maps in the Water Supply Report developed by the Kern County Water Agency and published in 2007.

Source Water

Source water for the WWTF is provided by the State Water Project, and by two on-site wells in emergencies. The 2010 Consumer Confidence Report indicates that the source water is relatively good, with an average EC of about 510 µmhos/cm, and NO_3 (as NO_3) of 4.8 mg/L. Quality of water from the two wells is of poor quality. Average EC for the TA Well and Rose Replacement Well are about 1,360 µmhos/cm and 1,170 µmhos/cm, respectively.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan identifies the greatest long-term water quality problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Central Valley Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use. Thus the Basin Plan establishes an incremental effluent EC limit of 500 µmhos/cm over source water EC as the measure of the maximum permissible addition of salt constituents through use. In addition, the Basin Plan states that discharges to areas that may recharge to good quality groundwater shall not exceed an EC of 1,000 µmhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

Maximum salinity limits for most wastewater discharges for most areas are those mentioned. One exception is the White Wolf Subarea, where the subject discharge takes place. Relaxation of some effluent salinity limits in the White Wolf Subarea is based on the class of irrigation water underlying the discharge.

The Basin Plan specifies that irrigation waters (underlying groundwater in this case), with an EC between 1,000–3,000 µmhos/cm, chlorides between 175–350 mg/L, sodium between 60–75 mg/L (percent base constituents), and boron between 0.5–2 mg/L, be considered Class II irrigation waters. Based on the quality from the Discharger's backup source water well, underlying groundwater is Class II for EC. It is likely that the source water well is of better quality than first-encountered groundwater. Information in the Kern County Water Agencies 2007 Water Supply Report suggests unconfined groundwater underlying the facility has an EC between 1,500 µmhos/cm and 2,300 µmhos/cm. The Basin Plan specifies that

discharges to land in areas overlying Class II or poorer groundwater shall not exceed an EC of 2,000 µmhos/cm. The quality of the effluent with respect to EC is generally better than groundwater. This order prescribes groundwater EC limitations pursuant to Title 22, California Code of Regulations (CCR), where EC has secondary Maximum Contaminant Levels (MCLs) of 1,600 µmhos/cm (upper limit) and 2,200 µmhos/cm (short term limit). These groundwater limitation proscribes the discharge from causing groundwater EC to exceed background groundwater quality is appropriate.

Antidegradation

State Water Board Resolution No. 68-16 ("Policy with Respect to Maintaining High Quality Waters of State") (hereafter Resolution No. 68-16) prohibits degradation of groundwater unless it has been shown that:

a. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;

b. The degradation will not unreasonably affect present and anticipated future beneficial uses;

c. The Discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation; and

d. The degradation is consistent with the maximum benefit to the people of the State.

Constituents of concern in the discharge that have the potential to degrade groundwater include salts and nutrients. This Order establishes term and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated uses of groundwater.

The Order includes two monthly average EC effluent limits, an incremental limit of source water plus 500 µmhos/cm and an overall cap limit of 2,000 µmhos/cm. The incremental EC effluent limit of source water plus 500 µmhos/cm is general provision that applies to all discharges to land involving advance wastewater treatment. The monthly average EC effluent limit of 2,000 µmhos/cm is included to ensure salinity loading rates to field crops will not adversely affect the crops that will be grown with the recycled water (turf grass). The Order also contains groundwater limitations that will ensure that discharges will not cause exceedances of water quality objectives established in the Basin Plant to protect beneficial uses. With respect to EC, the quality of the discharge is generally of better quality than underlying groundwater.

The WWTF provides nitrogen removal and the Order includes limits that require the effluent total nitrogen to be 10 mg/L or less. Nitrate (as N) represents only a portion of the total nitrogen in effluent. Other nitrogen species can include organic nitrogen, ammonia, and nitrite. Additional nitrogen losses will occur during the migration of effluent through the soil profile to groundwater. The total nitrogen limit of 10 mg/L will ensure that the nitrate (as N)

concentration of the percolate will be less than the MCL of 10 mg/L. Groundwater Limitations in the Order also proscribe the discharge from causing the groundwater nitrate (as N) concentration from exceeding the MCL. Therefore, any degradation that may result from the discharge will not exceed water quality objectives or impair beneficial uses.

Degradation of groundwater by EC (unlikely) and Nitrate (minimal should it occur) released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of the State. The project supports the local economy by purchasing construction materials from local merchants and by hiring local contractors. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and therefore sufficient reason to accommodate growth and groundwater degradation provided terms of the Basin Plan are met.

Treatment Technology and Control
The expansion project will provide treatment and control of the discharge that incorporates:

a. Tertiary treatment of wastewater to Title 22 2.2 MPN/100mL for Total Coliform Organisms;
b. UV Disinfection;
c. Nitrogen reduction of wastewater to less than the Nitrate MCL for drinking water;
d. Application of wastewater at rates that will not exceed reasonable agronomic demand in the areas where effluent will be recycled;
e. Sludge hauled off-site;
f. Certified operators to ensure proper operation and maintenance;
g. Source water and discharge monitoring; and
h. Salinity minimization

Implementation of the above treatment, operation, maintenance, and monitoring measures, as required by this Order, represent the implementations of BPTC of the discharge.

CEQA
The Kern County Planning Department, as the lead agency for purposes of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et, seq.) and the CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended), adopted a Final Environmental Impact Report (FEIR) and filed a Notice of Determination on 10 November 2005, State Clearinghouse Number 2001101133 for the New East WWTF.

Central Valley Water Board staff reviewed the FEIR and concurred with the conclusion that the discharge would not have a significant impact on water quality. This Order includes effluent limits for BOD, TSS, EC, and nitrogen. Compliance with these will mitigate any significant impacts to water quality.

Title 27
Title 27, CCR, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies sitting and construction standards for full containment to classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27 under Section 20090(a). None of the wastes regulated by the proposed Order are hazardous waste or required to be treated as hazardous wastes. As described under the Antidegradation Analysis section above, the authorized discharge of treated wastewater to land will not cause exceedances of Basin Plan requirements and is thus exempt from Title 27 pursuant to Section 20090(a).

The Discharger hauls sludge/biosolids off-site to a facility authorized to handle sludge/biosolids.

Proposed Order Terms and Conditions

Discharge Prohibitions, Specifications and Provisions
The proposed Order prohibits discharge to surface waters and surface water drainage courses and cross connection between potable water and well water piping with recycled water piping.

The proposed Order includes a schedule for the increase of monthly average daily flow limit by increments of 0.1 mgd up to a final design flow of 0.8 mgd, and effluent limits for BOD_5 and TSS each of 10 mg/L monthly average and 20 mg/L daily maximum. These limitations are based on Basin Plan minimum performance standards for municipal facilities.

The proposed Order's provisions regarding pond dissolved oxygen, and freeboard are consistent with Central Valley Water Board policy for the prevention of nuisance conditions, and are applied to all such facilities.

The proposed Order prescribes groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedances of these objectives or natural background water quality, whichever is greater.

The proposed Order includes provisions that would require the Discharger to submit engineering certification that the WWTF has sufficient treatment, storage capacity for each expansion phase, a written copy of the Title 22 Engineering Report approval letter from DPH. As the discharge will not immediately comply with the incremental EC limit of source water

plus 500 µmhos/cm, the Order also includes a time schedule for the Discharger to implement salinity minimization measures to ensure compliance with the limit within two years.

Monitoring Requirements

Section 13267 of the CWC authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes influent and effluent monitoring requirements, pond monitoring, source water monitoring, sludge monitoring, and Use Area monitoring. This monitoring is necessary to characterize the discharge, evaluate compliance with effluent limitations prescribed by the Order.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if new technical information or if applicable laws and regulations change.

DMS/WDH: 4/26/2011

WDH

State of California—Health and Human Services Agency

California Department of Public Health

HOWARD BACKER, MD, MPH
Interim Director

EDMUND G. BROWN JR.
Governor

RECEIVED
MAY 17 2011
RWQCB-CVR
FRESNO, CALIF.

May 13, 2011

Dale Harvey, Senior Water Resource Control Engineer
Regional Water Quality Control Board
1685 E Street
Fresno, CA 93706

Subject: Review of Draft Waste Discharge Requirements (WDR) for Tejon Industrial Complex (TIC) New East Water Reclamation Facility in Kern County (System No. 1590007)

Dear Mr. Harvey:

On behalf of the California Department of Public Health (CDPH), we have reviewed the tentative waste discharge requirements for Tejon-Castac Water District, Tejon Industrial Complex New East Wastewater Treatment Facility in Kern County and have the following comments:

1) Please correct Provision "*16. The turbidity of disinfected tertiary recycled water that is passed through a microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane shall not exceed the following (Title 22, Section 60301.320):*
   a. 0.02 NTU more than five percent of the time within a 24 hour period, and;
   b. 0.5 NTU at any time."
   Replace 0.02 NTU with 0.2 NTU.

2) The WDR states, under "*C. Ultraviolet Disinfection (UV) System Specifications*
   1. *The Discharger shall provide continuous, reliable monitoring of flow, UV transmittance, UV intensity, UV dose, UV power, and turbidity.*
   2. *The Discharger shall operate the UV disinfection system to provide a minimum UV dose of 80 millijoules per square centimeter (mJ/cm2) at all times, unless otherwise approved by CDPH.*
   3. *The UV transmittance (at 254 nanometers) in the wastewater shall not fall below 65 percent of the maximum at any time, unless otherwise approved by CDPH.*
   4. *The quartz sleeves and cleaning system components shall be visually inspected per the manufacturer's operation manual for physical wear (scoring, solarization, seal leaks, etc.) and to check the efficacy of the cleaning system.*
   5. *The quartz sleeves shall be cleaned at fixed intervals to ensure the minimum required UV dose delivery is consistently achieved. Cleaning intervals shall not be established based on the presence of coliform organisms.*

6. *Lamps shall be replaced per the manufacturer's recommendation, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.*
7. *The Discharger shall comply with all of CDPH's acceptance conditions for the UV disinfection system in use at the WWTF.*
8. *Prior to initial discharge to the ponds, the Discharger shall submit to the Executive Officer a copy of the letter from CDPH stating that all the UV disinfection system pre-operation acceptance conditions specified by CDPH have been satisfied.*
9. *The UV disinfection system shall be operated in accordance with an approved operations and maintenance plan.*

3) Replace C. 2. with "Until otherwise approved by CDPH, the Discharger shall operate the UV disinfection system to provide a minimum UV dose of 100 millijoules per square centimeter (mJ/cm^2) at all times. UV dose equations approved by CDPH must be used as part of the automatic UV disinfection control system for calculating UV dose."

4) Replace C. 9. with "The facility should be operated in accordance with an approved operations plan, which specifies clearly the operational limits and responses required for critical alarms. The operations plan should be submitted and approved by CDPH. A copy of the approved operations plan should be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies. The following should be described:
    a. Control system
    b. Alarm functions
    c. Alarm setpoints
    d. Records
    e. Reports
    f. Procedures and frequency of lamp replacement
    g. Procedures and frequency of calibration of all monitoring equipment
    h. Location, access, and quantity of backup supply of lamps and other critical components
    i. frequency of the membrane integrity test"

5) Add C. 10. "A quick reference plant operations data sheet should be posted at the treatment plant and include the following information:
    a. The alarm set points for tertiary turbidity, high and low flow, UV dose and transmittance.
    b. The values of high turbidity, high flow, and low UV dose, when flow must be diverted to waste.
    c. The required frequency of calibration for all monitoring equipment measuring turbidity, flow, UV intensity, and UVT.
    d. The required frequency of mechanical cleaning/wiping and equipment inspection.
    e. The UV lamp age tracking procedures and replacement intervals."

6) Add C. 11. "The UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. Conditions that should shut plant down and divert flow include: inability to meet the minimum UV dose, high flow, low UV sensor level, low UVT, or reactor failure."

7) Add C. 12. "There shall be no bypassing of untreated or partially treated wastewater from the plant or any intermediate unit processes to the point of use."

8) Add C. 13. "Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to the RWQCB, CDPH, and the local health officer."

9) Add C. 14. "The plant shall be provided with a sufficient number of qualified personnel to operate the filtration and disinfection facility effectively so as to achieve the required level of treatment at all times."

10) Add C. 15. "A preventive maintenance program shall be provided to ensure that all equipment is kept in a reliable operating condition."

11) Add C. 16. "UV intensity sensors, flow meters and UVT monitors must be properly calibrated to ensure proper disinfection."

12) Add C. 17. "The plant shall have a minimum of one reference UV intensity sensor on site at all times. Measurements made by each duty UV intensity sensor shall be checked at least monthly using a reference UV intensity sensor. For all UV intensity sensors in use, the ratio of the duty UV sensor intensity to the reference UV sensor intensity must be less than or equal to 1.2. If the calibration ratio is >1.2, the failed duty UV sensor must be replaced by a properly calibrated sensor and recalibrated by a qualified facility. The reference UV intensity sensors shall be recalibrated at least annually by a qualified facility using a National Institute of Standards and Technology (NIST) traceable standard."

13) Add C. 18. "UVT meter must be inspected and checked against a reference bench-top unit weekly to document accuracy. If the on-line analyzer UVT reading varies from the bench-top spectrophotometer UVT reading by 2% or more, the on-line UVT analyzer must be recalibrated by a procedure recommended by the manufacturer."

14) Add C. 19. "Flow meters measuring the flow through a UV reactor must be verified to determine accuracy at least monthly via checking the flow reading against other flow determination methods."

15) Add C. 20. "Equivalent or substitutions of equipment are not acceptable without an adequate demonstration of equivalent disinfection performance."

If you have any questions about this letter, please contact me at (661) 335-7315.

Sincerely,

Jaswinder Dhaliwal

Jaswinder S. Dhaliwal, P.E.
Senior Sanitary Engineer
Drinking Water Field Operations

CC: Kern County Environmental Health Services Department

Denise Soria, Water Resource Control Engineer
Central Valley RWQCB
1685 E Street
Fresno, CA 93706

Dean Brown
Tejon Ranch Company
6468 West Laval Road
Lebec, CA 93243

State of California—Health and Human Services Agency
California Department of Public Health

RON CHAPMAN, MD, MPH
Director

EDMUND G. BROWN JR.
Governor

August 30, 2011

Dale Harvey, Senior Water Resource Control Engineer
Regional Water Quality Control Board
1685 E Street
Fresno, CA 93706

Subject: Review of Tentative Waste Discharge Requirements (WDR) for Tejon Industrial Complex (TIC) - New East Water Reclamation Facility in Kern County (System No. 1590007)

Dear Mr. Harvey:

The California Department of Public Health (CDPH) provided comments pertaining to the tentative waste discharge requirements for Tejon-Castac Water District on May 13, 2011 under the premise that the Waste Discharge Requirements were to be adopted prior to the State of California Department of Public Health (CDPH) reviewing and approving a final Engineering Report (Production, Distribution, and Use of Recycled Water). Many of the comments were necessarily speculative in an effort to address uncertainties that remained with the recycled water project at that time. Postponement of adoption of the Waste Discharge Requirements has allowed the CDPH to receive and review the Updated Title 22 Engineering Report dated August 2011, which included the details of the UV disinfection system commissioning tests. In response to this change of events, the CDPH is reissuing its comments to better reflect the now known recycled water operation.

These comments are intended to supersede the comments provided in our previous letter dated May 13, 2011. The requirement that the Discharger shall comply with all of CDPH's acceptance conditions for the UV disinfection system should be explicitly stated in the Waste Discharge Requirements.

On behalf of the California Department of Public Health (CDPH), we have reviewed the tentative waste discharge requirements for Tejon-Castac Water District, Tejon Industrial Complex New East Wastewater Treatment Facility in Kern County and have the following comments:

1) The WDR states, under "*C. Ultraviolet Disinfection (UV) System Specifications:*

1. The Discharger shall provide continuous, reliable monitoring of flow, UV transmittance, UV intensity, UV dose, UV power, and turbidity.
2. The Discharger shall operate the UV disinfection system to provide a minimum UV dose of 80 millijoules per square centimeter (mJ/cm2) at all times, unless otherwise approved by CDPH.
3. The UV transmittance (at 254 nanometers) in the wastewater shall not fall below 65 percent of the maximum at any time, unless otherwise approved by CDPH.
4. The quartz sleeves and cleaning system components shall be visually inspected per the manufacturer's operation manual for physical wear (scoring, solarization, seal leaks, etc.) and to check the efficacy of the cleaning system.
5. The quartz sleeves shall be cleaned at fixed intervals to ensure the minimum required UV dose delivery is consistently achieved. Cleaning intervals shall not be established based on the presence of coliform organisms.
6. Lamps shall be replaced per the manufacturer's recommendation, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.
7. The Discharger shall comply with all of CDPH's acceptance conditions for the UV disinfection system in use at the WWTF.
8. Prior to initial discharge to the ponds, the Discharger shall submit to the Executive Officer a copy of the letter from CDPH stating that all the UV disinfection system pre-operation acceptance conditions specified by CDPH have been satisfied.
9. The UV disinfection system shall be operated in accordance with an approved operations and maintenance plan.

2) Replace C. 1. with "The Discharger shall provide continuous, reliable monitoring of flow, UV intensity, UV dose, and turbidity."

3) Replace C. 2. with "The Discharger shall operate the UV disinfection system to provide a minimum UV dose of 82 millijoules per square centimeter (mJ/cm^2) at all times. UV dose equations approved by CDPH must be used as part of the automatic UV disinfection control system for calculating UV dose. ."

4) Replace C. 3. with "The equation to be used as part of the automatic UV disinfection control system for calculating UV dose shall be the following:

$$RED_{calc} = 10^{[2.2414 - 0.7663 \times \log(Q) + 0.5534 \times \log(0.636 \times S)]}$$

Where:
S = Measured UV sensor value (mW/cm^2).
RED = RED calculated with the UV dose-monitoring equation (mJ/cm^2).
Q = Flow rate (gallons per minute [gpm]).

5) Replace C. 9. with "The facility should be operated in accordance with an approved operations plan, which specifies clearly the operational limits and responses required for critical alarms. The operations plan must be approved by CCDPH. The operations plan is part of the Engineering Report, Appendix G, which shall become an enforceable part of the permit. A copy of the approved operations plan should be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies.

6) Add C. 10. "A quick reference plant operations data sheet should be posted at the treatment plant and include the following information:
    a. The alarm set points for tertiary turbidity, high flow, and UV dose.
    b. The values of high turbidity, high flow, and low UV dose, when flow must be diverted to waste.
    c. The required frequency of calibration for all monitoring equipment measuring turbidity, flow, and UV intensity.
    d. The required frequency of mechanical cleaning/wiping and equipment inspection.
    e. The UV lamp age tracking procedures and replacement intervals."

7) Add C. 11. "The UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. Conditions that should divert flow include: inability to meet the minimum UV dose, intensity sensor failure, multiple lamp failure, or reactor failure."

8) Add C. 12. "There shall be no bypassing of untreated or partially treated wastewater from the plant or any intermediate unit processes to the point of use."

9) Add C. 13. "Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to the RWQCB, CDPH, and the local health officer." Supplier shall immediately begin implementation of corrective action pursuant to the approved Operations Plan.

10) Add C. 14. "The plant shall be provided with a sufficient number of qualified personnel to operate the filtration and disinfection facility effectively so as to achieve the required level of treatment at all times. The number and type of operational personnel should be described in the operations plan that is part of the Engineering Report, Appendix G, which shall become an enforceable part of the permit. ."

11) Add C. 15. "A preventive maintenance program shall be provided to ensure that all equipment is kept in a reliable operating condition. A preventative maintenance program is a required part of the Engineering Report operations plan, Appendix G, which shall become an enforceable part of the permit."

12) Add C. 16. "UV intensity sensors and flow meters must be properly calibrated to ensure proper disinfection."

13) Add C. 17. "The plant shall have a minimum of one reference UV intensity sensor on site at all times. Measurements made by each duty UV intensity sensor shall be checked at least monthly using a reference UV intensity sensor. For all UV intensity sensors in use, the ratio of the duty UV sensor intensity to the reference UV sensor intensity must be less than or equal to 1.2. If the calibration ratio is >1.2, the failed duty UV sensor must be replaced by a properly calibrated sensor and recalibrated by a qualified facility. The reference UV intensity sensors shall be recalibrated at least annually by a qualified facility using a National Institute of Standards and Technology (NIST) traceable standard."

14) Add C. 19. "Flow meters measuring the flow through a UV reactor must be verified to determine accuracy at least monthly via checking the flow reading against other flow determination methods."

15) Add C. 20. "Equivalent or substitutions of equipment are not acceptable without an adequate demonstration of equivalent disinfection performance."

If you have any questions about this letter, please contact me at (661) 335-7318.

Sincerely,

Jaswinder S. Dhaliwal, P.E.
Senior Sanitary Engineer
Drinking Water Field Operations

CC: Kern County Environmental Health Services Department

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Telephone: (661) 248-3000
Facsimile: (661) 248-3100

May 27, 2011

VIA US MAIL, FAX ((559) 445-5910), and EMAIL (dsoria@waterboards.ca.gov)

W. Dale Harvey, P.E.
California Regional Water Quality
Control Board
1685 E Street
Fresno, California 93706

RE: COMMENTS OF TEJON-CASTAC WATER DISTRICT TO TENTATIVE WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2011-____ FOR TEJON-CASTAC WATER DISTRICT TEJON INDUSTRIAL COMPLEX NEW EAST WASTEWATER TREATMENT FACILITY

Dear Mr. Harvey:

The following submission shall constitute the preliminary comments of the Tejon-Castac Water District (the "District") to the tentative Waste Discharge Requirements Order No. R5-2011-_____ For Tejon-Castac Water District Tejon Industrial Complex New East Wastewater Treatment Facility (the "tentative").

From the outset, the District would like to sincerely thank the Regional Board staff and in particular Dale Harvey, Doug Patteson, Lonnie Wass and Denise Soria for their assistance in this matter.

On a house keeping note, please be aware that the Tejon Industrial Complex has been renamed Tejon Ranch Commerce Center (TRCC), we therefore request that all references to the "Tejon Industrial Complex" be replaced with "Tejon Ranch Commerce Center.

As background, it should be noted that the District has been diligently working with RWQCB over the last couple of years to develop and construct a facility specifically tailored to meet the unique challenges presented by the waste stream characteristics[1] generated at this Interstate stopping center, while also meeting the EC discharge limits of 2,000 μmhos/cm as allowed for the White Wolf Subarea. This effort was engaged upon under the guidance of RWQCB staff, who specifically indicated that the 2,000 μmhos/cm was the proper EC level, when non-basin source water is used. The District followed this guidance and it agreed to develop a salinity management plan that assured all current and future tenants shall be required to implement the best management practices available in order to further insure salinity management.

Turning now to the substance of the tentative, the District would like to express that it is troubled by the analysis set forth in the tentative. In particular, the District would like to note that the tentative acknowledges that the Tulare Lake Basin Plan sets forth a requirement in White Wolf Subarea that discharges to land in the areas overlying Class II or poorer groundwater shall not exceed an EC of 2,000 μmhos/cm.[2] The tentative also acknowledges that the discharge area in question overlies these Class II lands and that the District's well water sources are considered Class II for EC purposes. Importantly, these well sources are the only District sources of water in question that are native to the Tulare Lake Basin and therefore it should follow that the District's discharge limit for EC in the White Wolf Subarea should be the cited 2,000 μmhos/cm, when using non-basin water sources. Unfortunately, the tentative does not properly factor in the non-basin water into its analysis and it does not provide any comment or analysis on this subject.

The tentative's failure to properly recognize the benefit derived from the use of non-basin water at this late date in effect penalizes the District, and those located in the White Wolf Subarea. The District's use of higher quality source water from outside the Tulare Lake Basin results in the production of effluent that is lower in EC than the underlying White Wolf Subarea.

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[1] The make-up of dischargers at this location are almost entirely restaurants, which by their very nature typically have a high EC waste discharge. To further aggravate the issue, TRCC is in large part an Interstate shopping center, which the traveling public naturally uses to stop for (1) food and (2) restrooms facilities. Without the benefit of residences that are typically very low in ECs, the District is at a disadvantage over other providers as it does not have these low EC residences to dilute the higher EC restaurants.

TRCC provides a much needed benefit to the state in the jobs that exist today (1000+) and the anticipated future jobs (6000+). Compliance with a performance based EC level will have a negative impact and slowing effect on TRCC's ability to create an environment where businesses can come open shop and employ residence of Kern County and the State of California.

[2] Please note that this limit is consistent with TRCC WEST WWTF (WDR Order R5-2008-0004). Additionally, it should be pointed out that the District sometimes diverts waste water from the West Side to the East Side for treatment and recycling purposes.

More specifically, the District has spent considerable sums building and planning its treatment facilities in a manner which relies on these lower source water ECs as part of the treatment process. The end result of the treatment process is a discharge of additional non-basin water supplies to the White Wolf Subarea that are actually lower in EC than the natural ground water in the Subarea. Simply put, it is fairly apparent that the discharge to the White Wolf Subarea is a benefit to the Subarea and the Tulare Lake Basin as a whole because the discharged water is of a higher quantity and quality than is naturally found within the Subarea.

Importantly, it should also be understood that the EC of this discharge is also lower than the legally permissible EC if the District were to abandon its current program and solely rely on the ground water from the White Wolf Subarea, as it is legally permitted and capable of doing. Additionally, it should be understood that if the tentative is adopted as currently written there is a likelihood that the District may abandon its current program as the cost benefit analysis of that program may no longer support it.

Given the above, it does not legally or logically follow that the District should be required to meet a lower EC than that of the White Wolf Subarea on which the discharge will actually occur, when the source is non-basin water. Even if one was to assume for the sake of argument that the EC analysis in the tentative was legally sufficient, the District appears to have ample grounds to support an estoppel argument.

We therefore respectfully ask that you reconsider your tentative in light of these comments and those particularly set forth in the redline comments to the tentative attached hereto. More specifically, we respectfully ask that you reconsider and adopt EC discharge limits of 2,000 µmhos/cm (except in emergency situations), when non-basin source water is used.

If you have any questions or concerns please feel free to contact Babs Makinde at the above captioned number at your earliest convenience.

Respectfully,

A. A. Makinde

for Dennis Atkinson
President, Tejon-Castac Water District

Enclosures Tentative Redline Comments
cc: Babs Makinde
Dean Brown
Angelica Martin
Ernest Conant

TEJON-CASTAC WATER DISTRICT'S COMMENTS

ON CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS

TENTATIVE ORDER NO. R5-2011-

Comment #1, Page 2, Item 8, we propose the following language:

8. The New East WWTF consists of: two fine screens (one millimeter), screw compactor, mixed anoxic basin, pre-aeration basin, two membrane bioreactor (MBR) basins, aerated sludge ~~aeration~~ tanks, one ultraviolet disinfection unit, one 0.9 million gallon (MG) lined storage pond, one 2 MG unlined storage/percolation pond, and approximately 13 acres of Use Area. A site map of the WWTF is shown on Attachment A and a process flow schematic is shown on Attachment B, both of which are attached hereto and made part of this Order by reference.

Comment #2, Page 4, Item 21, line 4 we propose the following language:

21. Title 22, Section 60323, requires recyclers of treated municipal wastewater to submit an engineering report detailing the use of recycled water, contingency plans, and safeguards. The discharges has submitted a Title 22 Engineering Report to DPH, but it has not been approved yet. ~~On _____, 2010~~Previously, CDPH's approved "Interim Water Recycling Disinfection Plan" which outlines guidelines that would allow the discharge to apply recycled water while the Title 22 Engineering Report and onsite UV validations are completed. A provision requiring the Discharger to submit a written copy of the letter from DPH approving the Title 22 Engineering Report prior to the application of recycled water ~~is included in this Order~~ other than as outlined in the "Interim Water Disinfection Plan". ~~is included in this Order.~~

Comment #3, Page 7, Item 43. We propose the following language:

43. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan has established three specific criteria for salesalinity management in subareas of the Tulare Lake Basin. Those requirements are outlined below;establishes several salt management requirements, including:

a. Strike in its entirety and replace with the following language:

White Wolf Subarea overlying Class I irrigation water (groundwater)--discharges

shall not exceed 1000 µmhos/cm ec, 175 mg/L chlorides , 60 percent sodium, and 1.0 mg/l boron.

b. Strike in its entirety and replace with the following:

White Wolf Subarea overlying Class II or poorer irrigation water (groundwater)-- Dischargers shall not exceed 2,000 µmhos/cm EC, 350 mg/L chlorides, 75 percent sodium, 75 percent sodium and 2mg/l boron.

c. Add C. and the following language:

All other areas in the Tulare Lake Basin -- discharges shall not exceed an EC level (µmhos/cm) of source water + 500.

Comment #4, Page 7 Item 44, We propose the following language:

44. Strike in its entirety and replace with the following language:

The White Wolf Subarea consists of 64,000 acres within the Tulare Lake Basin about 20 miles south of Bakersfield. The subarea is bounded on the West by the San Emidio Mountains, on the South and East by the Tehachapi Mountains and on the North by the White Wolf Fault.

The subject discharge will take place in the White Wolf Subarea. Based on the quality from the discharger's backup source water well underlying groundwater is considered Class II for EC discharge limites.; EC limits for this discharged wil be as required for White Wolf Subarea overlying Class II groundwater. (see 43b above)

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Comment #5, Page 8, Item 47.a. We propose the following language:

a. For salinity, the Basin Plan specifies that the incremental EC of a discharge cannot exceed the EC of the source water plus 500 µmhos/cm unless discharge is in the White Wolf Subarea. The Basin Plan ~~also~~ specifies that discharges to the White Wolf Subarea overlying Class II groundwater cannot exceed an effluent EC limit of 2,000 µmhos/cm in the White Wolf Subarea. The average discharge EC of 1301 µmhos/cm meets the basin plan discharge limit for EC of 2,000 µmhos/cm in the White Wolf Subarea. -Underlying groundwater has an EC that ranges from 1,500 µmhos/cm to 2,300 µmhos/cm; therefore, the EC of the discharge is less than the EC of underlying groundwater. EC degradation should it occur will not result in water quality that exceeds applicable water quality objectives for the White Wolf Subarea.

Comment #6, Page 9, Item 49.g. We propose the following language:

g. ~~Source water and d~~Discharge monitoring; and

Comment #7, Page 12, Paragraph B. Item 2. We propose the following language:

2. ~~———~~The 12-month rolling average EC of the discharge when using native sources shall not exceed the 12-month rolling average EC of the source water plus 500 µmhos/cm. Compliance with this effluent limitation shall be determined monthly. The Discharger shall comply with this limit in accordance with Provision H.21~~2.———~~.

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Comment #8, Page 12, Paragraph B. Item 2. We propose the following language:

3. The monthly average EC of the discharge when using non-native source shall not exceed 2,000 µmhos/cm.

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Comment #~~8~~9, Page 13, Paragraph C. We propose the following language:

1. The Discharger shall provide continuous, reliable monitoring of flow, ~~UV transmittance~~, UV intensity, UV dose, UV power, and turbidity.

2. The Discharger shall operate the UV disinfection system to provide a minimum UV dose of ~~80~~ 100 millijoules per square centimeter (mJcm2) at all times, unless otherwise approved by ~~DPH~~ CDPH~~S~~.

3. The UV transmittance (at 254 nanometers) in the wastewater shall not fall below 65 percent of the maximum at any time, unless other wise approved by ~~DPH~~ CDPH~~S~~.

7. The Discharger shall comply with all of ~~DPH's~~ CDPH'S acceptance conditions for the UV disinfection system in use at the WWTF.

8. Prior to initial discharge to the ~~ponds~~ use ~~arm~~area, the discharger shall submit to the Excutive Officer a copy of the letter from~~,~~ CDPH~~'S~~ stating that all the UV disinfection system pre-operation acceptance conditions specified by ~~DPH~~ CDPH~~S~~ have been satisfied or approval ~~outlined~~to implement in the "Interim Water Recycling disinfection Plan" has been granted.

Comment #~~9~~10, Page 15, Paragraph E. Item 3. We propose the following language:

4. Recycled water controller, valves, and similar appurtenances shall be affixed with recycled water ~~warning~~ signs, and shall be equipped with removable handles, locking mechanisms, or some other means to prevent public access or tampering. The contents of the signs shall conform to Title 22, CCR, Section 60310. Quick couplers and sprinkler heads, if used, shall be of a type, or secured in a manner, that permits operation only by authorized personnel. Hose bibs that the public could use shall be eliminated.

Comment #~~10~~11, Page 16, Item 11. We propose the following:

11. Potable water supply piping and recycled water piping shall not have any cross-connections. Supplementing recycled water with potable water shall not be allowed except through an air-gap separation or, if approved by the ~~DPH~~ CDPH~~S~~, a reduced pressure principle backflow device.

Comment #~~11~~12, Page 20, Item 13 and 19. We propose the following language:

13. All wastewater discharged shall be oxidized, coagulated (if necessary), filtered, and disinfected pursuant ~~DPH~~ CDPH~~S~~ reclamation criteria, CCR, Title 22, Division 4, Chapter 3, (Title 22), or equivalent. The maximum filtration rate shall not exceed 5 gpm/ft.

Comment #~~12~~13, Page 21, Item 16.a. We propose the following language:

a. ~~0.02~~ .20 NTU more than five percent of the time within a 24 hour period, and;

Comment #14, Page 21, Item 119.

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19. **By [180 days from adoption of the Order]**, the Discharger shall submit a Title 22 Engineering Report in accordance with CCR Title 22 Section 60323. The Discharger shall not recycle its effluent until ~~DPH~~ CDPHS has approved the Discharger's Title 22 Engineering Report or reuse in accordance with the "Interim Recycling Disinfection Plan" and a ~~written~~ copy of the approval letter from ~~DPH~~ CDPHS is provided to the Central Valley Water Board.

Comment #~~13~~15, Page 22, Item 21, a, b, c, d, e. We propose the following language:

21. Strike in its entirety.

a. Strike in its entirety
b. Strike in its entirety
c. Strike in its entirety
d. Strike in its entirety
e. Strike in its entirety

Comment #~~14~~16, Page 22, Item 22. We propose the following language:

22. Strike in its entirety ~~(Drop~~- contradicts statement and calculation in ~~4~~6 a. on page 8 of this Tentative Order~~)~~

TEJON-CASTAC WATER DISTRICT'S COMMENTS

ON CALIFORNIA REGIONAL WATER QUALITY CONTROL BAORD CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2011-

Comment #~~15~~17, Page 3 Paragraph "Source Water Monitoring". We propose the following language:

Strike in its entirety.

Comment #~~16~~18, Page 6, Paragraph "Source water reporting" ~~and~~ Items 1 and 2. We propose the following language:

Strike in its entirety

~~1. Strike in its entirety~~
~~2. Strike in its entirety.~~

Comment #~~17~~19, Page 7, Paragraph 1. We propose the following language:

1. The type of crop(s) grown or landscaping planted in the Use Area, and the quantified hydraulic and nitrogen loading rates in accordance with Table 2.

INFORMATION SHEET

Comment #~~18~~20, Page 2, Paragraph 4. We propose the following:

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan identifies the greatest long-term water quality problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Central Valley Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use for all areas outside the White Wolf Subarea. Thus the Basin Plan establishes an incremental effluent EC limit of 500 µmhos/cm, a chloride content of 175 mg/L, or boron content of 1/0 mg/L

Comment #~~19~~21, Page 3, Paragraph ~~7~~ 3 of "Antidegradation". We propose the following language:

The Order includes ~~two monthly average~~ an average EC effluent limit~~s, an incremental limit of source water plus 500 µmhos/cm and an overall cap limit~~ of 2,000 µmhos/cm. ~~The incremental EC effluent limit of source water plus 500 µmhos/cm is general provision that applies to all discharges to land involving advance wastewater treatment~~. The monthly average EC effluent limit of 2,000 µmhos.cm is included to ensure salinity loading rates to field crops will not adversely affect the crops that will be grown with the recycled water (turf grass). The Order also contains groundwater limitations that will ensure that discharges will not cause exceedances of water quality objectives established in the Basin Plant to protect beneficial uses. With respect to EC, the quality of the discharge is generally of better quality than underlying groundwater.

Comment #~~20~~22, Page 5 Paragraph ~~8~~5 of "Proposed Terms and Conditions". We propose the following language:

The proposed Order includes provisions that would require the Discharger to submit engineering certification that the WWTF has sufficient treatment, storage capacity for each expansion phase, a written copy of the Title 22 Engineering Report approval letter from DPH. ~~As the discharge will not immediately comply with the incremental EC limit of source water plus 500 µmhos/cm, the Order also includes a time schedule for the Discharger to implement salinity minimization measures to ensure compliance with the limit within thirty months of Order adoption.~~

From: Dean Brown <deanb@tejonranch.com>
To: Denise Soria <Dsoria@waterboards.ca.gov>
CC: "Dixon, Darrel" <darrel.dixon@stantec.com>
Date: 6/14/2011 4:54 PM
Subject: 20110614 - Missed comment to draft order c-3 page 13

Denise-

We have a little oversight. If you noticed in our comments to you as well as CDPH (on their comments to you on the Draft Order) we expressed that the plant does not monitor or control based on transmittance. The system utilizes turbidity meters and UV intensity is monitored by a UV sensor. UV intensity is a function of transmittance.

We intended on striking item C-3 on page 13 and replacing it with new language that is in line with plant controls and operations. How can we get this taken care of and not impact the August hearing date???

Dean

Regional Water Quality Control Board
Central Valley Region
Board Meeting – 12-14 October 2011

Response to Written Comments for Tejon-Castac Water District,
Tejon Industrial Complex New East WWTF
Tentative Waste Discharge Requirements

At a public hearing scheduled for 12 to 14 October 2011, the Regional Water Quality Control Board, Central Valley Region, (Central Valley Water Board) will consider adoption of Waste Discharge Requirements (WDRs) for Tejon-Castac Water District. This document contains responses to written comments received from interested parties regarding the Tentative WDRs (TWDRs) initially circulated on 26 April 2011. Written comments from interested parties were required by public notice to be received by the Central Valley Water Board by 27 May 2011 to receive full consideration. Comments were received by the California Department of Public Health (CDPH), and by Tejon-Castac Water District (District).

Written comments from the above interested party are summarized below, followed by the response of the Central Valley Water Board.

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH) COMMENTS

On 13 May 2011, CDPH submitted comments regarding Ultraviolet (UV) Disinfection Specifications included in the TWDRs. Following discussions with the District, by letter 30 August 2011, CDPH submitted revised comments to supersede Comments Nos. 2 through 15 of the 13 May 2011 Letter.

13 May 2011 CDPH Letter – COMMENT No. 1: The CDPH letter recommends to correct Provision H.16.a, from 0.02 NTU to 0.2 NTU.

RESPONSE: The change has been made as recommended.

30 August 2011 CDPH Letter – COMMENT No. 2: The CDPH letter recommends replacing UV Disinfection System Specifications C.1.

RESPONSE: Specification C.1 has been replaced to read:

> "The Discharger shall provide continuous, reliable monitoring of flow, UV intensity, UV dose, and turbidity"

30 August 2011 CDPH Letter – COMMENT No. 3: The CDPH letter recommends replacing UV Disinfection System Specification C.2

RESPONSE: Specification C.2 has been replaced to read:

> "The Discharger shall operate the UV disinfection system to provide a minimum UV dose of 82 millijoules per square

centimeter (mJ/cm^2) at all times. UV dose equations approved by CDPH must be used as part of the automatic UV disinfection control system for calculating UV dose."

30 August 2011 CDPH Letter – COMMENT No. 4: The CDPH letter recommends replacing UV Disinfection System Specification C.3

RESPONSE: Specification C.3 has been replaced to read:

"The equation to be used as part of the automatic UV disinfection control system for calculating UV does shall be the following:

$$RED_{calc} = 10^{[2.2414 - 0.7663 \times \log(Q) + 0.5534 \times \log(0.636 \times S)]}$$

Where:
S = Measured UV sensor value (mW/cm^2)
RED = RED calculated with the UV dose-monitoring equation (mJ/cm^2)
Q = Flow rate (gallons per minute [gpm])"

30 August 2011 CDPH Letter – COMMENT No. 5: The CDPH letter recommends that UV Disinfection System Specification C.9 be replaced to read:

"The facility should be operated in accordance with an approved operations plan, which specifies clearly the operational limits and responses required for critical alarms. The operations plan should be submitted and approved by CDPH. The operations plan is part of the Engineering Report, Appendix G, which shall become and enforceable part of the permit. A copy of the approved operations plan should be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies."

RESPONSE: Specification C.9 has been replaced as recommended but modified to read:

The facility shall be operated in accordance with an approved operations plan, which specifies clearly the operational limits and responses required for critical alarms. The operations plan shall be submitted and approved by CDPH. The operations plan is part of the Engineering Report, Appendix G, which shall become and enforceable part of the permit. A

copy of the approved operations plan shall be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies.

30 August 2011 CDPH Letter – COMMENT No. 6: The CDPH letter recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.10.

> "A quick reference plant operations data sheet should be posted at the treatment plant and include the following information:
>
> a. The alarm set points for tertiary turbidity, high flow, and UV dose.
> b. The values of high turbidity, high flow, and low UV dose, when flow must be diverted to waste.
> c. The required frequency of calibration for all monitoring equipment measuring turbidity, flow, and UV intensity.
> d. The required frequency of mechanical cleaning/wiping and equipment inspection.
> e. The UV lamp age tracking procedures and replacement intervals."

RESPONSE: The Specification has been included in the TWDRs and modified to read as follows:

> A quick reference plant operations data sheet shall be posted at the treatment plant and include the following information:
>
> a. The alarm set points for tertiary turbidity, high flow, and UV dose.
> b. The values of high turbidity, high flow, and low UV dose, when flow must be diverted to waste.
> c. The required frequency of calibration for all monitoring equipment measuring turbidity, flow, and UV intensity.
> d. The required frequency of mechanical cleaning/wiping and equipment inspection.
> e. The UV lamp age tracking procedures and replacement intervals."

30 August 2011 CDPH Letter – COMMENT No. 7: The CDPH recommends that the following language be added as UV Disinfection System Specification C.11.

> "The UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. Conditions that should divert flow include: inability to meet the minimum UV dose, intensity sensor failure, multiple lamp failure, or reactor failure."

RESPONSE: The Specification has been added to the TWDRs and modified to read:

> The UV system must be operated with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. Conditions that shall divert flow include: inability to meet the minimum UV dose, intensity sensor failure, multiple lamp failure, or reactor failure.

30 August 2011 CDPH Letter – COMMENT No. 8: The CDPH letter recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.12.

> "There shall be no bypassing of untreated or partially treated wastewater from the plant or any intermediate unit processes to the point of use."

RESPONSE: The Specification has been added as recommended.

30 August 2011 CDPH Letter– COMMENT No. 9: The CDPH letter recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.13.

> "Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to the RWQCB, CDPH, and the local health officer."

RESPONSE: The Specification has been added as recommended.

30 August 2011 CDPH Letter – COMMENT No. 10: The CDPH letter recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.14.

> "The plant shall be provided with a sufficient number of qualified personnel to operate the filtration and disinfection facility effectively so as to achieve the required level of treatment at all times. The number and type of operational personnel should be described in

> the operations plan that is part of the Engineering Report, Appendix G, which shall become an enforceable part of the permit."

RESPONSE: The Specification has been added to the TWDRs and modified to read:

> The plant shall be provided with a sufficient number of qualified personnel to operate the filtration and disinfection facility effectively so as to achieve the required level of treatment at all times. The number and type of operational personnel shall be described in the operations plan that is part of the Engineering Report, Appendix G, which shall become an enforceable part of the permit.

30 August 2011 CDPH Letter – COMMENT No. 11: The CDPH recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.15.

> "A preventive maintenance program shall be provided to ensure that all equipment is kept in a reliable operating condition. A preventative maintenance program is a required part of the Engineering Report operations plan, Appendix G, which shall become an enforceable part of the permit"

RESPONSE: The Specification has been added as recommended.

30 August 2011 CDPH Letter – COMMENT No. 12: The CDPH recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.16.

> "UV intensity sensors and flow meters must be properly calibrated to ensure proper disinfection."

RESPONSE: The Specification has been added as recommended.

30 August 2011 CDPH Letter – COMMENT No. 13: The CDPH recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.17.

> "The plant shall have a minimum of one reference UV intensity sensor on site at all times. Measurements made by each duty UV intensity sensor shall be checked at least monthly using a reference UV intensity sensor. For all UV intensity sensors in use, the ratio of the duty UV sensor intensity to the reference UV sensor intensity

> must be less than or equal to 1.2. If the calibration ratio is greater than 1.2, the failed duty UV sensor must be replaced by a properly calibrated sensor and recalibrated by a qualified facility. The reference UV intensity sensors shall be recalibrated at least annually by a qualified facility using a National Institute of Standards and Technology (NIST) traceable standards."

RESPONSE: The Specification has been added as recommended.

30 August 2011 CDPH Letter – COMMENT No. 14: The CDPH recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.18.

> "Flow meters measuring the flow through a UV reactor must be verified to determine accuracy at least monthly via checking the flow reading against other flow determination methods."

RESPONSE: The Specification has been added as recommended.

30 August 2011 CDPH Letter – COMMENT No. 15: The CDPH recommends that the following language be added to the TWDRs as UV Disinfection System Specification C.19.

> "Equivalent or substitutions of equipment are not acceptable without an adequate demonstration of equivalent disinfection performance."

RESPONSE: The Specification has been added as recommended.

TEJON-CASTAC WATER DISTRICT (DISTRICT) COMMENTS

The District submitted a cover letter and a strikeout track changes version of the order dated 27 May 2011. The cover letter discusses concerns the District has with the TWDRs. The strikeout track changes version has specific changes the District requests be included in the TWDRs.

DISTRICT LETTER – COMMENT No. 1: The District posits that the incremental increase EC limit of 500 µmhos/cm on page IV-11 in the *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised February 2004,* (Basin Plan) does not apply within the White Wolf subarea and should be removed from the TWDRs along with related Findings, Provisions,

Monitoring, and Information Sheet analysis. Rather, the District letter indicates only the 2,000 µmhos/cm EC limit on the same page of the Basin Plan should be included in the TWDRs.

RESPONSE: The changes have not been made. Basin Plan page I-2 acknowledges that salts accumulate in the Tulare Lake Basin (Basin) due to importation and evaporative use of water. It also acknowledges that the paramount water quality problem in the Basin is the accumulation of salts. On page I-3, the Basin Plan notes that **all** discharges must be managed to reduce salt contributions. On page IV-5, the Basin Plan states:

> Degradation of ground water in the Tulare Lake Basin by salts is unavoidable without a plan for removing salts from the Basin. A valleywide drain to carry salts out of the valley remains the best technical solution to the water quality problems of the Tulare Lake Basin. The drain would carry wastewater generated by municipal, industrial, and agricultural activities, high in salt and unfit for reuse. **The only other solution is to manage the rate of degradation by minimizing the salt loads to the ground water body. [Emphasis added]**
>
> Salts that are not indigenous to the Basin water resources result from man's activity. Salts come from imported water, soil leached by irrigation, animal wastes, fertilizers and other soil amendments, municipal use, industrial wastewaters, and oil field wastewaters. These salt sources, all contributors to salinity increases, should be managed to the extent practicable to reduce the rate of ground water degradation.

The above illustrates that the biggest problem in the Basin is the accumulation of salts and the resulting degradation of groundwater. The Basin Plan acknowledges that sources of salt, especially those associated with anthropogenic activities, need to be controlled to the extent practicable until a method of removal from the Basin is established. To this end, Basin Plan pages IV-10 through IV-11 explicitly describe requirements for **all** municipal and domestic wastewater discharges to land. On page IV-10, the Basin Plan describes levels of treatment required for all domestic wastewater facilities with land disposal. The description is continued on page IV-11, where the Basin Plan states:

> Additional effluent limits follow:
>
> • The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC shall not exceed the EC of the source water plus 500 micromhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.
>
> • Concentration of total coliform organisms in reclaimed wastewater must be in accordance with limits established in the following provisions of Title 22, California Code of Regulations (CCR): Sections 60303 (Spray Irrigation of Food Crops), 60305 (Surface Irrigation of Food Crops), 60311 (Pasture for Milking Animals), 60313 (Landscape Irrigation), 60315 (Nonrestricted Recreational Impoundment), 60317 (Restricted Recreational Impoundment), and 60319 (Landscape Impoundment).
>
> • In the Poso Creek Subarea, discharges shall not exceed 1,000 micromhos/cm EC, 200 mg/l chlorides, and 1.0 mg/l boron. The Poso Creek subarea consists of about 35,000 acres of

land between State Highways 99 and 65 about six miles north of Bakersfield, and is defined more specifically in Regional Water Board Resolution No. 71-122, which is incorporated by reference into this plan.

• In the White Wolf Subarea, for areas overlying Class I irrigation water, discharges shall not exceed 1,000 µmhos/cm EC, 175 mg/l chlorides; 60 percent sodium, and 1.0 mg/l boron. For areas overlying Class II or poorer irrigation water, discharges shall not exceed 2,000 µmhos/cm EC, 350 mg/l chlorides, 75 percent sodium, and 2 mg/l boron. In areas where ground water would be Class I except for the concentration of a specific constituent, only that constituent will be allowed to exceed the specified limits for Class I water. In no case shall any constituent be greater than those limits specified for areas overlying Class II irrigation water. The White Wolf subarea consists of 64,000 acres within the valley floor, at the southern tip of the Tulare Lake Basin, about 20 miles south of Bakersfield. The subarea is bounded on the west by the San Emigdio Mountains, on the south and east by the Tehachapi Mountains, and on the north by the White Wolf Fault.

Criteria for mineral quality of irrigation water is described below:

Constituent	Class I	Class II	Class III
TDS (mg/l)	<700	700 - 2,000	>2,000
EC (µmhos/cm)	<1,000	1,000 - 3,000	>3,000
Chlorides (mg/l)	<175	175 - 350	>350
Sodium (percent base constituents)	<60	60 - 75	>75
Boron (mg/l)	<0.5	0.5 – 2	>2

• Discharges to areas that may recharge to good quality ground waters shall not exceed an EC of 1,000 micromhos per centimeter, a chloride content of 175 mg/l, or a boron content of 1.0 mg/l.

The limits include the incremental EC effluent limit of source water plus 500 µmhos/cm, coliform limits for a range of uses; specific EC, chloride, and boron effluent limit caps for the Poso Creek Subarea; specific EC, chloride, sodium, and boron effluent limit caps for the White Wolf Subareas; and specific EC, chloride, and boron effluent limit caps for discharges to areas overlying “good quality” groundwater.

As described in the limit itself, the incremental increase EC limit is a limit on use, or in other words the reasonable amount of salt that should be allowed through municipal and domestic use of water. It is intended to ensure that municipal and domestic dischargers manage the increase in effluent EC to the extent practicable.

The EC limits for the Poso Creek Subarea, the White Wolf Subarea, and areas in the Basin overlying “good quality” groundwater represent caps on the EC of discharges to those areas. They are intended to maximize the use of available water resources in a water short basin while minimizing groundwater degradation and protecting historic groundwater uses.

The incremental increase limit and the caps are distinct and separate limits intended to achieve separate goals: (1) to maximize salt reduction, and (2) to protect the

groundwater resource, respectively. Choosing one limit in lieu of the other is inconsistent with the language and intent of the Basin Plan. The Basin Plan says "Additional effluent limits follow:" It does not say pick between the incremental EC limit and one of the caps. To make such a selection would be nonsensical. For example, suppose one had a discharge overlying "good quality" groundwater with an EC of 150 µmhos/cm. If one were to choose the cap of 1,000 µmhos/cm lieu of the incremental limit, as suggested by the District, the resulting WDRs would authorize a discharge with an effluent EC exceeding that of underlying groundwater by 850 µmhos/cm instead of 500 µmhos/cm. This would not be protective of underlying groundwater, could result in exceedences of applicable water quality objectives, and would be inconsistent with the Basin Plan's mandate to control the incremental increase in salt to the extent practicable.

Both the incremental increase effluent EC limit of source water plus 500 µmhos/cm and the EC cap of 2,000 µmhos/cm apply to the discharge at the Tejon Industrial Complex New East WWTF and are included in the TWDRs.

DISTRICT LETTER – COMMENT No. 2: Page three of the District's letter states that "…it does not legally or logically follow that the District should be required to meet a lower EC than that of the White Wolf…when the source is non-basin water." The District is referring to the TWDR requirement to comply with the incremental increase effluent EC limit of source water plus 500 µmhos/cm and the EC cap of 2,000 µmhos/cm for discharges within the White Wolf subarea when source water is imported surface water instead of poorer quality groundwater.

RESPONSE: Additional discussion has been added to the TWDRs information sheet, but no other changes have been made to the TWDRs in response to the comment. In describing the need for salinity management and effluent limits, the Basin Plan does not distinguish between source water supply. Logically, if the goal is to reduce the increase in effluent EC by controlling salts to the extent practicable, then the source water supply is irrelevant; regardless of its quality the goal would be to reduce the incremental increase in EC prior to discharge.

DISTRICT LETTER – COMMENT No. 3: The District states that if the TWDRs are adopted with both an incremental increase EC limit of source water plus 500 µmhos/cm and an EC cap limit of 2,000 µmhos/cm it "…may abandon its current program as the cost benefit analysis of the program may no longer support it." Presumably, the District is referring to its importation of surface water supplies for municipal and domestic drinking water supply.

RESPONSE: The District provides water supply and sanitation services to the businesses within the District. Groundwater depth is at 500 to 900 feet below ground surface. The

District has provided no cost benefit analysis comparing the costs and benefits of treating imported State Project water for local municipal and domestic uses with the costs associated with pumping local, poorer quality groundwater for the same uses. Should the District perform such an analysis, among other considerations, it would need to include as a cost to the people of the State, the accelerated degradation of groundwater due to the switch in sources from State Project water to local groundwater.

For the New East WWTF, the District also has not provided the Board with a description of pretreatment requirements, source control measures, or other salinity management measures that it has implemented to address the Basin Plan's mandate to reduce the incremental increase in discharge EC to the extent practicable. The District has provided no evidence that it cannot comply with the incremental EC limit. The District has submitted a Salinity Management Plan dated February 2009 for the West WWTF, as required by WDRs Order No. R5-2008-0004. The Salinity Management Plan indicates that the District implemented in 2005 its surface water delivery project because the generally poor quality of its source water wells, and particularly the hardness, limited some of the uses of its customers. The Plan also notes that the District's pretreatment ordinance limits the salinity of discharges to the West WWTF collection system to source water EC plus 500 µmhos/cm. The Plan indicates that the District also generally prohibits the installation of self-regenerating water softeners within the District; the Plan notes the District can make exceptions to this rule.

The Plan does not provide evidence demonstrating that the District samples discharges to its collection system for EC or, if or how, the District has enforced its own local limit for EC. Presumably, if discharges to the system comply, then the WWTF effluent should comply with the Basin Plan incremental EC limit. The Plan does not provide evidence that the District inspects its users for water softener installations or if it finds businesses with unapproved water softeners, requires their removal. The Plan also does not indicate if the District has implemented any other salinity management or source control measures (e.g., educating its users about the conversion of caustic cleaning chemicals to lower salinity alternatives, the conversion of powdered detergents to lower salinity liquid detergents, etc.)

The District has not provided any evidence that it has exhaustively pursued source control salinity minimization measures for those discharging to its WWTFs. More importantly, it has not demonstrated it cannot meet the incremental EC limit mandated by the Basin Plan. To the contrary, its own ordinance imposes the same limit on discharges to its collection system for the West WWTF.

DISTRICT STRIKEOUT VERSION – COMMENT No. 1: The District's letter requests that the facility description on Finding 8 of the TWDRs be modified to say aerated sludge tanks instead of sludge aeration tank.

RESPONSE: The change has been made.

DISTRICT STRIKEOUT VERSION – COMMENT No. 2: The District's letter requests modification to Finding 21 of the TWDRs to state that CDPH has approved the District's "Interim Water Recycling Disinfection Plan", allowing the discharge of wastewater prior to the completion of the Title 22 Engineering Report and UV validations.

RESPONSE: The change has not been made. The District submitted the "Interim Water Recycling Disinfection Plan" dated February 2010 to CDPH proposing to disinfect via chlorination until its UV unit meets the validation requirements of CDPH. CDPH reviewed the "Interim Water Recycling Disinfection Plan" and provided comments by letter dated 16 June 2010. According to Comment No. 20 of the 16 June 2010 letter, the "Interim Water Recycling Disinfection Plan" was reviewed and approved until the new UV units are installed, approved, and operational. The 16 June 2010 letter, requires the District to update its Title 22 Engineering Report addressing comments provided CDPH.

On 14 June 2011, CDPH staff inspected the Tejon Industrial Complex New East WWTF and indicated it is satisfied with the level of treatment and quality of the discharge and has conditionally approved the discharge. On 15 June 2011, Central Valley Water Board staff emailed the District notifying it there was no objection to the initiation of the proposed interim discharge, as the District has met the minimum requirements of the California Water Code section 13264.

The District submitted a report entitled "UV Disinfection System Field Commissioning Test" to CDPH for the validation of their UV system. By email of 17 August 2011, CDPH approved the validation of the Districts UV system. However, the Title 22 Engineering Report is still incomplete.

The District is required to submit an approval letter from CDPH to the Central Valley Water Board after the Title 22 Engineering Report has met all of CDPH's requirements and is considered complete.

DISTRICT STRIKEOUT VERSION – COMMENT No. 3: The District's letter requests to entirely remove the language in Finding 43.a and b and replace with the following:

> "a. White Wolf Subarea overlying Class I irrigation water (groundwater) – discharges shall not exceed 1,000 µmhos/cm EC, 175 mg/L chlorides, 60 percent sodium, and 1.0 mg/L boron.

b. White Wolf Subarea overlying Class II or poorer irrigation water (groundwater) – discharges shall not exceed 2,000 µmhos/cm EC, 350 mg/L chlorides, 75 percent sodium, and 2 mg/L boron.

c. All other areas in the Tulare Lake Basin – discharges shall not exceed an EC level of source water plus 500 µmhos/cm."

RESPONSE: The change has not been made. See response to District Letter – Comment No. 1.

DISTRICT STRIKEOUT VERSION – COMMENT No. 4: The District's letter requests to entirely remove Finding 44 of the TWDRs and replace with the following:

> "The White Wolf Subarea consists of 64,000 acres within the Tulare Lake Basin about 20 miles south of Bakersfield. The subarea is bounded on the west by the San Emidio Mountains, on the south and east by the Tehachapi Mountains, and on the north by the White Wolf Fault.
>
> The subject discharge will take place in the White Wolf Subarea. Based on the quality from the discharger's backup source water well, underlying groundwater is considered Class II for EC discharge limits. EC limits for this discharge will be as required for White Wolf Subareas overlying Class II groundwater."

RESPONSE: The change has not been made. See response to District Letter – Comment No. 1.

DISTRICT STRIKEOUT VERSION – COMMENT No. 5: The District's letter request to modify Finding 47.a. to read that the effluent salinity limit of source water plus 500 µmhos/cm excludes discharges in the White Wolf Subarea.

RESPONSE: The change has not been made. See response to District Letter – Comment No. 1.

DISTRICT STRIKEOUT VERSION – COMMENT No. 6: The District's letter requests to remove the language in Finding 49.g that includes source water monitoring.

RESPONSE: The change has not been made. Source water monitoring is necessary to determine compliance with the incremental effluent EC limit of source water plus 500 µmhos/cm. Source water EC monitoring shall be the calculated flow-weighted average if more than one source is used.

DISTRICT STRIKEOUT VERSION – COMMENT No. 7: The District's letter requests the following language be added to Effluent Limitation B.2 of the TWDRs "…when using native sources…" to read that the 12-month rolling average EC limit of source water plus 500 µmhos/cm will only apply to the discharge when the District obtains its source water from its supply wells.

RESPONSE: The change has not been made. See response to District Letter – Comment No. 2.

DISTRICT STRIKEOUT VERSION – COMMENT No. 8: The District's letter requests the following language be added to Effluent Limitation B.3 of the TWDRs "…when using non-native source…" to read that the monthly average EC limit of 2,000 µmhos/cm only applies to the discharge when the District utilizes surface water as its source water.

RESPONSE: The change has not been made. See response to District Letter – Comment No. 2.

DISTRICT STRIKEOUT VERSION – COMMENT No. 9: The District's letter requests to remove the reference to "UV Transmittance" from UV Disinfection System Specifications C.1.

RESPONSE: The change has been made.

DISTRICT STRIKEOUT VERSION – COMMENT No. 10: The District's letter requests to revise the UV dose in UV Disinfection System Specifications C.2 from 80 millijoules per square centimeter (mJ/cm^2) to 100 mJ/cm^2 along with the reference to the California Department of Public Health from DPH to CDPH.

RESPONSE: The correct UV dose for the UV disinfection system at the WWTF is 82 mJ/cm^2 according to CDPH by letter dated 30 August 2011. The change has been made accordingly.

DISTRICT STRIKEOUT VERSION – COMMENT No. 11: Via email dated 14 June 2011, the District requested the removal of UV Disinfection System Specifications C.3. According to the Districts email the WWTF does not monitor for UV transmittance.

RESPONSE: The change has been made.

DISTRICT STRIKEOUT VERSION – COMMENT No. 12: The District's letter requests to revise the reference to the California Department of Public Health from DPH to CDPH in UV Disinfection System Specification C.7.

RESPONSE: The change has been made.

DISTRICT STRIKEOUT VERSION – COMMENT No. 13: The District's letter requests to change UV Disinfection System Specification C.8 to read as follows:

> "Prior to initial discharge to the use area, the discharger shall submit to the Executive Officer a copy of the letter from CDPH stating that all the UV disinfection system pre-operation acceptance conditions specified by CDPH have been satisfied for approval to implement in the 'Interim Water Recycling Disinfection Plan' has been granted."

RESPONSE: The change has not been made. UV Disinfection Specifications in the TWDRs are requirements set forth by CDPH based on its evaluation of the discharge.

DISTRICT STRIKEOUT VERSION – COMMENT No. 14: The District's letter requests to remove the word "warning" from Recycling Specification E.3.

RESPONSE: Title 22, section 60310 of the CCR requires areas where recycled waste is used and accessible to the public to post signs notifying the public not to drink the water for it can pose a potential health risk . These signs are considered warning signs and the change to Recycling Specification E.3. has not been made.

DISTRICT STRIKEOUT VERSION – COMMENT No. 15: The District's letter requests to revise the California Department of Public Health from DPH to CDPH referenced in Recycling Specification E.11, and Provisions H.13.

RESPONSE: The change has been made.

DISTRICT STRIKEOUT VERSION – COMMENT No. 16: The District's letter requests to correct Provision H.16.a to read 0.2 NTU instead of 0.02 NTU.

RESPONSE: The change to Provision H.16.a has been made.

DISTRICT STRIKEOUT VERSION – COMMENT No. 17: The District's letter requests to change Provision H.19 to read as following:

> "The Discharger shall submit a Title 22 Engineering Report in accordance with CCR Title 22 Section 60323. The Discharger shall not recycle its effluent until CDPH has approved the Discharger's Title 22 Engineering Report or reuse in accordance with the "Interim Recycling Disinfection Plan" and a copy of the approval letter from CDPH is provided to the Central Valley Water Board."

RESPONSE: No change has been made to Provision H.19. See response to District Strikeout Version – Comment No. 2.

DISTRICT STRIKEOUT VERSION – COMMENT No. 18: The District's letter requests to entirely remove Provision H.21 which includes a Salinity Minimization compliance schedule.

RESPONSE: The change has not been made. The discharge will not immediately comply with the incremental effluent EC limit of source water plus 500 µmhos/cm and a time schedule requiring the District to implement salinity minimization measures is included in the TWDRs to ensure compliance with the limit.

DISTRICT STRIKEOUT VERSION – COMMENT No. 19: The District's letter requests to entirely remove Provision H.22. According to the letter Provision H.22 contradicts Finding 46.a of the TWDRs.

RESPONSE: No change has been made. Provision H.22 [H.23] simply explicitly acknowledges the Central Valley Water Board right to reopen the Waste Discharge Requirements should it determine it to be necessary.

DISTRICT STRIKEOUT VERSION – COMMENT No. 20: The District's letter requests to entirely remove the source water monitoring and reporting sections from the Monitoring and Reporting Program of the TWDRs.

RESPONSE: The change has not been made. See response to District Strikeout Version – Comment No. 6.

DISTRICT STRIKEOUT VERSION – COMMENT No. 21: The District's letter requests to include the following language "…or landscaping planted…" to Use Area Reporting No. 1 of the Monitoring and Reporting Program.

RESPONSE: The change has not been made. Title 22, CCR, section 60301 defines Use Area as "an area of recycled water use with defined boundaries…" The language in Use Area Reporting No.1 of the Monitoring and Reporting Program refers to all Use Areas included in the District's Title 22 Engineering Report and approved by CDPH.

ITEM: 9

SUBJECT: Glenn & Marie Chaney Trust (owner) and Tom Chaney (operator) Chris Chaney Dairy, Fresno County

BOARD ACTION: *Consideration of Issuance of Administrative Civil Liability Order*

BACKGROUND: The Glenn & Marie Chaney Trust owns and Tom Chaney operates (collectively Discharger) the Chris Chaney Dairy under the Existing Milk Cow Dairy General Order No. R5-2007-0035. A $19,800 Administrative Civil Liability Complaint was issued against the Discharger for failure to submit documents required by the General Order.

A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Fresno on 14 July 2011. Additional evidence, testimony and policy statements will not be accepted at the October 2011 hearing, unless allowed by the Board Chair.

Attached is a report by the Hearing Panel on this case that provides the findings and recommendations of the Hearing Panel.

The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $19,800.

A proposed Administrative Civil Liability Order implementing the Hearing Panel's recommendation is attached for consideration of adoption. The Board may adopt the Order in the recommended amount, modify the amount, or decide that imposition of administrative civil liability is not warranted.

Documents for the 14 July 2011 Panel Hearing may be found at: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1107/index.shtml

RECOMMENDATION: Review the Hearing Panel Report and consider adoption of the proposed Administrative Civil Liability Order.

Mgmt. Review_____
Legal Review____AM_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Glenn & Marie Chaney Trust (owner)
Tom Chaney (operator)
Chris Chaney Dairy
ACL Complaint No. R5-2011-0541

HEARING PANEL REPORT AND PROPOSED ORDER

This matter was heard on July 14, 2011 in Fresno, California before a Hearing Panel consisting of Central Valley Regional Water Quality Control Board (Central Valley Water Board) Members Karl Longley, Sandra Meraz, and Dan Odenweller. Alex Mayer and Ken Landau were Hearing Panel Advisors. Glenn & Marie Chaney Trust and Tom Chaney (Discharger) did not make an appearance. Doug Patteson appeared for the Prosecution Team.

The Hearing Panel makes the following determinations:

FINDINGS OF FACT

1. The Discharger owns and operates the Chris Chaney Dairy located at 6240 South El Dorado Avenue, San Joaquin, California, County of Fresno.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. The General Order and the MRP required that an Annual Report for the calendar year 2008 be submitted for regulated facilities by 1 July 2009 (2008 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with modifications implemented to date; documentation of interim facility modifications completed for storage capacity and to balance nitrogen; components of a Nutrient Management Plan; a Salinity Report; manure manifests; new wastewater agreements; and domestic and irrigation well groundwater monitoring results for the samples collected by November 2008.

4. The General Order and the MRP required that an Annual Report for the calendar year 2009 be submitted for regulated facilities by 1 July 2010 (2009 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with facility modifications implemented to date; and a status on facility retrofitting completed as proposed in the Nutrient Management Plan submittal that was due 1 July 2009.

5. The General Order required regulated facilities to submit a Waste Management Plan (WMP) by 1 July 2009. The General Order was amended by Order R5-2009-0029 to modify the compliance schedule, extending the deadline to submit the WMP to 1 July 2010 in order to give regulated parties additional time to come in to compliance. The WMP is required to have the following components: a retrofitting plan, with schedule, needed to improve storage capacity, flood

protection, or design of production area; maps of the production area and land application area; a wastewater storage capacity evaluation; a flood protection evaluation; a production area design/construction evaluation; and documentation that there are no cross connections.

6. On 23 July 2009, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2008 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

7. On 10 December 2009, the Executive Officer issued Conditional Early Settlement Offer R5-2009-0582-M (Offer) to the Discharger. The Offer provided the Discharger with an opportunity to settle the violation identified above through an expedited settlement process. The Offer provided the Discharger the option of accepting the conditions of the Offer by waiving the right to a hearing before the Central Valley Water Board, submitting the past-due 2008 Annual Report with appurtenant components, and paying a penalty in the amount of two thousand dollars ($2,000), by 14 January 2010. If the Discharger accepted the Offer, the Central Valley Water Board would consider the identified violation resolved. The Offer was issued via Certified Mail, but was returned to the Central Valley Water Board office unclaimed.

8. On 16 August 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2009 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

9. On 16 August 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the Waste Management Plan with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

10. Central Valley Water Board's compliance tracking system and case files indicate that the Board has not received the 2008 Annual Report, the 2009 Annual Report or the Waste Management Plan.

11. On 6 December 2010, the Central Valley Water Board staff issued a letter informing the Discharger that staff was in the process of assessing civil liability for failure to submit the Annual Reports and the Waste Management Plan. The letter provided the Discharger the opportunity to submit any information regarding the factors listed in CWC section 13327 that would be deemed relevant to determining an appropriate monetary penalty. The letter requested that all responses be received by 31 December 2010. As of the date of issuance of this Complaint, the Central Valley Water Board has not received any response to staff's 6 December 2010 letter.

12. CWC section 13268(a)(1) states that "Any person failing or refusing to furnish technical or monitoring reports as required by subdivision (b) of Section 13267...is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b)."

13. CWC section 13268(b)(1) states that "Civil Liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violations occurs."

14. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0541 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $19,800 pursuant to CWC section 13268 for the failure to submit the 2008 Annual Report, the 2009 Annual Report and Waste Management Plan as required by the General Order.

15. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2008 Annual Report by the required deadline of 1 July 2009. As of the date of the Complaint, the 2008 Annual Report was 673 days late.

16. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2009 Annual Report by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

17. The Discharger violated the requirements of the General Order and MRP by failing to submit a Waste Management Plan by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

18. On 17 November 2009 the State Water Resources Control Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy establishes a methodology for assessing discretionary administrative civil liability. Use of the methodology addresses the factors used to assess a penalty under CWC section 13327 including the Discharger's culpability, history of violations, ability to pay and continue in business, economic benefit, and other factors as justice may require. The required factors under CWC section 13327 have been considered using the methodology in the Enforcement Policy as explained in detail in Attachment A and shown in the Penalty Calculation for Civil Liability spreadsheet in Attachment B. Attachments A and B are attached hereto and incorporated herein by reference.

19. In general, violations of CWC section 13267 are assessed on a per day basis. Under the Enforcement Policy, an alternate approach to the penalty calculation for multiple day violations may be used if the regional board makes express findings that the violations do not cause daily detrimental impacts to the environment, result in no daily economic benefit that can be measured on a daily

basis or occurred without the knowledge or control of the violator. Here the failure to submit the required reports does not cause a daily detrimental impact to the environment and does not result in an economic benefit that can be measured on a daily basis, so the alternative approach is appropriate. Under this alternate approach, daily penalties are assessed for the first day of violation, plus one day for each 5-day period of violation until the 30th day, plus a one-day assessment for each additional thirty-day period of violation. In accordance with the alternative approach, a total of 20 days of violation have been assessed for the failure to submit the 2008 Annual report, and a total of 16 days of violation each have been assessed for the failure to submit the 2009 Annual report and the WMP.

20. On considering the written record and evidence presented at the hearing, the Hearing Panel determined that $19,800 should be imposed on the Discharger pursuant to CWC section 13268 for violations of CWC section 13267.

CONCLUSIONS OF LAW

1. The failure to submit the 2008 Annual Report constitutes a violation of CWC section 13267.

2. The failure to submit the 2009 Annual Report constitutes a violation of CWC section 13267.

3. The failure to submit the Waste Management Plan constitutes a violation of CWC section 13267.

4. Pursuant to CWC section 13268, the Central Valley Water Board may impose administrative civil liability up to $1,000 for each day of violation.

5. The total maximum amount of administrative civil liability assessable for the violations alleged in Complaint No. R5-2011-0541 pursuant to CWC section 13268 is $1,289,000.

RECOMMENDED ADMINISTRATIVE CIVIL LIABILITY AMOUNT

The Hearing Panel recommends that the Central Valley Regional Board impose administrative civil liability in the amount of $19,800 on the Discharger for violations found herein to have been committed by the Discharger. A proposed ACL Order is attached.

Karl E. Longley

Dr. Karl Longley
Hearing Panel Chair

August 22, 2011
Date

Attachment A Enforcement Policy methodology
Attachment B Penalty Calculation for Civil Liability spreadsheet
Proposed Administrative Civil Liability Order R5-2011-XXXX

Attachment A
Hearing Panel Report for ACL Complaint No. R5-2011-0541
Specific Factors Considered – Civil Liability
Chris Chaney Dairy

Each factor of the Enforcement Policy and its corresponding score for each violation are presented below:

1. **Violation No. 1 (Failure to submit 2008 Annual Report):** In accordance with the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (General Order), a 2008 Annual Report must be submitted for regulated facilities by 1 July 2009. To date, Glenn & Marie Chaney Trust and Tom Chaney (hereinafter Discharger) have not submitted this report for the Chris Chaney Dairy.

   <u>Calculation of Penalty for Failure to Submit 2008 Annual Report</u>

   Step1. Potential for Harm for Discharge Violations
   This step is not applicable because the violation is not a discharge violation.

   Step 2. Assessment for Discharge Violations
   This step is not applicable because the violation is not a discharge violation.

   Step 3. Per Day Assessment for Non-Discharge Violations

   The per day factor is 0.30.

   This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2008 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

   Initial Liability

   A failure to submit annual reports is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit an annual report for 2008 by 1 July 2009 as required by the General Order and the Monitoring Program (MRP), which is now 673 days late.

However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Discharger only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 28 days of violation. A calculation of initial liability totals $8,400 (0.3 per day factor X 28 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit a 2008 Annual Report and associated documents were detailed in the General Order. Further, the Discharger was issued a Notice of Violation on 23 July 2009, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to submit the 2008 Annual Report or any of the associated documents, and is therefore highly culpable for failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, including notice through the General Order and an NOV, the Discharger continues to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of

violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a) *Total Base Liability Amount:* **$8,400** (Initial Liability ($8,400) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

2. **Violation No. 2 (Failure to submit 2009 Annual Report):** In accordance with the General Order, a 2009 Annual Report must be submitted for regulated facilities by 1 July 2010. To date, the Discharger has not submitted this report for the Dairy.

<u>Calculation of Penalty for Failure to Submit 2009 Annual Report</u>

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2009 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit annual reports is punishable under CWC 13268(a)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit a 2009 Annual Report by 1 July 2010 as required by the General Order and the MRP, which is now 308 days late.

However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Discharger only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. A calculation of initial liability totals $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit a 2009 Annual Report and associated documents were detailed in the General Order. The Discharger was issued a Notice of Violation on 16 August 2010, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to submit the 2009 Annual Report or any of the associated documents, and is therefore highly culpable for failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC

section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a) *Total Base Liability Amount:* **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

3. **Violation No. 3 (Failure to submit a Waste Management Plan):** In accordance with the General Order and amended order R5-2009-0029, a Waste Management Plan for regulated facilities must be submitted by 1 July 2010. To date, Discharger has not submitted this Plan for the Dairy.

<u>Calculation of Penalty for Failure to Submit a Waste Management Plan</u>

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit a Waste Management Plan does not itself threaten water quality. The deviation from requirements was determined to be major, as the requirement to develop a

Waste Management Plan for the operational portions of the Dairy facility has been rendered ineffective. The failure to submit the required Waste Management Plan undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit a Waste Management Plan is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit a Waste Management Plan by the 1 July 2010 deadline as required by the General Order, which is now 308 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit a Waste Management Plan addressing the management of waste does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Discharger receives a single economic benefit in cost saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. This yields an initial liability of $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit a Waste Management Plan alleged in this Complaint. The requirement to develop and submit a Waste Management Plan was detailed in the General Order. Further, the amended Order gave dischargers and extra calendar year to develop and submit the Plan. The Discharger was issued a Notice of Violation on 16 August 2010, which requested that the Plan be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to show any progress toward developing a Plan, and is therefore highly culpable for their failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC section 13268, alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 2.

a. Total Base Liability Amount: **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

COMBINED TOTAL BASE LIABLITY AND FACTORS APPLIED TO ALL VIOLATIONS

The Combined Total Base Liability Amount for the three Violations is $18,000 ($8,400 + $4,800 + $4,800).

The following factors apply to the combined Total Base Liability Amounts for all of the violations discussed above.

Step 6. Ability to Pay and Continue in Business

a) *Adjusted Combined Total Base Liability Amount:* ***$18,000***

Discussion: The Discharger has the ability to pay the total base liability amount based on 1) the Discharger owns the Dairy, a significant asset, 2) the Discharger operates a dairy, an ongoing business that generates profits.

Based on the reasons discussed above, an ability to pay factor of 1 has been applied to the Combined Total Base Liability Amount.

Step 7. Other Factors as Justice May Require

a) *Adjusted Combined Total Base Liability Amount:* $18,000 + $1,800 (Staff Costs) = **$19,800.**

b) *Discussion:* The State and Regional Water Board has incurred $1,800 in staff costs associated with the investigation and enforcement of the violations alleged herein. This represents approximately 12 hours of staff time devoted to investigating and drafting the complaint at $150 an hour. In accordance with the Enforcement Policy, this amount is added to the Combined Total Base Liability Amount. A further adjustment of the combined total base liability amount may be made if the Discharger submits a complete 2008 Annual Report, a complete 2009 Annual report, and/or a complete Waste Management Plan by **20 June 2011**. The amount of the combined total base liability amount may be reduced by $2,000 for each completed report that is submitted to the Central Valley Water Board by **20 June 2011**. This reduction in the combined total base liability amount by $2,000 for each completed report accounts for enforcement efficiencies gained by the Discharger submitting the completed report or reports.

Step 8. Economic Benefit

a) *Estimated Economic Benefit:* **$10,000**

Discussion: The discharger has received an economic benefit from the costs saved in not drafting and preparing the annual report and the Waste Management Plan. This is based on the current consulting costs of producing two annual reports ($2,500 each) and employing a certified engineer to conduct a site inspection and produce a Waste Management Plan ($5,000). The adjusted total base liability amount of $18,000 is more than at least 10% higher than the economic benefit amount ($10,000) as required by the enforcement policy.

Step 9. Maximum and Minimum Liability Amounts

a) *Minimum Liability Amount:* ***$11,000***

Discussion: The Enforcement Policy requires that the minimum liability amount imposed not be below the economic benefit plus ten percent. As discussed above, the Regional Water Board Prosecution Team's estimate of the Discharger's economic benefit obtained from the violations cited in this Complaint is $10,000**.**

b) *Maximum Liability Amount:* ***$1,289,000***

Discussion: The maximum administrative liability amount is the maximum amount allowed by Water Code Section 13367(b)(1): one thousand dollars ($1,000) for each day in which the violation occurs. Without the benefit of the alternative approach for calculating liability for multiday violations under the Enforcement Policy, the Discharger could face penalties for the total number of days in violation (1,289 total days X $1,000 per day).

The proposed liability falls within these maximum and minimum liability amounts.

Step 10. Final Liability Amount

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount proposed for the failure to submit the 2008 and 2009 Annual Reports, and the Waste Management Plan is **$19,800.** Attachment B is a spreadsheet that demonstrates the use of the penalty calculation methodology.

ATTACHMENT B

Discharger Name/ID: Chris Chaney/5C10NC00150

			Violation 1	Violation 2	Violation 3
Discharge Violations	Step 1	Potential Harm Factor (Generated from Button)			
	Step 2	Per Gallon Factor (Generated from Button)			
		Gallons			
		Statutory / Adjusted Max per Gallon ($)			$ -
		Total	$ -	$ -	$ -
		Per Day Factor (Generated from Button)			
		Days			
		Statutory Max per Day			$ -
		Total	$ -	$ -	$ -
Non-Discharge Violations	Step 3	Per Day Factor	0.3	0.3	0.3
		Days	28	16	16
		Statutory Max per Day	$ 1,000	$ 1,000	$ 1,000
		Total	$ 8,400.00	$ 4,800.00	$ 4,800.00
	Initial Amount of the ACL		$ 8,400.00	$ 4,800.00	$ 4,800.00
Add'l Factors	Step 4	Culpability	1 $ 8,400.00	1 $ 4,800.00	1 $ 4,800.00
		Cleanup and Cooperation	1 $ 8,400.00	1 $ 4,800.00	1 $ 4,800.00
		History of Violations	1 $ 8,400.00	1 $ 4,800.00	1 $ 4,800.00
	Step 5	Total Base Liability Amount	$ 18,000.00		
	Step 6	Ability to Pay & to Continue in Business	1 $ 18,000.00		
	Step 7	Other Factors as Justice May Require	1 $ 18,000.00		
		Staff Costs*	$ 1,800 $ 19,800.00		
	Step 8	Economic Benefit	$ 10,000 $ 19,800.00		
	Step 9	Minimum Liability Amount	11,000		
		Maximum Liability Amount	$ 1,289,000		
	Step 10	Final Liability Amount	$ 19,800.00		

Penalty Day Range Generator

Start Date of Violation= 7/2/09
End Date of Violation= 5/5/11

Maximum Days Fined (Steps 2 & 3) = 673 Days
Minimum Days Fined (Steps 2 & 3) = 28 Days

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ADMINISTRATIVE CIVIL LIABILITY ORDER R5-2011-XXXX

IN THE MATTER OF

GLENN & MARIE CHANEY TRUST
AND
TOM CHANEY
CHRIS CHANEY DAIRY
FRESNO COUNTY

This Order is issued to the Glenn & Marie Chaney Trust and Tom Chaney (hereafter Discharger) pursuant to California Water Code (CWC) section 13268, which authorizes the imposition of Administrative Civil Liability. This Order is based on findings that the Discharger violated provisions of Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order).

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) finds the following:

1. The Discharger owns and operates the Chris Chaney Dairy located at 6240 South El Dorado Avenue, San Joaquin, California, County of Fresno.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. CWC section 13267 authorizes the Regional Water Boards to require the submittal of technical and monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge to waters of the state.

4. The General Order and the MRP required the Discharger to submit the 2008 Annual Report by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

5. The General Order and the MRP required the Discharger to submit the 2009 Annual Report by 1 July 2010 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

6. The General Order and MRP required the Discharger to submit a Waste Management Plan by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267. However, the General Order was amended by Order No. R5-2009-0029 to extend the deadline to submit the Waste Management Plan to 1 July 2010 in order to give enrollees additional time to submit this plan.

7. The Discharger violated CWC section 13267 by failing to submit the 2008 Annual Report, the 2009 Annual Report, and Waste Management Plan required by the General Order and Monitoring and Reporting Program by the required deadlines.

8. On 23 July 2009, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2008 Annual Report had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

9. A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Fresno on 14 July 2011. The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $19,800.

10. On 10 December 2009, the Executive Officer issued Conditional Early Settlement Offer R5-2009-0582-M to the Discharger. The Offer provided the Discharger with an opportunity to settle the violation identified above through an expedited settlement process by submitting the past-due 2008 Annual Report and paying a penalty in the amount of two thousand dollars ($2,000), by 14 January 2010. The Offer was issued via Certified Mail, but was returned to the Central Valley Water Board office unclaimed.

11. On 16 August 2010, the Central Valley Water Board staff issued two Notices of Violation pertaining to the two missing reports notifying the Discharger that the 2009 Annual Report and the Waste Management Plan had not been received. Both Notices of Violation requested that the delinquent reports be submitted as soon as possible to minimize potential liability.

12. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0541to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $19,800 pursuant to CWC

section 13268 for the failure to submit the 2008 Annual Report, the 2009 Annual Report and the Waste Management Plan.

13. Upon considering the Hearing Panel's final report and making an independent review of the record, the Central Valley Water Board during its meeting on XX October 2011 adopted the findings of the Hearing Panel's report as its own and upheld the imposition of the Hearing Panel's proposed administrative civil liability on the Discharger. Therefore, the Central Valley Water Board has determined that civil liability should be imposed upon the Discharger in the amount of $19,800.

14. Issuance of this Administrative Civil Liability Order to enforce CWC Division 7, Chapter 5.5 is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).

15. This Order is effective and final upon issuance by the Central Valley Water Board. Payment must be received by the Central Valley Water Board no later than thirty (30) days from the date on which this Order is issued.

16. In the event that the Discharger fails to comply with the requirements of this Order, the Executive Officer or her delegee is authorized to refer this matter to the Attorney General's Office for enforcement.

17. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IT IS HEREBY ORDERED that pursuant to section 13323 of the CWC, the Discharger shall make a cash payment of $19,800 (check payable to the State Water Pollution Cleanup and Abatement Account) no later than thirty days from the date of issuance of this Order. I, Pamela C. Creedon, Executive Officer, do hereby certify that the foregoing is a full, true, correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, and that such action occurred on 14 July 2011.

_____
Pamela C. Creedon, Executive Officer

ITEM: 10

SUBJECT: James G. and Amelia M. Sweeney, Sweeney Dairy, Tulare County

BOARD ACTION: *Consideration of Issuance of Administrative Civil Liability Order*

BACKGROUND: James G. and Amelia M. Sweeney (Discharger) own and operate the Sweeney Dairy under the Existing Milk Cow Dairy General Order No. R5-2007-0035. A $11,400 Administrative Civil Liability Complaint was issued against the Discharger for failure to submit documents required by the General Order.

A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Fresno on 14 July 2011. Additional evidence, testimony and policy statements will not be accepted at the October 2011 hearing, unless allowed by the Board Chair.

Attached is a report by the Hearing Panel on this case that provides the findings and recommendations of the Hearing Panel.

The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $11,400.

A proposed Administrative Civil Liability Order implementing the Hearing Panel's recommendation is attached for consideration of adoption. The Board may adopt the Order in the recommended amount, modify the amount, or decide that imposition of administrative civil liability is not warranted.

Documents for the 14 July 2011 Panel Hearing may be found at: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1107/index.shtml

RECOMMENDATION: Review the Hearing Panel Report and consider adoption of the proposed Administrative Civil Liability Order.

Mgmt. Review_____
Legal Review____AM_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

James G. and Amelia M. Sweeney
Sweeney Dairy
ACL Complaint No. R5-2011-0562

HEARING PANEL REPORT AND PROPOSED ORDER

This matter was heard on 14 July 2010 in Fresno, California before a Hearing Panel consisting of Central Valley Regional Water Quality Control Board (Central Valley Water Board) Members Karl Longley, Sandra Meraz, and Dan Odenweller. Alex Mayer and Ken Landau were Panel Advisors. Mr. James Sweeney appeared on behalf of himself and Amelia M. Sweeney (Discharger). Clay Rodgers, Doug Patteson, Dale Essary and Mayumi Okamoto appeared for the Prosecution Team.

The Hearing Panel makes the following determinations:

FINDINGS OF FACT

1. The Discharger owns and operates the Sweeney Dairy (Dairy) located at 30712 Road 170, Visalia, California, County of Tulare.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. The General Order and the MRP required that an Annual Report for the calendar year 2009 be submitted for regulated facilities by 1 July 2010 (2009 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with facility modifications implemented to date; and a status on facility retrofitting completed as proposed in the Nutrient Management Plan submittal that was due 1 July 2009.

4. The General Order required regulated facilities to submit a Waste Management Plan (WMP) by 1 July 2009. The General Order was amended by Order R5-2009-0029 to modify the compliance schedule, extending the deadline to submit the WMP to 1 July 2010 in order to give regulated parties additional time to come in to compliance. The WMP is required to have the following components: a retrofitting plan, with schedule, needed to improve storage capacity, flood protection, or design of production area; maps of the production area and land application area; a wastewater storage capacity evaluation; a flood protection evaluation; a production area design/construction evaluation; and documentation that there are no cross connections.

5. On 16 August 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2009 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

6. On 16 August 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the Waste Management Plan with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

7. Central Valley Water Board's compliance tracking system and case files indicate that the Board has not received the 2009 Annual Report or the Waste Management Plan.

8. CWC section 13268(a)(1) states that "Any person failing or refusing to furnish technical or monitoring reports as required by subdivision (b) of Section 13267...is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b)."

9. CWC section 13268(b)(1) states that "Civil Liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violations occurs."

10. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0562 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $11,400 pursuant to CWC section 13268 for the failure to submit the 2009 Annual Report and Waste Management Plan as required by the General Order.

11. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2009 Annual Report by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

12. The Discharger violated the requirements of the General Order and MRP by failing to submit a Waste Management Plan by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

13. On 17 November 2009 the State Water Resources Control Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy establishes a methodology for assessing discretionary administrative civil liability. Use of the methodology

addresses the factors used to assess a penalty under CWC section 13327 including the Discharger's culpability, history of violations, ability to pay and continue in business, economic benefit, and other factors as justice may require. The required factors under CWC section 13327 have been considered using the methodology in the Enforcement Policy as explained in detail in Attachment A and shown in the Penalty Calculation for Civil Liability spreadsheet in Attachment B. Attachments A and B are attached hereto and incorporated herein by reference.

14. In general, violations of CWC section 13267 are assessed on a per day basis. Under the Enforcement Policy, an alternate approach to the penalty calculation for multiple day violations may be used if the regional board makes express findings that the violations do not cause daily detrimental impacts to the environment, result in no daily economic benefit that can be measured on a daily basis or occurred without the knowledge or control of the violator. Here, the failure to submit the required reports does not cause a daily detrimental impact to the environment and does not result in an economic benefit that can be measured on a daily basis, so the alternative approach is appropriate. Under this alternate approach, daily penalties are assessed for the first day of violation, plus one day for each 5-day period of violation until the 30th day, plus a one-day assessment for each additional thirty-day period of violation. In accordance with the alternative approach, a total of 16 days of violation have been assessed for the failure to submit the 2009 Annual Report, and a total of 16 days of violation have been assessed for the failure to submit a WMP.

15. On considering the written record and evidence presented at the hearing, the Hearing Panel determined that $11,400 should be imposed on the Discharger pursuant to CWC section 13268 for violations of CWC section 13267.

CONCLUSIONS OF LAW

1. The failure to submit the 2009 Annual Report constitutes a violation of CWC section 13267.

2. The failure to submit the Waste Management Plan constitutes a violation of CWC section 13267.

3. Pursuant to CWC section 13268, the Central Valley Water Board may impose administrative civil liability up to $1,000 for each day of violation.

4. The total maximum amount of administrative civil liability assessable for the violations alleged in Complaint No. R5-2011-0562 pursuant to CWC section 13268 is $616,000.

RECOMMENDED ADMINISTRATIVE CIVIL LIABILITY AMOUNT

The Hearing Panel recommends that the Central Valley Water Board impose administrative civil liability in the amount of $11,400 on the Discharger for violations found herein to have been committed by the Discharger. A proposed ACL Order is attached.

Karl E. Longley

Dr. Karl Longley
Hearing Panel Chair

August 22, 2011
Date

Attachment A Enforcement Policy methodology
Attachment B Penalty Calculation for Civil Liability spreadsheet
Proposed Administrative Civil Liability Order R5-2011-XXXX

Attachment A
Hearing Panel Report for ACL Complaint No. R5-2011-0562
Specific Factors Considered – Civil Liability
Sweeney Dairy

Each factor of the Enforcement Policy and its corresponding score for each violation are presented below:

1. **Violation No. 1 (Failure to submit 2009 Annual Report):** In accordance with the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (General Order), a 2009 Annual Report must be submitted for regulated facilities by 1 July 2010. To date, James G. Sweeney and Amelia M. Sweeney (hereinafter Discharger) have not submitted this report for the Sweeney Dairy.

<u>Calculation of Penalty for Failure to Submit 2009 Annual Report</u>

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2009 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit annual reports is punishable under CWC 13268(a)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit a 2009 Annual Report by 1 July 2010 as required by the General Order and the MRP, which is now 308 days late.

However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Discharger only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. A calculation of initial liability totals $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit a 2009 Annual Report and associated documents were detailed in the General Order. The Discharger was issued a Notice of Violation on 16 August 2010, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to submit the 2009 Annual Report or any of the associated documents, and is therefore highly culpable for failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical

and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 2.

a) *Total Base Liability Amount:* **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

2. **Violation No. 2 (Failure to submit a Waste Management Plan):** In accordance with the General Order and amended order R5-2009-0029, a Waste Management Plan for regulated facilities must be submitted by 1 July 2010. To date, Discharger has not submitted this Plan for the Dairy.

<u>Calculation of Penalty for Failure to Submit a Waste Management Plan</u>

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit a Waste Management Plan does not itself threaten water quality. The deviation from requirements was determined to be major, as the requirement to develop a Waste Management Plan for the operational portions of the Dairy facility has been rendered ineffective. The failure to submit the required Waste Management Plan undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit a Waste Management Plan is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit a Waste Management Plan by the 1 July 2010 deadline as required by the General Order, which is now 308 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit a Waste Management Plan addressing the management of waste does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Discharger receives a single economic benefit in cost saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. This yields an initial liability of $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit a Waste Management Plan alleged in this Complaint. The requirement to develop and submit a Waste Management Plan was detailed in the General Order. Further, the amended Order gave dischargers and extra calendar year to develop and submit the Plan. The Discharger was issued a Notice of Violation on 16 August 2010, which requested that the Plan be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to show any progress toward developing a Plan, and is therefore highly culpable for their failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC

section 13268, alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a. Total Base Liability Amount: **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

COMBINED TOTAL BASE LIABLITY AND FACTORS APPLIED TO ALL VIOLATIONS

The Combined Total Base Liability Amount for the two Violations is $9,600 ($4,800 + $4,800).

The following factors apply to the combined Total Base Liability Amounts for all of the violations discussed above.

Step 6. Ability to Pay and Continue in Business

a) *Adjusted Combined Total Base Liability Amount:* ***$9,600***

Discussion: The Discharger has the ability to pay the total base liability amount based on 1) the Discharger owns the Dairy, a significant asset, 2) the Discharger operates a dairy, an ongoing business that generates profits.

Based on the reasons discussed above, an ability to pay factor of 1 has been applied to the Combined Total Base Liability Amount.

Step 7. Other Factors as Justice May Require

a) *Adjusted Combined Total Base Liability Amount:* $9,600 + $1,800 (Staff Costs) = **$11,400.**

b) *Discussion:* The State and Regional Water Board has incurred $1,800 in staff costs associated with the investigation and enforcement of the violations alleged herein. This represents approximately 12 hours of staff time devoted to investigating and drafting the complaint at $150 an hour. In accordance with the Enforcement Policy, this amount is added to the Combined Total Base Liability Amount. A further adjustment of the combined total base liability amount may be made if the Discharger submits a complete 2008 Annual Report, a complete 2009 Annual report, and/or a complete Waste Management Plan by 20 June 2011. The amount of the combined total base liability amount may be reduced by $2,000 for each completed report that is submitted to the Central Valley Water Board by 20 June 2011. This reduction in the combined total base liability amount by $2,000 for each completed report accounts for enforcement efficiencies gained by the Discharger submitting the completed report or reports.

Step 8. Economic Benefit

a) *Estimated Economic Benefit:* **$7,500**

Discussion: The discharger has received an economic benefit from the costs saved in not drafting and preparing the annual report and the Waste Management Plan. This is based on the current consulting costs of producing one annual report ($2,500) and employing a certified engineer to conduct a site inspection and produce a Waste Management Plan ($5,000). The adjusted total base liability amount of $9,600 is more than at least 10% higher than the economic benefit amount ($7,500) as required by the enforcement policy.

Step 9. Maximum and Minimum Liability Amounts

a) *Minimum Liability Amount:* ***$8,250***

Discussion: The Enforcement Policy requires that the minimum liability amount imposed not be below the economic benefit plus ten percent. As discussed above, the Regional Water Board Prosecution Team's estimate of the Discharger's economic benefit obtained from the violations cited in this Complaint is $7,500**.**

b) *Maximum Liability Amount:* ***$616,000***

Discussion: The maximum administrative liability amount is the maximum amount allowed by Water Code Section 13367(b)(1): one thousand dollars ($1,000) for each day in which the violation occurs. Without the benefit of the

alternative approach for calculating liability for multiday violations under the Enforcement Policy, the Discharger could face penalties for the total number of days in violation (616 total days X $1,000 per day).

The proposed liability falls within these maximum and minimum liability amounts.

Step 10. Final Liability Amount

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount proposed for the failure to submit the 2009 Annual Reports and the Waste Management Plan is **$11,400.** Attachment B is a spreadsheet that demonstrates the use of the penalty calculation methodology.

ATTACHMENT B

Discharger Name/ID: James G. & Amelia M. Sweeney/5D545155N01

			Violation 1		Violation 2	
Discharge Violations	Step 1	Potential Harm Factor (Generated from Button)				
	Step 2	Per Gallon Factor (Generated from Button)				
		Gallons				
		Statutory / Adjusted Max per Gallon ($)				
		Total		$ -		$ -
		Per Day Factor (Generated from Button)	0		0	
		Days				
		Statutory Max per Day				
		Total		$ -		$ -
Non-Discharge Violations	Step 3	Per Day Factor	0.3		0.3	
		Days	16		16	
		Statutory Max per Day	$ 1,000		$ 1,000	
		Total		$ 4,800.00		$ 4,800.00
	Initial Amount of the ACL			$ 4,800.00		$ 4,800.00
Add'l Factors	Step 4	Culpability	1	$ 4,800.00	1	$ 4,800.00
		Cleanup and Cooperation	1	$ 4,800.00	1	$ 4,800.00
		History of Violations	1	$ 4,800.00	1	$ 4,800.00
	Step 5	Total Base Liability Amount		$ 9,600.00		
	Step 6	Ability to Pay & to Continue in Business	1	$ 9,600.00		
	Step 7	Other Factors as Justice May Require	1	$ 9,600.00		
		Staff Costs*	$ 1,800	$ 11,400.00		
	Step 8	Economic Benefit	$ 7,500	$ 11,400.00		
	Step 9	Minimum Liability Amount	$8,250			
		Maximum Liability Amount	$ 616,000			
	Step 10	Final Liability Amount		$ 11,400.00		

Penalty Day Range Generator

Start Date of Violation= 7/2/10
End Date of Violation= 5/5/11

Maximum Days Fined (Steps 2 & 3) = 308 Days
Minimum Days Fined (Steps 2 & 3) = 16 Days

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ADMINISTRATIVE CIVIL LIABILITY ORDER R5-2011-XXXX

IN THE MATTER OF

JAMES G. SWEENEY AND AMELIA M. SWEENEY
SWEENEY DAIRY
TULARE COUNTY

This Order is issued to James G. Sweeney and Amelia M. Sweeney (hereafter Discharger) pursuant to California Water Code (CWC) section 13268, which authorizes the imposition of Administrative Civil Liability. This Order is based on findings that the Discharger violated provisions of Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order).

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) finds the following:

1. The Discharger owns and operates the Sweeney Dairy (Dairy) located at 30712 Road 170, Visalia, California, County of Tulare.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. CWC section 13267 authorizes the Regional Water Boards to require the submittal of technical and monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge to waters of the state.

4. The General Order and the MRP required the Discharger to submit the 2009 Annual Report by 1 July 2010 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

5. The General Order and MRP required the Discharger to submit a Waste Management Plan by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267. However, the General Order was amended by Order No. R5-2009-0029 to extend the

deadline to submit the Waste Management Plan to 1 July 2010 in order to give enrollees additional time to submit this plan.

6. The Discharger violated CWC section 13267 by failing to submit the 2009 Annual Report and Waste Management Plan required by the General Order and Monitoring and Reporting Program by the required deadline of 1 July 2010.

7. On 16 August 2010, the Central Valley Water Board staff issued two Notices of Violation pertaining to the two missing reports notifying the Discharger that the 2009 Annual Report and the Waste Management Plan had not been received. Both Notices of Violation requested that the delinquent reports be submitted as soon as possible to minimize potential liability.

8. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0562 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $11,400 pursuant to CWC section 13268 for the failure to submit the 2009 Annual Report and Waste Management Plan.

9. A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Fresno on 14 July 2011. The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $11,400.

10. Upon considering the Hearing Panel's final report and making an independent review of the record, the Central Valley Water Board during its meeting on XX October 2011 adopted the findings of the Hearing Panel's report as its own and upheld the imposition of the Hearing Panel's proposed administrative civil liability on the Discharger. Therefore, the Central Valley Water Board has determined that civil liability should be imposed upon the Discharger in the amount of $11,400.

11. Issuance of this Administrative Civil Liability Order to enforce CWC Division 7, Chapter 5.5 is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).

12. This Order is effective and final upon issuance by the Central Valley Water Board. Payment must be received by the Central Valley Water Board no later than thirty (30) days from the date on which this Order is issued.

13. In the event that the Discharger fails to comply with the requirements of this Order, the Executive Officer or her delegee is authorized to refer this matter to the Attorney General's Office for enforcement.

14. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IT IS HEREBY ORDERED that pursuant to section 13323 of the CWC, the Discharger shall make a cash payment of $11,400 (check payable to the State Water Pollution Cleanup and Abatement Account) no later than thirty days from the date of issuance of this Order. I, Pamela C. Creedon, Executive Officer, do hereby certify that the foregoing is a full, true, correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, and that such action occurred on XX October 2011.

_____
Pamela C. Creedon, Executive Officer

ITEM: 11

SUBJECT: David Albers (owner/operator), Vintage Dairy, Fresno County

BOARD ACTION: *Consideration of Issuance of Administrative Civil Liability Order*

BACKGROUND: David Albers (Discharger) owns and operates the Vintage Dairy under the Existing Milk Cow Dairy General Order No. R5-2007-0035. A $19,800 Administrative Civil Liability Complaint was issued against the Discharger for failure to submit documents required by the General Order.

A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Fresno on 14 July 2011. Additional evidence, testimony and policy statements will not be accepted at the October 2011 hearing, unless allowed by the Board Chair.

Attached is a report by the Hearing Panel on this case that provides the findings and recommendations of the Hearing Panel.

The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $19,800.

A proposed Administrative Civil Liability Order implementing the Hearing Panel's recommendation is attached for consideration of adoption. The Board may adopt the Order in the recommended amount, modify the amount, or decide that imposition of administrative civil liability is not warranted.

Documents for the 14 July 2011 Panel Hearing may be found at: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1107/index.shtml

RECOMMENDATION: Review the Hearing Panel Report and consider adoption of the proposed Administrative Civil Liability Order.

Mgmt. Review_____
Legal Review____AM_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

David Albers (owner/operator)
Vintage Dairy
ACL Complaint No. R5-2011-0542

HEARING PANEL REPORT AND PROPOSED ORDER

This matter was heard on July 14, 2011 in Fresno, California before a panel consisting of Central Valley Regional Water Quality Control Board (Central Valley Water Board) Members Karl Longley, Sandra Meraz, and Dan Odenweller. Alex Mayer and Ken Landau were Hearing Panel Advisors. [David Albers appeared on behalf of himself (Discharger). Clay Rodgers, Dale Essary and Ellen Howard appeared for the Prosecution Team.

The Hearing Panel makes the following determinations:

FINDINGS OF FACT

1. The Discharger is the managing partner and owner of the Vintage Dairy located at 12103 W Elkhorn Avenue, Riverdale, CA 93656, County of Fresno..

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. The General Order and the MRP required that an Annual Report for the calendar year 2008 be submitted for regulated facilities by 1 July 2009 (2008 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with modifications implemented to date; documentation of interim facility modifications completed for storage capacity and to balance nitrogen; components of a Nutrient Management Plan; a Salinity Report; manure manifests; new wastewater agreements; and domestic and irrigation well groundwater monitoring results for the samples collected by November 2008.

4. The General Order and the MRP required that an Annual Report for the calendar year 2009 be submitted for regulated facilities by 1 July 2010 (2009 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with facility modifications implemented to date; and a status on facility retrofitting completed as proposed in the Nutrient Management Plan submittal that was due 1 July 2009.

5. The General Order required regulated facilities to submit a Waste Management Plan (WMP) by 1 July 2009. The General Order was amended by Order R5-2009-0029 to modify the compliance schedule, extending the deadline to submit the WMP to 1 July 2010 in order to give regulated parties additional time to come in to compliance. The WMP is required to have the following components: a retrofitting plan, with schedule, needed to improve storage capacity, flood protection, or design of production area; maps of the production area and land

application area; a wastewater storage capacity evaluation; a flood protection evaluation; a production area design/construction evaluation; and documentation that there are no cross connections.

6. On 23 July 2009, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2008 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

7. On 25 August 2009, the Central Valley Water Board staff attempted to contact David Albers by telephone, and left a voicemail message stating that the Board had not received the required 2008 Annual Report with appurtenant components. On 31 August 2009, Mr. Albers contacted Board staff by telephone and indicated that the overdue report would be submitted by 20 August 2009.

8. On 17 March 2010, the Executive Officer issued Conditional Early Settlement Offer R5-2009-0585-M (Offer) to the Discharger. (Exhibit D.) The Offer provided the Discharger with an opportunity to settle the violation identified above through an expedited settlement process. The Offer provided the Discharger the option of accepting the conditions of the Offer by waiving the right to a hearing before the Central Valley Water Board, submitting the past-due 2008 Annual Report with appurtenant components, and paying a penalty in the amount of two thousand dollars ($2,000), by 31 March 2010. If the Discharger accepted the Offer, the Central Valley Water Board would consider the identified violation resolved. On 30 March 2010, the Discharger submitted the signed acceptance of the Offer and waiver of right to a hearing. On 13 April 2010, the Discharger submitted the $2,000 penalty. However, the Discharger did not submit the required 2008 Annual Report with appurtenant components. The Discharger therefore did not meet all the conditions of the Offer. .

9. On 16 August 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2009 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

10. On 16 August 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the Waste Management Plan with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

11. Central Valley Water Board's compliance tracking system and case files indicate that the Board has not received the 2009 Annual Report or the Waste Management Plan.

12. On 6 December 2010, the Central Valley Water Board staff issued a letter informing the Discharger that staff was in the process of assessing civil liability for failure to submit the Annual Reports and the Waste Management Plan. The letter provided the Discharger the opportunity to submit any information regarding the factors listed in CWC section 13327 that would be deemed relevant to determining an appropriate monetary penalty. The letter requested that all responses be received by 31 December 2010. As of the date of issuance of this Complaint, the Central Valley Water Board has not received any response to staff's 6 December 2010 letter.

13. CWC section 13268(a)(1) states that "Any person failing or refusing to furnish technical or monitoring reports as required by subdivision (b) of Section 13267...is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b)."

14. CWC section 13268(b)(1) states that "Civil Liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violations occurs."

15. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0542 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $19,800 pursuant to CWC section 13268 for the failure to submit the 2008 Annual Report, the 2009 Annual Report and Waste Management Plan as required by the General Order.

16. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2008 Annual Report by the required deadline of 1 July 2009. As of the date of the Complaint, the 2008 Annual Report was 673 days late.

17. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2009 Annual Report by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

18. The Discharger violated the requirements of the General Order and MRP by failing to submit a Waste Management Plan by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

19. On 17 November 2009 the State Water Resources Control Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy establishes a methodology for assessing discretionary administrative civil liability. Use of the methodology addresses the factors used to assess a penalty under CWC section 13327 including the Discharger's culpability, history of violations, ability to pay and continue in business, economic benefit, and other factors as justice may require.

The required factors under CWC section 13327 have been considered using the methodology in the Enforcement Policy as explained in detail in Attachment A and shown in the Penalty Calculation for Civil Liability spreadsheet in Attachment B. Attachments A and B are attached hereto and incorporated herein by reference.

20. In general, violations of CWC section 13267 are assessed on a per day basis. Under the Enforcement Policy, an alternate approach to the penalty calculation for multiple day violations may be used if the regional board makes express findings that the violations do not cause daily detrimental impacts to the environment, result in no daily economic benefit that can be measured on a daily basis or occurred without the knowledge or control of the violator. Here the failure to submit the required reports does not cause a daily detrimental impact to the environment and does not result in an economic benefit that can be measured on a daily basis, so the alternative approach is appropriate. Under this alternate approach, daily penalties are assessed for the first day of violation, plus one day for each 5-day period of violation until the 30th day, plus a one-day assessment for each additional thirty-day period of violation. In accordance with the alternative approach, a total of 28 days of violation have been assessed for the failure to submit the 2008 Annual Report, and a total of 16 days of violation each have been assessed for the failure to submit the 2009 Annual report and a WMP.

21. On considering the written record and evidence presented at the hearing, the Hearing Panel determined that $19,800 should be imposed on the Discharger pursuant to CWC section 13268 for violations of CWC section 13267.

CONCLUSIONS OF LAW

1. The failure to submit the 2008 Annual Report constitutes a violation of CWC section 13267.

2. The failure to submit the 2009 Annual Report constitutes a violation of CWC section 13267.

3. The failure to submit the Waste Management Plan constitutes a violation of CWC section 13267.

4. Pursuant to CWC section 13268, the Central Valley Water Board may impose administrative civil liability up to $1,000 for each day of violation.

5. The total maximum amount of administrative civil liability assessable for the violations alleged in Complaint No. R5-2011-0542 pursuant to CWC section 13268 is $1,289,000.

RECOMMENDED ADMINISTRATIVE CIVIL LIABILITY AMOUNT

The Hearing Panel recommends that the Central Valley Regional Board impose administrative civil liability in the amount of $19,800 on the Discharger for violations found herein to have been committed by the Discharger. A proposed ACL Order is attached.

Karl E. Longley

Dr. Karl Longley
Hearing Panel Chair

August 22, 2011
Date

Attachment A Enforcement Policy methodology
Attachment B Penalty Calculation for Civil Liability spreadsheet
Proposed Administrative Civil Liability Order R5-2011-XXXX

Attachment A
Hearing Panel Report for ACL Complaint No. R5-2011-0513
Specific Factors Considered – Civil Liability
Vintage Dairy

Each factor of the Enforcement Policy and its corresponding score for each violation are presented below:

1. **Violation No. 1 (Failure to submit 2008 Annual Report):** In accordance with the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (General Order), a 2008 Annual Report must be submitted for regulated facilities by 1 July 2009. To date, David Albers (hereinafter Discharger) has not submitted this report for the Vintage Dairy.

   <u>Calculation of Penalty for Failure to Submit 2008 Annual Report</u>

   Step1. Potential for Harm for Discharge Violations
   This step is not applicable because the violation is not a discharge violation.

   Step 2. Assessment for Discharge Violations
   This step is not applicable because the violation is not a discharge violation.

   Step 3. Per Day Assessment for Non-Discharge Violations

   The per day factor is 0.30.

   This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2008 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

   Initial Liability

   A failure to submit annual reports is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit an annual report for 2008 by 1 July 2009 as required by the General Order and the Monitoring Program (MRP), which is now 673 days late.

However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Discharger only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 28 days of violation. A calculation of initial liability totals $8,400 (0.3 per day factor X 28 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit a 2008 Annual Report and associated documents were detailed in the General Order. Further, the Discharger was issued a Notice of Violation on 23 July 2009, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to submit the 2008 Annual Report or any of the associated documents, and is therefore highly culpable for failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, including notice through the General Order and an NOV, the Discharger continues to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical

and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a) *Total Base Liability Amount:* **$8,400** (Initial Liability ($8,400) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

2. **Violation No. 2 (Failure to submit 2009 Annual Report):** In accordance with the General Order, a 2009 Annual Report must be submitted for regulated facilities by 1 July 2010. To date, the Discharger has not submitted this report for the Dairy.

<u>Calculation of Penalty for Failure to Submit 2009 Annual Report</u>

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2009 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit annual reports is punishable under CWC 13268(a)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit a 2009 Annual Report by 1 July 2010 as required by the General Order and the MRP, which is now 308 days late.

However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Discharger only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. A calculation of initial liability totals $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit a 2009 Annual Report and associated documents were detailed in the General Order. The Discharger was issued a Notice of Violation on 16 August 2010, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to submit the 2009 Annual Report or any of the associated documents, and is therefore highly culpable for failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC

section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a) *Total Base Liability Amount:* **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

3. **Violation No. 3 (Failure to submit a Waste Management Plan):** In accordance with the General Order and amended order R5-2009-0029, a Waste Management Plan for regulated facilities must be submitted by 1 July 2010. To date, Discharger has not submitted this Plan for the Dairy.

<u>Calculation of Penalty for Failure to Submit a Waste Management Plan</u>

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit a Waste Management Plan does not itself threaten water quality. The deviation from requirements was determined to be major, as the requirement to develop a

Waste Management Plan for the operational portions of the Dairy facility has been rendered ineffective. The failure to submit the required Waste Management Plan undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit a Waste Management Plan is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit a Waste Management Plan by the 1 July 2010 deadline as required by the General Order, which is now 308 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit a Waste Management Plan addressing the management of waste does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Discharger receives a single economic benefit in cost saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. This yields an initial liability of $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit a Waste Management Plan alleged in this Complaint. The requirement to develop and submit a Waste Management Plan was detailed in the General Order. Further, the amended Order gave dischargers and extra calendar year to develop and submit the Plan. The Discharger was issued a Notice of Violation on 16 August 2010, which requested that the Plan be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to show any progress toward developing a Plan, and is therefore highly culpable for their failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC section 13268, alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a. Total Base Liability Amount: **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

COMBINED TOTAL BASE LIABLITY AND FACTORS APPLIED TO ALL VIOLATIONS

The Combined Total Base Liability Amount for the three Violations is $18,000 ($8,400 + $4,800 + $4,800).

The following factors apply to the combined Total Base Liability Amounts for all of the violations discussed above.

Step 6. Ability to Pay and Continue in Business

a) *Adjusted Combined Total Base Liability Amount:* ***$18,000***

Discussion: The Discharger has the ability to pay the total base liability amount based on 1) the Discharger owns the Dairy, a significant asset, 2) the Discharger operates a dairy, an ongoing business that generates profits.

Based on the reasons discussed above, an ability to pay factor of 1 has been applied to the Combined Total Base Liability Amount.

Step 7. Other Factors as Justice May Require

a) *Adjusted Combined Total Base Liability Amount:* $18,000 + $1,800 (Staff Costs) = **$19,800.**

b) *Discussion:* The State and Regional Water Board has incurred $1,800 in staff costs associated with the investigation and enforcement of the violations alleged herein. This represents approximately 12 hours of staff time devoted to investigating and drafting the complaint at $150 an hour. In accordance with the Enforcement Policy, this amount is added to the Combined Total Base Liability Amount. A further adjustment of the combined total base liability amount may be made if the Discharger submits a complete 2008 Annual Report, a complete 2009 Annual report, and/or a complete Waste Management Plan by 20 June 2011. The amount of the combined total base liability amount may be reduced by $2,000 for each completed report that is submitted to the Central Valley Water Board by 20 June 2011. This reduction in the combined total base liability amount by $2,000 for each completed report accounts for enforcement efficiencies gained by the Discharger submitting the completed report or reports.

Step 8. Economic Benefit

a) *Estimated Economic Benefit:* **$10,000**

Discussion: The discharger has received an economic benefit from the costs saved in not drafting and preparing the annual report and the Waste Management Plan. This is based on the current consulting costs of producing two annual reports ($2,500 each) and employing a certified engineer to conduct a site inspection and produce a Waste Management Plan ($5,000). The adjusted total base liability amount of $18,000 is more than at least 10% higher than the economic benefit amount ($10,000) as required by the enforcement policy.

Step 9. Maximum and Minimum Liability Amounts

a) *Minimum Liability Amount:* ***$11,000***

Discussion: The Enforcement Policy requires that the minimum liability amount imposed not be below the economic benefit plus ten percent. As discussed above, the Regional Water Board Prosecution Team's estimate of the Discharger's economic benefit obtained from the violations cited in this Complaint is $10,000**.**

b) *Maximum Liability Amount:* ***$1,289,000***

Discussion: The maximum administrative liability amount is the maximum amount allowed by Water Code Section 13367(b)(1): one thousand dollars ($1,000) for each day in which the violation occurs. Without the benefit of the alternative approach for calculating liability for multiday violations under the Enforcement Policy, the Discharger could face penalties for the total number of days in violation (1,289 total days X $1,000 per day).

The proposed liability falls within these maximum and minimum liability amounts.

Step 10. Final Liability Amount

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount proposed for the failure to submit the 2008 and 2009 Annual Reports, and the Waste Management Plan is **$19,800.** Attachment B is a spreadsheet that demonstrates the use of the penalty calculation methodology.

Discharger Name/ID: David Albers/5C10NC00151

ATTACHMENT B

			Violation 1		Violation 2		Violation 3	
Discharge Violations	Step 1	Potential Harm Factor (Generated from Button)						
	Step 2	Per Gallon Factor (Generated from Button)						
		Gallons						
		Statutory / Adjusted Max per Gallon ($)						
		Total		$ -		$ -		$ -
		Per Day Factor (Generated from Button)	0		0		0	
		Days						
		Statutory Max per Day						
		Total		$ -		$ -		$ -
Non-Discharge Violations	Step 3	Per Day Factor	0.3		0.3		0.3	
		Days	28		16		16	
		Statutory Max per Day	$ 1,000		$ 1,000		$ 1,000	
		Total		$ 8,400.00		$ 4,800.00		$ 4,800.00
	Initial Amount of the ACL			$ 8,400.00		$ 4,800.00		$ 4,800.00
Add'l Factors	Step 4	Culpability	1	$ 8,400.00	1	$ 4,800.00	1	$ 4,800.00
		Cleanup and Cooperation	1	$ 8,400.00	1	$ 4,800.00	1	$ 4,800.00
		History of Violations	1	$ 8,400.00	1	$ 4,800.00	1	$ 4,800.00
	Step 5	Total Base Liability Amount		$ 18,000.00				
	Step 6	Ability to Pay & to Continue in Business	1	$ 18,000.00				
	Step 7	Other Factors as Justice May Require	1	$ 18,000.00				
		Staff Costs*	$ 1,800	$ 19,800.00				
	Step 8	Economic Benefit	$ 10,000	$ 19,800.00				
	Step 9	Minimum Liability Amount	$11,000					
		Maximum Liability Amount	$ 1,289,000					
	Step 10	Final Liability Amount		$ 19,800.00				

Penalty Day Range Generator

Start Date of Violation= 7/2/09
End Date of Violation= 5/5/11

Maximum Days Fined (Steps 2 & 3) = 673 Days
Minimum Days Fined (Steps 2 & 3) = 28 Days

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ADMINISTRATIVE CIVIL LIABILITY ORDER R5-2011-XXXX

IN THE MATTER OF

DAVID ALBERS
VINTAGE DAIRY
FRESNO COUNTY

This Order is issued to David Albers, managing partner of Vintage Dairy (hereafter Discharger) pursuant to California Water Code (CWC) section 13268, which authorizes the imposition of Administrative Civil Liability. This Order is based on findings that the Discharger violated provisions of Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order).

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) finds the following:

1. The Discharger is the managing partner and owner of the Vintage Dairy located at 12103 W Elkhorn Avenue, Riverdale, CA 93656, County of Fresno.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. CWC section 13267 authorizes the Regional Water Boards to require the submittal of technical and monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge to waters of the state.

4. The General Order and the MRP required the Discharger to submit the 2008 Annual Report by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

5. The General Order and the MRP required the Discharger to submit the 2009 Annual Report by 1 July 2010 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

6. The General Order and MRP required the Discharger to submit a Waste Management Plan by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267. However, the General Order was amended by Order No. R5-2009-0029 to extend the deadline to submit the Waste Management Plan to 1 July 2010 in order to give enrollees additional time to submit this plan.

7. The Discharger violated CWC section 13267 by failing to submit the 2008 Annual Report, the 2009 Annual Report, and Waste Management Plan required by the General Order and Monitoring and Reporting Program by the required deadlines.

8. On 23 July 2009, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2008 Annual Report had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

9. On 25 August 2009, the Central Valley Water Board staff attempted to contact David Albers by telephone, and left a voicemail message stating that the Board had not received the required 2008 Annual Report with appurtenant components. On 31 August 2009, Mr. Albers contacted Board staff by telephone and indicated that the overdue report would be submitted by 20 August 2009.

10. On 17 March 2010, the Executive Officer issued Conditional Early Settlement Offer R5-2009-0585-M (Offer) to the Discharger. The Offer provided the Discharger with an opportunity to settle the violation identified above through an expedited settlement process. The Offer provided the Discharger the option of accepting the conditions of the Offer by waiving the right to a hearing before the Central Valley Water Board, submitting the past-due 2008 Annual Report with appurtenant components, and paying a penalty in the amount of two thousand dollars ($2,000), by 31 March 2010. If the Discharger accepted the Offer, the Central Valley Water Board would consider the identified violation resolved. On 30 March 2010, the Discharger submitted the signed acceptance of the Offer and waiver of right to a hearing. On 13 April 2010, the Discharger submitted the $2,000 penalty. However, the Discharger did not submit the required 2008 Annual Report with appurtenant components. The Discharger therefore did not meet all the conditions of the Offer.

11. On 16 August 2010, the Central Valley Water Board staff issued two Notices of Violation pertaining to the two missing reports notifying the Discharger that the 2009 Annual Report and the Waste Management Plan

had not been received. Both Notices of Violation requested that the delinquent reports be submitted as soon as possible to minimize potential liability.

12. On 6 December 2010, the Central Valley Water Board staff issued a letter informing the Discharger that staff was in the process of assessing civil liability for failure to submit the Annual Reports and the Waste Management Plan. The letter provided the Discharger the opportunity to submit any information regarding the factors listed in CWC section 13327 that would be deemed relevant to determining an appropriate monetary penalty. The letter requested that all responses be received by 31 December 2010. As of the date of issuance of this Complaint, the Central Valley Water Board has not received any response to staff's 6 December 2010 letter.

13. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0542 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $19,800 pursuant to CWC section 13268 for the failure to submit the 2008 Annual Report, the 2009 Annual Report and the Waste Management Plan.

14. A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Fresno on 14 July 2011. The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $19,800.

15. Upon considering the Hearing Panel's final report and making an independent review of the record, the Central Valley Water Board during its meeting on XX October 2011 adopted the findings of the Hearing Panel's report as its own and upheld the imposition of the Hearing Panel's proposed administrative civil liability on the Discharger. Therefore, the Central Valley Water Board has determined that civil liability should be imposed upon the Discharger in the amount of $19,800.

16. Issuance of this Administrative Civil Liability Order to enforce CWC Division 7, Chapter 5.5 is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).

17. This Order is effective and final upon issuance by the Central Valley Water Board. Payment must be received by the Central Valley Water Board no later than thirty (30) days from the date on which this Order is issued.

18. In the event that the Discharger fails to comply with the requirements of this Order, the Executive Officer or her delegee is authorized to refer this matter to the Attorney General's Office for enforcement.

19. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IT IS HEREBY ORDERED that pursuant to section 13323 of the CWC, the Discharger shall make a cash payment of $19,800 (check payable to the State Water Pollution Cleanup and Abatement Account) no later than thirty days from the date of issuance of this Order. I, Pamela C. Creedon, Executive Officer, do hereby certify that the foregoing is a full, true, correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, and that such action occurred on 13 October 2011.

_____
Pamela C. Creedon, Executive Officer

ITEM: 12

SUBJECT: Barry, Arnold, And Clara Van Leeuwen, (A&C Van Leeuwen Family Trust), JAB Dairy, Stanislaus County

BOARD ACTION: *Consideration of Issuance of Administrative Civil Liability Order*

BACKGROUND: Barry, Arnold, And Clara Van Leeuwen, (A&C Van Leeuwen Family Trust), (Discharger) operates the JAB Dairy under the Existing Milk Cow Dairy General Order No. R5-2007-0035. A $23,700 Administrative Civil Liability Complaint was issued against the Discharger for failure to submit documents required by the General Order.

A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Rancho Cordova on 20 July 2011. Additional evidence, testimony and policy statements will not be accepted at the October 2011 hearing, unless allowed by the Board Chair.

Attached is a report by the Hearing Panel on this case that provides the findings and recommendations of the Hearing Panel.

The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $23,700.

A proposed Administrative Civil Liability Order implementing the Hearing Panel's recommendation is attached for consideration of adoption. The Board may adopt the Order in the recommended amount, modify the amount, or decide that imposition of administrative civil liability is not warranted.

Documents for the 20 July 2011 Panel Hearing may be found at: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1107/index.shtml

RECOMMENDATION: Review the Hearing Panel Report and consider adoption of the proposed Administrative Civil Liability Order.

Mgmt. Review_____
Legal Review____AM_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Barry, Arnold and Clara Van Leeuwen
(A & C Van Leeuwen Family Trust)
JAB Dairy
ACL Complaint No. R5-2011-0543

HEARING PANEL REPORT AND PROPOSED ORDER

This matter was heard on 20 July 2011 in Rancho Cordova, California before a Hearing Panel consisting of Central Valley Regional Water Quality Control Board (Central Valley Water Board) Members Kate Hart, Karl Longley, and Dan Odenweller. Alex Mayer and Ken Landau were Panel Advisors. Barry, Arnold and Clara Van Leeuwen (A&C Van Leeuwen Family Trust) (hereinafter, Discharger) did not make an appearance. Pamela Creedon, Clay Rodgers, Doug Patteson, Charlene Herbst, and Mayumi Okamoto appeared for the Prosecution Team.

The Hearing Panel makes the following determinations:

FINDINGS OF FACT

1. The Discharger owns and operates the JAB Dairy (Dairy) located at 9848 Milnes Road, Modesto, Stanislaus County.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. The General Order and the MRP required that an Annual Report for the 2008 calendar year be submitted for regulated facilities by 1 July 2009 (2008 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with modifications implemented to date; documentation of interim facility modifications completed for storage capacity and to balance nitrogen; components of a Nutrient Management Plan; Salinity Report; manure manifests; new wastewater agreements; and domestic and irrigation well groundwater monitoring results for samples collected by November 2008.

4. The General Order and the MRP required that an Annual Report for the 2009 calendar year be submitted for regulated facilities by 1 July 2010 (2009 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with facility modifications implemented to date; and a status on facility retrofitting completed as proposed in the Nutrient Management Plan submittal that was due 1 July 2009.

5. The General Order required regulated facilities to submit a Waste Management Plan (WMP) by 1 July 2009. The General Order was amended by Order R5-2009-0029 to modify the compliance schedule, extending the deadline to submit the WMP to 1 July 2010 in order to give regulated parties additional time to come in to compliance. The WMP is required to have the following components: a

retrofitting plan, with schedule, needed to improve storage capacity, flood protection, or design of production area; maps of the production area and land application area; a wastewater storage capacity evaluation; a flood protection evaluation; a production area design/construction evaluation; and documentation that there are no cross connections.

6. On 27 July 2009, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2008 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

7. On 10 December 2009, the Executive Officer issued Conditional Early Settlement Offer R5-2009-0591-M (Offer) to the Discharger for the 2008 Annual Report. The Offer provided the Discharger with an opportunity to settle the violation identified above through an expedited settlement process. The Offer provided the Discharger the option of accepting the conditions of the Offer by waiving the right to a hearing before the Central Valley Water Board, submitting the past-due 2008 Annual Report with appurtenant components, and paying a penalty in the amount of two thousand dollars ($2,000), by 14 January 2010. The Offer was issued via Certified Mail, and was signed for by Arnold Van Leeuwen on 8 January 2010. On 11 January 2010, a signed waiver and written response was received from Arnold Van Leeuwen on behalf of JAB Dairy. The written response said, in part, "We accept the 2000.00 (sic) fine but cannot pay for fines or reports at this time." Neither the 2008 Annual Report nor the fine has been received to date.

8. On 22 June 2010, the Executive Officer issued a California Water Code (CWC) section 13267 Order (13267 Order) to the Discharger that directed the Discharger to install groundwater monitoring wells, and to implement groundwater monitoring at the Dairy. Specifically, the 13267 Order directed the Discharger to submit an acceptable groundwater monitoring well installation and sampling plan (MWISP) to the Central Valley Water Board by 30 September 2010.

9. On 2 September 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2009 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

10. On 2 September 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the Waste Management Plan with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

11. Central Valley Water Board's compliance tracking system and case files indicate that the Board has not received the 2008 or 2009 Annual Report or the Waste Management Plan.

12. CWC section 13268(a)(1) states that "Any person failing or refusing to furnish technical or monitoring reports as required by subdivision (b) of Section 13267...is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b)."

13. CWC section 13268(b)(1) states that "Civil Liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violations occurs."

14. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0543 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $23,700 pursuant to CWC section 13268 for the failure to submit the 2008 Annual Report, 2009 Annual Report, Waste Management Plan and MWISP as required by the General Order.

15. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2008 Annual Report by the required deadline of 1 July 2009. As of the date of the Complaint, the 2009 Annual Report was 673 days late.

16. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2009 Annual Report by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

17. The Discharger violated the requirements of the General Order and MRP by failing to submit a Waste Management Plan by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

18. The Discharger violated the requirements of the General Order and 13267 Order issued by the Executive Officer on 22 June 2010 by failing to submit the MWISP plan by 30 September 2010 as required by the 13267 Order and as directed by the General Order and MRP.

19. On 17 November 2009 the State Water Resources Control Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy establishes a methodology for assessing discretionary administrative civil liability. Use of the methodology addresses the factors used to assess a penalty under CWC section 13327 including the Discharger's culpability, history of violations, ability to pay and continue in business, economic benefit, and other factors as justice may require. The required factors under CWC section 13327 have been considered using the

methodology in the Enforcement Policy as explained in detail in Attachment A and shown in the Penalty Calculation for Civil Liability spreadsheet in Attachment B. Attachments A and B are attached hereto and incorporated herein by reference.

20. In general, violations of CWC section 13267 are assessed on a per day basis. Under the Enforcement Policy, an alternate approach to the penalty calculation for multiple day violations may be used if the regional board makes express findings that the violations do not cause daily detrimental impacts to the environment, result in no daily economic benefit that can be measured on a daily basis or occurred without the knowledge or control of the violator. Here the failure to submit the required reports does not cause a daily detrimental impact to the environment and does not result in an economic benefit that can be measured on a daily basis, so the alternative approach is appropriate. Under this alternate approach, daily penalties are assessed for the first day of violation, plus one day for each 5-day period of violation until the 30th day, plus a one-day assessment for each additional thirty-day period of violation. In accordance with the alternative approach, a total of 28 days of violation have been assessed for the failure to submit the 2008 Annual Report, a total of 16 days of violation for the 2009 Annual Report, a total of 16 days of violation have been assessed for the failure to submit a WMP, and a total of 13 days of violation have been assessed for the failure to submit a MWISP.

21. On considering the written record and evidence presented at the hearing, the Hearing Panel determined that $23,700 should be imposed on the Discharger pursuant to CWC section 13268 for violations of CWC section 13267.

CONCLUSIONS OF LAW

1. The failure to submit the 2008 Annual Report constitutes a violation of CWC section 13267.

2. The failure to submit the 2009 Annual Report constitutes a violation of CWC section 13267.

3. The failure to submit the Waste Management Plan constitutes a violation of CWC section 13267.

4. The failure to submit the MWISP constitutes a violation of CWC section 13267.

5. Pursuant to CWC section 13268, the Central Valley Water Board may impose administrative civil liability up to $1,000 for each day of violation.

6. The total maximum amount of administrative civil liability assessable for the violations alleged in Complaint No. R5-2011-543 pursuant to CWC section 13268 is $1,506,000.

RECOMMENDED ADMINISTRATIVE CIVIL LIABILITY AMOUNT

The Hearing Panel recommends that the Central Valley Regional Board impose administrative civil liability in the amount of $23,700 on the Discharger for violations found herein to have been committed by the Discharger. A proposed ACL Order is attached.

Katherine Hart
Hearing Panel Chair

Aug. 16, 2011
Date

Attachment A Enforcement Policy methodology
Attachment B Penalty Calculation for Civil Liability spreadsheet
Proposed Administrative Civil Liability Order R5-2011-XXXX

Attachment A
Hearing Panel Report for ACL Complaint No. R5 –2011- 0543
Specific Factors Considered – Civil Liability
JAB Dairy

Each factor of the Enforcement Policy and its corresponding score for each violation are presented below:

1. **Violation No. 1 (Failure to submit 2008 Annual Report):** In accordance with Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035, an Annual Report must be submitted for regulated facilities by 1 July 2009. To date, Barry, Arnold, and Clare Van Leeuwen (A&C Van Leeuwen Family Trust)(hereinafter, Dischargers) have not submitted this report for the JAB Dairy.

   Calculation of Penalty for Failure to Submit 2008 Annual Report

   Step1. Potential for Harm for Discharge Violations
   This step is not applicable because the violation is a not a discharge violation.

   Step 2. Assessment for Discharge Violations
   This step is not applicable because the violation is a not a discharge violation.

   Step 3. Per Day Assessment for Non-Discharge Violations

   The per day factor is 0.30.

   This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: the failure to submit the 2008 Annual Report did not increase the amount of pollution discharged or threatened to be discharged into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the 2007 General Order.

   Initial Liability

   A failure to submit annual reports is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Dischargers failed to submit an annual report for 2008 on July 1, 2009 as required by the General Order and the MRP, which is now 673 days late.

   However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it

does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Dischargers only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 26 days of violation. A calculation of initial liability totals $ 7,800 (0.3 per day factor X 26 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Dischargers were given the neutral score of 1, which neither increases nor decreases the fine.

The Dischargers are fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit an Annual Report and associated documents were detailed in the 2007 General Order. Further, the Dischargers were issued a Notice of Violation on 27 July 2009, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Dischargers have failed to submit the 2008 annual report or any of the associated documents, and are therefore highly culpable for their failure to comply with the program.
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b) *Cleanup and Cooperation*: 1

Discussion: The Dischargers was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Dischargers received multiple notices regarding the requirements set forth in the General Order, including notice through the General Order and an NOV, the Dischargers continue to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Dischargers was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Dischargers with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a) *Total Base Liability Amount:* **$7,800** (Initial Liability ($7,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

2. **Violation No. 2 (Failure to submit 2009 Annual Report):** In accordance with Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035, a 2009 Annual Report must be submitted for regulated facilities by 1 July 2010. To date, Dischargers have not submitted this report

Calculation of Penalty for Failure to Submit 2009 Annual Report

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2009 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the 2007 General Order.

Initial Liability

A failure to submit annual reports is punishable under CWC 13268(a)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Dischargers failed to submit an Annual Report for 2009 on July 1, 2010 as required by the General Order and the MRP, which is now 308 days late.

However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Dischargers only receive an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 14 days of violation. A calculation of initial liability totals $4,200 (0.3 per day factor X 14 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Dischargers were given the neutral score of 1, which neither increases nor decreases the fine.

The Dischargers are fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit an Annual Report and associated documents were detailed in the 2007 General Order. The Dischargers were issued a Notice of Violation on 2 September 2010, which requested that the 2009 annual Report be submitted as soon as possible to minimize liability. Since that time, the Dischargers have failed to submit the 2009 Annual Report or any of the associated documents, and are therefore highly culpable for their failure to comply with the program.

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b) *Cleanup and Cooperation*: 1

Discussion: The Dischargers was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Dischargers received multiple notices regarding the requirements set forth in the General Order, the Dischargers continue to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Dischargers was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Dischargers with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 2.

a) *Total Base Liability Amount:* **$4,200** (Initial Liability ($4,200) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

3. **Violation No. 3 (Failure to submit a Waste Management Plan):** In accordance with Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035, and amended Order R5-2009-0029, a Waste Management Plan for regulated facilities must be submitted by 1 July 2010. To date, the Dischargers have not submitted this Plan.

Calculation of Penalty for Failure to Submit a Waste Management Plan

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit a Waste Management Plan does not itself threaten water quality. The deviation from requirements was determined to be major, as the requirement to develop a Waste Management Plan for the operational portions of the dairy facility has been rendered ineffective. The failure to submit the required management plans undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the 2007 General Order.

Initial Liability

A failure to submit a Waste Management Plan is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Dischargers failed to submit a Waste Management Plan by the July 1, 2010 deadline as required by the General Order and the MRP. It is now 308 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit a Waste Management Plan addressing the management of waste in the production area does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Dischargers receive a single economic benefit in cost saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 14 days of violation. This yields an initial liability of $ 4,200 (0.3 per day factor X 14 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Dischargers were given the neutral score of 1, which neither increases nor decreases the fine.

The Dischargers are fully responsible for failure to submit a Waste Management Plan alleged in this Complaint. The requirement to develop and submit a Waste Management Plan was detailed in the 2007 General Order. Further, the amended Order gave Dischargers an extra calendar year to develop and submit the Plan. Dischargers were issued a Notice of Violation on 2 September 2010, which requested that the Plan be submitted as soon as possible to minimize liability. Since that time, the Dischargers have failed to show any progress toward developing a Plan, and are therefore highly culpable for their failure to comply with the program.
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b) *Cleanup and Cooperation*: 1

Discussion: The Dischargers were given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Dischargers received multiple notices regarding the requirements set forth in the General Order, the Dischargers continue to fail to comply. The violation of CWC section 13268, alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Dischargers was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Dischargers with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a.Total Base Liability Amount: **$4,200** (Initial Liability ($4,200) x Adjustments (1)(1(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

4. Violation No.4 (Failure to comply with requirements of 13267 Directive): On 22 June 2010 the Dischargers were issued a Groundwater Monitoring Directive, issued pursuant to California Water Code Section 13267 (13267 Directive). This Directive was issued because the facility was identified as a dairy where installation of monitoring wells was appropriate because they did not submit a Statement of Completion certifying

that a Nutrient Management Plan had been completed. Under the 13267 Directive, the Dischargers were directed to submit a Monitoring Well Installation and Monitoring Plan (MWISP) by 30 September 2010. To date, the Dischargers have failed to submit a MWISP, which is 217 days past due.

Calculation of Penalty for Failure to comply with 13267 Directive

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit a MWISP is not in itself a threat to water quality. The deviation from requirements was determined to be major, as the requirement to develop a MWISP has been rendered ineffective. The failure to conduct additional groundwater monitoring to determine the status of pollution in areas surrounding dairy facilities undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the 2007 General Order.

Initial Liability

A failure to submit a MWISP is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Dischargers failed to submit a MWISP by the 30 September 2010 deadline as required by the 22 June 2010 13267 Directive. It is now 217 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit a MWISP does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Dischargers receive a single economic benefit in cost saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 11 days of violation. This yields an initial liability of $ 3,300 (0.3 per day factor X 11 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Dischargers were given the neutral score of 1, which neither increases nor decreases the fine.

The Dischargers are fully responsible for failure to submit a MWISP as alleged in this Complaint. The requirement to develop and submit the MWISP was detailed in the 13267 Directive issued to the Dischargers on 22 June 2010. The Dischargers have failed to show any progress toward developing a Plan, and are therefore highly culpable for their failure to comply with the program.
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b) *Cleanup and Cooperation*: 1

Discussion: The Dischargers were given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Dischargers received notice regarding the requirements to comply with the 13267 Directive, the Dischargers continue to fail to comply. The violation of CWC section 13268, alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Dischargers was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Dischargers with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a. Total Base Liability Amount: **$3,300** (Initial Liability ($3,300) x Adjustments (1)(1)(1).

<u>COMBINED TOTAL BASE LIABLITY AND FACTORS APPLIED TO ALL VIOLATIONS</u>

The Combined Total Base Liability Amount for the four Violations is $19,500 ($7,800 + $4,200 + $4,200 + $3,300).

The following factors apply to the combined Total Base Liability Amounts for all of the violations discussed above.

Step 6. Ability to Pay and Continue in Business

a) *Adjusted Combined Total Base Liability Amount:* ***$19,500***

Discussion: The Dischargers have the ability to pay the total base liability amount based on 1) the Dischargers own the dairy, a significant asset, 2) the Dischargers operate a dairy, an ongoing business that generates profits.

Based on the reasons discussed above, an ability to pay factor of 1 has been applied to the Combined Total Base Liability Amount.

Step 7. Other Factors as Justice May Require

a) *Adjusted Combined Total Base Liability Amount:* $19,500 + $1,800 (Staff Costs) = **$21,300.**

b) *Discussion:* The State and Regional Water Board has incurred $1,800 in staff costs associated with the investigation and enforcement of the violations alleged herein. This represents approximately 12 hours of staff time devoted to investigating and drafting the complaint at $150 an hour. In accordance with the Enforcement Policy, this amount is added to the Combined Total Base Liability Amount. A further adjustment of the combined total based liability amount may be made if the Dischargers submit a complete 2008 Annual Report, a complete 2009 Annual Report, a complete Waste Management Plan, and a complete MWISP by 20 June 2011. The amount of the combined total based liability amount may be reduced by $2000 for each completed report that is submitted to the Central Valley Water Board by 20 June 2011. This reduction in the combined total base liability amount by $2000 for each completed report accounts for enforcement efficiencies gained by the Dischargers submitting the completed report or reports.

Step 8. Economic Benefit

a) *Estimated Economic Benefit:* **$12,500**

Discussion: The Dischargers has received an economic benefit from the costs saved in not drafting and preparing the annual report and the Waste Management Plan. This is based on the current consulting costs of producing two annual reports ($2,500 each), employing a certified engineer to conduct a site inspection and produce a Waste Management Plan ($5,0003), and employing a licensed professional to prepare a MWISP ($2,500). The adjusted total base liability amount of $19,500 is more than at least 10% higher than the economic benefit amount ($12,500) as required by the enforcement policy.

Step 9. Maximum and Minimum Liability Amounts

a) *Minimum Liability Amount:* ***$ 13,750***

Discussion: The Enforcement Policy requires that the minimum liability amount imposed not be below the economic benefit plus ten percent. As discussed above, the Regional Water Board Prosecution Team's estimate of the Dischargers's economic benefit obtained from the violations cited in this Complaint is $12,500**.**

b) *Maximum Liability Amount:* ***$1,506,000***

Discussion: The maximum administrative liability amount is the maximum amount allowed by Water Code Section 13367(b)(1): one thousand dollars ($1,000) for each day in which the violation occurs. Without the benefit of the alternative approach for calculating liability for multiday violations under the Enforcement Policy, the Dischargers could face penalties for the total number of days in violation (1506 total days X $1,000 per day).

The proposed liability falls within these maximum and minimum liability amounts.

Step 10. Final Liability Amount

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount proposed for the failure to submit the 2008 and 2009 Annual Reports, the Waste Management Plan, and the MWISP is **$21,300.** Attachment B is a spreadsheet that demonstrates the use of the penalty calculation methodology.

Penalty Calculation Methodology Worksheet - Version Date: 6/24/2010
Password for Workbook Protection: **enforcement**

Instructions
1. Select Potential Harm for Discharge Violations
2. Select Characteristics of the Discharge
3. Select Susceptibility to Cleanup or Abatement
4. Select Deviation from Standards
5. Click "Determine Harm & per Gallon/Day"
6. Enter Values into the Yellow Highlighted Fields

Select Item	Potential Harm for Discharge Violations	Select Item	Potential Harm for Discharge Violations	Select Item	
Select Item	Characteristics of the Discharge	Select Item	Characteristics of the Discharge	Select Item	
Select Item	Susceptibility of Cleanup or Abatement	Select Item	Susceptibility of Cleanup or Abatement	Select Item	
Select Item	Deviation from Requirement	Select Item	Deviation from Requirement	Select Item	

Discharger Name/ID: JAB Dairy/ 5B50NC00145

ATTACHMENT B

			Violation 1		Violation 2		
Discharge Violations	Step 1	Potential Harm Factor (Generated from Button)					
	Step 2	Per Gallon Factor (Generated from Button)					
		Gallons					
		Statutory / Adjusted Max per Gallon ($)					
		Total		$ -		$ -	
		Per Day Factor (Generated from Button)	0		0		0
		Days					
		Statutory Max per Day					
		Total		$ -		$ -	
Non-Discharge Violations	Step 3	Per Day Factor	0.3		0.3		0.3
		Days	28		16		16
		Statutory Max per Day	$ 1,000		$ 1,000		$ 1,000
		Total		$ 8,400.00		$ 4,800.00	
	Initial Amount of the ACL			$ 8,400.00		$ 4,800.00	
Add'l Factors	Step 4	Culpability	1	$ 8,400.00	1	$ 4,800.00	1
		Cleanup and Cooperation	1	$ 8,400.00	1	$ 4,800.00	1
		History of Violations	1	$ 8,400.00	1	$ 4,800.00	1
	Step 5	Total Base Liability Amount		$ 21,900.00			
	Step 6	Ability to Pay & to Continue in Business	1	$ 21,900.00			
	Step 7	Other Factors as Justice May Require	1	$ 21,900.00			
		Staff Costs*	$ 1,800	$ 23,700.00			
	Step 8	Economic Benefit	$ 12,500	$ 23,700.00			
	Step 9	Minimum Liability Amount	13,750				
		Maximum Liability Amount	$ 1,506,000				
	Step 10	Final Liability Amount		$ 23,700.00			

Penalty Day Range Generator

Start Date of Violation= 10/1/10
End Date of Violation= 5/5/11

Maximum Days Fined (Steps 2 & 3) = 217 Days
Minimum Days Fined (Steps 2 & 3) = 13 Days

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ADMINISTRATIVE CIVIL LIABILITY ORDER R5-2011-XXXX

IN THE MATTER OF

BARRY, ARNOLD, AND CLARA VAN LEEUWEN
(A&C VAN LEEUWEN FAMILY TRUST)
JAB DAIRY
STANISLAUS COUNTY

This Order is issued to Barry, Arnold, and Clara Van Leeuwen (A&C Van Leeuwen Family Trust)(hereafter Discharger) pursuant to California Water Code (CWC) section 13268, which authorizes the imposition of Administrative Civil Liability. This Order is based on findings that the Discharger violated provisions of Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order).

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) finds the following:

1. The Discharger owns and operates the JAB Dairy (Dairy) located at 9848 Milnes Road, Modesto, Stanislaus County.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. CWC section 13267 authorizes the Regional Water Boards to require the submittal of technical and monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge to waters of the state.

4. The General Order and the MRP required the Discharger to submit the 2008 Annual Report by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

5. The General Order and the MRP required the Discharger to submit the 2009 Annual Report by 1 July 2010 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

6. The General Order and MRP required the Discharger to submit a Waste Management Plan by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267. However, the General Order was amended by Order No. R5-2009-0029 to extend the deadline to submit the Waste Management Plan to 1 July 2010 in order to give enrollees additional time to submit this plan.

7. The General Order and 22 June 2010 13267 Order issued to the Discharger by the Executive Officer directed the Discharger to submit an acceptable groundwater monitoring well installation and sampling plan (MWISP) to the Central Valley Water Board by 30 September 2010.

8. The Discharger violated CWC section 13267 by failing to submit the 2008 Annual Report required by the General Order and MRP by the required deadline of 1 July 2009.

9. The Discharger violated CWC section 13267 by failing to submit the 2009 Annual Report and Waste Management Plan required by the General Order and MRP by the required deadline of 1 July 2010.

10. The Discharger violated CWC section 13267 by failing to submit the MWISP required by the General Order and 22 June 2010 13267 Order by the required deadline of 20 September 2010.

11. The Central Valley Water Board staff issued Notices of Violation for the 2008 Annual Report on 27 July 2009 and for the 2009 Annual Report and Waste Management Plan on 2 September 2010 for the delinquent reports stating they had not been received and requested that they be submitting as soon as possible.

12. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0543 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $23,700 pursuant to CWC section 13268 for the failure to submit the 2008 Annual Report, the 2009 Annual Report, the Waste Management Plan, and the MWISP.

13. A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Rancho Cordova on 20 July 2011. The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $23,700.

14. Upon considering the Hearing Panel's report and making an independent review of the record, the Central Valley Water Board during its meeting on XX October 2011 adopted the findings of the Hearing Panel's report as its own and upheld the imposition of the Hearing Panel's proposed administrative civil liability on the Discharger. Therefore, the Central Valley Water Board has determined that civil liability should be imposed upon the Discharger in the amount of $23,700.

15. Issuance of this Administrative Civil Liability Order to enforce CWC Division 7, Chapter 5.5 is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).

16. This Order is effective and final upon issuance by the Central Valley Water Board. Payment must be received by the Central Valley Water Board no later than thirty (30) days from the date on which this Order is issued.

17. In the event that the Discharger fails to comply with the requirements of this Order, the Executive Officer or her delegee is authorized to refer this matter to the Attorney General's Office for enforcement.

18. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IT IS HEREBY ORDERED that pursuant to section 13323 of the CWC, the Discharger shall make a cash payment of $23,700 (check payable to the State Water Pollution Cleanup and Abatement Account) no later than thirty days from the date of issuance of this Order. I, Pamela C. Creedon, Executive Officer, do hereby certify that the foregoing is a full, true, correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, and that such action occurred on 13 October 2011.

_____
Pamela C. Creedon, Executive Officer

ITEM: 13

SUBJECT: Leno Bettencourt, Bettencourt & Sons Dairy, Stanislaus County

BOARD ACTION: *Consideration of Issuance of Administrative Civil Liability Order*

BACKGROUND: Bettencourt & Sons Dairy (Discharger) operates a dairy under the Existing Milk Cow Dairy General Order No. R5-2007-0035. A $16,800 Administrative Civil Liability Complaint was issued against the Discharger for failure to submit documents required by the General Order.

A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Rancho Cordova on 20 July 2011. Additional evidence, testimony and policy statements will not be accepted at the October 2011 hearing, unless allowed by the Board Chair.

Attached is a report by the Hearing Panel on this case that provides the findings and recommendations of the Hearing Panel.

The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $16,800.

A proposed Administrative Civil Liability Order implementing the Hearing Panel's recommendation is attached for consideration of adoption. The Board may adopt the Order in the recommended amount, modify the amount, or decide that imposition of administrative civil liability is not warranted.

Documents for the 20 July 2011 Panel Hearing may be found at: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1107/index.shtml

RECOMMENDATION: Review the Hearing Panel Report and consider adoption of the proposed Administrative Civil Liability Order.

Mgmt. Review_____
Legal Review___AM_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Leno Bettencourt
Bettencourt & Sons Dairy
ACL Complaint No. R5-2011-0551

HEARING PANEL REPORT AND PROPOSED ORDER

This matter was heard on 20 July 2011 in Rancho Cordova, California before a Hearing Panel consisting of Central Valley Regional Water Quality Control Board (Central Valley Water Board) Members Kate Hart, Karl Longley, and Dan Odenweller. Alex Mayer and Ken Landau were Hearing Panel Advisors. Leno Bennecourt (Discharger) did not make an appearance. Clay Rodgers and Doug Patteson appeared for the Prosecution Team.

The Hearing Panel makes the following determinations:

FINDINGS OF FACT

1. The Discharger owns and operates the Bettencourt and Sons Dairy located at 5731 Downie Road, Denair, Stanislaus County.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. The General Order and the MRP required that an Annual Report for the calendar year 2009 be submitted for regulated facilities by 1 July 2010 (2009 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with facility modifications implemented to date; and a status on facility retrofitting completed as proposed in the Nutrient Management Plan submittal that was due 1 July 2009.

4. The General Order required regulated facilities to submit a Waste Management Plan (WMP) by 1 July 2009. The General Order was amended by Order R5-2009-0029 to modify the compliance schedule, extending the deadline to submit the WMP to 1 July 2010 in order to give regulated parties additional time to come in to compliance. The WMP is required to have the following components: a retrofitting plan, with schedule, needed to improve storage capacity, flood protection, or design of production area; maps of the production area and land application area; a wastewater storage capacity evaluation; a flood protection evaluation; a production area design/construction evaluation; and documentation that there are no cross connections.

5. Under the MRP, the Executive Officer has authority pursuant to California Water Code section 13267 to order the installation of monitoring wells based on the threat that an individual dairy or dairies pose to water quality. On 4 February 2010, the Executive Officer issued a California Water Code section 13267 Order (13267 Order) to the Discharger that directed the Discharger to install groundwater monitoring wells, and to implement groundwater monitoring at the

Dairy. Specifically, the 13267 Order directed the Discharger to submit an acceptable groundwater monitoring well installation and sampling plan (MWISP) to the Central Valley Water Board by 30 April 2010.

6. On 2 September 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2009 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

7. On 2 September 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the Waste Management Plan with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

8. Central Valley Water Board's compliance tracking system and case files indicate that the Board has not received the 2009 Annual Report, Waste Management Plan, or MWISP.

9. California Water Code section (CWC) 13268(a)(1) states that "Any person failing or refusing to furnish technical or monitoring reports as required by subdivision (b) of Section 13267...is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b)."

10. CWC section 13268(b)(1) states that "Civil Liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violations occurs."

11. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0551 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $16,800 pursuant to CWC section 13268 for the failure to submit the 2009 Annual Report, Waste Management Plan, and MWISP as required by the General Order and 13267 Order.

12. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2009 Annual Report by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

13. The Discharger violated the requirements of the General Order and MRP by failing to submit a Waste Management Plan by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

14. The discharger failed to submit a MWISP by 30 April 2010. As of the date of the Complaint this plan was 370 days late.

15. On 17 November 2009 the State Water Resources Control Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy establishes a methodology for assessing discretionary administrative civil liability. Use of the methodology addresses the factors used to assess a penalty under CWC section 13327 including the Discharger's culpability, history of violations, ability to pay and continue in business, economic benefit, and other factors as justice may require. The required factors under CWC section 13327 have been considered using the methodology in the Enforcement Policy as explained in detail in Attachment A and shown in the Penalty Calculation for Civil Liability spreadsheet in Attachment B. Attachments A and B are attached hereto and incorporated herein by reference.

16. In general, violations of CWC section 13267 are assessed on a per day basis. Under the Enforcement Policy, an alternate approach to the penalty calculation for multiple day violations may be used if the regional board makes express findings that the violations do not cause daily detrimental impacts to the environment, result in no daily economic benefit that can be measured on a daily basis or occurred without the knowledge or control of the violator. Here the failure to submit the required reports does not cause a daily detrimental impact to the environment and does not result in an economic benefit that can be measured on a daily basis, so the alternative approach is appropriate. Under this alternate approach, daily penalties are assessed for the first day of violation, plus one day for each 5-day period of violation until the 30th day, plus a one-day assessment for each additional thirty-day period of violation. In accordance with the alternative approach, a total of 16 days each of violation have been assessed for the failure to submit the 2009 Annual Report and Waste Management Plan, and a total of 18 days of violation have been assessed for the failure to submit a MWISP.

17. On considering the written record and evidence presented at the hearing, the Hearing Panel determined that $16,800 should be imposed on the Discharger pursuant to CWC section 13268 for violations of CWC section 13267.

CONCLUSIONS OF LAW

1. The failure to submit the 2009 Annual Report constitutes a violation of CWC section 13267.

2. The failure to submit the Waste Management Plan constitutes a violation of CWC section 13267.

3. The failure to submit a MWISP in response to the 4 February 2010 13267 Order constitutes a violation of CWC section 13267.

4. Pursuant to CWC section 13268, the Central Valley Water Board may impose administrative civil liability up to $1,000 for each day of violation.

5. The total maximum amount of administrative civil liability assessable for the violations alleged in Complaint No. R5-2011-0551 pursuant to CWC section 13268 is $986,000.

RECOMMENDED ADMINISTRATIVE CIVIL LIABILITY AMOUNT

The Hearing Panel recommends that the Central Valley Regional Board impose administrative civil liability in the amount of $16,800 on the Discharger for violations found herein to have been committed by the Discharger. A proposed ACL Order is attached.

Katherine Hart
Hearing Panel Chair

Aug 16, 2011
Date

Attachment A Enforcement Policy methodology
Attachment B Penalty Calculation for Civil Liability spreadsheet
Proposed Administrative Civil Liability Order R5-2011-XXXX

Attachment A
Hearing Panel Report for ACL Complaint No. R5 –2011- 0551
Specific Factors Considered – Civil Liability
Bettencourt & Sons Dairy

Each factor of the Enforcement Policy and its corresponding score for each violation are presented below:

1. **Violation No. 1 (Failure to submit 2009 Annual Report):** In accordance with Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035, an Annual Report must be submitted for regulated facilities by 1 July 2010. To date, Leno Bettencourt (Discharger) has not submitted this report for the Bettencourt & Sons Dairy.

<u>Calculation of Penalty for Failure to Submit 2009 Annual Report</u>

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2009 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the 2007 General Order.

Initial Liability

A failure to submit annual reports is punishable under CWC 13268(a)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The discharger failed to submit an annual report for 2009 on July 1, 2010 as required by the General Order and the Monitoring and Reporting Program (MRP), which is now 308 days late.
However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it

does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Discharger only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. A calculation of initial liability totals $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit a 2009 Annual Report and associated documents were detailed in the General Order. Further, the Discharger was issued a Notice of Violation on 2 September 2010, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to submit the 2009 Annual Report or any of the associated documents, and is therefore highly culpable for failure to comply with the program.
.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, including notice through the General Order and an NOV, the Discharger continues to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a) *Total Base Liability Amount:* **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

2. **Violation No. 2 (Failure to submit a Waste Management Plan):** In accordance with the General Order and Order R5-2009-0029, a Waste Management Plan for regulated facilities must be submitted by 1 July 2010. To date, the Discharger has not submitted this Plan for the Dairy.

Calculation of Penalty for Failure to Submit a Waste Management Plan

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit a Waste Management Plan does not itself threaten water quality. The deviation from requirements was determined to be major, as the requirement to develop a Waste Management Plan for the operational portions of the Dairy facility has been rendered ineffective. The failure to submit the required Waste Management Plan undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit a Waste Management Plan is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit a Waste Management Plan by the July 1, 2010 deadline as required by the General Order which is now 308 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit a Waste Management Plan addressing the management of waste does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Discharger receives a single economic benefit in cost saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. This yields an initial liability of $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit a Waste Management Plan alleged in this Complaint. The requirement to develop and submit a Waste Management Plan was detailed in the General Order. Further, the amended Order gave dischargers and extra calendar year to develop and submit the Plan. The Discharger was issued a Notice of Violation on 2 September 2010, which requested that the Plan be submitted as soon as possible to minimize liability. Since that time, the Discharger has failed to show any progress toward developing a Plan, and is therefore highly culpable for failure to comply with the program.
.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC section 13268, alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a. Total Base Liability Amount: **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

3. Violation No. 3 (Failure to comply with requirements of 13267 Directive): On 29 January 2010 the Discharger was issued a Groundwater Monitoring Directive, issued pursuant to California Water Code Section 13267 (13267 Directive). This Directive was

issued because the facility was identified as a dairy where installation of monitoring wells was appropriate based on the factors listed in the MRP. Under the 13267 Directive, the Discharger was directed to submit an acceptable Monitoring Well Installation and Sampling Plan (MWISP) by 30 April 2010. To date, the Discharger has not submitted an MWISP for the Dairy.

Calculation of Penalty for Failure to Submit MWISP

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit an MWISP is not in itself a threat to water quality. The deviation from requirements was determined to be major, as the requirement to develop an MWISP for the Dairy has been rendered ineffective. The failure to submit the required MWISP undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the General Order.

Initial Liability

A failure to submit an MWISP is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The Discharger failed to submit an MWISP by the 30 April 2010 deadline as required by the 29 January 2010 13267 Directive, which is now 370 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit an MWISP does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Discharger receives a single economic benefit in cost saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 18 days of violation. This yields an initial liability of $5,400 (0.3 per day factor X 18 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit the MWISP as alleged in this Complaint. The requirement to develop and submit the MWISP was detailed in the 13267 Directive issued to the Discharger on 29 January 2010. Since that time, the Discharger has failed to show any progress toward developing an MWISP, and is therefore highly culpable for failure to comply with the program.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, including notice through the MRP, the 13267 Directive, and an NOV, the Discharger continues to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a. Total Base Liability Amount: **$5,400** (Initial Liability ($5,400) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

COMBINED TOTAL BASE LIABLITY AND FACTORS APPLIED TO ALL VIOLATIONS

The Combined Total Base Liability Amount for the three Violations is $15,000 ($4,800 + $4,800 + $5,400).

The following factors apply to the combined Total Base Liability Amounts for all of the violations discussed above.

Step 6. Ability to Pay and Continue in Business

a) *Adjusted Combined Total Base Liability Amount:* ***$15,000***

Discussion: The Discharger has the ability to pay the total base liability amount based on 1) the Discharger owns the Dairy, a significant asset, 2) the Discharger operates a dairy, an ongoing business that generates profits.

Based on the reasons discussed above, an ability to pay factor of 1 has been applied to the Combined Total Base Liability Amount.

Step 7. Other Factors as Justice May Require

a) *Adjusted Combined Total Base Liability Amount:* $15,000 + $1,800 (Staff Costs) = **$16,800.**

b) *Discussion:* The State and Regional Water Board has incurred $1,800 in staff costs associated with the investigation and enforcement of the violations alleged herein. This represents approximately 12 hours of staff time devoted to investigating and drafting the complaint at $150 an hour. In accordance with the Enforcement Policy, this amount is added to the Combined Total Base Liability Amount. A further adjustment of the combined total based liability amount may be made if the Discharger submits a complete 2009 Annual report, a complete Waste Management Plan, and/or a complete MWISP by20 June 2011. The amount of the combined total based liability amount may be reduced by $2000 for each completed report that is submitted to the Central Valley Water Board by 20 June 2011. This reduction in the combined total base liability amount by $2000 for each completed report accounts for enforcement efficiencies gained by the Discharger submitting the completed report or reports.

Step 8. Economic Benefit

a) *Estimated Economic Benefit:* **$10,000**

Discussion: The Discharger has received an economic benefit from the costs saved in not drafting and preparing the 2009 Annual Report, the Waste Management Plan, and the MWISP. This is based on the current consulting costs of producing an Annual Report and an MWISP ($2,500 each) and employing a certified engineer to conduct a site inspection and produce a Waste Management Plan ($5,000). The adjusted total base liability amount of $16,800 is more than at least 10% higher than the economic benefit amount ($10,000) as required by the enforcement policy.

Step 9. Maximum and Minimum Liability Amounts

a) *Minimum Liability Amount:* ***$ 11,000***

Discussion: The Enforcement Policy requires that the minimum liability amount imposed not be below the economic benefit plus ten percent. As discussed above, the

Regional Water Board Prosecution Team's estimate of the Discharger's economic benefit obtained from the violations cited in this Complaint is $10,000**.**

b) *Maximum Liability Amount:* ***$986,000***

Discussion: The maximum administrative liability amount is the maximum amount allowed by Water Code Section 13367(b)(1): one thousand dollars ($1,000) for each day in which the violation occurs. Without the benefit of the alternative approach for calculating liability for multiday violations under the Enforcement Policy, the Discharger could face penalties for the total number of days in violation (986 total days X $1,000 per day).

The proposed liability falls within these maximum and minimum liability amounts.

Step 10. Final Liability Amount

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount proposed for the failure to submit the 2009 Annual Report, the Waste Management Plan, and the MWISP is **$16,800**. Attachment B is a spreadsheet that demonstrates the use of the penalty calculation methodology.

Penalty Calculation Methodology Worksheet - Version Date: 6/24/2010
Password for Workbook Protection: **enforcement**

Instructions
1. Select Potential Harm for Discharge Violations
2. Select Characteristics of the Discharge
3. Select Susceptibility to Cleanup or Abatement
4. Select Deviation from Standard
5. Click Determine Harm & per Gallon/Day
6. Enter Values into the Yellow Highlighted Fields

Select Item	Potential Harm for Discharge Violations	Select Item	Potential Harm for Discharge Violations	Select Item
Select Item	Characteristics of the Discharge	Select Item	Characteristics of the Discharge	Select Item
Select Item	Susceptibility of Cleanup or Abatement	Select Item	Susceptibility of Cleanup or Abatement	Select Item
Select Item	Deviation from Requirement	Select Item	Deviation from Requirement	Select Item

Discharger Name/ID: Bettencourt & Sons Dairy/5B50NC00064

ATTACHMENT B

			Violation 1		Violation 2		
Discharge Violations	Step 1	Potential Harm Factor (Generated from Button)					
	Step 2	Per Gallon Factor (Generated from Button)					
		Gallons					
		Statutory / Adjusted Max per Gallon ($)					
		Total		$ -		$ -	
		Per Day Factor (Generated from Button)	0		0		0
		Days					
		Statutory Max per Day					
		Total		$ -		$ -	
Non-Discharge Violations	Step 3	Per Day Factor	0.3		0.3		0.3
		Days	16		16		18
		Statutory Max per Day	$ 1,000		$ 1,000		$ 1,000
		Total		$ 4,800.00		$ 4,800.00	
	Initial Amount of the ACL			$ 4,800.00		$ 4,800.00	
Add'l Factors	Step 4	Culpability	1	$ 4,800.00	1	$ 4,800.00	1
		Cleanup and Cooperation	1	$ 4,800.00	1	$ 4,800.00	1
		History of Violations	1	$ 4,800.00	1	$ 4,800.00	1
	Step 5	Total Base Liability Amount		$ 15,000.00			
	Step 6	Ability to Pay & to Continue in Business	1	$ 15,000.00			
	Step 7	Other Factors as Justice May Require	1	$ 15,000.00			
		Staff Costs*	$ 1,800	$ 16,800.00			
	Step 8	Economic Benefit	$ 10,000	$ 16,800.00			
	Step 9	Minimum Liability Amount	$ 11,000				
		Maximum Liability Amount	$ 986,000				
	Step 10	Final Liability Amount		$ 16,800.00			

Penalty Day Range Generator

Start Date of Violation= 7/2/10
End Date of Violation= 5/5/11

Maximum Days Fined (Steps 2 & 3) = 308 Days
Minimum Days Fined (Steps 2 & 3) = 16 Days

Potential Harm for Discharge Violations	Select Item	Potential Harm for Discharge Violations	Select Item	Potential Harm for Discharge Violations	Select Item	Potential Harm for Discharge Violations	Select Item
Characteristics of the Discharge	Select Item	Characteristics of the Discharge	Select Item	Characteristics of the Discharge	Select Item	Characteristics of the Discharge	Select Item
Susceptibility to Cleanup or Abatement	Select Item	Susceptibility to Cleanup or Abatement	Select Item	Susceptibility to Cleanup or Abatement	Select Item	Susceptibility to Cleanup or Abatement	Select Item
Deviation from Requirement	Select Item	Deviation from Requirement	Select Item	Deviation from Requirement	Select Item	Deviation from Requirement	Select Item

Violation 3	Violation 4	Violation 5	Violation 6
$ -	$ -	$ -	$ -
$ -		$ -	$ -
$ 5,400.00	$ -	$ -	$ -
$ 5,400.00	$ -	$ -	$ -
$ 5,400.00	$ -	$ -	$ -
$ 5,400.00	$ -	$ -	$ -
$ 5,400.00	$ -	$ -	$ -

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ADMINISTRATIVE CIVIL LIABILITY ORDER R5-2011-XXXX

IN THE MATTER OF

LENO BETTENCOURT
BETTENCOURT & SONS DAIRY
STANISLAUS COUNTY

This Order is issued to Leno Bettencourt (hereinafter Discharger) pursuant to California Water Code (CWC) section 13268, which authorizes the imposition of Administrative Civil Liability. This Order is based on findings that the Discharger violated provisions of Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order).

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) finds the following:

1. The Discharger owns and operates the Bettencourt and Sons Dairy located at 5731 Downie Road, Denair, Stanislaus County.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. CWC section 13267 authorizes the Regional Water Boards to require the submittal of technical and monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge to waters of the state.

4. The General Order and the MRP required the Discharger to submit the 2009 Annual Report by 1 July 2010 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

5. The General Order and MRP required the Discharger to submit a Waste Management Plan by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267. However, the General Order was amended by Order No. R5-2009-0029 to extend the deadline to submit the Waste Management Plan to 1 July 2010 in order to give enrollees additional time to submit this plan.

6. Under the MRP, the Executive Officer has authority pursuant to California Water Code section 13267 to order the installation of monitoring wells based on the threat that an individual dairy or dairies pose to water quality. Specifically, a 13267 Order directs the Discharger to submit an acceptable groundwater

monitoring well installation and sampling plan (MWISP) to the Central Valley Water Board. The due date for the MWISP depends upon the date of issuance of a 13267 order from the Central Valley Water board Executive Officer. On On 4 February 2010, the Executive Officer issued a California Water Code section 13267 Order (13267 Order) to the Discharger that directed the Discharger to install groundwater monitoring wells, and to implement groundwater monitoring at the Dairy. Specifically, the 13267 Order directed the Discharger to submit an acceptable groundwater monitoring well installation and sampling plan (MWISP) to the Central Valley Water Board by 30 April 2010.

7. The Discharger violated CWC section 13267 by failing to submit the 2009 Annual Report, Waste Management Plan required by the General Order and Monitoring and Reporting Program by the required deadline of 1 July 2010, and a failure to submit a an acceptable groundwater monitoring well installation and sampling plan (MWISP) to the Central Valley Water Board by 30 April 2010.

8. On 2 September 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2009 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability..

9. On 2 September 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the Waste Management Plan with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

10. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0551 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $16,800 pursuant to CWC section 13268 for the failure to submit the 2009 Annual Report , Waste Management Plan, and MWISP.

11. A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Rancho Cordova on 20 July 2011. The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $16,800.

12. Upon considering the Hearing Panel's report and making an independent review of the record, the Central Valley Water Board during its meeting on XX October 2011 adopted the findings of the Hearing Panel's report as its own and upheld the imposition of the Hearing Panel's proposed administrative civil liability on the Discharger. Therefore, the Central Valley Water Board has determined that civil liability should be imposed upon the Discharger in the amount of $16,800.

13. Issuance of this Administrative Civil Liability Order to enforce CWC Division 7, Chapter 5.5 is exempt from the provisions of the California Environmental Quality

Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).

14. This Order is effective and final upon issuance by the Central Valley Water Board. Payment must be received by the Central Valley Water Board no later than thirty (30) days from the date on which this Order is issued.

15. In the event that the Discharger fails to comply with the requirements of this Order, the Executive Officer or her delegee is authorized to refer this matter to the Attorney General's Office for enforcement.

16. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IT IS HEREBY ORDERED that pursuant to section 13323 of the CWC, the Discharger shall make a cash payment of $16,800 (check payable to the State Water Pollution Cleanup and Abatement Account) no later than thirty days from the date of issuance of this Order. I, Pamela C. Creedon, Executive Officer, do hereby certify that the foregoing is a full, true, correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, and that such action occurred on 13 October 2011.

_____
Pamela C. Creedon, Executive Officer

ITEM: 14

SUBJECT: Frank Pimentel, Fialho & Sons Dairy, San Joaquin County

BOARD ACTION: *Consideration of Issuance of Administrative Civil Liability Order*

BACKGROUND: Frank Pimentel (Discharger) operates the Fialho & Sons Dairy under the Existing Milk Cow Dairy General Order No. R5-2007-0035. A $11,400 Administrative Civil Liability Complaint was issued against the Discharger for failure to submit documents required by the General Order.

A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Rancho Cordova on 20 July 2011. Additional evidence, testimony and policy statements will not be accepted at the October 2011 hearing, unless allowed by the Board Chair.

Attached is a report by the Hearing Panel on this case that provides the findings and recommendations of the Hearing Panel.

The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $11,400.

A proposed Administrative Civil Liability Order implementing the Hearing Panel's recommendation is attached for consideration of adoption. The Board may adopt the Order in the recommended amount, modify the amount, or decide that imposition of administrative civil liability is not warranted.

Documents for the 20 July 2011 Panel Hearing may be found at: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1107/index.shtml

RECOMMENDATION: Review the Hearing Panel Report and consider adoption of the proposed Administrative Civil Liability Order.

Mgmt. Review_____
Legal Review____AM_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Frank Pimentel
Fialho & Sons Dairy
665 Valentine Court
Galt, CA 95632-3312
ACL Complaint No. R5-2011-0548

HEARING PANEL REPORT AND PROPOSED ORDER

This matter was heard on 20 July 2011, in Rancho Cordova, California before a panel consisting of Central Valley Regional Water Quality Control Board (Central Valley Water Board) Members Kate Hart, Karl Longley, and Dan Odenweller. Alex Mayer and Ken Landau were Hearing Panel Advisors. Frank Pimentel (Discharger) did not make an appearance. Clay Rodgers and Doug Patteson appeared for the Prosecution Team.

The Hearing Panel makes the following determinations:

FINDINGS OF FACT

1. The Discharger owns Fialho & Sons Dairy (Dairy) located at 13310 E. Kettleman Lane, Lodi, San Joaquin County.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. The General Order and the MRP required that an Annual Report for the calendar year 2009 be submitted for regulated facilities by 1 July 2010 (2009 Annual Report), including the following components: a revised Annual Dairy Facility Assessment, with facility modifications implemented to date; and a status on facility retrofitting completed as proposed in the Nutrient Management Plan submittal that was due 1 July 2009.

4. The General Order required regulated facilities to submit a Waste Management Plan (WMP) by 1 July 2009. The General Order was amended by Order R5-2009-0029 to modify the compliance schedule, extending the deadline to submit the WMP to 1 July 2010 in order to give regulated parties additional time to come in to compliance. The WMP is required to have the following components: a retrofitting plan, with schedule, needed to improve storage capacity, flood protection, or design of production area; maps of the production area and land application area; a wastewater storage capacity evaluation; a flood protection evaluation; a production area design/construction evaluation; and documentation that there are no cross connections.

5. On 16 August 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the 2009 Annual Report with appurtenant components had not been received. The Notice of Violation also requested that

the delinquent report be submitted as soon as possible to minimize potential liability.

6. On 2 September 2010, the Central Valley Water Board staff issued a Notice of Violation, notifying the Discharger that the Waste Management Plan with appurtenant components had not been received. The Notice of Violation also requested that the delinquent report be submitted as soon as possible to minimize potential liability.

7. Central Valley Water Board's compliance tracking system and case files indicate that the Board has not received the 2009 Annual Report or the Waste Management Plan.

8. California Water Code (CWC) section 13268(a)(1) states that "Any person failing or refusing to furnish technical or monitoring reports as required by subdivision (b) of Section 13267...is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b)."

9. CWC section 13268(b)(1) states that "Civil Liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violations occurs."

10. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0548 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $11,400 pursuant to CWC section 13268 for the failure to submit the 2009 Annual Report and Waste Management Plan as required by the General Order.

11. The ACL Complaint was originally issued to both Frank Pimentel, the property owners, and to Manuel Fialho, the operator of the property at the time the reports were due. The copy of the complaint mailed to Manuel Fialho was returned unclaimed. Subsequently, the Prosecution Team learned that Manuel Fialho filed for bankruptcy on 30 September 2010. The filing of bankruptcy and automatic stay of creditor claims by the federal bankruptcy court pre-dates assessment of penalties for violations cited in the Complaint. Because monetary penalties cannot be sought from Manuel Fialho without violating the stay of the court, Manuel Fialho has been removed as a party cited in the complaint.

12. The ACL Complaint mailed to Frank Pimentel was also returned unclaimed. Staff determined that the mailing address used was the most recent available for Frank Pimentel and arranged for service of the Complaint by a process service. The process service made three attempts to deliver the Complaint, on three separate days during the course of a week, at times varying from 8:39 am to 7:04 pm. None of the attempts were successful. An attempt to contact Frank Pimentel by phone on 3 June 2011 was unsuccessful as the phone had been

disconnected. The complaint was finally served to Frank Pimentel's daughter on 7 June 2011 on the fifth attempt by the process service.

13. The Discharger violated the requirements of the General Order and MRP by failing to submit the 2009 Annual Report by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

14. The Discharger violated the requirements of the General Order and MRP by failing to submit a Waste Management Plan by the required deadline of 1 July 2010. As of the date of the Complaint, the 2009 Annual Report was 308 days late.

15. On 17 November 2009 the State Water Resources Control Board adopted Resolution No. 2009-0083 amending the Water Quality Enforcement Policy (Enforcement Policy). The Enforcement Policy establishes a methodology for assessing discretionary administrative civil liability. Use of the methodology addresses the factors used to assess a penalty under CWC section 13327 including the Discharger's culpability, history of violations, ability to pay and continue in business, economic benefit, and other factors as justice may require. The required factors under CWC section 13327 have been considered using the methodology in the Enforcement Policy as explained in detail in Attachment A and shown in the Penalty Calculation for Civil Liability spreadsheet in Attachment B. Attachments A and B are attached hereto and incorporated herein by reference.

16. In general, violations of CWC section 13267 are assessed on a per day basis. Under the Enforcement Policy, an alternate approach to the penalty calculation for multiple day violations may be used if the regional board makes express findings that the violations do not cause daily detrimental impacts to the environment, result in no daily economic benefit that can be measured on a daily basis or occurred without the knowledge or control of the violator. Here the failure to submit the required reports does not cause a daily detrimental impact to the environment and does not result in an economic benefit that can be measured on a daily basis, so the alternative approach is appropriate. Under this alternate approach, daily penalties are assessed for the first day of violation, plus one day for each 5-day period of violation until the 30th day, plus a one-day assessment for each additional thirty-day period of violation. In accordance with the alternative approach, a total of 16 days of violation have been assessed for the failure to submit the 2009 Annual Report, and a total of 16 days of violation have been assessed for the failure to submit a Waste Management Plan.

17. On considering the written record and evidence presented at the hearing, the Hearing Panel determined that $11,400 should be imposed on the Discharger pursuant to CWC section 13268 for violations of CWC section 13267.

CONCLUSIONS OF LAW

1. The failure to submit the 2009 Annual Report constitutes a violation of CWC section 13267.

2. The failure to submit the Waste Management Plan constitutes a violation of CWC section 13267.

3. Pursuant to CWC section 13268, the Central Valley Water Board may impose administrative civil liability up to $1,000 for each day of violation.

4. The total maximum amount of administrative civil liability assessable for the violations alleged in Complaint No. R5-2011-0548 pursuant to CWC section 13268 is $616,000.

RECOMMENDED ADMINISTRATIVE CIVIL LIABILITY AMOUNT

The Hearing Panel recommends that the Central Valley Regional Board impose administrative civil liability in the amount of $11,400 on the Discharger for violations found herein to have been committed by the Discharger. A proposed Draft ACL Order is attached.

Katherine Hart
Hearing Panel Chair

Aug 16, 2011
Date

Attachment A Enforcement Policy methodology
Attachment B Penalty Calculation for Civil Liability spreadsheet
Proposed Administrative Civil Liability Order R5-2011-XXXX

Attachment A
ACL Complaint No. R5 –2011- 0548
Specific Factors Considered – Civil Liability
Fialho & Sons Dairy (Complaint)

Each factor of the Enforcement Policy and its corresponding score for each violation are presented below:

1. **Violation No. 1 (Failure to submit 2009 Annual Report):** In accordance with Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035, an Annual Report must be submitted for regulated facilities by 1 July 2010. To date, Frank Pimentel (Discharger) has not submitted this report for the Fialho & Sons Dairy.

Calculation of Penalty for Failure to Submit 2009 Annual Report

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to submit the 2009 Annual Report did not increase the amount of pollution discharged or threatened to discharge into Waters of the State. The deviation from requirements was determined to be major, as the requirement to submit technical reports has been rendered ineffective. The failure to submit the required technical reports undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the 2007 General Order.

Initial Liability

A failure to submit annual reports is punishable under CWC 13268(a)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The discharger failed to submit an annual report for 2009 on July 1, 2010 as required by the General Order and the MRP, which is now 308 days late.

However, the alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit required technical reports does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the

extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. Furthermore, the Discharger only receives an economic benefit by not submitting the required technical reports, and not a per-day benefit during the entire period of violation.

Applying the per-day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. A calculation of initial liability totals $4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

The Discharger is fully responsible for failure to submit annual reports alleged in this Complaint. The requirement to submit an Annual Report and associated documents were detailed in the 2007 General Order. Dischargers were issued a Notice of Violation on 2 September 2010, which requested that the report be submitted as soon as possible to minimize liability. Since that time, the Dischargers have failed to submit the 2009 annual report or any of the associated documents, and are therefore highly culpable for their failure to comply with the program.
.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, including notice through the General Order and an NOV, the Discharger continues to fail to comply. The violation of CWC section 13268(a), alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 2.

a) *Total Base Liability Amount:* **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

2. **Violation No. 2 (Failure to submit a Waste Management Plan):** In accordance with Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035, and amended Order R5-2009-0029, a Waste Management Plan for regulated facilities must be submitted by 1 July 2010. To date, Discharger has not submitted this Plan.

Calculation of Penalty for Failure to Submit a Waste Management Plan

Step1. Potential for Harm for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 2. Assessment for Discharge Violations
This step is not applicable because the violation is a not a discharge violation.

Step 3. Per Day Assessment for Non-Discharge Violations

The per day factor is 0.30.

This factor is determined by a matrix analysis using the potential for harm and the deviation from requirements. The potential for harm was determined to be minor due to the following: The failure to develop and submit a Waste Management Plan does not itself threaten water quality. The deviation from requirements was determined to be major, as the requirement to develop a Waste Management Plan for the operational portions of the dairy facility has been rendered ineffective. The failure to submit the required management plans undermines the Regional Board's efforts to prevent water quality degradation and implement the regulatory protection measures detailed in the 2007 General Order.

Initial Liability

A failure to submit a Waste Management Plan is punishable under CWC 13268(b)(1) by civil liability in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs. The discharger failed to submit a Waste Management Plan by the July 1, 2010 deadline as required by the General Order and the MRP. It is now 308 days late.

The alternative approach for calculating liability for multiday violations in the Enforcement Policy is applicable. The failure to submit a Waste Management Plan addressing the disposal of waste in the production area does not cause a daily detrimental impact to the environment or the regulatory program and it does not result in an economic benefit that can be measured on a daily basis. It is the extended time period of non-compliance that causes the detrimental impact to both the environment and the regulatory program. The Discharger receives a single economic benefit in cost

saved in not developing the report, and not a per-day benefit during the entire period of violation.

Applying the per day factor to the adjusted number of days of violation rounded to the nearest full day equals 16 days of violation. This yields an initial liability of $ 4,800 (0.3 per day factor X 16 adjusted days of violation X $1000 per day penalty).

Step 4. Adjustment Factors

a) *Culpability*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine.

Frank Pimentel (the Discharger), is fully responsible for failure to submit a Waste Management Plan alleged in this Complaint. The requirement to develop and submit a Waste Management Plan was detailed in the 2007 General Order. Further, the amended Order gave dischargers and extra calendar year to develop and submit the Plan. Dischargers were issued a Notice of Violation on 2 September 2010, which requested that the Plan be submitted as soon as possible to minimize liability. Since that time, the Dischargers have failed to show any progress toward developing a Plan, and are therefore highly culpable for their failure to comply with the program.
.

b) *Cleanup and Cooperation*: 1

Discussion: The Discharger was given the neutral score of 1, which neither increases nor decreases the fine. Despite the fact that the Discharger received multiple notices regarding the requirements set forth in the General Order, the Discharger continues to fail to comply. The violation of CWC section 13268, alleged herein, is a non-discharge violation, and thus cleanup is not applicable.

c) *History of Violations*: 1

Discussion: The Discharger was given the score of 1 which neither increases nor decreases the fine. The Regional Board has no documentation of violations for the Discharger with respect to the failure to submit technical and/or monitoring reports as required by an order issued pursuant to CWC section 13267(b).

Step 5. Determination of Total Base Liability Amount

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amount determined in Step 3.

a. Total Base Liability Amount: **$4,800** (Initial Liability ($4,800) x Adjustments (1)(1)(1).

Steps 6 through 10 Are Applied to the Combined Total Base Liability Amount for All Violations and Will be Discussed After the Total Base Liability Amounts Have Been Determined for the Remaining Violations.

COMBINED TOTAL BASE LIABLITY AND FACTORS APPLIED TO ALL VIOLATIONS

The Combined Total Base Liability Amount for the two Violations is $9,600 ($4,800 + $4,800).

The following factors apply to the combined Total Base Liability Amounts for all of the violations discussed above.

Step 6. Ability to Pay and Continue in Business

a) *Adjusted Combined Total Base Liability Amount:* ***$9,600***

Discussion: The Discharger has the ability to pay the total base liability amount based on 1) the Discharger owns the dairy, a significant asset, 2) the Discharger operates a dairy, an ongoing business that generates profits.

Based on the reasons discussed above, an ability to pay factor of 1 has been applied to the Combined Total Base Liability Amount.

Step 7. Other Factors as Justice May Require

a) *Adjusted Combined Total Base Liability Amount:* $9,600+ $1,800 (Staff Costs) = **$11,400.**

b) *Discussion:* The State and Regional Water Board has incurred $1,800 in staff costs associated with the investigation and enforcement of the violations alleged herein. This represents approximately 12 hours of staff time devoted to investigating and drafting the complaint at $150 an hour. In accordance with the Enforcement Policy, this amount is added to the Combined Total Base Liability Amount. A further adjustment of the combined total based liability amount may be made if the discharger submits a complete 2009 Annual report and a complete Waste Management Plan by 20 June 2011. The amount of the combined total based liability amount may be reduced by $2000 for each completed report that is submitted to the Central Valley Water Board by 20 June 2011. This reduction in the combined total base liability amount by $2000 for each completed report accounts for enforcement efficiencies gained by the discharger submitting the completed report or reports.

Step 8. Economic Benefit

a) *Estimated Economic Benefit:* **$7,500**

Discussion: The Discharger has received an economic benefit from the costs saved in not drafting and preparing the 2009 Annual Report and the Waste Management Plan. This is based on the current consulting costs of producing one annual reports ($2,500

each), employing a certified engineer to conduct a site inspection and produce a Waste Management Plan ($5,000), and employing a licensed professional to prepare a MWISP ($2,500). The adjusted total base liability amount of $15,000 is more than at least 10% higher than the economic benefit amount ($10,000) as required by the enforcement policy.

Step 9. Maximum and Minimum Liability Amounts

a) *Minimum Liability Amount:* ***$ 8,250***

Discussion: The Enforcement Policy requires that the minimum liability amount imposed not be below the economic benefit plus ten percent. As discussed above, the Regional Water Board Prosecution Team's estimate of the Discharger's economic benefit obtained from the violations cited in this Complaint is $ 7,500**.**

b) *Maximum Liability Amount:* ***$616,000***

Discussion: The maximum administrative liability amount is the maximum amount allowed by Water Code Section 13367(b)(1): one thousand dollars ($1,000) for each day in which the violation occurs. Without the benefit of the alternative approach for calculating liability for multiday violations under the Enforcement Policy, the Discharger could face penalties for the total number of days in violation (616 total days X $1,000 per day).

The proposed liability falls within these maximum and minimum liability amounts.

Step 10. Final Liability Amount

Based on the foregoing analysis, and consistent with the Enforcement Policy, the final liability amount proposed for the failure to submit the 2009 Annual Report and the Waste Management Plan is **$11,400.** Attachment B is a spreadsheet that demonstrates the use of the penalty calculation methodology.

Penalty Calculation Methodology Worksheet - Version Date: 6/24/2010
Password for Workbook Protection: enforcement

Instructions

1. Select Potential Harm for Discharge Violations
2. Select Characteristics of the Discharge
3. Select Susceptibility to Cleanup or Abatement
4. Select Deviation from Standard
5. Click "Determine Harm & per Gallon/Day..."
6. Enter Values into the Yellow highlighted fields

Select Item	Potential Harm for Discharge Violations	Select Item	Potential Harm for Discharge Violations	Select Item
Select Item	Characteristics of the Discharge	Select Item	Characteristics of the Discharge	Select Item
Select Item	Susceptibility of Cleanup or Abatement	Select Item	Susceptibility of Cleanup or Abatement	Select Item
Select Item	Deviation from Requirement	Select Item	Deviation from Requirement	Select Item

Discharger Name/ID: Fialho & Sons Dairy/5B39NC00113

ATTACHMENT B

			Violation 1		Violation 2		
Discharge Violations	Step 1	Potential Harm Factor (Generated from Button)					
	Step 2	Per Gallon Factor (Generated from Button)					
		Gallons					
		Statutory / Adjusted Max per Gallon (S)					
		Total		$ -		$ -	
		Per Day Factor (Generated from Button)	0		0		
		Days					
		Statutory Max per Day					
		Total		$ -		$ -	
Non-Discharge Violations	Step 3	Per Day Factor	0.3		0.3		
		Days	16		16		
		Statutory Max per Day	$ 1,000		$ 1,000		$ -
		Total		$ 4,800.00		$ 4,800.00	
		Initial Amount of the ACL		$ 4,800.00		$ 4,800.00	
Add'l Factors	Step 4	Culpability	1	$ 4,800.00	1	$ 4,800.00	
		Cleanup and Cooperation	1	$ 4,800.00	1	$ 4,800.00	
		History of Violations	1	$ 4,800.00	1	$ 4,800.00	
	Step 5	Total Base Liability Amount		$ 9,600.00			
	Step 6	Ability to Pay & to Continue in Business	1	$ 9,600.00			
	Step 7	Other Factors as Justice May Require	1	$ 9,600.00			
		Staff Costs*	$ 1,800	$ 11,400.00			
	Step 8	Economic Benefit	$ 7,500	$ 11,400.00			
	Step 9	Minimum Liability Amount	$ 8,250				
		Maximum Liability Amount	$ 616,000				
	Step 10	Final Liability Amount		$ 11,400.00			

Penalty Day Range Generator

Start Date of Violation= 7/2/10
End Date of Violation= 5/5/11

Maximum Days Fined (Steps 2 & 3) = 308 Days
Minimum Days Fined (Steps 2 & 3) = 16 Days

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ADMINISTRATIVE CIVIL LIABILITY ORDER R5-2011-XXXX

IN THE MATTER OF

FRANK PIMENTEL
FIALHO & SONS DAIRY
SAN JOAQUIN COUNTY

This Order is issued to Frank Pimentel (hereafter Discharger) pursuant to California Water Code (CWC) section 13268, which authorizes the imposition of Administrative Civil Liability. This Order is based on findings that the Discharger violated provisions of Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order).

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) finds the following:

1. The Discharger owns Fialho & Sons (Dairy) located at 13310 E. Kettleman Lane, Lodi California, San Joaquin County.

2. The Dairy is regulated by the Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2007-0035 (hereinafter General Order), which was issued by the Central Valley Water Board on 3 May 2007. Monitoring and Reporting Program R5-2007-0035 (hereinafter MRP) accompanies the General Order. The General Order and the MRP contain reporting requirements for dairies regulated by the General Order. The General Order became effective on 9 May 2007.

3. CWC section 13267 authorizes the Regional Water Boards to require the submittal of technical and monitoring reports from any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge to waters of the state.

4. The General Order and the MRP required the Discharger to submit the 2009 Annual Report by 1 July 2010 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267.

5. The General Order and MRP required the Discharger to submit a Waste Management Plan by 1 July 2009 pursuant to the Central Valley Water Board's authority in accordance with CWC section 13267. However, the General Order was amended by Order No. R5-2009-0029 to extend the deadline to submit the Waste Management Plan to 1 July 2010 in order to give enrollees additional time to submit this plan.

6. The Discharger violated CWC section 13267 by failing to submit the 2009 Annual Report and Waste Management Plan required by the General Order and Monitoring and Reporting Program by the required deadline of 1 July 2010.

7. On 2 September 2010, the Central Valley Water Board staff issued two Notices of Violation pertaining to the two missing reports notifying the Discharger that the 2009 Annual Report and the Waste Management Plan had not been received. Both Notices of Violation requested that the delinquent reports be submitted as soon as possible to minimize potential liability.

8. On 5 May 2011, the Executive Officer issued Administrative Civil Liability Complaint (Complaint) No. R5-2011-0548 to the Discharger recommending that the Central Valley Water Board assess the Discharger an administrative civil liability in the amount of $11,400 pursuant to CWC section 13268 for the failure to submit the 2009 Annual Report and Waste Management Plan.

9. A Hearing Panel composed of three members of the Central Valley Water Board held a hearing on this matter in Rancho Cordova on 20 July 2011. The Hearing Panel recommended that civil liability should be imposed upon the Discharger in the amount of $11,400.

10. Upon considering the Hearing Panel's report and making an independent review of the record, the Central Valley Water Board during its meeting on XX October 2011 adopted the findings of the Hearing Panel's report as its own and upheld the imposition of the Hearing Panel's proposed administrative civil liability on the Discharger. Therefore, the Central Valley Water Board has determined that civil liability should be imposed upon the Discharger in the amount of $11,400.

11. Issuance of this Administrative Civil Liability Order to enforce CWC Division 7, Chapter 5.5 is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).

12. This Order is effective and final upon issuance by the Central Valley Water Board. Payment must be received by the Central Valley Water Board no later than thirty (30) days from the date on which this Order is issued.

13. In the event that the Discharger fails to comply with the requirements of this Order, the Executive Officer or her delegee is authorized to refer this matter to the Attorney General's Office for enforcement.

14. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IT IS HEREBY ORDERED that pursuant to section 13323 of the CWC, the Discharger shall make a cash payment of $11,400 (check payable to the State Water Pollution Cleanup and Abatement Account) no later than thirty days from the date of issuance of this Order. I, Pamela C. Creedon, Executive Officer, do hereby certify that the foregoing is a full, true, correct copy of an Order issued by the California Regional Water Quality Control Board, Central Valley Region, and that such action occurred on 13 October 2011.

_____
Pamela C. Creedon, Executive Officer

ITEM: 15

SUBJECT: City of Willows, Willows Wastewater Treatment Plant, Glenn County

BOARD ACTION: *Consideration of NPDES Permit Renewal and Adoption of Time Schedule Order*

BACKGROUND: The City of Willows owns a Publicly Owned Treatment Works (POTW) in Willows, Glenn County. SouthWest Water Company (contract operator) operates the wastewater treatment plant. The treatment system at the facility consists of a wastewater collection, treatment, and disposal system and provides sewage service to the City of Willows. The treatment system includes influent screening, extended aeration (biolac system), activated sludge with two secondary clarifiers, nine continuous backwash sand filters, disinfection with sodium hypochlorite, dechlorination using sodium bisulfite injection, equalization and emergency storage ponds, and sludge storage lagoons. Wastewater is discharged from the Plant to Agricultural Drain C, a tributary to Logan Creek or to the Glenn-Colusa Irrigation District (GCID) Lateral 26-2, waters of the United States, and tributaries to the Colusa Basin Drain.

The tentative NPDES permit renewal proposes new effluent limits for electrical conductivity, ammonia, nitrate, dichlorobromomethane and chlorodibromomethane. A Time Schedule Order is also proposed to include a compliance schedule which allows the Discharger time to evaluate alternatives, secure funding, and complete construction of the selected alternative adequate to achieve compliance with the new effluent limits or pursue a Basin Plan Amendment.

Public comments were received from the Contractor that operates the WWTP, Central Valley Clean Water Association (CVCWA) and Senator Doug La Malfa and Assemblymember Jim Nielsen. Detailed comments and responses are included in the Staff Response to Comments document included in this agenda item.

ISSUES: The main issue is the municipal/domestic water supply (MUN) beneficial use designation. The Discharger's previous NPDES Permit does not apply the MUN designation to the receiving waters; however, the proposed NPDES Permit does based on State Water Board's Resolution No. 88-63, which establishes that all waters should be considered potentially suitable for municipal or domestic supply. The Discharger and CVCWA disagree and comment that the exception in Resolution No. 88-63 for agricultural drains applies to this discharge, and that the Central Valley Water Board only needs to find that the exception for agricultural drains applies to this discharge. Central Valley Water Board staff does not concur. Although the agricultural canal, which serves as the receiving waters, may qualify for an exception to Resolution No. 88-63, the Central Valley Water Board may only grant such an exception through a formal Basin Plan Amendment process. Thus, the newly interpreted MUN designation of the receiving waters must be applied in the proposed NPDES Permit until the Basin Plan is

amended.

This item was originally circulated for public comment in April 2011 for a June 2011 Board meeting, but was continued from the Agenda, to allow revisions to the Time Schedule Order. The Discharger has indicated they want to pursue a Basin Plan Amendment process, and the Time Schedule Order has been revised to include the Basin Plan Amendment process in the compliance schedule.

RECOMMENDATION: Adopt the proposed order.

Mgmt. Review__BJS____
Legal Review_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair

Matthew Rodriquez
Secretary for Environmental Protection Agency

415 Knollcrest Drive, Suite 100, Redding, California 96002
(530) 224-4845 • FAX (530) 224-4857
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Edmund G. Brown Jr.
Governor

2 August 2011

CERTIFIED MAIL
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Mr. Greg Tyhurst
Public Works Director
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Regional Technical Manger
SouthWest Water Company
P O Box 230
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NOTICE OF PUBLIC HEARING
FOR
TENTATIVE WASTE DISCHARGE REQUIREMENTS (NPDES NO. CA0078034)
AND TIME SCHEDULE ORDER
FOR
CITY OF WILLOWS
WILLOWS WASTEWATER TREATMENT PLANT
GLENN COUNTY

TO ALL CONCERNED PERSONS AND AGENCIES:

Enclosed is the tentative Waste Discharge Requirements (NPDES No. CA0078034) and Time Schedule Order for the City of Willows, Willows Wastewater Treatment Plant, with the late revisions shown in track changes. This item is being continued from the 10 June 2011 Central Valley Water Board meeting. To be given full consideration, any comments or recommendations you may have concerning the Late and Late-Late Revisions on the Waste Discharge Requirements and the Revised Time Schedule Order must be submitted in writing to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) office by **5:00 pm on 2 September 2011.** Written materials submitted after this date and time will not be accepted and will not be incorporated into the administrative record if doing so would prejudice any party. Please note that the tentative documents will receive internal legal and management review during the public comment period.

A Public Hearing has been scheduled for the Central Valley Water Board to consider adoption of the tentative Orders at its 12, 13, 14 October 2011 Board Meeting. The Notice of Public Hearing (4 copies) and a copy of a Proof of Posting form are also enclosed.

By 4 August 2011 post one (1) copy of the Notice of Public Hearing at:

- The entrance to the facility;
- The nearest city hall or county courthouse;
- The local newspaper (one (1) day publishing); and
- The post office nearest to the Facility (if allowed).

Proof of posting, using the enclosed form, shall be filed with this office by 18 August 2011. To conserve resources, this letter transmits a paper copy of the tentative documents to the discharger only. Interested persons are advised that the full text of the tentative documents is available on the Central Valley Water Board's web site at

http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/.

Copies of these documents can also be obtained by contacting or visiting the Central Valley Water Board's Redding office at 415 Knollcrest Drive, Suite 100, Redding, California, weekdays between 8:00 a.m. and 5:00 p.m.

If you have any questions regarding the proposed Order, the scheduling of the Public Hearing, or the above requirements please contact Greg Cash of my staff at (530) 224-3208, or at the letterhead address above.

Original signed by

Robert A. Crandall
Assistant Executive Officer

GC: knr

Enclosures: Notice of Public Hearing
Proof of Posting Form (Discharger Only)
Tentative Orders (Discharger Only) in track changes

cc: Mr. Dave Smith, U.S. Environmental Protection Agency, Region IX, San Francisco
U.S. Army Corps of Engineers, Sacramento
U.S. Fish and Wildlife Service, Sacramento
U.S. National Marine Fisheries Service, Santa Rosa
Department of Water Resources, Northern District, Red Bluff
Department of Public Health, Environmental Management Branch, Sacramento
Department of Public Health, Office of Drinking Water, Redding
Glenn County Division of Environmental Health, Willows
Mr. Phil Isorena, State Water Resources Control Board, Sacramento
Department of Fish and Game, Region 2, Rancho Cordova
Mr. Bill Jennings, California Sport Fishing Protection Alliance, Stockton
Ms. Megan Anderson, Environmental Advocates, San Francisco
Ms. Debbie Webster, Central Valley Clean Water Association, Grass Valley

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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ORDER NO. R5-2011-XXXX
NPDES NO. CA0078034

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF WILLOWS WILLOWS WASTEWATER TREATMENT PLANT GLENN COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	**City of Willows**
Name of Facility	**Willows Wastewater Treatment Plant**
Facility Address	**1600 Tehama Street**
	Willows, CA 95988
	Glenn County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the City of Willows from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
D-001	Treated Municipal Wastewater	39 º 29’ 34” N	122º 11’ 16” W	Agricultural Drain C, tributary to Logan Creek, Colusa Basin Drain
D-002	Treated Municipal Wastewater	39 º 30’ 08” N	122 º 11’ 28” W	GCID Lateral 26-2, Colusa Basin Drain

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**<Adoption Date>**
This Order shall become effective on:	**<Effective Date>**
This Order shall expire on:	**<Expiration Date>**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**<180 days prior to the Order expiration date OR insert date>**

I, **PAMELA C. CREEDON**, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **<Adoption Date>**.

_____
PAMELA C. CREEDON, Executive Officer

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Attachment K - Summary of Special Studies / Significant Compliance Dates K-1

I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	**City of Willows**
Name of Facility	**Willows Wastewater Treatment Plant**
Facility Address	**1600 Tehama Street**
	Willows, CA 95988
	Glenn County
Facility Contact, Title, and Phone	**Greg Tyhurst, City of Willows Public Works Director, (530) 934-7041**
Mailing Address	**201 N. Lassen Street** **Willows, CA 95988**
Type of Facility	**Publicly Owned Treatment Works**
Facility Design Flow	**1.2 million gallons per day**

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

A. Background. The City of Willows (hereinafter Discharger) is currently discharging pursuant to Order No. R5-2006-0009 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0078034. The Discharger submitted a Report of Waste Discharge, dated 1 July 2010, and applied for a NPDES permit renewal to discharge up to 1.2 million gallons daily of treated wastewater from Willows Wastewater Treatment Plant, hereinafter Facility. The application was deemed complete on 27 July 2010.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns a Publicly Owned Treatment Works (POTW). SouthWest Water Company (contract operator) operates the wastewater treatment plant. The treatment system at the facility consists of a wastewater collection, treatment, and disposal system and provides sewage service to the City of Willows. The treatment system includes influent screening, extended aeration (biolac system), activated sludge with two secondary clarifiers, nine continuous backwash sand filters, disinfection with sodium hypochlorite, dechlorination using sodium bisulfite injection, equalization and emergency storage ponds, and sludge storage lagoons. Wastewater is discharged from Discharge Point No. D-001 (see table on cover page) to Agricultural Drain C, a tributary to Logan Creek or from Discharge Point D-002 (see table on cover page) Glenn-Colusa Irrigation District (GCID) Lateral 26-2, waters of the United States, and tributaries to the Colusa Basin Drain within the Colusa Trough Hydrologic Sub Area

(520.21) of the Glenn Colusa Hydrologic Area in the Colusa Basin Hydrologic Unit. This wastewater treatment plant was upgraded from a "pond" system in 2007. There are groundwater monitoring wells monitoring the ponds, which were installed in 1991, and have not detected any constituents of concern in the groundwater. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. **Legal Authorities.** This Order is issued pursuant to Section 402 of the Clean Water Act (CWA) and implementing regulations adopted by U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (Water Code; commencing with Section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with Section 13260).

D. **Background and Rationale for Requirements.** The Central Valley Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** Under Water Code Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100-21177.

F. **Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations Title 40 of the Code of Federal Regulations (CFR) Part 122.44 (40 CFR 122.44), require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133**.** A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. **Water Quality-Based Effluent Limitations (WQBELs).** Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as a technology equivalence requirement, which is necessary to achieve water quality standards. The Central Valley Water Board has considered the factors listed in CWC Section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet (Attachment F).

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all

pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, Water Quality Based Effluent Limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA Section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Central Valley Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised September 2009)*, for the Sacramento and San Joaquin River Basins (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the "…*beneficial uses of any specifically identified water body generally apply to its tributary streams*." The Basin Plan does not specifically identify beneficial uses for GCID Lateral 26-2 or Agricultural Drain C, but does identify present and potential uses for Colusa Basin Drain, to which GCID Lateral 26-2 and Agricultural Drain C, via Logan Creek, is tributary. According to the Basin Plan, municipal and domestic supply is not a beneficial use of the Colusa Basin Drain.

However the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal and domestic supply. One exception is if the water is in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Central Valley Water Boards. In accordance with Chapter IV of the Basin Plan, the Central Valley Water Board must adopt a formal Basin Plan Amendment to grant an exception to Resolution No. 88-63. Therefore, until the Central Valley Water Board adopts a Basin Plan Amendment for an exception, and the State Water Board and Office of Administrative Law approve the Basin Plan Amendment, the receiving water is considered to be suitable or potentially suitable for municipal or domestic supply in accordance with State Water Board Resolution No. 88-63. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to the receiving water are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
D-001 and D-002	Colusa Basin Drain	Municipal and domestic supply (MUN); Agricultural supply, including irrigation and stock watering (AGR); water contact recreation, including canoeing and rafting (REC-1); warm freshwater habitat (WARM); cold freshwater habitat (COLD); migration of aquatic organisms, warm and cold (MIGR); spawning, reproduction, and/or early development, warm and cold (SPWN); and wildlife habitat (WILD). Ground water recharge (GWR), freshwater replenishment (FRSH).

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*." Colusa Basin Drain is listed as a WQLS for Azinphos-methyl, Carbofuran, Diazinon, Group A Pesticides, Malathion, and Methyl Parathion in the 303(d) list of impaired water bodies. Effluent limitations applicable to this listing are included in this Order.

Requirements of this Order implement the Basin Plan.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About 40 criteria in the NTR applied in California. On 18 May 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on 13 February 2001. These rules contain water quality criteria for priority pollutants.

J. **State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 28 2000 with respect to the priority pollutant criteria promulgated for California by USEPA through the NTR and to the priority pollutant objectives established by the Central Valley Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by USEPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. Compliance Schedules and Interim Requirements. In general, an NPDES permit must include final effluent limitations that are consistent with CWA Section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board's *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy) allows compliance schedules for new, revised, or newly interpreted water quality objectives or criteria, or in accordance with a TMDL. All compliance schedules must be as short as possible, and may not exceed ten years from the effective date of the adoption, revision, or new interpretation of the applicable water quality objective or criterion, unless a TMDL allows a longer schedule. The Central Valley Water Board, however, is not required to include a compliance schedule, but may issue a Time Schedule Order pursuant to CWC Section 13300 or a Cease and Desist Order pursuant to CWC Section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Central Valley Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Compliance Schedule Policy, should consider feasibility of achieving compliance, and must impose a schedule that is as short as possible to achieve compliance with the effluent limit based on the objective or criteria.

The Compliance Schedule Policy and the SIP do not allow compliance schedules for priority pollutants beyond 18 May 2010, except for new or more stringent priority pollutant criteria adopted by USEPA after 17 December 2008.

Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter, interim milestones and compliance reporting within 14 days after each interim milestone. The permit may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures. This Order does not include compliance schedules and interim effluent limitations.

L. Alaska Rule. On 30 March 2000, USEPA revised its regulation that specifies when new and revised State and tribal water quality standards become effective for CWA purposes. (40 CFR 131.21 and 65 FR 24641 (27 April 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by 30 May 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow, percent removal requirements for 5-day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), Total Coliform Organisms and pH. The WQBELs consist of restrictions on Chlorine Residual, Ammonia**,** BOD_5**,** TSS, Electrical Conductivity (EC) and Toxicity. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes new effluent limitations for Ammonia Nitrate, Dichloromochloromethane, Dichlorobromomethane and

Electrical Conductivity to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in the Fact Sheet. In addition, the Central Valley Water Board has considered the factors in CWC Section 13241 in establishing these requirements.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on 1 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the [Clean Water] Act*" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

N. Antidegradation Policy. 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. Sections 303(d)(4) and 402(o)(2) of the CWA and Federal Regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions. All effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R5-2006-0009.

P. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code Sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. Sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

Q. Monitoring and Reporting. 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code Sections 13267 and 13383 authorize the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Central Valley Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

S. Provisions and Requirements Implementing State Law. The provisions/requirements in Subsections IV.B, V.B, and VI.C.4 of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

T. Notification of Interested Parties. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements (WDRs) for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the attached Fact Sheet of this Order.

U. Consideration of Public Comment. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the attached Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED, that this Order supercedes Order No. R5-2006-0009 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with Section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).

C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code (CWC).

D. The Discharger shall not allow pollutant-free wastewater to be discharged into the, treatment or disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

E. The discharge of hazardous or toxic substances, which may include laboratory and water treatment chemicals, solvents, or petroleum products (including oil, grease, gasoline and diesel) to surface waters or groundwater is prohibited.

F. The discharge of hazardous waste, as defined at Title 23, Division 3, Chapter 15, Article 2, Section 2521 of the CCR or designated waste, as defined at Section 13173 of the CWC, is prohibited.

G. Neither the discharge nor its treatment shall cause pollution as defined in Section 13050 of the CWC.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. D-001 (Ag Drain C) and D-002 (GCID Lateral 26-2)

1. **Final Effluent Limitations – Discharge Point No.** D-001 (Ag Drain C) and D-002 (GCID Lateral 26-2)

   a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. D-001 and D-002, with compliance measured at Monitoring Locations as described in the Monitoring and Reporting Program:

Table 6. Final Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	**Average Weekly**	**Maximum Daily**	**Other**
Biochemical Oxygen Demand 5-day @ 20°C	mg/L[a]	10	15	30	
	lbs/day[b]	100	150	300	
Total Suspended Solids	mg/L[a]	10	15	30	
	lbs/day[b]	100	150	300	
Total Residual Chlorine	mg/L			0.02 (1-hr average)	0.01 (4-Day Average)
Total Coliform Bacteria	MPN/100 mL			23	2.2 (7-Day Median)
Nitrate (as N)	mg/L	10			
Ammonia[c]	mg/L	1.30 (Ag Drain C), 0.63 (GCID Lateral 26-2)		2.61 (Ag Drain C, 1.27 (GCID Lateral 26-2)	
	lbs/day[b]	13.01 (Ag Drain C), 6.33 (GCID Lateral 26-2)		26.11 (Ag Drain C), 12.70 (GCID Lateral 26-2)	
Ammonia[d]	mg/L	1.43 (Ag Drain C), 0.77 (GCID Lateral 26-2)		2.87 (Ag Drain C), 1.55 (GCID Lateral 26-2)	
	lbs/day[b]	14.32 (Ag Drain C), 7.75 (GCID Lateral 26-2)		28.74 (Ag Drain C), 15.55 (GCID Lateral 26-2)	
Dibromochloromethane	ug/L	0.41		0.82	
Dichlorobromomethane	ug/L	0.56		1.13	
Electrical Conductivity					845(Annual Average)

[a] To be ascertained by a 24-hour composite
[b] Based upon a design treatment capacity of 1.2 mgd
[c] For the period of May 1 through October 31
[d] For the period of November 1 through April 30

b. **Percent Removal.** The average monthly percent removal of 5-day Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS) shall not be less than 85 percent.

c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

   i. 70%, minimum for any one bioassay; and
   ii. 90%, median for any three consecutive bioassays.

d. **Chronic Whole Effluent Toxicity.** There shall be no chronic whole effluent toxicity in the effluent discharge.

e. **pH.** The discharge shall not have a pH less than 6.5 nor greater than 8.5.

f. **Average Dry Weather Flow.** The average dry weather discharge flow shall not exceed 1.2 mgd**.**

2. **Interim Effluent Limitations - Not Applicable**

B. Land Discharge Specifications - Not Applicable

C. Reclamation Specifications - Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the GCID Lateral 26-2 or Ag Drain C:

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than four samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.

2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.

4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.

5. **Dissolved Oxygen:**

a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;

b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor

c. The dissolved oxygen concentration to be reduced below **7.0 mg/L** at any time.

6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

8. **pH.** The pH to be depressed below 6.5 nor raised above 8.5, nor changes in normal ambient pH levels to be exceeded by more than 0.5 units.

9. **Pesticides:**

a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;

b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer;

d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR 131.12.);

e. Pesticide concentrations to exceed the lowest levels technically and economically achievable;

f. Thiobencarb to be present in excess of 1.0 µg/L.

10. **Radioactivity:**

a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

11. **Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. **Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

14. **Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. **Temperature.** The natural temperature to be increased by more than 5°F.

16. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

17. **Turbidity.** The turbidity to increase as follows:

    a. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;

    b. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;

    c. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

    d. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor

    e. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

1. Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not cause or contribute to, in combination with other sources of the waste constituents, groundwater within influence of the Facility to contain:

   a. Taste or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses;

b. Waste constituent concentrations in excess of water quality objectives or background water quality, whichever is greater; and

c. Waste constituent concentrations in excess of the concentrations specified below or background water quality, whichever is greater:

d. Total coliform organisms to exceed 2.2 MPN/100mL over any seven-day period.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all (federal NPDES standard conditions from 40 CFR Part 122) Standard Provisions included in Attachment D of this Order.

2. The Discharger shall comply with the following provisions:

a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.

b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

i. violation of any term or condition contained in this Order;

ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

- *New regulations.* New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

- *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

- *Change in sludge use or disposal practice.* Under 40 CFR 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for

modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Central Valley Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

ii. controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

h. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

i. Safeguard to electric power failure:

i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

ii. Upon written request by the Central Valley Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Central Valley Water Board.

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this Order.

j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Central Valley Water Board Standard Provision contained in Section VI.A.2.i. of this Order.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Central Valley Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

k. A publicly owned treatment works whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last 3 years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in 4 years, the Discharger shall notify the Central Valley Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and local posting by the Discharger. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Central Valley Water Board may extend the time for submitting the report.

l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

m. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

n. For publicly owned treatment works, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC Section 1211).

o. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Central Valley Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within 5 days, unless the Central Valley Water Board waives confirmation. The written notification shall include the information

required by the Standard Provision contained in Attachment D Section V.E.1. [40 CFR 122.41(l)(6)(i)].

p. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

q. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory and certification requirements in the Federal Standard Provisions (Attachment D, Section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. Transfer shall be approved or disapproved in writing by the Executive Officer.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, including, but not limited to:

i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

b. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

c. **Mercury.** If mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted, this Order shall be reopened and the interim mass effluent limitation modified (higher or lower) or an effluent concentration limitation imposed. If the Central Valley Water Board determines that a mercury offset program is feasible for Dischargers subject to a NPDES permit, then this Order may be reopened to reevaluate the interim mercury mass loading limitation(s) and the need for a mercury offset program for the Discharger.

d. **Constituent Study.** This Order requires the Discharger prepare constituent study following CWC Section 13263.3(d)(3) for Ammonia, Nitrate, Dichlorobromomethane and Dibromochloromethane. Based on a review of the constituent study, this Order may be reopened for addition and/or modification of effluent limitations and requirements for these constituents.

e. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.

f. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for inorganic constituents. An acceptable WER can be used to adjust aquatic life-based water quality standards. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators and submits an approved report, this Order may be reopened to modify the effluent limitations for the applicable constituents.

g. **Effluent Quality and Treatment Performance.** The treatment processes employed at the treatment plant were designed and intended to provide specific pollutant removal efficiency. This Order contains effluent limitations that are partially based on the treatment plant's ability to remove pollutants. This Order also considers the assimilative capacity in the receiving water to minimize the impact of pollutants discharged from the treatment plant. Therefore, if a trend of declining treatment plant pollutant removal efficiency, or a trend of increasing

effluent pollutant concentrations is observed, the Discharger is required to submit an Effluent Quality and Treatment Performance Study that identifies the cause of the change in effluent quality. If the Central Valley Board determines that the change and resulting degradation is not warranted or not in compliance with the anti-degradation policy, then this Order may be reopened, and the effluent limitations tightened, or other regulatory measures may be employed to ensure that the quality of the receiving water is not unnecessarily degraded.

h. **Constituents of Emerging Concern (CECs).** The State Water Resources Control Board is conducting studies on CECs discharged from wastewater treatment plants. Upon completion of the studies and formulation of recommendations for CEC monitoring, this Order may be reopened for addition of monitoring or special studies of CECs in the treatment plant discharge.

i. **Reasonable Potential for Constituents with Insufficient Information.** This Order may be reopened, and appropriate effluent limitations added, if results from the Monitoring and Reporting Program indicate additional constituents are present at concentrations that have the reasonable potential to cause or contribute to an exceedance of applicable water quality criteria or objectives.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity (WET) testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exhibits a pattern of toxicity exceeding the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Discharger is required to initiate a TRE in accordance with an approved TRE Workplan, and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Workplan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

i. **Initial Investigative TRE Workplan.** Within **90 days** of the effective date of this Order, the Discharger shall submit to the Central Valley Water Board an Initial Investigative TRE Workplan for approval by the Executive Officer. This should be a one to two page document including, at a minimum:

(a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;

(b) A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and

(c) A discussion of who will conduct the Toxicity Identification Evaluation (TIE), if necessary (e.g., an in-house expert or outside contractor).

ii. Accelerated Monitoring and TRE Initiation. When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Discharger shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.

iii. Numeric Toxicity Monitoring Trigger. The numeric toxicity monitoring trigger to initiate a TRE is > **1 TU_C** (where TU_C = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE when the effluent exhibits toxicity.

iv. Accelerated Monitoring Specifications. If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Discharger shall initiate accelerated monitoring within 14 days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four (4) chronic toxicity tests conducted once every 2 weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

(a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of toxicity, the Executive Officer may require that the Discharger initiate a TRE.

(b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

(c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during

accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Central Valley Water Board including, at minimum:

(1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

(2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

(3) A schedule for these actions.

b. Constituent Study. There are indications that the discharge may contain constituents that have a reasonable potential to cause or contribute to an exceedance of water quality objectives for Ammonia, Nitrate, Dichlorobromomethane and Dibromochloromethane. The Discharger shall comply with the following time schedule in conducting a study of these constituents' potential effect in surface waters:

Table 7. Constituent Study

Task	Compliance Date
i. Submit Workplan and Time Schedule	Within 6 months following the effective date of this Order
ii. Begin study	Within 3 months of Central Valley Water Board approval of Workplan and Time Schedule
iii. Complete study	As established by Task i.
iv. Submit study report	60 days following completion of Task iii. (no greater than 2 years after the effective date of this Order)

c. Best Practical Treatment or Control (BPTC). The Discharger shall submit, a BPTC Evaluation Work Plan for a comprehensive technical evaluation of the Facility's waste treatment control, to determine BPTC of its discharge, to meet requirements of State Water Board Resolution 68-16. The work plan shall include a preliminary evaluation of each component of the waste management system and propose a time schedule for completing the comprehensive technical evaluation.

Following completion of the evaluation, the Discharger shall submit to the Central Valley Water Board, a technical report describing the evaluation's results and critiquing the treatment facility with respect to the BPTC. Where deficiencies are documented, the technical report shall provide recommendations for necessary modifications to achieve BPTC and identify the source(s) of funding and proposed schedule for modifications. The Discharger shall comply with the following schedule in conducting a BPTC Study.

Table 8. BPTC Study

Task	Compliance Date
i. Submit Work Plan and Time Schedule for approval by the Executive Officer.	Within 6 months following the effective date of this Order.
ii. Commence comprehensive evaluation	30 days following Executive Officer approval of Task i.
iii Complete study and submit summary report	As established by Task i and/or 2 years following Task ii, whichever is sooner.

d. Effluent and Receiving Water Characterization Study. An effluent and receiving water monitoring study is required to ensure adequate information is available for the next permit renewal. During the third and fourth year of this permit term, the Discharger shall conduct annual monitoring of the effluent at EFF-001 and of the receiving water at RSW-001 or RSW-003 (dependent upon which receiving water location is being used) for all priority pollutants and other constituents of concern as described in Attachment I. Dioxin and Furan sampling shall be performed only twice during the third year, as described in Attachment J. The report shall be completed in conformance with the following schedule.

Table 9. Effluent and Receiving Water Characterization Study

Task	Compliance Date
i. Submit Work Plan and Time Schedule	No later than 2 years 6 months from adoption of this Order
ii. Conduct annual[1] monitoring	During third/fourth year of permit term
iii. Submit Final Report	6 months following completion of final monitoring event
[1] Dioxin and Furan sampling shall be performed only twice during the third year, as described in Attachment J.	

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP)

The Discharger shall develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above

an effluent limitation and either: (1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or (2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in the Monitoring and Reporting Program (Attachment E, Section X.B.4).

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Central Valley Water Board:

i. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

v. An annual status report that shall be sent to the Central Valley Water Board including:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

b. Salinity Reduction Goal. The Discharger shall provide annual reports demonstrating reasonable progress in the reduction of salinity in its discharge to Colusa Basin Drain. The Central Valley Water Board finds that an annual average salinity of 845 µmhos/cm as electrical conductivity is a reasonable intermediate goal that can be achieved during this permit term. This is a performance based effluent EC limitation calculated as the 99.9 percentile of the running average based on current effluent data. The annual reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, section X.D.1).

c. Salinity Evaluation and Minimization Plan. The Discharger shall prepare a Salinity Evaluation and Minimization Plan to address sources of salinity from the Facility. The plan shall be completed and submitted to the Central Valley Water Board **within 6 months of the adoption date of this Order** for the approval by the Executive Officer.

Table 10. Salinity Evaluation and Minimization Plan

Task	Compliance Date
1. Submit Work Plan and Time Schedule	**Within 6 months** of the effective date of the Order
2. Begin Study	**Within 3 months** of Central Valley Water Board approval of Workplan and Time Schedule
3. Complete Study	As established by Task 1
4. Submit Final Report	**60 days** following completion of Task 3 (no greater than 2 years after the effective date of this Order

4. Construction, Operation and Maintenance Specifications

a. Flow Equalization Storage Basin Operating Requirements.

i. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

ii. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

iii. Basins shall be managed to prevent breeding of mosquitoes. In particular,

(a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

(b) Weeds shall be minimized.

(c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

iv. Freeboard shall never be less than 2 feet (measured vertically to the lowest point of overflow) at the last downstream pond.

b. Turbidity Operational Requirements. The Discharger shall operate the treatment system to ensure that the turbidity measured at EFF-001, as described in the MRP (Attachment E), shall not exceed:

i. 2 NTU as a daily average, and
ii. 5 NTU as a daily maximum.

5. Special Provisions for Municipal Facilities

a. Sludge/Biosolids Treatment or Discharge Specifications

Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subjected to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 CFR Part 503.

i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq. Removal for further treatment, storage, disposal, or reuse at sites (e.g., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a Central Valley Water Board will satisfy these specifications.

ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.

iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations in Section V.B. of this Order. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate groundwater limitations included in Section V.B. of this Order.

iv. The use, disposal, storage, and transportation of biosolids shall comply with existing federal and state laws and regulations, including permitting requirements and technical standards included in 40 CFR Part 503. If the State Water Board and the Central Valley Water Board are given the authority to implement regulations contained in 40 CFR Part 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR Part 503 whether or not they have been incorporated into this Order.

v. The Discharger shall comply with Section IX.A. Biosolids of the Monitoring and Reporting Program Attachment E.

vi. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least 90 days in advance of the change.

b. Biosolids Storage and Transportation Specifications

i. The Discharger shall comply with the Monitoring and Reporting Program for biosolids disposal contained in Attachment E.

ii. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least 90 days in advance of the change.

iii. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.

c. Biosolids Storage Requirements

i. Facilities for the storage of Class B biosolids shall be located, designed and maintained to restrict public access to biosolids.

ii. Biosolids storage facilities shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.

iii. Biosolids storage facilities, which contain biosolids, shall be designed and maintained to contain all storm water falling on the biosolids storage area during a rainfall year with a return frequency of 100 years.

iv. Biosolids storage facilities shall be designed, maintained and operated to minimize the generation of leachate.

v. All biosolids shall be transported in covered vehicles capable of containing the designated load.

vi. All biosolids having a water content that is capable of leaching liquids shall be transported in leak proof vehicles.

vii. Each biosolids transport driver shall be trained as to the nature of its load and the proper response to accidents or spill events and shall carry a copy of an approved spill response plan.

viii. The Discharger shall avoid the use of haul routes near residential land uses to the extent possible. If the use of haul routes near residential land uses cannot be avoided, the Discharger shall limit project-related truck traffic to daylight hours.

d. Collection System. On 2 May 2006, the State Water Board adopted State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order No. 2006-0003 and any future revisions thereto. Order No. 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDRs. The Discharger has applied for and has been approved for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system.

e. This permit, and the Monitoring and Reporting Program which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The wastewater treatment plant is not staffed on a full time basis. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. For existing continuous monitoring systems, the electronic notification system shall be installed within 6 months of adoption of this permit. For systems installed following permit adoption, the notification system shall be installed simultaneously.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

A. BOD_5 and TSS Effluent Limitations (Section IV.A.1.b. and Table 6). Compliance with the final effluent limitations for BOD_5 and TSS required in Limitations and Discharge Requirements Section **IV.A.1.b and Table 6.** shall be ascertained by 24-hour composite samples. Compliance with effluent limitations required in Limitations and Discharge Requirements Section **IV.A.1.b.** for percent removal shall be calculated using the arithmetic mean of BOD_5 and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. Average Dry Weather Flow Effluent Limitations (Section IV.A.1.e). The average dry weather discharge flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the average dry weather flow effluent limitations will be determined annually based on the average daily flow over three consecutive dry weather months (e.g., July, August, and September).

C. Total Coliform Organisms Effluent Limitations (Section IV.A.1.Table 6.). <u>For each day that an effluent sample is collected and analyzed for total coliform organisms</u>, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday)

are used to calculate the 7-day median. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance.

D. **Total Residual Chlorine Effluent Limitations (Section IV.A.1.Table 6).** Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. Continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

   Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive. Records supporting validation of false positives shall be maintained in accordance with Section IV Standard Provisions (Attachment D).

E. **Annual Average Effluent Limitations.** Annual average effluent constituent concentrations for determining compliance with the annual average effluent limitations for aluminum shall be performed as the average value of each averaging period required in the Monitoring and Reporting Program. For example, if quarterly effluent monitoring is required, the annual average is the average of the four quarterly averages. Each quarterly average is the average of the verified results during that calendar quarter.

F. **Chronic Whole Effluent Toxicity Effluent Limitation (Section IV**). Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a shall constitute compliance with the effluent limitation.

G. **Mass Effluent Limitations.** The mass effluent limitations contained in the Final Effluent Limitations IV.A.1.a and Intermin Effluent Limitations IV.A.2. are based on the permitted average dry weather flow and calculated as follows:

   <u>Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)</u>

   If the effluent flow exceeds the permitted average dry weather flow during wet-weather seasons, the effluent mass limitations contained in Final Effluent Limitations IV.A.1.a. and Interim Effluent Limitations IV.A.2. shall not apply. If the effluent flow is below the permitted average dry weather flow during wet-weather seasons, the effluent mass limitations do apply.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Practicable Treatment or Control (BPTC): BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, *"(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."* Pollution is defined in CWC Section 13050(l). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Biosolids is sewage sludge that has been treated and tested and shown to be capable of being beneficially and legally used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities as specified under 40 CFR Part 503.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a

calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of 1 day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams

that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in CWC section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136, Attachment B, revised as of 3 July 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Central Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Central Valley Water Board.

Reporting Level (RL)
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Central Valley Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Sewage Sludge is the solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a municipal wastewater treatment facility. Sewage sludge includes solids removed or used during primary, secondary, or advanced wastewater treatment processes. Sewage sludge does not include grit or screening material generated during preliminary treatment of domestic sewage at a municipal wastewater treatment facility.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Central Valley Water Board Basin Plan.

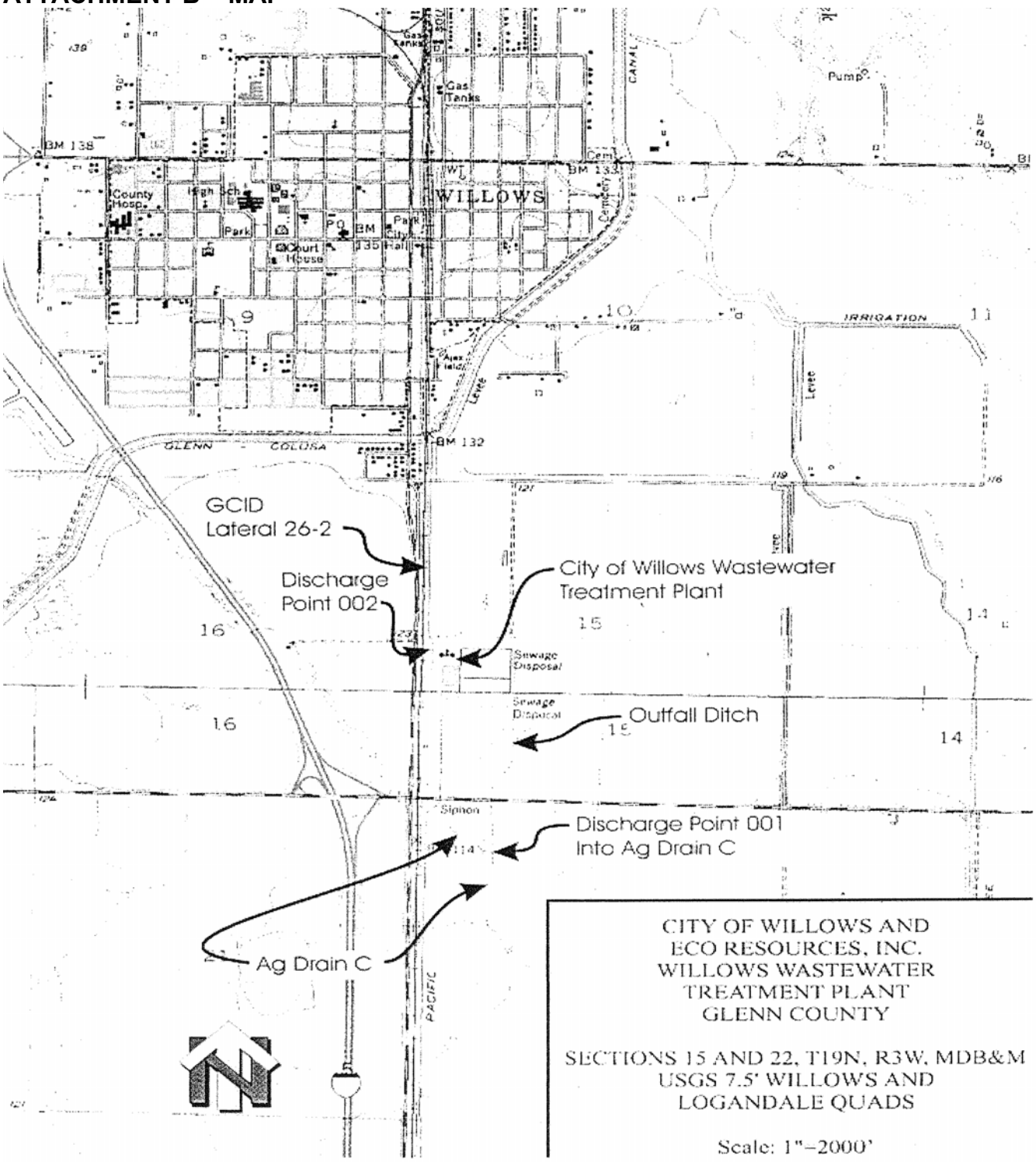
Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

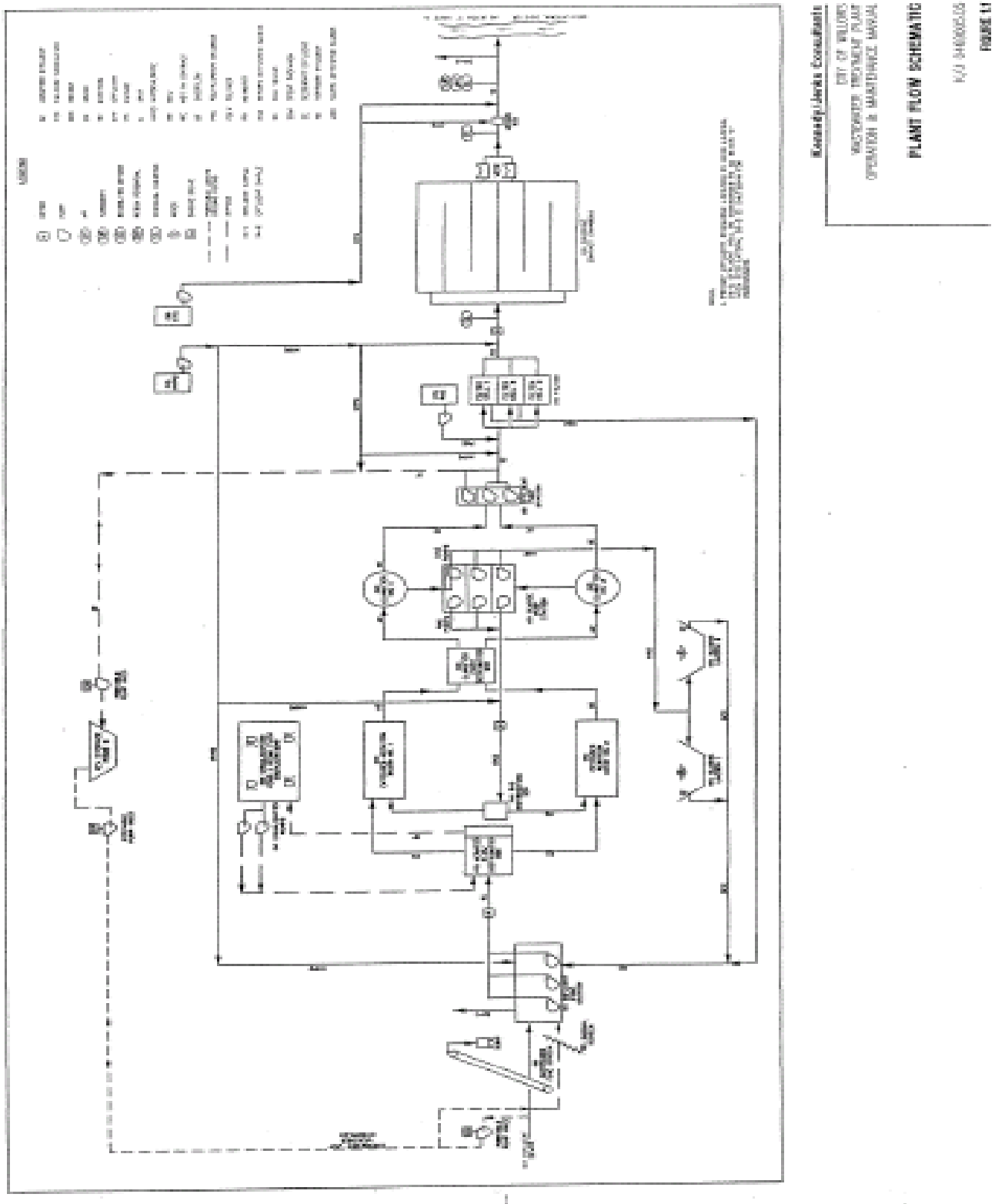
where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR 122.41(a).)

2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Central Valley Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR 122.41(i); CWC section 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location. (40 CFR 122.41(i)(4).)

G. Bypass

1. Definitions

   i. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i).)

   ii. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Central Valley Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the Central Valley Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 122.41(m)(4)(i)(C).)

4. The Central Valley Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Valley Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR 122.41(m)(4)(ii).)

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR 122.41(n)(3)):

a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Central Valley Water Board. The Central Valley Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 CFR 122.41(l)(3) and 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order. (40 CFR 122.41(j)(4) and 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Central Valley Water Board Executive Officer at any time. (40 CFR 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 CFR 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 CFR 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Central Valley Water Board, State Water Board, or USEPA within a reasonable time, any information which the Central Valley Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Central Valley Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Valley Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR 122.41(k).)

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Central Valley Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR 122.22(b)(2)); and

c. The written authorization is submitted to the Central Valley Water Board and State Water Board. (40 CFR 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard

Provisions – Reporting V.B.3 above must be submitted to the Central Valley Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*" (40 CFR 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Valley Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Central Valley Water Board. (40 CFR 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall

also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):

a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(B).)

3. The Central Valley Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Central Valley Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) (40 CFR 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Central Valley Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Central Valley Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the California Water Code, including, but not limited to, Sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Central Valley Water Board of the following (40 CFR 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Title 40 of the Code of Federal Regulations (CFR), Section 122.48 (40 CFR 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) Sections 13267 and 13383 also authorize the Central Valley Water Quality Control Board (Central Valley Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements, which implement the Federal and California Regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Central Valley Water Board.

B. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

C. Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory certified for such analyses by the Department of Public Health (DPH; formerly the Department of Health Services). Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event a certified laboratory is not available to the Discharger for any onsite field measurements such as pH, Turbidity, temperature and Residual Chlorine, such analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any onsite field measurements such as pH, Turbidity, Temperature and Residual Chlorine must be kept onsite in the treatment facility laboratory and shall be available for inspection by Central Valley Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Central Valley Water Board.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

F. Laboratories analyzing monitoring samples shall be certified by DPH, in accordance with the provision of CWC Section 13176, and must include Quality Assurance/Quality Control (QA/QC) data with their reports.

G. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.

H. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.

I. The results of all monitoring required by this Order shall be reported to the Central Valley Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	INF-001	Point at which raw sewage enters the treatment plant
D-001 or D-002	EFF-001	Downstream of the last connection through which wastes can be admitted to the outfall
D-001	RSW-001	Upstream Receiving Water - 1,500 feet upstream from D-001 when discharging to Ag Drain C
D-001	RSW-002	Downstream Receiving Water - 100 feet downstream from D-001 when discharging to Ag Drain C
D-002	RSW-003	Upstream Receiving Water - 100 feet upstream from D-002 when discharging to GCID Lateral 26-2
D-002	RSW-004	Downstream Receiving Water - 100 feet downstream from D-002 when discharging to GCID Lateral 26-2
	SPL-001	Municipal Water Supply – A location where a representative sample location for the municipal water supply can be collected. If the water supply is from more than one source, a weighted average should be calculated.
	BIO-001	Biolsolids (sludge) monitoring location

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Locations INF-001,

1. The Discharger shall monitor influent to the facility **INF-001** as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Daily Flow	Mgd	Meter	Continuous	
BOD, 5-day 20ºC	Mg/L, lbs/day	24-hour Composite calculate	1/Month	[1]
Total Suspended Solids	Mg/L, lbs/day	24-hour Composite calculate	1/Month	[1]
pH	Standard Units	Grab	1/Week	
Hardness (as $CaCO_3$	Mg/L	24-hour composite calculate	1/Quarter	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor treated advanced secondary effluent at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	[1]
Conventional Pollutants				
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	24-hr Composite[8]	1/Week	[1]
	lbs/day	Calculate	1/Week	[1]
pH	pH Units	Grab	1/Week	[1,6]
Total Suspended Solids	mg/L	24-hr Composite[8]	1/Week	[1]
	lbs/day	Calculate	1/Week	[1]
Priority Pollutants				
Priority Pollutants	µg/L	Grab	1/Year	[1,2,3,4]
Dibromochloromethane	ug/L	Grab	1/Month	[1, 2]
Dichlorobromomethane	ug/L	Grab	1/Month	[1, 2]
Non-Conventional Pollutants				
Chlorine, Total Residual	mg/L	Meter	Continuous	[1,5]
Total Coliform Bacteria	MPN/100 ml	Grab	1/Week	[1]
Ammonia Nitrogen, Total (as N)[7]	mg/L	Grab	1/Week	[1,6,7]
	lbs/day	Calculate	1/Week	
Nitrate (as N)	mg/L	Grab	1/Month	[1]
Electrical Conductivity @ 25ºC	umhos/cm	Grab	1/Week	[1]
Temperature	ºF	Grab	1/Week	[1,6]
Hardness	mg.L	Grab	1/Month	[1,6]
Standard Minerals[9]	ug/L	Grab	1/Year	[1]
Turbidity	NTU	Grab	1/Day	[1]
Total Dissolved Solids	mg/L	Grab	1/Quarter	[1]
Acute Toxicity (see Section V. below)	% survival	Grab	1/Quarter	[1]
Chronic Toxicity (see Section V. below)	--	--	2/permit cycle	--

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136. Effluent samples shall be collected simultaneously with receiving water samples to be analyzed for the Priority Pollutants. See requirements below under Section "Priority Pollutant Monitoring".

[2] For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP. Sampling and analysis of Bis (2-ethylhexyl) phthalate shall be conducted using ultra-clean techniques that eliminate the possibility of sample contamination.

[3] Volatile constituents shall be sampled in accordance with 40 CFR Part 136.

[4] Concurrent with receiving surface water sampling.

[5] Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of

0.01 mg/L (in accordance with Section VII.4. Compliance Determination of the Limitations and Discharge Requirements).

[6] pH, hardness and temperature (and Priority Pollutants when sampled) shall be recorded at the time of ammonia sample collection.

[7] Report as both total and un-ionized ammonia.

[8] 24-hr composite.

[9] Standard minerals shall include the following: aluminum, boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing. The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. *Monitoring Frequency* – The Discharger shall perform **quarterly** acute toxicity testing, concurrent with effluent ammonia sampling.

2. *Sample Types* – For static non-renewal and static renewal testing, the samples shall be 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001.

3. *Test Species* – Test species shall be fathead minnows (Pimephales promelas).

4. *Methods* – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.

5. *Test Failure* – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. Chronic Toxicity Testing. The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. *Monitoring Frequency* – The Discharger shall perform three species chronic toxicity testing; one test shall be performed **within 365 days of permit adoption, and one test shall be performed no later than 365 days prior to permit expiration**.

2. *Sample Types* – Effluent samples shall be 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001. The receiving water control shall be a grab sample obtained from the RSW-001 or RSW-003 (dependent

on which Discharge Point is being used at the time of sample collection) sampling location, as identified in this Monitoring and Reporting Program.

3. *Sample Volumes* – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

4. *Test Species* – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:

   - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
   - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
   - The green alga, *Selenastrum capricornutum* (growth test).

5. *Methods* – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002.

6. *Reference Toxicant* – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.

7. *Dilutions* – The chronic toxicity testing shall be performed using the dilution series identified in the table, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).

Table E-4. Chronic Toxicity Testing Dilution Series

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

8. *Test Failure* – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:

   a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or

b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in the Special Provision at Section VI. 2.a.iii. of the Order.)

C. WET Testing Notification Requirements. The Discharger shall notify the Central Valley Water Board within 24-hours after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.

D. WET Testing Reporting Requirements. All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Central Valley Water Board within 30 days following completion of the test, and shall contain, at minimum:

   a. The results expressed in TUc, measured as 100/NOEC, and also measured as 100/LC50, 100/EC25, 100/IC25, and 100/IC50, as appropriate.

   b. The statistical methods used to calculate endpoints;

   c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

   d. The dates of sample collection and initiation of each toxicity test; and

   e. The results compared to the numeric toxicity monitoring trigger.

   Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or Toxicity Reduction Evaluation (TRE).

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.

3. **TRE Reporting.** Reports for TREs shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Workplan.

4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:

a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.

b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.

c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – Not Applicable

VII. RECLAMATION MONITORING REQUIREMENTS – Not Applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location RSW-001, RSW-002, RSW-003 and RSW-004

1. The Discharger shall monitor RSW-001 and RSW-002 when discharging to Ag Drain C or RSW-003 and RSW-004 when discharging to the GCID Lateral 26-2 as follows:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	pH Units	Grab	2/Month	[1]
EC	umhos/cm	Grab/Meter	2/Month	[1]
Dissolved Oxygen	mg/L	Grab	2/Month	[1]
Turbidity	NTU	Grab	2/Month	[1]
Temperature	ºF	Grab	2/Month	[1]
Hardness	mg/L	Grab	1/Month	[1]
Nitrate (as N)		Grab	1/Month	[1]
Ammonia	mg/L	Grab	1/Month[2]	[1]
Priority Pollutants	ug/L	Grab	1/Year[1,2]	[1]
Dichlorobromomethane	ug/L	Grab	1/Month	[1]
Chlorodibromomethane	ug/L	Grab	1/Month	[1]
Fecal Coliform Bacteria	MPN/100 mL	Grab	1/Quarter	[1]
Receiving Water Conditions	Safe/Unsafe		1/Month	

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Central Valley Water Board or the State Water Board.
[2] Concurrent with effluent priority pollutant sampling, including pH, temperature and hardness.

In conducting the receiving water sampling, a log shall be kept of the receiving water condition. Attention shall be given to the presence or absence of:

a. Floating or suspended matter	e. Visible films, sheens, or coatings
b. Discoloration	f. Fungi, slimes, or objectable growths
c. Bottom deposits	g. Potential nuisance conditions
d. Aquatic life	

B. Monitoring Location MW-1, MW-2 and MW-3

1. The Discharger shall monitor groundwater at **MW-1, MW-2 and MW-3**.

The current groundwater monitoring network includes 3 monitoring wells. MW-1 is considered the upgradient (background) well. Prior to construction of any additional groundwater wells or the addition of surrounding groundwater wells to the current network, the Discharger shall submit plans and specification to the Central Valley Water Board for review and approval. Once installed and/or approved into the network, all new monitoring wells shall be added to the MRP, and shall be analyzed according to the schedule below.

Prior to well purging, groundwater elevations shall be measured. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and direction of flow. The monitoring wells shall be purged at least three well volumes or until temperature, pH, and electrical conductivity have stabilized. Samples shall be collected and analyzed using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Table E-6. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Groundwater Elevation	0.01 feet MSL	Measurement	Quarterly
Groundwater Gradient	feet/foot	Calculated	Quarterly
pH	pH Units	Grab	Quarterly
Electrical Conductivity	µmhos/cm	Grab	Quarterly
Nitrate (as N)	mg/L	Grab	Quarterly
Total Chemical Oxygen Demand (COD)	mg/L	Grab	Quarterly

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

a. If offsite sludge disposal occurs within a given year, a composite sample of sludge shall be collected **annually** at Monitoring Location BIO-001 in accordance with EPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989, and tested for priority pollutants listed in 40 CFR Part 122, Appendix D, Tables II and III (excluding total phenols).

b. Sampling records shall be retained for a minimum of **5 years**. A log shall be maintained of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log must be complete enough to serve as a basis for part of the annual report.

c. Upon removal of biosolids, the Discharger shall submit characterization of biosolids quality, including sludge percent solids and the most recent quantitative results of chemical analysis for the priority pollutants listed in 40 CFR Part 122, Appendix D, Tables II and III (excluding total phenols). In addition to USEPA's POTW *Sludge Sampling and Analysis Guidance Document*, August 1989, suggested methods for analysis of biosolids are provided in USEPA publications titled "*Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*" and "*Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*". Recommended analytical holding times for biosolids samples should reflect those specified in 40 CFR 136.6.3(e).

B. Municipal Water Supply

1. Monitoring Location SPL-001

The Discharger shall monitor the municipal water supply at SPL-001 as follows. A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Municipal water supply samples shall be collected at approximately the same time as effluent samples.

Table E-7. Municipal Water Supply Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids[1]	mg/L	Grab	1/year	
Electrical Conductivity @ 25°C[1]	µmhos/cm	Grab	1/year	
Standard Minerals[2]	mg/L	Grab	1/year	

[1] If the water supply is from more than one source, the total dissolved solids and electrical conductivity shall be reported as a weighted average and include copies of supporting calculations.

[2] Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance)

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.

4. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "*Emergency Planning and Community Right to Know Act*" of 1986.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State Water Board or the Central Valley Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this Monitoring and Reporting Program under Sections III through IX. The Discharger shall submit **monthly** SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with **monthly** SMR
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with **monthly** SMR
1/Week	Permit effective date	Sunday through Saturday	Submit with **monthly** SMR
1/Month	Permit effective date	First day of calendar month through last day of calendar month	**1st day of the second month following the reporting period**
1/Quarter	Permit effective date	1 January through 1 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	**1st day of the second month following the reporting period**
1/Year	Permit effective date	1 January through 31 December	**1st day of the second month following the reporting period**

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the Central Valley Water Board and the State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

6. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMRs in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. SMRs must be submitted to the Central Valley Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board
Central Valley Region
415 Knollcrest Drive, Suite 100
Redding, CA 96002

8. Reports must clearly show when discharging to D-001 or D-002 or other permitted discharge locations. Reports must show the date and time that the discharge started and stopped at each location.

C. Discharge Monitoring Reports (DMRs)

1. As described in section X.B.1 above, at any time during the term of this permit, the State Water Board or Central Valley Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. Progress Reports. As specified in the compliance time schedules required in the Special Provisions contained in section VI of the Order, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

Table E-9. Reporting Requirements for Special Provisions Progress Reports,

Special Provision	Reporting Requirements
Constituent Study for Bromodichloromethane, Dichlorobromomethane and Nitrate	**30 January**, annually, until final compliance
BPTC Evaluation Tasks	**30 January**, annually, until final compliance
Salinity Evaluation and Minimization Study	**30 January**, until final compliance
Initial Investigation TRE Workplan	**Within 90 days from the effective date of this Order**

2. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, required by this Order. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in the Special Provision at section VI.C.7 of this Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

3. **Within 60 days** of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in section 2.3 and 2.4 of the SIP.

4. **Annual Operations Report. By 30 January of each year**, the Discharger shall submit a written report to the Executive Officer containing the following:

   a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.

   b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

   c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

   d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

   e. The Discharger may also be requested to submit an annual report to the Central Valley Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the

report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in the Findings in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	5A110101001
Discharger	City of Willows
Name of Facility	Willows Wastewater Treatment Plant
Facility Address	1600 Tehama Street
	Willows, CA 95988
	Glenn County
Facility Contact, Title and Phone	Greg Tyhurst, City of Willows Public Works Director, (530) 934-7041
Authorized Person to Sign and Submit Reports	Greg Tyhurst, Kathy Stone, John Dobson, Skyler Lipski, Brian Davis, SouthWest Water Company, 530-934-2052
Mailing Address	201 N. Lassen Street Willows, CA 95988
Billing Address	201 N. Lassen Street Willows, CA 95988
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	NA
Reclamation Requirements	NA
Facility Permitted Flow	1.2 million gallons per day (mgd)
Facility Design Flow	1.2 mgd
Watershed	Colusa Basin Drain
Receiving Water	Glenn Colusa Irrigation District
Receiving Water Type	Canal

A. The City of Willows (hereinafter Discharger) is the owner of Willows Wastewater Treatment Plant (hereinafter Facility), a Publicly Owned Treatment Works (POTW). SouthWest Water Company (contract operator) currently operates the Facility for the City of Willows.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to the Glenn-Colusa Irrigation District, a water of the United States, and is currently regulated by Order No. R5-2006-0009 which was adopted on 26 January 2006 and expired on 1 January 2011. The two discharge points (D-001 – Agricultural Drain C and D-002 – GCID Lateral 26-2) are the permitted discharge points, which are part of the Glenn-Colusa Irrigation District. The terms and conditions of Order No. R5-2006-0009 have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on 1 July 2010. Supplemental information was requested on 12 July 2010 and received on 19 July 2010. The Central Valley Water Board deemed the ROWD complete on 27 July 2010.

II. FACILITY DESCRIPTION

The Discharger owns and operates a POTW which provides wastewater collection, treatment, and disposal sewerage services for the community of Willows and the Northeast Willows Community Service District. The facility serves approximately 6,200 residences and small commercial customers. The design average dry weather flow capacity of the Facility is 1.2 million gallons per day (MGD).

Time Schedule Order No. R5-2011-XXXX includes interim effluent limits for dibromochloromethane, dichlorobromomethane and nitrate to meet the effluent limitations of this Order by **1 May 2016**.

A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system at the Facility consists of a headworks with influent screening; extended aeration activated sludge with secondary clarifiers with skimmers, continuous backwash sand filters, chlorine disinfection with sodium hypochlorite, dechlorination using sodium bisulfite injection, equalization and emergency storage ponds, and two 3.75 MG sludge storage lagoons. The current design flow of the facility is 1.2 mgd.

Prior to 2006, the treatment system consisted of a comminutor, primary aeration ponds, stabilization ponds and disinfection.

B. Discharge Points and Receiving Waters

1. The Facility is located in Sections 15 and 22, Township 19 North, Range 3 West of the Mt. Diablo Base Line and Meridian, as shown in Attachment B, a part of this Order.

2. Treated municipal wastewater is discharged at Discharge Point No. D-001 Agricultural Drain C, a tributary to Logan Creek, a water of the United States and tributary to the Colusa Basin Drain within the Colusa Trough Hydrologic Sub Area (520.21) of the Glenn Colusa Hydrologic Area in the Colusa Basin Hydrologic Unit at a point latitude 39° 29' 34" N and longitude 122° 11' 16" W, which is a tributary to the Sacramento River.

3. As an alternate, treated municipal wastewater is discharged at Discharge Point No. D-002 to Glenn-Colusa Irrigation District (GCID) Lateral 26-2, a tributary to Logan Creek, a water of the United States and tributary to the Colusa Basin Drain within the Colusa Trough Hydrologic Sub Area (520.21) of the Glenn Colusa Hydrologic Area in the Colusa Basin Hydrologic Unit at a point latitude 39° 30' 08" N and longitude 122° 11' 28" W, which is a tributary to the Sacramento River.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations and discharge specifications contained in Order No. R5-2006-0009 for discharges from Discharge Point No. 001 (Agricultural Drain C) and Discharge Point No. 002 (Monitoring Location GCID Lateral 26-2) and representative monitoring data from the term of Order No. R5-2006-0009 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2007To May 2010[h]		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD_5[a]	mg/L	10[b]	15[b]	30[b]	5.48	- -	27.0
	lbs/day[c]	100	150	300	36.72	- -	161.46
Total Suspended Solids	mg/L	10[b]	15[b]	30[b]	1.5	- -	4.0
	lbs/day[c]	100	150	300	10.1	- -	26.7
Chlorine	mg/L		0.01(4-day avg)	0.02[d]	0.01	- -	1.65
Total Coliform Bacteria	MPN/100 mL		2.2 (7-day median)	23		2.27	11
Ammonia[f]	mg/L	1.1		2.1		0.21	1.05
	lbs/day[c]	11		21		- -	- -
Ammonia[g]	mg/L	1.9		3.8		0.23	1.02
	lbs/day[c]	19		38		- -	- -
Turbidity	NTU			5[e]	0.51	0.99	1.90

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2007To May 2010[h]		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge

[a] Five-day biochemical oxygen demand at 20º C
[b] To be ascertained by a 24-hour composite
[c] Based upon a design treatment capacity of 1.2 mgd
[d] 1-hour average
[e] The daily maximum limit is 5 NTU, the daily average shall not exceed 2 NTU
[f] For the period of May 1 through October 31
[g] For the period of November 1 through April 30
[h] Monitoring Data was selected for the specific period due to the current WWTP began operational in March 2007 (waste activated sludge plant). There was a 90-day startup period; therefore data was used from June 2007 to May 2010. Prior to March 2007, the WWTP only consisted of a "pond" system.

D. Compliance Summary

An Administrative Civil Liability Complaint/Order was issued to the City of Willows and ECO Resources, Inc. for the sum of $216,000 for effluent violations, from January 2004 through December 2007. The effluent violations included exceedances of total residual chlorine, total coliform , BOD, and ammonia. A majority of the violations occurred when two of the treatment ponds were removed from the treatment system during the upgrades to the WWTP. Since the initial startup of the new WWTP (March – May 2007), there have only been two BOD violations occurring at the Facility.

E. Planned Changes

This permit contains newly applicable effluent limits for nitrate, dibromochloromethane, chlorodibromomethane, and electrical conductivity. The Discharger is evaluating potential alternatives for maintaining compliance with this permit. Some options may require facility upgrades. Such changes are unknown at this time and are not addressed by this permit.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in the Findings in Section II of this Order. The applicable plans, policies, and regulations relevant to the discharge include the following:

A. Legal Authorities

This Order is issued pursuant to regulations in the Clean Water Act (CWA) and the California Water Code (CWC) as specified in the Finding contained at Section II.C of this Order.

B. California Environmental Quality Act (CEQA)

This Order meets the requirements of CEQA as specified in the Finding contained at Section II.E of this Order.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** This Order implements the following water quality control plans as specified in the Finding contained at Section II.H of this Order.

   a. ***Water Quality Control Plan, Fourth Edition (Revised February 2007), for the Sacramento and San Joaquin River Basins*** (Basin Plan)

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** This Order implements the NTR and CTR as specified in the Finding contained at Section II.I of this Order.

3. **State Implementation Policy (SIP).** This Order implements the SIP as specified in the Finding contained at Section II.I of this Order.

4. **Alaska Rule.** This Order is consistent with the Alaska Rule as specified in the Finding contained at Section II.L of this Order.

5. **Antidegradation Policy.** As specified in the Finding contained at Section II.N of this Order and as discussed in detail in the Fact Sheet (Attachment F, Section IV.D.4.), the discharge is consistent with the antidegradation provisions of 40 CFR Section 131.12 and State Water Resources Control Board (State Water Board) Resolution 68-16.

6. **Anti-Backsliding Requirements.** This Order is consistent with anti-backsliding policies as specified in the Finding contained at Section II.M of this Order. Compliance with the anti-backsliding requirements is discussed in the Fact Sheet (Attachment F, Section IV.D.3).

7. **Emergency Planning and Community Right to Know Act**

   Section 13263.6(a) of the California Water Code, requires that "*the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Central Valley Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective*".

   The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility. Therefore, a

reasonable potential analysis based on information from EPCRA cannot be conducted. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to California Water Code Section 13263.6(a).

However, as detailed elsewhere in this Order, available effluent data indicate that there are constituents present in the effluent that have a reasonable potential to cause or contribute to exceedances of water quality standards and require inclusion of effluent limitations based on federal and state laws and regulations.

8. **Storm Water Requirements**

   USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from **wastewater treatment facilities. Wastewater treatment** facilities are applicable industries under the storm water program and are obligated to comply with the Federal Regulations. The Facility submitted it's NOI to be covered under the General Industrial Storm Water Permit on **11 March 1992**.

9. **Endangered Species Act.** This Order is consistent with the Endangered Species Act as specified in the Finding contained at Section II.P of this Order.

D. Impaired Water Bodies on CWA 303(d) List

1. Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 30 November 2006 USEPA gave final approval to California's 2006 Section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources* (40 CFR Part 130, et seq.)." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*." The listing for the Colusa Basin Drain includes: azinphos-methyl, carbofuran, diazinon, Group A Pesticides, malathion, methyl parathion, molinate/ordram and unknown toxicity.

2. **Total Maximum Daily Loads (TMDLs).** USEPA requires the Central Valley Water Board to develop TMDLs for each 303(d) listed pollutant and water body combination. TMDLs have been proposed for the Colusa Basin Drain. It is anticipated that the TMDLs will be completed by 2019.

3. The 303(d) listings and TMDLs have been considered in the development of the Order. A pollutant-by-pollutant evaluation of each pollutant of concern is described in Section VI.C.3. of this Fact Sheet.

E. Other Plans, Polices and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 *et seq.* (hereafter Title 27). The exemption, pursuant to Title 27 CCR Section 20090(a), is based on the following:

   a. The waste consists primarily of domestic sewage and treated effluent;

   b. The waste discharge requirements are consistent with water quality objectives; and

   c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act and amendments thereto are applicable to the discharge.

The Federal Clean Water Act mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., §1311(b)(1)(C); 40 CFR 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality*." Federal Regulations, 40 CFR 122.44(d)(1)(vi), further provide that "[w]*here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits*."

The Clean Water Act requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and

40 CFR 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Basin Plan at page IV-17.00**,** contains an implementation policy, "*Policy for Application of Water Quality Objectives*", that specifies that the Central Valley Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives*." This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) USEPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Central Valley Water Board's "*Policy for Application of Water Quality Objectives*" (40 CFR 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*." (Basin Plan at III-8.00.) The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, "…*water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)" in Title 22 of CCR.* The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCLs. The narrative tastes and odors objective states: *"Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses*."

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order).** This prohibition is based on CWC Section 13260 that requires filing a report of waste discharge (ROWD) before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

2. **Prohibition III.D (No bypasses or overflow of untreated wastewater, except under the conditions at CFR Part 122.41 (m)(4)).** As stated in Section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41(m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Central Valley Water Board's prohibition of bypasses,

the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

3. **Prohibition III.E (No controllable condition shall create a nuisance).** This prohibition is based on CWC Section 13050 that reqires water quality objectives established for the prevention of nuisance within a specified area. The Basin Plan prohibits conditions that create a nuisance.

B. `Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133.

Regulations promulgated in 40 CFR 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in Section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations.

a. **BOD_5 and TSS.** Federal Regulations, 40 CFR Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS. Advanced secondary-level treatment is necessary to protect the beneficial uses of the receiving stream and minimize degradation. Therefore, the final effluent limitations for BOD_5 and TSS are based on the technical capability of the advanced secondary processes. BOD_5 is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The secondary treatment standards for BOD_5 and TSS are indicators of the effectiveness of the treatment processes. The principal design parameter for wastewater treatment plants is the daily BOD_5 and TSS loading rates and the

corresponding removal rate of the system. In applying 40 CFR Part 133 for weekly and monthly average BOD_5 and TSS limitations, the application of advanced secondary treatment processes results in the ability to achieve lower levels for BOD_5 and TSS than the secondary standards currently prescribed; therefore, consistent with Order No. R5-2006-0009, this Order includes 30-day average BOD_5 and TSS limitations of 10 mg/L, which are technically based on the capability of an advanced secondary system. In addition to the average weekly and average monthly effluent limitations, a daily maximum effluent limitation for BOD_5 and TSS is included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. See Table F-4 for final technology-based effluent limitations required by this Order. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD_5 and TSS must be achieved by a secondary treatment plant, it must also be achieved by an advanced secondary (i.e., treatment beyond secondary level) treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD_5 and TSS over each calendar month.

b. **Flow.** The Facility was designed to provide advanced secondary level of treatment for up to a design flow of 1.2 mgd. Therefore, this Order contains an average dry weather discharge flow effluent limit of 1.2 mgd.

Table F-3. Summary of Technology-based Effluent Limitations, Discharge Point No. D-001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L[a]	10	15	30		
	lbs/day[b]	100	150	300		
Total Suspended Solids	mg/L[a]	10	15	30		
	lbs/day[b]	100	150	300		
Average Dry Weather Flow	mgd	1.2				

[a] To be ascertained by a 24-hour composite
[b] Based upon a design treatment capacity of 1.2 mgd

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…*" and with respect to disposal of wastewaters states that "...*disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"

The Federal CWA Section 101(a)(2), states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR Sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR Section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt

waste transport or waste assimilation as a beneficial use for any waters of the United States.

The Central Valley Water Board considered the factors listed in CWC section 13241 at the time of adoption of the previous Order No. R5-2006-0009 which initially established secondary level effluent limitations for protection of beneficial uses of the receiving water. The previous permit, however, did not recognize the MUN beneficial use to the receiving water. Although the receiving waters consist of modified agricultural drains upstream of the Colusa Basin Drain, which is specifically not designated with the MUN beneficial use in Table II-1 in the Basin Plan, this Order correctly interprets the beneficial uses of the receiving waters to include the beneficial use of MUN through implementation of State Water Board Resolution No. 88-63. As stated in Chapter II of the Basin Plan, "Water Bodies within the basins that do not have beneficial uses designated in Table II-1 are assigned MUN designations in accordance with the provisions of State Water Board Resolution No. 88-63 which is, by reference, a part of the Basin Plan" except for two non-applicable exceptions. Furthermore, as specified in Chapter IV of the Basin Plan, an exception to Resolution No. 88-63, and removal of the MUN beneficial use designation for the receiving waters, is effective after a Basin Plan Amendment is adopted by the Central Valley Water Board and approved by the State Water Board and Office of Administrative Law. Therefore, this Order contains new effluent limitations necessary to protect the municipal and domestic supply use of the receiving waters

a. **Receiving Water and Beneficial Uses. Colusa Basin Drain**. The receiving water is currently the GCID Lateral 26-2 and Agricultural Drain C, via Logan Creek, which is tributary to Colusa Basin Drain, which are waters of the United States. The flows in the GCID Lateral 26-2 and Agricultural Drain C are not continuous during the year, only when there is agricultural runoff or stormwater flow.

   The Basin Plan at II-2.00 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for GCID Lateral 26-2 and Agricultural Drain C, but does identify present and potential uses for the Colusa Basin Drain, to which these waters are tributary. Thus, pursuant to the Basin Plan and State Water Board plans and policies including Resolution No. 88-63, and consistent with the Federal Clean Water Act, beneficial uses applicable to GCID Lateral 26-2 and Agricultural Drain C are as follows

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
D-001 and D-002	Colusa Basin Drain	Municipal and domestic supply (MUN); Agricultural supply, including irrigation and stock watering (AGR); water contact recreation, including canoeing and rafting (REC-1); warm freshwater habitat (WARM); cold freshwater habitat (COLD); migration of aquatic organisms, warm and cold (MIGR); spawning, reproduction, and/or early development, warm and cold (SPWN); and wildlife habitat (WILD). Ground water recharge (GWR), freshwater replenishment (FRSH).

b. **Effluent and Ambient Background Data.** The reasonable potential analysis (RPA), as described in Section IV.C.3 of this Fact Sheet, was based on data from February 2006 through May 2010, which includes effluent and ambient background data submitted in SMRs and the Report of Waste Discharge (ROWD).

c. **Priority Pollutant Metals**

Hardness-Dependent CTR Metals Criteria. The *California Toxics Rule* and the *National Toxics Rule* contain water quality criteria for seven metals that vary as a function of hardness. The lower the hardness the lower the water quality criteria. The metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc.

This Order has established the criteria for hardness-dependent metals based on the reasonable worst-case ambient hardness as required by the SIP[1], the CTR[2] and State Water Board Order No. WQO 2008-0008 (City of Davis). The SIP and the CTR require the use of "receiving water" or "actual ambient" hardness, respectively, to determine effluent limitations for these metals. (SIP, § 1.2; 40 CFR § 131.38(c)(4), Table 4, note 4.) The CTR does not define whether the term "ambient," as applied in the regulations, necessarily requires the consideration of upstream as opposed to downstream hardness conditions. Therefore, where reliable, representative data are available, the hardness value for calculating criteria can be the downstream receiving water hardness, after mixing with the effluent (Order WQO 2008-0008, p. 11). The Central Valley Water Board thus has considerable discretion in determining ambient hardness (*Id.*, p.10.).

[1] The SIP does not address how to determine the hardness for application to the equations for the protection of aquatic life when using hardness-dependent metals criteria. It simply states, in Section 1.2, that the criteria shall be properly adjusted for hardness using the hardness of the receiving water.

[2] The CTR requires that, for waters with a hardness of 400 mg/L (as $CaCO_3$), or less, the actual ambient hardness of the surface water must be used. It further requires that the hardness values used must be consistent with the design discharge conditions for design flows and mixing zones.

The hardness values must also be protective under all flow conditions (*Id.*, pp. 10-11). As discussed below, scientific literature provides a reliable method for calculating protective hardness-dependent CTR criteria, considering all discharge conditions. This methodology produces criteria that ensure these metals do not cause receiving water toxicity, while avoiding criteria that are unnecessarily stringent.

i. **Reasonable Potential Analysis (RPA).** The SIP in Section 1.3 states, "The RWQCB shall…determine whether a discharge may: (1) cause, (2) have a reasonable potential to cause, or (3) contribute to an excursion above any applicable priority pollutant criterion or objective." Section 1.3 provides a step-by-step procedure for conducting the RPA. The procedure requires the comparison of the Maximum Effluent Concentration (MEC) and Maximum Ambient Background Concentration to the applicable criterion that has been properly adjusted for hardness. Unless otherwise noted, for the hardness-dependent CTR metals criteria the following procedures were followed for properly adjusting the criterion for hardness when conducting the RPA.

- For comparing the MEC to the applicable criterion, in accordance with the SIP, CTR, and Order WQO 2008-0008, the reasonable worst-case downstream hardness was used to adjust the criterion. In this evaluation the portion of the receiving water affected by the discharge is analyzed. For hardness-dependent criteria, the hardness of the effluent has an impact on the determination of the applicable criterion in areas in the receiving water affected by the discharge. Therefore, for this situation it is necessary to consider the hardness of the effluent in determining the applicable hardness to adjust the criterion. The procedures for determining the applicable criterion after proper adjustment using the reasonable worst-case downstream hardness is outlined in subsection ii, below.

- For comparing the Maximum Ambient Background Concentration to the applicable criterion, in accordance with the SIP, CTR, and Order WQO 2008-0008, the reasonable worst-case upstream hardness was used to adjust the criterion. In this evaluation the area outside the influence of the discharge is analyzed. For this situation, the discharge does not impact the upstream hardness. Therefore, the effect of the effluent hardness was not included in this evaluation. .

a) **Discharge Point No. EFF-001 (Colusa Basin Drain)**. The upstream receiving water (RSW-003) hardness varied from 43 mg/L to 55 mg/L (as $CaCO_3$), based on 11 samples from April 2007 to June 2009. The minimum upstream receiving water hardness of 43 mg/L (as $CaCO_3$) represents the reasonable worst-case upstream hardness and was used to adjust the criterion when comparing the Maximum Background Ambient Concentration to the criterion for the discharge to the Colusa Basin Drain at Discharge Point No. EFF-001. For comparing the MEC to the applicable criterion, in accordance

with the SIP, CTR, and Order WQO 2008-008, the reasonable worst-case downstream hardness was used to adjust the criterion. The procedures for determining the applicable criterion after proper adjustment using the reasonable worst-case downstream hardness is outlined in subsection ii below.

ii. Effluent Concentration Allowance (ECA) Calculations. A 2006 Study[1] developed procedures for calculating the effluent concentration allowance (ECA)[2] for CTR hardness-dependent metals. The 2006 Study demonstrated that it is necessary to evaluate all discharge conditions (e.g. high and low flow conditions) and the hardness and metals concentrations of the effluent and receiving water when determining the appropriate ECA for these hardness-dependent metals. Simply using the lowest recorded upstream receiving water hardness to calculate the ECA may result in over or under protective WQBELs.

The equation for the ECA is defined in Section 1.4, Step 2, of the SIP and is as follows:

$ECA = C + D(C - B)$; when $C > B$ (Equation 1)

$ECA = C$ (when $C \leq B$)[3] (Equation 2)

Where:

C = the priority pollutant criterion/objective, adjusted for hardness (see Equation 1, above)

B = the ambient background concentration

D = the dilution credit

The 2006 Study demonstrated that the relationship between hardness and the calculated criteria is the same for some metals, so the same procedure for calculating the ECA may be used for these metals. The same procedure can be used for chronic cadmium, chromium III, copper, nickel, and zinc. These metals are hereinafter referred to as “Concave Down Metals”. “Concave Down” refers to the shape of the curve represented by the relationship between hardness and the CTR criteria in Equation 3. Another similar procedure can be used for determining the ECA for acute cadmium, lead, and acute silver, which are referred to hereafter as “Concave Up Metals”.

[1] Emerick, R.W.; Borroum, Y.; & Pedri, J.E., 2006. California and National Toxics Rule Implementation and Development of Protective Hardness Based Metal Effluent Limitations. WEFTEC, Chicago, Ill.

[2] The ECA is defined in Appendix 1 of the SIP (page Apendix 1-2). The ECA is used to calculate water quality-based effluent limitations in accordance with Section 1.4 of the SIP

[3] The 2006 Study assumes the ambient background metals concentration is equal to the CTR criterion (i.e. $C \leq B$)

Concave Down Metals – For Concave Down Metals (i.e., chronic cadmium, chromium III, copper, nickel, and zinc) the 2006 Study demonstrates that when the effluent is in compliance with the CTR criteria and the upstream receiving water is in compliance with the CTR criteria, any mixture of the effluent and receiving water will always be in compliance with the CTR criteria. Therefore, based on any observed ambient background hardness, no receiving water assimilative capacity for metals (i.e., ambient background metals concentrations are at their respective CTR criterion) and the minimum effluent hardness, the ECA calculated using Equation 1 with a hardness equivalent to the minimum effluent hardness is protective under all discharge conditions (i.e., high and low dilution conditions and under all mixtures of effluent and receiving water as the effluent mixes with the receiving water). This is applicable whether the effluent hardness is less than or greater than the ambient background receiving water hardness.

The following equation provides fully protective water quality criteria for those metals that exhibit a concave down relationship:

$$\text{CTR Criterion} = \text{WER} \times (e^{m[\ln(H)]+b}) \qquad \text{(Equation 3)}$$

Where:

H = hardness (as $CaCO_3$)
WER = water-effect ratio
m, b = metal- and criterion-specific constants

In accordance with the CTR, the default value for the WER is 1. A WER study must be conducted to use a value other than 1. The constants “m” and “b” are specific to both the metal under consideration, and the type of total recoverable criterion (i.e., acute or chronic). The metal-specific values for these constants are provided in the CTR at paragraph (b)(2), Table 1.

The effluent hardness ranged from 162 mg/L to 208 mg/L (as $CaCO_3$), based on 13 samples from April 2007 to June 2009. The upstream receiving water hardness in the Colusa Basin Drain varied from 43 mg/L to 55 mg/L (as $CaCO_3$), based on 11 samples from April 2007 to June 2009. Using a hardness of 43 mg/L (as $CaCO_3$) to calculate the ECA for all Concave Down Metals will result in WQBELs that are protective under all potential effluent/receiving water mixing scenarios and under all known hardness conditions, assuming the following conservative conditions for the upstream receiving water:

- Upstream receiving water always at the lowest observed upstream receiving water hardness;

- Upstream receiving water concentration always at the CTR criteria (i.e., no assimilative capacity

An ECA based on a lower hardness (e.g., lowest upstream receiving water hardness) would also be protective, but would result in unreasonably stringent effluent limits considering the known conditions. Therefore, in this Order the ECA for all Concave Down Metals has been calculated using Equation 2 with a hardness of 43 mg/L (as $CaCO_3$). Based on the RPA analysis, there is no reasonable potential for these "concave down metals" to cause, or contribute to an excursion above any applicable priority pollutant criterion or objective.

Concave Up Metals – For Concave Up Metals (i.e., acute cadmium, lead, and acute silver), the 2006 Study demonstrates that the Design Hardness must not exceed the lowest recorded effluent hardness in order to adequately protective. However, for these metals the Design Hardness is not readily apparent, due to a different relationship between hardness and the metals criteria. Based on the 2006 Study, the following equation is used to determine the appropriate Design Hardness to calculate effluent limits that are protective under all discharge conditions. The following equation provides fully protective water quality criteria for those metals that exhibit a concave upward relationship

$$C = \left[\frac{m}{H_{rw}} \cdot \left(H_{eff} - H_{rw} \right) + 1 \right] \cdot e^{m \cdot \ln(H_{rw}) + b} \qquad \text{(Equation 4)}$$

Where:

C = regulatory criterion
H_{eff} = minimum observed effluent hardness
H_{rw} = minimum observed upstream receiving water hardness (when $H_{rw} < H_{eff}$)
b = metal- and criterion-specific constant
m = metal- and criterion-specific constant

Based on the RPA analysis, there is no reasonable potential for these "concave up metals" to cause, or contribute to an excursion above any applicable priority pollutant criterion or objective.

d. Human Health Criteria and Other Long-term Criteria

Effluent concentration allowances based on human health criteria are calculated similarly as described above, using the following equation.

$ECA_{HH} = HH + D(HH - B)$

Where:

ECA_{HH} = effluent concentration allowance for human health criterion
HH = human health criteria/objective
D = dilution credit

B = maximum observed receiving water concentration

For other long-term criteria, the effluent concentration allowances are set equal to the criteria/standards/objectives.

$ECA_{acute} = CMC$
$ECA_{chronic} = CCC$

e. Effluent Limitation Calculations

In calculating maximum effluent limitations, ECAs are converted to equivalent long term averages using statistical multipliers and the lowest is used. Additional statistical multipliers are then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL).

Acute and chronic toxicity ECAs are converted to equivalent MDEL and AMEL using the following equations.

$$AMEL = mult_{AMEL}\left[\min\left(\overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic}\right)\right]$$

$$MDEL = mult_{MDEL}\left[\min\left(M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}}\right)\right]$$

where:
$mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting acute ECA to LTA_{acute}
M_C = statistical multiplier converting chronic ECA to $LTA_{chronic}$

WQBELs based on human health and other long-term criteria, are also calculated in accordance with Section 1.4 of the SIP. For human health criteria, the ECA is set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

$$AMEL_{HH} = ECA_{HH}$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

f. Assimilative Capacity/Mixing Zone

USEPA established numeric criteria for priority toxic pollutants in the California Toxics Rule (CTR). The State Water Resources Control Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) to implement the CTR. The Central Valley Water Board's Basin Plan allows mixing zones provided the

Discharger has demonstrated that the mixing zone will not adversely impact beneficial uses. The Basin Plan further requires that in determining the size of a mixing zone, the Central Valley Water Board will consider the applicable procedures in USEPA's Water Quality Standards Handbook and the Technical Support Document for Water Quality Based Toxics Control (TSD). It is the Central Valley Water Board's discretion whether to allow a mixing zone. The SIP, in part, states that mixing zones shall not:

- Compromise the integrity of the entire water body;
- Cause acutely toxic conditions to aquatic life passing through the mixing zone;
- Restrict passage of aquatic life;
- Adversely impact biologically sensitive or critical habitats, including but not limited to, habitat of species listed under Federal or State endangered species laws;
- Produce undesirable or nuisance aquatic life;
- Result in floating debris, oil, or scum;
- Produce objectionable color, odor, taste, or turbidity;
- Cause objectionable bottom deposits;
- Cause nuisance;
- Be allowed at or near any drinking water intake;
- Dominate the receiving water body; and,
- Overlap a mixing zone from a different outfall.

USEPA's Water Quality Standards Handbook (WQSH) states that States may, at their discretion, allow mixing zones. The WQSH recommends that mixing zones be defined on a case-by-case basis after it has been determined that the assimilative capacity of the receiving stream can safely accommodate the discharge. This assessment should take into consideration the physical, chemical, and biological characteristics of the discharge and the receiving stream; the life history of and behavior of organisms in the receiving stream; and the desired uses of the waters. Mixing zones should not be allowed where they may endanger critical areas (e.g., drinking water supplies, recreational areas, breeding grounds and areas with sensitive biota). USEPA's TSD states, in part in Section 4.3.1, that mixing zones should not be permitted where they may endanger critical areas.

The Basin Plan, the SIP and USEPA's TSD state that allowance of a mixing zone is discretionary on the part of the Central Valley Water Board. Mixing zones will be limited to the amount of assimilative capacity necessary to comply with discharge limitations. Based on the available information, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero dilution/assimilative capacity within the receiving water is that the discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water. This permit contains a reopener to establish dilution credits and mixing zone if the Discharger conducts the necessary studies and makes any necessary physical improvements, and the Central Valley Water Board decides to

grant dilution credits and mixing zones. The Discharger has not requested a mixing zone for this discharge.

3. Determining the Need for WQBELs

a. The Central Valley Water Board conducted the RPA in accordance with Section 1.3 of the SIP. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Central Valley Water Board may use the SIP as guidance for water quality-based toxics control.[1] The SIP states in the introduction "*The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency*." Therefore, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs.

b. Constituents with No Reasonable Potential. WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential; however, monitoring for those pollutants is established in this Order as required by the SIP. If the results of effluent monitoring demonstrate reasonable potential, this Order may be reopened and modified by adding an appropriate effluent limitation.

c. Constituents with Reasonable Potential. The Central Valley Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for ammonia, dichlorobromomethane, dibromochloromethane and nitrate. WQBELs for these constituents are included in this Order. A summary of the RPA is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.

i. Ammonia

(a) WQO. The NAWQC for the protection of freshwater aquatic life for total ammonia, recommends acute (1-hour average; criteria maximum concentration or CMC) standards based on pH and chronic (30-day average; criteria continuous concentration or CCC) standards based on pH and temperature. USEPA also recommends that no 4-day average concentration should exceed 2.5 times the 30-day CCC. USEPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature. Because the **Colusa Basin Drain** has a beneficial use of

[1] See Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

cold freshwater habitat and the presence of salmonids and early fish life stages in the **Colusa Basin Drain** is well-documented, the recommended criteria for waters where salmonids and early life stages are present were used.

The maximum permitted effluent pH is 8.5, as the Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5. In order to protect against the worst-case short-term exposure of an organism, a pH value of 8.5 was used to derive the acute criterion. The resulting acute criterion is 2.14 mg/L. However, using site specific temperature and pH, the resulting acute/30-day chronic criteria during the dry season (May – October) is 5.403 / 1.075 mg/L for Agricultural Drain C and 1.945 / 0.523 mg/L for the GCID Lateral 26-2. During the wet season (November – April), the acute/30-day chronic criteria is 6.070 / 1.184 for Agricultural Drain C and 2.968 / 0.641 mg/L for the GCID Lateral 26-2.

(b) RPA Results. Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger **does** currently use nitrification to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia would violate the Basin Plan narrative toxicity objective. The maximum effluent concentration (MEC) for ammonia was 1.05 mg/L, while the maximum observed upstream receiving water concentration was 0.12 mg/L. Because domestic wastewater contains ammonia and the MEC for ammonia exceeds the NAWQC, ammonia in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective.

(c) WQBELs. The Central Valley Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. The SIP procedure assumes a 4-day averaging period for calculating the long-term average discharge condition (LTA). However, USEPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day CCC. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day CCC was calculated assuming a 30-day averaging period. The lowest LTA representing the acute, 4-day CCC, and 30-day CCC is then selected for deriving the average monthly effluent limitation (AMEL) and the maximum daily effluent limitation (MDEL). The remainder of the WQBEL calculation for ammonia was performed according to the SIP

procedures. This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) for **ammonia** as shown in Tables F-6 through F-9 of this Fact Sheet for the discharges to the GCID Lateral 26-2 canal and the AG Drain C canal. Tables F-6 through F-9 are based on temperature and pH sample results collected during the wet and dry seasons at each discharge point (Ag Drain C canal and GCID Lateral 26-2 canal). Effluent limitations for ammonia were based on maximum temperature and pH sample results in both of the two receiving waterbodies (GCID and AG Drain C). There were considerable differences between the dry and wet seasons at the two receiving waterbodies.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 1.05 mg/L is greater than the applicable WQBELs, however the average MEC values are 0.78 mg/L. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible**.**

ii. Chlorine Residual

(a) WQO. USEPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1-hour average (acute) criteria for chlorine residual are 0.01 mg/L and 0.02 mg/L, respectively. These criteria are protective of the Basin Plan's narrative toxicity objective.

(b) RPA Results. The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. The Discharger uses a sodium bisulfite process to dechlorinate the effluent prior to discharge to **Colusa Basin Drain**. Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the NAWQC.

(c) WQBELs. The USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average 1-hour limitation is considered more appropriate than an average daily limitation. This Order contains a 4-day average effluent limitation and 1-hour average effluent limitation for chlorine residual of 0.01 mg/L and 0.02 mg/L, respectively, based on USEPA's NAWQC, which implements the Basin Plan's narrative toxicity objective for protection of aquatic life.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that immediate compliance with these effluent limitations is feasible.

iii. Pathogens

The Central Valley Water Board, when developing NPDES permits, implements recommendations by DPH for the appropriate disinfection requirements for the protection of MUN, REC-1 and AGR. The disinfection requirements in the proposed Order implement the DPH recommendations and are fully protective of the beneficial uses of the receiving water.

(a) WQO. DPH has developed reclamation criteria, CCR, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 mL as a 7-day median. As coliform organisms are living and mobile, it is impracticable to quantify an exact number of coliform organisms and to establish weekly average limitations. Instead, coliform organisms are measured as a most probable number and regulated based on a 7-day median limitation.

Title 22 also requires that recycled water used as a source of water supply for non-restricted recreational impoundments be disinfected tertiary recycled water that has been subjected to conventional treatment. A non-restricted recreational impoundment is defined as *"…an impoundment of recycled water, in which no limitations are imposed on body-contact water recreational activities.*" Title 22 is not directly applicable to surface waters; however, the Central Valley Water Board finds that it is appropriate to apply an equivalent level of treatment to that required by the Department of Public Health's reclamation criteria because the receiving water is used for irrigation of agricultural land and for contact recreation purposes. The stringent disinfection criteria of Title 22 are appropriate since the undiluted effluent may be used for the irrigation of food crops and/or for body-contact water recreation. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens

(b) RPA Results. The beneficial uses being applied to the Colusa Basin Drain include **municipal and domestic supply, water contact recreation, and agricultural irrigation supply**, and there is, at times, less than 20:1 dilution. To protect these beneficial uses, the Central Valley Water Board finds that the wastewater must be disinfected and adequately treated to prevent disease. The method of treatment is not prescribed by this Order; however, wastewater must be treated to a level equivalent to that recommended by DPH.

(c) WQBELs. In accordance with the requirements of Title 22, this Order includes effluent limitations for total coliform organisms of 2.2 MPN/100 mL as a 7-day median and 23 MPN/100 mL (daily max), which are the existing effluent limits. Title 22 requires that the Order include effluent limitations for total coliform organisms of 2.2 MPN/100 mL as a 7-day median; 23 MPN/100 mL, not to be exceeded more than once in a 30-day period; and 240 MPN/100 mL as an instantaneous maximum. Since the existing effluent limitations are more stringent than the Title 22 requirements, the existing limits will be retained. The Discharger has been able to meet the existing limits, and future compliance with these stricter limits is expected.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the immediate compliance with these effluent limitations is feasible.

iv. pH

(a) WQO. The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "…pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses." Due to periods of no flow in the receiving water and at a minimum, instantaneous minimum and maximum effluent limits of 6.5 and 8.5, respectively, are necessary to comply with the Basin Plan objectives for pH.

(b) RPA Results. The Discharger monitored weekly pH levels in the effluent. Based on 33 pH samples taken from June 2007 through May 2010, the pH level averaged 7.45, with the maximum weekly level at 8.01 and a minimum weekly level at 6.95. The 30-day average maximum pH was 7.45. The discharge has a reasonable potential to cause or contribute to an excursion above the effluent limit for pH.

(c) WQBELs. Effluent limitations for pH of 6.5 as an instantaneous minimum and 8.5 as an instantaneous maximum are included in this Order based on protection of the Basin Plan objectives for pH.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the immediate compliance with these effluent limitations is feasible.

v. Salinity

(a) WQO. There are no USEPA water quality criteria for the protection of aquatic organisms for electrical conductivity, total dissolved solids, sulfate, and chloride. The Basin Plan contains a chemical constituent objective that incorporates State MCLs, contains a narrative objective, and contains

numeric water quality objectives for electrical conductivity, total dissolved solids, sulfate, and chloride.

Table F-5. Salinity Water Quality Criteria/Objectives

Parameter	Agricultural WQ Goal[1]	Secondary MCL[3]	Effluent	
			Average	Maximum
EC (µmhos/cm)	Varies[2]	900, 1600, 2200	**790**	**1,144**
TDS (mg/L)	Varies	500, 1000, 1500	**544**	**688**
Sulfate (mg/L)	Varies	250, 500, 600	**n/a**	**n/a**
Chloride (mg/L)	Varies	250, 500, 600	**n/a**	**n/a**

1 Agricultural water quality goals based on *Water Quality for Agriculture*, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985)

2 The EC level in irrigation water that harms crop production depends on the crop type, soil type, irrigation methods, rainfall, and other factors. An EC level of 700 umhos/cm is generally considered to present no risk of salinity impacts to crops. However, many crops are grown successfully with higher salinities.

3 The secondary MCLs are stated as a recommended level, upper level, and a short-term maximum level.

(1) Electrical Conductivity. The secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum. The agricultural water quality goal, that would apply the narrative chemical constituents objective, is 700 µmhos/cm as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 700 µmhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops, such as beans, carrots, turnips, and strawberries. These crops are either currently grown in the area or may be grown in the future. Most other crops can tolerate higher EC concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the EC, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts. The Basin Plan does not contain a specific EC water quality objective for the Colusa Basin Drain.

(2) Total Dissolved Solids. The secondary MCL for TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum. The recommended agricultural water quality goal for TDS, that would apply the narrative chemical constituent objective, is 450 mg/L as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). Water Quality for Agriculture

evaluates the impacts of salinity levels on crop tolerance and yield reduction, and establishes water quality goals that are protective of the agricultural uses. The 450 mg/L water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops. Only the most salt sensitive crops require irrigation water of 450 mg/L or less to prevent loss of yield. Most other crops can tolerate higher TDS concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the TDS, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts. The Basin Plan does not contain a specific TDS water quality objective for the Sacramento River.

(b) RPA Results.

(1) Electrical Conductivity. A review of the Discharger's monitoring reports shows an average effluent EC of 790 µmhos/cm, with a range from 572 µmhos/cm to 1,144 µmhos/cm. The background receiving water EC for the Colusa Basin Drain averaged 657 µmhos/cm, with a maximum of 2,610 µmhos/cm.

(2) Total Dissolved Solids. The average TDS effluent concentration was 544 mg/L with concentrations ranging from 470 mg/L to 688 mg/L.

(c) WQBELs. To protect the receiving water from further salinity degradation, this Order includes a performance-based annual average effluent limitation of 845 µmhos/cm for EC. This interim performance-based effluent limitation is derived using the 99.9 percentile of the rolling 12-month average effluent concentration from January 2006 through March 2011.

This Order also requires the Discharger to implement pollution prevention measures to reduce the salinity in its discharge to the receiving water. Specifically this Order requires the Discharger to prepare and implement a salinity evaluation and minimization plan in accordance with CWC section 13263.3(d)(3), and to report on progress in reducing salinity discharges to the receiving water. Implementation measures to reduce salt loading may include source control, mineralization reduction, chemical addition reductions, changing to water supplies with lower salinity, and limiting the salt load from domestic and industrial dischargers. Also water supply monitoring is required to evaluate the relative contribution of salt from the source water to the effluent.

(d) Plant Performance and Attainability. The existing plant's discharge has caused an exceedance of the Water Quality objective for EC for the agricultural water quality goal, and therefore there are salinity limitations in this Order

vi. Nitrate

(a) WQO. DPH has adopted primary MCLs for the protection of human health for nitrite and nitrate that are equal to 1 mg/L and 10 mg/L (measured as nitrogen), respectively. DPH has also adopted a primary MCL of 10 mg/L for the sum of nitrate and nitrite, measured as nitrogen.

USEPA has developed a primary MCL and an MCL goal of 1 mg/L for nitrite (as nitrogen). For nitrate, USEPA has developed Drinking Water Standards (10 mg/L as primary MCL) and NAWQC for protection of human health (10 mg/L for non-cancer health effects). Recent toxicity studies have indicated a possibility that nitrate is toxic to aquatic organisms.

(b) RPA Results. Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. Nitrate and nitrite are known to cause adverse health effects in humans. Inadequate or incomplete denitrification may result in the discharge of nitrate and/or nitrite to the receiving stream. The conversion of ammonia to nitrites and the conversion of nitrites to nitrates present a reasonable potential for the discharge to cause or contribute to an in-stream excursion above the Primary MCLs for nitrite and nitrate.

(c) WQBELs. This Order contains a final average monthly effluent limitation (AMEL) for nitrate of 10 mg/L, based on the protection of the Basin Plan's narrative chemical constituents' objective and to assure the treatment process adequately nitrifies and denitrifies the waste stream.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC for nitrate (as N) of 15.7 mg/L is greater than the WQBELs, and therefore, the Discharger appears to be in immediate non-compliance with nitrate final effluent limitations. The Facility includes nitrification, but does not include denitrification. New or modified control measures may be necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. Therefore, a time schedule for compliance with the effluent limit is established in Time Schedule Order No. R5-2011-XXXX (TSO) in accordance with CWC section 13301. The TSO also requires preparation and implementation of a pollution prevention plan in compliance with CWC section 13263.3.

vii. Dibromochloromethane

(a) WQO. The CTR includes a criterion of 0.41 µg/L for dibromochloromethane for the protection of human health for waters from which both water and organisms are consumed.

(b) RPA Results. CTR monitoring was performed from January 2006 through May 2010. The MEC for dibromochloromethane was 5.3 µg/L. Therefore, dibromochloromethane in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health.

(c) WQBELs. This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) for dibromochloromethane of 0.41 µg/L and 0.82 µg/L, respectively, based on the CTR criterion for the protection of human health.

(d) Plant Performance and Attainability. Analysis of the effluent monitoring samples shows an MEC of 5.3 µg/L, and therefore, the Discharger appears to be in immediate non-compliance with dibromochloromethane final effluent limitations. New or modified control measures may be necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. Therefore, a time schedule for compliance with the effluent limit is established in TSO Order No. R5-2011-XXXX in accordance with CWC section 13301. The TSO also requires preparation and implementation of a pollution prevention plan in compliance with CWC section 13263.3. The Discharger will have to implement improvements to the Facility in order to meet the final effluent limitations.

viii. Dichlorobromomethane

(a) WQO. The CTR includes a criterion of 0.56 µg/L for dichlorobromomethane for the protection of human health for waters from which both water and organisms are consumed.

(b) RPA Results. CTR monitoring was performed monthly from January 2006 through May 2010. The MEC for dichlorobromomethane was 20.2 µg/L. Therefore, dichlorobromomethane in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health.

(c) WQBELs. This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) for dichlorobromomethane of 0.56 µg/L and 1.13 µg/L, respectively, based on the CTR criterion for the protection of human health.

(d) Plant Performance and Attainability. Analysis of the effluent monitoring samples shows an MEC of 20.2 µg/L; therefore, the Discharger appears to

be in immediate non-compliance with dichlorobromomethane final effluent limitations. New or modified control measures may be necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. Therefore, a time schedule for compliance with the effluent limit is established in TSO R5-2011-XXXX in accordance with CWC section 13301. The TSO also requires preparation and implementation of a pollution prevention plan in compliance with CWC section 13263.3. The Discharger will have to implement improvements to the Facility in order to meet the final effluent limitations.

4. WQBEL Calculations

a. This Order includes WQBELs for ammonia, EC, dibromochloromethane, dichlorobromomethane, nitrate, pH, and total coliform. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below. See **Attachment H** for the WQBEL calculations.

b. Effluent Concentration Allowance. For each water quality criterion/objective, the ECA is calculated using the following steady-state mass balance equation from Section 1.4 of the SIP:

$ECA = C + D(C - B)$ *where* $C>B$, *and*
$ECA = C$ *where* $C \leq B$

where:
ECA = effluent concentration allowance
D = dilution credit
C = the priority pollutant criterion/objective
B = the ambient background concentration.

According to the SIP, the ambient background concentration (B) in the equation above shall be the observed maximum with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the arithmetic mean concentration of the ambient background samples. For ECAs based on MCLs, which implement the Basin Plan's chemical constituents objective and are applied as annual averages, an arithmetic mean is also used for B due to the long-term basis of the criteria.

c. Basin Plan Objectives and MCLs. For WQBELs based on site-specific numeric Basin Plan objectives or MCLs, the effluent limitations are applied directly as the ECA as either an MDEL, AMEL, or average annual effluent limitations, depending on the averaging period of the objective.

d. Aquatic Toxicity Criteria. WQBELs based on acute and chronic aquatic toxicity criteria are calculated in accordance with Section 1.4 of the SIP. The ECAs are

converted to equivalent long-term averages (i.e. LTAacute and LTAchronic) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers.

e. **Human Health Criteria.** WQBELs based on human health criteria, are also calculated in accordance with Section 1.4 of the SIP. The ECAs are set equal to the AMEL and a statistical multiplier was used to calculate the MDEL.

$$AMEL = mult_{AMEL}\left[\min\left(\overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic}\right)\right]$$

$$MDEL = mult_{MDEL}\left[\min\left(M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}}\right)\right]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where:
multAMEL = statistical multiplier converting minimum LTA to AMEL
multMDEL = statistical multiplier converting minimum LTA to MDEL
MA = statistical multiplier converting acute ECA to LTA_{acute}
MC = statistical multiplier converting chronic ECA to $LTA_{chronic}$

Table F-6. WQBEL Calculations For Ammonia – Ag Drain C – May – October[3]

	Acute	Chronic 4-day	Chronic 30-day
Criteria (m/L)[1]	5.403	2.689	1.075
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	5.403	2.689	1.075
ECA Multiplier	0.321	0.527	0.78
LTA	1.73	2.10	0.57
AMEL Multiplier (95th%)	[2]	[2]	1.55
AMEL (mg/L)	[2]	[2]	**1.30**
MDEL Multiplier (99th%)	[2]	[2]	3.11
MDEL (mg/L)	[2]	[2]	**2.61**

[1] USEPA Ambient Water Quality Criteria
[2] Limitations based on chronic LTA (Chronic LTA < Acute LTA)
[3] Based on temperature of 21.7 degrees C and pH of 8.23

Table F-7. WQBEL Calculations For Ammonia – GCID Lateral 26-2 – May - October[3]

	Acute	Chronic 4-day	Chronic 30-day
Criteria (mg/L) [1]	1.945	1.308	0.523
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	1.945	1.308	0.523
ECA Multiplier	0.321	0.527	0.78
LTA	0.62	1.02	0.28
AMEL Multiplier (95th%)	[2]	[2]	1.55
AMEL (mg/L)	[2]	[2]	**0.63**
MDEL Multiplier (99th%)	[2]	[2]	3.11
MDEL (mg/L)	[2]	[2]	**1.27**

1 USEPA Ambient Water Quality Criteria
2 Limitations based on chronic LTA (Chronic LTA < Acute LTA)
3 Based on temperature of 18.9 degrees C and pH of 8.77

Table F-8. WQBEL Calculations For Ammonia – Ag Drain C – November - April[3]

	Acute	Chronic 4-day	Chronic 30-day
Criteria (mg/L) [1]	6.070	2.959	1.184
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	6.070	2.959	1.184
ECA Multiplier	0.321	0.527	0.78
LTA	1.95	2.31	0.62
AMEL Multiplier (95th%)	[2]	[2]	1.55
AMEL (mg/L)	[2]	[2]	**1.43**
MDEL Multiplier (99th%)	[2]	[2]	3.11
MDEL (mg/L)	[2]	[2]	**2.87**

1 USEPA Ambient Water Quality Criteria
2 Limitations based on chronic LTA (Chronic LTA < Acute LTA)
3 Based on temperature of 15.15 degrees C and pH of 8.17

Table F-9. WQBEL Calculations For Ammonia – GCID Lateral 26-2 – November - April[3]

	Acute	Chronic 4-day	Chronic 30-day
Criteria (mg/L) [1]	2.968	1.602	0.641
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	2.968	1.602	0.641
ECA Multiplier	0.321	0.527	0.78
LTA	0.95	1.25	0.34
AMEL Multiplier (95th%)	[2]	[2]	1.55
AMEL (mg/L)	[2]	[2]	**0.77**
MDEL Multiplier (99th%)	[2]	[2]	3.11
MDEL (mg/L)	[2]	[2]	**1.55**

1 USEPA Ambient Water Quality Criteria
2 Limitations based on chronic LTA (Chronic LTA < Acute LTA)
3 Based on temperature of 16.2 degrees C and pH of 8.54

Table F-10. WQBEL Calculations For Dibromochloromethane

	Human Health
Criteria (ug/L)	0.41
Dilution Credit	No Dilution
ECA	0.41
AMEL (ug/L) [1]	**0.41**
MDEL/AMEL Multiplier[2]	2.01
MDEL (ug/L)	**0.82**

[1] AMEL = ECA per section 1.4.B, Step 6 of SIP

[2] Assumes sampling frequency n<=4. Uses MDEL/AMEL multiplier from Table 2 of SIP.

Table F-11. WQBEL Calculations For Dichlorobromomethane

	Human Health
Criteria (ug/L)	0.56
Dilution Credit	No Dilution
ECA	0.56
AMEL (ug/L) [1]	**0.56**
MDEL/AMEL Multiplier[2]	2.01
MDEL (ug/L)	**1.13**

[1] AMEL = ECA per section 1.4.B, Step 6 of SIP

[2] Assumes sampling frequency n<=4. Uses MDEL/AMEL multiplier from Table 2 of SIP.

Table F-12. Summary of Water Quality-Based Effluent Limitations, Discharge Point No. D-001 (Ag Drain C) and D-002 (GCID Lateral 26-2)

Parameter	Units	Effluent Limitations			
		Average Monthly	**Average Weekly**	**Maximum Daily**	**Other**
Total Residual Chlorine	mg/L			0.02 (1-hr average)	0.01 (4-Day Average)
Total Coliform Bacteria	MPN/100 mL			23	2.2 (7-Day Median)
pH	standard units			8.5 (maximum)	6.5 (minimum)
Nitrate (as N)	mg/L	10			
Ammonia[a]	mg/L	1.30 (Ag Drain C), 0.63 (GCID Lateral 26-2)		2.61 (Ag Drain C, 1.27 (GCID Lateral26-2)	
	lbs/day[c]	13.01 (Ag Drain C), 6.33 (GCID Lateral 26-2)		26.11 (Ag Drain C), 12.70 (GCID Lateral 26-2)	
Ammonia[b]	mg/L	1.43 (Ag Drain C), 0.77 (GCID Lateral 26-2)		2.87 (Ag Drain C), 1.55 (GCID Lateral 26-2)	
	lbs/day[c]	14.32(Ag Drain C), 7.75 (GCID Lateral 26-2)		28.74 (Ag Drain C), 15.55 (GCID Lateral 26-2)	
Dibromochloromethane	ug/L	0.41		0.82	

Dichlorobromomethane	ug/L	0.56		1.13	
Electrical Conductivity					845 (Annual Average)

[a] For the period of May 1 through October 31
[b] For the period of November 1 through April 30
[c] Based upon a design treatment capacity of 1.2 mgd

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E Section V.). This Order also contains effluent limitations for acute toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

a. Acute Aquatic Toxicity.

The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at page III-8.00) The Basin Plan also states that, *"…effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate…*". USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc.*" Accordingly, effluent limitations for acute toxicity have been included in this Order as follows:

Acute Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay-- ---------- 70%
Median for any three consecutive bioassays --------- 90%

b. Chronic Aquatic Toxicity. The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at page III-8.00) Based on chronic WET testing performed by the Discharger from January 2006 through May 2010, the

discharge does not have reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

No dilution has been granted for the chronic condition. Therefore, chronic toxicity testing results exceeding one (1) chronic toxicity unit (TUc) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective.

The Monitoring and Reporting Program of this Order requires **two** chronic WET monitoring events for demonstration of compliance with the narrative toxicity objective. In addition to WET monitoring, the Special Provision in section VI.C.2.a. of the Order requires the Discharger to submit to the Central Valley Water Board an Initial Investigative TRE Workplan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger, requirements for accelerated monitoring, and requirements for TRE initiation if a pattern of toxicity is demonstrated.

Numeric chronic WET effluent limitations have not been included in this Order. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in the petitioning of a NPDES permit in the Los Angeles Region[1] that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, "*In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits."* The process to revise the SIP is currently underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision it is infeasible to develop numeric effluent limitations for chronic toxicity. Therefore, this Order requires that the Discharger meet best management practices for compliance with the Basin Plan's narrative toxicity objective, as

[1] In the Matter of the Review of Own Motion of Waste Discharge Requirements Order Nos. R4-2002-0121 [NPDES No. CA0054011] and R4-2002-0123 [NPDES NO. CA0055119] and Time Schedule Order Nos. R4-2002-0122 and R4-2002-0124 for Los Coyotes and Long Beach Wastewater Reclamation Plants Issued by the California Regional Water Quality Control Board, Los Angeles Region SWRCB/OCC FILES A-1496 AND 1496(a)

allowed under 40 CFR 122.44(k). This Order also includes a narrative effluent chronic toxicity trigger, chronic WET monitoring requirements, and a provision that requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity.

To ensure compliance with the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic WET testing, as specified in the Monitoring and Reporting Program (Attachment E section V.). Furthermore, the Special Provision contained at VI.C.2.a. of this Order requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates toxicity exceeding the numeric toxicity monitoring trigger, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE workplan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to perform accelerated chronic toxicity monitoring, as well as, the threshold to initiate a TRE if toxicity has been demonstrated.

D. Final Effluent Limitations

a. The following table summarizes the final effluent limitations for Discharge Point D-001 and D-002:

Table F-13. Final Effluent Limitations for Discharge Point No. D-001 (Ag Drain C) and D-002 (GCID Lateral 26-2)

Parameter	Units	Effluent Limitations			
		Average Monthly	**Average Weekly**	**Maximum Daily**	**Other**
Biochemical Oxygen Demand 5-day @ 20°C	mg/L[a]	10	15	30	
	lbs/day[b]	100	150	300	
Total Suspended Solids	mg/L[a]	10	15	30	
	lbs/day[b]	100	150	300	
Total Residual Chlorine	mg/L			0.02 (1-hr average)	0.01 (4-Day Average)
Total Coliform Bacteria	MPN/100 mL			23	2.2 (7-Day Median)
Nitrate (as N)	mg/L	10			
Ammonia[c]	mg/L	1.30 (Ag Drain C), 0.63 (GCID Lateral 26-2)		2.61 (Ag Drain C, 1.27 (GCID Lateral 26-2)	
	lbs/day[b]	13.01 (Ag Drain C), 6.33 (GCID Lateral 26-2)		26.11 (Ag Drain C), 12.70 (GCID Lateral 26-2)	
Ammonia[d]	mg/L	1.43 (Ag Drain C), 0.77 (GCID Lateral 26-2)		2.87 (Ag Drain C), 1.55 (GCID Lateral 26-2)	

	lbs/day[b]	14.32 (Ag Drain C), 7.75 (GCID Lateral 26-2)		28.74 (Ag Drain C), 15.55 (GCID Lateral 26-2)	
Dibromochloromethane	ug/L	0.41		0.82	
Dichlorobromomethane	ug/L	0.56		1.13	
Electrical Conductivity					845 (Annual Average)

[a] To be ascertained by a 24-hour composite
[b] Based upon a design treatment capacity of 1.2 mgd
[c] For the period of May 1 through October 31
[d] For the period of November 1 through April 30

b. Percent Removal. The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 85 percent.

c. Acute Whole Effluent Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70%, minimum for any one bioassay; and
ii. 90%, median for any three consecutive bioassays.

d. pH. The discharge shall not have a pH less than 6.5 nor greater than 8.5.

e. Average Dry Weather Flow. The average dry weather discharge flow shall not exceed 1.2 mgd**.**

1. Mass-based Effluent Limitations

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated based upon the permitted average daily discharge flow of 1.2 mgd.

2. Averaging Periods for Effluent Limitations.

40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, USEPA recommends the use of a maximum daily effluent limitation in lieu of average weekly effluent limitations for two reasons. *"First, the basis for the 7-day*

average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge's potential for causing acute toxic effects would be missed." (TSD, pg. 96) This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for ammonia, chlorodibromomethane, and dichlorobromomethane as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. Furthermore, for BOD, TSS, pH, coliform and total residual chlorine, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3. of this Fact Sheet.

For effluent limitations based on Primary and Secondary MCLs, except nitrate and nitrite, this Order includes annual average effluent limitations. The Primary and Secondary MCLs are drinking water standards contained in Title 22 of the California Code of Regulations. Title 22 requires compliance with these standards on an annual average basis (except for nitrate and nitrite), when sampling at least quarterly. Since it is necessary to determine compliance on an annual average basis, it is impracticable to calculate average weekly and average monthly effluent limitations because such limits would be more stringent than necessary to protect the MUN beneficial use.

3. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the existing Order. This Order contains new effluent limits for Ammonia, Nitrate EC, Dibromochloromethane, and Dichlorobromomethane.

Order No. R5-2006-0009 contained effluent limitations for turbidity. The prior limitations were to ensure the treatment system was functioning properly and could meet the limits for solids and coliform. The prior effluent limitations were not intended to regulate turbidity in the receiving water. Rather, turbidity is an operational parameter to determine proper system functioning and not a WQBEL.

This Order contains performance-based operational turbidity specifications to be met in lieu of effluent limitations. The revised Order does not include effluent limitations for turbidity. However, the performance-based specification in this Order is an equivalent limit that is not less stringent, and therefore does not constitute backsliding.

The revised operational specifications for turbidity are the same as the effluent limitations in Order No. R5-2006-0009. These revisions are consistent with State regulations implementing recycled water requirements.

The revision in the turbidity limitation is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16 because this

Order imposes equivalent or more stringent requirements than Order No. R5-2006-0009 and therefore does not allow degradation.

4. Satisfaction of Antidegradation Policy

This Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. The Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

The permitted surface water discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, total suspended solids and pH. The WQBELs consist of restrictions on ammonia, total coliform, chlorodibromomethane, and dichlorobromomethane and EC. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes new effluent limitations for ammonia, chlorodibromomethane, dichlorobromomethane, electrical conductivity and nitrate to meet numeric objectives or protect beneficial uses.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively,

this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Central Valley Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]*he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses.*" The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for bacteria, biostimulatory substances, color, chemical constituents, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.

B. Groundwater

1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

3. Nitrate, which was found to be present in the wastewater at an average concentration of up to 16.6 mg/L as nitrogen, has the potential to degrade groundwater quality because there is little ability for attenuation in the shallow permeable vadose zone beneath the Facility. Groundwater monitoring data show nitrate concentrations are below the primary MCL of 10 mg/L in monitoring wells (upgradient at 4.50 mg/l, downgradient at 6.37 mg/L). The Chemical Constituents objective prohibits concentrations of chemical constituents in excess of California MCLs in groundwater that is designated as municipal or domestic supply. The California primary MCL for nitrate is equivalent to 10 mg/L as nitrogen, and groundwater beneath the facility is designated as municipal or domestic supply.

4. Comparing the results from data from the upgradient and downgradient monitory wells indicates that the Facility does not appear to be impacting groundwater quality

5. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for the Facility.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies have been retained from Order No. R5-2006-0009.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

2. Effluent monitoring frequencies and sample types for BOD, TSS, Total Residual Chlorine, Total Coliform, Turbidity, pH, and Flow have been retained from Order No. R5-2006-0009 to determine compliance with effluent limitations for these parameters.

3. Order No. R5-2006-0009 required monthly annual priority pollutant effluent monitoring for the first year of the new treatment system and annually thereafter. This Order required annual priority pollutant effluent monitoring.

4. The SIP states that if "…*all reported detection limits of the pollutant in the effluent are greater than or equal to the C [water quality criterion or objective] value, the RWQCB [Central Valley Water Board] shall establish interim requirements…that require additional monitoring for the pollutant*…." All reported detection limits for are greater than or equal to corresponding applicable water quality criteria or objectives. Monitoring for these constituents has been included in this Order in accordance with the SIP.

5. New monitoring requirements are included for standard minerals, nitrate, dibromochloromethane and dichlorobromomethane.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity. Quarterly** 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.

2. **Chronic Toxicity.** The previous Order No. R5-2006-0009 required one chronic toxicity test during the permit term. Chronic whole effluent toxicity testing is being increased to twice during the permit cycle in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

b. Receiving water monitoring frequencies and sample types for pH, dissolved oxygen, turbidity, temperature, EC, fecal coliform bacteria, and ammonia have been retained from Order No. R5-2006-0009 to determine compliance with effluent limitations for these parameters.

c. Order No. R5-2006-0009 required monthly annual priority pollutant receiving water monitoring for the first year of the new treatment system and annually thereafter. This Order required annual priority pollutant receiving water monitoring.

2. Groundwater

a. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Central Valley Water Board plans and policies, including Resolution No. 68-16. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements contained in the Special Provision contained in section VI.C.6.a. of this Order. Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

2. Water Supply Monitoring

Water supply monitoring is required to evaluate the source of constituents in the wastewater.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The discharger must

comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Mercury.** This provision allows the Central Valley Water Board to reopen this Order in the event mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted. In addition, this Order may be reopened if the Central Valley Water Board determines that a mercury offset program is feasible for dischargers subject to NPDES permits.

b. **Whole Effluent Toxicity.** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a Toxicity Reduction Evaluation (TRE). This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.

c. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for dibromochloromethane and dichlorobromomethane. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

d. **Constituent Study.** There are indications that the discharge may contain constituents that have a reasonable potential to cause or contribute to an exceedance of water quality objectives. This Order requires the Discharger to complete a study of these constituents' potential effect in the receiving water. This reopener provision allows the Central Valley Water Board to reopen this Order for addition of effluent limitations and requirements for these constituents if after

review of the study results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective.

e. **Salinity Evaluation and Minimization Plan.** This Order requires the Discharger to prepare a Salinity Evaluation and Minimization Plan (SEMP). This reopener provision allows the Central Valley Water Board to reopen this Order for addition and/or modification of effluent limitations and requirements for salinity based on review and implementation of the SEMP.

f. **New Information.** This Order may be reopened and modified as necessary when new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance, including approved process changes or an updated mixing zone/dilution study. For example, modifications to the Chronic Whole Effluent Toxicity Accelerated Monitoring Trigger, or the effluent limitations for chlorine disinfection byproducts or ammonia, may be appropriate.

g. **Effluent Quality and Treatment Performance.** The treatment processes employed at the treatment plant were designed and intended to provide specific pollutant removal efficiency. This Order contains effluent limitations that are partially based on the treatment plant's ability to remove pollutants. This Order also considers the assimilative capacity in the receiving water to minimize the impact of pollutants discharged from the treatment plant. Therefore, if a trend of declining treatment plant pollutant removal efficiency, or a trend of increasing effluent pollutant concentrations is observed, the Discharger is required to submit an Effluent Quality and Treatment Performance Study that identifies the cause of the change in effluent quality. If the Central Valley Board determines that the change and resulting degradation is not warranted or not in compliance with the anti-degradation policy, then this Order may be reopened, and the effluent limitations tightened, or other regulatory measures may be employed to ensure that the quality of the receiving water is not unnecessarily degraded.

h. **Constituents of Emerging Concern (CECs).** The State Water Resources Control Board is conducting studies on CECs discharged from wastewater treatment plants. Upon completion of the studies and formulation of recommendations for CEC monitoring, this Order may be reopened for addition of monitoring or special studies of CECs in the treatment plant discharge.

i. **Reasonable Potential for Constituents with Insufficient Information.** This Order may be reopened, and appropriate effluent limitations added, if results from the Monitoring and Reporting Program indicate additional constituents are present at concentrations that have the reasonable potential to cause or contribute to an exceedance of applicable water quality criteria or objectives.

2. Special Studies and Additional Monitoring Requirements

a. **Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic*

substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at page III-8). Based on whole effluent chronic toxicity testing performed by the Discharger from January 2006 through May 2010, the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective. Attachment E of this Order requires chronic WET monitoring for demonstration of compliance with the narrative toxicity objective, to be conducted twice during the permit cycle.

The Monitoring and Reporting Program of this Order requires chronic WET monitoring for demonstration of compliance with the narrative toxicity objective. In addition to WET monitoring, this provision requires the Discharger to submit to the Central Valley Water Board an Initial Investigative TRE Workplan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger, requirements for accelerated monitoring, and requirements for TRE initiation if of toxicity is demonstrated.

Monitoring Trigger. A numeric toxicity monitoring trigger of **1** TUc (where TUc = 100/NOEC) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits toxicity at 100% effluent. The Discharger may collect additional chronic toxicity data that would enable the Central Valley Water Board to evaluate the appropriateness of applying specific dilution credits to the chronic toxicity monitoring trigger. The reopener provision in Section C.1.b.ii of the Permit would be exercised to modify the chronic toxicity monitoring trigger, if warranted.

Accelerated Monitoring. The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four chronic toxicity tests in a six-week period (i.e., one test every two weeks) using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics Control,* EPA/505/2-90-001, March 1991 (TSD). The TSD at page 118 states, "*EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required.*" Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of effluent toxicity (i.e. toxicity present exceeding the monitoring trigger more than 20

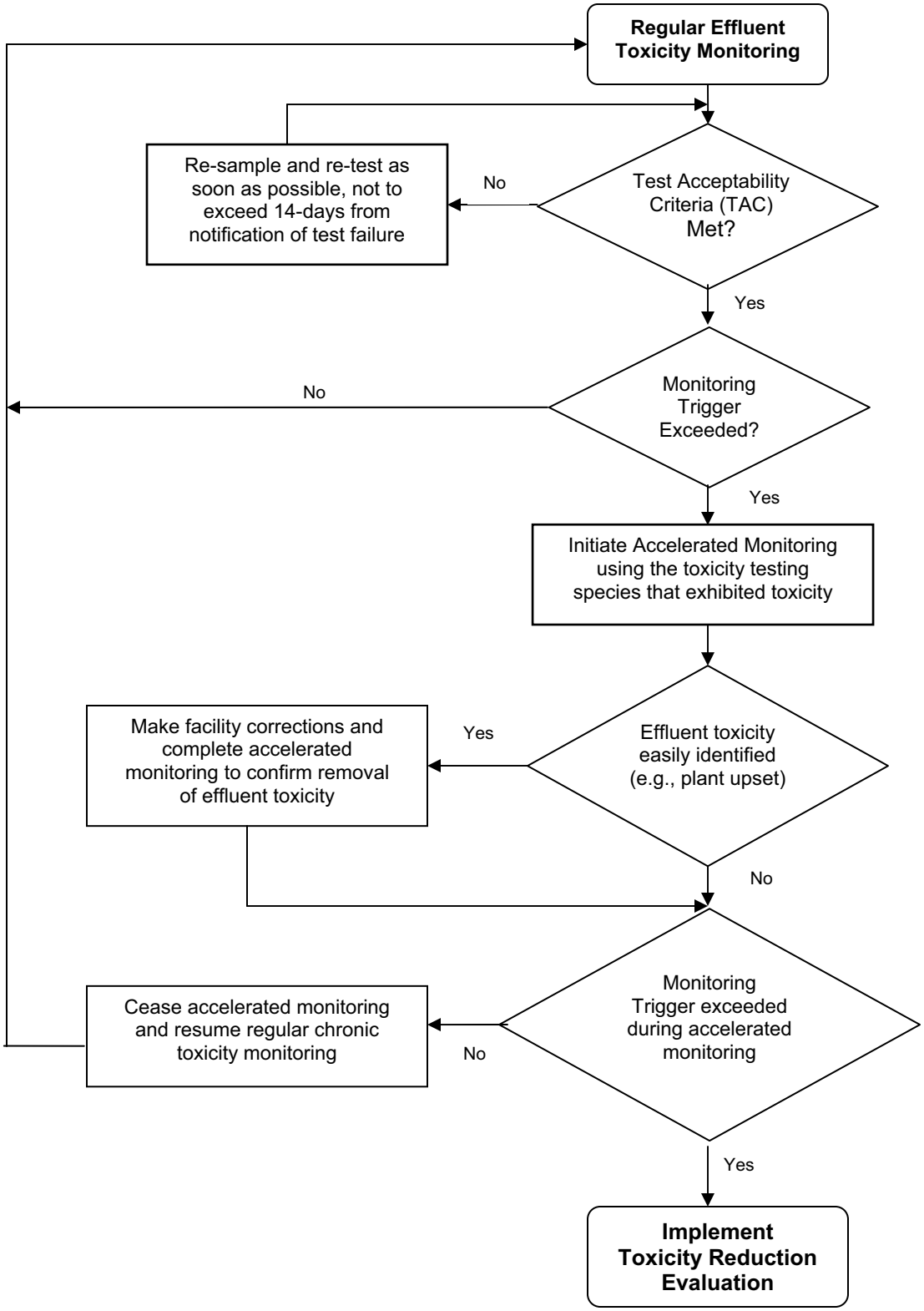
percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

TRE Guidance. The Discharger is required to prepare a TRE Workplan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833-B-99/002, August 1999.
- Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), EPA/600/2-88/070, April 1989.
- Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition, EPA 600/6-91/003, February 1991.
- Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, EPA/600/6-91/005F, May 1992.
- Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA/600/R-92/080, September 1993.
- Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA 600/R-92/081, September 1993.
- Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA-821-R-02-012, October 2002.
- Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002.
- Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991.

Figure F-1
WET Accelerated Monitoring Flow Chart



b. **Salinity Evaluation and Minimization Plan.** The Discharger shall prepare a Salinity Evaluation and Minimization Plan to address sources of salinity from the Facility. The plan shall be completed and submitted to the Central Valley Water Board **within 6 months of the adoption date of this Order** for the approval by the Executive Officer.

Table F-14. Salinity Evaluation and Minimization Plan

Task	Compliance Date
1. Submit Work Plan and Time Schedule	**Within 6 months** of the effective date of the Order
2. Begin Study	**Within 3 months** of Central Valley Water Board approval of Workplan and Time Schedule
3. Complete Study	As established by Task 1
4. Submit Final Report	**60 days** following completion of Task 3 (no greater than 2 years after the effective date of this Order

c. **Best Practical Treatment or Control (BPTC).** The Discharger shall submit, a BPTC Evaluation Work Plan for a comprehensive technical evaluation of the Facility's waste treatment control, to determine BPTC of its discharge, to meet requirements of State Water Board Resolution 68-16. The work plan shall include a preliminary evaluation of each component of the waste management system and propose a time schedule for completing the comprehensive technical evaluation.

Following completion of the evaluation, the Discharger shall submit to the Central Valley Water Board, a technical report describing the evaluation's results and critiquing the treatment facility with respect to the BPTC. Where deficiencies are documented, the technical report shall provide recommendations for necessary modifications to achieve BPTC and identify the source(s) of funding and proposed schedule for modifications. The Discharger shall comply with the following schedule in conducting a BPTC Study.

Table F-15. BPTC Study

Task	Compliance Date
i. Submit Work Plan and Time Schedule for approval by the Executive Officer.	Within 6 months following the effective date of this Order.
ii. Commence comprehensive evaluation	30 days following Executive Officer approval of Task i.
iii Complete study and submit summary report	As established by Task i and/or 2 years following Task ii, whichever is sooner.

d. **Effluent and Receiving Water Characterization Study.** An effluent and receiving water monitoring study is required to ensure adequate information is available for the next permit renewal. During the third and fourth year of this permit term, the Discharger shall conduct annual monitoring of the effluent at EFF-001 and of the receiving water at RSW-001 or RSW-003 (dependent upon which receiving water location is being used) for all priority pollutants and other constituents of concern as described in Attachment I. Dioxin and Furan sampling shall be performed only twice during the third year, as described in Attachment J. The report shall be completed in conformance with the following schedule.

Table F-16. Effluent and Receiving Water Characterization Study

Task	Compliance Date
i. Submit Work Plan and Time Schedule	No later than 2 years 6 months from adoption of this Order
ii. Conduct annual[1] monitoring	During third/fourth year of permit term
iii. Submit Final Report	6 months following completion of final monitoring event
[1] Dioxin and Furan sampling shall be performed only twice during the third year, as described in Attachment J.	

f. **Constituent Study.** There are indications that the discharge may contain constituents that have a reasonable potential to cause or contribute to an exceedance of water quality objectives for ammonia, nitrate, dichlorobromomethane and dibromochloromethane. This Order requires the Discharger to complete a study of these constituents' potential effect in the receiving water. If after a review of the study results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective this Order may be reopened and effluent limitations added for the subject constituents.

Table F-17. Constituent Study

Task	Compliance Date
1. Submit Workplan and Time Schedule	**Within 6 months** of the effective date of this Order
2. Begin Study	**Within 3 months** of Central Valley Water Board approval of Workplan and Time Schedule
3. Complete Study	As established by Task 1
4. Submit Study Report	**60 days** following completion of Task 3 (no greater than 2 years after the effective date of this Order)

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation, and Maintenance Specifications

a. Certified Operator Requirement. The Discharger shall provide certified wastewater treatment plant operators in accordance with regulations adopted by the State Board.

b. Flow Equalization Storage Basin Operating Requirements.

i. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

ii. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

iii. Basins shall be managed to prevent breeding of mosquitoes. In particular,

(a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

(b) Weeds shall be minimized.

(c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

iv. Freeboard shall never be less than 2 feet (measured vertically to the lowest point of overflow) at the last downstream pond.

c. Turbidity Operational Requirements. Turbidity is included as an operational specification as an indicator of the effectiveness of the treatment process and to assure compliance with effluent limitations for total coliform organisms. The treatment process utilized at this Facility is capable of reliably meeting a turbidity limitation of 2 NTU as a daily average. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires that turbidity shall not exceed 2 NTU as a daily average; and 5 NTU daily maximum Turbidity specifications are included as operating criteria in section VI.C.4.b of this Order to ensure that adequate disinfection of wastewater is achieved.

5. Special Provisions for Municipal Facilities

a. Pretreatment Requirements – Not applicable.

b. The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General

Order) on 2 May 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. **The Discharger has applied for and has been approved for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system.**

6. Other Special Provisions

a. **Ownership Change.** To maintain the accountability of the operation of the Facility, the Discharger is required to notify the succeeding owner or operator of the existence of this Order by letter if, and when, there is any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger.

b. **Technical Reports.** All technical reports required herin that involve planning, investigation, evaluation, or design, or other work requiring interpretations and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these lawas, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

c. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, this Order requires the Discharger to notify the Central Valley Water Board by telephone (530) 224-4845 (or to the Central Valley Water Board engineer assigned to the facility) within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing with in five days, unless the Central Valley Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision [40 CFR 122.41(l)(6)(i)].

d. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger must obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the person responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard Provision V.B.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The Central Valley Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs. The Central Valley Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through physical posting (posting at city offices, county courthouse or city hall) and internet posting**.**

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Central Valley Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, written comments must be received at the Central Valley Water Board offices by 5:00 p.m. on 05 May 2011.

C. Public Hearing

The Central Valley Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **<Public Hearing Date>**
Time: 8:30 a.m.
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Central Valley Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/centralvalley where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Central Valley Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Central Valley Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (530) 224-4845.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Heidi Bauer at (530) 224-4996.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Dibromochloromethane	µg/L	5.3	<0.5 (ND)	0.41	--	--	--	--	--	80	Yes
Dichlorobromomethane	µg/L	20.2	<0.5 (ND)	0.56	--	--	--	--	--	80	Yes
Ammonia	mg/L	1.05	0.12	0.52	--	--	--	--	--	50	Yes

General Note: All inorganic concentrations are given as a total recoverable.
MEC = Maximum Effluent Concentration
B = Maximum Receiving Water Concentration or lowest detection level, if non-detect
C = Criterion used for Reasonable Potential Analysis
CMC = Criterion Maximum Concentration (CTR or NTR)
CCC = Criterion Continuous Concentration (CTR or NTR)
Water & Org = Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)
Org. Only = Human Health Criterion for Consumption of Organisms Only (CTR or NTR)
Basin Plan = Numeric Site-specific Basin Plan Water Quality Objective
MCL = Drinking Water Standards Maximum Contaminant Level
NA = Not Available
ND = Non-detect

ATTACHMENT H – CALCULATION OF WQBELS

		Most Stringent Criteria			Dilution Factors			Aquatic Life Calculations									Final Effluent Limitations	
Parameter	Units	HH	CMC	CCC	HH	CMC	CCC	ECA Multiplier acute	LTA acute	ECA Multiplier chronic	LTA chronic	Lowest LTA	AMEL Multiplier 95	AMEL	MDEL Multiplier 99	MDEL	Lowest AMEL	Lowest MDEL
Dibromochloromethane	ug/L	0.41	- -	- -	0	0	0	- -	- -	- -	- -	- -	1.55	0.41	3.11	0.82	**0.41**	**0.82**
Dichlorobromomethane	ug/L	0.56	- -	- -	0	0	0	- -	- -	- -	- -	- -	1.55	0.56	3.11	1.13	**0.56**	**1.13**

ATTACHMENT I – EFFLUENT AND RECEIVING WATER CHARACTERIZATION STUDY

I. **Background.** Sections 2.4.1 through 2.4.4 of the SIP provide minimum standards for analyses and reporting. (Copies of the SIP may be obtained from the State Water Resources Control Board, or downloaded from http://www.waterboards.ca.gov/iswp/index.html). To implement the SIP, effluent and receiving water data are needed for all priority pollutants. Effluent and receiving water pH and hardness are required to evaluate the toxicity of certain priority pollutants (such as heavy metals) where the toxicity of the constituents varies with pH and/or hardness. Section 3 of the SIP prescribes mandatory monitoring of dioxin congeners. In addition to specific requirements of the SIP, the Central Valley Water Board is requiring the following monitoring:

A. **Drinking water constituents**. Constituents for which drinking water Maximum Contaminant Levels (MCLs) have been prescribed in the California Code of Regulation are included in the *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* (Basin Plan). The Drinking Water Policy implemented through the Basin Plan defines virtually all surface waters within the Central Valley Region as being suitable or potential suitable for municipal and domestic supply. The Basin Plan further requires that, at a minimum, water designated for use as domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the MCLs contained in the California Code of Regulations.

B. **Effluent and receiving water temperature.** This is both a concern for application of certain temperature-sensitive constituents, such as fluoride, and for compliance with the Basin Plan's thermal discharge requirements.

C. **Effluent and receiving water hardness and pH.** These are necessary because several of the CTR constituents are hardness and pH dependent.

D. **Dioxin and furan sampling.** Section 3 of the SIP has specific requirements for the collection of samples for analysis of dioxin and furan congeners, which are detailed in Attachment J. Pursuant to Section 13267 of the California Water Code, this Order includes a requirement for the Discharger to submit monitoring data for the effluent and receiving water as described in Attachment J.

II. **Monitoring Requirements.**

A. **Twice During the Life of the Permit Monitoring.** Priority pollutant samples shall be collected from the effluent and upstream receiving water (EFF-001 and RSW-001 or RSW-003) and analyzed for the constituents listed in Table I-1 twice during the life of the permit (in the third and fourth year). The results of such monitoring be submitted to the Central Valley Water Board, during the fourth year of the permit term. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water.

B. Semi-annual Monitoring (dioxins and furans only). Semi-annual monitoring is required for dioxins and furans, as specified in Attachment J. The results of dioxin and furan monitoring shall be submitted to the Central Valley Water Board with the priority data at the completion of the Effluent and Receiving Water Characterization Study, and during the fourth year of the permit term.

C. Concurrent Sampling. Effluent and receiving water sampling shall be performed at approximately the same time, on the same date.

D. Sample type. All effluent samples shall be taken as 24-hour composite samples. All receiving water samples shall be taken as grab samples.

Table I-1. Priority Pollutants

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted[1]		
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	National Toxics Rule	0.17	0.5	EPA 8260B
75	1,2-Dichlorobenzene	95501	Taste & Odor	10	0.5	EPA 8260B
29	1,2-Dichloroethane	107062	National Toxics Rule	0.38	0.5	EPA 8260B
	cis-1,2-Dichloroethene	156592	Primary MCL	6	0.5	EPA 8260B
31	1,2-Dichloropropane	78875	Calif. Toxics Rule	0.52	0.5	EPA 8260B
101	1,2,4-Trichlorobenzene	120821	Public Health Goal	5	0.5	EPA 8260B
76	1,3-Dichlorobenzene	541731	Taste & Odor	10	0.5	EPA 8260B
32	1,3-Dichloropropene	542756	Primary MCL	0.5	0.5	EPA 8260B
77	1,4-Dichlorobenzene	106467	Primary MCL	5	0.5	EPA 8260B
17	Acrolein	107028	Aquatic Toxicity	21	2	EPA 8260B
18	Acrylonitrile	107131	National Toxics Rule	0.059	2	EPA 8260B
19	Benzene	71432	Primary MCL	1	0.5	EPA 8260B
20	Bromoform	75252	Calif. Toxics Rule	4.3	0.5	EPA 8260B
34	Bromomethane	74839	Calif. Toxics Rule	48	1	EPA 8260B
21	Carbon tetrachloride	56235	National Toxics Rule	0.25	0.5	EPA 8260B
22	Chlorobenzene (mono chlorobenzene)	108907	Taste & Odor	50	0.5	EPA 8260B
24	Chloroethane	75003	Taste & Odor	16	0.5	EPA 8260B
25	2- Chloroethyl vinyl ether	110758	Aquatic Toxicity	122 (3)	1	EPA 8260B
26	Chloroform	67663	OEHHA Cancer Risk	1.1	0.5	EPA 8260B
35	Chloromethane	74873	USEPA Health Advisory	3	0.5	EPA 8260B

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted[1]		
23	Dibromochloromethane	124481	Calif. Toxics Rule	0.41	0.5	EPA 8260B
27	Dichlorobromomethane	75274	Calif. Toxics Rule	0.56	0.5	EPA 8260B
36	Dichloromethane	75092	Calif. Toxics Rule	4.7	0.5	EPA 8260B
33	Ethylbenzene	100414	Taste & Odor	29	0.5	EPA 8260B
88	Hexachlorobenzene	118741	Calif. Toxics Rule	0.00075	1	EPA 8260B
89	Hexachlorobutadiene	87683	National Toxics Rule	0.44	1	EPA 8260B
91	Hexachloroethane	67721	National Toxics Rule	1.9	1	EPA 8260B
94	Naphthalene	91203	USEPA IRIS	14	10	EPA 8260B
38	Tetrachloroethene	127184	National Toxics Rule	0.8	0.5	EPA 8260B
39	Toluene	108883	Taste & Odor	42	0.5	EPA 8260B
40	trans-1,2-Dichloroethylene	156605	Primary MCL	10	0.5	EPA 8260B
43	Trichloroethene	79016	National Toxics Rule	2.7	0.5	EPA 8260B
44	Vinyl chloride	75014	Primary MCL	0.5	0.5	EPA 8260B
	Methyl-tert-butyl ether (MTBE)	1634044	Secondary MCL	5	0.5	EPA 8260B
	Trichlorofluoromethane	75694	Primary MCL	150	5	EPA 8260B
	1,1,2-Trichloro-1,2,2-Trifluoroethane	76131	Primary MCL	1200	10	EPA 8260B
	Styrene	100425	Taste & Odor	11	0.5	EPA 8260B
	Xylenes	1330207	Taste & Odor	17	0.5	EPA 8260B
SEMI-VOLATILE ORGANICS						
60	1,2-Benzanthracene	56553	Calif. Toxics Rule	0.0044	5	EPA 8270C
85	1,2-Diphenylhydrazine	122667	National Toxics Rule	0.04	1	EPA 8270C
45	2-Chlorophenol	95578	Taste and Odor	0.1	2	EPA 8270C
46	2,4-Dichlorophenol	120832	Taste and Odor	0.3	1	EPA 8270C
47	2,4-Dimethylphenol	105679	Calif. Toxics Rule	540	2	EPA 8270C
49	2,4-Dinitrophenol	51285	National Toxics Rule	70	5	EPA 8270C
82	2,4-Dinitrotoluene	121142	National Toxics Rule	0.11	5	EPA 8270C
55	2,4,6-Trichlorophenol	88062	Taste and Odor	2	10	EPA 8270C
83	2,6-Dinitrotoluene	606202	USEPA IRIS	0.05	5	EPA 8270C
50	2-Nitrophenol	25154557	Aquatic Toxicity	150 (5)	10	EPA 8270C
71	2-Chloronaphthalene	91587	Aquatic Toxicity	1600 (6)	10	EPA 8270C
78	3,3'-Dichlorobenzidine	91941	National Toxics Rule	0.04	5	EPA 8270C
62	3,4-Benzofluoranthene	205992	Calif. Toxics Rule	0.0044	10	EPA 8270C
52	4-Chloro-3-methylphenol	59507	Aquatic Toxicity	30	5	EPA 8270C
48	4,6-Dinitro-2-methylphenol	534521	National Toxics Rule	13.4	10	EPA 8270C
51	4-Nitrophenol	100027	USEPA Health Advisory	60	5	EPA 8270C
69	4-Bromophenyl phenyl ether	101553	Aquatic Toxicity	122	10	EPA 8270C

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted[1]		
72	4-Chlorophenyl phenyl ether	7005723	Aquatic Toxicity	122 (3)	5	EPA 8270C
56	Acenaphthene	83329	Taste and Odor	20	1	EPA 8270C
57	Acenaphthylene	208968	No Criteria Available		10	EPA 8270C
58	Anthracene	120127	Calif. Toxics Rule	9,600	10	EPA 8270C
59	Benzidine	92875	National Toxics Rule	0.00012	5	EPA 8270C
61	Benzo(a)pyrene (3,4-Benzopyrene)	50328	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
63	Benzo(g,h,i)perylene	191242	No Criteria Available		5	EPA 8270C
64	Benzo(k)fluoranthene	207089	Calif. Toxics Rule	0.0044	2	EPA 8270C
65	Bis(2-chloroethoxy) methane	111911	No Criteria Available		5	EPA 8270C
66	Bis(2-chloroethyl) ether	111444	National Toxics Rule	0.031	1	EPA 8270C
67	Bis(2-chloroisopropyl) ether	39638329	Aquatic Toxicity	122 (3)	10	EPA 8270C
68	Bis(2-ethylhexyl) phthalate	117817	National Toxics Rule	1.8	3	EPA 8270C
70	Butyl benzyl phthalate	85687	Aquatic Toxicity	3 (7)	10	EPA 8270C
73	Chrysene	218019	Calif. Toxics Rule	0.0044	5	EPA 8270C
81	Di-n-butylphthalate	84742	Aquatic Toxicity	3 (7)	10	EPA 8270C
84	Di-n-octylphthalate	117840	Aquatic Toxicity	3 (7)	10	EPA 8270C
74	Dibenzo(a,h)-anthracene	53703	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
79	Diethyl phthalate	84662	Aquatic Toxicity	3 (7)	2	EPA 8270C
80	Dimethyl phthalate	131113	Aquatic Toxicity	3 (7)	2	EPA 8270C
86	Fluoranthene	206440	Calif. Toxics Rule	300	10	EPA 8270C
87	Fluorene	86737	Calif. Toxics Rule	1300	10	EPA 8270C
90	Hexachlorocyclopentadiene	77474	Taste and Odor	1	1	EPA 8270C
92	Indeno(1,2,3-c,d)pyrene	193395	Calif. Toxics Rule	0.0044	0.05	EPA 8270C
93	Isophorone	78591	National Toxics Rule	8.4	1	EPA 8270C
98	N-Nitrosodiphenylamine	86306	National Toxics Rule	5	1	EPA 8270C
96	N-Nitrosodimethylamine	62759	National Toxics Rule	0.00069	5	EPA 8270C
97	N-Nitrosodi-n-propylamine	621647	Calif. Toxics Rule	0.005	5	EPA 8270C
95	Nitrobenzene	98953	National Toxics Rule	17	10	EPA 8270C
53	Pentachlorophenol	87865	Calif. Toxics Rule	0.28	0.2	EPA 8270C
99	Phenanthrene	85018	No Criteria Available		5	EPA 8270C
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C
INORGANICS						
	Aluminum	7429905	Ambient Water Quality	87	50	EPA 6020/200.8
1	Antimony	7440360	Primary MCL	6	5	EPA 6020/200.8
2	Arsenic	7440382	Ambient Water Quality	0.018	0.01	EPA 1632

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted[1]		
15	Asbestos	1332214	National Toxics Rule/ Primary MCL	7 MFL	0.2 MFL >10um	EPA/600/R-93/116(PCM)
	Barium	7440393	Basin Plan Objective	100	100	EPA 6020/200.8
3	Beryllium	7440417	Primary MCL	4	1	EPA 6020/200.8
4	Cadmium	7440439	Public Health Goal	0.07	0.25	EPA 1638/200.8
5a	Chromium (total)	7440473	Primary MCL	50	2	EPA 6020/200.8
5b	Chromium (VI)	18540299	Public Health Goal	0.2	0.5	EPA 7199/1636
6	Copper	7440508	National Toxics Rule	4.1 (2)	0.5	EPA 6020/200.8
14	Cyanide	57125	National Toxics Rule	5.2	5	EPA 9012A
	Fluoride	7782414	Public Health Goal	1000	0.1	EPA 300
	Iron	7439896	Secondary MCL	300	100	EPA 6020/200.8
7	Lead	7439921	Calif. Toxics Rule	0.92 (2)	0.5	EPA 1638
8	Mercury	7439976	TMDL Development		0.0002 (11)	EPA 1669/1631
	Manganese	7439965	Secondary MCL/ Basin Plan Objective	50	20	EPA 6020/200.8
9	Nickel	7440020	Calif. Toxics Rule	24 (2)	5	EPA 6020/200.8
10	Selenium	7782492	Calif. Toxics Rule	5 (8)	5	EPA 6020/200.8
11	Silver	7440224	Calif. Toxics Rule	0.71 (2)	1	EPA 6020/200.8
12	Thallium	7440280	National Toxics Rule	1.7	1	EPA 6020/200.8
	Tributyltin	688733	Ambient Water Quality	0.063	0.002	EV-024/025
13	Zinc	7440666	Calif. Toxics Rule/ Basin Plan Objective	54/ 16 (2)	10	EPA 6020/200.8
PESTICIDES - PCBs						
110	4,4'-DDD	72548	Calif. Toxics Rule	0.00083	0.02	EPA 8081A
109	4,4'-DDE	72559	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
108	4,4'-DDT	50293	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
112	alpha-Endosulfan	959988	National Toxics Rule	0.056 (9)	0.02	EPA 8081A
103	alpha-Hexachlorocyclohexane (BHC)	319846	Calif. Toxics Rule	0.0039	0.01	EPA 8081A
	Alachlor	15972608	Primary MCL	2	1	EPA 8081A
102	Aldrin	309002	Calif. Toxics Rule	0.00013	0.005	EPA 8081A
113	beta-Endosulfan	33213659	Calif. Toxics Rule	0.056 (9)	0.01	EPA 8081A
104	beta-Hexachlorocyclohexane	319857	Calif. Toxics Rule	0.014	0.005	EPA 8081A
107	Chlordane	57749	Calif. Toxics Rule	0.00057	0.1	EPA 8081A
106	delta-Hexachlorocyclohexane	319868	No Criteria Available		0.005	EPA 8081A
111	Dieldrin	60571	Calif. Toxics Rule	0.00014	0.01	EPA 8081A
114	Endosulfan sulfate	1031078	Ambient Water Quality	0.056	0.05	EPA 8081A
115	Endrin	72208	Calif. Toxics Rule	0.036	0.01	EPA 8081A
116	Endrin Aldehyde	7421934	Calif. Toxics Rule	0.76	0.01	EPA 8081A

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted[1]		
117	Heptachlor	76448	Calif. Toxics Rule	0.00021	0.01	EPA 8081A
118	Heptachlor Epoxide	1024573	Calif. Toxics Rule	0.0001	0.01	EPA 8081A
105	Lindane (gamma-Hexachlorocyclohexane)	58899	Calif. Toxics Rule	0.019	0.019	EPA 8081A
119	PCB-1016	12674112	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
120	PCB-1221	11104282	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
121	PCB-1232	11141165	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
122	PCB-1242	53469219	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
123	PCB-1248	12672296	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
124	PCB-1254	11097691	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
125	PCB-1260	11096825	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
126	Toxaphene	8001352	Calif. Toxics Rule	0.0002	0.5	EPA 8081A
	Atrazine	1912249	Public Health Goal	0.15	1	EPA 8141A
	Bentazon	25057890	Primary MCL	18	2	EPA 643/ 515.2
	Carbofuran	1563662	CDFG Hazard Assess.	0.5	5	EPA 8318
	2,4-D	94757	Primary MCL	70	10	EPA 8151A
	Dalapon	75990	Ambient Water Quality	110	10	EPA 8151A
	1,2-Dibromo-3-chloropropane (DBCP)	96128	Public Health Goal	0.0017	0.01	EPA 8260B
	Di(2-ethylhexyl)adipate	103231	USEPA IRIS	30	5	EPA 8270C
	Dinoseb	88857	Primary MCL	7	2	EPA 8151A
	Diquat	85007	Ambient Water Quality	0.5	4	EPA 8340/ 549.1/HPLC
	Endothal	145733	Primary MCL	100	45	EPA 548.1
	Ethylene Dibromide	106934	OEHHA Cancer Risk	0.0097	0.02	EPA 8260B/504
	Glyphosate	1071836	Primary MCL	700	25	HPLC/EPA 547
	Methoxychlor	72435	Public Health Goal	30	10	EPA 8081A
	Molinate (Ordram)	2212671	CDFG Hazard Assess.	13	2	EPA 634
	Oxamyl	23135220	Public Health Goal	50	20	EPA 8318/632
	Picloram	1918021	Primary MCL	500	1	EPA 8151A
	Simazine (Princep)	122349	USEPA IRIS	3.4	1	EPA 8141A
	Thiobencarb	28249776	Basin Plan Objective/ Secondary MCL	1	1	HPLC/EPA 639
16	2,3,7,8-TCDD (Dioxin)	1746016	Calif. Toxics Rule	1.30E-08	5.00E-06	EPA 8290 (HRGC) MS
	2,4,5-TP (Silvex)	93765	Ambient Water Quality	10	1	EPA 8151A
	Diazinon	333415	CDFG Hazard Assess.	0.05	0.25	EPA 8141A/GCMS
	Chlorpyrifos	2921882	CDFG Hazard Assess.	0.014	1	EPA 8141A/GCMS
OTHER CONSTITUENTS						
	Ammonia (as N)	7664417	Ambient Water Quality	1500 (4)		EPA 350.1

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted[1]		
	Chloride	16887006	Agricultural Use	106,000		EPA 300.0
	Flow			1 CFS		
	Hardness (as $CaCO_3$)			5000		EPA 130.2
	Foaming Agents (MBAS)		Secondary MCL	500		SM5540C
	Nitrate (as N)	14797558	Primary MCL	10,000	2,000	EPA 300.0
	Nitrite (as N)	14797650	Primary MCL	1000	400	EPA 300.0
	pH		Basin Plan Objective	6.5-8.5	0.1	EPA 150.1
	Phosphorus, Total (as P)	7723140	USEPA IRIS	0.14		EPA 365.3
	Specific conductance (EC)		Agricultural Use	700 umhos/cm		EPA 120.1
	Sulfate		Secondary MCL	250,000	500	EPA 300.0
	Sulfide (as S)		Taste and Odor	0.029		EPA 376.2
	Sulfite (as SO_3)		No Criteria Available			SM4500-SO3
	Temperature		Basin Plan Objective	^{o}C		
	Total Disolved Solids (TDS)		Agricultural Use	450,000		EPA 160.1

FOOTNOTES:

(1) - The Criterion Concentrations serve only as a point of reference for the selection of the appropriate analytical method. They do not indicate a regulatory decision that the cited concentration is either necessary or sufficient for full protection of beneficial uses. Available technology may require that effluent limits be set lower than these values.

(2) - Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed correspond to a total hardness of 40 mg/L.

(3) - For haloethers

(4) - Freshwater aquatic life criteria for ammonia are expressed as a function of pH and temperature of the water body. Values displayed correspond to pH 8.0 and temperature of 22°C.

(5) - For nitrophenols.

(6) - For chlorinated naphthalenes.

(7) - For phthalate esters.

(8) - Basin Plan objective = 2 ug/L for Salt Slough and specific constructed channels in the Grassland watershed.

(9) - Criteria for sum of alpha- and beta- forms.

(10) - Criteria for sum of all PCBs.

(11) - Mercury monitoring shall utilize "ultra-clean" sampling and analytical methods. These methods include:

Method 1669: Sampling Ambient Water for Trace Metals at USEPA Water Quality Criteria Levels, USEPA; and

Method 1631: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluoresence, USEPA

III. Additional Study Requirements

A. Laboratory Requirements. The laboratory analyzing the monitoring samples shall be certified by the Department of Health Services in accordance with the provisions of Water Code 13176 and must include quality assurance/quality control data with their reports (ELAP certified).

B. Criterion Quantitation Limit (CQL). The criterion quantitation limits will be equal to or lower than the minimum levels (MLs) in Appendix 4 of the SIP or the detection limits for purposes of reporting (DLRs) below the controlling water quality criterion concentrations summarized in Table I-1 of this Order. In cases where the controlling water quality criteria concentrations are below the detection limits of all approved analytical methods, the best available procedure will be utilized that meets the lowest of the MLs and DLR. Table I-1 contains suggested analytical procedures. The Discharger is not required to use these specific procedures as long as the procedure selected achieves the desired minimum detection level.

C. Method Detection Limit (MDL). The method detection limit for the laboratory shall be determined by the procedure found in 40 CFR Part 136, Appendix B (revised as of May 14, 1999).

D. Reporting Limit (RL). The reporting limit for the laboratory. This is the lowest quantifiable concentration that the laboratory can determine. Ideally, the RL should be equal to or lower than the CQL to meet the purposes of this monitoring.

E. Reporting Protocols. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

1. Sample results greater than or equal to the reported RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

2. Sample results less than the reported RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

3. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may shortened to "Est. Conc.). The laboratory, if such information is available, may include numerical estimates of the data quantity for the reported result. Numerical estimates of data quality may be percent accuracy (+ or – a percentage of the reported value), numerical ranges (low and high), or any other means considered appropriate by the laboratory.

4. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

F. Data Format. The monitoring report shall contain the following information for each pollutant:

1. The name of the constituent.
2. Sampling location.
3. The date the sample was collected.
4. The time the sample was collected.
5. The date the sample was analyzed. For organic analyses, the extraction data will also be indicated to assure that hold times are not exceeded for prepared samples.
6. The analytical method utilized.
7. The measured or estimated concentration.
8. The required Criterion Quantitation Limit (CQL).
9. The laboratory's current Method Detection Limit (MDL), as determined by the procedure found in 40 CFR Part 136, Appendix B (revised as of May 14, 1999).
10. The laboratory's lowest reporting limit (RL).
11. Any additional comments.

ATTACHMENT J – DIOXIN AND FURAN SAMPLING

The CTR includes criteria for 2,3,7,8-tetrachlorodibenzo-pdioxin (2,3,7,8-TCDD). In addition to this compound, there are many congeners of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) that exhibit toxic effects similar to those of 2,3,7,8-TCDD. The USEPA has published toxic equivalency factors (TEFs) for 17 of the congeners. The TEFs express the relative toxicities of the congeners compared to 2,3,7,8-TCDD (whose TEF equals 1.0). In June 1997, participants in a World Health Organization (WHO) expert meeting revised TEF values for 1,2,3,7,8-PentaCDD, OctaCDD, and OctaCDF. The current TEFs for the 17 congeners, which include the three revised values, are shown below:

Toxic Equivalency Factors (TEFs) for 2,3,7,8-TCDD Equivalents

Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

The Discharger shall conduct effluent and receiving water monitoring for the 2,3,7,8-TCDD congeners listed above to assess the presence and amounts of the congeners being discharged and already present in the receiving water. Effluent and upstream receiving water shall be monitored for the presence of the 17 congeners once during dry weather and once during wet weather for 1 year within the term of the study (during the third year of the permit).

The Discharger shall report, for each congener, the analytical results of the effluent and receiving water monitoring, including the quantifiable limit and the method detection limit, and the measured or estimated concentration.

In addition, the Discharger shall multiply each measured or estimated congener concentration by its respective TEF value and report the sum of these values.

ATTACHMENT K - SUMMARY OF SPECIAL STUDIES / SIGNIFICANT COMPLIANCE DATES

Following is a summary of all of the special studies and significant compliance dates that are required by this order:

Compliance Date (Actual Date)	Task	Compliance Date (Narrative)
Initial Investigative TRE Workplan		
XXXXXXXX	Submit Initial Investigate TRE Workplan	Within 90 days of the effective date of this Order
Constituent Study - Ammonia, Nitrate, Dichlorobromomethane and Dibromochloromethane		
XXXXXXXX	i. Submit Workplan and Time Schedule	Within 6 months following the effective date of this Order
XXXXXXXX	ii. Begin study	Within 3 months of Central Valley Water Board approval of Workplan and Time Schedule
XXXXXXXX	iii. Complete study	As established by Task i.
XXXXXXXX	iv. Submit study report	60 days following completion of Task iii. (no greater than 2 years after the effective date of this Order)
BPTC Study		
XXXXXXXX	i. Submit Work Plan and Time Schedule for approval by the Executive Officer.	Within 6 months following the effective date of this Order.
XXXXXXXX	ii. Commence comprehensive evaluation	30 days following Executive Officer approval of Task i.
XXXXXXXX	iii Complete study and submit summary report	As established by Task i and/or 2 years following Task ii, whichever is sooner.
Effluent and Receiving Water Characterization Study		
XXXXXXXX	i. Submit Work Plan and Time Schedule	No later than 2 years 6 months from adoption of this Order
XXXXXXXX	ii. Conduct annual monitoring	During third/fourth year of permit term (two samples)
XXXXXXXX	iii. Submit Final Report	6 months following completion of final monitoring event
Dioxin and Furan Sampling		
XXXXXXXX	Collect wastewater and surface water samples for dioxin and furan	Effluent and upstream receiving water shall be monitored for the presence of the 17 congeners once during dry weather and once during wet weather for 1 year within the term of the study (during the third year of the permit)
Salinity Evaluation and Minimization Plan		
XXXXXXXX	1. Submit Work Plan and Time Schedule	**Within 6 months** of the effective date of the Order
XXXXXXXX	2. Begin Study	**Within 3 months** of Central Valley Water Board approval of

		Workplan and Time Schedule
XXXXXXXX	3. Complete Study	As established by Task 1
XXXXXXXX	4. Submit Final Report	**60 days** following completion of Task 3 (no greater than 2 years after the effective date of this Order
Report of Waste Discharge		
XXXXXXXX	Draft ROWD	Due **One Year** prior to expiration of permit
XXXXXXXX	Final ROWD	Due **6 months** prior to expiration of permit
Laboratory Detection Report		
XXXXXXXX	Reporting levels, MDLs, and Analytical Methods	Within **60 days** of adoption of permit

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2011-XXXX

REQUIRING CITY OF WILLOWS
WILLOWS WASTEWATER TREATMENT PLANT
GLENN COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2011-XXXX
(NPDES PERMIT NO. CA0078034)

The California Regional Water Quality Control Board, Central Valley Region, (hereinafter Central Valley Water Board) finds that:

1. On XXXX the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2011-XXXX, NPDES Permit No. CA000078034, prescribing waste discharge requirements for the City of Willows (hereinafter Discharger) at the Willows Wastewater Treatment Plant (hereafter Facility), Glenn County.

2. WDR Order No. R5-2011-XXXX contains Final Effluent Limitations IV.A.1.a., which reads, in part, as follows:

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Other
Biochemical Oxygen Demand 5-day @ 20ºC	mg/L[a]	10	15	30	--
	lbs/day[b]	100	150	300	--
Total Suspended Solids	mg/L[a]	10	15	30	--
	lbs/day[b]	100	150	300	--
Total Residual Chlorine	mg/L			0.02 (1-hr average)	0.01 (4-Day Average)
Total Coliform Bacteria	MPN/100mL			23	2.2 (7-Day Median)
Nitrate (as N)	mg/L	10			
Ammonia[c]	mg/L	1.30 (Ag Drain C), 0.63 (GCID)		2.61 (Ag Drain C), 1.27 (GCID)	--
	lbs/day[b]	13.0 (Ag Drain C), 6.33 (GCID)		26.11 (Ag Drain C), 12.70 (GCID)	--
Ammonia[d]	mg/L	1.43 (Ag Drain C), 0.77 (GCID)		2.87 (Ag Drain C), 1.55 (GCID)	--
	lbs/day[b]	14.32 (Ag Drain C), 7.75 (GCID)		28.74 (Ag Drain C), 15.55 (GCID)	--
Electrical Conductivity					845 (Annual Average)
Dibromochloromethane	ug/L	0.41		0.82	--
Dichlorobromomethane	ug/L	0.56		1.13	--

[a] To be ascertained by a 24-hourcomposite
[b] Based upon a design treatment capacity of 1.2 mgd
[c] For the period of May 1 through October 31
[d] For the period of November 1 through April 30

3. The effluent limitations specified in Order No. R5-2011-XXXX for Dibromochloromethane, Dichlorobromomethane and Nitrate are based on implementation of the California Toxics Rule.

4. Federal regulations, 40 CFR 122.44 (d)(1)(i), require that NPDES permit effluent limitations must control all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above any State water quality standard, including any narrative criteria for water quality. Beneficial uses, together with their corresponding water quality objectives or promulgated water quality criteria, can be defined per federal regulations as water quality standards.

5. Immediate compliance with the final effluent limitations contained in Order No. R5-2011-XXXX for Dibromochloromethane, Dichlorobromomethane and Nitrate at Discharge Point D-001 and D-002 is not possible. The Discharger has submitted a feasibility analysis indicating it would take 4 years and 9 months to complete upgrades to the plant to achieve compliance with the new final effluent limits. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance. The following table summarizes the effluent monitoring data obtained from March 2007 through August 2011 for Dibromochloromethane, Dichlorobromomethane and Nitrate:

Parameter	Units	MEC	Mean	# of Samples	# of Non-Detects
Dibromochloromethane	ug/L	5.30	1.92	12	2
Dichlorobromomethane	ug/L	20.20	9.03	12	2
Nitrate (as N)	mg/L	20.0	17.5	9	0

6. On 24 February 2011, the Discharger submitted justification for a compliance schedule for Dibromochloromethane, Dichlorobromomethane and Nitrate. For compliance with the final effluent limitations for Dibromochloromethane, Dichlorobromomethane and Nitrate, the Discharger anticipates that additional time is necessary for plant upgrades to eliminate the discharge to surface waters in the next five years. The Discharger's submittal included: discussion of current plant processes and a detailed schedule for achieving full compliance.

7. On 11 July 2011, the Discharger submitted a request for additional time to begin a Basin Plan amendment study to de-designate the MUN beneficial use of the receiving water. If de-designation of the municipal beneficial use is not adopted through the Basin Plan amendment process, the Discharger will seek funding sources that would assist them in making the necessary process changes to comply with the final effluent limitations. Additionally, the Discharger would conduct a rate analysis and an associated rate increase, if necessary, to cover the costs for installation and maintenance to operate a new system that will achieve the final effluent limitations.

8. This Order provides a time schedule for the Discharger to develop, submit and implement methods of compliance, which includes a possible Basin Plan Amendment to update and implement the pollution prevention plan, and construct the necessary treatment plant upgrades to meet the final effluent limitations.

9. California Water Code (CWC) section 13300 states:

> Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.

10. CWC subsections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j)(3) provides protection from mandatory minimum penalties for violations of an effluent limitation when:

> … the waste discharge is in compliance with either a cease and desist order issued pursuant to section 13301 or a time schedule order issued pursuant to section 13300 or 13308, if all of the following requirements are met:
>
> > (A) The cease and desist order or time schedule is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i).
> >
> > (B) The regional board finds that, for one of the following reasons, the discharger is not able to consistently comply with one or more of the effluent limitations established in the waste discharge requirements applicable to the waste discharge:
> >
> > > (i) The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
> >
> > (C) The regional board establishes a time schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitation. For the purposes of this subdivision, the time schedule may not exceed five years in length…. If the time schedule exceeds one year from the effective date of the order, the schedule shall include interim requirements and the dates for their achievement. The interim requirements shall include both of the following:
> >
> > > (i) Effluent limitations for the pollutant or pollutants of concern.
> > >
> > > (ii) Actions and milestones leading to compliance with the effluent limitation.

(D) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan pursuant to section 13263.3.

11. The time schedule order satisfies provisions of CWC section 13385(j)(3) as follows:

13385(j)(3)(A): This time schedule order is being issued after July 1, 2000, and specifies actions that the Discharger must take to correct the violations that would be subject to enforcement actions (see Compliance Time Schedule Table on Page 7).

13385(j)(3)(B)(i): This time schedule order includes new effluent limits that become effective after the July 1, 2000 date, and may require new or modified control measures in order to comply with the final effluent limits. Additionally, the Discharger has provided a feasibility study indicating it would take approximately 4 years and 9 months to conduct the planning, funding, and constructing improvements to the existing plant to meet the new final effluent limitations. Therefore the new modifications cannot be designed, installed, or put into operation within 30 calendar days.

13385(j)(3)(C): The Discharger has provided a feasibility study that indicates it will take approximately 4 years and 9 months to upgrade the existing plant to meet the new final effluent limitations. To meet the new final limits, the Discharger will have to change from a wet chemistry (chlorination/dechlorination) to some other type of disinfection process, which will take a considerable amount of time (obtain funding, planning and construction). This timeframe is as short as possible, considering the major upgrades the plant will have to complete to meet the final effluent limitations.

13385(j)(3)(C)(i): This time schedule order contains effluent limits for the constituents of concern which are Dibromochloromethane, Dichlorobromomethane and Nitrate.

13385(j)(3)(C)(ii): This time schedule order contains milestones and actions which lead to compliance with the final effluent limitations (See the Compliance Time Schedule Table on Page 7).

13385(j)(3)(D): This time schedule order contains a requirement that the Discharger must submit and implement a pollution prevention plan within 6 months after adoption of the time schedule order.

12. CWC section 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC section 13385(j) exempts certain violations from the mandatory minimum penalties. CWC section 13385(j)(3) exempts the discharge from mandatory minimum penalties "*where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, if all the [specified] requirements are met.*"

13. Compliance with this Order exempts the Discharger from mandatory penalties for violations of the final effluent limitations for Dibromochloromethane, Dichlorobromomethane and Nitrate, in accordance with CWC section 13385(j)(3). CWC section 13385(j)(3) requires the Discharger to update and implement a pollution prevention plan pursuant to section 13263.3 of the California Water Code. Therefore, a pollution prevention plan will be necessary for Dibromochloromethane, Dichlorobromomethane and Nitrate in order to effectively reduce the effluent concentrations by source control measures.

14. Since the time schedules for completion of actions necessary to bring the waste discharge into compliance exceeds 1 year, this Order includes interim requirements and dates for achievement. The time schedules do not exceed 5 years.

15. The compliance time schedule in this Order includes interim performance-based effluent limitations for Dibromochloromethane, Dichlorobromomethane and Nitrate. Interim effluent limitations consist of a maximum daily effluent concentration derived using sample data provided by the Discharger demonstrating actual treatment plant performance. In developing the interim limitations, when there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row, 3rd Edition, January 1986). Where actual sampling shows an exceedance of the proposed 3.3 standard deviation limit, the maximum detected concentration has been established as the interim limitation. When there are less than ten sampling data points available, the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001) (TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Thus, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration (MEC) to obtain the daily interim limitation (TSD, Table 5-2) and 2.13 times the maximum MEC to obtain the average monthly interim limitation (assuming one sample per month). If the statistically projected interim limitation is less than the maximum observed effluent concentration, the interim limitation is established as the maximum observed concentration. The following table summarizes the calculation of the interim effluent limitation for Dibromochloromethane, Dichlorobromomethane and Nitrate:

Parameter	Units	MEC	Mean	Standard Deviation	Number of Samples with Detections	Interim Limitation (Average Monthly)	Interim Limitation (Maximum Daily)
Dibromochloromethane	ug/L	5.30	1.92	1.48	10	11.29	16.48
Dichlorobromomethane	ug/L	20.20	9.03	5.79	10	43.03	62.82
Nitrate (as N)	mg/L	20.0	17.5	1.98	9	42.6	NA

16. The Central Valley Water Board finds that the Discharger can maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with the final effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitations can be achieved.

17. On XXXX, in Sacramento, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Time Schedule Order under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.

18. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) ("CEQA"), under Water Code Section 13389, since any adoption or modification of a NPDES Permit for an existing source is exempt and this order only serves to implement such a NPDES permit. This Order is also exempt from CEQA in accordance with Section 15321(a)(2), Title 14, California Code of Regulations. This Order is not subject to the limitations of Government Code section 65962.5(c)(3) [Cortese List] on use of categorical exemptions because it does not involve the discharge of "hazardous" materials as used in that statute, but rather involves the discharge of domestic sewage. In addition, adoption of this Order is not subject to CEQA because this Order does not have the potential to cause a significant impact on the environment (Title 14 CCR section 15061(b)(3)) as it is intended to enforce preexisting requirements to improve the quality of ongoing discharges that are part of the CEQA "baseline". Any plant upgrades or replacement are the result of WDRs Order No. R5-2011-XXXX and not this Order.

19. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

20. In the event the selected alternative requires additional review under the California Environmental Quality Act, the Discharger shall conduct required review and obtain appropriate approval prior to initiating construction.

IT IS HEREBY ORDERED THAT:

1. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations for Dibromochloromethane, Dichlorobromomethane and Nitrate, contained in WDR Order No. R5-2011-XXXX as described in the above Findings:

COMPLIANCE TIME SCHEDULE TABLE

Task	Compliance Date
Submit and implement a Pollution Prevention Plan (PPP)[1] pursuant to CWC section 13263.3 for Dibromochloromethane, Dichlorobromomethane and Nitrate	6 Months after Adoption Date of this Order
Submit Initial Workplan for Proposed BPA	12 Months after Adoption Date of this Order
Progress Reports[2]	Semi Annually (1 March and 1 September)
Submit Formal Decision Regarding Continuance of BPA Approval Process or Initiation of Compliance Project Feasibility Study (i.e. Facility Upgrade, Relocation of Discharge to Colusa Basin Drain, Other)	4 Years After Adoption Date of this Order
Achieve compliance with applicable final effluent limits	5 years after Adoption Date of this Order

[1] The Discharger shall implement a new Pollution Prevention Plan (PPP) for Dibromochloromethane, Dichlorobromomethane and Nitrate and shall meet the requirements specified in California Water Code Section 13263.

[2] The progress reports for Dibromochloromethane, Dichlorobromomethane and Nitrate shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance with the final effluent limitations.

2. The following interim maximum daily effluent limitations shall be effective immediately in lieu of the final effluent limitations for Dibromochloromethane, Dichlorobromomethane and Nitrate contained in Order No. R5-2011-XXXX. The final effluent limitations at Discharge Point No. D-001 and D-002 for Dibromochloromethane, Dichlorobromomethane and Nitrate contained in Order No. R5-2011-XXXX shall become effective five years after the adoption of this Order, or when the Discharger is able to come into compliance, whichever is sooner.

Parameter	Units	Interim Average Monthly Effluent Limitation	Interim Maximum Daily Effluent Limitation
Dibromochloromethane	µg/L	11.29	16.48
Dichlorobromomethane	µg/L	43.03	62.82
Nitrate (as N)	mg/L	42.6	NA

3. For the compliance schedule required by this Order, the Discharger shall submit to the Central Valley Water Board on or before the compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may take additional enforcement action, including but not limited to, the application to the Attorney General for judicial enforcement or issuance of a complaint for Administrative Civil Liability.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 13 October 2011.

_____
PAMELA C. CREEDON, Executive Officer

PROOF OF POSTING

I, _____
(print name)

posted the **NOTICE OF PUBLIC HEARING** concerning Waste Discharge Requirements for

_____
(name of discharger)

(1) at the _____
(name of city hall or county courthouse)

on _____
(date posted)

(2) at the _____
(name of post office)

on _____
(date posted)

(3) at the _____
(name of Discharger's facility)

on _____
(date posted)

_____
(signature)

STATE CAPITOL
ROOM 3070
SACRAMENTO, CA 95814
(916) 651-4004

5800 STANFORD RANCH ROAD
SUITE 720
ROCKLIN, CA 95765
(916) 435-0744

1550 MYERS STREET
SUITE C
OROVILLE, CA 95965
(530) 532-5860

2885 CHURN CREEK ROAD
SUITE C
REDDING, CA 96002
(530) 225-3142

1080 MASON MALL
SUITE 4
CRESCENT CITY, CA 95531
(707) 464-1255

California State Senate

SENATOR
DOUG LA MALFA
FOURTH SENATE DISTRICT

COMMITTEES
NATURAL RESOURCES & WATER
VICE-CHAIR
ELECTIONS & CONSTITUTIONAL AMENDMENTS
VICE-CHAIR
AGRICULTURE
BUDGET & FISCAL REVIEW
GOVERNANCE & FINANCE
JOINT LEGISLATIVE AUDIT
JOINT FAIRS, ALLOCATIONS & CLASSIFICATIONS
CHAIR

September 1, 2011

Ms. Katherine Hart, Chair
Central Valley Regional Water Quality
Control Board
415 Knollcrest Drive, Suite 100
Redding, CA 96002

RE: City of Willows Wastewater Facility

Dear Ms. Hart and Members of the Board:

The City of Willows, located in the Fourth Senate District and the Second Assembly District, has been in contact with my office and that of Assemblymember Jim Nielsen to request assistance with a matter pertaining to the city's wastewater permit.

Only four years ago, the city invested in a new wastewater treatment facility; however, the Central Valley Regional Water Quality Control Board recently informed the city that the wastewater runoff (that is UV treated and feeds into local agricultural drains and canals) are being re-classified as a municipal and domestic water supply.

This significant policy revision essentially revokes a 20-year exemption permit that has recognized the historical treatment and use of this water supply and will require the city to upgrade its four-year old plant to a meet a much more stringent drinking water standard rather than the non-potable water standard under which the plant has been operating. The city has already increased local water fees to cover the cost of the new wastewater treatment facility, and this unnecessary regulatory burden will incur significant costs that will unnecessarily and negatively impact the residents of this small city.

At a minimum, we are requesting that the Board identify a source of funding to facilitate the study and implementation of the "Basin Plan Amendment," to identify and exempt certain agricultural drains and canals from the Board's definition of "municipal" waters. However, in light of the historical exemption provided the City of Willows, the traditional treatment and use of the water supplies in question, and the fiscal burden this re-designation will impose, we respectfully request that the Board re-evaluate and reverse the decision to impose the municipal water standard on the city and its residents. It is also worth noting that similar re-designations will also have negative impacts on the cities of Biggs, Colusa, Live Oak and Davis.

This is a matter of utmost importance to our districts, and the Board's conscientious consideration of will be appreciated.

Please contact either of us at our respective Capitol offices if you would like to discuss this further.

We look forward to hearing from you.

Sincerely,

Doug LaMalfa
SENATOR, Fourth District

Jim Nielsen
ASSEMBLYMEMBER, Second District

DL:cb

SouthWest
Water Company™

1600 South Tehama
P.O. Box 892
Willows, CA 95988
Phone 530.934.2052
Fax 530.934.2138
www.swwc.com

Date: September 2, 2011

From: John E. Dobson, Facility Manager

To: Gregory D. Cash, P.G.
Senior Engineering Geologist
Chief, South Regulatory Unit

Re. **Time Schedule Order for Nitrate**

Mr. Greg Cash,

Our nitrate limits for the wastewater treatment plant are currently being revised and will need to be set at a reasonable level in order to meet the new tentative permit. The Draft Time Schedule Order utilized sample data up to March 2011 for calculating the interim effluent limit for Nitrate (as N). Recent Certified Laboratory reports indicate that 20mg/L of Nitrate as N ($NO_3 - N$) during the summer of August 2011 is the highest result that have been received. Our concern is the limitation during the Time Schedule Order (TSO) based on the minimal data that has been collected so far. The calculation of an interim effluent limitation for Nitrate (as N) should include all of the recent data along with the historical data. We request that the interim effluent limitation for Nitrate (as N) be recalculated using the entire nitrate samples analysis collected to date.

Respectively,

John E. Dobson

John E. Dobson

CENTRAL VALLEY CLEAN WATER ASSOCIATION
CVCWA
EST. 1987

Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

MICHAEL RIDDELL – CHAIR, CITY OF CERES **STEVE HOGG – VICE CHAIR, CITY OF FRESNO**
JEFF WILLETT– SECRETARY, CITY OF STOCKTON **ED CROUSE – TREASURER, RANCHO MURIETA CSD**

September 2, 2011

Submitted Via Electronic Mail

Mr. Greg Cash
California Regional Water Quality Control Board,
Central Valley Region
415 Knollcrest Drive, Suite 100
Redding, CA 96002
gcash@waterboards.ca.gov

SUBJECT: Comments on Late and Late-Late Revisions on Tentative Waste Discharge Requirements (NPDES No. CA0078034) and Time Schedule Order for City of Willows, Willows Wastewater Treatment Plant, Glenn County

Dear Mr. Cash:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to comment on the Late and Late-Late Revisions on the Waste Discharge Requirements (Tentative Permit) and the Revised Time Schedule Order (TSO) for the City of Willows' Wastewater Treatment Plant.

In general, CVCWA appreciates and supports the proposed revisions to the TSO. At the June 10, 2011 hearing of the Central Valley Regional Water Quality Control Board (Central Valley Water Board), CVCWA expressed concern with the specific tasks identified in the Compliance Schedule Table of the TSO. As originally proposed, the City of Willows would have had no option but to pursue and build new treatment to meet effluent limitations based on the municipal (MUN) beneficial use designation notwithstanding the fact that MUN is not a proper beneficial use for the receiving waters in question. The proposed revisions to the TSO appear to

provide the City of Willows sufficient flexibility to seek a Basin Plan Amendment to remove the MUN beneficial use. To that end, we support the proposed revisions.

However, CVCWA must express its concerns with the Central Valley Water Board staff's position that pursuit of a Basin Plan Amendment under these circumstances must be funded wholly, or at least largely in part, by the City of Willows. As chairperson Hart clearly stated at the June 10, 2011 Central Valley Water Board meeting, the Central Valley Water Board should accept responsibility for not excepting out agricultural drains when it adopted Resolution 88-63 into the Basin Plan. ("[]in adopting Resolution 88-63 without excepting out these ag drains, we should accept responsibility for that.") Accepting responsibility includes funding the studies and staff time necessary to pursue a Basin Plan Amendment for Central Valley Water Board consideration.

Accordingly, CVCWA recommends that the Central Valley Water Board direct staff to expeditiously pursue a Basin Plan Amendment if the Tentative Permit and TSO are adopted. Please contact me at (530) 268-1338 or eofficer@cvcwa.org if you have questions with respect to these comments.

Sincerely,

Original Signed by Debbie Webster

Debbie Webster
Executive Officer

Regional Water Quality Control Board
Central Valley Region

Board Meeting – 12/13/14 October 2011

Response to Written Comments on
Tentative Waste Discharge Requirements and Time Schedule Order
for

City of Willows
Willows Wastewater Treatment Plant
Glenn County

12 September 2011

At a public hearing scheduled for 12/13/14 October 2011, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of tentative Waste Discharge Requirements (NPDES No. CA0078034) and a Time Schedule Order for the City of Willows Wastewater Treatment Plant. This document contains responses to comments received from interested parties in response to the Tentative Orders. Written comments from interested parties were required to be received by the Central Valley Water Board by 2 September 2011 in order to receive full consideration. Comments were received prior to the deadline from:

1. Senator Doug La Malfa and Assemblymember Jim Nielsen
2. Central Valley Clean Water Association
3. SouthWest Water Company (contract operator for the City of Willows)

Written comments from the above interested parties are summarized below, followed by the response of Central Valley Water Board staff.

SENATOR DOUG LA MALFA AND ASSEMBLYMEMBER JIM NIELSEN COMMENTS

SENATOR DOUG LA MALFA AND ASSEMBLYMEMBER JIM NIELSEN – COMMENT #1 – Funding of Basin Plan Amendment:

"At a minimum, we are requesting that the Board identify a source of funding to facilitate the study and implementation of the "Basin Plan Amendment," to identify and exempt certain agricultural drains and canals from the Board's definition of "municipal" waters."

RESPONSE:
The Discharger has several funding sources that they can pursue to help facilitate the beneficial use study in support of a possible Basin Plan Amendment. As an example, the City of Vacaville received funding from the following sources for their Basin Plan Amendment process:

- City of Vacaville (Discharger);
- Local Irrigation District; and,
- A cooperative group of Publically Owned Treatment Works (POTW) that benefited from the Basin Plan amendment.

Other possible sources that might be used for funding a Basin Plan Amendment include:

- Funds secured by Elected officials (congressional representatives, legislative representative);
- United States Environmental Protection Agency (USEPA);
- California Department of Water Resources which has awarded over $204 million dollars in Proposition 84 Grant funding for their Integrated Regional Water Management Implementation Grant Program;
- The State Water Resources Control Board has a Clean Water State Revolving Fund (CWSRF) that has financed "expanded use projects";
- Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), and
- Central Valley Water Board, although it has only very limited Basin Planning staff and funding.

SENATOR DOUG LA MALFA AND ASSEMBLYMEMBER JIM NIELSEN – COMMENT #2 – Municipal Beneficial Use Issue:

"However, in light of the historical exemption provided the City of Willows, the traditional treatment and use of the water supplies in question, and the fiscal burden this re-designation will impose, we respectfully request that the Board re-evaluate and reverse the decision to impose the municipal water standard on the city and its residents. It is also worth noting that similar re-designations will also have negative impacts on the cities of Biggs, Colusa, Live Oak and Davis."

RESPONSE:
Central Valley Water Board staff does not concur with reversing the decision to apply the Municipal Beneficial Use (MUN) to the receiving water that the City of Willows Wastewater Treatment Plant discharges into. Central Valley Water Board staff concurs that the receiving water may have been constructed or modified for the purpose of conveying agricultural drainage water, as specified in the criteria of Exception No. 2.b. of Resolution No. 88-63; however, the Central Valley Water Board staff does not concur that the MUN designation is inappropriate. The Central Valley Water Board does not have the authority to grant an exception to Resolution No. 88-63 through an individual NPDES Permit. As discussed in Finding II.H of the proposed NPDES Permit, the MUN beneficial use is applied to the receiving waters based on Resolution No. 88-63, which establishes that all waters (with certain exceptions) should be considered suitable or potentially suitable for municipal or domestic supply. The Central Valley Water Board implemented this policy by designating all unnamed waterbodies as having the MUN use. Basin Plan, page II-2.01, states that the Central Valley Water Board may de-

designate MUN based on the applicability of one or more of the Resolution No. 88-63 exceptions; however, as specified in page VI-9.00, de-designation of a MUN use must occur through a formal basin plan amendment process.

Moreover, this approach is consistent with subsequently adopted State Board orders. As recognized in the Vacaville Order, the Central Valley Water Board chose to implement 88-63 through a blanket MUN designation for all unidentified waterbodies in the region. Therefore, given that the Central Valley Water Board has made such a designation, the Central Valley Water Board would be required to go through another rulemaking process to change the designation. (WQ Order No. 2002-0015 at pp. 16-17.) See also In the Matter of the Petition of Curtis D. Quinones and Vapor Cleaners, Inc. WQ Order No. 2006-0010 at p. 2, noting that (1) beneficial uses are designated in the Basin Plan through a quasi-legislative process rather than on a case-by-case basis, as in a permit or cleanup order; (2) a Basin Plan amendment is the appropriate vehicle to designate or de-designate uses and that Resolution 88-63 is a tool in designations; and (3) it is not self-implementing.

Recently, (June 2011 Regional Board Meeting), the Central Valley Regional Board adopted an NPDES permit for the City of Live Oak, which included agricultural drainages, that stated, "until the Central Valley Water Board adopts a Basin Plan Amendment for an exception, and the State Water Board and Office of Administrative Law approve the Basin Plan Amendment, the receiving water is considered to be suitable or potentially suitable for municipal or domestic supply in accordance with State Water Board Resolution No. 88-63." The proposed permit for the City of Willows Wastewater Treatment Plant is consistent with the permit adopted for the City of Live Oak's Wastewater Treatment Plant permit, that also applies the MUN beneficial use to the receiving water.

CENTRAL VALLEY CLEAN WATER ASSOCIATION COMMENTS (CVCWA)

CVCWA – COMMENT #1 – Funding of Basin Plan Amendment:

"However, CVCWA must express its concerns with the Central Valley Water Board staff's position that pursuit of a Basin Plan Amendment under these circumstances must be funded wholly, or at least largely in part, by the City of Willows. As chairperson Hart clearly stated at the June 10, 2011 Central Valley Water Board meeting, the Central Valley Water Board should accept responsibility for not excepting out agricultural drains when it adopted Resolution 88-63 into the Basin Plan. ("[]in adopting Resolution 88-63 without excepting out these ag drains, we should accept responsibility for that.") Accepting responsibility includes funding the studies and staff time necessary to pursue a Basin Plan Amendment for Central Valley Water Board consideration.

Accordingly, CVCWA recommends that the Central Valley Water Board direct staff to expeditiously pursue a Basin Plan Amendment if the Tentative Permit and TSO are adopted."

RESPONSE:
The Central Valley Water Board can request funds to be shifted to a Basin Planning Amendment process, however, the funds (and Basin Planning staff) from the Central Valley Water Board are very limited. The Central Valley Water Board intends to use its available resources to help facilitate the process; however, full funding of the Basin Plan Amendment process is beyond the means of the Board at this time. Central Valley Water Board staff will work with the Dischargers on this Basin Planning process. See Response to Comments, Senator Doug La Malfa and Assemblymember Jim Nielsen – Comment #1 for additional information.

SOUTHWEST WATER COMPANY

SOUTHWEST WATER COMPANY (CONTRACT OPERATOR FOR THE CITY OF WILLOWS) – COMMENT #1 – Nitrate Interim Effluent Limits:

Our nitrate limits for the wastewater treatment plant are currently being revised and will need to be set at a reasonable level in order to meet the new tentative permit. The Draft Time Schedule Order utilized sample data up to March 2011 for calculating the interim effluent limit for Nitrate (as N). Recent Certified Laboratory reports indicate that 20 mg/L of Nitrate as N (NO_3 – N) during the summer of August 2011 is the highest result that have been received. Our concern is the limitation during the Time Schedule Order (TSO) based on the minimal data that has been collected so far. The calculation of an interim effluent limitation for Nitrate (as N) should include all of the recent data along with the historical data. We request that the interim effluent limitation for Nitrate (as N) be recalculated using the entire nitrate samples analysis collected to date.

RESPONSE:
Central Valley Water Board staff concurs with the request to include all of the most recent nitrate effluent data by proposing a revision to the tentative Time Schedule Order, in regards to the Interim Effluent Limits for Nitrate (as N). The interim effluent limit calculation for Nitrate (as N) will include the most recent data along with the previous data presented in the tentative Time Schedule Order.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
415 Knollcrest Drive, Suite 100, Redding, CA 96002

NOTICE OF PUBLIC HEARING

concerning

RENEWAL OF WASTE DISCHARGE REQUIREMENTS
(NPDES PERMIT NO. CA0078034)
AND
TIME SCHEDULE ORDER
FOR
CITY OF WILLOWS
WILLOWS WASTEWATER TREATMENT PLANT
GLENN COUNTY

The City of Willows (Discharger) owns the Willows Wastewater Treatment Plant. SouthWest Water Company operates the Willows Wastewater Treatment Plant located at 1600 Tehama Street, Willows, Glenn County. The Discharger may be contacted by mail at 201 N. Lassen Street, Willows, CA 95988. The treatment system at the facility consists of a wastewater collection, treatment, and disposal system and provides sewage service to the City of Willows. The treatment system includes influent screening, extended aeration (biolac system), activated sludge with two secondary clarifiers, nine continuous backwash sand filters, disinfection with sodium hypochlorite, dechlorination using sodium bisulfite injection, equalization and emergency storage ponds, and sludge storage lagoons.

The Discharger has upgraded the facility in 2007 (installation of the activated sludge processes) to meet the final effluent limits in the current permit.

Based on the interpretation of the beneficial uses of the receiving waters, the permit has included the Municipal/Domestic beneficial (MUN) use for the surface waters. This designation requires establishing effluent limitations at a level to protect the MUN beneficial use. The Discharger will not be able to immediately comply with the revised tentative NPDES permit; therefore a Time Schedule Order has been proposed for the chlorination byproducts (dibromochloromethane, dichlorobromomethane) and nitrate.

The Discharger is expected to be able to immediately comply with the revised tentative NPDES permit for all other constituents, except for those included in the Time Schedule Order, if adopted. The Central Valley Water Quality Control Board (Central Valley Water Board) considered adopting the tentative Waste Discharge Requirements at the 10 June 2011 Board meeting; however, the Board continued the adoption of the proposed Orders. Late and Late-Late revisions were presented at the 10 June 2011 Board meeting on the tentative NPDES permit, and are incorporated into the revised tentative NPDES permit in track changes. The Central Valley Water Board continued the Board meeting to revise the compliance schedule in the Time Schedule Order.

A public hearing concerning this matter will be held during the Central Valley Water Board meeting that is scheduled for:

DATE: 12, 13, 14 October 2011
TIME: 8:30 a.m.
PLACE: Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA

The designated parties for this hearing are as follows:

- Staff of the Central Valley Water Board
- Staff of the City of Willows
- Staff of SouthWest Water Company

The tentative Waste Discharge Requirements and Time Schedule Order were issued on 5 April 2011, and the comment period ended on 5 May 2011. Due to the continuation of this item, the comment period is extended to **5:00 pm on 2 September 2011** for comments on the Late and Late-Late Revisions to the tentative NPDES Permit and the Revised Time Schedule Order. Both documents are in track changes format.

Designated parties but not interested persons will have these rights: to call and examine witnesses; to cross-examine opposing witnesses; to impeach any witness; and to rebut the evidence against him or her. Central Valley Water Board staff will prepare the administrative record, and may present evidence, make an oral presentation and cross-examine opposing witnesses.

Interested persons may not cross examine witnesses, and will not be subject to cross examination. Interested persons may submit evidence (e.g., photographs, eye-witness testimony, monitoring data) if the evidence is submitted in accordance with the deadlines for submitting evidence described below. Interested persons who present evidence may be subject to cross-examination. Interested persons may request status as a designated party for purposes of this hearing by submitting such request in writing to the Central Valley Water Board no later than **5:00 pm on 2 September 2011.** The request must explain the basis for status as a designated party and in particular how the person is affected by the discharge.

The tentative Revised Orders were issued on 2 August 2011. Persons wishing to comment on the Late Revisions to the tentative NPDES permit and the Revised Time Schedule Order item must submit testimony, evidence, if any, and/or comments in writing to the Central Valley Water Board no later than **5:00 p.m. on 2 September 2011**. Only testimony, evidence, and/or comments regarding the tentative Order Revisions will be accepted absent a ruling by the Chair. Written materials submitted after this date and time will not be accepted and will not be incorporated into the administrative record absent a ruling by the Chair. A party requesting to submit late materials must demonstrate good cause for the late submission, and the Chair must find that the late submission would not prejudice the Central Valley Water Board or any designated party.

All designated parties and interested persons may speak at the Central Valley Water Board meeting, and are expected to orally summarize their written submittals. Oral testimony and cross examination will be limited in time by the Board Chair. Both designated parties and interested persons may be asked to respond to clarifying questions from Central Valley Water Board members, counsel staff or others, at the discretion of the Central Valley Water Board.

Anyone having questions on the proposed Orders should contact **Greg Cash at (530) 224-3208**. Interested parties may download the proposed Orders and related documents from the Central Valley Water Board's Internet website at

http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/.

Copies of these documents can also be obtained by contacting or visiting the Central Valley Water Board's office at 415 Knollcrest Drive, Suite 100, Redding, CA 96002 weekdays between 8:00 a.m. and 5:00 p.m.

The final meeting agenda will be available at

http://www.waterboards.ca.gov/board_info/agendas/

at least ten days before the meeting. The agenda will provide the dates the Central Valley Water Board meeting will be held, indicate the anticipated order of agenda items, and may include staff revisions to the proposed order(s).

The procedures governing Central Valley Water Board meetings may be found at Title 23, California Code of Regulations, Section 647 et seq. and are available upon request. Hearings before the Board are not conducted pursuant to Government Code section 11500 et seq. The procedures may be obtained by accessing http://www.waterboards.ca.gov/laws_regulations/. Information on meeting and hearing procedures is also available on the Board's website at http://www.waterboards.ca.gov/centralvalley/board_info/meetings/mtgprocd.shtml or by contacting any one of the Board's offices. Questions regarding such procedures should be directed to Ms. Kiran Lanfranchi-Rizzardi at (916) 464-4839.

The hearing facilities will be accessible to persons with disabilities. Individuals requiring special accommodations are requested to contact Ms. Kiran Lanfranchi-Rizzardi at (916) 464-4839 at least 5 working days prior to the meeting. TTY users may contact the California Relay Service at 1-800-735-2929 or voice line at 1-800-735-2922.

Please bring the above information to the attention of anyone you know who would be interested in this matter.

Original signed by

Robert A. Crandall
Assistant Executive Officer

Matthew Rodriquez
Secretary for
Environmental
Protection Agency

California Regional Water Quality Control Board
Central Valley Region

Katherine Hart, Chair

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Edmund G. Brown Jr.
Governor

12 September 2011

Mr. Greg Tyhurst
Public Works Director
City of Willows
201 N. Lassen Street
Willows, CA 95988

Mr. John Dobson
Regional Technical Manager
SouthWest Water Company
P O Box 230
Corning, CA 96021

RESPONSE TO COMMENTS, CITY OF WILLOWS, WILLOWS WASTEWATER TREATMENT PLANT, GLENN COUNTY

Attached to this cover letter is the Response to Written Comments – Tentative Order – Waste Discharge Requirements and Time Schedule Order (NPDES No. CA0078034), City of Willows, Willows Wastewater Treatment Plant, Glenn County. Comments were received from the Senator Doug La Malfa and Assemblymember Jim Nielsen, Central Valley Clean Water Association, and SouthWest Water Company (contract operator for the City of Willows). A copy of the tentative permit is available on the Central Valley Water Board's web site at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/

A public hearing concerning this matter will be held during the Central Valley Regional Water Quality Control Board (Regional Board) meeting, which is scheduled for:

DATE: 12/13/14 October 2011
TIME: 8:30 a.m.
PLACE: Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

If you have any questions, please contact me at (530) 224-3208, or at the address above.

Greg Cash
Senior Engineering Geologist
Chief, South Regulatory Unit

GC: lm

Enclosures – Response to Comments
Comments from Senator Doug La Malfa and Assemblymember Jim Nielsen
Comments from Central Valley Clean Water Association
Comments from SouthWest Water Company
Time Schedule Order (Discharger only)

cc: Senator Doug La Malfa
State Capitol – California State Senate
Assemblymember Jim Nielsen
State Capitol – California State Assembly
Ms. Debbie Webster, Executive Officer, Central Valley Clean Water Association, Grass Valley

ITEM: 16

SUBJECT: Triennial Review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins

REPORT: The Triennial Review process set forth in the Federal Clean Water Act and California Water Code requires that regional water boards conduct public hearings to help them identify and prioritize problems concerning the effectiveness of a water quality control plan. It also requires that the regional water boards develop work plans to investigate the problems and make appropriate amendments to water quality control plans. This item concerns the Regional Water Quality Control Board, Central Valley Region's (Central Valley Water Board) obligatory review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) and approval of the work plan proposed by staff.

The purpose of this hearing is to receive further comment from the public on water quality issues and the work plan proposed for addressing them. The Central Valley Water Board held a workshop in August 2009 to receive comments on issues to be included in the Triennial Review work plan. Written comments submitted for the workshop were provided to the Board in the workshop agenda package. The written comments submitted for the workshop can be viewed at:

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/triennialreviews.shtml.

Staff reviewed and responded to comments and developed a work plan to investigate the identified issues by priority. Resources for this planning effort are limited, so the work plan identifies what can be expected with existing resources and what additional resources would be required to address remaining issues. The response to comments and the draft work plan were made available for additional comments with the release of the Notice of Public Hearing. Written comments submitted since the Notice of Public Hearing was released are included in this agenda package. Staff responded to the additional comments and made changes to the draft work plan as appropriate.

At the conclusion of the hearing, the Central Valley Water Board will consider adoption of a resolution to:

- Adopt the proposed work plan which identifies and ranks what water quality issues need to be addressed and in what priority resources will be allocated to address these issues and develop basin plan amendments,
- Approve the response to comments received during the process,
- Reaffirm that the Basin Plan is adequate in all areas where an issue for investigation has not been identified,
- Declare that the Basin Plan in its entirety shall remain in effect except when a specific portion of it is subsequently amended through implementation of the work plan.

RECOMMENDATION: Adopt the proposed Resolution.

Mgmt. Review_____
Legal Review _____

13 October 2011
Central Valley Regional Water Quality Control Board meeting
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Issue List and Work Plan for the 2011 Triennial Review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins

To meet requirements of Section 303(c) of the Federal Clean Water Act and Section 13240 of the California Water Code, the Central Valley Regional Water Quality Control Board (Regional Water Board) reviews the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) every three years. The Basin Plan is the foundation for the Regional Water Board's water quality regulatory programs. The Basin Plan designates beneficial uses for water bodies in the Sacramento River and San Joaquin River Basins, 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 conducting a public workshop to receive comments on water quality issues in the two Basins and preparing a work plan which describes the actions the Regional Water Board may take over the next three years to investigate and respond to the issues. The triennial review process includes a public solicitation and identification of issues that may need to be addressed through Basin Plan amendments. 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 Plan activities.

The Regional Water Board began the current Triennial Review by providing a 45-day public notice, culminating in a public workshop, to solicit comments on water quality problems. An information document was prepared to provide a status of the high priority issues from the last Triennial Review. The notice was mailed or emailed to the more than 2800 entities on the Basin Plan mailing list and published for one day in each of the five major newspapers covering the Basin Plan area.

The public workshop was held during the regularly scheduled Regional Water Board meeting on 13 August 2009 to receive oral comments. While comments submitted after the public workshop until the release of the draft work plan would have been considered in developing the draft work plan, no comments were provided. The Regional Water Board received a total of 12 written comments prior to the workshop and 5 verbal comments at the workshop. Staff prepared responses to all comments. In addition, staff also prepared responses to basin

planning comments received outside of the Triennial Review process such as basin planning comments received during the process of developing the 2008 Clean Water Act Section 303(d)/305(b) Integrated Report. After the draft Work Plan and Response to Comments was circulated, seven written comments were submitted by the due date of 29 August 2011. Responses to these comments were added to the Response to Comments document and the Work Plan was revised as indicated by the response to comments.

The issues listed below reflect the high priority water quality problems identified from public comments received during this review period and staff knowledge about problems in the Basins. The Triennial Review work plan consists of issues that are in various stages of development. Many of the issues have not been investigated by staff and detailed information was not provided in comments. These issues are described in broad conceptual terms. Before an issue can result in basin plan amendments, staff must investigate the issue to identify the scope of potential basin plan amendments in conformance with applicable federal and state laws and regulations. After determining that a basin plan amendment is the appropriate means to address the issue, information, including the development of scientific justification, is prepared to support the amendment. Then the potential amendment undergoes a structured public participation process before it can be presented to the Board for its consideration.

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. In addition to prioritizing the activities, the work plan identifies unfunded and inadequately funded issues for which the Regional Water Board will actively seek funding and will accept funding to accomplish.

Two levels of actions are specified. Current Actions represent the staff's best judgment about what can be done from FY 11/12 through FY 13/14 to address the issue with available resources. Additional Actions depend on more resources becoming available. Some stakeholders have provided funding for staff and studies to move certain issues forward. Also, other programs, such as the TMDL program, include resources to complete basin plan amendments. These other sources of funding are identified in the work plan. Even with other sources funding basin planning work, the existing basin plan budget is used to provide support in the preparation of basin plan amendments developed with these other sources of funding. The priority for each issue indicates the intended order to address the issues.

Based on the staff analysis, the following issues have been identified as high priority for the Sacramento and San Joaquin Rivers Basin.

- Salt and Nitrate Management
- Regulatory Guidance to Address Water Bodies Dominated by NPDES Discharges

- Regulatory Actions in Agricultural Dominated Water Bodies and Agricultural Conveyance Facilities
- Beneficial Use Designations
- Delta Issues
- Dissolved Oxygen Problems in the San Joaquin River near Stockton
- Pesticide Control Efforts
- Mercury Load Reduction Program
- Policies for Maintaining Water Quality for Drinking Water
- Protection of Central Valley Fisheries and other Aquatic Life
- Secondary MCLs as Water Quality Objectives

In addition to the above issues, the State Water Board is working on various plans and policies and it is necessary for Central Valley Water Board staff to expend resources to participate in these processes. In many cases, the resources to participate in the development of the State Water Board's plans and policies are from programs other than basin planning, such as NPDES, Water Quality Certifications, and TMDL. However, some of the plans and policies are most closely associated with basin planning and will require allocating some of our limited basin planning resources to assure that the Central Valley Water Board's priorities are considered. Issue No. 12 describes the Basin Plan Program resources used to follow State Water Board Plans and Policies. Basin planning resources are also used to implement Basin Planning priorities when the activities are not directly related to a regulatory program. These priorities include implementing the groundwater quality protection strategy described in Issue No. 14 and implementing policies on subsurface agricultural drainage. Recently, the Water Boards have started working together on multi-regional basin planning activities that could have staff working on lower priority issues in the short term but have the state-wide benefit of completing more basin plan amendments in the long run. A description of these multi-region projects is included in Issue No. 12.

The issues selected for the 2011 Triennial Review represent major water quality concerns based on what is currently known about them. Knowledge about pollution problems may change significantly from one year to the next.

The basin plan amendment process begins after sufficient studies and technical information has been gathered to develop the scope of the amendment. Resources are estimated based on conducting the information gathering phase and the basin plan amendment process as efficiently and quickly as possible. For many of the issues, staff has access to very limited technical information. Therefore the resource estimates are generic and may significantly underestimate the resources needed to gather the necessary information or to complete the actual basin plan amendment. For many of the issues, stakeholders have expectations of specific outcomes. Due to the lack of

technical information readily available to staff, the outcome of these issues is uncertain and cannot be determined at this time.

The following issue descriptions are mainly based on stakeholder comments and may include stakeholder expectations. As explained above, outcomes are uncertain until further information has been gathered. Available technical information and statutory and regulatory requirements were used to provide context to the issues.

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

Discussion: Salinity: Salt management is the most serious long-term water quality issue in the San Joaquin River Basin. The causes include increased urban and agricultural development, over allocation of surface water supplies, diversion of high quality flows to outside the basin, salty return flows from agriculture and higher salinity water being imported into the basin. Approximately 600,000 tons of salt are imported annually into the western portion of the San Joaquin Basin (west of the San Joaquin River) for crop irrigation and wetland management via federal, state, and local water projects. An additional 160,000 tons are applied through irrigation from San Joaquin River diversions. Some of this salt is returned to the river through tail water return flows and some is stored in the soil. Most, however, is purposefully leached below the root zone to maintain salt balance in the root zone. Much of this leached salt ends up in the groundwater. Degradation of groundwater in the San Joaquin River Basin by salts is unavoidable without a plan to remove salts from the basin.

Water quality in the San Joaquin River has degraded significantly since the late 1940s. During this period, salt concentrations in the River, near Vernalis, have doubled and boron levels have increased significantly. The Central Valley Water Board adopted a Control Program to implement salt and boron objectives in the San Joaquin River at Vernalis in 2004. However, this control program only deals with control of loads discharged to the River. Since groundwater inflow is a contributor of salt to the river and beneficial uses of groundwater are being impacted, a parallel control plan needs to be established for the control of salts to groundwater.

Even with a control plan, the use of the San Joaquin River to export salts creates additional problems. For example, salt that is being exported through the San Joaquin River is being

recirculated into the federal and State water project pumps and returned to the water users in the San Joaquin River Basin as well as to water users in the Tulare Lake Basin where there is no outlet for salt at the present time. Development of numeric water quality objectives for salinity is all the more important since the Central Valley Water Board allows the San Joaquin River to be used to remove salts from the Basin as long as water quality objectives are met. However, work to develop numerical objectives for salinity in the San Joaquin River upstream of Vernalis is still in progress.

In the Sacramento River Basin, salt buildup and control is rarely an intrabasin issue. However, an incremental increase in Sacramento River salinity exacerbates salinity problems in the southern basins and for all Delta exporters because of larger salt loads in their supply water.

In addition to basin-wide issues, there are local areas of potential groundwater problems due to disposal of wastewater from food processing, septic tanks, municipal wastewater, confined animal facilities, and numerous other types of industrial dischargers. With no basin wide infrastructure to isolate and export salt, there are only two alternatives for these dischargers: individually isolate the salt and store it in the basin or dilute it for reuse. Both have long-term consequences.

Nitrates. A 1988 State Water Board report to the State Legislature on Nitrate in Drinking Water[1] reported that 10 percent of the samples in STORET (the USEPA database) were above the primary Maximum Contaminant Level (10 mg/L nitrate-nitrogen). A geographical depiction of wells with levels of nitrate above background (greater than 4.5 mg/L nitrate-nitrogen) showed the highest densities in the Central Valley are close to the

[1] State Water Resources Control Board. 1988. Nitrate in Drinking Water Report to the Legislature, Report No. 88-11WQ, Division of Water Quality. October. The report is available at: http://www.waterboards.ca.gov/water_issues/programs/gama/docs/anton1988.pdf

Highway 99 corridor and primarily around population centers (e.g. Modesto, Yuba City, Fresno, and Bakersfield) and concentrated animal confinement areas (e.g. feedlots and dairies). Nitrate is one of the most frequently exceeded constituents in public supply wells.

The primary sources of nitrate in groundwater are application of nitrogen fertilizers, disposal or reuse of animal waste at confined animal production facilities, and individual sewer systems (septic systems). Groundwater in crop production areas can become contaminated with nitrate when nitrogen fertilizers are applied at rates in excess of crop utilization and inefficient irrigation or high rainfall leach the nitrate to groundwater. Other factors that put groundwater at risk are a shallow aquifer, the absence of a restricting layer to vertical migration of nitrate, permeable soils and poor well construction.

In 2010, the US Geological Survey (USGS) released a report on nutrients in the nation's streams and groundwater[2]. The Sacramento River Basin and the San Joaquin River Basin were two of the 51 hydrologic systems studied by the USGS in this report. Stream systems were categorized as draining agricultural, urban, mixed or undeveloped areas. Generally, nutrient concentrations in streams were found to be directly related to land use and associated fertilizer applications and human and animal wastes in upstream watersheds. Total nitrogen concentrations were highest in streams draining agricultural areas. Streams draining urban areas had concentrations of total nitrogen lower than streams draining agricultural areas but higher than background. Total phosphorus concentrations were highest in streams draining agricultural and urban areas. In groundwater, nitrate

[2] Dubrovsky, N.M., Burow, K.R., Clark, G.M., Gronberg, J.M., Hamilton P.A., Hitt, K.J., Mueller, D.K., Munn, M.D., Nolan, B.T., Puckett, L.J., Rupert, M.G., Short, T.M., Spahr, N.E., Sprague, L.A., and Wilber, W.G., 2010, The quality of our Nation's waters—Nutrients in the Nation's streams and groundwater, 1992–2004: U.S. Geological Survey Circular 1350, 174 p. Additional information about this study is available at http://water.usgs.gov/nawqa/nutrients/pubs/circ1350

concentrations were highest in shallow wells in agricultural areas that were associated with high fertilizer and manure applications. Nitrate concentrations were lowest in shallow wells in urban areas and in deep wells in major aquifers. Regardless of land use and nitrogen sources, nitrate concentrations were significantly higher in well-oxygenated groundwater. The human health findings were that nitrate concentrations in streams seldom exceeded the MCL but 83% of studies of shallow groundwater in agricultural areas had one or more samples with a nitrate concentration greater than the MCL. Concentrations exceeding the MCL were less common in public-supply wells.

The Central Valley Water Board may address nutrients from agricultural areas with the long-term irrigated lands regulatory program which is now under development.

In 1993, the Central Valley Water Board conducted a survey of groundwater beneath five typical well operated dairies in the vicinity of Hilmar. The average nitrate-nitrogen concentration beneath these dairies was 49 mg/L with a maximum value of 250 mg/L. This far exceeds the drinking water standard of 10 mg/L. Conditions were conducive to migration of nitrates to groundwater as soils are highly permeable (sandy) and the water table is shallow (4 to 25 below ground surface). There are 1600 dairies in the Central Valley with over 1 million milking cows. In 2007, the Central Valley Water Board adopted general waste discharge requirements to control nutrients from existing confined animal production facilities.

With respect to individual septic systems, the Central Valley Water Board has dealt with these on a case-by-case basis by prohibiting discharge in problematic service areas. Twenty-six prohibitions have been adopted by the Central Valley Water Board. The Central Valley Water Board has also adopted guidelines for use of septic tank systems in developments. Staff has

encouraged counties to adopt and enforce ordinances that are consistent with the guidelines. However, these guidelines are now outdated and the State Water Board is working on regulations. See Issue No. 12 for more information on State Water Board plans and policies.

Triennial review comments indicate that wineries might be an area of concern. Wineries can produce substantial quantities of stillage waste which is high in concentrations of BOD, EC, TDS, and nitrogen. The Basin Plan includes guidelines for the disposal of stillage waste that are based on a study conducted in 1980. The Basin Plan notes that the guidelines represent minimum requirements for disposal of stillage waste from wineries and do not preclude the establishment of more stringent requirements to comply with water quality objectives and protect beneficial uses of surface and ground waters.

CV-SALTS: In recognition of these salt and nitrate issues, the Central Valley Water Board, the State Water Board, and stakeholders began a joint effort to address salinity and nitrate problems in the Central Valley and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program. This effort is expected to include evaluation of beneficial uses and water quality objectives for salt and nitrate constituents as well as development of a comprehensive implementation program. CV-SALTS is also the venue for coordinating the development of the salt and nutrient management plans from the State's Recycled Water Policy. However, as indicated in triennial review comments, participants realize that addressing salt and nitrates concerns will go beyond basin planning and the Water Boards.

CV-SALTS is expected to be a comprehensive effort that may take a number of years to

complete. While CV-SALTS is in progress, it is important for all stakeholders to be involved in developing solutions. However, many stakeholders are being required by regulatory requirements to focus on local issues. Therefore, it is important for the Water Boards to provide an atmosphere conducive for stakeholders to maintain their focus on CV-SALTS.

The State Water Board is responsible for a water quality control plan that spans the San Francisco Bay and the Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan). The State Water Board is currently reviewing the southern Delta salinity and San Joaquin River flow objectives. This review provides information that is useful for CV-SALTS and the efforts must be coordinated to provide a holistic solution. This review may address the regulatory concerns of some of the individual dischargers and allow these dischargers to participate fully in the CV-SALTS efforts.

Stakeholders have requested that the Central Valley Water Board develop an implementation program to achieve the water quality objectives in the Bay-Delta Plan for dischargers of salt. To avoid duplication, the need for an implementation program should be assessed after the State Water Board completes its review of the southern Delta salinity and San Joaquin River flow objectives and after the CV-SALTS effort is completed.

Priority: High

Current Action: Staff is working with a stakeholder coalition on CV-SALTS. In order to improve coordination with participants of CV-SALTS, the development of salinity water quality objectives for the Lower San Joaquin River is now one of the CV-SALTS activities. Stakeholders have developed a workplan to complete the CV-SALTS activities.

Staff is also exploring potential options to provide incentives for stakeholder participation in CV-SALTS.

Current Resources: Stakeholders are expected to participate in CV-SALTS and provide the necessary input to conduct the basin planning activities. Staff participating in CV-SALTS is funded from basin planning and nonpoint source resources. (2 PYs)

Discussions with stakeholders and other regulatory agencies over potential short-term regulatory solutions are funded by basin planning resources. (0.1 PYs)

Additional Action: The stakeholder work plan estimates that $22 to $42 million will be needed to complete the CV-SALTS activities. Stakeholders are expected to develop a funding mechanism to obtain resources needed for CV-SALTS activities.

Current actions cover staff assistance on the comprehensive CV-SALTS effort. However, the effort may be made up of a number of projects for which staff efforts are not funded. As these projects are identified and implemented, resources are needed for appropriate levels of staff involvement.

While CV-SALTS is under development, there is a need to develop an interim regulatory solution for dischargers adversely affected by salinity regulation.

Additional Resource Requirements:

1) Staff – Since stakeholders are expected to develop a funding mechanism to complete CV-SALTS activities, the existing staff resources are adequate. However, CV-SALTS includes a number of project that will require an additional 0.5 PYs per year per project for staff. For the interim solution, an additional 0.3 PYs per year for two years will be needed.

2) Contract(s) – Stakeholders estimate that $22 to $42 million is needed to complete CV-SALTS activities and stakeholders are expected to develop a funding mechanism. For the interim solution, an additional $100,000 will be needed.

Issue 2: **Regulatory Guidance to Address Water Bodies Dominated by NPDES Discharges**

Discussion: It is sometimes difficult and expensive for dischargers to meet water quality objectives in water bodies dominated by NPDES discharges, also known as effluent dominated water bodies (EDWs). Where little or no dilution is available, effluent limits are set at the applicable water quality criterion/objective which may be more stringent than drinking water MCLs in order to protect aquatic life beneficial uses. In addition, the water quality objectives for turbidity and temperature are based on allowing only limited changes to background conditions. However background stream conditions can fluctuate and respond more quickly to environmental changes (i.e., rainfall, changes in air temperature) than effluents from wastewater treatment facilities. Stakeholders have commented that, in some cases, wastewater treatment plants are capable of discharging high quality effluent that would fully support beneficial uses and yet still be in violation of the Basin Plan. The consistent flows provided by the wastewater discharge may also enhance some aquatic life beneficial uses but be detrimental to others that depend on the ephemeral nature of the stream. The original conditions in the stream may change, causing a shift in the specific uses within a beneficial use category (i.e. a shift from the unique uses of ephemeral waters to the uses of perennial waters). There are questions of whether the discharger should be required to fully protect these shifted uses when it is the discharge itself that allows the modified uses to exist at all. There are also questions regarding the fate of the original uses that are lost due to the discharge.

Stakeholders have suggested that the assigned beneficial uses of these water bodies are inappropriate and have requested that various alternatives be explored for assigning beneficial uses to EDWs. The alternatives suggested were to a) designate site specific beneficial uses, b) use “warm” and “cold” designations on a case by case

basis rather than applying the "tributary rule," c) develop an EDW beneficial use which would consist of a limited warm water habitat, recreation and/or municipal use, d) adopt site specific objectives, or e) develop provisions for granting variances from compliance with water quality objectives. Further discussion regarding the designation of beneficial uses is in Issue No. 4. In 1995 an Effluent-Dependent Water Bodies Task Force established by the State Water Board developed recommendations[3] for providing reasonable protection for appropriate beneficial uses of effluent-dependent water bodies. Some of these recommendations might be appropriate to address stakeholder concerns.

All of the above alternatives can only be accomplished through the Basin Plan amendment process. They cannot be performed during the permit adoption process. Studies necessary to comply with Clean Water Act and California Water Code requirements for amending the basin plan have not been completed for most EDWs. Because of the number of water bodies where action is needed, alternative policies and actions would allow the most efficient use of resources.

The Central Valley Water Board has adopted several basin plan amendments that address EDW concerns. In 2003, the Central Valley Water Board adopted site specific water quality objectives for pH and turbidity for Deer Creek in El Dorado County. This provided the approach used for a regionwide amendment to revise the pH and turbidity water quality objectives in 2007. Since 2003, the Central Valley Water Board adopted site specific water quality objectives for temperature for Deer Creek in El Dorado County, and de-designated several beneficial uses of Old Alamo Creek in Solano County. In May 2010, the Central Valley Water Board adopted site specific water

[3] State Water Resources Control Board. 1995. Report of the Effluent-Dependent Waters Task Force for Consideration of Issues Related to the Inland Surface Waters Plan. October. The report is available at:
http://www.waterboards.ca.gov/publications_forms/publications/general/docs/effluent-dependent-waters-1995.pdf

quality objectives for several trihalomethanes for New Alamo and Ulatis creeks in Solano County and implementation provisions for NPDES dischargers to Old Alamo Creek. These amendments provide an approach for similar situations.

Priority: High

Current Action: None

Current Resources: None

Additional Action: Following the example of pH and turbidity, it would be efficient to explore whether the approaches used for site-specific basin plan amendments can be expanded to regionwide basin plan amendments. Otherwise, it is still important to conduct individual amendments that deal with different aspects of the EDW issue to address regulatory issues as well as provide information that would be useful for geographically larger basin plan amendments.

Additional Resources Requirements:

1) Site-specific amendments require roughly 0.5 PY per year for three years. A more generic amendment would probably take 1.0 PYs per year for two years to develop an approach. Resource needs and time frames after the first two years will depend on the approach.

2) Contract(s) -- Approximately $200,000 to conduct studies per site-specific basin plan amendment. These studies include the scientific justification, environmental assessment and economic analysis. A more generic amendment would probably require $500,000 or more to conduct studies.

Issue 3: **Regulatory Actions in Agricultural Dominated Water Bodies and Agricultural Conveyance Facilities**

Discussion: 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. Many of these waterways lack habitat and physical flow characteristics to sustain the full range of aquatic life and other beneficial uses. Based on information that the Central Valley Water Board staff collected in 1992, it is estimated that more than 130 natural water bodies, totaling more than 1100 miles, are dominated by agricultural drainage and supply water in the Sacramento and San Joaquin River Basins. There are more than 5100 water bodies, totaling over 11,000 miles, which were identified as constructed facilities designed to carry agricultural drainage and supply water. There are more than 75 water bodies, totaling almost 600 miles that are natural dry washes that have been altered to carry agricultural supply or drainage water.

Some of these water bodies were deliberately modified for the purpose of providing support to the agricultural industry. Stakeholders have commented that fully protecting the assigned beneficial uses would result in loss of the agricultural functionality of the water body. Therefore, stakeholders have requested that the Central Valley Water Board develop plans and policies that recognize that the functionality of the modified water body should take precedence over any perceived beneficial uses. In 1995 an Agricultural Waters Task Force established by the State Water Board developed recommendations[4] for providing reasonable protection for beneficial uses of agricultural waters. Some of these

[4] State Water Resources Control Board. 1995. Report of the Agricultural Waters Task Force for Consideration of Issues Related to the Inland Surface Waters Plan. October. The report is available at: http://www.waterboards.ca.gov/publications_forms/publications/general/docs/inland_surface_plan_b.pdf

recommendations might provide an approach to addressing stakeholder concerns.

All of the approaches suggested above require amending the Basin Plan. All amendments would need to comply with the California Water Code and the Clean Water Act.

Priority: High

Current Action: The most efficient use of limited resources is to develop a strategy to specifically address agricultural dominated water bodies. It will be necessary to divide these water bodies into groups with specific characteristics that would facilitate developing policies regarding appropriate beneficial uses, water quality objectives and/or implementation provisions. Initial work will include identifying water bodies that are agricultural dominated or agricultural conveyance structures and begin characterizing individual water bodies to identify characteristics that could be used for grouping purposes. Assemble stakeholder groups to document environmental and regulatory issues that need to be considered.

Current Resources: 1) Staff – 1.0 PYs per year for two years to develop an approach.

Additional Action: Similar to the EDW issue (See Issue No. 2), it may be necessary to conduct site-specific basin plan amendments to explore various approaches that could be used in a more generic amendment.

Additional Resource Requirements:

1) Staff –Resource needs after the first two years will depend on the approach. Site-specific amendments require roughly 0.5 PY per year for three years.

2) Contract(s) -- At least $500,000 to conduct studies to support a basin plan amendment with a generic strategy. Site-specific amendments require about $200,000 per basin plan amendment.

Issue 4: **Beneficial Use Designations for Surface and Ground Waters**

Discussion: The Basin Plan designates beneficial uses to surface waters in three different ways: (1) Table II-1 lists existing and potential beneficial uses that apply to surface waters of the basins; (2) The beneficial uses of any specifically listed water body generally apply to its tributary streams; and (3) The Basin Plan implements State Water Board Resolution 88-63 ("Sources of Drinking Water Policy") by assigning municipal and domestic supply uses (MUN) to all unlisted water bodies.

The Basin Plan states that all ground waters in the Region are suitable or potentially suitable for municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).

Dischargers to both effluent and agricultural dominated surface water bodies question the appropriateness of the designated beneficial uses. There have also been questions on how to protect water bodies with apparent conflicting beneficial uses such as both WARM and COLD. Adjustments to designated beneficial uses for surface and ground waters can only be made through the Basin Plan amendment process. Changes to surface water beneficial uses that result in less stringent criteria must be supported by a scientific analysis as described in Title 40 Code of Federal Regulations (CFR) §131.10(g). Further discussion regarding issues specific to effluent or agricultural dominated water bodies is contained in Issues No. 2 and 3.

The State Water Board determined in Order No. 2002-0015, "… where a Regional Board has evidence that a use neither exists nor likely can be feasibly attained, the Regional Board must expeditiously initiate appropriate basin plan amendments to consider dedesignating the use. Moreover, the Regional Board can require dischargers to the affected water body to provide assistance, through data collection, water quality-

related investigations, or other appropriate means, to support and expedite the basin plan amendment process."

Stakeholders have indicated that there is information that supports reviewing specific beneficial uses of the following water bodies: (1) West Squaw Creek; (2) Grassland wetland water supply channels for RARE, REC1-and REC2; (3) Upper North Fork Feather River from Lake Almanor to Lake Oroville; (4) Pit River; (5) South Yuba River between Lake Spaulding and Englebright Reservoir; (6) Willow Creek in Madera County; (7) Pleasant Grove Creek; (8) Kellogg Creek; (9) Fresno River above Hensley Reservoir; (10) Calaveras River from the San Joaquin River to the Stockton Diverting Canal and from the Stockton Diverting Canal to below the weir; (11) the unnamed tributary to Powell Slough, and Powell Slough tributary to the Colusa Basin Drain; (12) Reclamation District 777 Lateral Drain No. 1 and No. 2; and (13) groundwater in the vicinity of the Littlejohns Fault in Calaveras County

Stakeholders have identified the following categories of water bodies as deserving review: (1) Long water body reaches (i.e. water bodies reaches that are so long that the characteristics of the water body change within the reach), especially water bodies that have large changes in elevation, species assemblages and other characteristics; (2) Water bodies with both COLD and WARM beneficial use designations; and (3) agricultural water bodies that are designated MUN through the Central Valley Water Board's application of the State Water Board's Sources of Drinking Water Policy, such as the unnamed tributary to Powell Slough and Powell Slough, tributary to Colusa Basin Drain. Issues with water bodies dominated by NPDES discharges and agricultural dominated water bodies are included in Triennial Review Issue Nos. 2 and 3, respectively.

Priority: High

Current Action: Staff is currently evaluating beneficial uses for West Squaw Creek, tributary to Shasta Lake; the unnamed tributary to Powell Slough and Powell Slough, tributary to Colusa Basin Drain; and groundwater in the vicinity of the Littlejohns Fault. Staff will evaluate agricultural water bodies that are designated MUN through the Central Valley Water Board's application of the State Water Board's Sources of Drinking Water Policy to develop and complete basin plan amendments to provide appropriate protection to these water bodies.

Current Resources:

1) Staff – 0.5 PYs per year to work on agricultural water bodies that are designated MUN through the application of the State Water Board's Drinking Water Policy
2) Stakeholders have funded staff to work on West Squaw Creek and the groundwater in the vicinity of Littlejohns Fault and provided for contractor assistance to develop any needed technical information.

Additional Action: Because of the large number and size of the unlisted water bodies, developing a logical system of grouping some of the water bodies and assigning beneficial uses to the groups would be the most efficient use of resources. It would be useful to assemble and work with a stakeholder group to define the issues associated with any general classification system and to determine the best and most efficient approach to the assignment of beneficial uses. The starting point for grouping water bodies could be identifying water bodies that fit the exception criteria 2a and 2b in State Water Board Resolution No. 88-63 (Sources of Drinking Water Policy). One possible conclusion of additional studies could be that categorizing the water bodies will be technically infeasible and beneficial uses will need to be addressed on a site-specific basis.

While grouping water bodies appears to be an efficient approach to addressing the beneficial use issues, the outcome is uncertain so securing funding is difficult. Another approach would be to

select individual water bodies with notable characteristics for individual basin plan amendments with the goal of developing templates for similar water bodies. The approach for individual basin plan amendments is usually apparent early in the process and, therefore, has more certain outcomes. The Central Valley Water Board has adopted Basin Plan amendments addressing beneficial uses in Old Alamo Creek and Sulphur Creek. These amendments provide the approach for removing beneficial uses.

Additional Resources Requirements:

1) Staff -- For evaluating grouping of water bodies, 1.0 PY per year for the first two years is needed to further define this issue. Future needs would depend on the number and types of water body categories that are identified. For work on individual water bodies, 0.5 PYs is needed per year for three years for each water body.

2) Contract(s) -- Approximately $500,000 is needed to help identify the scope of the grouped water body issue and group water bodies into logical categories. Future needs would depend on the types of water body categories that are identified. For individual water bodies, up to $200,000 is needed per water body.

Issue 5: **Delta Issues**

Discussion: Various planning activities and strategies are under development that may affect water quality in the Bay-Delta. At the same time, various aquatic species in the Bay-Delta have experienced dramatic and unexpected population declines. The causes of Delta ecosystem problems are complex and not fully understood, but involve flow, habitat, invasive species, contaminant, and other stressors. The Water Board focuses primarily on contaminant issues, although it is also involved in habitat preservation and restoration, and invasive species control.

Staff of 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). The Strategic Workplan includes development and implementation of total maximum daily loads (TMDLs), development and implementation of a drinking water policy for the Central Valley, management of invasive species, and evaluation of effects of certain contaminants. The Strategic Workplan also includes establishment of a comprehensive monitoring program that coordinates monitoring and assessment efforts in and around the Delta.

The TMDL development and implementation described in the Workplan are being addressed through the TMDL program. Delta TMDLs that involve Basin Plan Amendments are part of Issue Nos 1, 6, 7, and 8 (Salt and Nitrate Management, Dissolved Oxygen Problems in San Joaquin River near Stockton, Pesticide Control Efforts, and Mercury Load Reduction Program). Some of the Workplan activities include monitoring, conducting studies of the contaminants that have already

been identified, and identifying new contaminants that are causing toxicity issues. In addition, the Central Valley Water Board works with the Interagency Ecological Program (IEP); Calfed Science Program researchers; and other stakeholders to coordinate efforts designed to identify, evaluate and address existing and potential sources of toxicity.

Staff is working with stakeholders to develop a Regional Monitoring Program (RMP) in the Delta. The RMP will allow more efficient collection and evaluation of Delta monitoring data, helping identify beneficial use impairments and other issues that may require Basin Planning action.

Invasive species contribute to Delta ecosystem problems. Staff participate in the California Agencies Aquatic Invasive Species Team, and are involved periodically in specific invasive species eradication efforts.

As the Bay-Delta Team implements the Strategic Workplan, it may become necessary to amend the Basin Plan to address specific issues.

Priority: High

Current Action: None. Current activities are investigating the causes and possible solutions to Delta ecosystem problems. If water quality issues are identified, these issues will need to be evaluated to determine if current regulatory programs can address these issues or whether the Basin Plan needs to be amended.

Current Resources: Central Valley Water Board Staff working on Delta issues is funded with general fund resources and SWAMP resources. (3.5 PYs) The Delta Team has secured contract funds to conduct Strategic Workplan activities. If the Basin Plan needs to be amended, it is anticipated that staff could receive some funding from the current resources to conduct the Basin Plan Amendments. However, it is not certain that current funding will be sufficient.

Additional Action:	As the Strategic Workplan activities are completed, it may become necessary for the Central Valley Water Board to develop Basin Plan Amendments to provide additional protection of beneficial uses in the Delta. These Amendments may include modification of beneficial uses, water quality objectives or establishment of implementation programs that would require further reductions in pollutant concentrations in discharges or additional monitoring by dischargers.
Additional Resource Requirements:	To be determined based on the type of policies that will need to be developed for Central Valley Water Board consideration.

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

Discussion: Low dissolved oxygen concentrations in the San Joaquin River in the vicinity of Stockton annually impact or threaten to impact beneficial uses. Water quality objectives are frequently violated during high temperature periods in late summer and early fall. Adult San Joaquin River fall run Chinook salmon migrate up river between September and December to spawn in the Merced, Tuolumne, and Stanislaus Rivers. The San Joaquin River population has experienced severe declines and is considered a species of concern by the US Fish and Wildlife Service. The San Joaquin River Restoration Program began interim flow releases from Friant Dam in the fall of 2009, with the mandate of reintroducing salmon to the River upstream of the Merced River by 31 December 2012, and providing full restoration flows by January 2014. Low dissolved oxygen in the San Joaquin River can act as a barrier to migration as well as kill or stress salmon and other species present in this portion of the Delta. Water ways in the vicinity of Stockton are 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 due to the low dissolved oxygen levels and a Cleanup Plan was adopted to address this issue.

In 2005, the Central Valley Water Board adopted a control program to achieve the dissolved oxygen objectives in the Stockton Deep Water Ship Channel. The control program presents a phased approach to address this issue. Required upgrades to the Stockton Wastewater Treatment Plant have reduced oxygen demanding substances in the effluent discharge, with a resultant improvement in river oxygen concentrations. A pilot oxygenation system has been installed at the Port of Stockton which appears to increase dissolved oxygen concentrations in the river. Efforts to provide

	operation and funding for the aerator are part of the Dissolved Oxygen TMDL implementation.
Priority:	High
Current Action:	The Central Valley Water Board staff is evaluating the control program for the Stockton Deep Water Ship Channel. Studies required by the control program have not been completed due to State budget issues. Staff will be developing a proposal for Central Valley Water Board consideration.
Current Resources:	Staff is funded with TMDL resources. (1 PY)
Additional Action:	None
Additional Resource Requirements:	None

Issue 7: **Pesticide Control Efforts**

Discussion: Pesticides, when used properly, protect people and their environment from pests (animal, plant, or microbial) that threaten human health and human activities.[5] However, pesticide residues that escape their intended use area may enter waters of the State and cause beneficial use impairments, particularly aquatic life impacts. Various pesticides have been detected at toxic levels in the Central Valley water bodies. The Basin Plan contains requirements relevant to pesticides, including narrative and numeric water quality objectives to protect beneficial uses. However, there are currently very few numeric water quality objectives for pesticides.

For water bodies on the Clean Water Act section 303(d) list of impaired water bodies, the Central Valley Water Board must develop load reduction programs to resolve these water quality problems through a Total Maximum Daily Load (TMDL) allocation process. In addition, the Basin Plan outlines a specific review process that the Central Valley Water Board must follow to address pesticide problems that are identified.

Organochlorines: Organochlorine (OC) pesticides have been detected in the water column, sediment and biota collected from water bodies throughout the Sacramento and San Joaquin River Basins at high enough concentrations to include these water bodies on the Clean Water Act section 303(d) list of impaired water bodies, even though most OC pesticides have been banned for use in the United States. Staff starting working on a Basin Plan amendment to establish TMDLs for several water bodies impaired for OCs in the Region.

Stakeholders have expressed concern regarding the water quality objectives for organochlorine pesticides which states that:

[5] California Department of Pesticide Regulation, Pesticide Info Fact Sheet

Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer.

Stakeholders are concerned that the water quality objective fluctuates with the accuracy of analytical methods and would prefer numeric water quality objectives that are protective of beneficial uses. Since the adoption of this water quality objective, the US Environmental Protection Agency has developed water quality criteria for organochlorine pesticides that are protective of human health and aquatic life and in 2000 promulgated the criteria in the California Toxics Rule (CTR). At this time, the detection limits for analytical methods approved by the US EPA are higher than the CTR criteria for the organochlorine pesticides. The Basin Plan must be amended consistent with applicable federal and state laws and regulations to revise, add or delete any water quality objective.

Organophosphates: The organophosphorus (OP) pesticides diazinon and chlorpyrifos have been documented at toxic levels in numerous surface water bodies and these water bodies have been listed on the Clean Water Act section 303(d) list of impaired water bodies.

To address the OP pesticide problem, the Basin Plan has been amended to establish water quality objectives and implementation programs for diazinon and chlorpyrifos in the Sacramento, Feather and San Joaquin Rivers and the Delta. Federal requirements to develop TMDL allocations are also addressed in this process. Staff is currently working on a Basin Plan Amendment to establish water quality objectives for diazinon and chlorpyrifos in many other water bodies within the Region.

Other Pesticides: In addressing the diazinon and chlorpyrifos issues, significant concerns have been raised regarding the impacts of replacement

products, such as pyrethroids. Staff anticipates working in the future on pesticide Basin Plan Amendments that would address pyrethroid pesticides and other pesticides that pose a high risk to surface waters in the Sacramento and San Joaquin River Basins. For water bodies that are impaired for these pesticides, water quality objectives and implementation programs would be developed. The Amendments would include TMDL allocations, where appropriate. It is anticipated that adopting numeric objectives for these pesticides will facilitate implementation of provisions of the Irrigated Lands Waiver, since well defined pesticide objectives and compliance time schedules will be established.

Public workshops and hearings will be held as part of the Basin Planning process to address OC, diazinon, chlorpyrifos and other pesticides. The public hearings will provide the review process that was established in the Basin Plan for addressing problem pesticides.

Priority: High

Current Action: Organochlorines: Staff started working on a Basin Plan Amendment to control OC pesticides in 21 impaired reaches of water bodies within the Central Valley. However, this activity is now on hold pending resource allocations.

Organophosphates: Staff is currently working on a Basin Plan Amendment addressing diazinon and chlorpyrifos in nearly 1,000 water bodies in the Sacramento and San Joaquin River Basins. This Basin plan Amendment will include numeric water quality objectives and a program and implementation, and also TMDL allocations for impaired water bodies.

Other Pesticides: Staff anticipates working on future Basin Plan Amendments to address other pesticides. Most pesticides lack sufficient data to use the 1985 US Environmental Protection Agency methodology to calculate criteria, which could be used for development of water quality

objectives. Central Valley Water Board staff provided contract funds for the University of California, Davis to develop an alternative methodology for deriving water quality criteria for pesticides. The methodology was finalized in 2009. UC Davis recently produced technical reports where this methodology was utilized for several pesticides, including a few pyrethroids. Staff will consider using this information, along with other available methodologies, in the development of future pesticide Basin Plan Amendments to address pesticides that pose a high risk to surface waters in the Sacramento and San Joaquin River Basins.

Current Resources:

1) Staff – TMDL resources.

2) Contract(s) -- about $100,000 in current year funds has been provided from state-wide TMDL resources to aid in pesticide criteria development.

Additional Action:

Monitoring to establish the sources for impacted waters in the remaining Sacramento and San Joaquin River watersheds and development of control programs that include water quality objectives and, where applicable, TMDL allocations for these water bodies.

Continue work on the control program for OC pesticides. Re-evaluate the Basin Plan water quality objectives for OC pesticides.

Additional Resource Requirements:

1) Staff -- 1.0 PY per year for three years to complete the control program for OC pesticides. 0.5 PY per year for three years to re-evaluate the water quality objectives for OC pesticides.

2) Contract(s) -- $200,000 per year to conduct source monitoring for pesticide impaired water bodies.

Issue 8: **Mercury Load Reduction Program**

Discussion: 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. Mercury is a problem because it accumulates in aquatic organisms to levels that pose a threat to predator species and people that eat fish. Because of elevated mercury levels in fish tissue, numerous water bodies, including the Delta, its tributaries, and numerous reservoirs and streams have been included on the Clean Water Act Section 303(d) list of impaired water bodies. The Clean Water Act mandates that the Regional Water Board develop load reduction programs to resolve these water quality problems through a Total Maximum Daily Load (TMDL) allocation process. Health advisories have been issued for the Delta, the Lower American River, Lake Natoma, and other water bodies in the Central Valley due to the mercury levels in fish. Recent studies may result in health advisories being issued for additional water bodies as well as more water bodes being added to the Clean Water Act 303(d) list for mercury impairments.

The Regional Water Board adopted Basin Plan Amendments that include fish tissue objectives, implementation programs, and TMDL allocations for controlling mercury and methylmercury in Clear Lake, Cache Creek and its tributaries, and the Delta.

Priority: High

Current Action: Adopted mercury control programs need to be implemented while new control programs need to be adopted. While total mercury is expected to be controlled when contaminated sediment is controlled, control technology and management practices for methylmercury are not known. For the adopted control programs, staff will work with stakeholders to design and implement work plans to identify feasible control measures. This information will be useful for the development of

future control programs as well as the implementation of existing control programs. Staff is working on new control programs for other water bodies in the Central Valley including the American River watershed. Also, staff from multiple water boards are working together on control program to address mercury impairments on a statewide perspective. See Issue No. 12 (State Water Board Plans and Policies and other Statewide Issues) for more information.

Current Resources:

1) Staff -- Funding from the TMDL program and the nonpoint source program.

2) Contract(s) -- $30,000 per year from the TMDL program

Additional Action:

Initiate source monitoring and develop methylmercury and mercury TMDL control programs for the Delta tributaries, reservoirs, and upstream watersheds. Work with stakeholders in water bodies other than the Delta to develop, evaluate, and implement methylmercury control measures for land and/or water management activities that cause or contribute to the methylmercury impairment.

Additional Resource Requirements:

1) Staff -- 2 PYs per year

2) Contract(s) -- $100,000 per year

Issue 9: **Policies for Maintaining Water Quality for Drinking Water**

Discussion: The CALFED Record of Decision (ROD) identified the need for a comprehensive source water protection program and a comprehensive drinking water policy for the Delta and upstream tributaries. The Central Valley Water Board signed a Memorandum of Understanding (MOU) committing to working with the Department of Health Services (DHS) (now the Department of Public Health (DPH)), the State Water Board and USEPA to develop and adopt a policy to protect sources of drinking water for the Delta and its tributaries. The Central Valley Water Board committed to developing a comprehensive drinking water policy in Resolution No. R5-2004-0091 and reiterated its commitment for a policy in Resolution No. R5-2010-0079. In the 2010 resolution, the Central Valley Water Board directed staff to bring a final drinking water policy to the Board in three years.

Priority: High

Current Action: A Central Valley Drinking Water Policy Workgroup (Workgroup) made up of federal and state agencies, drinking water purveyors, and wastewater, municipal and agricultural interests was formed to help staff develop the comprehensive drinking water policy.

Current Resources: Stakeholders have funded staff to develop a drinking water policy.

Additional Action: Once the Policy is finalized, it may be necessary to conduct more studies to evaluate the impact of the drinking water constituents of concern on all the beneficial uses and to develop appropriate criteria to protect all the beneficial uses.

Additional Resource Requirements:

1) Staff -- While stakeholders have funded 0.5 PYs per year since 2003, performance is evaluated every year prior to agreement to extend funding another year. Therefore, the staff resources are included under Additional

Resource Requirements since future funding is not assured at this time. A minimum of 0.5 PYs staff funding is needed every year to work with stakeholders to develop any basin plan amendments.

2) Contract(s) -- To be determined.

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

The Basin Plan identifies water bodies that require aquatic life protection by designating the following beneficial uses: warm freshwater habitat (WARM), cold freshwater habitat (COLD), fish migration (MIGR) and fish spawning (SPWN). Stakeholders have indicated that water quality objectives for dissolved oxygen and temperature may need to be re-evaluated to provide appropriate protection of the aquatic life beneficial uses.

Dissolved Oxygen: The basin plan includes (1) general dissolved oxygen objectives that apply to all water bodies designated as supporting WARM, COLD and SPWN and (2) site specific objectives for certain water bodies that are typically higher than the general objectives. Both general and site-specific objectives are applied as minimum levels that are to be equaled or exceeded at all times. These objectives have existed in the Basin Plan since its original adoption in 1975. In 1986, the USEPA developed National Criteria for dissolved oxygen. The National Criteria have not been evaluated for use in the Sacramento River and San Joaquin River Basins.

A concern is that the specific dissolved oxygen objectives for the Delta contain ambiguous language regarding applicable water quality objectives for “bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use.” There is an unresolved disapproval from the US Environmental Protection Agency on the editing of the language that created this ambiguity.

Commenters have requested that site specific dissolved oxygen objectives be developed for the Stanislaus River because the current dissolved oxygen water quality objectives do not provide adequate protection of the fisheries present in the River.

Temperature: In previous Triennial Reviews, the Department of Fish and Game, Region 1, requested that temperature objectives be established to protect spring-run Chinook salmon and steelhead in the Sacramento River Basin. In the current Triennial Review, the Department of Fish and Game, Region 4, requested temperature objectives be established to protect fall-run Chinook salmon in the San Joaquin River Basin. USEPA Region 10, which has jurisdiction over the Northwestern United States, issued regional guidance for developing numeric temperature standards for the Pacific Northwest to protect cold water (salmonid) beneficial uses. While USEPA Region 9, which has jurisdiction over California, has not adopted similar guidance, it is supportive of the scientific approach used in the EPA Region 10 guidance for development of numeric temperature standards to protect salmonid beneficial uses in the Central Valley. The Department of Fish and Game is also supportive of the use of the USEPA Region 10 guidance to develop numeric temperature objectives.

In August 2005, NOAA Fisheries designated critical habitat for 19 Evolutionarily Significant Units (ESUs) of salmon and steelhead in the Northwest and California. The ESUs within the Central Valley are the Central Valley Spring Run Chinook Salmon and the Central Valley Steelhead. The ESU range for the Chinook salmon is the Sacramento River and the ESU range for the steelhead is the Sacramento River and the San Joaquin River and their tributaries. Essential features of critical habitat include adequate: (1) substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions.

Long Water Body Reaches: Commenters on the current Triennial Review also point out that some of the Basin Plan's named water bodies are very long and have different characteristics from one end of the reach to the other end. In many of

these cases, these long water body reaches are designated both WARM and COLD, and thus protection of aquatic life is based on the COLD criteria, which is believed to be more stringent. However, this may not be adequately protective of either the warm or cold water ecosystems that are present. Suggestions include subdividing these reaches to appropriate sizes and designating appropriate beneficial uses for each subreach, or developing water quality objectives that take into consideration the species that may be present at any particular place or time and, thus, provide seasonality to the water quality objectives.

Beneficial Uses: Commenters have stated that there is technical information that indicates that WARM and/or COLD might be inappropriately designated for specific water bodies. These water bodies have been included under Issue No. 4 (Beneficial Use Designations) and are not included in the below work plan estimates.

Priority: High

Current Action: None

Current Resources: None

Additional Action: There are a number of actions that staff may take to address this issue. One possible action would be to re-evaluate the general and site-specific water quality objectives for dissolved oxygen.

Another action would be to work with the fishery agencies and other stakeholders to develop water quality objectives, which may be narrative or numeric, for dissolved oxygen and temperature to protect the salmonid beneficial uses specifically for the Central Valley.

Yet another action could be to work with stakeholders on appropriately subdividing long water body reaches and developing water quality objectives that provide optimum protection of the aquatic life that is present in each reach. In these cases, it may be useful to design and conduct a

site-specific evaluation that would then serve as a template for other evaluations.

Additional Resource Requirements:

1) Staff -- 0.5 PYs per year per amendment.

2) Contract(s) -- $500,000 for work on temperature objectives, $200,000 for work on reaches.

Issue 11: **Secondary MCLs as Water Quality Objectives for Surface and Ground Waters**

Discussion: Secondary MCLs are used as water quality objectives to protect the municipal and domestic supply (MUN) use from impairment. The Central Valley Water Board determines compliance with these water quality objectives using total recoverable analysis of unfiltered water samples, not as dissolved. The rationale for the use of total recoverable analysis rather than dissolved is that MUN includes small domestic water supply systems that may not be required to filter and so may not be filtering ambient water prior to delivery to customers.

Commenters in the last two triennial reviews have recommended that the Central Valley Water Board re-evaluate the use of Secondary Maximum Contaminant Levels (MCLs) as water quality objectives. Commenters were particularly concerned with iron, manganese and TDS. Commenters believe that use of Secondary MCLs should be re-evaluated because Secondary MCLs are based on consumer acceptance levels and are therefore unrelated to human health and welfare or the protection of aquatic life. Also, secondary MCLs are applied at the tap, not to the drinking water source (or in this case ambient water). Commenters recommend the removal of the incorporation by reference for secondary maximum contaminant levels, or, at the very least, secondary MCLs should be applied as a dissolved standard instead of a total standard.

While secondary MCLs are standards that apply to contaminants that may adversely affect the odor or appearance of water, these constituents may have other effects at higher concentrations including to beneficial uses other than MUN. In order to address these constituents in accordance with applicable federal and state laws and regulations, their potential effects on human health as well as on other beneficial uses would need to be evaluated.

Priority:	High
Current Action:	The Central Valley Water Board staff will evaluate the constituents that make up the secondary drinking water standards to determine if any are necessary as water quality objectives to protect beneficial uses. If water quality objectives are appropriate, staff will work with stakeholders to develop a regulatory approach to provide appropriate protection of beneficial uses for these pollutants of concern. Due to the range of types of the constituents, there may be a number of different approaches. All approaches need to be consistent with applicable federal and state laws and regulations.
Current Resources:	1) Staff – 0.5 PYs per year
Additional Action:	For the secondary drinking water constituents that are necessary as water quality objectives to protect beneficial uses, conduct literature reviews of these constituents and compile and evaluate information to develop options for alternative water quality objectives that provide reasonable protection of beneficial uses.
Additional Resource Requirements:	1) Contract(s) -- $100,000 to $200,000 per constituent.

Issue 12: **Participation in State Water Board Plans and Policies and other Statewide Issues**

Discussion: The State Water Board may develop plans and policies which, when adopted, supersede any regional water quality control plans for the same waters to the extent of any conflict (CWC §13170).

The State Water Board staff is currently working on the following plans and policies which are relevant to the Central Valley Region:

- Anti-degradation policy
- Aquifer storage and recovery policy
- Bacterial objectives for inland surface waters
- Bay-Delta Plan
- Bio-indicators or Biological Objectives
- Cadmium objective and implementation policy
- Chlorine residual objectives and implementation policy
- Mercury offset policy
- Methymercury objectives
- Nutrient numeric endpoints tools
- Onsite waste water treatment regulations/waiver
- Sediment Quality Objectives for Enclosed Bays and Estuaries
- Toxicity control provisions for the SIP
- Trash policy
- Wetlands and riparian areas policy

The Central Valley Water Board staff participates in the development of these plans and policies to make sure the Central Valley regional priorities are considered. The most relevant program generally provides staff to participate in policy development. So, for example, the Water Quality Certification Program takes the lead in communicating with State Water Board staff developing the Wetlands and Riparian Areas Policy. However, for many of the policies, the most closely related program is basin planning. Therefore, some of the Region's basin planning resources must be spent in participating in the development of the State Water Board's Plans and Policies. In all cases, once the

State Water Board's Plans and Policies become effective, the Central Valley's Basin Plans should be updated to provide the most updated information to stakeholders.

Recently, staff from multiple Water Boards is exploring working together on projects that are of mutual interest. The initial planning projects are development of a statewide implementation program to address methyl mercury impairments in reservoirs; and development of strategies for addressing naturally high levels of constituents.

Priority: High

Current Action: Basin planning resources are used to track development of the anti-degradation Policy, bacterial objectives for inland surface waters, nutrient numeric endpoints tools, and the toxicity control provisions for the SIP.

The core regulatory programs (NPDES and land discharge programs) track development of the policies on aquifer storage and recovery, cadmium, chlorine residual, and onsite waste water treatment regulations. The Water Quality Certification program is tracking development of the wetlands and riparian areas policy. And the TMDL program is tracking work on the Bay-Delta Plan, development of the mercury offset policy, methylmercury objectives, sediment quality objectives and the trash policy. Staff working on CV-SALTS is also coordinating with State Water Board staff working on the Bay-Delta Plan. Land Discharge Program Staff is also taking the lead in developing statewide General Waste Discharge Requirements for Aquifer Storage and Recovery projects.

Current Resources: Basin planning provides 0.2 PYs per year to track the development of the policies that are most closely related to the basin planning program.

Additional Action: The State Water Board's policy for onsite sewage treatment systems is expected to be generic to reflect the need to apply the policy everywhere in

the State. Due to some of the known conditions in the Central Valley, it may be necessary for the Central Valley Water Board to adopt supplemental provisions to provide appropriate protection of beneficial uses in the Central Valley.

Additional Resource Requirements:

1) Staff – 0.5 PYs per year

2) Contract(s) -- $0 to $100,000 depending on the areas that need to be amended.

Issue 13: **Current USEPA Criteria**

Discussion: The Central Valley Regional Board is currently implementing criteria promulgated by USEPA in 2000. These criteria are known as the California Toxics Rule (CTR) and include the toxic pollutants which are also called priority pollutants. Since the promulgation of the CTR, USEPA has published updated guidance for 98 pollutants, pursuant to Section 304(a) of the Clean Water Act. The updated guidance represents the most current science and may provide better criteria to protect beneficial uses. For example, USEPA recently provided guidance for pentachlorophenol criteria to protect early life stage salmonids in situations of low DO and high temperatures.

USEPA also publishes guidance for non-priority pollutants. These pollutants were not included in the EPA promulgation of the CTR. Ammonia is an example of a non-priority pollutant. The Basin Plan includes narrative objectives and a *Policy for Application of Water Quality Objectives* that indicates that the Central Valley Water Board can use available information and numerical criteria and guidelines from other authoritative bodies to assist in determining compliance with narrative objectives. Therefore, staff can use the USEPA National Recommended Water Quality Criteria to derive permit limits. However, non-uniform translation of narrative water quality objectives could be impairing the Central Valley Water Board's ability to properly protect the beneficial uses of its waters.

Priority: Low

Current Action: None

Current Resources: None

Additional Action: Review current National Recommended Water Quality Criteria and other recent scientific information on pollutants to determine whether amendments are needed to the water quality

objectives to ensure that beneficial uses are protected.

Additional Resource Requirements:

1) Staff -- About 0.5 PYs per year for two years. Additional resources would be needed to conduct basin plan amendments if determined to be necessary.

2) Contract(s) -- $0

Issue 14: **Groundwater Survey and Control Policies for Discharges to Groundwater**

Discussion: The Basin Plan describes various ground water quality problems that exist throughout the region and includes numerous policies that address prevention and cleanup of groundwater quality problems.

The 2003 update of the Department of Water Resources Bulletin 118 includes a summary of water quality from public supply water wells sampled from 1994 to 2000. In the Sacramento River Basin, 74 of 1356 wells had constituents that exceed one or more of the state's maximum contaminant levels (MCLs) for drinking water. The most frequently exceeded constituents were nitrates, volatile/semi-volatile organic compounds and inorganic chemicals. In addition, the Bulletin also notes that groundwater quality is generally excellent but there are areas with local groundwater problems such as natural water quality impairments at the north end of the Sacramento Valley and along the margins of the valley and around the Sutter Buttes, where Cretaceous-age marine sedimentary rocks containing brackish to saline water are near the surface. Human-induced impairments in this area are generally associated with individual septic system development in shallow unconfined portions of aquifers or in fractured hard rock areas where insufficient soil depths are available to properly leach effluent before it reaches the local groundwater supply.

In the San Joaquin River Basin, 126 of 689 wells had constituents that exceeded one or more MCLs. The most frequently exceeded constituents were pesticides, radiological contaminants and nitrates. In general, groundwater quality throughout the basin is suitable for most urban and agricultural uses with only local impairments. The primary constituents of concern are TDS, nitrate, boron, chloride, and organic compounds. Most of the TDS is naturally occurring. High TDS content in the trough of the

valley is the result of concentrations of salts due to evaporation and poor drainage. Nitrates may occur naturally or as a result of disposal of human and animal waste products and fertilizer. Boron and chloride are likely a result of concentration from evaporation near the valley trough. Organic contaminants can be broken into two categories, agricultural and industrial. Agricultural pesticides and herbicides have been detected in groundwater throughout the region, but primarily along the east side of the San Joaquin Valley where soil permeability is higher and depth to groundwater is shallower. Industrial organic contaminants include TCE, dichloroethylene (DCE), and other solvents. They are found in groundwater near airports, industrial areas, and landfills. PCE and other dry cleaning chemicals are found in groundwaters beneath many cities.

The Supplemental Report of the 1999 Budget Act and later the Groundwater Quality Monitoring Act of 2001 required the State Water Board to develop a comprehensive ambient groundwater monitoring plan. To meet this mandate, the State Water Board created the Groundwater Ambient Monitoring and Assessment (GAMA) Program. The primary objective of the GAMA Program is to comprehensively assess statewide groundwater quality and gain an understanding about contamination risk to specific groundwater resources. The GAMA Program initiated a number of ground water assessment projects. One of the projects, the Voluntary Domestic Well Assessment Project, samples domestic wells county by county. While there are no drinking water standards for domestic wells, the studies compare water quality of the wells to the MCLs. Studies have been completed for El Dorado, Tehama and Yuba Counties. In El Dorado County, it was found that 30% of the sampled wells would not pass state primary MCLs. In Tehama County, 25% of the sampled wells had constituent levels above the primary MCLs. In Yuba County, 24% of the sampled wells had constituent levels above the primary MCLs.

In 2008, the Central Valley Water Board adopted Resolution No. R5-2008-0181 supporting the development of a groundwater strategy for the Central Valley Region. In September 2010, the Central Valley Water Board approved the 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. Since these efforts are included in Issue No. 1 (Salt and Nitrate Management) and Issue No. 12 (Participation in State Water Board Plans and Policies), no basin planning actions are identified as part of this issue.

Priority: None

Current Action: No action required.

Table: Priority and Resources

Issue #	Priority	Title	Current PYs/Yr	Current Contract Resources	Add'l PYs/Yr	Additional Contract Resources
1	High	Salt & Nitrate Management	2.1	Cleanup/Abatement Acct	0.8+	$22-$42 million
2	High	Water Bodies Dominated by NPDES Discharges	0	0	0.5	$200,000
3	High	Agricultural Dominated Water Bodies & Conveyances	1	0	1	$500,000
4	High	Beneficial Use Designations	0.5+	Stakeholder funded	1	$500,000
5	High	Delta Issues	3.5	Cleanup/Abatement Acct	TBD	TBD
6	High	Dissolved Oxygen Problems in San Joaquin River	1	0	0	$0
7	High	Pesticide Control Efforts	3	$100,000	1.5	$200,000
8	High	Mercury Load Reduction Program	4.5	$30,000	2	$100,000
9	High	Maintaining Water Quality for Drinking Water	0.5	Stakeholder funded	TBD	$1,000,000
10	High	Protection of Central Valley Fisheries & other Aquatic Life	0	0	0.5	$500,000
11	High	Secondary MCLs	0.5	0	0.5	$100,000 to $200,000
12	High	Participation in SB Plans and Policies	0.2+	0	0.5	$100,000
13	Low	Current USEPA Criteria	0	0	0.5	$0
14		Groundwater Survey and Control Policies	0	0	0	$0

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2011-XXX

ADOPTING THE 2011 TRIENNIAL REVIEW AND WORK PLAN
FOR THE
SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region (hereafter Central Valley Water Board) finds that:

1. In 1975 the Central Valley Water Board adopted the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan), which has been amended occasionally.

2. The Basin Plan contains the Sacramento River and San Joaquin River Basins' beneficial uses, water quality objectives and implementation programs.

3. Section 303(c) of the Clean Water Act (CWA) requires that water quality standards be reviewed at least every three years and section 13240 of the California Water Code requires periodic review. This review is known as the Triennial Review.

4. In accordance with State Water Resources Control Board (State Water Board) procedures for conducting a Triennial Review, Central Valley Water Board staff circulated a list of water quality issues and held a public workshop on 13 August 2009 to receive public comment regarding the list and other potential issues.

5. Central Valley Water Board staff responded to all comments and developed a draft list of issues and work plan to rank and address them.

6. The work plan lists water quality issues, the relative priority for investigating the issues, identifies which issues can be investigated with existing resources, and identifies additional issues along with the additional resources it will take to investigate and complete them.

7. The work plan and the responses to comments have been circulated to interested individuals and public agencies for review and additional comment.

8. Central Valley Water Board staff have responded to all additional written comments and revised the work plan as appropriate.

9. The Central Valley Water Board held a public hearing on xx October 2011 in Rancho Cordova, California to receive public comment on the ranking of the issues and the proposed work plan for addressing them. Notice of the public hearing was sent to all interested persons consistent with state and federal environmental regulations (40 Code of Federal Regulations (CFR) Part 25, and 40 CFR Part 131).

THEREFORE BE IT RESOLVED:

1. The Central Valley Water Board hereby approves the response to comments and adopts the Triennial Review work plan in accordance with the requirements of section 303(c)(1) of the CWA and section 13240 of the California Water Code.

2. The Central Valley Water Board reaffirms its intent to address the priority issues identified during the Triennial Review process as described in the work plan, to the extent resources allow.

3. The areas of the Basin Plan not identified as needing investigation and possible revision are hereby affirmed as adequate; however, this determination does not preclude the consideration of other issues for possible revision or amendment of the Basin Plan.

4. The entire Basin Plan shall remain in effect until such time that appropriate and specific amendments on priority issues are adopted by the Central Valley Water Board and approved by the appropriate review authorities.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 13 October 2011.

_____
PAMELA C. CREEDON, Executive Officer

O'Laughlin & Paris LLP

Attorneys at Law

SENT VIA ELECTRONIC TRANSMISSION/US MAIL

August 19, 2011

Betty Yee
Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670
byee@waterboards.ca.gov

Re: Triennial Review Draft Work Plan

Dear Ms. Yee:

On July 11, 2011, the Central Valley Regional Water Quality Control Board ("CVRWQCB") issued its "Issue List and Work Plan for the 2011 Triennial Review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins" ("Issue List"), as well as a response to comments on the 2009-2010 Triennial Review. The following comments are submitted on behalf of the San Joaquin River Group Authority ("SJRGA").

1. Beneficial Use Designations

Many of the issues listed in the Issue List, such as water bodies dominated by NPDES discharges; agricultural dominated water bodies and agricultural conveyance facilities; beneficial use designations; dividing long streams into smaller segments, each with different beneficial uses; and temperature transition zones all tie into beneficial use designations. Since beneficial use designations are the starting point for the regulation of water quality, a better, more efficient way must be developed to more precisely designate beneficial uses for streams, apply the tributary rule, and, if necessary, develop site specific objectives. The current method of amending the Basin Plan for every objective and every stream, such as that used for Deer Creek temperature objectives and MUN designations for Old Alamo Creek, are too time-consuming and expensive to make any meaningful progress. Developing a process and amending the Basin Plan to incorporate such a process would require time and money, but it would save time and money in the long run.

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2. Salt and Nitrate Management

The Issue List appears to contradict the current Basin Plan. According to the current Basin Plan:

> "Of the two major options for disposal of salts produced by agricultural irrigation, export out of the basin has less potential for environmental impacts and, therefore, is the favored option. The San Joaquin River may continue to be used to remove salts from the basin so long as water quality objectives are met."

(Water Quality Control Plan for the Sacramento River and San Joaquin River Basin, p. IV-15.00.)

The Issue List, however, is less favorable towards using the San Joaquin River to export salt from the Basin, on the basis that salts are "recirculated into the federal and State water project pumps and returned to the water users in the San Joaquin River Basin, as well as to water users in the Tulare Lake Basin where there is no outlet for salt at the present time." (Issue List, p. 6.) Absent a valley-wide drain to remove salt from the Basin, the San Joaquin River remains the only method available for the removal of salt. Unless salt can be removed from the Basin, salt balance cannot occur and salt will built up in the soil and/or groundwater, potentially harming agricultural beneficial uses, depending on where and how these harmful salts accumulate.

As the Issue List recognizes, CV-SALTS is currently working to develop long-term solutions for managing salt in the Basin. (Issue List, p. 9.) Recirculation of salts is one of the many challenges to address in developing a long-term, comprehensive strategy for managing salt in the Basin.

3. Use of EPA Region Temperature Criteria

According to the Issues List, the Department of Fish and Game ("DFG"), Region 4, requested the establishment of temperature objectives to protect fall-run Chinook salmon in the San Joaquin River Basin. (Issue List, p. 37.) EPA Region 9 and the DFG support using "the scientific approach used in the EPA Region 10 guidance for development of numeric temperature standards to protect salmonid beneficial uses in the Central Valley." (Id.)

If the CVRWQCB chooses to develop numeric temperature standards to protect salmonid beneficial uses in the Central Valley and, in doing so, considers the EPA Region 10 guidance, it must not repeat a common error with the EPA Region 10 guidance of directly applying its criteria.

In 2003, EPA Region 10, which encompasses Oregon, Washington, Alaska, Idaho, and 267 Native American tribes, determined that there were a variety of chronic and sub-lethal effects likely to occur to Pacific Salmonids, that the guidance in *Quality Criteria for Water 1986* would not necessarily protect Pacific Northwest salmonids, and that guidance more specific to

Pacific Northwest salmonids was necessary. (EPA *Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards* (2003).) As a result, EPA Region 10 chose to adopt additional guidance for designating uses, developing temperature water quality objectives, managing stream temperatures, issuing National Pollutant Discharge and Elimination System permits for heat discharges, and identifying water quality limited segments under Clean Water Act Section 303(d) within its region. It did not adopt new water quality objectives or any new regulations, but simply additional guidance. The guidelines may offer states outside the Pacific Northwest assistance in developing their own temperature objectives. The Region 10 application of its guidelines and the criteria developed were specific to Pacific Northwest salmonids. As a result, the numeric criteria developed applies in the Pacific Northwest generally and may apply in the Pacific Southwest, but only to the degree that the salmonids and hydrologic and other conditions are sufficiently similar.

Region 10 obtained preference and avoidance figures for various Pacific Northwest salmonids by conducting a literature review (Sally Sauter, John McMillan, Jason Dunham, *Salmonid Behavior and Water Temperature (Issue Paper 1),* Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project (EPA-910-D-01-001, May 2001)[1], p. 3-10.) Only one of the studies in the literature reviewed, a study of juvenile wild steelhead, was conducted in California. The other studies used salmonids from British Columbia, Virginia, Oregon, Washington, and Ontario, not California. The lone California study was conducted in an unspecified stream in "northern California," not in the San Joaquin River Basin. Furthermore, only two of the studies observed fall-run Chinook salmon, the only run existing in the San Joaquin River Basin today, but both were conducted in Washington, not in the San Joaquin River Basin. Even then, the Region 10 Temperature Criteria was also only one part of Region 10's guidance. It was not intended to operate alone and be applied directly, but as only one of multiple considerations, such as unusually warm seasonal conditions, natural background temperatures exceeding temperature criteria, and diurnal variations, in developing temperature objectives for the waters of the Pacific Northwest. (Id. at 20, 35.) The general methodology used by EPA Region 10 would be useful and informative, but in developing temperature objectives or in seeking guidance in applying current temperature objectives, the CVRWQCB must avoid directly applying temperature criteria that were never intended for the San Joaquin River Basin.

4. San Joaquin River Dissolved Oxygen

Dissolved oxygen conditions in the Stockton Deep Water Ship Channel ("Ship Channel") have significantly improved since 2006. Much of the improvement has been attributable to the City of Stockton's treatment plan upgrades, which have significantly reduced ammonia discharges since 2008. Upstream discharges of oxygen demanding substances are also lower and have further contributed to improved dissolved oxygen conditions in the Ship Channel. Finally, the Department of Water Resources ("DWR") completed testing its aerator and showed that aeration is an effective method of improving dissolved oxygen conditions in the Ship Channel. A stakeholder group has agreed, in principle, to fund and operate the aerator for an initial five years and is currently negotiating an agreement providing for such funding and operation.

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[1] Available at
http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/epa_reg10_paper%201_behavioral.pdf

Basin Plan amendments to further refine the dissolved oxygen objective would greatly aid managing dissolved oxygen conditions in the Ship Channel. Potential refinements include, but are not limited to, the development of averaging periods and consideration of changing San Joaquin River flows. Most important, is a review of the scientific basis of the 6.0 mg/l September-November objective. The 6.0 mg/l objective was based on a 1969 agreement between the DFG and DWR to act as a trigger for DWR to install the barrier at the Head of Old River in order to maintain dissolved oxygen conditions of 5.0 mg/l or better. As a result, the 6.0 mg/l objective was not based on science, it lacks a scientific basis, and it was never intended to be an objective, but rather a trigger for an implementation action. Although five years are contemplated for the aerator funding and operating agreement, the initial term will be three years. Two one-year extensions may occur thereafter, but extending the agreement may depend on what progress has been made in reviewing and refining the dissolved oxygen objective.

Very truly yours,
O'LAUGHLIN & PARIS LLP

KENNETH PETRUZZELLI

KP/tb
cc: San Joaquin River Group Authority

CITY OF LIVE OAK

August 26, 2011

Ms. Betty Yee
California Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

Re: Triennial Review of the Basin Plans for the Sacramento and San Joaquin River Basins

Dear Ms. Yee:

The City of Live Oak is pleased that the Central Valley Regional Water Quality Control Board has identified the issue of inappropriate beneficial use designations in its Triennial Review Work Plan. The City of Live Oak recommends that the list of water bodies on page 18 of the Triennial Review Work Plan be expanded to also include the agricultural drains that the City of Live Oak discharges its effluent into. The City of Live Oak recommends this expansion because it is particularly concerned about the MUN beneficial use designation that has been assigned to the agricultural drains into which it discharges its treated wastewater effluent. The agricultural drains fit within the agricultural conveyance exception to the MUN designation contained in the State Water Resources Control Board's Sources of Drinking Water Policy (Resolution 88-63), and the nearest downstream designated water body does not have the MUN beneficial use designation. The City has submitted information to the CVRWQCB documenting that these drains were constructed in the early 1900's and were never a natural waterbody. Thus, the City of Live Oak believes that de-designation through a Basin Plan Amendment is fully warranted.

The immediate need for the de-designation becomes evident when the potential costs of compliance are considered. On June 10, 2011, the Regional Water Board adopted an NPDES permit for the City of Live Oak's Wastewater Treatment Plant discharge that includes the MUN beneficial use designation for Lateral Drain No. 1 and Lateral Drain No. 2. For the City of Live Oak's 8500 citizens to comply with its previous NPDES permit a completely new $20 million WWTP plant is nearing completion. With the approval of the City's NPDES permit that applies the MUN beneficial use to Lateral Drain Nos. 1 and 2, the City of Live Oak faces an

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additional $4 million in costs, plus on-going operational expense, above those for the current upgrades to comply with the water quality-based effluent limitations designed to satisfy the MUN beneficial use designation. The City of Live Oak's single- family residential customers could ultimately see a 33% increase in their sewer bills above the 2011 sewer fee, which means bills could be as high as $80/month. These costs would place a significant burden on Live Oak residents and businesses because Live Oak is disadvantaged community with a median household income of approximately $32,000/year – to institute water quality objectives the CVRWQCB Board members acknowledged made no logical sense.

Also, the City of Live Oak is concerned that the Triennial Review Work Plan indicates that stakeholders will be the primary source of funding for beneficial use de-designations. The studies are costly, and it is inappropriate to place this burden on the Live Oak and its ratepayers. As such, the City of Live Oak should not be responsible for funding the de-designation effort. At the June 10, 2011 Regional Water Board meeting, Chairperson Hart acknowledged the inequity of imposing the costs associated with a Basin Plan amendment process on dischargers to rectify this problem. Specifically, Chairperson Hart indicated that " in adopting the Resolution 88-63 without excepting out these ag drains, we should accept responsibility for that. It's our fault that we didn't catch that, that we didn't except these drains out, and we should fix it." The City of Live Oak requests that the Work Plan be revised to identify state funding options that may be available to fund these efforts versus identifying "stakeholders" as the funding mechanism.

In summary, the City of Live Oak requests that the list of water bodies on page 18 of the Work Plan be expanded to include the agricultural drains into which Live Oak discharges its treated wastewater effluent. The City of Live Oak looks forward to working with the Regional Water Board to ensure that a Basin Plan amendment removing the MUN designation from its agricultural drains is processed as quickly as possible.

Thank you for considering these comments.

Sincerely,

William P. Lewis

William P. Lewis
Public Works Director

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Telephone (530) 695-2112 · FAX (530) 695-2595

From: Betsy Cawn <epi-center@sbcglobal.net>
To: <byee@waterboards.ca.gov>
Date: 8/29/2011 11:23 AM
Subject: Sacramento River Basin Plan Triennial Review

Dear Ms. Yee,

I do not know if these questions are technically appropriate for the public comments on the Triennial Review of the Sacramento River Basin Plan, or not, but I would like to know the answers, in any case. If these questions are relevant to the Triennial Review process, please include them.

In 2006, the Central Valley Regional Water Quality Control Board adopted Resolution No. 2006-0060, amending the Sacramento River Basin Plan for the "control of nutrients" in Clear Lake, establishing a TMDL of 73 micrograms per liter of Chlorophyll-a, based on a technical study performed in 2002 by Tetra Tech.

The County of Lake (Department of Public Works) disputed the validity of that TMDL, on the basis that the lake had been getting "clearer" (according to Secchi disc depth measurements, and because of the lack of "reported" blue-green algal blooms) since 1992.

In 2009, 2010, and 2011, however, the lake has produce prodigious amounts of blue-green algal/cyanobacterial blooms, resulting in tremendous loss of "clarity," and causing some local concerns about the health and safety of the lake for swimming and for raw water supplies to drinking water purveyors.

There are 17 domestic water suppliers in communities around Clear Lake (including the County of Lake's "Special Districts" which provides 7 of 10 Community Service Areas with treated lake water) who participate in daily monitoring of water quality for compliance with the Safe Drinking Water Act requirements mandated by the California Department of Public Health. These water suppliers measure "turbidity" on a nearly constant basis. Would it be possible to use their monitoring data as a reasonable measurement of lake water quality for purposes of the TMDL metric?

In his peer review comments on the Tetra Tech report of 2002, Dr. Vladimir Novotny noted (in 2004) the absence of a Use Attainability Analysis prior to the determination of the original TMDL, and the lack of baseline data to establish the relevance of the accepted TMDL. Is it too late to seek such an analysis, and consider revision of the nutrient TMDL for Clear Lake if that analysis recommends it?

Finally, there is some indication that our last three years' manifestation of blue-green algal blooms may be contributing cyanobacterial toxins to our recreational and drinking water supply. The known hazards of cyanobacterial toxins found in the Klamath River reservoirs generated a TMDL for Microcystis formulated by a cooperative effort between the US EPA Region 9 and the North Coast Regional Water Quality Control Board, along with local agencies and tribes. Is there any way your board can assist the County of Lake and members of the public who are concerned about the health of Clear Lake to develop appropriate testing and health information in this regard?

Respectfully submitted,

Betsy Cawn
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CENTRAL VALLEY CLEAN WATER ASSOCIATION
CVCWA
EST. 1987

Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

MICHAEL RIDDELL– CHAIR, CITY OF CERES **STEVE HOGG– VICE CHAIR, CITY OF FRESNO**
JEFF WILLETT – SECRETARY, CITY OF STOCKTON **ED CROUSE – TREASURER, RANCHO MURIETA CSD**

August 29, 2011

Sent via email to byee@waterboards.ca.gov

Ms. Betty Yee
Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

Re: Triennial Review of the Basin Plans for the Sacramento and San Joaquin River Basins

Dear Ms. Yee:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to provide comments regarding the Issue List and Work Plan for the 2011 Triennial Review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (2011 Triennial Review). Given the importance of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) to the system of water quality regulation, Publically-owned Treatment Works (POTWs) and other wastewater treatment agencies, industry, agriculture, the State and Regional Water Boards and other stakeholders must all work together to find creative solutions for updating these vital documents. CVCWA and its members continue to look for ways to establish mutually agreeable partnerships among interested parties to facilitate necessary updates to the Basin Plan.

On July 22, 2009, CVCWA submitted comments regarding issues it recommends the Central Valley Regional Water Quality Control Board (Central Valley Water Board) address during the 2011 Triennial Review of the Basin Plan. CVCWA's 2009 comment letter identified Tier One priority issues, which CVCWA urged the Central Valley Water Board to address and several Tier Two issues that it urged the Central Valley Water Board to consider, if resources allow. This

comment letter responds to the draft Issue List and Work Plan for the 2011 Triennial Review of the Basin Plan (Work Plan).

Overall, CVCWA agrees that the issues identified as being high-priority are indeed high-priority Basin Planning issues. However, of the high-priority issues identified, CVCWA believes that several are of higher priority than others. Further, in several of the high-priority issues, the Work Plan suggests that Basin Planning activities for that specific issue should be stakeholder funded. For some of those issues, we disagree. Our comments on certain high-priority issues are provided here.

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

In 2009, CVCWA requested that the Central Valley Water Board keep the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) a top priority during the 2011 Triennial Review. CVCWA appreciates the Central Valley Water Board's recognition of the importance of stakeholders being involved in developing solutions, and the need for the Central Valley Water Board to ensure stakeholders can focus on the CV-SALTS program, even while focusing on local issues. Also, CVCWA appreciates the Central Valley Water Board highlighting the concerns that POTWs have regarding the southern Delta salinity objectives, and the need to carefully coordinate the CV-SALTS with the State Water Resources Control Board (State Water Board) review of the salinity objectives. CVCWA was party to litigation against the State Water Board challenging the adoption of the southern Delta salinity objectives. The Sacramento Superior Court ordered the State Water Board to reconsider the southern Delta salinity objectives consistent with Water Code section 13241, and to develop a program of implementation that complied with Water Code section 13242. The outcome of the State Water Board's review of these objectives should inform the CV-SALTS program.

Accordingly, CVCWA supports the continued allocation of Central Valley Water Board staff resources for the CV-SALTS effort. CVCWA will continue to participate in CV-SALTS and will work with its members and other stakeholders to identify the financial resources necessary to complete CV-SALTS activities.

Issues 2, 3, and 4: Regulatory Guidance to address Water Bodies Dominated by NPDES Discharges; Regulatory Actions in Agricultural Dominated Water Bodies and Agricultural Conveyance Facilities; Beneficial Use Designations for Surface and Ground Waters

Issues 2, 3 and 4 are all similar in nature in that they are intended to address inappropriate beneficial use designations, which result in the inappropriate application of water quality objectives to effluent and agriculturally dominated water bodies. Because of the similar nature of these actions, we recommend that all three issues be combined into one. Or, in the alternative, we recommend that Issue 4, Beneficial Use Designations for Surface and Ground

Waters, be identified as Issue 2 on the Central Valley Water Board's Triennial Review Work Plan list.

As you know, many of CVCWA'S member agencies operate wastewater treatment plants that discharge to effluent and agricultural dominated water bodies with *inappropriately designated uses*. In many instances, inappropriate uses are attributed to these water bodies through the Central Valley Water Board's broad application of the tributary statement rather than site-specific analyses of appropriate beneficial uses. There are also cases where the municipal and industrial (MUN) beneficial use has been assigned to an agricultural drain or effluent dominated water body through the Central Valley Water Board's application of the State Water Board's Sources of Drinking Water Policy (Resolution 88-63). In both cases, CVCWA members are particularly concerned about the inappropriate beneficial use designations in effluent and agricultural dominated water bodies. Specifically, inappropriate beneficial use designations can result in the adoption of water quality based effluent limitations that may ultimately require POTWs to expend unnecessary resources to install treatment facilities to protect non-existent beneficial uses. Further, to remove inappropriate beneficial use designations, POTWs and others must spend considerable resources on developing the information necessary for the Central Valley Water Board to de-designate a beneficial use by means of an amendment to the Basin Plan.

With respect to the list of specific examples for review of beneficial uses identified on page 18, CVCWA recommends that the list be expanded to also include the agricultural drains into which the Cities of Biggs, Davis, Live Oak and Willows discharge their effluent. All of these agricultural drains fit within the agricultural conveyance exception contained in Resolution 88-63, and all of these drains are upstream of waterbodies which do not have the MUN beneficial use designated in the current Basin Plan.

Next, CVCWA appreciates the fact that the Work Plan is attempting to put forward creative solutions to resolve the inappropriate application of beneficial uses by suggesting that it may be appropriate to try and group water bodies, starting with those that fit within the exceptions identified in Resolution 88-63. CVCWA would support this effort. CVCWA also understands that it may be necessary for site-specific amendments to uses to also be pursued in parallel.

However, CVCWA is concerned that funding for these efforts are primarily identified in the Work Plan as being stakeholder funded. The difficulty and expense of de-designating a beneficial use highlights the need for the Central Valley Water Board to re-examine its policy and practice for addressing de-designations, which is to require stakeholders to fund the de-designation process. The de-designation of beneficial uses often requires lengthy and resource-intensive Use Attainability Analyses (UAA). (See 40 C.F.R. § 131.10(j) [requiring a UAA for de-designation of wildlife and recreation designations].) Even when the federal regulations do not specifically require a UAA, adequate data must be compiled to demonstrate that attaining a designated use

is not feasible. (See 40 C.F.R. § 131.10(g).) The studies necessary under Section 131.10(g) can be extensive and costly.

Stakeholders, and in particular small municipalities like the Cities of Live Oak and Willows, are not financially able to fund the costly and expensive studies associated with use de-designation and the associated Basin Plan amendment process. Further, these cities are being asked to fund a de-designation that is now required because of a change in interpretation of policies by the Central Valley Water Board and the State Water Board. Considering that the inappropriate designation of beneficial use for some of these cities resulted from Central Valley Water Board actions twenty-years ago, it is improper to now ask these small, economically disadvantaged communities to pay for the costly studies and the Basin Plan amendments. Accordingly, CVCWA requests that the Work Plan be revised to identify state funding options, including the option of CV-SALTS, which may be available to fund these efforts versus identifying "stakeholders" as the funding mechanism. While we appreciate that the Central Valley Water Board has resource constraints, so do the POTWs in the Central Valley.

Issue 9: Policies for Maintaining Water Quality for Drinking Water

CVCWA and other stakeholders have been actively participating in the Central Valley Drinking Water Policy Work Group (work group) for almost ten years. In the past year, the work group has completed the work identified in the 2003 Technical Work Plan, and is currently working with Regional Water Board staff on the development of an outline and work plan for a Drinking Water Policy. Completion of the technical work, which has included control measure studies for POTWs, stormwater and agriculture and analytical water quality modeling of the Sacramento and San Joaquin Rivers and Delta has yielded some important results. First, the perception that loadings of pollutants of concern to drinking water agencies (organic carbon, pathogens, salt and nutrients) will be increasing in the future due to population growth in the Central Valley has been dispelled. Detailed technical evaluations of future loading scenarios show that loadings will trend down in the future due to current and planned improvements in source control by POTWs and urban runoff agencies, a reduction in agricultural land use, water conservation and water recycling. Second, the concern that water treatment costs will increase in the future due to degradation of water quality in the Delta has been largely resolved based on the results of a study performed for the work group that addressed this issue. As a result, the findings from the work group point to a Drinking Water Policy which will not include new numeric water quality objectives for organic carbon or pathogens. Ongoing concerns regarding the impact of salts and the role of nutrients in taste and odor episodes will be addressed through CV-SALTS and the SWRCB's Nutrient Numeric Endpoint work, with support from the work group.

As a result of these new findings by the work group, the Issue 9 description should be modified and updated to reflect the current status and direction of the effort. We suggest the discussion section of Issue 9 be revised as follows:

The Sacramento/San Joaquin Delta is a source of drinking water for two thirds of the state's population (over 25 million people). In addition, the Sacramento and San Joaquin Rivers, the two large rivers which flow into the Delta, and their tributaries, are sources of drinking water for many Central Valley communities. The water quality of the Sacramento and San Joaquin Rivers is affected by pollutants from various activities, including agriculture, mining, confined animal facilities, urban runoff, and municipal wastewater effluent. Pollutants include salts, organic carbon, nutrients, pathogens, pesticides and trace metals. Concerns have long existed that increased development and population growth in the Central valley will increase pollutant loads and deteriorate water quality in the Delta.

The Basin Plan assigns the municipal and domestic water supply (MUN) beneficial use to all surface waters with a few limited exceptions. Maximum contaminant levels (MCLs) to protect drinking water supplies are contained in Title 22 of the California code of Regulations and have been incorporated by reference into the Basin Plan for the protection of waters designated MUN. MCLs exist for arsenic, salinity, nitrates, some pesticides, volatile organics, disinfection byproducts (trihalomethanes) and radiological constituents, but do not exist for organic carbon, bromide or specific pathogens (Cryptosporidium and Giardia).

In response to directives in the 1996 Reauthorization of the federal Safe Drinking Water Act, the USEPA has developed more stringent regulations pertaining to disinfection by-products (DBPs) and pathogens. High levels of organic carbon in source waters may make control of trihalomethanes and haloacetic acid compounds difficult if chlorine is used as a drinking water disinfectant, while high levels of bromide can make control of bromate difficult if ozone is used as a drinking water disinfectant.

The Sacramento River generally has low concentrations of organic carbon (generally around 2 mg/l) and the San Joaquin River has higher organic carbon concentrations (generally around 4 mg/l). Drinking water purveyors must conduct additional actions when total organic carbon concentrations exceed 4 mg/l. Delta agricultural drainage, wetlands and the smaller rivers that flow into the Delta are sources of organic carbon. As urban areas develop within the watersheds tributary to the Delta, and as new wetlands are created in the Delta, there is concern that organic carbon levels will increase in the Delta. The tidal exchange between the Delta and San Francisco Bay brings elevated levels of bromide into the Delta.

Concerns also have been expressed regarding salinity and nutrients. Stakeholders have been coordinating with the CV-SALTS efforts to develop a regionwide salt management policy that will also address drinking water concerns. See Issue No. 1 for more details regarding development of a salt management policy. Drinking water purveyors are also

concerned that taste and odor problems they experience are associated with high nutrient levels. There are also concerns regarding the presence of algal species that may produce algal toxins. Stakeholders are also coordinating with the State Water Board's effort to develop nutrient numeric endpoints to ensure that drinking water concerns are addressed in that effort. See Issue No. 12 for a list of State Water Board planning efforts regarding nutrient management.

The CALFED Record of Decision (ROD) identified the need for a comprehensive source water protection program and a comprehensive drinking water policy for the Delta and upstream tributaries. The Central Valley Water Board signed a MOU committing to working with the Department of Public Health (DPH), the State Water Board, and USEPA to develop and adopt a policy to protect sources of drinking water for the Delta and its tributaries. The Central Valley Water Board committed to developing a comprehensive drinking water policy in Resolution No. R5-2004-0091 and reiterated its commitment for a policy in Resolution No. R5-2010-0079. In the 2010 resolution, the Central Valley Water Board directed staff to bring a final drinking water policy to the Board in three years.

Issue 11: Secondary MCLs as Water Quality Objectives for Surface and Ground Waters

In 2009, CVCWA recommended that the water quality objective for chemical constituents that incorporates by reference secondary maximum contaminant levels (MCLs) be deleted from the Basin Plan. CVCWA also recommended that, at a minimum, the Central Valley Water Board should amend the Basin Plan to clarify how secondary MCLs should be applied to receiving waters. CVCWA appreciates that the Central Valley Water Board proposes to identify the issue of secondary MCLs as water quality objectives in the Work Plan and looks forward to working with the Central Valley Water Board to resolve issues related to the use of secondary MCLs as water quality objectives for both surface and ground waters.

Ultimately, CVCWA still recommends that the Basin Plan be amended to delete secondary MCLs because secondary MCLs are recommendations to drinking water providers that are based on consumer acceptance levels and are therefore unrelated to human health and welfare or the protection of aquatic life. The application of secondary MCLs to natural waterways is inappropriate when one considers the basis for secondary MCLs (aesthetics) and the fact that water treatment in accordance with the Safe Drinking Water Act will occur prior to use by consumers.

If the Central Valley Water Board chooses not to delete the secondary MCLs, CVCWA recommends that the Central Valley Water Board amend the Basin Plan to clarify that secondary MCLs should be analyzed using "dissolved" standards because, according to Safe Drinking Water Act regulations under the Surface Water Treatment Rule, drinking water purveyors are required to filter the water prior to treatment, which will remove particulates. The Work Plan notes that the rationale for using a total recoverable analysis rather than dissolved is that MUN includes

small domestic water supply systems that may not be required to filter. In fact, such systems are required to meet the filtration requirements of the Safe Drinking Water Act, regardless of size. CVCWA also supports, as an alternative to deletion, use of secondary MCL ranges where applicable to provide additional flexibility.

Issue Identified by CVCWA Not Included in the Work Plan

In addition to the priority issues discussed above, CVCWA identifies one additional issue from its 2009 comments that should be included in the Work Plan.

Remove Non-Detect Standard for Organochlorine Pesticides.

CVCWA previously requested that the Basin Plan be amended to remove the provision that states organochlorine pesticides "shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the EPA or the Executive Officer." (Basin Plan at p. III.6.00.) This water quality objective results in a fluctuating standard based on the accuracy of the analytical method rather than being based on the appropriate level to protect the uses of waterways. Instead, CVCWA supports the use of the CTR criteria for organochlorine pesticides. Accordingly, CVCWA recommends that the Regional Water Board amend the Basin Plan by deleting the "non-detect" provision.

CVCWA appreciates the Central Valley Water Board's efforts to conduct a meaningful triennial review process. CVCWA will remain involved in the triennial review process on behalf of its members and during subsequent Basin Plan amendment processes that follow on from the review process. Thank you for your consideration of CVCWA's comments. If you have any questions, please contact me at (530) 268-1338.

Sincerely,

Debbie Webster
Executive Officer

c: Pamela Creedon (via email)

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Technology in balance with nature

August 29, 2011

California Regional Water Quality Control Board
Central Valley Region
Attention: Ms. Betty Yee
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

Via email to byee@waterboards.ca.gov

Subject: **Issue List and Work Plan for the 2011 Triennial Review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins**

Dear Ms. Yee:

The Sacramento Regional County Sanitation District (SRCSD) appreciates the opportunity to comment on the issue list and workplan for the 2011 triennial review for the Sacramento River and San Joaquin River basins (Triennial Review). The basin planning process is a key component in the strategy to achieve water quality objectives. We believe that wastewater agencies, industry, agriculture, state and regional water boards, and other stakeholders must all work together to find creative solutions for updating the basin plans. The issue list and work plan provided by the Central Valley Regional Water Quality Control Board (CVRWQCB) provides a good foundation for the Triennial Review process. Our comments detailed below focus on beneficial use impacts and a regional monitoring program as described in Issue 5, Delta Issues, and Issue 9, Policies for Maintaining Water Quality for Drinking Water.

In addition to our comments, we support comments submitted by the Central Valley Clean Water Association.

Comment #1: Issue 5: Delta Issues

The second paragraph on page 22 states that "ammonia levels appear to be a factor in causing beneficial use impacts." It also says that "the USEPA Ambient Water Quality Criteria for Ammonia – 1999 and the draft USEPA criteria released in 2009 do not appear to adequately protect the beneficial uses of the Delta." These statements are misleading and should be changed to reflect the fact that more research is necessary to determine if ammonia is causing beneficial use impacts in the Delta. Additionally, Issue 5 of the Triennial Review should reflect the current regulatory efforts of the San Francisco Bay Regional Water Quality Control Board's San Francisco Bay Numeric Nutrient Endpoint (SF Bay NNE) process—a process currently showing no proof that USEPA water quality criteria for ammonia is insufficient to protect beneficial uses.

Ammonia's role in the Delta has been, and is being, debated in multiple venues, including the March 2009 CalFED Ammonia Workshop, the August 2009 CVRWQB Ammonia Summit, and the March 2010 State Water Resources Control Board Informational Proceeding for Flow Criteria. The conclusions from these workshops all stated that more research was necessary to determine whether beneficial uses were impacted by ambient ammonia concentrations. In June 2011, the SF Bay NNE published "Southern California Water Research Project Technical Report 644," a

literature review and data gap analysis for the development of NNEs. The review recognizes the uncertainty of ammonia's role in SF Bay and recommends forming a workgroup that will synthesis existing data and recommend future data collection.

An April 20, 2010, University of California Davis contaminant synthesis report contracted by the Water Boards concluded the following:

> *"... while contaminants are unlikely to be a major cause of the POD, they cannot be eliminated as a possible contributor to the decline."*

In addition to the above referenced reports, the National Research Council has been asked to review other stressors, with a report due in the fall of 2011. The USEPA is also analyzing ammonia's role in the Delta under an Advanced Notice of Proposed Rulemaking, which will publish a draft report in the fall of 2011. The Delta Stewardship Council (Council) requested the Independent Science Board (ISB) to "...conduct an assessment of stressors on populations of native fish species in the Delta, the Sacramento and San Joaquin rivers, and the tributaries of those rivers below the rim dams of the central valley." In a January 26, 2011, memo from the ISB to the Council, there is only one note on nutrients that lists nutrients as a current stressor. They list it as a stressor because of the following:

> *"We list 'current stressors' last because The Delta Plan needs to take the long temporal view. To the extent that current stressors are expected to carry on into the future, including how water is managed, the DSC should address them."*

Even the Fifth draft of the Delta Plan states the following regarding food web effects of ammonia on the Delta:

> *"Food web effects of ammonium in the Delta remain an open question with much active research and a healthy scientific debate."*

Clearly there is no scientific consensus that ammonia is a key driver of ecological problems in the Delta and San Francisco estuary, including the pelagic organism decline. There is, and has been, the agreement that more research is needed to understand ammonia's role and importance in the Delta. We request the Delta Issue discussion in the Triennial Review reflect this fact. Therefore, we recommend deleting the second paragraph on page 22 and replacing it with the following:

> **There are conflicting reports on the role that ammonia plays and its importance in the Delta ecosystem. However, most stakeholders and scientists agree that more research is needed to better understand ammonia's role in the Delta ecosystem and to determine if there is an impact to beneficial uses. Staff will work with stakeholders and other interested entities to conduct studies and assessments aimed at evaluating existing water quality criteria as they relate to ammonia.**

The Delta Science Program has funded millions of dollars in research regarding nutrients over the last several years. The results of this research will be available in the next year, and this research should be considered before determining if ammonia is impacting beneficial uses. These studies, and other studies that will be recommended by the SF Bay NNE, should go through a rigorous scientific process that can lead to appropriate water quality objectives for nutrients. The water quality objectives would then be used to determine if beneficial uses are impacted by ammonia.

Comment #2: Issue 5: Delta Issues

We believe that the importance of the Delta Regional Monitoring Program (Delta RMP) is understated in this section and that it deserves a more thorough explanation of its importance. Development and completion of the Delta RMP along with completion of Delta water quality modeling could provide critical information related to current and future Delta water conditions. This information is used by many programs that address other issues that are mentioned in the Triennial Review. As such, this item would be better served to receive its own issue number in this document. We recommend adding the Delta Regional Water Quality Monitoring and Modeling as an individual issue with the following description:

Issue X: **Regional Water Quality Monitoring and Modeling**

Discussion: Many of the other issues presented in this triennial review would benefit from the development of a comprehensive Delta RMP and Delta water quality modeling program. The Delta Stewardship Council also recognizes the importance of a Delta RMP and recommends in the Fifth draft of the Delta Plan that regulatory agencies and stakeholders work together to create a Delta RMP.

The following is taken from the CVRWQCB comprehensive monitoring program website.

> "Many agencies and groups monitor water quality, water flows, and ecological conditions in the Bay-Delta, but there is no comprehensive contaminant monitoring and assessment program. The Interagency Ecological Program (IEP), CALFED, and other organizations, including the Water Boards, conduct some of these analyses, but due to their specific mandates, information gaps may exist. Emerging concerns with contaminants related to the decline of pelagic organisms in the Delta, wastewater treatment plant discharges, agricultural discharges, pesticides, blue-green algae toxicity, and unknown toxicity events all highlight the need for well-coordinated contaminants monitoring. A system is needed for coordinating among monitoring programs and integrating contaminants monitoring into existing monitoring efforts whereby all data are synthesized and assessed on a regular basis. The Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which was adopted by the State Water Board, Central Valley Regional Water Board, and San Francisco Bay Regional Water Board, identifies the development of a comprehensive monitoring program for the Delta as a priority action."

The Watershed Analysis Risk Management Framework (WARMF) model and the Delta DSM2 model have been successfully linked through the efforts of the Drinking Water Policy Workgroup. Efforts of this group also included gathering a significant amount of historical water quality data for the Sacramento River and San Joaquin River and tributaries. This linked model could be used to evaluate gaps in water quality data to make future efforts of the Delta RMP program more effective.

Current Action: The Delta RMP has created straw man proposals for governance, funding, water quality monitoring priorities, and data integration. The Delta RMP has also published the first edition of the Pulse of the Delta – the public outreach portion of the Delta RMP.

For modeling efforts, the Central Valley Drinking Water Policy Workgroup has completed watershed models for the Sacramento-San Joaquin Watershed and

Delta, using WARMF and DSM2 models, respectively. Currently, the Workgroup is determining what additional data is necessary to further refine the models.

Current Resources: Various dischargers and entities contribute to sampling efforts and gathering water quality data that could be used to contribute to a future coordinated Delta Regional Monitoring Program.

Additional Action: For the Delta RMP, staff needs to continue working with stakeholders to finalize the straw man proposals. The modeling efforts could be used to help identify and prioritize water quality and water monitoring data gaps. For modeling efforts, the WARMF and DSM2 efforts that were initiated by the Central Valley Drinking Water Policy Workgroup need to be completed. Complete the source evaluation and model input for the agriculture source component for the Sacramento and San Joaquin Rivers and tributaries. The DICU and other Delta agriculture inputs and natural source inputs would need to be completed for a more accurate DSM2 model. Additional activities include expanding stakeholder outreach, gathering additional data and further developing the model to add constituents to build a more comprehensive Delta model to better understand and predict Delta water quality. Current model parameters include flow, pathogens, salts & nutrients (ammonia, nitrates, nitrites, phosphorus, etc), temperature, algae, and organic carbon.

Comment #3: Issue 9: Policies for Maintaining Water Quality for Drinking Water

The first paragraph in the discussion for this issue lists nutrients as pollutants. We agree that nutrients, in certain concentrations, can be considered a pollutant, but we don't believe that nutrients in general should be considered a pollutant. We recommend changing this paragraph to more accurately describe how a nutrient becomes a pollutant (such as nutrients in excessive concentrations). Also, organic carbon and some trace elements occur in natural runoff in areas that have not been disturbed by human activity. In some locations, these natural sources contribute a significant load to waters. The text on page 32 should be changed to note the contribution of the natural sources in the Delta and the importance of these constituents to the Delta ecosystem.

The "Current Resources" section on page 35 states that "CUWA received a grant on behalf of the Workgroup for almost a million dollars to fund technical studies that will help with development of the policy." The grant funding has been expended and significant work remains for completion of the Drinking Water Policy. SRCSD and the California Urban Water Agencies (CUWA) have provided significant funding for various activities including reimbursements for CVRWQCB staff time associated with completion of this workgroup's activities. We would appreciate the recognition of SRCSD in providing these resources.

Item 2 on page 35 states that "additional studies are estimated to require $1,000,000." Funding is required to support additional modeling, studies, water quality monitoring, and staffing. Models developed from this workgroup could be used in other groups such as the Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS). Costs could exceed $2,000,000 to complete the water quality modeling effort. The cost for completing the CV-SALTS effort is estimated to be between $20 million and $40 million.

Thank you again for the opportunity to comment on the 2011 Triennial Review. If you have any questions or need clarification on any of our comments, please contact me at (916) 876-6008 or loftonj@sacsewer.com.

Sincerely,

Jason Lofton
Associate Civil Engineer

cc: Meghan Sullivan, CVRWQCB (msullivan@waterboards.ca.gov)

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EDMUND G. BROWN, Jr. Governor
JOHN McCAMMAN, Director

August 24, 2011

RECEIVED SACRAMENTO CVRWQCB 11 AUG 29 PM 12: 33

Betty Yee
Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, California 95670-6114

Subject: Triennial Review for the Sacramento River and San Joaquin River Basins

Dear Ms. Yee:

The California Central Valley Regional Water Quality Control Board (Board) is in the process of reviewing the adequacy of water quality standards for designated beneficial uses for water bodies in the Central Valley as contained in the Basin Plan. Currently, the water quality standards for anadromous salmonids in the Basin Plan are qualitative rather than quantitative. Due to the poor condition of anadromous salmonid populations in the San Joaquin River Basin, there is a need to implement numerical (i.e., quantitative) standards to protect anadromous fish species.

The California Department of Fish and Game (Department) has jurisdiction over the conservation, protection and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species (Fish and Game Code Section 1802). As trustee agency for fish and wildlife resources, we are responsible for providing, as available, biological expertise to review and comment on environmental documents and impacts arising from Project activities, as well as, propose protections to sustain healthy populations of fish and wildlife.

The Board presented twelve priority issues and work plan for the above Triennial Review. Our main comments concern Issue 10: Protection of Central Valley Fisheries and other Aquatic Life. Issue 10 is considered a High Priority, but no Current Action and Current Resources are proposed. Additional resources include a 0.5 PY per year per amendment and Contracts of $500,000 for temperature work. We concur that to address temperature protection will require funding and staff time; however, we believe minimal time and cost is needed because the United States (U.S.) Environmental Projection Agency's (EPA) Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards [EPA 910-B-03-002] (EPA 2003) has established scientifically based numerical water temperature standards for anadromous fish critical life stages. We strongly advocate that the Board adopt these numeric standards in the Basin Plan.

The Department continues to believe that the most significant critical factor limiting anadromous salmon and steelhead population abundance in the San Joaquin River Basin is the presence of high water temperatures during critical life-stages in the east-side tributaries (the Stanislaus, Tuolumne, and Merced Rivers) and the main-stem of the San Joaquin River. Increased water temperatures result largely from insufficient in-stream flow releases

from the lower rim dams, which the Department believes is directly responsible for most chronic stressors affecting anadromous species of the San Joaquin River Basin.

The Department continues to contend that the EPA Region 10 criteria are consistent with the requirements of 18 CFR § 5.9(b)(6) and are appropriate for the San Joaquin River Basin. The Department accepts these criteria because the EPA **completed a very thorough literature review** for water temperatures to protect cold water fish species (trout and salmon), referencing 41 sources that included five issue papers. The issue papers, in turn, referenced approximately 700 citations. As a result, EPA's recommendations are grounded in a broad spectrum of the scientific literature across North America, including California, and parts of Europe and New Zealand for developing chronic protective temperature criteria for anadromous fish populations across multiple generations. This chronic exposure approach is consistent with the emphasis by the Department on reproduction and recruitment success of an entire **population** across each generation. Taking a chronic exposure approach recognizes the evolutionary importance of multi-year class life history strategies of salmon and steelhead. In contrast, standards based on only acute to sub-acute exposure to high temperatures emphasize "tolerance or acclimation" temperatures, which is the survival of **individuals** over a shorter time period.

In addition, with regard to the temperature threshold metric, EPA (2003) stated:

> "This metric is recommended because it describes the maximum temperatures in a stream, but is not overly influenced by the maximum temperature of a single day. Thus, it reflects an average of maximum temperatures that fish are exposed to over a weeklong period. Since this metric is oriented to daily maximum temperatures, it can be used to protect against acute effects, such as lethality and migration blockage conditions. This metric can also be used to protect against sub-lethal or chronic effects (e.g., temperature effects on growth, disease, smoltification, and competition)..."

EPA (2003) also stated:

> "It is important to note that there are also studies that analyzed sub-lethal effects based on maximum or 7DADM temperature values which need not be translated for purposes of determining protective 7DADM temperatures. For example, there are field studies (emphasis added) that assess probability of occurrence or density of a specific species based on maximum temperatures [Issue Paper 1, Haas (2001), Welsh et al. (2001)]. These field studies (emphasis added) represent an independent line of evidence for defining upper optimal temperature thresholds, which complements laboratory studies."

These criteria (e.g., 7DADM) are chronic thresholds to protect anadromous fish populations across multiple generations. In addition, this is an average, meaning a range of values, not

constant values, were used to calculate a criteria value. Elevated daily temperatures across seven days indicate the fish are not being briefly exposed across time. Daily water temperature range is very narrow at higher temperature values (as opposed to a wide range of values) in the San Joaquin River and tributaries, thus the fish are not briefly exposed to elevated temperatures. Also, based upon empirical data, San Joaquin River Basin fish do not have the health sustaining refugia of a brief exposure to optimal cool temperatures during a 24-hour period in the San Joaquin Valley Basin river systems.

To further illustrate how the EPA Region 10 criteria apply to the San Joaquin River basin, we evaluated climatic ambient air temperatures across the historic range for Chinook salmon and steelhead in the lower continental U.S. (Figure 1.) Evaluating a comparison between the coastal region of Washington or Oregon and the southern San Joaquin Valley is inappropriate. As such, we evaluated the entire historic anadromous fish range, because these are the areas where these stocks of fish co-evolved. We compared average daily, mean minimum and mean maximum daily air temperatures for the month of September from 2007 to 2010 (Tables 1, 2 and 3). September was chosen because this is one of the hottest months of the year and this is the time period fall-run Chinook salmon major migration begins into the Delta San Joaquin Valley Corridor. Climatic conditions varied across locations in Idaho, Washington, Oregon, Nevada, and California. However, there were similarities across these states. Three California locations, South Lake Tahoe, Alturas, and Eureka had the coolest average daily temperature and were not significantly different (ANOVA, $P < 0.05$) (Table 1). The second-coolest locations based on average daily temperatures were McArthur, California; Elko, Nevada; Santa Rosa, California; Winnemucca, Nevada; Spokane, Washington; and Seattle, Washington ($P < 0.05$; Table 1). This trend was similar for mean minimum and mean maximum air temperatures (Tables 2 and 3). The primary reason for these similarities is due to oceanic influence along the coastal locations and mountain elevations within the inland locations. Merced and Stockton, California did have the warmest air temperatures for the locations evaluated; however, anadromous fish did not spawn in these areas. Rather, they historically migrated further upstream to sites in higher, cooler elevations, which today either receive less cooling water due to diversion, or are blocked by dams. In summary, no evidence exists to demonstrate San Joaquin River Basin salmon have higher temperature resistance or adaptation, and the environmental conditions for fall-run salmon are consistent across the fall-run range in the lower continental U.S. Thus, EPA Region 10 criteria are valid for and should be applied to the San Joaquin River Basin.

We support the Board's efforts to address other high priority issues as listed and understand your limitations of funding and staff resources. The Department has similar limitations, but remains interested in assisting Board staff to address these issues where applicable and practical. The Board's efforts with CV-SALTS (per Priority Issue 1) are especially commendable. Regarding priority Issue 3: "Regulatory Actions in Agricultural Dominated Water Bodies and Agricultural Conveyance Facilities", the Department recognizes that these water bodies can have unique issues. We caution however, that the Department does not agree in general with the contention of some of the stakeholders that functionality should take precedence over other beneficial uses. It is possible in limited and unique situations

that this could be the case, but each must be well documented and justified. Within the discussion of priority Issue 4, the topics of "long water body reaches" and the perceived conflict of a water body with both COLD and WARM beneficial designations is raised. The Department urges caution in splitting water bodies, because the ecosystem services and functions of a water body are inter-related. The Board may determine in the future that it is more practical to address beneficial uses for a smaller unit of the system, but that decision should be made with care and full knowledge of disadvantages a change could have. For instance, many of our native fish will move through a system as the seasons change. This behavior does lead to specific reaches that need to be maintained as COLD during part of the year and WARM during other times.

If you have any questions regarding these comments, please contact Dr. Andrew Gordus, Staff Environmental Scientist, of my staff at (559) 243-4014, extension 239.

Sincerely,

Jeffrey R. Single, Ph. D.
Regional Manager

Attachments

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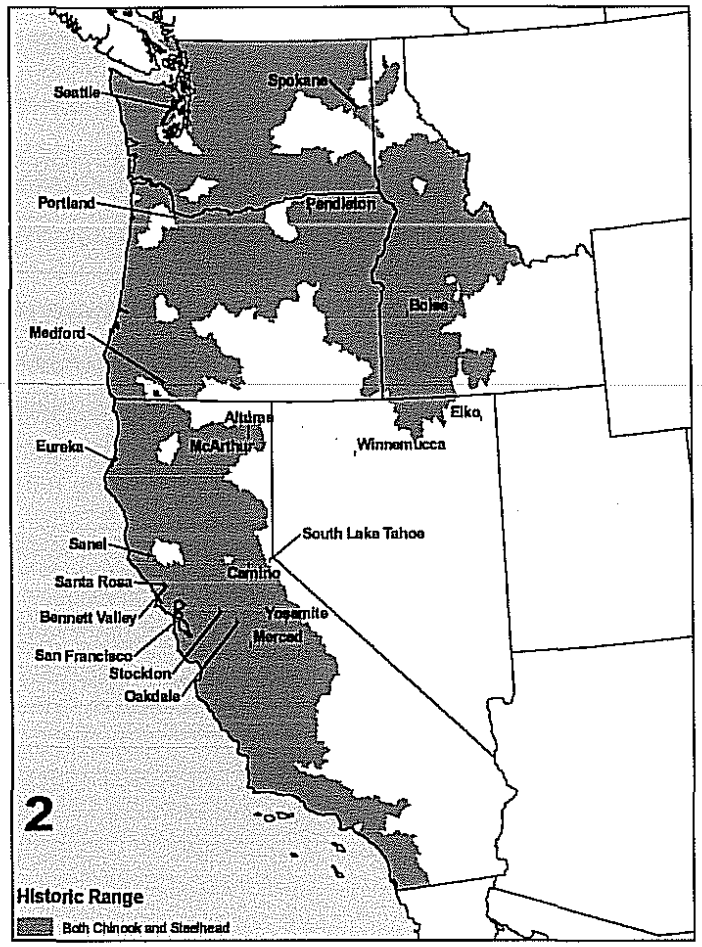


Figure 1. Historic range for Chinook salmon and steelhead in the Pacific north west (Source: www.ecotrust.org).

Table 1. Comparison of daily air temperatures across the Pacific northwest using analysis of variance.

AVERAGE DAILY AIR TEMPERATURES (C) SEPTEMBER 2007 TO 10		
Bars = No Significance $p < 0.05$		
S. LAKE TAHOE	CA	55.5
ALTURAS	CA	57.2
EUREKA	CA	57.5
McARTHUR	CA	59.9
ELKO	NV	61.1
SANTA ROSA	CA	61.1
WINNEMUCCA	NV	61.2
SPOKANE	WA	61.3
SEATTLE	WA	61.3
BENNETT VALLEY**	CA	62.1
PENDLETON	OR	63.1
PORTLAND	OR	64.8
SANEL VALLEY*	CA	64.9
SAN FRANCISCO	CA	66.3
BOISE	ID	67.5
MEDFORD	OR	67.8
YOSEMITE VALLEY	CA	68.3
CAMINO (Placerville)	CA	69.8
OAKDALE	CA	69.6
STOCKTON	CA	73.1
MERCED	CA	73.1

*Mendocino and Lake Counties

**Sonoma County

Table 2. Comparison of minimum air temperatures across the Pacific northwest using analysis of variance.

MEAN MINIMUM AIR TEMPERATURES (C) SEPTEMBER 2007 TO 10		
Bars = No Significance $p < 0.05$		
S. LAKE TAHOE	CA	34.9
ALTURAS	CA	35.0
WINNEMUCCA	NV	38.8
McARTHUR	CA	39.4
ELKO	NV	40.1
SANTA ROSA	CA	45.6
SANEL VALLEY*	CA	46.6
BENNETT VALLEY**	CA	47.1
PENDLETON	OR	48.2
SPOKANE	WA	48.4
EUREKA	CA	50.3
MEDFORD	OR	51.0
YOSEMITE VALLEY	CA	52.9
SEATTLE	WA	53.1
BOISE	ID	53.2
PORTLAND	OR	54.0
OAKDALE	CA	54.5
MERCED	CA	56.0
STOCKTON	CA	56.6
SAN FRANCISCO	CA	57.0
CAMINO (Placerville)	CA	58.0

*Mendocino and Lake Counties

**Sonoma County

Table 3. Comparison of maximum air temperatures across the Pacific northwest using analysis of variance.

MEAN MAXIMUM AIR TEMPERATURES (C) SEPTEMBER 2007 TO 10		
Bars = No Significance $p < 0.05$		
EUREKA	CA	64.1
SEATTLE	WA	69.0
SPOKANE	WA	73.6
SAN FRANCISCO	CA	75.0
PORTLAND	OR	75.1
S. LAKE TAHOE	CA	75.6
PENDLETON	OR	77.5
SANTA ROSA	CA	80.1
ALTURAS	CA	80.4
BOISE	ID	81.3
ELKO	NV	81.5
BENNETT VALLEY**	CA	82.1
McARTHUR	CA	82.7
WINNEMUCCA	NV	83.0
CAMINO (Placerville)	CA	84.0
MEDFORD	OR	84.1
OAKDALE	CA	86.3
YOSEMITE VALLEY	CA	87.0
SANEL VALLEY*	CA	87.2
STOCKTON	CA	89.2
MERCED	CA	89.7

*Mendocino and Lake Counties

**Sonoma County

1370 Trancas PMB-614
Napa, Ca. 94559
707-255-7434 Fax. 259-1097
cmalan@myoneearth.org
www.edennapa.org
www.livingriverscouncil.org

August 16, 2011

The Living Rivers Council (LRC) was established to protect, restore, defend and preserve watersheds in natural harmony with the people and wildlife that depend on healthy water for economic vitality, recreational enjoyment and ecological sustainability. We will pursue these goals through education, research, consensus building, and advocacy.

Central Valley Regional Water Quality Control Board
CVRWQCB
11020 Sun Center Dr. #200
Rancho Cordova, Ca.
95670-6114
916.464.3291
Betty Yee-Triennial Report
Holly Glover-Nutrient TMDL
Genivieve Sparks-alternate
Janis Cooke-Mercury TMDL

Lake County Special District
Mark Dillinger
230 N. Main Street
Lakeport, Ca. 95453-4816

Lake County Department of Water Resources
Thomas R. Smythe
255 N Forbes Street
Lakeport, Ca. 95453

Lake County Public Works
Gary Hanson
255 N Forbes Street
Lakeport, Ca. 95453

Lake County Environmental Health
Raymond Ruminski
255 N Forbes Street

Lakeport, Ca. 95453

Clear Lake Advisory Committee
Betsy Cawn

CLEAN
Clean Lake Environmental Network
Chuck and Holly Lamb
www.Cleanlake.org

Lake County Board of Supervisors
City Councils

Re: Sacramento and San Joaquin Total Maximum Daily Load, TMDL, Triennial Report Comments Clear Lake, Lake County California, Nutrient and Mercury TMDL & Central Valley Regional Water Quality Control Board
Public Hearing to be held on this matter October 12/13/14, 2011
11020 Sun Center Dr., Rancho Cordova, Ca. 95670-6114

Attention Betty Yee:

CLEAR LAKE WATERSHED

Clear Lake is located 80 miles north of San Francisco and is the oldest lake in California. Clear Lake is part of the Sacramento and San Joaquin River Basins. The Clear Lake watershed basin has been shaped by faulting, tilting, volcanism and erosion over a period as long as 2 million years. It is considered a shallow lake ranging from 27 to 60 feet and is feed by volcanic springs. It lies at the base of the 4,200 foot Mt. Konocti, a volcanic cone. The Lake is 68 square miles with 100 miles of shoreline including the Upper, Lower and Oaks Arms. Temperatures range from 61-40 degrees in the winter and 76 in the summer. The only outlet to this large lake is Cache Creek which is located in the Lower Arm of the Lake. A dam is located 5 miles below the Lake. The Clear Lake watershed is 441 square miles. The beneficial uses of this unique Lake are: municipal, agriculture, recreation, warm freshwater, warm spawning , wildlife and cold freshwater habitats. The two largest streams are Scotts Creek and Middle Creek , which join in the Middle Creek marsh area before draining into the Upper Arm through Rodman Slough. These two creeks drain 30% of the watershed. Vegetation ranges from grasslands , chaparral-type plants in the lowlands to coniferous forest to the upper elevations. The confluence of Cache Creek is the Sacramento River, hence the Delta, hence the San Francisco Bay estuary.

FOOD WEB

A total of 260 aquatic species have been found in Clear Lake. Most of these are 101 algae species and 94 invertebrates, macrophytes (aquatic plants near the water surface that

provide habitat/food for fish plus and if in decline show water quality problems) (23 species), microheterotrophs (8 species) and 29 species of fish (13 native and 16 introduced). The major amphibious/terrestrial links to these aquatic species are frogs, mink, otter, birds and humans. (Thomas H. Suchanek)

Clear Lake is considered 'a naturally productive lake' due to its biomass abundance consisting of diatoms, green algae, water plants and macrophytes which where considered to be the first abundant life according to core samples. Macrophytes were dominant until 1920s when mining released sediments to the Lake changing the clarity of the Lake thus increasing the turbidity. Clear Lake supports abundant aquatic and terrestrial biological resources.

CLEAR LAKE HITCH

Clear Lake Hitch, is an ancient fish endemic to Clear Lake and it lives in deep water but spawns in the tributaries of Clear Lake. The Chi-Council for the Clear Lake Hitch, a local group that tracks the status of Clear Lake Chi, document that Hitch is in 'precipitous decline'. This decline is in keeping with water quality decline. Clear Lake Splittail became extinct in 1970 along with Pacific Lamprey, Thicktail Chub and Hardhead in 2000. While little is known about their disappearance, fish need clean water, healthy habitats with adequate flows throughout their life cycle. Human impacts to Clear Lake fish habitats are certain to be causing fish declines.

Limnologist recommend that the native fish assemblage be restored to help correct the imbalance of algae blooms and improve the water quality of Clear Lake.

In 2009 during the three year drought in California Clear Lake suffered a devastating infestation of cyanbacteria/blue-green algae with mats forming around the entire Lake. These mats extended hundreds of feet from the shore line. The Lower Arms of the Lake were particularly impacted completely eliminating beneficial uses. The blue-green algae produced toxins which caused public health alarms to go off.

Additionally, there have been numerous fish kills as oxygen was sucked out of the water. People reported to LRC seeing fish near the shorelines jumping out of the water.

Cyanobacteria AKA blue-green algae

Cyanobacteria are true bacteria but differ from other bacteria by having photosynthetic ability. Blue-green algae can occur as single cells, strands of cells called trichomes, or accumulated cells called colonies. A 'bloom' or increase in cells to form colonies causes reduced water quality and can produce toxins.

Life cycle of cyanobacteria: they fix gaseous nitrogen and are efficient at storing phosphorous. Buoyancy of this species varies due to the changing size of their internal pockets of gas. They will migrate to calm water in response to nutrient or light gradients. They produce spores (akinetes) which will lie dormant for years and then when conditions are ripe they will seed a water body. Optimal conditions for this bacteria are: high temperatures, long sunny days, high levels of phosphorus and nitrogen and calm winds which allow the cells to migrate to the surface. Reproduction takes place through trichome fragmentation, the splitting of the chain of cells, and is promoted by photosynthesis. They can produce an oily looking film or blue-green scums many inches thick.(Resource #10)

CLEAR LAKE NUTRIENT TMDL

Clear Lake is on the 303(d) of the Clean Water Act since 1998 and 2002 due to impairments of water quality from excessive nutrients causing 'intense algae growth' that severely impacts the surrounding economy and stops all beneficial uses (2009, 2011) of the Lake during the algae blooms of cyanbacteria also known as blue-green algae. Cyanobacteria algae blooms are destructive to the lake's natural ecology and they destroy beneficial uses of the lake.

The purpose of developing the Nutrient TMDL for Clear Lake is to reduce the frequency and intensity of the algae blooms that are a result of nutrient cycling. (TR 4.2.1.3)

<u>The primary goal of the Nutrient Total Maximum Daily Load, TMDL,is to reduce external phosphorous from the watershed in order to meet the Nutrient TMDL of chlorophyll-a which shall not exceed 73ug/l.</u>

In reports from the 19th and early 20th centuries, scum forming algae are hardly mentioned, but vegetation growth from the bottom of the lake was frequently observed. Bottom dwelling plants need relatively clear water to thrive. Increased turbidity and blue-green-algae scums were conspicuous by the late 1930's and bottom dwelling algae and waterweeds have been absent in most recent years since that time. The cause of this increased turbidity comes from sediment entering the lake from human activities in the watershed such as: mining, forestry, vineyards and other agricultural activities, construction, roads and grazing. Mobilized sediment carries pollution such as nutrients (phosphorus) and mercury directly into the Lake.

The delicate natural ecology of the lake consisting of an equilibrium of water plants, algae and diatoms, has been severely altered by humans causing a shift in the lake water quality. The blue-green algae or cyanobacteria becomes

opportunistic given warm days and high nutrients and then it explodes and infests the lake. Some infestations are now toxic.

Nutrients (phosphorus) sources are mostly from fertilizers used by irrigated agriculture, residents and massive sewer spills over the years totaling 7,390,306 gallons or 140 spill events (attachment herein 1 Big Valley Rancheria map 2003-2010). Again, cyanobacteria have seeds that lie in the sediment for years.

Lakebed core samples from the last 15,000 years historically shows that Clear Lake has high total phosphorus coming from lakebed sediments. However, external phosphorus has been determined to be excessive coming from the tributaries draining the watershed. The external phosphorus loading of the Lake comes from water running overland either by sheet flow or stream flows where phosphorus mobilizes with sediment and overloads the Lake. It then severely impairs water quality and ultimately, when the conditions are ripe can explode into a cyanobacteria infestations also known as an 'algae bloom'.

LRC prefers to call 'algae bloom' a 'cyanobacteria infestation'. While cyanobacteria is frequently described as 'ancient bacteria naturally occurring in the environment for millions of years' it turns opportunistic given the right conditions in the lake and can over populate quickly and dominate the fragile Lake ecosystem due to: 1)unnatural loading of nutrients and metals to the Lake causing an increase in food for the cyanobacteria that otherwise would be in equilibrium with other algae 2) lack of fresh water flows caused by diversion to the Central Valley for farm lands 3) failure of precipitation or drought 4) climate change/warming of the lake 4) increase in pollution like sediment loading to the Lake during storm events 5) severe damage to native fish assemblage where the native fish once fed on the 'eutrophic' elements of the Lake. These variables interact to cause significant cumulative impacts to Clear Lake water quality that results in total loss of beneficial uses of the Lake with devastating economic impacts.

Scum producing cyanobacteria engulfs the Lake with algae mats that can be as thick as three feet at the shoreline and extend 100s of feet into the lake (2009, 2010 and 2011). LRC has witnessed this personally by its members. The smell will drive you away from the Lake as it is a dead stench like rotting eggs.

Some cyanobacteria such as Microcystis, Aphanizomenon, Anabaena spiroides, Lyngbya cincinnati produce cyanotoxins such as: dedromoaphlysiatoxin (neurotoxins-paralytic) and lyngbyatoxin a dermotoxin causing 'swimmer's itch'. (resource #3) In 2009 Clear Lake was plagued with Lyngbya and public officials were forced to warn people not to enter the water

that rashes might occur and pets could be at risk of death if they drank the water. Cyanobacteria can become toxic at anytime. The dominant Anabaena species growing in Clear Lake in 2010 was identified as Anabaena spiroides. This scum-forming filamentous cyanobactrium species can produce at least two types of toxins: anatozin-a and microcystins, a hepatoxin capable of causing liver failure and acting as tumor-promoters. (resource #4 see pictures of these bacteria).

In 2009-2011, Clear Lake had summers plagued with scum producing algae mats. While 2009 was a drought year, **2011 has not been a drought year**. In fact 2011 has had high amounts of rainfall into June and the Lake has been plagued with scums regardless of high rainfall years. This suggests that the Nutrient TMDL is not effective and or the responsible parties are not compliant with the Nutrient TMDL limit. The 2004 Technical Report bases the Clear Lake Nutrient TMDL on the argument that drought conditions exacerbate the natural chemical balance of the lake and can cause an infestation of toxin producing cyanobacteria/blue-green algae. Further the 2004 Technical Report makes the claim that normal to high rainfall shows that the Lake water quality improves.

Tetra Tech did extensive modeling for the 2004 Technical Report to determine the amount of chlorophyll-a the Lake can tolerate. However, this modeling could be inaccurate and the actual tipping point for which algae blooms occur is much below 73ug/l. Recent data results by UC Santa Cruz for the SWAMP 2011 Monitoring of Clear Lake shows that on June 16, 2011 the chlorophyll-a sample was highest at 27.89 ug/L and four days later the Lake exploded in an cyanobacteria infestation/bloom. (see resource #4)

LRC requests that the CVRWQCB re-evaluate the efficacy of the current Nutrient TMDL limit of 73 ug/L adopted by the SWRCB based on this new research that the Water Board funded.

Additionally, the interactions of metals with cyanobacteria could exacerbate onset of blooms. Little is known about this variable but all the literature done over the years by top experts on the recurrent algae blooms suggests that metals (phosphorous, mercury, iron) influence algae growth. (see all resources listed)

There is a tipping point with algae blooms such that so much nutrient/phosphorous (other metals) is entering the lake from external sources that dilution from rain events is not enough any longer to achieve the current Nutrient TMDL limit. Additonally, it is not clear that responsible parties who are suppose to reduce sediment to the lake are compliant.

Clear Lake has had cyanobacteria/blue-green scum mats depriving the people of public trust values even during high rainfall years.

2007	2008	2009	2010	2011
Drought Scum Toxins	drought scums toxins	drought scums toxins	Normal rainfall Scums toxins	Above normal rainfall Scums/toxins

CYANOBACTERIA GLOBAL PROBLEM

More importantly, the Basin Plan should reflect that multiple contaminants to the State water bodies are collectively causing toxic stews that create toxic cyanobacteria infestations throughout fresh and salt water resources around the globe. Scientists are studying these mysterious cyanobacteria mats. The Basin Plan should discuss the significant cumulative impacts to watersheds where human impacts severely change the water quality such that multiple impacts are exacerbating fresh water resources in ways we have never seen before i.e., Japan's fishing industry is all put shut down due to invasions of jelly fish that feed off of nutrient loading to the oceans around this island nation. Floating algae mats miles long have been spotted off the Pacific coast and estuaries around the globe. National Marine Fisheries have found dead dolphins where their livers have been poisoned by cyanobacteria.

MONITORING

Monitoring data from 2007-2011 that tracks chlorophyll-a throughout the drought and high rainfall years is NOT available to the public in analytic form so that the public can see that TMDL limits are NOT being met. Responsible parties lack the will to get aggressive in cleaning up the water quality and public officials lay claim that they do not know why the lake has blooms or that the lake naturally has algae blooms.

The Clear Lake Nutrient 2004 Technical Report, TR, which the TMDL is based on (and is on line for the public) is severely out of date with the actual conditions going on with the Lake for example:

1. Irrigated agriculture land uses such as vineyards has increased significantly since 2004 which produces a large amounts of the erosion runoff to the lake. Fertilizers are a source pollution to the lake and contribute to the excessive phosphorous that is causing the blue-green

algae blooms. The Basin Plan should be updated regarding these important pollution source.

2. The State Department of Water Resources, DWR, has water quality data available on their website in their water quality library. DWR does not sample consistently during the warmest months when water quality plummets. (2011 sampling dates were more frequent during the summer but this data does not have easy access to the public). Chlorophyll-a is not posted by the DWR library but instead is sent to the CVRWQCB, Holly Grover. LRC had to personally request the data. It should be readily available to the public, since public funds paid for the study.

3. Lake County Water Resources Department with funds from the Water Board, is now working with a UC Santa Cruz, PhD, Cecile Mioni, who is documenting 2011 water quality data including Chlorophyll-a but this data has not gone public nor has it been anlyized for the public. Holly Grover, CVRWQCB, states that she is using this data to update the 2012-14 TMDL. This research project shows that chlorophyll-a quickly climbs to 27.89ug/l in the Clear Lake Lower Arms on June 16th, 2011. Additionally phosphorous and temperatures were high and secchi depths dropped dramatically. Four days after these data were collected, Clear Lake suffered a devastating cyanobacteria bloom and it continues to date (August 24, 2011) LRC was notified by Lake County Department of Water Resources, that July 2011 data collection is more shocking than June's data. July 2011 data of chlorophyll-a more than tripled. (recent data from CVRWQCB, Holly Grover) These data have been collected during severe scum infestations of cyanobacteria and this shows the lake is not compliant with the Nutrient TMDL.(see chart inserted herein page 10)

	1/25/2011	6/12/2011	7/19/2011
	mg/m3 (ppb)		
CL-01 0.5M	8.07	3.07	60.6
CL-01 0.5M dup	6.33	4.78	
CL-01 3M	6.34	12.3	32.3
CL-01 3M dup			
CL-01 6M	5.13	9.9	21.6
CL-01 6M dup			
CL-03 0.5M	75.6	13.6	136

CL-03 3M	62.4	13.5	78.5
CL-03 6M	35.6	14	67
CL-03 9M	56.3	12.1	55.3
CL-04 0.5M	37.4	16.7	
CL-04 3M	37.3	14.6	
CL-04 6M	60.4	15.7	
CL-04 9M	54.2	18	
CL-04 12M	93.8	17.1	
Secchi Depth CL-01	4.6 m		
Secchi Depth CL-03	3.0 m		
Secchi Depth CL-04	3.9 m		

4. Page 26 of the TR states that Lake County Monitoring lacks monitoring data (1999) therefore eluding to the fact that the 2006 Nutrient TMDL modeling could have been ineffective and not valid for today's conditions.

5. Stream incision due to increased rate of runoff from wildland conversions to vineyards is a major cause of channel erosion but the Nutrient and the Mercury TMDL fails to discuss this major landuse source of nutrient and mercury loading to the Lake.

MERCURY (Hg)

Mercury is a heavy metal which is detrimental to life and it bio-accumulates in the environment. One thermometer of mercury entering the natural aquatic environment can pollute 9,000 cans of tuna.

Clear Lake was listed on the 303 (d) list of the Clean Water Act in 1988 due to high levels of mercury (Hg) in fish and the lakebed sediments. The Mercury TMDL for Clear Lake was approved by the State Water Resources Control Board in 2010.

The primary goal of the Mercury TMDL is to reduce mercury in 'trophic levels 3 & 4 to .09 & .19 mg/kg Hg. This is a high priority of this Basin Plan Ammendment.

However, the current TMDL for mercury does not clean up mercury contamination to safe levels for native populations who historically ate 1 ½-3 pounds of fish daily. There are tribes identified in the Mercury TMDL: Big Valley Rancheria, Elem Pomo, Habematolel Pomo Upperlake, Lower Lake Rancheria

Koi Nation, Middletown Rancheria, Robinson Rancheria, Scotts Valley Band of Pomo Indians.

The Mercury TMDL lacks environmental justice for Native Americans who depend on the native fish for their food.

The Sulphur Banks Mercury Mine/Herman Pit (1840-1960) is located in the Oaks Arm of the Lake. This site was abandoned by the Bradly Mining Company who did open pit mining. Expert research (resource #7) states that it is the main pollution source of mercury attaching to sediment during storm events and entering the Lake. This site contributes to significant pollution to Clear Lake, hence the Sacramento River, hence the San Francisco Bay Delta hence the Pacific Ocean. Clear Lake is considered one of the most polluted lakes for mercury in the world.

When the Herman Pit overflows into the natural environment of the Lake microbes convert mercury to methyl Hg which is more toxic.

According to the 1994 research document, The Causes and Control of Algal Blooms in Clear Lake, (page III-8) the Lake is now a USEPA SuperFund cleanup site (Chamberlin et.al., 1990; Suchanek et al., 1993). Larger individuals of largemouth bass and other sport fish often have body burdens in excess of .5 ppm mercury, which has lead to a health advisory on eating fish from Clear Lake. The problem stems from the large quantity of inorganic mercury stored in the sediments, mostly in the Oaks Arm. There may also be an interaction between excessive algal growth and the mercury problem. Some data indicates that heavy loads of organic matter to the sediment, as it might result from the collapse of blue-green blooms, may fuel microbial activities (microbes methylate mercury).

The Mercury TMDL relies on the EPA's superfund designation to clean up Hg as a source pollutant.

Resource (7) T. H. Suchanek, ' These data provide preliminary evidence of how a relatively extensive aquatic ecosystem has been contaminated with methyl Hg from a point source (Sulphur Banks mercury mine inorganic Hg) over several decades.

The research literature shows that cyanobacteria/blue-green algae thrive in the presence of metals such as iron, phosphorous and mercury .

CLEAR LAKE WATER DIVERSIONS

The State Water Resource Control Board, SWRCB, has on-going jurisdiction over water diversions in the State. Clear Lake supplies the Central Valley with water for farmers. During drought conditions Clear Lake's water quality plummets causing

a total loss of public trust values such as fishing, swimming and recreation. The SWRCB should assert their jurisdiction and protect the natural environment of Clear Lake by reducing the water allocations to farmers during droughts. This should be part of the Basin Plan update. Clear Lake has numerous water diversions that send water to farmers in the Central Valley. The SWRCB has documented 1,777 illegal water diversions in Napa, Marin, Sonoma, Mendocino and Humboldt Counties.

How many illegal water diversions are contributing to the decline of fish and water quality in the Clear Lake Basin?

CLIMATE CHANGE

The Basin Plan should take into consideration the impacts to Clear Lake associated with climate change. The lake is shallow and warm naturally. Since 1920 human impacts have caused the Lake to increase in temperature and become contaminated by sediment loads. Diversions lower the Lake during the warm months. As temperatures increase and drought becomes more frequent, Clear Lake is vulnerable to increases in scum producing algae infestations.

TMDL LIMITS FOR NUTRIENTS ARE NOT ADEQUATE

The 2004 Nutrient Technical Report repeatedly relies on data that says that Clear Lake experiences out breaks of blue-green algae during drought conditions. This is incorrect because in 2010 and 2011 when precipitation/water year rainfall was above normal, Clear Lake had repeated outbreaks of cyanbacteria mats plaguing the entire Lake especially in the Arm's shoreline where temperature and turbidity increase and secchi depth dramatically decreases. The TMDL relies on this information which is incorrect given the on-going nutrient loading, increased development in the watershed, lack of enforcement and utter disregard for construction and road Best Management Practices (BMPs). Irrigated agriculture escapes the nutrient and mercury TMDLs by lack of BMPS and no regulations over increased rate of runoff due to deforestation of wildlands.

Modeling to establish the limits of pollution for nutrients loading to Clear Lake must be recalibrated because algae blooms have increased in frequency and intensity dramatically despite high rainfall in to June of 2011. The *73ug/l chlorophyll-a limits were determined by modeling to be the target for reducing nutrient loading, however this is more the tipping point than a 'target'. This limit should be reduced because the lake is experiencing increase blue-green infestations during high precipitation years, which indicates that the target is not low enough.*

Enforcement :

The responsible parties for preventing pollution to the Lake do not enforce the Clean Water Act such as:

- Developers do not always install BMPs or if they install them, they often are not installed properly
- After storm events, BMPs are not properly maintained
- Yearly, sewer leaks pollute the Lake due to inadequate and old leaking infrastructure, (see Map attachment) by Big Valley Rancheria EPA. Current bond measures and infrastructure plans are moving forward. However, the Lake County Special District must prevent further spills
- CVRWQCB should issue fines for continued sewer pollution events to the Lake
- Illegal water diversion must be stopped
- LRC made a formal complaint to the SWRCB regarding water diversions in 2009 that were exacerbating the cyanobacteria infestation.

MORITORIUM

<u>There should be a moratorium on any new construction in the basin until sewer infrastructure has been updated to carry the current capacity and projected growth. The nutrient loading to the Lake as a result of the failing sewer systems throughout the Lake County Special District is causing tremendous damage to the Lake's ecosystem and water quality.</u>

<u>Laws should be put in place locally to protect the Lake from development that will cause sewer leaks in the future.</u>

BASIN PLAN AMMENDMENT RECOMMENDATIONS FOR CLEAR LAKE:

1. Lake County Public Works, the Department of Water Resources and the State Department of Water Resources, DWR, and any other public resource agencies should post all monitoring data on the internet for easy public access to this important information. This should include:

2. Responsible agencies should post to the internet all sewer discharges to the Lake.

2. Revise the months that data collection of chlorophyll-a is being done. The Department of Water Resources, DWR, collects/or posts (makes public) data for months of December and June. This is not the height of the cyanobacteria/blue-green algae blooms. Chlorophyll-a data collection must be collected during the warmest months i.e., July, August and possibly September.

3. The Mercury TMDL relies on the EPA Plan aka Record of Decision for Operable Unit 1 by 7/31/2011 and Operable

Unit 2 by 3/31/2013. However, the Sulphur Banks Mercury Mine Herman Pit could spill into Clear Lake toxic water when at flood stage of the pit. Given climate change and possible intense storm events, the sooner the EPA's project plan is implemented the better.

4. Secchi or clarity of the Lake: Now you can hardly see your hand in front of your face when your able to swim. While the DWR, collects Secchi data the current TMDL does not utilize this data and interpret it for the TMDL.

5. Fish kills-shoreline residents document to the local resource agencies fish kills. Some have actually witnessed fish leaping out of the water near the shoreline or they wash up on the shoreline. There is little information about this available to the public.

6. Limnologist recommend restoration efforts should take place to restore the natural fish assemblage of the Lake which will help deplete the algae blooms. Every effort should be made to diminish the introduction of non-native fish.

7. Responsible agencies should be accountable to the public for their non responsiveness to the TMDL implementation plans, lack of enforcement and irresponsible actions that lead to pollution events to the Lake.

8. The responsible agencies must enforce the Clean Water Act and issue fines to developers that do not install and utilize BMPs properly.

9. Water Diversions-the 2004 Technical Report fails to adequately discuss the impacts of water diversions on the health of the lake. During drought conditions the SWRCB could reduce water diversions/allocations due to harm to native fish.

10. Public figures, politicians and some environmental groups, announce and proclaim that the Lake is 'naturally eutrophic' or 'naturally productive' and they dismiss cries for help this way. Time and time again, Lake County leadership falls flat when teachable moments present themselves to educate the public about cyanobacteria and the causes of poor water quality. We the public can not count on the 'authorities' to speak the truth about Clear Lake's devastating water quality problems to urge the stakeholders to roll up their sleeves and get busy reducing sediment at every opportunity.

11. The Basin Plan must discuss the environmental impacts to Clear Lake as a result of climate change.

12. The Nutrient TR states that 'biostimulatory substances' in Clear Lake shall not contain stimulate or promote aquatic growths in concentrations that cause aquatic growths that adversely affect beneficial uses. The 73ug/l limit for nutrients allowed to the Lake is too high. The Bain Plan should reduce this limit to improve water quality conditions.

13. In 1990 the EPA required NPDES Phase I permits to discharge polluted storm water to water bodies. Phase one applies to municipalities of 100,000 populations and Phase II applies to certain municipalities of 10,000 population. The Mercury TMDL states that the County has a MS4 Phase II NPDES Permit CAS000004-2003b. The Basin Plan should require the County to post their permit and show monitoring results for transparency for the public to show compliance with the Clean Water Act.

14. Mercury and other metal contamination to the Lake likely exacerbate blue-green algae growth. The Nutrient TMDL relies on the Mercury TMDL success and the restoration of the Sulphur Banks/Herman Pit superfund project!

15. Modeling for Clear Lake Nutrient TMDL has been ineffective and may be completely off target for improving water quality.

16. TMDLs require that the Water Boards (WB) consider all other impairments/limiting factors in the basin and find nexus where WBs can help improve water quality. Clear Lake is an important water body in rapid decline of the water quality and far from achieving or even moving towards the TMDL that was established in 2006. In fact, the Lake's water quality is getting precipitously worse. The WB should have an integrated approach to water quality improvement such as: 1) reduce water diversions both in the future and with current water rights 2) cancel any conditional waiver programs and step up the TMDL program to closer supervision by the WB.

SUMMARY:

Between drought conditions, increased land uses such as wildland conversion to vineyards, poor road conditions, lack of effective best management practices and numerous sewer leaks that discharge nutrients to the Lake and over allocations of water to down stream diverters combined with defunct and out of date nutrient TMDL modeling along with lack of current data all have put Clear Lake in jeopardy. Living River Council is concerned about the lack of improvement to the water quality of Clear Lake. During the summer and warm months Clear Lake's water quality plummeted causing fish kills and loss of public trust values such as fishing, swimming and

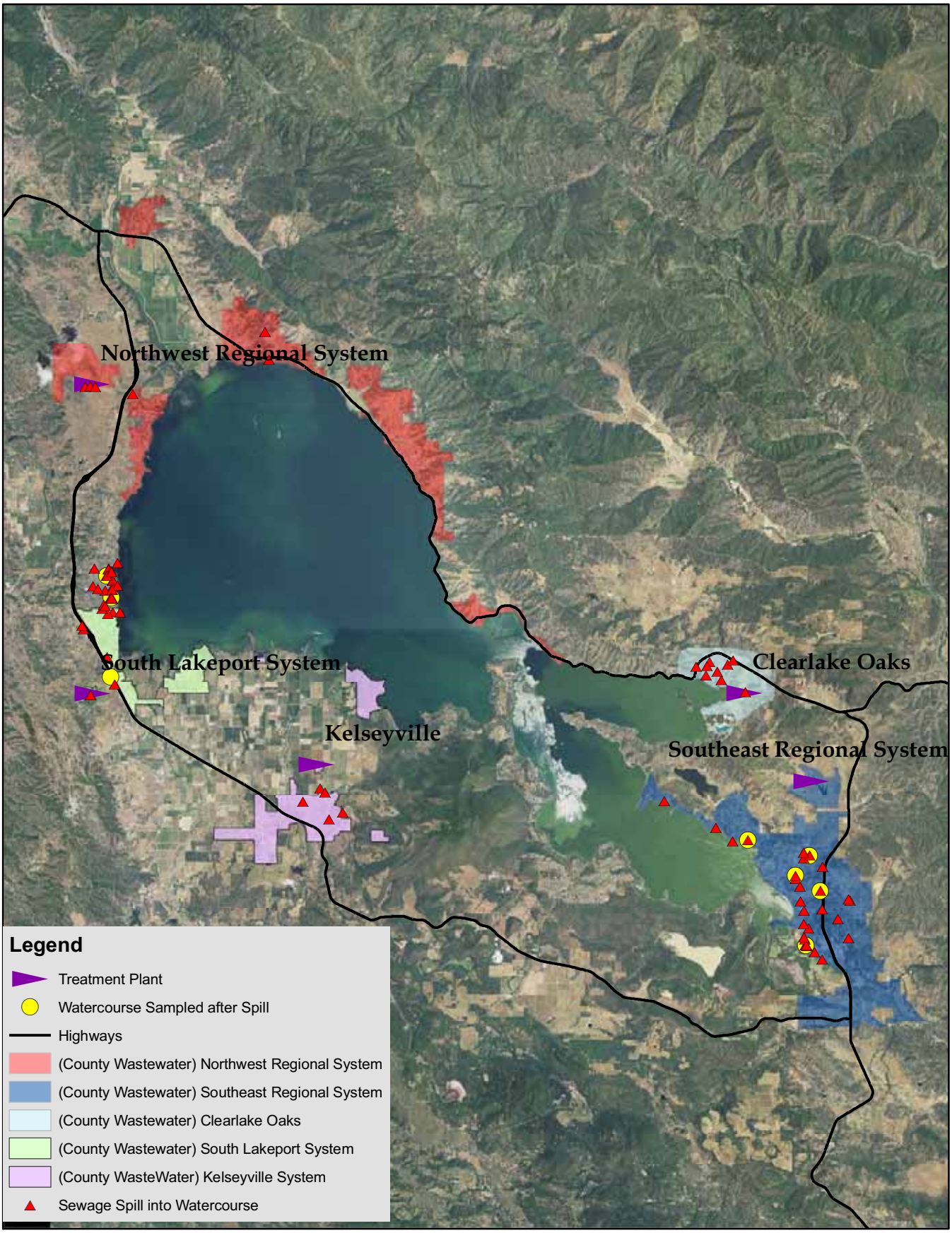
recreation. Mercury impacts to the Lake are dependent on the Superfund Record of decision now on hold due to 'technical difficulties'for restoration efforts. Heavy metals are contributing to significant cumulative impacts to water quality and are dangerously not fully understood by the Water Boards. The Triennial update for Clear Lake must reevaluate modeling that sets TMDL limits to improve future water quality for this important watershed to the Delta.

Chris Malan
Living Rivers Council
Manager

Resources:

1. Central Valley Regional Water Quality Control Board, 2004 Technical Report
2. CVRWQCB 2006 Staff Report
3. Algal Toxins Bioassessment-Clear Lake, July/August 2010
4. SWAMP 2011 monitoring in Clear Lake and San Francisco Bay/Delta, Cecile Mioni, PHD, UCSC, Institute of Marine Sciences
5. The Causes and Control of Algal Blooms in Clear Lake, Thomas H. Suchanek, SWRCB, LCFCWCD
6. Big Valley Rancheria, Sarah Ryan
7. Redistribution of Mercury from contaminated Lake Sediment of Clear Lake, Ca. Thomas Suchanek
8.Ecological Society of America-Mercury Cycling and Bioaccoumuation in a Mine-dominated Aquatic Ecosystem: Clear Lake California
9. National Toxicology Program: Blue-Green Algae, Evidence for Possible Carcinogenic Activity.
10. Aquatic Invasive Species: Blue-Green Algae

Sewer Spills in the Clear Lake Basin 2003-2010

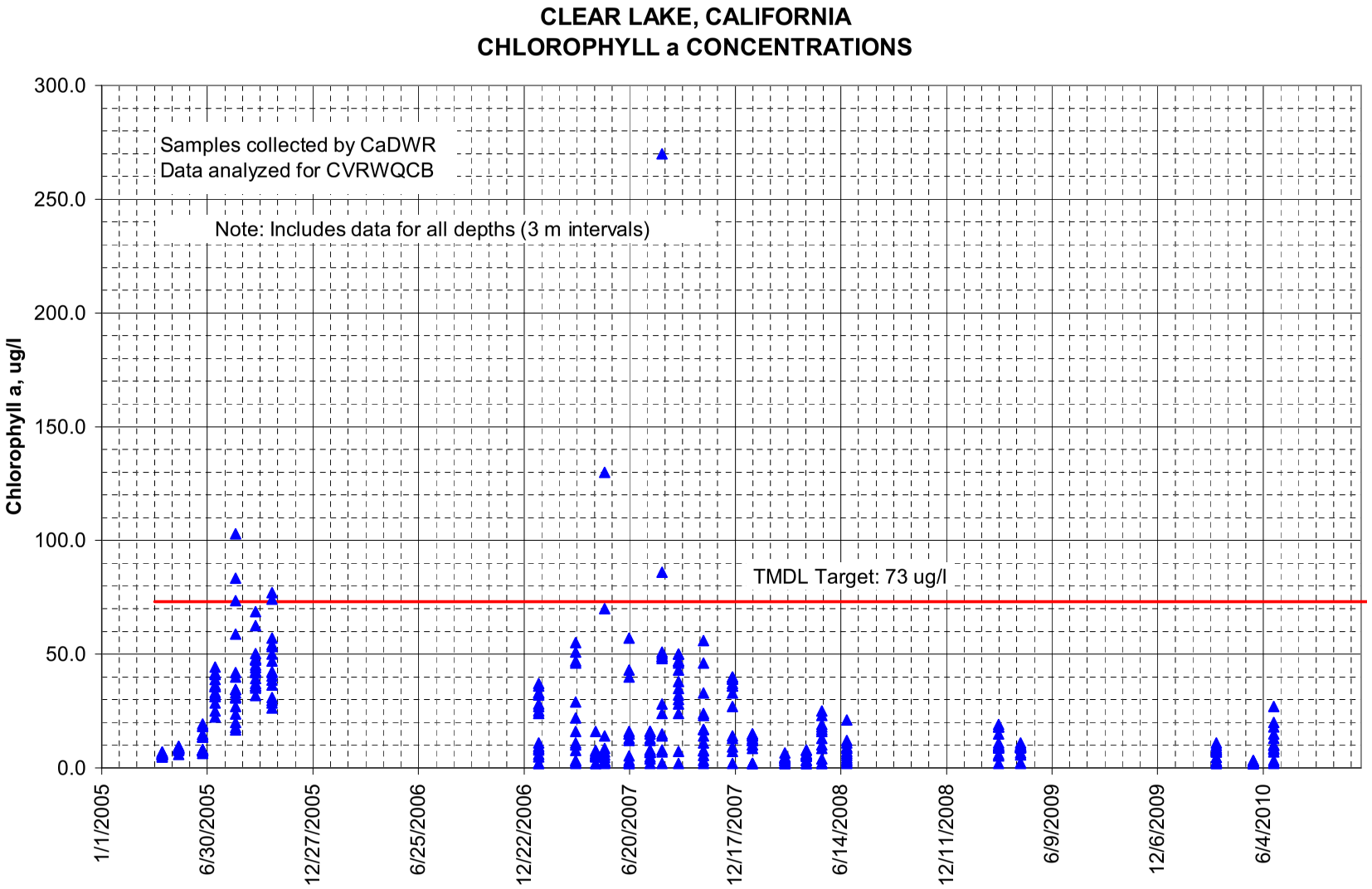


1 inch = 15,851 feet

Data From:
State of California Region 5 Central Valley Water Quality Control Board
Executive Officer's Reports, 2001 - 2010 and Lake County Environmental Health
Wastewater Spills & Monitoring 2003 - 2010

7,373,686 Gallons Spilled into Watercourse
7,390,306 Total Gallons Spilled
140 Spill Events
8 Sampled after Spill

BIG VALLEY RANCHERIA EPA Sept. 2010


CLEAR LAKE, CALIFORNIA
CHLOROPHYLL a CONCENTRATIONS
Samples collected by CaDWR
Data analyzed for CVRWQCB
Note: Includes data for all depths (3 m intervals)
TMDL Target: 73 ug/l
Chlorophyll a, ug/l
300.0
250.0
200.0
150.0
100.0
50.0
0.0
1/1/2005
6/30/2005
12/27/2005
6/25/2006
12/22/2006
6/20/2007
12/17/2007
6/14/2008
12/11/2008
6/9/2009
12/6/2009
6/4/2010

DRAFT REPORT

Algal toxins bioassessment – Clear Lake, July/August 2010

Prepared by Cécile Mioni & Raphael Kudela

The University of California, Santa Cruz
Institute of Marine Science
1156 High Street
Santa Cruz, CA 95064

April 2011

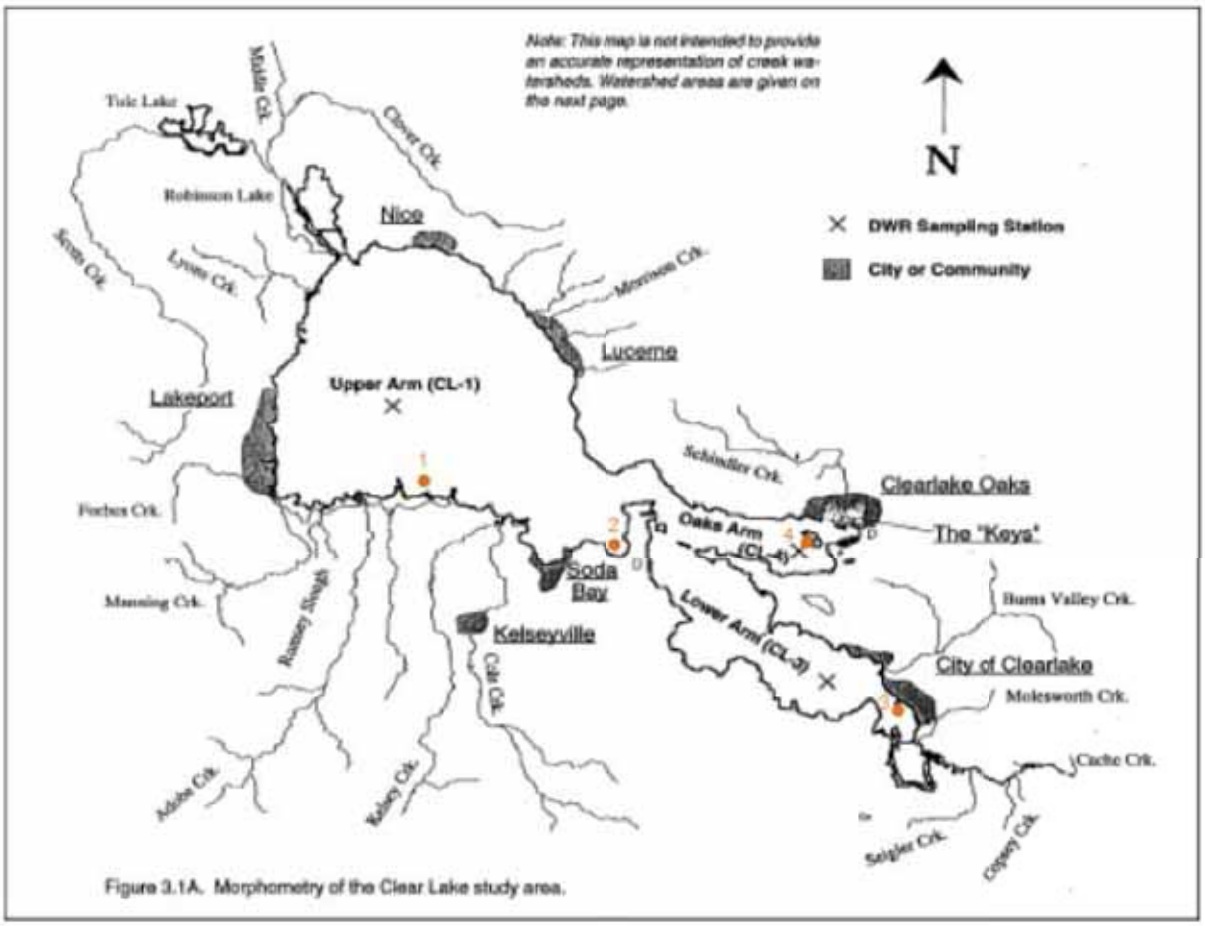


Figure 1: Study are map. CL-1, CL-2 and CL-3 discrete monitoring stations are historical DWR monitoring stations (Richerson 1994). They were also used for a toxicology study performed in 1990 (ODWSESP 1991). The stations 1, 2, 3, 4 are continuous monitoring stations (SPATT samples, HOBOS) and are located at coastal buoys (county owned). Discrete samples were also collected monthly at these stations

Algal toxins bioassessment – Clear Lake, July/August 2010

Cécile Mioni & Raphael Kudela, UCSC

The following draft report describes the results from a series of monthly investigations into the toxicity of cyanobacteria in Clear Lake, California. Individuals from the Lake County Water Resources Department and the University of California, Santa Cruz all redirected efforts to gather samples, carry out assays, and/or interpret results. The findings can be summarized as follows:

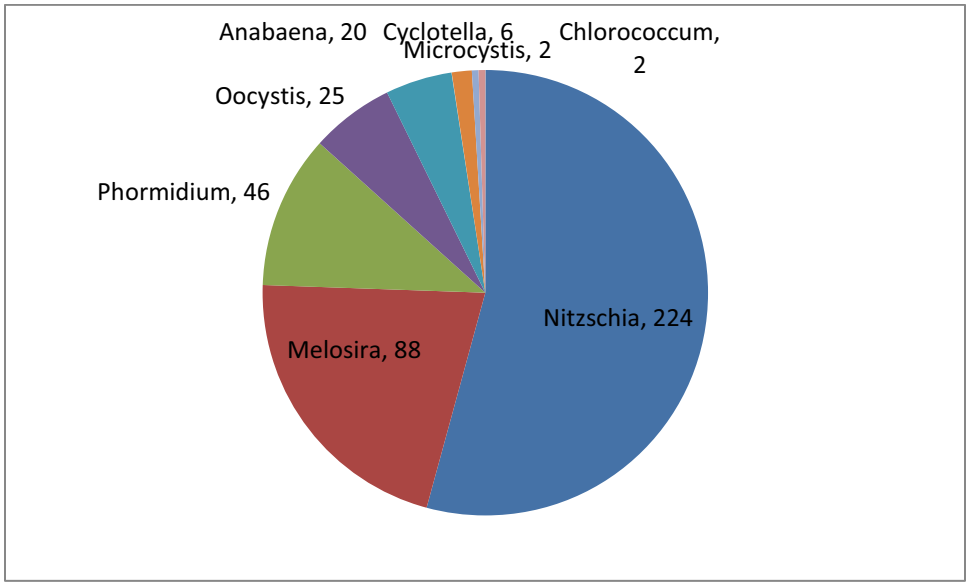


Figure 2: Algal composition a bloom sample collected in August 2010 at station 5B located in the northern Lower Arm. The bloom was dominated by: *Nitzschia* (diatoms), *Melosira* (diatoms), *Phormidium cincinnatum* (aka *Lyngbya cincinnati*, cyanobacteria), *Oocystis* (green alga), *Anabaena spiroides* (cyanobacteria) and *Microcystis aeruginosa* (cyanobacteria). Note: *Microcystis* is a floating species and does not settle to the bottom of a Utermohl chamber. Therefore the number of *Microcystis* enumerated in the sample is underestimated.

Presence of toxic cyanobacteria in Clear Lake

Thirty-one surface water samples were collected from Clear Lake for algal toxicology analysis at seven stations (Figure 1). One sample collected in August at the epicenter of the bloom (northern part of Lower Arm, station 5B) was sent to EcoAnalysts, Inc. for taxonomy analysis. Cyanotoxin concentrations (microcystins, anatoxin-a and saxitoxins) were analyzed using ELISA (microcystins, saxitoxins) and LC/MS (microcystins, anatoxin-a) analysis at the University of California, Santa Cruz. Some pictures of the bloom are included in the appendix section of this report.

Taxonomy results indicate that the algal bloom assemblage was composed of a mixed assemblage of diatoms, green algae and cyanobacteria. The cyanobacteria comprised a significant fraction of the algal assemblage and included several potentially harmful cyanobacteria such as: *Aphanizomenon* (June samples), *Microcystis aeruginosa* (mostly June and September), *Anabaena spiroides (throughout summer)*, and *Lyngbya cincinnati* (aka *Phormidium cincinnatum*, throughout summer). In the sample collected in August 2010 in the northern section of the Lower arm (station 5B, epicenter of the bloom) and analyzed by Ecoanalyst, Inc., *Lyngbya cincinnati* and *Anabaena spiroides* were the two dominant cyanobacteria species (Figure 2).

According to the literature, Clear Lake has been seriously impaired by seasonal blooms of scum-forming cyanobacteria (Richerson 1994). Over the entire 23 year period for which the DWR phytoplankton taxonomy data record summarized in the Richerson's report (1994), the three most common scum-forming cyanobacterial genus were *Anabaena*, *Aphanizomenon* and *Microcystis. Microcystis* blooms have been documented in both the Oaks Arm and the Lower Arm of Clear Lake in the mid 1970's with the largest blooms recorded by DWR occurring in the Lower Arm in 1991 (Richerson 1994). *Aphanizomenon* showed similar trends and was the most important scum former for most years up to 1985, when it suddenly became much less important (Richerson 1994). *Anabaena* was never responsible for blooms on the scale of *Microcystis* and *Aphanizomenon* in any arm but was a common component of the midsummer scums throughout the record, becoming much more important after 1980 before diminishing as the drought progressed (Richerson 1994). *Lyngbya* was not observed until 1984 (Richerson 1994) and the first large bloom event dominated by this mat-forming filamentous cyanobacterium was not observed until 2009 (Tom Smythe, *pers. com*.). Please note that the DWR taxonomy data records alternatively identified this cyanobacterium as *Phormidium,*

Lyngbya or *PlanktoLyngbya* so the historical records might be misleading with regard to the presence/abundance of this cyanobacterium.

Taxonomists from Ecoanalysts, Inc. identified the dominant mat-forming cyanobacterium from August 2010 mat sample as *Lyngbya Cincinnati* (synonym: *Phormidium cincinnatum*). Although some freshwater *Lyngbya* species can produce the cyanotoxins saxitoxin, dedromoaplysiatoxin and lyngbyatoxin-a (Onodera et al. 1997, Puscher and Humbert 2007), the literature contains no information with regard to the toxicity of this specific *Lyngbya* strain. Over the course of our study, we did not detect any saxitoxin or its analogues (potent neurotoxins responsible for the human poisoning syndrome called paralytic shellfish poisoning) in any of the Clear Lake surface water samples (see below). Lyngbyatoxin-a (a dermatoxin causing "swimmer itch") wasn't monitored as part of this study but LC/MS preliminary results indicate that a compound with similar chemical properties was present in some discrete surface samples. Our future toxicology studies will attempt to determine the toxicity of this filamentous cyanobacteria strain using LC/MS and a lyngbyatoxin-a standard acquired from SCRIPPS (Dr. Jensen). Indeed, although no swimmer itch appear to have been reported among swimmers in summer 2010, 8 cases of "swimmer's itch" were reported on June 19 of 2010 and may have been the result to exposure to dermacyanotoxins such as lyngbyatoxin-a (ODWSESP 1991). These cases were then diagnosed as schistosome dermatitis but mot cercaria were found in the swimming area or elsewhere in Clear Lake. On the day of the outbreak, no cyanobacteria were found in the swimming area water samples but cyanotoxins. However, cyanobacteria cell counts can underestimate the risk of cyanotoxin poisoning because cyanotoxins may persist in the water after a bloom has subsided.

The dominant *Anabaena* species growing in Clear Lake during summer 2010 was identified as *Anabaena spiroides*. It was the second most abundant cyanobacterium in the mat sample collected in August 2010. Compiled literature evidences suggest that this scum-forming filamentous cyanobacterium species can produce at least two types of toxins: anatoxin-a and microcystins (Puschner and Humbert 2007). Microcystins are nonribosomal peptide toxin that inhibits protein phosphatases in a broad range of eukaryotes from zooplankton to humans. These potent hepatotoxins are capable of causing liver failure and acting as tumor-promoters (Falconer 1991, Carmichael 1995, Chorus 2001, Grosse et al. 2006). Microcystins constitute the larger group of cyanotoxins with over 80 variants identified to date. Microcystin-LR is the most common congener of the series. Most microcystins display a LD-50 (intraperitoneal) ranging between 50 and 100 µg/kg in mice although Microcystin-RR are slightly less toxic with a LD-50 of 600 µg/kg in mice (Rinehart et al. 1994). Anatoxin-a(s) is a highly toxic neurotoxin structurally similar to an organophosphorus pesticide, with a LD-50 (intraperitoneal) in rats of about 20 µg/kg and 31 µg/kg in mice, respectively (Cook et al. 1988, Falconer 1996).

Microcystis spp. are bloom-forming single-celled, colonial, freshwater cyanobacteria and have been observed world-wide. In summer 2010, *Microcystis* colonies sizes varied from a dozen to several hundred of cells in the surface water of Clear Lake and were observed throughout the summer. They were not the most abundant components of the cyanobacteria mat from June-August but their relative abundance increased as compared to the other genera in September 2010. *Microcystis aeruginosa* strains can produce a multiple of toxins in addition to microcystin (Okino et al. 1995, Namikoshi and Rinehart 1996). Some *Microcystis aeruginosa* strains may also produce anatoxin-a (Park et al. 1995) and microviridins (Okino et al. 1995). Most microviridins show inhibitory activities against serine-type proteases. One of the peptide isoforms, microviridin J, has been shown to inhibit the molting process of *Daphnia* (small, planktonic crustaceans), and ultimately leading to death (Rohrlack et al. 2004).

Presence of cyanotoxins in Clear Lake

Previous studies suggest that the possibility that a cyanobacterial bloom may be toxic is more than 50% (Olson 1964). The ability to produce cyanotoxins may be regulated both by environmental factors and genotype (Kaebernick et al. 2000, Downing et al. 2005, Kardinaal et al. 2007) but these links are not well understood. Although recurrent cyanobacteria blooms have plagued Clear Lake for the past century, there is only one toxicology survey available to date that was conducted by the Office of Drinking Water and the Special Epidemiological Studies Program in 1990 (ODWSESP 1991). This study was focused on microcystin toxin only and did not examine other cyanotoxins. Results from this study reported large temporal and spatial variability as well as trace level (2.6×10^{-3} µg/L) of this cyanotoxin in one surface water sample collected in a swimming area of the lake and measured via immunoassay/ELISA (ODWSESP 1991). Among the 20 algae samples analyzed for toxicity using mouse bioassay, only two samples collected in Oaks arm (station CL-4) on June 28, 1990 were reported toxic. The most toxic of these samples contained 3.4 mg hepatotoxin/g of lyophilized algae (ODWSESP 1991). Based on these results, the study concluded that the oral NOAEL (No observed adverse effect level) for a 60 kg (ca. 132 lbs) adult would need to ingest 3.17 lbs of wet algae from Clear Lake.

Results from our study (LC/MS analyses) confirm a low level of microcystins, below the recreational advisory limit of 8 µg/L, however microcystin concentrations exceeded the WHO advisory limit for drinking water (1 µg/L) in several samples (Table 1). There were discrepancies between the ELISA and the LC-MS results. We believe that these discrepancies results from other compounds present in the water that could interfere with the ELISA kit optical reading and are working on modifying our methods to solve the issue (e.g. dilution, filtration at smaller pore size). Some compounds are also interfering with the detection of Microcystin-YR on the LC-MS and therefore we did not add this variant to the table below. The LC-MS results are

Table 1: Levels of cyanotoxins (µ/L) as measured by LC/MS (total microcystins –MC- and individual variants, anatoxin-a -ANA) and ELISA (saxitoxin –PSP-).

Date	Station	Name	MC-RR	MC-YR	MC-LR	MC-LA	Total MC	ANA	PSP
6/23/2010	Stn 1	Lakeport	0	NA	0	0		0	0
6/23/2010	CL1	Upper Arm	0	NA	0	0		0	0
6/23/2010	Stn 2	Horseshoe bend	0	NA	0	0		0	0
6/23/2010	Stn 3	Man	0	NA	0	0		0	0
6/23/2010	CL3	Lower Arm	0	NA	0	0		0	0
6/23/2010	Stn4	Rattlesnake island	0	NA	0	0		0	0
6/23/2010	CL4	Oaks Arm	0	NA	0	0		0	0
7/22/2010	Stn 1	Lakeport	0.617	NA	2.998	0	**3.615**	0	0
7/22/2010	CL1	Upper Arm	0	NA	0	0		0	0
7/22/2010	Stn 2	Horseshoe bend	0	NA	0	0		0	0
7/22/2010	Stn 3	Man	0	NA	0	0		0	0
7/22/2010	CL3	Lower Arm	0	NA	0	0		0	0
7/22/2010	Stn4	Rattlesnake island	0	NA	0	0		0	0
7/22/2010	CL4	Oaks Arm	0	NA	0	0		0	0
7/22/2010	Stn 5	north lower arm	0	NA	0	0		0	0
7/22/2010	Stn 6	Horseshoe bend	0	NA	0	0		0	0
8/16/2010	Stn 1	Lakeport	0	NA	0	0		0	0
8/16/2010	CL1	Upper Arm	0	NA	0	0		0	0
8/16/2010	Stn 2	Horseshoe bend	2.586	NA	0	0	**2.586**	0	0
8/16/2010	Stn 3	Man	0	NA	0	0		0	0
8/16/2010	CL3	Lower Arm	0	NA	0	0		**0.52**	0
8/16/2010	Stn4	Rattlesnake island	0	NA	3.193	0	**3.193**	0	0
8/16/2010	CL4	Oaks Arm	2.265	NA	0	0	**2.265**	0	0
8/16/2010	Stn 5B	north lower arm	0	NA	0	0		**7.78**	0
9/9/2010	Stn 1	Lakeport	0	NA	1.73	0	**1.73**	0	0
9/9/2010	CL1	Upper Arm	0	NA	0	0	0	0	0
9/9/2010	Stn 2	Horseshoe bend	0	NA	0	0	0	0	0
9/9/2010	Stn 3	Man	0	NA	0	0	0	0	0
9/9/2010	CL3	Lower Arm	0	NA	0	0	0	0	0
9/9/2010	Stn4	Rattlesnake island	0	NA	0	0	0	0	0
9/9/2010	CL4	Oaks Arm	0	NA	0	0	0	0	0

considered more accurate than ELISA (high-throughput assay) and therefore, these are the results that we will keep in the database. All samples are expressed in ppb (µg/L). The microcystin levels measured in Clear Lake during Summer 2010 are much lower than that reported other local lakes with similar cyanobacteria biomass (e.g. Pinto Lake, Miller et al. 2010).

Anatoxin-a was detected in two of the samples collected in the lower arm in August 2010 (CL-3 and station 5B, table 1). At both collection sites, anatoxin-a was well below the suggested action levels for recreational use (50 µg/L, OEHHA/EPA 2009).

Saxitoxins were below the detection limit or not present in the lake surface water (using Abraxis ELISA kits only).

Other cyanotoxins (e.g. lyngbyatoxin-a) might have been present in the surface water but we did not have a standard and therefore cannot quantify the compound or validate that it is actually lyngbyatoxin-a. Based on the LC-MS results, the mass seems to match lyngbyatoxin-a but the level appear low. We have acquired a lyngbyatoxin-a pure extract from SCRIPPS (Dr. Jensen) and will attempt to calibrate the LC/MS to measure this toxin during Summer 2011.

As noted in the toxicological report from 1991, cyanotoxin concentrations in Clear Lake display a high variability in space and time. Except for September 2010 samples, Upper arm is usually the least toxic as compared to the Lower Arm and Oaks Arm. The possible sources of variation that may be responsible for this variability in cyanotoxin concentrations are:

(i) *Variability in cyanobacterial biomas*s. A higher biomass of cyanotoxin producers may result in higher toxin concentrations. Indeed, the cyanobacterial biomass was usually lower in the Upper Arm as compared to the Lower Arm and Oaks Arm. The growth of cyanobacteria can be influenced by several environmental drivers in lakes that have not been identified and previous studies have pointed out the influence of prominent winds on the accumulation of cyanobacteria in the Lower Arm and Oaks Arm (Richerson 1994).

(ii) *Physiological variability*. Cyanotoxin production is affected by several environmental factors (nutrient availability, light conditions, and temperature) as demonstrated by controlled laboratory experiments. We did not observe any significant correlations between cyanotoxin concentrations and nutrient concentrations. The lack of significant correlation might be related to a low amount of samples presenting detectable levels of toxins.

(iii) *Variability in cyanobacterial species and genotype composition.* The cellular content and diversity of cyanotoxins vary among species and even among different genotypes within the same species. As a result, changes in the species composition of cyanobacteria, and also changes in genotype composition within the same species may lead to fluctuations in cyanotoxin concentration. During Summer 2011, we will collect samples for molecular analysis

in the attempt to identify the potentially harmful cyanobacterial strains as well as to determine their toxigenicity (presence/absence of toxic genes).

Because toxins concentrations vary greatly on a spatiotemporal scale, we also monitored the cyanotoxins using the SPATT (Solid Phase Adsorption Toxins Tracking) methodology which is a modification of a method originally developed for marine lipophilic toxins by Dr Kudela (UCSC) for continuous toxin tracking by passively absorbing dissolved toxins from the water column. SPATT devices were attached at buoys located at the continuous monitoring stations (maps). Unfortunately, we weren't able to attach the SPATT devices in the proximity of the surface and therefore, the results presented here are representative of deep (1-2 m) rather than sub-/surface (0.1-0.2m) waters. SPATT samples were analyzed for microcystin and anatoxin-a detection using LC/MS as described above and the daily cyanotoxin production was computed (Table 2). Microcystis LA was the most abundant variant at the SPATT depth although it wasn't detected in the discrete surface water samples. No anatoxin-a toxin were detected in the SPATT. These results confirms the spatio-temporal heterogeneity of the cyanotoxins concentration and speciation, not only horizontally (e.g. between stations) but also with depth. It could be possible that cyanobacteria from the mat might be producing different toxins than the cyanobacteria growing in the water column. Another hypothesis would be that discrete samples collected at a given time may not representative of the cyanotoxin cocktail due to the influence of mixing (winds, currents) while SPATT integrate these variations. We will attempt to maintain the SPATT devices in the surface of the the water column next summer to allow a better comparison between the continuous toxin measurements and the discrete toxins measurements.

Conclusion

Based on our results, it doesn't appear that there is any significant recreational toxin exposure risks in Clear Lake surface waters. However, the microcystins levels measured during Summer 2010 were several orders of magnitude higher than that reported for the same stations for Summer 1990 (ODWSESP 1991). More research is needed to determine if the cyanotoxin level increase between the two studies is a real trend or if the discrepancies are related to the technologies used ("old" ELISA kits and mouse assay vs. "newer" ELISA kits and LC/MS).
This study also indicate that more that Clear Lake might be a cyanotoxin cocktail (microcystin, anatoxin-a and maybe other cyanotoxins). Indeed, the only toxicology report available for Clear Lake was focusing on Microcystin toxins only (ODWSESP 1991). Our future efforts will focus on expanding the range of monitored toxins in order to gain a more comprehensive understanding of this system.

Table 2:
Clear Lake SPATT samples

Analysis: LC/MS

Column: Zorbax Rapid-Resolution HT

Extraction: 50% MeOH

Analyzed For: MCY-LR, MCY-RR, MCY-YR, MCY-LA, Anatoxin-a

	----------ppb in extract----------						----------ng/g/day ----------					
Sample	[MCY-RR]	[MCY-LR]	[MCY-YR]	[MCY-LA]	[ANA-A]	Extract Vol	Duration (days)	[MCY-RR]	[MCY-LR]	[MCY-YR]	[MCY-LA]	[ANA-A]
CL072210.1	1.36	4.99	0	13.88	0	10	30	0.15	0.55	0.00	1.54	0.00
CL072210.2	0.98	5.24	0	12.29	0	10	30	0.11	0.58	0.00	1.37	0.00
CL072210.3	0	6.03	0	30.61	0	10	30	0.00	0.67	0.00	3.40	0.00
CL072210.4	0	0	0	12.52	0	10	30	0.00	0.00	0.00	1.39	0.00
CL081601.1	0	5.71	0	14.79	0	10	30	0.00	0.63	0.00	1.64	0.00
CL081601.2	0	0	0	10.1	0	10	30	0.00	0.00	0.00	1.12	0.00
CL081601.3	3.13	5.52	0	20.64	0	10	30	0.35	0.61	0.00	2.29	0.00
CL081601.4	0	3.97	0	22.5	0	10	30	0.00	0.44	0.00	2.50	0.00

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APPENDIX

Clear Lake - June 2010

Picture of cyanobacteria growth observed in the surface water of the Lower Arm of Clear Lake (June 2010). The filamentous cyanobacteria were *Anabaena sp*., *Aphanizomenon sp*. and *Lyngbya Cincinnati* (*Phormidium cincinnatum*). Some macrocolonies can be seen floating in surface. Other potentially harmful cyanobacteria such as *Microcystis spp*. were also present but not as these filamentous cyanobacteria. *Picture: Cécile Mioni*

Clear Lake – July 2010

Lyngbya cincinnati was the dominating cyanobacteria present in the mat in the Lower Arm.

Some clumps were rotting in the surface of the lake, releasing some fool odor.

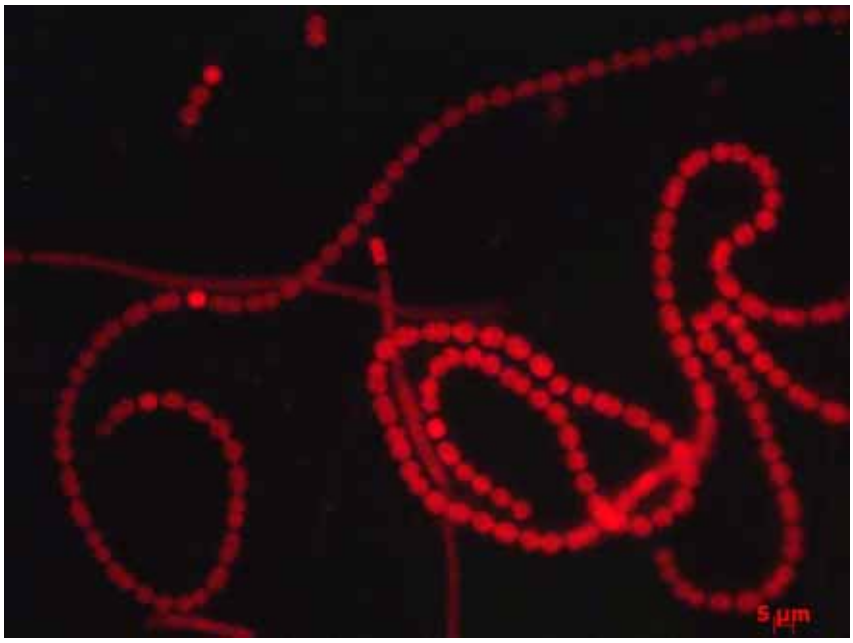
Picture: Cécile Mioni

Horseshoe bend cyanobacterial scum/mat was dominated by *Anabaena* and *Lyngbya.*

We saw a couple of dead fish but we did not investigate the cause of death.

Picture: Cécile Mioni

Selected micrographs (epifluorescence microscopy) of Clear Lake samples



Heterocystous *Anabaena spiroides* and *Aphanizomenon sp*.

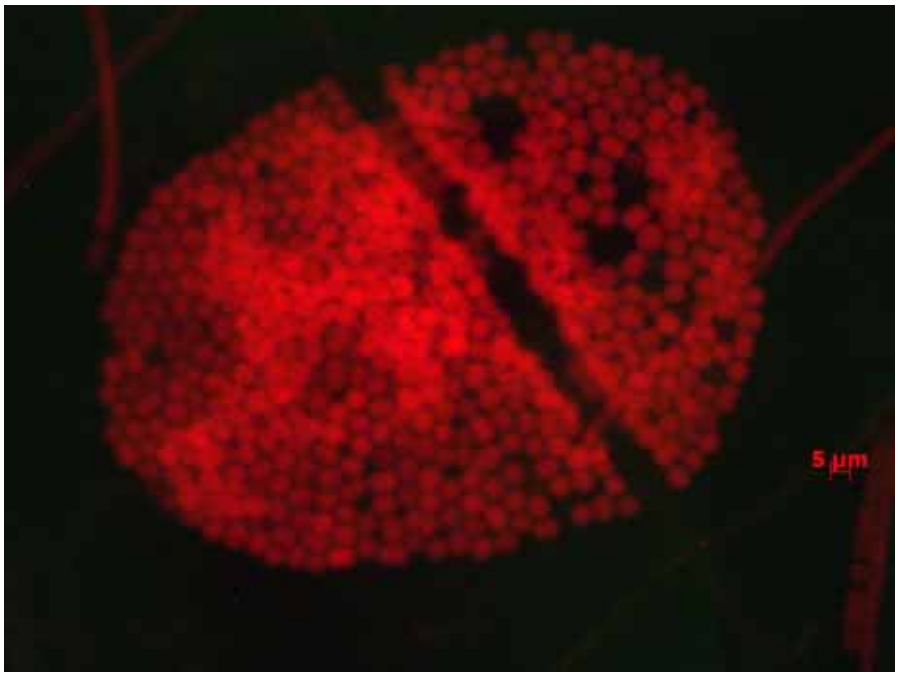
Oaks Arm sample, station 4 (June 23, 2010)

Picture: Cécile Mioni

One *Lyngbya cincinnati* filament (*Gleotrichia* filaments can also be seen on the top left corner of the image and a blurry *Anabaena* spiroides filament can be seen right by the scale).

Oaks Arm sample, station 4 (June 23, 2010)

Picture: Cécile Mioni



One *Microcystis aeruginosa* colony

Oaks Arm sample, station 4

(June 23, 2010)

Picture: Cécile Mioni

SWAMP 2011 monitoring in Clear Lake & San Francisco Bay/Delta
June 2011 Summary Report

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The following summary report describes the initial field observations and a summary of the initial results from the first month (June 2011) of the SWAMP-funded monitoring of blue-green algae bloom and their toxicity in Clear lake and the San Joaquin Delta. The main goal of this study is the assessment of the toxicity of the cyanobacteria in Clear Lake and the San Francisco Bay/Delta. Investigators from the Lake County Water Resources Department, the California of Water Resources and the University of California, Santa Cruz all redirected efforts to gather samples, carry out assays, and/or interpret results in agreement with our scope of work and the QAPP. Additionally, extra taxonomy samples (2) and a toxin sample (1) were collected by Lake County Water Resources Department in Clear Lake on June 23, 2011 to investigate a bloom event that occurred in the Lower Arm (near Station 513LAK004) shortly after our scheduled SWAMP sampling event took place (June 16, 2011). These extra samples were collected and will be processed with respect to the QAPP SOPs.

San Francisco Bay/Delta –

Surface water samples were collected at the sampling stations of the San Francisco Bay/Delta with the assistance of the Environmental Monitoring Program of the California Department of Water Resource on June 6 (SWAMP stations 544CCC001, 544CCC003 and 544CCC004) and June 7 of 2011 (SWAMP stations 544SAC004 and 544SJC010) on board of the R/V San Carlos. These sampling events occurred after a series of late Spring storms. The surface water temperatures at the sampling stations were 16.8°C in average (from 16.1 to 17.8°C). These surface water temperatures were lower than that observed at the same time of year in previous years and might explain the absence of *Microcystis aeruginosa* at the sampling sites. Indeed, compiled evidence gathered from the literature as well as from our past monitoring programs in the Delta suggest that *M. aeruginosa* blooms initiate at surface water temperatures greater than 20°C (Lehman et al. 2008). The mean dissolved inorganic nitrogen and orthophosphate were greater in the Delta than in Clear Lake and were not limiting. Chlorophyll *a* levels were low, averaging 1.81µg/L and spanning from 0.85 µg/L at station 544SJC010 to 2.38 µg/L at station 544CCC001. Taxonomy/cell enumeration samples were processed at UCSC using epifluorescence microscopy. No *M. aeruginosa* cells or colonies were observed in these samples reflecting pre-bloom conditions. The toxicology analysis of the water samples collected for cyanotoxin assessment is in progress. Solid Phase Adsorption Toxin Tracking (SPATT) resins were deployed on June 16 at the continuous EMP/DWR monitoring stations and will be retrieved mid-July. This continuous toxin tracking device will enable to detect if a toxic bloom occurred after this June sampling event.

Clear Lake –

Surface water samples were collected in Clear Lake on June 16, 2011 with the assistance of the Lake County Water Resources Department at the stations 513LAK001, 513LAK002, 513LAK003, 513LAK004, 513LAK005, 513LAK006, and 513LAK007. Observations from the field indicate that a cyanobacteria bloom was initiating in the lower arm as well as in horseshoe bend and in Oaks arm. The highest cyanobacterial biomass was observed in the lower arm. No mat or scum were observed on June 16, 2011 and the biomass was lower than that observed in June 2010. Strong wind conditions might have contributed to dispersal.

Based on our field observations the cyanobacterial assemblage was dominated by filamentous cyanobacteria and *Gloeotrichia* colonies. Microscopic enumeration/taxonomy analyses of the samples are in progress. Samples analyzed to date at UCSC indicate the presence of four filamentous cyanobacteria: *Gloeotrichia* (figure 1A), *Aphanizomenon sp.* (figure 1B), *Anabaena sp*. (figure 1C) and *Lyngbya cincinnati* (figure 1D). *Gloeotrichia*, *Aphanizomenon sp*. and *Anabaena sp*. were the most abundant filamentous cyanobacteria in the assemblage at all stations. *Lyngbya cincinnati* was not present at all station processed to date and when present, its contribution to the cyanobacterial assemblage was rare (<1 %). Among the samples examined so far, *Microcystis aeruginosa* was only detected in the lower arm (station 513LAK004). *Microcystis aeruginosa* is a known producer of the hepatoxin microcystin. Interestingly, we observed filamentous cyanobacteria (*Pseudanabaena*?) associated with *Microcystis aeruginosa* colonies at this station (figure 2). Similar consortia were observed in the Delta in 2008 and 2009 at stations displaying elevated microcystin levels. *Gloeotrichia* and *Aphanizomenon* can produce a series of cyanotoxins, including the hepatototoxin microcystin toxins. We are hoping to identify this associated filamentous cyanobacterium with the assistance of the taxonomists from EcoAnalyst, Inc. *Aphanizomenon* can also produce the hepatotoxin cylindrospermopsin and the neurotoxin saxitoxin. *Anabaena* can produce the neurotoxin anatoxin-a and some *Lyngbya* strains produce dermatoxins (skin irritant) including aplysiatoxin and Lyngbyatoxin-a. Toxicology assessments are in progress and the presence of these toxins is being investigated. The dominance of filamentous cyanobacteria in Clear Lake could be explained by their ability to alleviate nitrogen limitation by N_2 fixation while *Microcystis* (a non nitrogen fixer) is dependent on combined N sources. Indeed, dissolved inorganic nitrogen levels were significantly lower in Clear Lake than in the Delta and the nitrate+nitrite levels were near the limit of detection. Moreover, filaments of *Gloeotrichia*, *Aphanizomenon* and *Anabaena* with heterocysts (specialized cells for N_2 fixation) were observed at all stations processed to date. These observations provide strong evidence that these filamentous cyanobacteria are actively fixing N_2.

Chlorophyll *a* levels on June 16, 2011 were globally higher than that observed in the Delta, averaging 11.54 µg/L (Table 1). The lowest Chl *a* level were observed at the upper arm stations (Station 513LAK001: 1.63 µg/L, Station 513LAK002: 2.91) and the highest Chl *a* levels were observed in the Lower Arm at station 513LAK005. Preliminary analysis of the data collected in Clear Lake on June 16, 2011 suggest that there was a significant direct correlation between Chl *a* levels and orthophosphates ($R= 0.8164$, $R^2 = 0.6664$, figure 3) and ammonium ($R = 0.7686$, $R^2 = 0.5908$, figure 3D). Nitrate+Nitrite levels were extremely low. The Chl *a* levels appear to be negatively correlated with secchi depths (figure 3B). The highest phytoplankton biomass coincided with the highest Electrical Conductivity (EC, figure 3C). Surface water temperatures were significantly higher in Clear Lake than in the Delta, averaging 23.3°C, and therefore within the optimal range of temperature for cyanobacteria growth (Table 1). No significant correlations were observed however between surface water temperature and Chl *a* (figure 3A).

A massive mat-forming bloom event occurred in the Lower Arm 4 days after our sampling event (June 20, 2011) just northwest of station 513LAK004 (figure 4). In order to investigate this cyanobacterial bloom, extra surface water samples for taxonomy/enumeration and toxicology assessment were collected by Lake County at station 513LAK004 on June 23, 2011. However, this extra sampling event took place under strong winds conditions and no mats were evident at the time of sampling (figure 5). These strong winds might have dispersed the mats. Field observations suggest that the cyanobacteria assemblage was dominated by filamentous cyanobacteria. Microscopic taxonomy/enumeration as well as toxicology analysis of these extra samples are in progress.

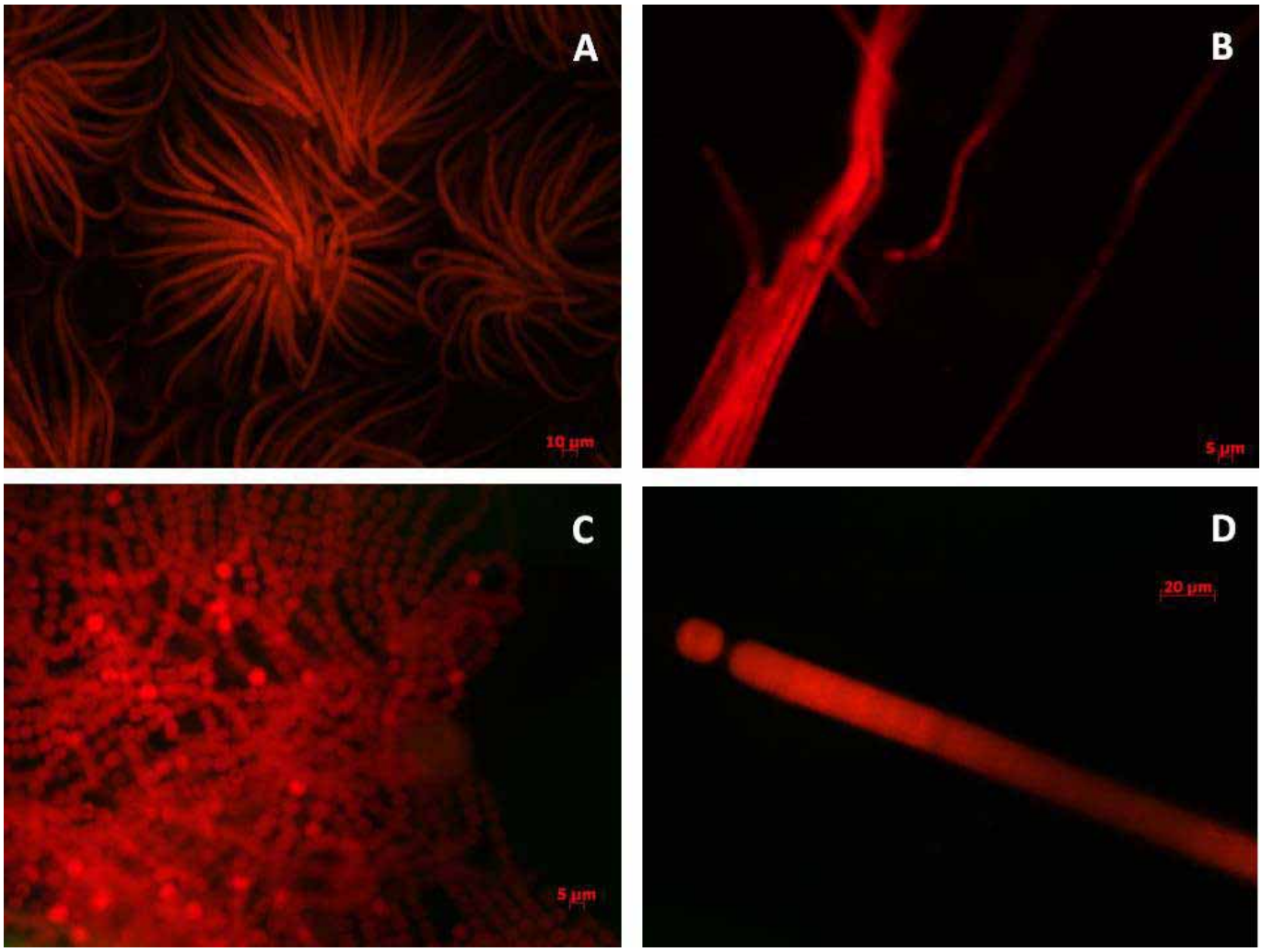

Figure 1: Micrographs of filamentous cyanobacteria observed in Clear Lake samples collected on June 16, 2011: A. *Gloeotrichia sp*., B. *Aphanizomenon sp*., C. *Anabaena sp*., D. *Lyngbya cincinnati*. Surface water samples (50 mL each) were collected for enumeration/taxonomy analysis of the cyanobacteria assemblage by epifluorescence microscopy (UCSC). Samples were fixed with 2.5% (v/v) glutaraldehyde and filtered through 1-µm pore size, 25-mm diameter, black polycarbonate filters (GE Osmonics). The abundance of autofluorescing phycoerythrin containing cells (aka cyanobacteria) was determined on a Zeiss Axioplan epifluorescence microscope using green excitation (Zeiss filter set 20, excitation 546-nm bandpass, and emission 575–640-nm bandpass filters).

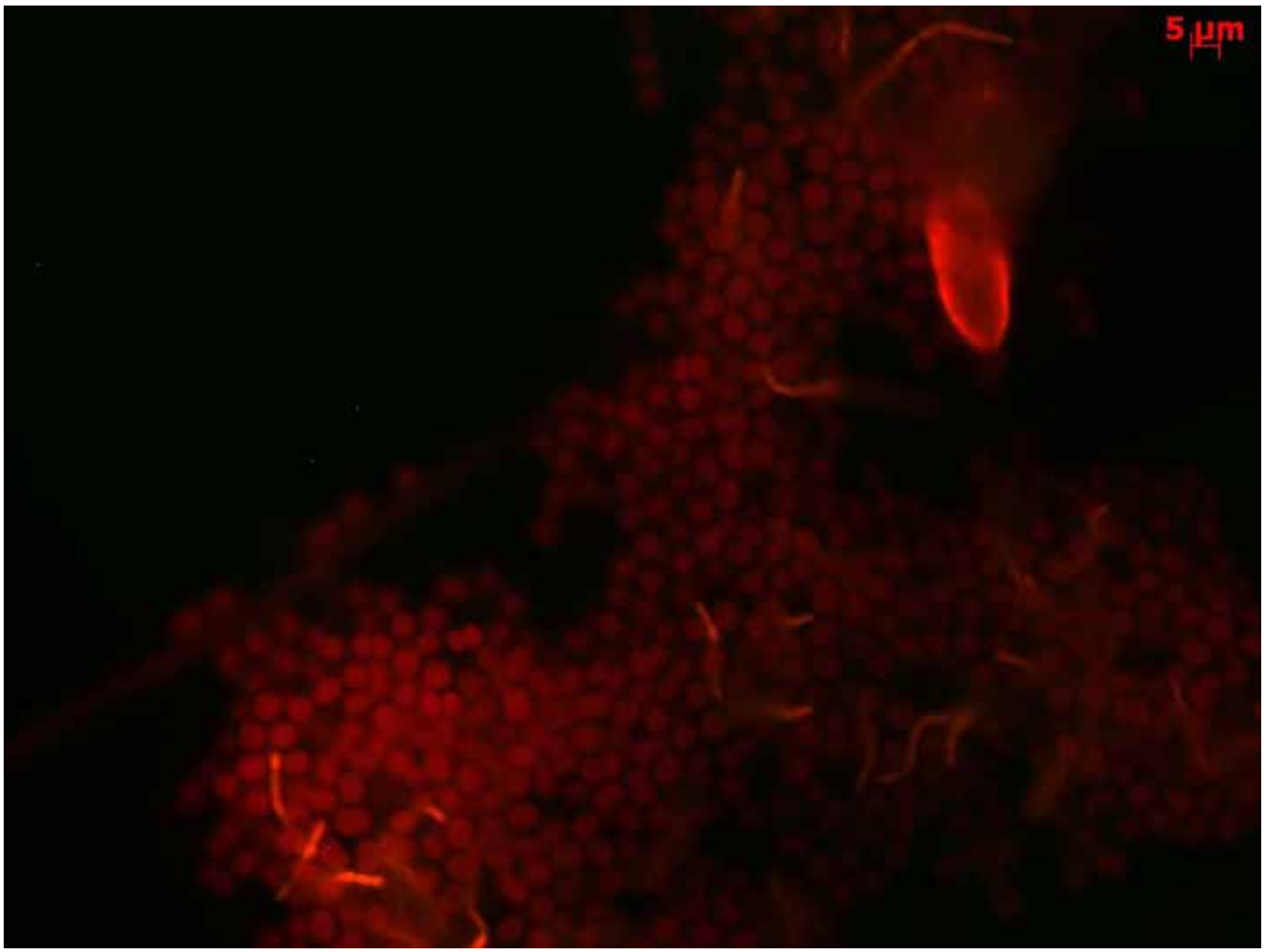

Figure 2: Micrograph of Microcystis aeruginosa colonies observed in Clear Lake sample collected on June 16, 2011 at station 513LAK004. Association with a filamentous cyanobacterium (possibly *Pseudanabaena*) can be seen on this micrograph. Surface water samples (50 mL each) were collected for enumeration/taxonomy analysis of the cyanobacteria assemblage by epifluorescence microscopy (UCSC). Samples were fixed with 2.5% (v/v) glutaraldehyde and filtered through 1-µm pore size, 25-mm diameter, black polycarbonate filters (GE Osmonics). The abundance of autofluorescing phycoerythrin containing cells (aka cyanobacteria) was determined on a Zeiss Axioplan epifluorescence microscope using green excitation (Zeiss filter set 20, excitation 546-nm bandpass, and emission 575–640-nm bandpass filters) with a x40 objective.

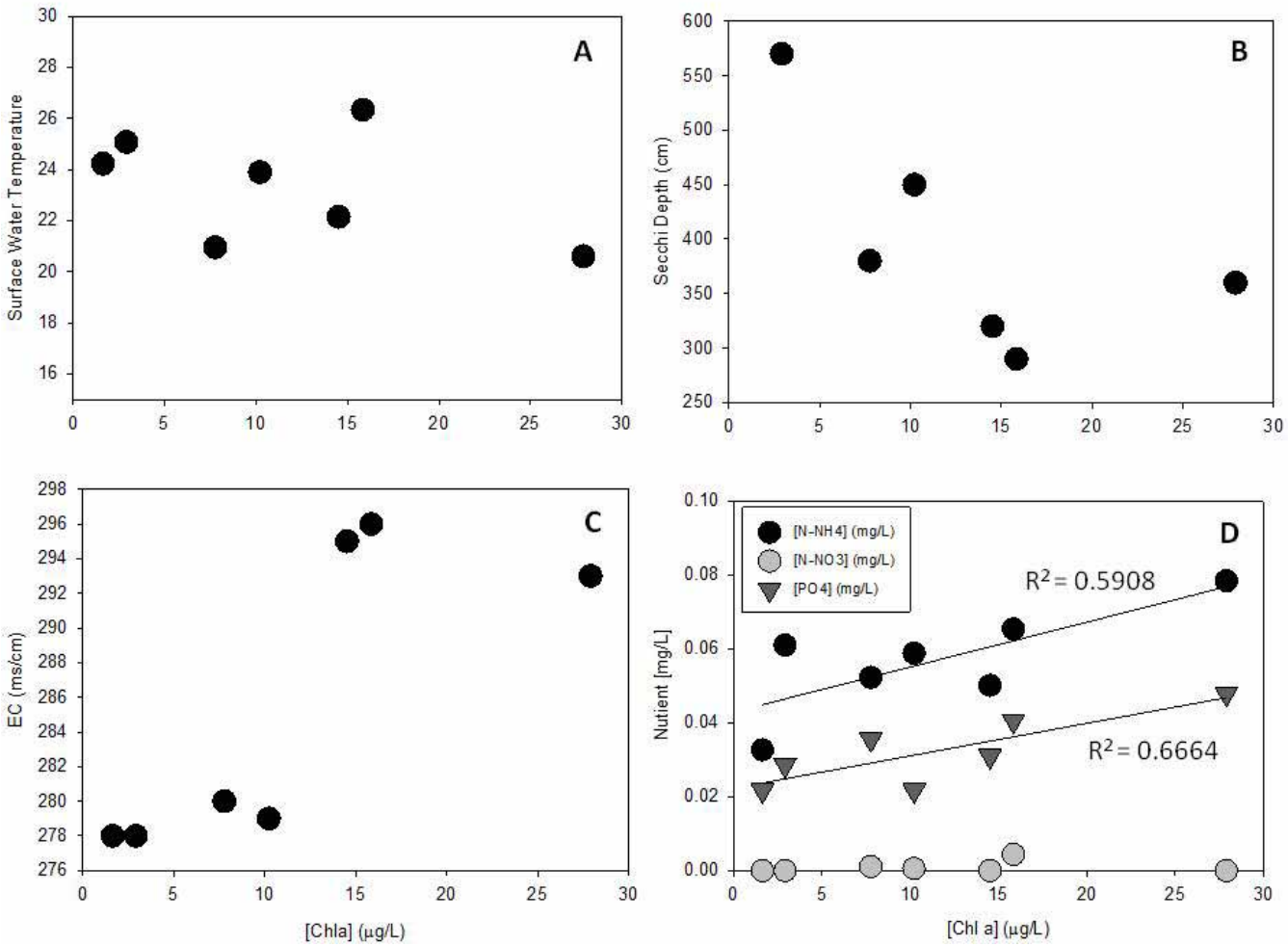

Figure 3: Correlations between Chlorophyll a concentrations and some key water quality variables observed in surface water samples from Clear Lake (June 16, 2011). A: Temperature, B. Secchi Depth, C. EC, D. Dissolved inorganic nutrients.

Figure 4. Picture of the cyanobacteria bloom located northwest of station 513LAK004 (lower arm, Manakee cove, near Clearlake) as observed on June 20, 2011 (credit: Samir Tuma, Kila properties). Cyanobacteria mats can be observed in surface.

Figure 5. Picture of the cyanobacteria bloom located at Redbud park, south of station 513LAK004 (Manakee cove, lower arm, near Clearlake) as observed during the sample collection on June 23, 2011. Strong winds dispersed the newly formed mats before the sampling event took place (credit: Tom Smythe).

Table 1. Water quality variables in Clear Lake in June 2011.

Date	Station ID	Temperature	pH	DO (mg/L)	DO (%)	EC (ms/cm)	Secchi (cm)	[N-NH4] (mg/L)	[N-NO3] (mg/L)	[N-NO2] (mg/L)	[PO4] (mg/L)	NH4/P	[DOC] (uM)	[Chla] (mg/L)
6/16/2011	513LAK001	24.22	8.25	6.05	72.3	278	>390	0.033	0.000	0.000	0.022	1.507	273.79	1.63
6/16/2011	513LAK002	25.07	8.33	7.41	89.9	278	570	0.061	0.000	0.000	0.029	2.133	269.09	2.91
6/16/2011	513LAK002							0.057	0.000	0.000	0.028	1.996		
6/16/2011	513LAK003	23.89	8.24	7.38	87.7	279	450	0.059	0.001	0.000	0.022	2.713	269.49	10.22
6/16/2011	513LAK004	26.33	8.08		94.2	296	290	0.065	0.004	0.000	0.040	1.613	297.39	15.84
6/16/2011	513LAL005	20.6	8.21	10.1	113	293	360	0.078	0.000	0.000	0.048	1.637	276.79	27.89
6/16/2011	513LAK006	22.14	8.13	7.58	87	295	320	0.050	0.000	0.000	0.031	1.617	270.49	14.51
6/16/2011	513LAK007	20.95	8.27	10.25	115	280	380	0.052	0.001	0.000	0.035	1.472	274.49	7.77

Regional Water Quality Control Board, Central Valley Region
2011 Triennial Review
Response to Comments
Water Quality Control Plan for the
Sacramento River and San Joaquin River Basins

The Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) has provided opportunities for the public to submit written comments on the 2009-2010 Triennial Review. This document contains written responses to comments received pertaining to the Triennial Review of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins.

Written comments were received prior to the 13 August 2009 workshop from:

1. Ms. Kari E. Fisher, Associate Counsel, and Justin E. Fredrickson, Environmental Policy Analyst, California Farm Bureau Federation (1-3)
2. Ms. Debbie Webster, Executive Officer, Central Valley Clean Water Association (4-6)
3. Mr. Jeffrey R. Single, Ph.D., Regional Manager, Department of Fish and Game, Central Region (7)
4. Ms. Melissa A. Thorme, Downey Brand, on behalf of the City of Tracy (8-10)
5. Mr. Matthew Mitchell, United States Environmental Protection Agency, Region IX, (11-19)
6. Ms. Jo Anne Kipps, Fresno, CA (20)
7. Mr. Gordon Plantenga and Mr. Mark Miller, Nevada County Sanitation District No. 1 (21)
8. Mr. Rich Gigliotti, Director, PG&E Land Services, Pacific Gas and Electric Company (22-24)
9. Mr. Stan R. Dean, Director of Policy and Planning, Sacramento Regional County Sanitation District (25-26)
10. Mr. Kenneth Petruzzelli, O'Laughlin & Parris LLP (27-32)
11. Mr. John Herrick, South Delta Water Agency (33-36)
12. Ms. Elaine Archibald, Executive Director, California Urban Water Agencies (37)

The following entities submitted basin planning comments as part of the 2008 Clean Water Act Section 303(d)/305(b) Integrated Report process:

13. Mr. Art O'Brien, City of Roseville (38)
14. Mr. Donald P. Freitas, Contra Costa Clean Water Program (39)
15. Mr. Parry Klassen, East San Joaquin Water Quality Coalition (40)
16. Mr. Jerald James, Madera County (41)
17. Mr. Mike Wackman, San Joaquin County Delta & Water Quality Coalition (42)

18. Ms. Karna E. Harrigfeld, Stockton East Water District (43)

Verbal comments were received during the 13 August 2009 workshop from:

19. Ms. Valerie Kincaid, San Luis & Delta Mendota Water Authority (44-45)
20. Ms. Karna Harrigfeld, Stockton East Water District (46-47)
21. Mr. Ed Cheslak, Pacific Gas & Electric Co. (48)
22. Mr. Steve Bailey, City of Tracy (49)
23. Mr. Ken Petruzzelli, San Joaquin River Group (50-53)

The following entity submitted basin planning comments as part of the public review of the draft Basin Plan Amendments to Address Selenium Control in the San Joaquin River Basin:

24. Ms. Susan K. Moore, United State Department of the Interior, Fish and Wildlife Service (54)

Written comments were received prior to the xx October 2011 hearing from:

25. Mr. Ken Petruzzelli, San Joaquin River Group (55-58)
26. Mr. William P. Lewis, City of Live Oak (59)
27. Ms. Betsy Cawn, Essential Public Information Center (60-62)
28. Ms. Debbie Webster, Central Valley Clean Water Association (63-69)
29. Mr. Jason Lofton, Sacramento Regional Wastewater Treatment Plant (70-74)
30. Dr. Jeffrey R. Single, Ph. D., Department of Fish and Game, Central Region (75-76)
31. Ms. Chris Malan, Living Rivers Council (77-86)

Following are the responses to the comments.

<u>Ms. Kari E. Fisher, Associate Counsel, and Justin E. Fredrickson, Environmental Policy Analyst, California Farm Bureau Federation)</u>

1. *Beneficial Use Dedesignations should continue to occur, especially in water ways that are inappropriately designated as MUN. Proper application of appropriate beneficial use designations to water bodies, which may result in numerous dedesignations, must occur.*

   The Regional Board should look to its past policy documents and publications to initiate dialog with stakeholders and other agencies with the goal of developing a planning process to appropriately apply proper beneficial uses to all water bodies. Farm Bureau appreciates the magnitude of this endeavor; however, we believe a well-prioritized process that is enlightened by public input is superior to ad-hoc adjustments driven by State Board Order or judicial mandate.

In previous Triennial Review Work Plans, the Central Valley Water Board has prioritized issues addressing appropriate beneficial use designations and water bodies dominated by NPDES discharges and agriculture discharges. Staff is proposing that these issues remain a high priority. Issues 2, 3 and 4 (EDWs, ADWs, and Beneficial Use Designations) describe possible approaches to address these concerns. The Central Valley Water Board is interested in exploring approaches that will address more than one water body at a time. Staff is available to meet with interested stakeholders over basin planning concerns.

2. *The Farm Bureau believes that it is essential for the Regional Board to develop a sound policy for effluent dominated water bodies that includes, but is not limited to, agricultural dominated water bodies and agricultural conveyance facilities. The importance of this issue cannot be overstated as, nearly thirty years after first acknowledging that the Basin Plan's beneficial use designations remain uncompleted, there is still no plan or priority process to address this fundamental requirement. The importance and need for an effluent dominated water bodies policy requires development of a self-standing, near-term activity and not as a subset of a potential future irrigated lands program.*

   The 'tributary rule' that currently extends designated beneficial uses in one water body to any water bodies tributary to that water body that lack their own formally designated beneficial uses is overly coarse and unworkable, as a practical matter, simply because it would tend to make upstream dischargers in agricultural dominated water bodies, for example, theoretically liable for one or more unachievable standards that do not, in fact, reflect any actual use that is locally supported by said agricultural dominated water way. Also, because of the practical and logistical difficulty of enforcing or applying the tributary rule to each individual water body, the tributary rule does not in fact accomplish its alleged regulatory purpose of protecting or improving water quality, but does unreasonably and unpredictably expose individual dischargers to undue risks or potential enforcement and excessive compliance costs and even prosecution.

   As an alternative to the tributary rule, the Board can follow established processes to formally designate beneficial uses in an upstream water body or, subtractively, 'dedesignate' specific beneficial uses that would otherwise extend to that water body by virtue of tributary. Such processes, however, have likewise shown themselves to be extremely cumbersome and are, consequently, very nearly unworkable as the tributary rule itself.

As opposed to rote application of the tributary rule, therefore, or a case-by-case, location-specific designation, dedesignation, or enforcement, a more workable potential approach for the Regional Board's consideration in this Triennial Review might involve a new policy that seeks to reasonably protect broad downstream beneficial uses without impairing more narrowly defined uses above, by more holistically and realistically approaching water quality on a broad watershed basis.

Staff is proposing that issues addressing water bodies dominated by NPDES discharges and agricultural dominated water bodies remain a high priority. See Issues 2 and 3 for more information. Beneficial use designations and dedesignations must follow federal and state laws and regulations and are not conducted as part of the Board's permitting activities. The Central Valley Water Board is interested in addressing beneficial use issues in a holistic manner in compliance with federal and state laws and regulations and within financial constraints. Staff is available to meet with stakeholders to explore any feasible options. See Issue No. 4 (Beneficial Use Designations) for more details.

3. *A policy to address and manage salt in the Sacramento River and San Joaquin River Basins is needed. As the Regional Board observes, certain regulatory tools or controls on salinity lie within the Board's jurisdiction, while other aspects which might be required for such a comprehensive management approach, lie outside of the Board's jurisdictional reach. Without a doubt, however, excessive accumulation of salts in Central Valley solids and waters is a serious problem and a long-term, regional threat to the viability of agricultural activities in certain areas of the Central Valley. Accordingly, a concerted long-term effort to address this problem is, in our view, not only desirable, but absolutely necessary. While Farm Bureau readily acknowledges as much, however, we would also draw the Board's attention to its own observation that regulatory Basin Plan elements of comprehensive salinity management plan could potentially "result in more restrictive discharge limits, requirements to conduct costly studies, implementation of treatment measures or projects to manage salt, and potentially prohibition of certain discharges." To integrate parallel efforts and minimize such detrimental impacts of a purely regulatory approach on existing economic uses, therefore, it will be critically important to include proper coordination and integration with all interested and applicable entities and stakeholders, and also to coordinate closely with on-going efforts occurring independently of the Board's jurisdiction, including both salinity management efforts and the potential of new infrastructure to more fundamentally address root causes of the current salt imbalance, particularly on the westside San Joaquin Valley.*

Staff recommends that holistic salt issues be addressed through the CV-SALTS effort. The Central Valley Water Board welcomes and encourages

the participation of all stakeholders in the CV-SALTS effort. See Issue No. 1 (Salt and Nitrate Management) for more details.

Ms. Debbie Webster, Executive Officer, Central Valley Clean Water Association (CVCWA)

4. *In general, CVCWA would support an effort by the Regional Water Board to undertake a comprehensive review of the Basin Plan as a whole. The Basin Plan has not changed significantly since its original inception in 1975. As a result, the Basin Plan is out of date and in many instances no longer relevant. However, CVCWA also understands that the lack of financial resources prevents the Regional Water Board from reviewing the Basin Plan in its entirety. In light of the Regional Water Board's limited resources, CVCWA has identified several Tier One priority issues that CVCWA urges the Regional Water Board to address during this triennial review period. We have also identified several Tier Two issues that should be considered should resources allow.*

   The Central Valley Water Board thanks CVCWA for providing recommendations for Triennial Review Work Plan issues.

5. *Tier One Issues:*

   a. *Salt Management Policy: CVCWA commends the Regional Water Board for the progress made in the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) basin planning effort. CVCWA is a founding member of the non-profit Central Valley Salinity Coalition, which is working hand in hand with the Regional Water Board and other stakeholders to develop a comprehensive salt management strategy for the Central Valley. This collaborative effort to develop and implement a comprehensive salinity and nitrate management program must remain a top priority during this triennial review period. Although some of the solutions to the salinity issues in the Central Valley are outside of the Regional Water Board's jurisdiction, the success of the CV-SALTS program hinges on the Regional Water Board's support during this triennial review process to evaluate beneficial uses and water quality objectives in the Basin Plan.*

   The Central Valley Water Board thanks CVCWA for participating in the CV-SALTS effort. See Issue No. 1 (Salt and Nitrate Management) for more details.

   b. *The water quality objective for chemical constituents incorporates by reference primary and secondary maximum contaminant levels (MCLs), which are drinking water standards adopted by the*

Department of Health Services. Both apply to drinking water at the tap as it is delivered by drinking water agencies to consumers. Drinking water providers are required to meet primary MCLs; however, the secondary MCLs are recommendations based on consumer acceptance levels and are therefore unrelated to human health and welfare or the protection of aquatic life. For example, the secondary MCL for iron is set at a level to protect laundry from staining. As set forth in the Basin Plan, the secondary MCLs apply directly to the receiving water without considering that filtration (or satisfaction of specific turbidity requirements) is required prior to use by consumers for drinking water. In other words, rivers and streams that are sources of drinking water must meet the same levels for some constituents as tap water even though such levels are not related to human or aquatic health. In addition, the same drinking water will be filtered, which will remove the constituent of concern to an acceptable level, prior to being used by consumers. The application of such secondary MCLs to natural waterways is inappropriate when one considers the aesthetic basis for secondary MCLs and the treatment that will occur prior to use by consumers.

In the State Board's recent action on the City of Lodi permit, the adverse unintended consequences of the prospective incorporation by reference of secondary MCLs were evident. Despite the reasonable position taken by the Regional Water Board—that the salinity objectives may be interpreted flexibly for water quality purposes just as the MCLs are applied on a case-by-case basis—the State Water Board found that the low end of the numeric ranges must be applied to discharges. Therefore, the Basin Plan must be amended to delete the secondary MCLs. If there are specific secondary MCLs that the Regional Water Board deems necessary to protect uses of the Region's waterways, the Regional Water Board should adopt water quality objectives for those constituents pursuant to Porter-Cologne. At a minimum, the Regional Water Board should amend the Basin Plan to clarify how secondary MCLs should be applied to receiving waters (i.e. dissolved standards and subject to ranges).

The Central Valley Water Board is also interested in evaluating the use of secondary MCLs as water quality objectives and will include this issue in the Triennial Review Work Plan as Issue No. 11 (Secondary MCLs as Water Quality Objectives).

c. *CVCWA consists of 60 local public agencies located within the Central Valley region that provide wastewater collection, treatment, and water recycling services to millions of Central Valley residents and businesses. Many of our member agencies operate*

wastewater treatment plants that discharge to effluent and agricultural dominated water bodies with inappropriately designated uses. In most instances, inappropriate uses are attributed to these water bodies through the Regional Water Board's broad application of the tributary statement rather than site-specific analyses of appropriate beneficial uses.

The de-designation of beneficial uses, like designation of beneficial uses, requires a lengthy and resource-intensive use attainability analysis (UAA). De-designations and designations cannot occur effectively in the absence of a clear and efficient process for conducting UAAs. CVCWA commends the Regional Water Board for de-designating the MUN, COLD, SPWN and MIGR beneficial uses on Old Alamo Creek during the last triennial review period. However, the difficulty and expense of de-designating this effluent dominated water body, despite the State Water Board's acknowledgment in a 2002 Order that beneficial uses were improperly designated, highlights the need for the Regional Water Board to re-examine its policy and practice for addressing de-designations, especially on effluent and agricultural dominated waterbodies.

Further, the Regional Water Board should prioritize reconsideration of the broad application of the tributary rule and the development of a policy for conducting UAAs. The Regional Water Board should work collaboratively with interested parties to develop a process for conducting UAAs. By having a set process in place, UAAs can be more efficient and cost effective for both designating and de-designating beneficial uses.

Beneficial use designations and dedesignations must follow federal and state laws and regulations. However, within the constraints of federal and state laws and regulations, the Central Valley Water Board is interested in developing an efficient process for evaluating beneficial uses and is pleased that CVCWA wishes to help in this effort. Issue No. 4 (Beneficial Use Designations) in the Triennial Review Work Plan includes an initial discussion of this issue and some approaches that might address this issue.

d. *Remove Non-Detect Standard for Organochlorine Pesticides: The pesticide objective for the Sacramento and San Joaquin River Basins includes an objective for chlorinated hydrocarbon pesticides that states that they "shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer." (Basin Plan, III.6.00.) This provision was adopted into the*

Basin Plan in 1975 and was classified as an interim objective by the Regional Water Board due to a lack of information regarding tolerance levels. (A Review of the Administrative Record for the Central Valley's Water Quality Control Plan 1975-1994, September 2003 (Review), at p. 32.) By classifying the pesticide objective as an interim objective, the Regional Water Board intended to develop specific numeric objectives as part of the triennial review process. (Review at p. 32.) However, such follow-up actions have never occurred. As a result, the objective fluctuates with the accuracy of analytical methods rather than being based on the appropriate level to protect the uses of the waterways of the Sacramento and San Joaquin River Basins. Consequently, the non-detect standard should be removed from the Basin Plan.

The Basin Plan does not indicate that this is an interim provision. Regardless of whether the Basin Plan specifies water quality objectives as interim or final, the Central Valley Water Board may revise water quality objectives when it has information that indicates the need to do so. Re-evaluating this water quality objective has been included in Issue No. 7 (Pesticide Control Efforts).

e. *Three Species Chronic Tests: As part of the triennial review, the Regional Water Board should identify the need for a policy that explains how the Regional Water Board intends to interpret three species chronic toxicity tests to determine if the narrative "no toxics in toxic amounts" water quality objective has been violated. Currently, different standards in different permits create confusion and uncertainty amongst the various wastewater agencies throughout the Central Valley.*

The State Water Board is currently evaluating the toxicity control provisions in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). State Water Board adopted water quality control plans supersede Regional Water Board basin plans for the same geographic area (CWC §13170). The Central Valley Water Board will participate in the State Water Board's process. See Issue No. 12 for State Water Board Plans and Policies and Other Statewide Issues that are under development.

6. Tier Two Issues

a. *CVCWA continues to support and commend the Regional Water Board for its stakeholder-based process to develop a Drinking Water Policy for the Central Valley. It is unfortunate that current funding issues will cause unknown delay in the development of a comprehensive, scientifically supportable policy for drinking water.*

In light of this delay, CVCWA urges the Regional Water Board to re-prioritize the stakeholder-based development of an equitable Drinking Water Policy when funding permits. The Regional Water Board should be certain that any Drinking Water Policy developed now or in the future provides reasonable protection for drinking water while ensuring that out-of-Valley interests that benefit from the policy share in the costs of implementing and complying with the final policy.

The Central Valley Water Board is committed to developing a comprehensive drinking water policy (Central Valley Water Board Resolution No. R5-2004-0091 and R5-2010-0079). Certainly, the funding affects the schedule for completing the policy. However, re-prioritizing this issue will not create a better policy. At this time, there is still momentum and institutional knowledge from the stakeholders that continues to support a high priority for this issue. Resolution R5-2010-0079 provided direction for future actions and set deadlines for interim deliverables associated with Policy development by July 2013. Since the 2010 Resolution, staff has worked closely with the Workgroup to develop a draft Policy Outline and Work Plan/Funding Proposal as required by the 2010 Resolution. See Issue No. 9 (Policies for Maintaining Water Quality for Drinking Water) for more details on the status of this policy.

b. *CVCWA commends the Regional Water Board for its commitment to stakeholder outreach in devising a groundwater strategy pursuant to Resolution No. R5-2008-0181. The development of a long-term groundwater strategy should remain a high priority in the triennial review process.*

CVCWA encourages the Regional Water Board to work with the State Water Board to develop a comprehensive groundwater strategy. Due to the many stakeholders who use and/or have the potential to impact groundwater, the Regional Water Board and State Water Board need a collaborative process for developing a scientifically sound policy for the Central Valley and the State. CVCWA prefers a sound groundwater policy to the Regional Water Board's current practice of establishing ad hoc policy on a permit-by-permit basis. In the absence of a sound policy, the Regional Water Board could potentially interpret and re-interpret narrative groundwater objectives much in the same way as done for surface water objectives. This process results in the use of de facto numeric water quality objectives that have not been evaluated under Water Code section 13241.

The Central Valley Water Board agrees that a regionwide, if not a statewide policy, on groundwater protection is important. The Central

Valley Water Board works closely with the State Water Board on development and implementation of groundwater programs and policies. The Central Valley Water Board also recognizes the importance of groundwater to the stakeholders of the Central Valley and adopted the Groundwater Quality Protection Strategy or "Roadmap" with Resolution No. R5-2010-0095. See Issue No. 14 (Groundwater Survey and Control Policies for Discharges to Groundwater) and the Central Valley Water Board's webpage for Groundwater Quality[1] for more information.

c. *Pesticide Control Program: CVCWA commends the Regional Water Board for considering the adoption of numeric water quality objectives for pesticides instead of continuing to rely solely on the narrative objectives currently contained in the Basin Plan. Since wastewater agencies may be directly impacted by the adoption of water quality objectives for pesticides, wastewater agencies must be involved as stakeholders in any pesticide basin planning efforts. CVCWA urges the Regional Water Board to prioritize the adoption of numeric water quality objectives for pesticides—established in compliance with the intent and specific requirements of the California Water Code section 13241—in any pesticide basin planning efforts conducted during this triennial review period.*

The Central Valley Water Board has a goal of establishing numeric water quality objectives for pesticides that present a potential threat to water quality to surface waters in the Sacramento and San Joaquin River Basins. The public process for amendments to the basin plan has begun. The Central Valley Water Board encourages all stakeholders to participate. Interested persons may subscribe to electronic mailing lists for any of the basin plan amendments through our website at:

http://www.waterboards.ca.gov/resources/email_subscriptions/reg5_subscribe.shtml

Postal mail notifications are also available by contacting the staff person for each amendment. See Issue No. 7 for more information on the Central Valley Water Board pesticide control efforts.

<u>Mr. Jeffrey R. Single, Ph.D., Regional Manager, Department of Fish and Game, Central Region</u>

7. *The Department of Fish and Game stresses the importance for COLD beneficial use to remain in the Basin Plan for many Central Valley streams and also recommends a priority be given to establish a numeric water*

[1] Webpage located at:
http://www.waterboards.ca.gov/centralvalley/water_issues/groundwater_quality/index.shtml

quality objective for temperature to protect COLD in the upper and lower San Joaquin River.

Of particular concern in this case is protecting habitat for migrating, spawning, juvenile rearing and outmigrating Chinook salmon and steelhead in the San Joaquin River.

It is imperative the COLD beneficial use designation remains for the San Joaquin River, especially the mainstem above the mouth of the Merced River to Friant Dam. At present, migrating salmonids are excluded from entering the San Joaquin River upstream of the mouth of the Merced River by an artificial barrier. The intentional exclusion is necessary due to the lack of suitable habitat and elevated temperatures in reaches of the upper San Joaquin River. However, that may change in the near future as the Friant Restoration Settlement Parties begin implementing the proposed San Joaquin River Restoration Program. The Program has the primary goal of restoring naturally reproducing, self-sustaining spring-run and fall-run salmon populations and other native fish (including steelhead) on the river mainstem, upstream of the mouth of the Merced River to Friant Dam. The Program's guidance document is the Draft Fisheries Management Plan: A Framework for Adaptive Management in the San Joaquin River Restoration Program. The Management Plan identifies temperature among the most important manageable factors for salmonid survival.

In order to protect the COLD designation for beneficial uses in the San Joaquin River, a Basin Plan amendment is needed to establish a numeric water quality objective for temperature.

Numeric objectives for temperature should be at least as stringent to protect the most sensitive fish and wildlife resource protected under the COLD designated beneficial use. In this case, the most sensitive to elevated temperatures would be the basin's salmonid fishery. The EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards are expected to be applied to specified reaches of the San Joaquin River and its major tributaries based on salmonid habitat and temperature requirements for each life stage.

We cannot stress enough the importance of establishing protective temperature requirements in advance of the planned restoration of spring-run and fall-run salmon on the upper San Joaquin River; and also improving the existing populations of fall-run Chinook salmon and steelhead in the river's major tributaries. The Department looks forward to partnering with the Regional Board in this endeavor of maintaining water quality standards for salmonids by establishing and applying effective numeric objectives for temperature, implementing a plan to achieve those

objectives, and helping to restore this region's valued public trust resources.

The Central Valley Water Board strives to protect the beneficial uses of all the waters in its jurisdiction. Certainly, any amendments to modify the aquatic life or habitat beneficial uses will only occur after consultation with the Department of Fish and Game.

Temperature objectives have been identified in the past as a need for spring-run Chinook salmon and steelhead in the Sacramento River watershed. The Central Valley Water Board is also interested in evaluating temperature objectives to protect salmonid habitat in the San Joaquin River. See Issue No. 10 (Protection of Central Valley Fisheries and other Aquatic Life) in the Triennial Review Work plan for more details.

<u>Ms. Melissa A. Thorme, Downey Brand, on behalf of the City of Tracy</u>

8. *The Regional Water Board should expand its analysis of the best method to measure and assess salinity for protection of beneficial uses in the southern Delta beyond Electrical Conductivity (EC) to include analysis of TDS, "effective" EC (only measuring the relevant EC that may impact agricultural beneficial uses), and/or individual salinity-related constituents, and then determine the most accurate and cost-effective manner to regulate salinity for the benefits of all interested in the southern Delta.*

   Water quality objectives for the EC for the southern Delta need not be overly conservative so as to be unreasonable or unnecessary for adequate protection of the Agricultural Supply beneficial use. Use of EC as the simple measure of salinity should be re-evaluated by the Regional Water Board, and alternative measures, such as TDS, "effective" EC, or more specific salinity compounds (e.g. if individual constituents that comprise EC are more directly relevant to reasonable protection of beneficial uses and allow compliance flexibility), should be investigated and used if more accurate and reasonable regulation will result. If EC is retained as the measure for salinity, new numeric water quality objectives for EC should be adopted based on recent information and studies, to provide for the reasonable protection of the Agricultural Supply beneficial use. The Regional Water Board must comply with Water Code section 13241 and 13242, if incorporating water quality objectives from updates to the State Water Board's Bay-Delta Plan, or adopting new water quality objectives for the southern Delta.

   The south Delta salinity objectives were established by the State Water Board in its Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan). The State Water Board is in the process of evaluating southern Delta salinity. The

Central Valley Water Board coordinates with the State Water Board on the Bay Delta Plan. Currently, the Central Valley Water Board is working on a regionwide policy called the CVSALTS initiative which will address salts and salt compounds. CVSALTS will also include management plans and may be the appropriate venue to evaluate use of EC as the measure of salinity. See Issue No. 1 (Salt and Nitrate Management) for more details.

In addition, staff is working on strategies that would provide interim regulatory solutions for dischargers adversely affected by salinity regulation while the CV-SALTS initiative is under development.

9. *The Basin Plan incorporates by reference the numeric water quality objectives for EC for the protection of agricultural beneficial uses from the 1991 Bay-Delta Plan. The Regional Water Board did not include a prospective incorporation by reference of any future modifications to water quality objectives from the Bay-Delta Plan. The 1991 (and 1995) Bay-Delta Plan applied numeric EC objectives at four locations in the Delta and implementation of those objectives was to occur via regulation of water flow by federal and state agencies controlling Delta water flows and best management practices and waste discharge requirements for non-point source dischargers. See 1991 Bay-Delta Plan at Table 1-1, pgs. 2-2 and 7-5. Without appropriate analysis, the 2006 Bay-Delta Plan suddenly applied the numeric objectives to all waterways within the southern Delta, and implementation was expanded to include restrictions on municipal discharges to the southern Delta. These changes have not been incorporated into the Regional Water Board's Basin Plan.*

As such, only the four compliance points currently referenced in the Basin Plan can be used for impairment determinations for the southern Delta and for reasonable potential determination prior to NPDES permitting decisions. It is the City's understanding from staff at the State Water Board that purported "non-substantive" modifications to the 2006 Bay-Delta Plan's water quality objectives for EC have not yet been approved by the U.S. EPA, and therefore, cannot be used as "applicable water quality standards" for Clean Water Act/NPDES permitting purposes. Under federal case law and federal regulations, state water quality standards adopted after May 30, 2000 are not valid under federal law until explicitly approved by U.S. EPA. See 40 C.F.R. §131.2(c)(2).

If the Regional Water Board wants to incorporate into its Basin Plan the not-yet effective and inadequate 2006 modifications to the Bay-Delta Plan, the Regional Water Board must first undertake analysis in compliance with Water Code section 13241 (analyzing whether expansion of the objectives, both geographically and to the specified types of discharges, is appropriate), and amend the Basin Plan's implementation plan for EC to incorporate a plan for relevant and affected municipal dischargers,

including the City. Prior to implementation, the revised water quality objectives for EC would need to be approved by the U.S. EPA. None of these activities has yet occurred; therefore, the Regional Water Board cannot yet impose the EC objectives from the 2006 Bay-Delta Plan. The same analysis and compliance with Water Code sections 13240-13247 is required for any new water quality objective(s) for EC that the Regional Water Board may adopt in lieu of applying the 2006 Bay-Delta Plan water quality objectives for EC.

In accordance with California Water Code section 13170, water quality control plans adopted by the State Water Board supersede Regional Water Board basin plans for the same geographic area. No formal action is required on the part of the Central Valley Water Board to amend its Basin Plan in order for the most current Bay-Delta Plan to take effect. Nevertheless, the Central Valley Water Board adopted non-regulatory amendments in 2009 to update various parts of the Basin Plan including the reference to the State Water Board 2006 Bay-Delta Plan.

The USEPA formally approved the Bay-Delta Plan standards on 26 September 1995. The 2006 Bay-Delta Plan was adopted by the State Water Board in Resolution No. 2006-0098, in which the State Water Board found that there were no substantive amendments to any water quality standards. Therefore, USEPA approval of the 2006 Bay-Delta Plan was not required. The 2006 Bay-Delta Plan went into effect upon approval by the Office of Administrative Law which occurred on 27 June 2007.

On 1 June 2011, Judge Timothy Frawley of the Sacramento Superior Court issued a peremptory writ of mandamus ordering that adoption of the portion of State Water Board Order WQ No. 2009-0003 related to southern Delta agricultural Electrical Conductivity (EC) water quality objectives in the Bay-Delta Plan was a prejudicial abuse of discretion. As a result, the Court further ordered the State Water Board to provide the Central Valley Water Board to comply with the Court's Order including (1) any "reasonable potential analysis for the Bay Delta EC Objectives will be performed at the Old River/Tracy Road Bridge compliance location specified in the Bay-Delta Plan rather than at the end of Tracy's discharge pipe unless the compliance locations are subsequently modified and (2) the current Bay-Delta EC Objectives shall not apply to the City of Tracy and other municipal dischargers pending the reconsideration of the Bay-Delta EC Objectives and adoption of a proper program of implementation that includes municipal dischargers, in compliance with the Court's ruling. The Court further directed the State Water Board to reconsider and revise the Bay-Delta Plan provisions related to Bay-Delta EC Objectives and related program of implementation. The State Board is currently working with the Regional Board to determine how best to respond to the 1 June

2011 Court Order and subsequent remand order from the State Water Board to the Central Valley Water Board issued on 1 September 2011.

10. *The Regional Water Board's Basin Plan does not contain an implementation plan describing how water quality objectives for EC incorporated by reference from the Bay-Delta Plan are to be implemented in relation to municipal wastewater discharges. This lack of a comprehensive implementation plan violates Water Code section 13242 and should be identified as a priority project as a result of this Triennial Review process. It is imperative that the Regional Water Board provide a comprehensive implementation plan for salinity that specifically addresses feasible steps for municipal wastewater dischargers to take to achieve compliance.*

    The Bay-Delta Plan includes any necessary implementation programs. The Central Valley Water Board's Basin Plan is not required to include an implementation program for the Bay-Delta Plan. However, the Central Valley Water Board is free to develop implementation programs for waste discharges in the Delta, subject to State Water Board approval. This concern is discussed further in Issue No. 1 (Salt and Nitrate Management).

<u>Mr. Matthew Mitchell, United States Environmental Protection Agency, Region IX</u>

11. *The issue to "Develop Temperature Criteria to Protect Chinook Salmon and Central Valley Steelhead" should continue to be identified as a high priority in the upcoming Work Plan. The Bay-Delta Water Quality Control Plan (State Water Resources Control Board, 1995) sets a narrative objective of doubling of natural production of Chinook salmon and endorses a basin-wide approach to achieving this objective. Any work undertaken by the Regional Board on temperature criteria should be conducted in the context of the Bay-Delta Plan narrative objective and plans and activities to support this objective.*

    In 2003, EPA Region 10 issued regional guidance for developing numeric temperature standards for the Pacific Northwest to protect cold water (salmonid) beneficial uses. This guidance was endorsed by both NOAA Fisheries and the U.S. Fish and Wildlife Service (FWS). While EPA Region 9 has not adopted similar guidance, we generally support the scientific approach proposed in this guidance, which recognizes factors of biology, life stage/timing, and the natural thermal patterns. We are interested in discussing the merits of this approach with the Central Valley Regional Board technical staff and the appropriate offices of NOAA and FWS during this triennial review.

The Central Valley Water Board also believes temperature objectives protective of salmonids are important. Staff will consult with EPA, NOAA Fisheries and US Fish and Wildlife Service on any amendments to the Basin Plan affecting salmonids. See Response to Comment No. 7 and Triennial Review Work Plan Issue No. 10 (Protection of Central Valley Fisheries and other Aquatic Life).

12. *EPA would like to see the two outstanding disapprovals from the May 26, 2000 action resolved. The tributary rule and Delta DO disapprovals remain outstanding.*

    a. *On September 6, 2002, the Regional board adopted an amendment that would have resolved the tributary rule disapproval by clarifying the Regional Board's use designation process; however, that amendment was withdrawn from State Board consideration in 2003 and, therefore, has never been submitted to EPA for approval. We strongly encourage the Regional Board to complete the process of resolving this disapproval.*

    The Executive Officer withdrew the amendment addressing the tributary rule pending the resolution of ongoing litigation. The Central Valley Water Board will consider this amendment when the litigation is settled.

    b. *EPA and Regional Board staff have discussed options for resolving the Delta DO disapproval. That disapproval could be resolved by deleting the exemption from DO objectives that is currently in the Basin Plan for Delta water bodies "which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use." To our knowledge, no such waters have been identified.*

    The Central Valley Water Board staff agrees that no water bodies have been identified which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use. Re-evaluation of the dissolved oxygen objectives has been included in Triennial Review Work Plan Issue No. 10 (Protection of Central Valley Fisheries and Other Aquatic Life).

13. *In EPA's May 24, 2000 action on the 1996 "Grassland amendments" to the Basin Plan, we reserved action on the omission of REC-1 and REC-2 uses for the Grassland wetland water supply channels, pending the Regional Board's submission of additional information from the administrative record to justify this omission, consistent with the requirements of 40 CFR 131.10(j). Since then, Regional Board staff have informed us that a search of the administrative record did not yield the necessary information. "Recreation in and on the water" are goal uses*

identified in section 101(a)(2) of the Clean Water Act (CWA). Federal regulations at 40 CFR 131.20(a) require States to reexamine, every three years, any water bodies for which goal uses of the CWA have not been designated to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State must revise its standards accordingly. During the upcoming triennial review, the Regional board should either submit the necessary information to EPA to justify omission of the REC-1 and REC-2 uses or amend the Basin Plan to designate these uses for the Grassland wetland water supply channels.

The Central Valley Water Board considers beneficial use designations as a high priority. The evaluation of REC-1 and REC-2 beneficial uses in the Grassland wetland water supply channels has been included in Triennial Review Work Plan Issue No. 4 (Beneficial Use Designations).

14. *We support the current stakeholder group which is currently working with the Regional Board to establish a Delta methylmercury TMDL and supporting Basin Plan amendment which would include methylmercury fish tissue objectives. However, if the TMDL and water quality objectives are not adopted by the time the triennial review Workplan is scheduled to be adopted, we recommend that the Regional Board adopt the draft methylmercury fish tissue objectives as soon as possible.*

    On 22 April 2010, the Central Valley Water Board adopted methylmercury fish tissue objectives for the Delta as part of the Delta Mercury Control Program in Resolution No. R5-2010-0043. In addition, the State Water Board is working on statewide fish tissue objectives for methylmercury.

15. *On August 24, 2007, EPA completed a Reasonable and Prudent Measures (RPM) required by the California Toxics Rule (CTR) Biological Opinion after consultation with the FWS and NOAA Fisheries. The RPM required us to determine appropriate pentachlorophenol (PCP) water quality criteria for waters in which early life stages of salmonids were present, and further, under conditions of low DO and high temperatures. As a result of the RPM, EPA determined that Site Specific Criteria (SSC) should be adopted for waters in CA where early life stages (ELSs) of salmonids are present, and a lower SSC where they may be under conditions of low DO and high temperatures. EPA promulgated freshwater chronic criteria for PCP of 15 ug/l in the CTR for all inland surface waters. EPA is now in agreement with FWS and NOAA Fisheries that more stringent SSC should be adopted in waters containing ELSs of salmonids: 10 ug/l where ELSs of salmonids are present and 5 ug/l in those waters that also have low DO and high temperatures. We recommend that the Regional Board identifies freshwaters in which ELSs*

of salmonids may be present and includes the updated freshwater PCP criteria for those waters.

The Central Valley Water Board considers peer reviewed science and criteria for the protection of all life stages of all aquatic life and thanks the USEPA for providing the most recent criteria for pentachlorophenol. Review of pentachlorophenol has been included in Triennial Review Work Plan Issue No. 13 (Current USEPA Criteria). However, it should be noted that most water bodies with ELS salmonids are also protected by the municipal and domestic supply (MUN) beneficial use. The CTR criterion for human health consumption of water and organisms is 0.28 ug/l.

16. *The Regional Board should accelerate its efforts to identify and implement controls necessary to reduce selenium loading to Mendota Pool. In listing Mendota Pool as impaired by selenium, the Regional and State Boards noted that the Delta-Mendota Canal is likely a primary contributor of selenium to the Pool. While the Pool is subject to the Basin Plan's site specific selenium objective of 2 ppb monthly mean, the Canal was evaluated for impairment against the CTR criterion of 5 ppb as a 4-day average. We also recommend the Regional Board consider whether a more protective objective should be applied to the Canal in order to protect the downstream uses in Mendota Pool.*

    Water quality objectives for selenium have not been established for the Mendota Pool or the Delta Mendota Canal. Therefore, the CTR criterion of 5 ppb as a 4-day average applies to the Pool as well as the Delta Mendota Canal. Any evaluation of selenium impairments for the Mendota Pool using a selenium criterion of 2 ppb as a monthly mean would be incorrect. Any previous listing errors will be corrected in future listing cycles.

17. *Development of policies for maintaining water quality for drinking water was identified as a high priority in the Regional Board's 2005 Workplan, and in the interim a number of excellent reports have advanced this important subject. The Regional Board should continue its work on development of a Central Valley drinking water policy as a high priority.*

    The Central Valley Water Board appreciates your comments. See response to Comment No. 6.a. and Triennial Review Work Plan Issue No. 9 (Policies for Maintaining Water Quality for Drinking Water) for more details.

18. *The Regional Board has several TMDLs under development, and many more awaiting initiation. TMDLs may require revision to beneficial uses, water quality objectives, or policies on implementation, but resources are not currently available to complete this work. We recognize that resources*

are limited, and encourage the Regional Board to consider options for re-allocating resources, as needed, to ensure appropriate basin planning follow-through on TMDLs.

The Central Valley Water Board agrees that completing TMDLs and the basin plan amendments necessary to implement the TMDLs is important. Dedicated funding for TMDL development and implementation is available. However, the resources needed to address all the water bodies listed as impaired far exceed the available funding. The lack of resources affects all Water Board programs making it difficult to redirect more resources to this particular program. Consistent with the Water Board Strategic Plan (State Water Board Resolution No. 2008-0063), staff continues to explore procedures to more efficiently complete and process TMDLs. For example, staff from multiple water boards are working together to address methylmercury impairments from a statewide perspective. See Issue No. 12 (State Water Board Plans and Policies and Other Statewide Issues) for more information.

19. *We also recommend that you use this time to coordinate with Regional Board NPDES staff to ensure that the Workplan continues to include as high priority any Basin Plan activity necessary to support issuance or reissuance of NPDES permit. For example, the 2005 Workplan did a good job summarizing high priority beneficial use designations, many of which would have an impact on NPDES permit issuance. We recommend that you continue to work with Regional Board NPDES staff to see if any new Basin Plan activities may be needed and to ensure that existing high priority Basin Plan activities are carried out.*

    The planning staff regularly coordinates with the permitting staff as well as staff from other Water Board programs to identify and address planning issues. The Triennial Review Work Plan Issue Nos. 2, 4 and 11 (EDWs, Beneficial Use Designations and Secondary MCLs) provide work plans to address concerns expressed by NPDES permit stakeholders.

<u>Ms. Jo Anne Kipps, Fresno, CA</u>

20. *The Basin Plan should be amended to delete the Guidelines for the Land Disposal of Stillage Waste from Wineries due to their ineffectiveness in protecting the beneficial uses of groundwater underlying stillage disposal operations.*

    If the guidelines are revised, then the revised guidelines should be based on studies to determine the appropriate application rates to prevent water quality degradation. These studies should evaluate loading rates based on soil type or quality of winery wastewater.

The Board is involved in a comprehensive effort called the CVSALTS initiative to address salinity and nitrate problems in the Central Valley and adopt long-term solutions that will lead to enhanced water quality and economic stability. Food processing wastes are one of the categories that will be evaluated in the CVSALTS initiative. Specific evaluation of winery waste guidelines will be included in Triennial Review Work Plan Issue No. 1 (Salt and Nitrate Management).

Mr. Gordon Plantenga and Mr. Mark Miller, Nevada County Sanitation District No. 1

21. *Addressing beneficial use issues and development of regulatory guidance to address water bodies dominated by NPDES discharges should be high priorities.*

The Central Valley Water Board agrees that these issues should be high priorities. See Triennial Review Work Plan Issue Nos. 2 and 4 (EDWs and Beneficial Use Designations) for more details.

Mr. Rich Gigliotti, Director, PG&E Land Services, Pacific Gas and Electric Company

22. *The Basin Plan would be more effective if it identified beneficial use designations for separate water body segments or individual reaches within longer rivers, and particularly for water bodies with large changes in elevation, species assemblages, and other characteristics.*

The Central Valley Water Board agrees that long water body reaches often do not have the same characteristics from its head waters to its outflow due to changes in elevation, riparian vegetation cover, climate, etc. The Board is committed to addressing beneficial use issues. See Triennial Review Work Plan Issues No. 4 (Beneficial Use Designations) and No. 10 (Protection of Central Valley Fisheries and other Aquatic Life) for more details. The Board looks forward to working with PG&E to address these concerns.

23. *The Basin Plan manages any water bodies with both COLD and WARM beneficial use designations as COLD water bodies for the application of water quality objectives. The most current data associated with both COLD and WARM designations suggest that a new designation for a transitional zone may be most appropriate in this situation. This new designation would be applied to a designated segment or reach. Application of COLD water objectives can have unintended consequences if special status warm water species occur within a water body that has both designations. Such an approach would ensure proper protection for all reaches of a watershed.*

The Central Valley Water Board agrees that water bodies with both COLD and WARM beneficial use designations often have a transitional zone where optimum habitat conditions are not represented by water quality objectives for either the COLD or WARM beneficial uses. See Triennial Review Work Plan Issues No. 4 (Beneficial Use Designations) and No. 10 (Protection of Central Valley Fisheries and other Aquatic Life) for more details. The Board looks forward to working with PG&E to address these concerns.

24. *PG&E is particularly interested in the beneficial uses of the following water bodies:*

    (1) Upper North Fork Feather River from Lake Almanor to Lake Oroville
    (2) Pit River
    (3) South Yuba River between Lake Spaulding and Englebright Reservoir
    (4) Willow Creek in Madera County

    These water body segments have been included for evaluation in Triennial Review Work Plan Issue Nos. 4 (Beneficial use Designations).

<u>Mr. Stan R. Dean, Director of Policy and Planning, Sacramento Regional County Sanitation District</u>

25. *The following priority issues should be addressed before the next triennial review:*

    a. Salt Management Policy
    b. Drinking Water Policy
    c. Ammonia & Chlorine Objectives
    d. Pesticide Control Program
    e. Remove Incorporation by Reference of Secondary Maximum Contaminant Levels
    f. Remove Non-Detect Standard for Organochlorine Pesticides
    g. Three Species Chronic Test

    The Central Valley Water Board appreciates the assistance from the Sacramento Regional County Sanitation District in prioritizing the basin planning issues. See Triennial Review Work Plan Issue Nos. 1, 9, 12, 13, 7, and 11 (Salt and Nitrate Management, Policies for Maintaining Water Quality for Drinking Water, Participation in State Water Board Plans and Policies, Current USEPA Criteria, Pesticide Control Efforts, and Secondary MCLs as Water Quality Objectives) for more details regarding salt management, drinking water, ammonia and chlorine objectives,

toxicity control provisions for the SIP, pesticide control programs and the secondary maximum contaminant levels. Also, please see responses to Comment Nos. 5 and 6.

26. *The Regional Water Board should adopt bacteria objectives that are based on appropriate indicators such as fecal coliform, enterococcus or e. coli. The Regional Water Board should also adopt a plan for the implementation of the bacteria objectives that properly guides staff on the linkage between adopted water quality objectives and water quality based effluent limitations.*

    The State Water Board has initiated a process to revise bacterial standards for water contact recreation in fresh waters in California. State Water Board adopted water quality control plans supersede Regional Water Board basin plans for the same geographic area (CWC §13170). The Central Valley Water Board will participate in the State Water Board's process. See Triennial Review Work Plan Issue No. 12 for more information on the State Water Board's plans and policies and other statewide issues.

<u>Mr. Kenneth Petruzzelli, O'Laughlin & Parris LLP</u>

27. The most important issues for the Board to address are Beneficial Use Designations and Effluent and Agriculture Dominated Water Bodies.

    The Central Valley Water Board should solicit information to compile a list of water bodies falling under exceptions 2a and 2b in the Sources of Drinking Water Policy.

    The Central Valley Water Board agrees that addressing beneficial use designations and developing policies to address concerns with effluent and agriculture dominated water bodies are a priority. Suggested procedures for moving forward on these issues will be included in the Work Plan. See Triennial Review Work Plan Issue Nos. 2, 3 and 4 (EDWs, ADWs and Beneficial Use Designations) for more details.

28. *The Central Valley Water Board must impose discharge controls on in-Delta discharges of salts by agricultural, domestic, and municipal dischargers as required by the 2006 Bay-Delta Plan.*

    The Central Valley Water Board includes basin plan objectives from both the Basin Plan and the Bay-Delta Plan in waste discharge requirements, including NPDES permits, for dischargers in the Delta.

29. *The Chemical Constituents objective contained in the Basin Plan currently incorporates primary and secondary maximum contaminant levels (MCLs)*

by reference for application to MUN-designated surface waters. However, Secondary MCLs apply to water provided to the public by community water systems where a community water system is a public water system serving at least 15 service connections of 25 individuals daily at least 60 days out of the year. Also, since Secondary MCLs apply to water provided to the public, they apply at the tap and not the source.

The prospective incorporation by reference and includes future changes to be added to the Basin Plan without consideration of the required factors in Water Code section 13241. The Central Valley Regional Board may consider amending the Basin Plan language to incorporate only MCLs adopted as of a date specified and then update the language in future Basin Plan amendments.

See response to Comment No. 5.b.

30. *The reference to the Bay-Delta Plan should remove the year and reference the Bay-Delta Plan as the "current" edition.*

This recommendation will be considered in a future basin plan amendment to update the language of the Basin Plan. In addition, Water Board staff is discussing the most efficient procedure for consistent referencing of State Water Board plans and policies in regional water board basin plans.

31. *The Basin plan designates water bodies with potential beneficial uses. "Potential" uses are not defined in federal or state regulations, the Basin Plan or any state plan or policy. For clarification, the Central Valley Water Board should define what a "potential beneficial use" is.*

The Clean Water Act requires states to adopt water quality standards and water quality standards are made up of the designated uses and the criteria to protect the uses. "Potential" and "Existing" uses identified in the Basin Plan are designated uses as defined in 40 CFR §131.3(f). Designated uses may be dedesignated after undergoing the processes specified in federal and state laws and regulations. Other regional water board basin plans also use the terms "Potential" and "Existing." Water Board staff are discussing these terms and their definitions. Addressing the term "potential beneficial uses" can be considered in a future basin plan amendment.

32. *The Basin Plan uses the term "natural receiving water temperature" without defining it. The term is defined in the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California (Thermal Plan). While the Thermal Plan applies to coastal and interstate waters and to enclosed bays and estuaries, the State Water Board has used the Thermal Plan definition for*

intrastate waters in water quality orders. When an agency uses an identical term that has a specific definition in similar regulations, the use of the term is presumed to have the same meaning. Consequently, the definition of natural receiving water temperature for the Temperature Objective for intrastate waters is the same as that in the Thermal Plan. For clarification, the CVRWQCB should therefore either include the definitions of natural receiving water temperature, elevated temperature waste, and thermal waste in the Basin Plan or adopt the definitions by referencing the Thermal Plan.

In State Water Board Order No. WQ 2002-0015, the State Water Board states that "Natural receiving water temperature" is defined in the State Water Board's Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (1975) (Thermal Plan). It means "[t]he temperature of the receiving water at locations, depths, and times which represent conditions unaffected by any elevated temperature waste discharge or irrigation return waters."

The recommendation to define "natural receiving water temperature" in the Basin Plan will be considered in a future basin plan amendment to update the language of the Basin Plan.

<u>Mr. John Herrick, South Delta Water Agency</u>

33. *The Central Valley Water Board should promptly adopt and implement salinity standards for the San Joaquin River above Vernalis as instructed by the State Water Board. Although various upstream efforts by water districts have apparently decreased the load of salt in the river during some times, the concentration problems remain. Regional Board efforts to date have placed no time line on actually addressing the salinity problem, only deter action or enforcement. It is clear that the salt problem derives from the surface and subsurface drainage from CVP service area on the west side of the valley. The only possible solutions to the salinity problem are (i) removal of salts from discharges, (ii) cessation of discharges, or (iii) dilution of the concentrations. The Basin Plan should recognize these limited options and move forward to require action on the appropriate one or ones.*

The Central Valley Water Board continues to work on salinity objectives for the San Joaquin River above Vernalis. Recently, in order to provide more coordination, this work has been incorporated into the CV-SALTS effort. Salinity issues in the Central Valley are expected to be addressed by the CV-SALTS effort. See Triennial Review Work Plan Issue No. 1 (Salt and Nitrate Management) for more details.

34. *The Basin plan must address the issue of minimum flows on the San Joaquin. Current DFG modeling, as well as current NMFS and USFWS Biological Opinions indicate that additional flows are needed in order to preserve endangered and threatened species.*

    Flow objectives are part of water rights. Therefore, the State Water Board is responsible for determining minimum flows if appropriate.

35. *The Basin Plan should reaffirm both federal and state anti-degradation laws. There are ongoing efforts to relax such protections to the detriment of beneficial uses. The Regional Board should take note of recent reports which indicate that salinity may likely affect fish, by creating false gradients which impair the normal migrations.*

    The Central Valley Water Board implements anti-degradation consistent with state and federal regulations found in State Water Board Resolution No. 68-16 and 40 CFR 131.12, respectively. The Basin Plan recognizes both sets of regulations on Page IV-8.00.

36. *"Finally, our comments to the various TMDL processes are herein incorporated."*

    This response to comments includes basin planning comments submitted as part of the 2008 Clean Water Act Section 303(d)/305(b) Integrated Report process. None of the comments submitted by the South Delta Water Agency were identified as basin planning comments.

<u>Ms. Elaine Archibald, Executive Director, California Urban Water Agencies</u>

37. *The Central Valley Drinking Water Policy should continue to be listed as a high priority item in the Triennial Review Work Plan.*

    The Central Valley Water Board appreciates the assistance from the California Urban Water Agencies in prioritizing the basin planning issues. See Triennial Review Work Plan Issue No. 9 (Policies for Maintaining Water Quality for Drinking Water) for more details drinking water policy development.

<u>Mr. Art O'Brien, City of Roseville</u>

38. *Pleasant Grove Creek should be designated WARM rather than COLD. The Regional Water Board staff should reconsider the appropriateness of listing the upper Pleasant Grove Creek for dissolved oxygen. The current dissolved oxygen standard applicable to Pleasant Grove Creek was assigned, in part, based on the Basin Plan's "tributary statement," which*

designated the COLD beneficial use year-round. Based on the fact that upper Pleasant Grove Creek is a valley floor water body that is seasonally low-flow and ephemeral in nature, and supports abundant plant and animal communities, it is highly unlikely that a substantial change in the frequency with which this reach experiences dissolved oxygen levels below 7 mg/l could be affected by reasonable, implementable load restrictions placed on nutrients or other constituents/parameters affecting reach dissolved oxygen levels. If natural factors are the primary reason why the dissolved oxygen levels in the upper reach of Pleasant Grove Creek fall below 7 mg/l for a portion of the day during the late spring through fall period, annually, then 303(d) listing the water body reach and conducting a TMDL will not meaningfully change the situation.

Pleasant Grove Creek will be included in Triennial Review Work Plan Issue No. 4 (Beneficial Use Designations) as a water body that should have its beneficial uses reviewed.

Mr. Donald P. Freitas, Contra Costa Clean Water Program

39. *The Kellogg Creek (tributary to Clifton Court Forebay, Contra Costa County; partly in Delta Waterways, central and western portion) listing for unknown toxicity and sediment toxicity appears to be based on the beneficial use designation of Cold Freshwater Habitat. The Cold Freshwater Habitat beneficial use is not appropriate and the Warm Freshwater Habitat is more appropriate for the downstream portions of the creek where the samples were taken (Kellogg Creek at Highway 4 and along Hoffman Lane).*

    Kellogg Creek will be included in Triennial Review Work Plan Issue No. 4 (Beneficial Use Designations) as a water body that should have its beneficial uses reviewed.

Mr. Parry Klassen, East San Joaquin Water Quality Coalition

40. *Based on the [Sacramento River/San Joaquin River Basin Plan], the tributary rule applies beneficial uses of the San Joaquin River to upstream water bodies that do not have listed beneficial uses. This has resulted in many water bodies within the ESJWQC region being listed on the 303(d) list. If these water bodies are listed based on beneficial uses applied due to the tributary rule, the result will be the implementation of a costly TMDL aimed to protect unattainable and sometimes conflicting beneficial uses. Resolution 2005-0050, Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options, states that a water body may be de-listed if "incompatible uses exist" which is clearly the case for many of the agricultural drains which have been assigned municipal drinking water beneficial uses. It is the opinion of the ESJWQC that the*

State and Regional Boards should prioritize the evaluation of beneficial uses during the next tri-annual San Joaquin Basin Plan amendment (2009) review.

The ESJWQC is aware of similar situations where beneficial uses have been contested by entities within the Tulare [Lake] Basin Plan area during the associated Basin Plan amendment process. The entities that supplied documentation regarding inappropriate beneficial use designations were told that there are insufficient funds to review those documents. The ESJWQC would like to take this opportunity to remind the State and Regional Boards of the importance of reviewing and updating beneficial uses. Due to the influx of obtainable water quality information through programs such as the ILRP, data are now available for water bodies that previously had little or no water quality information. As such, many of the water bodies within agricultural areas have not been assigned appropriate beneficial uses and it is apparent that the current listings of recreation and drinking water are unrealistic and incompatible with the current hydrology and land use of those areas. This problem is more widespread than the ESJWQC region and the Coalition hopes that the State and Regional Boards realize the importance of committing resources to thoroughly review and update currently assigned beneficial uses.

The Central Valley Water Board agrees that addressing beneficial uses should be high priorities. See Triennial Review Work Plan Issue Nos. 3 and 4 (ADWs and Beneficial Use Designations) for more details.

<u>Mr. Jerald James, Madera County</u>

41. *The Fresno River above Hensley Reservoir should be designated WARM rather than COLD.*

The Fresno River above Hensley Reservoir will be included in Triennial Review Work Plan Issue No. 4 (Beneficial Use Designations) as a water body that should have its beneficial uses reviewed.

<u>Mr. Mike Wackman, San Joaquin County Delta & Water Quality Coalition</u>

42. *Beneficial uses have been inappropriately applied to water bodies upstream of the San Joaquin River using the tributary rule, which resulted in may of the proposed listings. The State and Regional Boards should prioritize the evaluation of beneficial uses during the next tri-annual San Joaquin Basin Plan amendment (2009) review.*

The Central Valley Water Board agrees that addressing beneficial uses should be high priorities. See Triennial Review Work Plan Issue Nos. 4 (Beneficial Use Designations) for more details.

Ms. Karna E. Harrigfeld, Stockton East Water District

43. *The Calaveras River is a highly managed basin. During the 1950s, the City of Stockton was flooded and many lives were lost and millions of dollars of damage was suffered. As a result of the floods, the Army Corps of Engineers constructed levees that could hold 12,500 cfs of flood water, re-routed Mormon Slough around the City with the construction of the Stockton Diverting Canal, and all winter time flows in the Old Calaveras River Channel were eliminated. The only time the Old Calaveras River Channel has water in it is during the irrigation season, when the District opens the Old Calaveras Headworks Facility. There are no fish present in the Old Calaveras River channel, and therefore, the designation of it as a "cold water" fishery is inappropriate.*

    The Calaveras River will be included in Triennial Review Work Plan Issue No. 4 (Beneficial Use Designations) as a water body that should have its beneficial uses reviewed.

Ms. Valerie Kincaid, San Luis & Delta Mendota Water Authority

44. *The triennial review should be coordinated with the State Water Board periodic review of the Bay-Delta Plan. Recently the State Board adopted a staff report and it deferred the issues of ammonia and toxics to the Regional Board. And the Authority would like to ensure that the process, the triennial review process, takes that into consideration, and the process coordinates and complements the State Board process.*

    Staff consults with State Board staff on triennial review issues that overlap statewide planning activities including the Bay-Delta Plan. Regional Board planning activities described in the Triennial Review work plan are generally coordinated with statewide planning priorities at the time the work plan is considered. The State Water Board staff with the San Francisco and Central Valley Water Board staff have formed a team to improve coordination of Water Boards' activities in the San Francisco Bay and Sacramento-San Joaquin Delta. More information is included in Triennial Review Work Plan Issue No. 5 (Delta Issues).

45. *The Authority would like to note that there are ongoing Basin Plan amendments and we hope that the current triennial review does not slow down or otherwise impact the moving forward of those Basin Plan amendments. So I guess the idea is to adopt comprehensive, coordinated, feasible objectives.*

    The Triennial Review is a prioritization activity conducted with resources that are different than most of the resources used to conduct basin plan

amendments and Triennial Review staff is generally different than the staff assigned to basin plan amendments. Therefore, ongoing basin plan amendments are not affected by the Triennial Review.

Ms. Karna Herrigfeld, Stockton East Water District

46. *The reach of the Calaveras River from below the weir up to New Hogan Dam is an 18 mile reach where there is water flowing, rainbow trout, beautiful habitat. From below the weir down to what is referenced as the Stockton Diverting Canal; that is reach two. That is a dry area. Water only flows in it when we are irrigating. There is an additional reach from the Stockton Diverting Canal to the San Joaquin River. The way that it is listed in the Basin Plan it says that cold water and spawning apply to the entire Calaveras River. So what we are requesting as a high priority issue is the redesignation of the beneficial use for the lower portions from the San Joaquin River to the Stockton Diverting Canal and from the Stockton Diverting Canal to below the weir, to have the beneficial uses for cold water and spawning removed. We recognize that that could potentially be a migration route, so we are not requesting that migration be eliminated.*

    See response to Comment No. 43.

47. *Stockton East believes that there is sufficient evidence to add to the DO water quality objectives a specific objective for the Stanislaus River. Currently we have specific DO objectives for the Sacramento, Feather, Tuolumne and the Merced. And, as you know, the three main tributaries on the San Joaquin River are the Merced, the Tuolumne and the Stanislaus. Over the course of the past 15 years or more, stakeholders on the river have done an incredible amount of work on monitoring. And we have developed a whole host of information, and so it is our opinion that we would like to see a dissolved oxygen objectives specifically set forth for the Stanislaus River and that it apply from Orange Blossom Bridge up to Goodwin, which is right below New Hogan and Tulloch Dam. So it is the major stretch where fishery resides during the time in which DO is an issue on the Stanislaus River.*

    Dissolved oxygen water quality objectives will be included in the Triennial Review Work Plan Issue No. 10 (Protection of Central Valley Fisheries and Other Aquatic Life).

Mr. Ed Cheslak, Pacific Gas & Electric Co.

48. *Many of the beneficial use designations that are utilized in the Basin Plan were developed based upon then current information. More recent data indicates that historic designations in some of the surface water bodies in the Basin Plan may not be appropriate for all of the reaches within those*

water bodies. You heard similar testimony just a little bit ago. Because much better information about these water bodies is now available, as well as much better understanding through the three decades of experience and definitions and applications of some of these beneficial uses should be reevaluated and updated. It would be more effective to identify beneficial use designations for separate water body segments or individual reaches. Especially within long rivers that are 10 to 15 miles in total length. In particular for water bodies with large changes in elevation or species assemblages or other characteristics which would yield nice discrete segments.

The current Basin Plan manages all water bodies with cold and warm beneficial use designations as cold water bodies for the application of water quality objectives. This approach can result in some unintended consequences, such as protection of protected species. The most current data associated with cold and water designation suggests that a new designation for a transitional zone may be appropriate for these kinds of mixed classifications. This new designation can be applied to specific segments of reaches and such an approach would ensure protection for all beneficial uses of that water body, such as cold, warm and transitional zones.

So we at PG&E recommend a collaborative review of the surface water body definitions and beneficial use designations for each of the water bodies of concern, and we have identified some of those water bodies in our letter to you to determine whether the current designations are appropriate. Where appropriate we ask that you redefine those water body definitions through segmentation and take into account the assemblages and elevations we mentioned. This analysis will ensure that water bodies are managed the best possible water to protection of the beneficial uses.

See response to Comment Nos. 22 and 23.

<u>Mr. Steve Bailey, City of Tracy</u>

49. *The Regional Water Quality Control Board should comply with Water Codes sections 13241 and 13242 when incorporating water quality objectives from updates to the State Water Board's Bay-Delta Plan when adopting new water quality objectives for the southern Delta.*

In 2006, the State Water Board, without supporting environmental analysis or analysis under Water Code section 13241 and in the guise of non-substantive modifications, extended the applicability of the previously adopted water quality objectives for EC at Vernalis throughout the entire southern Delta. The Bay-Delta Plan's implementation was not modified to

include municipal dischargers as an entity required to take actions necessary to achieve the objectives, it did not describe appropriate action, and it did not include a time schedule for such actions. All of these are required by Water Code section 13242.

And the USEPA has not yet approved the 2006 modification for the Bay-Delta Plan. Until the 2006 modification is approved by the USEPA, it cannot be properly used for 303(d) listing decisions of NPDES permitting decisions. Water quality objectives for the EC in the southern Delta need not be so overly conservative so as to be unreasonable to unnecessary for adequate protection of agricultural beneficial uses. Time of year salinity objectives should be examined as well as alternative measurements, such as TDS, effective EC or more specific salinity compound such as the specific ions.

It is imperative that the Regional Water Quality Control Board provide a comprehensive implementation plan for salinity that specifically addresses feasible steps for municipal dischargers to take to achieve compliance.

See response to Comments No. 9 and 10.

<u>Mr. Ken Petruzzelli, San Joaquin River Group</u>

50. *The number one issue is the beneficial uses issue because that starts everything. There really isn't a mechanism or process to address what I don't want to call necessarily de-designation, but site-specific uses or site-specific objectives. Something more precise that what is already in the Basin Plan. That would be more appropriate to the specific water body, given its hydrograph and its natural characteristics.*

    Issue No. 4 (Beneficial Use Designations) in the Triennial Review Work Plan includes an initial discussion of this issue and some approaches that might address this concern.

51. *Stakeholders may be willing to fund Basin Plan amendments if they think that there is a possibility that the Basin Plan amendment might go forward. There is a kind of chicken or egg problem. Stakeholders might fund the process but they want to see that the process might go somewhere.*

    Staff is available to discuss ideas for basin plan amendments and funding. The Central Valley Water Board has previously adopted Basin Plan Amendments brought up and funded by stakeholders. These amendments include site-specific water quality objectives pH, turbidiy and temperature for Deer Creek in El Dorado County; regionwide water quality objectives for pH and turbidity; de-designation of four beneficial uses of Old Alamo Creek in Solano County; and site-specific water quality

objectives for chloroform, chlorodibromomethane, and dichlorobromomethane for New Alamo and Ulatis Creeks in Solano County and permit implementation provisions.

52. *With respect to salinity, Dr. Hoffman has drafted a report on crop salt tolerance in the South Delta that would be very good for salinity basin planning work.*

The Central Valley Water Board is very interested in the salt report prepared by Dr. Hoffman for the State Water Board. Staff has used Dr. Hoffman's approach to develop a similar report on salt tolerance of crops in the Lower San Joaquin River. Development of salt and boron objectives for the San Joaquin River upstream of Vernalis is being undertaken by the CV-SALTS effort. See Issue No. 1 (Salt and Nitrate Management) for more information.

53. *I concur with comments about re-evaluating the secondary MCLs. The three numbers that they usually have are really confusing in their application. As the DHS regulations are written, they apply to tap water which is treated while the Basin Plan applies them to surface water. And any one of those three numbers may or may not be appropriate for the specific surface water at issue.*

The Central Valley Water Board is also interested in evaluating the use of secondary MCLs as water quality objectives and will include this issue in the Triennial Review Work Plan as Issue No. 11 (Secondary MCLs as Water Quality Objectives).

<u>Ms. Susan K. Moore, United State Department of the Interior, Fish and Wildlife Service</u>

54. *The Commenter requested the following action to protect the quality of water delivered to wetland areas within the Grassland watershed, to protect federally listed species in the Grassland wetlands, and to protect existing and future runs of anadromous fish in the San Joaquin River: Addition of RARE beneficial use designation for protection of the giant garter snake in the public and private wetlands of the Grasslands and consideration and protection of this beneficial use.*

The Grasslands waterways will be included in Triennial Review Work Plan Issue No. 4 (Beneficial Use Designations) as water bodies that should have its beneficial uses reviewed.

<u>Mr. Ken Petruzzelli, San Joaquin River Group</u>

55. Beneficial Use Designations

Many of the issues listed in the Issue List, such as water bodies dominated by NPDES discharges; agricultural dominated water bodies and agricultural conveyance facilities; beneficial use designations; dividing long streams into smaller segments, each with different beneficial uses; and temperature transition zones all tie into beneficial use designations. Since beneficial use designations are the starting point for the regulation of water quality, a better, more efficient way must be developed to more precisely designate beneficial uses for streams, apply the tributary rule, and, if necessary, develop site specific objectives. The current method of amending the Basin Plan for every objective and every stream, such as that used for Deer Creek temperature objectives and MUN designations for Old Alamo Creek, are too time-consuming and expensive to make any meaningful progress. Developing a process and amending the Basin Plan to incorporate such a process would require time and money, but it would save time and money in the long run.

Staff agrees that it would be more efficient to address beneficial uses and water quality objectives using an approach that groups water bodies. The Triennial Review Work Plan includes approaches that group water bodies. However, in recognition that we may lack information on key characteristics to use for grouping water bodies, staff believe that planning for individual water bodies is still useful. Both approaches are included as activities that would be conducted by staff for a number of the issues. See Issues No. 2, 3 and 4 for more information.

56. Salt and Nitrate Management

The Issue List appears to contradict the current Basin Plan. According to the current Basin Plan:

"Of the two major options for disposal of salts produced by agricultural irrigation, export out of the basin has less potential for environmental impacts and, therefore, is the favored option. The San Joaquin River may continue to be used to remove salts from the basin so long as water quality objectives are met."

(Water Quality Control Plan for the Sacramento River and San Joaquin River Basin, p. IV-15.00.)

The Issue List, however, is less favorable towards using the San Joaquin River to export salt from the Basin, on the basis that salts are "recirculated into the federal and State water project pumps and returned to the water users in the San Joaquin River Basin, as well as to water users in the Tulare Lake Basin where there is no outlet for salt at the present time." (Issue List, p. 6.) Absent a valley-wide drain to remove salt from the Basin,

the San Joaquin River remains the only method available for the removal of salt. Unless salt can be removed from the Basin, salt balance cannot occur and salt will built up in the soil and/or groundwater, potentially harming agricultural beneficial uses, depending on where and how these harmful salts accumulate.

As the Issue List recognizes, CV-SALTS is currently working to develop long-term solutions for managing salt in the Basin. (Issue List, p. 9.) Recirculation of salts is one of the many challenges to address in developing a long-term, comprehensive strategy for managing salt in the Basin.

Staff did not intend for the Triennial Review Work Plan to appear to take a position on how an issue should be addressed. The goal of the Work Plan is to describe the issue with the concerns that have been identified by stakeholders and staff and that should be investigated when the issue moves forward. Since the Work Plan describes concerns with the Basin Plan, there are many discussions in the Work Plan that might appear to contradict the Basin Plan. The Work Plan describes the activities that are necessary to confirm that the identified areas of the Basin Plan need revision and, if the Basin Plan does need to be amended, the initial steps for determining how to revise the Basin Plan. At this time there have been no conclusions on the outcomes for the issues in the Work Plan.

57. Use of EPA Region Temperature Criteria

According to the Issues List, the Department of Fish and Game ("DFG"), Region 4, requested the establishment of temperature objectives to protect fall-run Chinook salmon in the San Joaquin River Basin. (Issue List, p. 37.) EPA Region 9 and the DFG support using "the scientific approach used in the EPA Region 10 guidance for development of numeric temperature standards to protect salmonid beneficial uses in the Central Valley." (Id.)

If the CVRWQCB chooses to develop numeric temperature standards to protect salmonid beneficial uses in the Central Valley and, in doing so, considers the EPA Region 10 guidance, it must not repeat a common error with the EPA Region 10 guidance of directly applying its criteria.

In 2003, EPA Region 10, which encompasses Oregon, Washington, Alaska, Idaho, and 267 Native American tribes, determined that there were a variety of chronic and sub-lethal effects likely to occur to Pacific Salmonids, that the guidance in Quality Criteria for Water 1986 would not necessarily protect Pacific Northwest salmonids, and that guidance more specific to Pacific Northwest salmonids was necessary. (EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water

Quality Standards (2003).) As a result, EPA Region 10 chose to adopt additional guidance for designating uses, developing temperature water quality objectives, managing stream temperatures, issuing National Pollutant Discharge and Elimination System permits for heat discharges, and identifying water quality limited segments under Clean Water Act Section 303(d) within its region. It did not adopt new water quality objectives or any new regulations, but simply additional guidance. The guidelines may offer states outside the Pacific Northwest assistance in developing their own temperature objectives. The Region 10 application of its guidelines and the criteria developed were specific to Pacific Northwest salmonids. As a result, the numeric criteria developed applies in the Pacific Northwest generally and may apply in the Pacific Southwest, but only to the degree that the salmonids and hydrologic and other conditions are sufficiently similar.

Region 10 obtained preference and avoidance figures for various Pacific Northwest salmonids by conducting a literature review (Sally Sauter, John McMillan, Jason Dunham, Salmonid Behavior and Water Temperature (Issue Paper 1), Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project (EPA-910-D-01-001, May 2001)[2]*, p. 3-10.) Only one of the studies in the literature reviewed, a study of juvenile wild steelhead, was conducted in California. The other studies used salmonids from British Columbia, Virginia, Oregon, Washington, and Ontario, not California. The lone California study was conducted in an unspecified stream in "northern California," not in the San Joaquin River Basin. Furthermore, only two of the studies observed fall-run Chinook salmon, the only run existing in the San Joaquin River Basin today, but both were conducted in Washington, not in the San Joaquin River Basin. Even then, the Region 10 Temperature Criteria was also only one part of Region 10's guidance. It was not intended to operate alone and be applied directly, but as only one of multiple considerations, such as unusually warm seasonal conditions, natural background temperatures exceeding temperature criteria, and diurnal variations, in developing temperature objectives for the waters of the Pacific Northwest. (Id. at 20, 35.) The general methodology used by EPA Region 10 would be useful and informative, but in developing temperature objectives or in seeking guidance in applying current temperature objectives, the CVRWQCB must avoid directly applying temperature criteria that were never intended for the San Joaquin River Basin.*

Staff agrees that salmonids may have site-specific temperature requirements depending on which major water systems are used. If we

[2] Available at http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/epa_reg10_paper%201_behavioral.pdf

initiate actions to develop water quality objectives for temperature, we will consider all available information, including the information in EPA Region 10 guidance. Issue No. 10 has been revised to clarify that the additional action regarding temperature should be specifically for the Central Valley.

58. San Joaquin River Dissolved Oxygen

Dissolved oxygen conditions in the Stockton Deep Water Ship Channel ("Ship Channel") have significantly improved since 2006. Much of the improvement has been attributable to the City of Stockton's treatment plan upgrades, which have significantly reduced ammonia discharges since 2008. Upstream discharges of oxygen demanding substances are also lower and have further contributed to improved dissolved oxygen conditions in the Ship Channel. Finally, the Department of Water Resources ("DWR") completed testing its aerator and showed that aeration is an effective method of improving dissolved oxygen conditions in the Ship Channel. A stakeholder group has agreed, in principle, to fund and operate the aerator for an initial five years and is currently negotiating an agreement providing for such funding and operation.

Basin Plan amendments to further refine the dissolved oxygen objective would greatly aid managing dissolved oxygen conditions in the Ship Channel. Potential refinements include, but are not limited to, the development of averaging periods and consideration of changing San Joaquin River flows. Most important, is a review of the scientific basis of the 6.0 mg/l September-November objective. The 6.0 mg/l objective was based on a 1969 agreement between the DFG and DWR to act as a trigger for DWR to install the barrier at the Head of Old River in order to maintain dissolved oxygen conditions of 5.0 mg/l or better. As a result, the 6.0 mg/l objective was not based on science, it lacks a scientific basis, and it was never intended to be an objective, but rather a trigger for an implementation action. Although five years are contemplated for the aerator funding and operating agreement, the initial term will be three years. Two one-year extensions may occur thereafter, but extending the agreement may depend on what progress has been made in reviewing and refining the dissolved oxygen objective.

The dissolved oxygen objective of 6.0 mg/l from September to November was established by the State Water Board in the Bay-Delta Plan. State Water Board adopted water quality control plans supersede Regional Water Board basin plans for the same geographic area (CWC §13170). In order to change this water quality objective, the State Water Board must change it in the Bay-Delta Plan. Your comments have been forwarded to the State Water Board for its consideration during its next Triennial Review of the Bay-Delta Plan. Staff will recommend that the State Water Board consider the appropriateness of re-evaluating the water quality

objectives for dissolved oxygen. You should submit your comments to the State Water Board when it solicits comments on its next Triennial Review of the Bay-Delta Plan. The Central Valley Water Board staff coordinates with the State Water Board staff when addressing provisions in the Bay-Delta Plan.

Mr. William P. Lewis, City of Live Oak

59. *The City of Live Oak is pleased that the Central Valley Regional Water Quality Control Board has identified the issue of inappropriate beneficial use designations in its Triennial Review Work Plan. The City of Live Oak recommends that the list of water bodies on page 18 of the Triennial Review Work Plan be expanded to also include the agricultural drains that the City of Live Oak discharges its effluent into. The City of Live Oak recommends this expansion because it is particularly concerned about the MUN beneficial use designation that has been assigned to the agricultural drains into which it discharges its treated wastewater effluent. The agricultural drains fit within the agricultural conveyance exception to the MUN designation contained in the State Water Resources Control Board's Sources of Drinking Water Policy (Resolution 88-63), and the nearest downstream designated water body does not have the MUN beneficial use designation. The City has submitted information to the CVRWQCB documenting that these drains were constructed in the early 1900's and were never a natural waterbody. Thus, the City of Live Oak believes that de-designation through a Basin Plan Amendment is fully warranted.*

The immediate need for the de-designation becomes evident when the potential costs of compliance are considered. On June 10, 2011, the Regional Water Board adopted an NPDES permit for the City of Live Oak's Wastewater Treatment Plant discharge that includes the MUN beneficial use designation for Lateral Drain No.1 and Lateral Drain No.2. For the City of Live Oak's 8500 citizens to comply with its previous NPDES permit a completely new $20 million WWTP plant is nearing completion. With the approval of the City's NPDES permit that applies the MUN beneficial use to Lateral Drain Nos. 1 and 2, the City of Live Oak faces an additional $4 million in costs, plus on-going operational expense, above those for the current upgrades to comply with the water quality-based effluent limitations designed to satisfy the MUN beneficial use designation. The City of Live Oak's single- family residential customers could ultimately see a 33% increase in their sewer bills above the 2011 sewer fee, which means bills could be as high as $80/month. These costs would place a significant burden on Live Oak residents and businesses because Live Oak is disadvantaged community with a median household income of approximately $32,000/year - to institute water quality objectives the CVRWQCB Board members acknowledged made no logical sense.

Also, the City of Live Oak is concerned that the Triennial Review Work Plan indicates that stakeholders will be the primary source of funding for beneficial use de-designations. The studies are costly, and it is inappropriate to place this burden on the Live Oak and its ratepayers. As such, the City of Live Oak should not be responsible for funding the dedesignation effort. At the June 10, 2011 Regional Water Board meeting, Chairperson Hart acknowledged the inequity of imposing the costs associated with a Basin Plan amendment process on dischargers to rectify this problem. Specifically, Chairperson Hart indicated that" in adopting the Resolution 88-63 without excepting out these ag drains, we should accept responsibility for that. It's our fault that we didn't catch that, that we didn't except these drains out, and we should fix it." The City of Live Oak requests that the Work Plan be revised to identify state funding options that may be available to fund these efforts versus identifying "stakeholders" as the funding mechanism.

In summary, the City of Live Oak requests that the list of water bodies on page 18 of the Work Plan be expanded to include the agricultural drains into which Live Oak discharges its treated wastewater effluent. The City of Live Oak looks forward to working with the Regional Water Board to ensure that a Basin Plan amendment removing the MUN designation from its agricultural drains is processed as quickly as possible.

The City of Live Oak's receiving waters were included within the category of "agricultural water bodies that are designated MUN through the Central Valley Water Board's application of the State Water Board's Sources of Drinking Water Policy, such as the unnamed tributary to Powell Slough and Powell Slough, tributary to Colusa Basin Drain." The discussion of categories of water bodies is found in the paragraph that follows the paragraph listing specific water bodies. Regardless, Reclamation District 777 Lateral Drain No. 1 and No. 2 have been added to the list of water bodies that stakeholders have requested review of the beneficial uses.

The Triennial Review Work Plan does not include potential funding sources; although, it does identify funds that are currently allocated to specific issues. The Work Plan includes a direct quote from the State Water Board's Order which specifies that regional boards must initiate appropriate basin plan amendments when the regional board has evidence that a use neither exists nor likely can be feasibly attained. The quote goes on to state that the Regional Water Board can require that dischargers to the affected water body provide assistance. The State Water Board's Order did not specifically state that assistance must be monetary. At this time, the Work Plan states that the the Board has allocated some staff resources to work on this issue agricultural water bodies that are designated MUN through application of the State Water Board's Sources of Drinking Water Policy but the Work Plan does not

identify dischargers as a source of funding for this work or any additional actions. The Work Plan identifies this concern as a high priority so that it can proceed if appropriate funding is allocated for the identified basin planning activities.

Ms. Betsy Cawn, Essential Public Information Center

60. *In 2006, the Central Valley Regional Water Quality Control Board adopted Resolution No. 2006-0060, amending the Sacramento River Basin Plan for the "control of nutrients" in Clear Lake, establishing a TMDL of 73 micrograms per liter of Chlorophyll a, based on a technical study performed in 2002 by Tetra Tech.*

The County of Lake (Department of Public Works) disputed the validity of that TMDL, on the basis that the lake had been getting "clearer" (according to Secchi disc depth measurements, and because of the lack of "reported" blue green algal blooms) since 1992.

In 2009, 2010, and 2011, however, the lake has produced prodigious amounts of blue green algal/cyanobacterial blooms, resulting in tremendous loss of "clarity," and causing some local concerns about the health and safety of the lake for swimming and for raw water supplies to drinking water purveyors.

There are 17 domestic water suppliers in communities around Clear Lake (including the County of Lake's "Special Districts" which provides 7 of 10 Community Service Areas with treated lake water) who participate in daily monitoring of water quality for compliance with the Safe Drinking Water Act requirements mandated by the California Department of Public Health. These water suppliers measure "turbidity" on a nearly constant basis. Would it be possible to use their monitoring data as a reasonable measurement of lake water quality for purposes of the TMDL metric?

The Basin Plan includes an implementation program to control nutrients in Clear Lake on Page IV-37.04. The implementation program directs Central Valley Water Board staff to work with the responsible parties to develop and implement a plan to identify appropriate measures necessary for Clear Lake to meet the Basin Plan objectives, conduct appropriate monitoring for evaluating Lake conditions, develop criteria to determine when Clear Lake is no longer impaired, as well as address other topics relevant to nutrients in Clear Lake. These topics seem similar to the topics that were raised in these comments. The Basin Plan requires the Central Valley Water Board to consider the information collected to determine whether the implementation program should be modified. The Board must consider this information by 19 September 2012. The public will have an opportunity to comment on the information and make

suggestions for Board consideration. Central Valley Water Board staff will contact Lake County officials to discuss the monitoring data collected by domestic water suppliers.

61. *In his peer review comments on the Tetra Tech report of 2002, Dr. Vladimir Novotny noted (in 2004) the absence of a Use Attainability Analysis prior to the determination of the original TMDL, and the lack of baseline data to establish the relevance of the accepted TMDL. Is it too late to seek such an analysis, and consider revision of the nutrient TMDL for Clear Lake if that analysis recommends it?*

    A Use Attainability Analysis is used to evaluate beneficial uses. The beneficial uses of Clear Lake are municipal and domestic supply (MUN); agricultural supply (AGR) as irrigation and stock watering; water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); spawning, reproduction and/or early development (SPWN) for warm water species; wildlife habitat (WILD); and commercial and sport fishing (COMM). The Central Valley Water Board has received no information that these uses are not the appropriate beneficial uses for Clear Lake. These uses are currently impaired which is why the Central Valley Water Board adopted the TMDL and Basin Plan Implementation Program to attain these uses.

62. *Finally, there is some indication that our last three years' manifestation of blue green algal blooms may be contributing cyanobacterial toxins to our recreational and drinking water supply. The known hazards of cyanobacterial toxins found in the Klamath River reservoirs generated a TMDL for Microcystis formulated by a cooperative effort between the US EPA Region 9 and the North Coast Regional Water Quality Control Board, along with local agencies and tribes. Is there any way your board can assist the County of Lake and members of the public who are concerned about the health of Clear Lake to develop appropriate testing and health information in this regard?*

    The water boards are responsible for coordinating and controlling water quality. Under this authority, the State Water Board and some of the regional water boards, including the Central Valley Water Board, are conducting investigations of blue-green algae. Findings are compiled in reports which are released to the public when the investigations are completed. A current Water Board funded study on cyanobacteria in Clear Lake is expected to be completed by March 2012. While the regional boards protect water quality for a variety of human health related beneficial uses, the regional boards are not responsible for human health. The Department of Public Health coordinates with local health programs to protect the health of the people of California.

Ms. Debbie Webster, Central Valley Clean Water Association

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

In 2009, CVCWA requested that the Central Valley Water Board keep the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) a top priority during the 2011 Triennial Review. CVCWA appreciates the Central Valley Water Board's recognition of the importance of stakeholders being involved in developing solutions, and the need for the Central Valley Water Board to ensure stakeholders can focus on the CV-SALTS program, even while focusing on local issues. Also, CVCWA appreciates the Central Valley Water Board highlighting the concerns that POTWs have regarding the southern Delta salinity objectives, and the need to carefully coordinate the CV-SALTS with the State Water Resources Control Board (State Water Board) review of the salinity objectives. CVCWA was party to litigation against the State Water Board challenging the adoption of the southern Delta salinity objectives. The Sacramento Superior Court ordered the State Water Board to reconsider the southern Delta salinity objectives consistent with Water Code section 13241, and to develop a program of implementation that complied with Water Code section 13242. The outcome of the State Water Board's review of these objectives should inform the CV-SALTS program.

Accordingly, CVCWA supports the continued allocation of Central Valley Water Board staff resources for the CV-SALTS effort. CVCWA will continue to participate in CV-SALTS and will work with its members and other stakeholders to identify the financial resources necessary to complete CV-SALTS activities.

The Central Valley Water Board thanks CVCWA for its continued participation in the CV-SALTS effort.

64. *Issues 2, 3, and 4: Regulatory Guidance to address Water Bodies Dominated by NPDES Discharges; Regulatory Actions in Agricultural Dominated Water Bodies and Agricultural Conveyance Facilities; Beneficial Use Designations for Surface and Ground Waters*

Issues 2, 3 and 4 are all similar in nature in that they are intended to address inappropriate beneficial use designations, which result in the inappropriate application of water quality objectives to effluent and agriculturally dominated water bodies. Because of the similar nature of these actions, we recommend that all three issues be combined into one. Or, in the alternative, we recommend that Issue 4, Beneficial Use Designations for Surface and Ground Waters, be identified as Issue 2 on the Central Valley Water Board's Triennial Review Work Plan list.

Issues 1 through 12 are identified as high priority issues; the numbering is for ease of discussing specific issues. Issues are addressed when funding is allocated. Funding is generally allocated for specific topics. Changing the issue number will not change the order of addressing the issue or the availability of funding.

While Issues 2 through 4 have some overlapping concerns, they also have specific differences. Issues 2 and 3 (Water Bodies Dominated by NPDES Discharges and Agricultural Dominated Water Bodes & Conveyances, respectively) are similar surface water issues that have differences due to the type of wastewater that they receive which have different constituents of concern. This can result in significantly different Implementation Programs. Issue 4 (Beneficial Use Designations) is both a surface and ground water issue and may not have anything to do with wastewater discharges.

65. *As you know, many of CVCWA'S member agencies operate wastewater treatment plants that discharge to effluent and agricultural dominated water bodies with inappropriately designated uses. In many instances, inappropriate uses are attributed to these water bodies through the Central Valley Water Board's broad application of the tributary statement rather than site-specific analyses of appropriate beneficial uses. There are also cases where the municipal and industrial (MUN) beneficial use has been assigned to an agricultural drain or effluent dominated water body through the Central Valley Water Board's application of the State Water Board's Sources of Drinking Water Policy (Resolution 88-63). In both cases, CVCWA members are particularly concerned about the inappropriate beneficial use designations in effluent and agricultural dominated water bodies. Specifically, inappropriate beneficial use designations can result in the adoption of water quality based effluent limitations that may ultimately require POTWs to expend unnecessary resources to install treatment facilities to protect non-existent beneficial uses. Further, to remove inappropriate beneficial use designations, POTWs and others must spend considerable resources on developing the information necessary for the Central Valley Water Board to de-designate a beneficial use by means of an amendment to the Basin Plan.*

With respect to the list of specific examples for review of beneficial uses identified on page 18, CVCWA recommends that the list be expanded to also include the agricultural drains into which the Cities of Biggs, Davis, Live Oak and Willows discharge their effluent. All of these agricultural drains fit within the agricultural conveyance exception contained in Resolution 88-63, and all of these drains are upstream of waterbodies which do not have the MUN beneficial use designated in the current Basin Plan.

These water bodies were included within the category of "agricultural water bodies that are designated MUN through the Central Valley Water Board's application of the State Water Board's Sources of Drinking Water Policy, such as the unnamed tributary to Powell Slough and Powell Slough, tributary to Colusa Basin Drain." The discussion of categories of water bodies is found in the paragraph that follows the paragraph listing specific water bodies. The category includes the receiving waters and may include downstream water bodies. At this time, staff has not identified all the affected water bodies so it is more expedient to include these water bodies by category rather than by name.

66. *Next, CVCWA appreciates the fact that the Work Plan is attempting to put forward creative solutions to resolve the inappropriate application of beneficial uses by suggesting that it may be appropriate to try and group water bodies, starting with those that fit within the exceptions identified in Resolution 88-63. CVCWA would support this effort. CVCWA also understands that it may be necessary for site-specific amendments to uses to also be pursued in parallel.*

However, CVCWA is concerned that funding for these efforts are primarily identified in the Work Plan as being stakeholder funded. The difficulty and expense of de-designating a beneficial use highlights the need for the Central Valley Water Board to re-examine its policy and practice for addressing de-designations, which is to require stakeholders to fund the de-designation process. The de-designation of beneficial uses often requires lengthy and resource-intensive Use Attainability Analyses (UAA). (See 40 C.F.R. § 131.10(j) [requiring a UAA for de-designation of wildlife and recreation designations].) Even when the federal regulations do not specifically require a UAA, adequate data must be compiled to demonstrate that attaining a designated use is not feasible. (See 40 C.F.R. § 131.10(g).) The studies necessary under Section 131.10(g) can be extensive and costly.

Stakeholders, and in particular small municipalities like the Cities of Live Oak and Willows, are not financially able to fund the costly and expensive studies associated with use de-designation and the associated Basin Plan amendment process. Further, these cities are being asked to fund a de-designation that is now required because of a change in interpretation of policies by the Central Valley Water Board and the State Water Board. Considering that the inappropriate designation of beneficial use for some of these cities resulted from Central Valley Water Board actions twenty-years ago, it is improper to now ask these small, economically disadvantaged communities to pay for the costly studies and the Basin Plan amendments. Accordingly, CVCWA requests that the Work Plan be revised to identify state funding options, including the option of CV-SALTS, which may be available to fund these efforts versus identifying

"stakeholders" as the funding mechanism. While we appreciate that the Central Valley Water Board has resource constraints, so do the POTWs in the Central Valley.

The Triennial Review Work Plan does not include potential funding sources; although, it does identify funds that are currently allocated to specific issues. The Work Plan includes a direct quote from the State Water Board's Order which specifies that regional boards must initiate appropriate basin plan amendments when the regional board has evidence that a use neither exists nor likely can be feasibly attained. The quote goes on to state that the Regional Water Board can require that dischargers to the affected water body provide assistance. The State Water Board's Order did not specifically state that assistance must be monetary. At this time, the Work Plan states that the the Board has allocated some staff resources to work on agricultural water bodies that are designated MUN through application of the State Water Board's Drinking Water Policy but the Work Plan does not identify dischargers as a source of funding for this work or any additional actions. The Work Plan identifies this concern as a high priority so that it can proceed if appropriate funding is allocated for the identified basin planning activities.

67. Issue 9: Policies for Maintaining Water Quality for Drinking Water

CVCWA and other stakeholders have been actively participating in the Central Valley Drinking Water Policy Work Group (work group) for almost ten years. In the past year, the work group has completed the work identified in the 2003 Technical Work Plan, and is currently working with Regional Water Board staff on the development of an outline and work plan for a Drinking Water Policy. Completion of the technical work, which has included control measure studies for POTWs, stormwater and agriculture and analytical water quality modeling of the Sacramento and San Joaquin Rivers and Delta has yielded some important results. First, the perception that loadings of pollutants of concern to drinking water agencies (organic carbon, pathogens, salt and nutrients) will be increasing in the future due to population growth in the Central Valley has been dispelled. Detailed technical evaluations of future loading scenarios show that loadings will trend down in the future due to current and planned improvements in source control by POTWs and urban runoff agencies, a reduction in agricultural land use, water conservation and water recycling. Second, the concern that water treatment costs will increase in the future due to degradation of water quality in the Delta has been largely resolved based on the results of a study performed for the work group that addressed this issue. As a result, the findings from the work group point to a Drinking Water Policy which will not include new numeric water quality objectives for organic carbon or pathogens. Ongoing concerns regarding the impact of salts and the role of nutrients in taste and odor episodes will

be addressed through CV-SALTS and the SWRCB's Nutrient Numeric Endpoint work, with support from the work group.

As a result of these new findings by the work group, the Issue 9 description should be modified and updated to reflect the current status and direction of the effort. We suggest the discussion section of Issue 9 be revised as follows:

> *The Sacramento/San Joaquin Delta is a source of drinking water for two thirds of the state's population (over 25 million people). In addition, the Sacramento and San Joaquin Rivers, the two large rivers which flow into the Delta, and their tributaries, are sources of drinking water for many Central Valley communities. The water quality of the Sacramento and San Joaquin Rivers is affected by pollutants from various activities, including agriculture, mining, confined animal facilities, urban runoff, and municipal wastewater effluent. Pollutants include salts, organic carbon, nutrients, pathogens, pesticides and trace metals. Concerns have long existed that increased development and population growth in the Central valley will increase pollutant loads and deteriorate water quality in the Delta.*
>
> *The Basin Plan assigns the municipal and domestic water supply (MUN) beneficial use to all surface waters with a few limited exceptions. Maximum contaminant levels (MCLs) to protect drinking water supplies are contained in Title 22 of the California Code of Regulations and have been incorporated by reference into the Basin Plan for the protection of waters designated MUN. MCLs exist for arsenic, salinity, nitrates, some pesticides, volatile organics, disinfection byproducts (trihalomethanes) and radiological constituents, but do not exist for organic carbon, bromide or specific pathogens (Cryptosporidium and Giardia).*
>
> *In response to directives in the 1996 Reauthorization of the federal Safe Drinking Water Act, the USEPA has developed more stringent regulations pertaining to disinfection by-products (DBPs) and pathogens. High levels of organic carbon in source waters may make control of trihalomethanes and haloacetic acid compounds difficult if chlorine is used as a drinking water disinfectant, while high levels of bromide can make control of bromate difficult if ozone is used as a drinking water disinfectant.*

The Sacramento River generally has low concentrations of organic carbon (generally around 2 mg/l) and the San Joaquin River has higher organic carbon concentrations (generally around 4 mg/l). Drinking water purveyors must conduct additional actions when total organic carbon concentrations exceed 4 mg/l. Delta agricultural drainage, wetlands and the smaller rivers that flow into the Delta are sources of organic carbon. As urban areas develop within the watersheds tributary to the Delta, and as new wetlands are created in the Delta, there is concern that organic carbon levels will increase in the Delta. The tidal exchange between the Delta and San Francisco Bay brings elevated levels of bromide into the Delta.

Concerns also have been expressed regarding salinity and nutrients. Stakeholders have been coordinating with the CV-SALTS efforts to develop a regionwide salt management policy that will also address drinking water concerns. See Issue No. 1 for more details regarding development of a salt management policy. Drinking water purveyors are also concerned that taste and odor problems they experience are associated with high nutrient levels. There are also concerns regarding the presence of algal species that may produce algal toxins. Stakeholders are also coordinating with the State Water Board's effort to develop nutrient numeric endpoints to ensure that drinking water concerns are addressed in that effort. See Issue No. 12 for a list of State Water Board planning efforts regarding nutrient management.

The CALFED Record of Decision (ROD) identified the need for a comprehensive source water protection program and a comprehensive drinking water policy for the Delta and upstream tributaries. The Central Valley Water Board signed a MOU committing to working with the Department of Public Health (DPH), the State Water Board, and USEPA to develop and adopt a policy to protect sources of drinking water for the Delta and its tributaries. The Central Valley Water Board committed to developing a comprehensive drinking water policy in Resolution No. R5-2004-0091 and reiterated its commitment for a policy in Resolution No. R5-2010-0079. In the 2010 resolution, the Central Valley Water Board directed staff to bring a final drinking water policy to the Board in three years.

Staff has modified the Work Plan to remove much of the description for this Issue. The contents of the policy are in development and will be finalized about the same time that the Triennial Review Work Plan will be adopted. The discussion in the triennial review work plan is not intended to influence or shape what should or should not be included in the policy. To avoid this possibility, staff has modified the Issue No. 9 to remove the details of this issue from the Work Plan.

68. *Issue 11: Secondary MCLs as Water Quality Objectives for Surface and Ground Waters*

In 2009, CVCWA recommended that the water quality objective for chemical constituents that incorporates by reference secondary maximum contaminant levels (MCLs) be deleted from the Basin Plan. CVCWA also recommended that, at a minimum, the Central Valley Water Board should amend the Basin Plan to clarify how secondary MCLs should be applied to receiving waters. CVCWA appreciates that the Central Valley Water Board proposes to identify the issue of secondary MCLs as water quality objectives in the Work Plan and looks forward to working with the Central Valley Water Board to resolve issues related to the use of secondary MCLs as water quality objectives for both surface and ground waters.

Ultimately, CVCWA still recommends that the Basin Plan be amended to delete secondary MCLs because secondary MCLs are recommendations to drinking water providers that are based on consumer acceptance levels and are therefore unrelated to human health and welfare or the protection of aquatic life. The application of secondary MCLs to natural waterways is inappropriate when one considers the basis for secondary MCLs (aesthetics) and the fact that water treatment in accordance with the Safe Drinking Water Act will occur prior to use by consumers.

If the Central Valley Water Board chooses not to delete the secondary MCLs, CVCWA recommends that the Central Valley Water Board amend the Basin Plan to clarify that secondary MCLs should be analyzed using "dissolved" standards because, according to Safe Drinking Water Act regulations under the Surface Water Treatment Rule, drinking water purveyors are required to filter the water prior to treatment, which will remove particulates. The Work Plan notes that the rationale for using a total recoverable analysis rather than dissolved is that MUN includes small domestic water supply systems that may not be required to filter. In fact, such systems are required to meet the filtration requirements of the Safe Drinking Water Act, regardless of size. CVCWA also supports, as an alternative to deletion, use of secondary MCL ranges where applicable to provide additional flexibility.

The Work Plan has been clarified to include an evaluation of the need to develop water quality objectives for any of the constituents that make up the secondary drinking water standards and only move forward with developing water quality objectives if appropriate. Please see Issue No. 11 for more information.

69. Issue Identified by CVCWA Not Included in the Work Plan

In addition to the priority issues discussed above, CVCWA identifies one additional issue from its 2009 comments that should be included in the Work Plan.

Remove Non-Detect Standard for Organochlorine Pesticides.

CVCWA previously requested that the Basin Plan be amended to remove the provision that states organochlorine pesticides "shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the EPA or the Executive Officer." (Basin Plan at p. III.6.00.) This water quality objective results in a fluctuating standard based on the accuracy of the analytical method rather than being based on the appropriate level to protect the uses of waterways. Instead, CVCWA supports the use of the CTR criteria for organochlorine pesticides. Accordingly, CVCWA recommends that the Regional Water Board amend the Basin Plan by deleting the "non-detect" provision.

The evaluation of the water quality objective for total identifiable persistent chlorinated hydrocarbon pesticides was included in the draft Triennial Review Work Plan. Please see the Organochlorines section of Issue No. 7 for more information.

<u>Mr. Jason Lofton, Sacramento Regional Wastewater Treatment Plant</u>

70. Comment #1: Issue 5: Delta Issues

The second paragraph on page 22 states that "ammonia levels appear to be a factor in causing beneficial use impacts." It also says that "the USEPA Ambient Water Quality Criteria for Ammonia - 1999 and the draft USEPA criteria released in 2009 do not appear to adequately protect the beneficial uses of the Delta." These statements are misleading and should be changed to reflect the fact that more research is necessary to determine if ammonia is causing beneficial use impacts in the Delta. Additionally, Issue 5 of the Triennial Review should reflect the current regulatory efforts of the San Francisco Bay Regional Water Quality Control Board's San Francisco Bay Numeric Nutrient Endpoint (SF Bay NNE) process-a process currently showing no proof that USEPA water quality criteria for ammonia is insufficient to protect beneficial uses.

Ammonia's role in the Delta has been, and is being, debated in multiple venues, including the March 2009 CalFED Ammonia Workshop, the August 2009 CVRWQB Ammonia Summit, and the March 2010 State Water Resources Control Board Informational Proceeding for Flow Criteria. The conclusions from these workshops all stated that more research was necessary to determine whether beneficial uses were impacted by ambient ammonia concentrations. In June 2011, the SF Bay NNE published "Southern California Water Research Project Technical Report 644," a literature review and data gap analysis for the development of NNEs. The review recognizes the uncertainty of ammonia's role in SF Bay and recommends forming a workgroup that will synthesis existing data and recommend future data collection.

An April 20, 2010, University of California Davis contaminant synthesis report contracted by the Water Boards concluded the following:

" ... while contaminants are unlikely to be a major cause of the POD, they cannot be eliminated as a possible contributor to the decline. "

In addition to the above referenced reports, the National Research Council has been asked to review other stressors, with a report due in the fall of 2011. The USEPA is also analyzing ammonia's role in the Delta under an Advanced Notice of Proposed Rulemaking, which will publish a draft report in the fall of 2011. The Delta Stewardship Council (Council) requested the Independent Science Board (ISB) to " ... conduct an assessment of stressors on populations of native fish species in the Delta, the Sacramento and San Joaquin rivers, and the tributaries of those rivers below the rim dams of the central valley." In a January 26, 2011, memo from the ISB to the Council, there is only one note on nutrients that lists nutrients as a current stressor. They list it as a stressor because of the following:

"We list 'current stressors' last because The Delta Plan needs to take the long temporal view. To the extent that current stressors are expected to carry on into the future, including how water is managed, the DSC should address them."

Even the Fifth draft of the Delta Plan states the following regarding food web effects of ammonia on the Delta:

"Food web effects of ammonium in the Delta remain an open question with much active research and a healthy scientific debate. "

Clearly there is no scientific consensus that ammonia is a key driver of ecological problems in the Delta and San Francisco estuary, including the

pelagic organism decline. There is, and has been, the agreement that more research is needed to understand ammonias role and importance in the Delta. We request the Delta Issue discussion in the Triennial Review reflect this fact. Therefore, we recommend deleting the second paragraph on page 22 and replacing it with the following:

There are conflicting reports on the role that ammonia plays and its importance in the Delta ecosystem. However, most stakeholders and scientists agree that more research is needed to better understand ammonia's role in the Delta ecosystem and to determine if there is an impact to beneficial uses. Staff will work with stakeholders and other interested entities to conduct studies and assessments aimed at evaluating existing water quality criteria as they relate to ammonia.

The Delta Science Program has funded millions of dollars in research regarding nutrients over the last several years. The results of this research will be available in the next year, and this research should be considered before determining if ammonia is impacting beneficial uses. These studies, and other studies that will be recommended by the SF Bay NNE, should go through a rigorous scientific process that can lead to appropriate water quality objectives for nutrients. The water quality objectives would then be used to determine if beneficial uses are impacted by ammonia.

Staff agrees that more studies may be needed to better understand ammonia's role in the Delta ecosystem. In addition, the current description of the issue is overly detailed and is not specific to basin planning. Therefore the issue has been re-organized to try to explain that ongoing work might lead to the need to amend the Basin Plan during the next three years, and if so, the basin planning activities to address Delta issues is a high priority.

71. Comment #2: Issue 5: Delta Issues

We believe that the importance of the Delta Regional Monitoring Program (Delta RMP) is understated in this section and that it deserves a more thorough explanation of its importance. Development and completion of the Delta RMP along with completion of Delta water quality modeling could provide critical information related to current and future Delta water conditions. This information is used by many programs that address other issues that are mentioned in the Triennial Review. As such, this item would be better served to receive its own issue number in this document. We recommend adding the Delta Regional Water Quality Monitoring and Modeling as an individual issue with the following description:

Issue X: Regional Water Quality Monitoring and Modeling

Discussion: *Many of the other issues presented in this triennial review would benefit from the development of a comprehensive Delta RMP and Delta water quality modeling program. The Delta Stewardship Council also recognizes the importance of a Delta RMP and recommends in the Fifth draft of the Delta Plan that regulatory agencies and stakeholders work together to create a Delta RMP.*

The following is taken from the CVRWQCB comprehensive monitoring program website.

"Many agencies and groups monitor water quality, water flows, and ecological conditions in the Bay-Delta, but there is no comprehensive contaminant monitoring and assessment program. The Interagency Ecological Program (IEP), CALFED, and other organizations, including the Water Boards, conduct some of these analyses, but due to their specific mandates, information gaps may exist. Emerging concerns with contaminants related to the decline of pelagic organisms in the Delta, wastewater treatment plant discharges, agricultural discharges, pesticides, blue-green algae toxicity, and unknown toxicity events all highlight the need for well-coordinated contaminants monitoring. A system is needed for coordinating among monitoring programs and integrating contaminants monitoring into existing monitoring efforts whereby all data are synthesized and assessed on a regular basis. The Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which was adopted by the State Water Board, Central Valley Regional Water Board, and San Francisco Bay Regional Water Board, identifies the development of a comprehensive monitoring program for the Delta as a priority action."

The Watershed Analysis Risk Management Framework (WARMF) model and the Delta DSM2 model have been successfully linked through the efforts of the Drinking Water Policy Workgroup. Efforts of this group also included gathering a significant amount of historical water quality data for the Sacramento River and San Joaquin River and

tributaries. This linked model could be used to evaluate gaps in water quality data to make future effol1s of the Delta RMP program more effective.

Current Action: *The Delta RMP has created straw man proposals for governance, funding, water quality monitoring priorities, and data integration. The Delta RMP has also published the first edition of the Pulse of the Delta - the public outreach portion of the Delta RMP.*

For modeling efforts, the Central Valley Drinking Water Policy Workgroup has completed watershed models for the Sacramento-San Joaquin Watershed and Delta, using WARMF and DSM2 models, respectively. Currently, the Workgroup is determining what additional data is necessary to further refine the models.

Current Resources: *Various dischargers and entities contribute to sampling efforts and gathering water quality data that could be used to contribute to a future coordinated Delta Regional Monitoring Program.*

Additional Action: *For the Delta RMP, staff needs to continue working with stakeholders to finalize the straw man proposals. The modeling efforts could be used to help identify and prioritize water quality and water monitoring data gaps. For modeling efforts, the WARMF and DSM2 efforts that were initiated by the Central Valley Drinking Water Policy Workgroup need to be completed. Complete the source evaluation and model input for the agriculture source component for the Sacramento and San Joaquin Rivers and tributaries. The DICU and other Delta agriculture inputs and natural source inputs would need to be completed for a more accurate DSM2 model. Additional activities include expanding stakeholder outreach, gathering additional data and further developing the model to add constituents to build a more comprehensive Delta model to better understand and predict Delta water quality. Current model parameters include flow, pathogens, salts & nutrients (ammonia, nitrates, nitrites, phosphorus, etc), temperature, algae, and organic carbon.*

While the Central Valley Water Board agrees that the Delta Regional Monitoring Program is a high priority, it is not a basin planning issue. The purpose of the Triennial Review Work Plan is to prioritize basin planning activities so the Work Plan is not the appropriate venue for this discussion.

72. *Comment #3: Issue 9: Policies for Maintaining Water Quality for Drinking Water*

The first paragraph in the discussion for this issue lists nutrients as pollutants. We agree that nutrients, in certain concentrations, can be considered a pollutant, but we don't believe that nutrients in general should be considered a pollutant. We recommend changing this paragraph to more accurately describe how a nutrient becomes a pollutant (such as nutrients in excessive concentrations). Also, organic carbon and some trace elements occur in natural runoff in areas that have not been disturbed by human activity. In some locations, these natural sources contribute a significant load to waters. The text on page 32 should be changed to note the contribution of the natural sources in the Delta and the importance of these constituents to the Delta ecosystem.

Staff has modified the Work Plan to remove much of the description for this Issue. The contents of the policy are in development and will be finalized about the same time that the Triennial Review Work Plan will be adopted. The discussion in the Triennial Review Work Plan is not intended to influence or shape what should or should not be included in the policy. Please see Issue No. 9 for more information.

73. *The "Current Resources" section on page 35 states that "CUWA received a grant on behalf of the Workgroup for almost a million dollars to fund technical studies that will help with development of the policy." The grant funding has been expended and significant work remains for completion of the Drinking Water Policy. SRCSD and the California Urban Water Agencies (CUWA) have provided significant funding for various activities including reimbursements for CVRWQCB staff time associated with completion of this workgroup's activities. We would appreciate the recognition of SRCSD in providing these resources.*

The Triennial Review Work Plan states that “[s]takeholders have funded staff to develop a drinking water policy.” However, the Work Plan did not identify the stakeholders that funded staff. While the Work Plan can include this information, staff has generally credited the stakeholders by name in the eventual basin plan amendments that result from Work Plan issues. The citation to the California Urban Water Agencies was in reference to the grant that the Work Group received. However, this citation is now obsolete since the work has been completed and the grant

has ended so the citation will be deleted from the draft Work Plan that will be included with the Central Valley Water Board's October 2011 agenda.

74. *Item 2 on page 35 states that "additional studies are estimated to require $1,000,000." Funding is required to support additional modeling, studies, water quality monitoring, and staffing. Models developed from this workgroup could be used in other groups such as the Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS). Costs could exceed $2,000,000 to complete the water quality modeling effort. The cost for completing the CV-SALTS effort is estimated to be between $20 million and $40 million.*

    The estimate for contract funds for additional actions has been changed to "To be determined." Staff is working on an outline of the contents of the Policy. As the Policy is finalized, additional basin planning actions may be identified with a need for contract resources. If this occurs, these actions will be a high priority and a better estimate of the resource needs can be provided.

<u>Dr. Jeffrey R. Single, Ph. D., Department of Fish and Game, Central Region</u>

75. *The Board presented twelve priority issues and work plan for the above Triennial Review. Our main comments concern Issue 10: Protection of Central Valley Fisheries and other Aquatic Life. Issue 10 is considered a High Priority, but no Current Action and Current Resources are proposed. Additional resources include a 0.5 PY per year per amendment and Contracts of $500,000 for temperature work. We concur that to address temperature protection will require funding and staff time; however, we believe minimal time and cost is needed because the United States (U.S.) Environmental Projection Agency's (EPA) Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards [EPA 910-B-03-002] (EPA 2003) has established scientifically based numerical water temperature standards for anadromous fish critical life stages. We strongly advocate that the Board adopt these numeric standards in the Basin Plan.*

    The Department continues to believe that the most significant critical factor limiting anadromous salmon and steelhead population abundance in the San Joaquin River Basin is the presence of high water temperatures during critical life-stages in the east-side tributaries (the Stanislaus, Tuolumne, and Merced Rivers) and the main-stem of the San Joaquin River. Increased water temperatures result largely from insufficient in-stream flow releases from the lower rim dams, which the Department believes is directly responsible for most chronic stressors affecting anadromous species of the San Joaquin River Basin.

The Department continues to contend that the EPA Region 10 criteria are consistent with the requirements of 18 CFR § 5.9(b)(6) and are appropriate for the San Joaquin River Basin. The Department accepts these criteria because the EPA completed a very thorough literature review for water temperatures to protect cold water fish species (trout and salmon), referencing 41 sources that included five issue papers. The issue papers, in turn, referenced approximately 700 citations. As a result, EPA's recommendations are grounded in a broad spectrum of the scientific literature across North America, including California, and parts of Europe and New Zealand for developing chronic protective temperature criteria for anadromous fish populations across multiple generations. This chronic exposure approach is consistent with the emphasis by the Department on reproduction and recruitment success of an entire population across each generation. Taking a chronic exposure approach recognizes the evolutionary importance of multi-year class life history strategies of salmon and steelhead. In contrast, standards based on only acute to sub-acute exposure to high temperatures emphasize "tolerance or acclimation" temperatures, which is the survival of individuals over a shorter time period.

In addition, with regard to the temperature threshold metric, EPA (2003) stated:

"This metric is recommended because it describes the maximum temperatures in a stream, but is not overly influenced by the maximum temperature of a single day. Thus, it reflects an average of maximum temperatures that fish are exposed to over a weeklong period. Since this metric is oriented to daily maximum temperatures, it can be used to protect against acute effects, such as lethality and migration blockage conditions. This metric can also be used to protect against sub-lethal or chronic effects (e.g., temperature effects on growth, disease, smoltification, and competition)..."

EPA (2003) also stated:

"It is important to note that there are also studies that analyzed sub-lethal effects based on maximum or 7DADM temperature values which need not be translated for purposes of determining protective 7DADM temperatures. For example, there are field studies (emphasis added) that assess probability of occurrence or density of a specific species based on maximum temperatures [Issue Paper 1, Haas (2001), Welsh et al. (2001)]. These field studies (emphasis added) represent an independent line of evidence for defining upper optimal temperature thresholds, which complements laboratory studies."

These criteria (e.g., 7DADM) are chronic thresholds to protect anadromous fish populations across multiple generations. In addition, this is an average, meaning a range of values, not constant values, were used to calculate a criteria value. Elevated daily temperatures across seven days indicate the fish are not being briefly exposed across time. Daily water temperature range is very narrow at higher temperature values (as opposed to a wide range of values) in the San Joaquin River and tributaries, thus the fish are not briefly exposed to elevated temperatures. Also, based upon empirical data, San Joaquin River Basin fish do not have the health sustaining refugia of a brief exposure to optimal cool temperatures during a 24-hour period in the San Joaquin Valley Basin river systems.

To further illustrate how the EPA-Region 10 criteria apply to the San Joaquin River basin, we evaluated climatic ambient air temperatures across the historic range for Chinook salmon and steelhead in the lower continental U.S. (Figure 1.) Evaluating a comparison between the coastal region of Washington or Oregon and the southern San Joaquin Valley is inappropriate. As such, we evaluated the entire historic anadromous fish range, because these are the areas where these stocks of fish co-evolved. We compared average daily, mean minimum and mean maximum daily air temperatures for the month of September from 2007 to 2010 (Tables 1, 2 and 3). September was chosen because this is one of the hottest months of the year and this is the time period fall-run Chinook salmon major migration begins into the Delta San Joaquin Valley Corridor. Climatic conditions varied across locations in Idaho, Washington, Oregon, Nevada, and California. However, there were similarities across these states. Three California locations, South Lake Tahoe, Alturas, and Eureka had the coolest average daily temperature and were not significantly different (ANOVA, $P < 0.05$) (Table 1). The second-coolest locations based on average daily temperatures were McArthur, California; Elko, Nevada; Santa Rosa, California; Winnemucca, Nevada; Spokane, Washington; and Seattle, Washington ($P < 0.05$; Table 1). This trend was similar for mean minimum and mean maximum air temperatures (Tables 2 and 3). The primary reason for these similarities is due to oceanic influence along the coastal locations and mountain elevations within the inland locations. Merced and Stockton, California did have the warmest air temperatures for the locations evaluated; however, anadromous fish did not spawn in these areas. Rather, they historically migrated further upstream to sites in higher, cooler elevations, which today either receive less cooling water due to diversion, or are blocked by dams. In summary, no evidence exists to demonstrate San Joaquin River Basin salmon have higher temperature resistance or adaptation, and the environmental conditions for fall-run salmon are consistent across the fall-run range in the lower continental U.S. Thus, EPA Region 10 criteria are valid for and should be applied to the San Joaquin River Basin.

The Central Valley Water Board appreciates the information submitted by the Department of Fish and Game supporting adoption of the USEPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards. The Board recognizes the status of the Department of Fish and Game as a trustee agency.

The Central Valley Water Board adopts water quality objectives consistent with federal and state laws and regulations. Following are some of requirements under the federal and state laws and regulations that the Board must comply with. Federal regulations (40 CFR §131) require states to adopt water quality criteria to protect the designated uses and the criteria must be based on sound scientific rationale and contain sufficient parameters or constituents to protect the designated use. The referenced federal regulations (18 CFR § 5.9(b)(6)) is not relevant since it relates to study requests for the Federal Energy Regulatory Commission and is not related to the development of water quality standards. The California Water Code §13141 requires regional boards to consider the following factors when establishing water quality objectives: (a) past, present, and probably future beneficial uses of water; (b) environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto; (c) water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area; (d) economic considerations; (e) the need for developing housing within the region; and (f) the need to develop and use recycled water. In addition, as part of complying with the California Environmental Quality Act, the Central Valley Water Board must perform an environmental analysis of the reasonable foreseeable methods of compliance. (PRC §21159) While the USEPA Region 10 Guidance might be scientifically sound, it does not include an evaluation of the factors that the Central Valley Water Board must consider when establishing water quality objectives. The staff and contracts needs identified in the Work Plan are staff estimates of the resources necessary to complete the documentation requirements and to carry out the public participation to adopt scientifically sound water quality criteria.

76. *We support the Board's efforts to address other high priority issues as listed and understand your limitations of funding and staff resources. The Department has similar limitations, but remains interested in assisting Board staff to address these issues where applicable and practical. The Board's efforts with CV-SALTS (per Priority Issue 1) are especially commendable. Regarding priority Issue 3: "Regulatory Actions in Agricultural Dominated Water Bodies and Agricultural Conveyance Facilities", the Department recognizes that these water bodies can have unique issues. We caution however, that the Department does not agree in general with the contention of some of the stakeholders that*

functionality should take precedence over other beneficial uses. It is possible in limited and unique situations that this could be the case, but each must be well documented and justified. Within the discussion of priority Issue 4, the topics of "long water body reaches" and the perceived conflict of a water body with both COLD and WARM beneficial designations is raised. The Department urges caution in splitting water bodies, because the ecosystem services and functions of a water body are inter-related. The Board may determine in the future that it is more practical to address beneficial uses for a smaller unit of the system, but that decision should be made with care and full knowledge of disadvantages a change could have. For instance, many of our native fish will move through a system as the seasons change. This behavior does lead to specific reaches that need to be maintained as COLD during part of the year and WARM during other times.

The Central Valley Water Board appreciates the offer of assistance from the Department of Fish and Game and welcomes any input the Department of Fish and Game has in basin planning activities that involve fisheries and other aquatic life. Federal regulations (40 CFR §131.10 (b)) require that states take into consider the attainment and maintenance of the water quality standards of downstream waters when designating beneficial uses and establishing water quality objectives so beneficial uses modifications to specific reaches must be supported by an evaluation that the downstream beneficial uses continue to be protected and maintained.

<u>Ms. Chris Malan, Living Rivers Council</u>

77. CLEAR LAKE WATERSHED

Clear Lake is located 80 miles north of San Francisco and is the oldest lake in California. Clear Lake is part of the Sacramento and San Joaquin River Basins. The Clear Lake watershed basin has been shaped by faulting, tilting, volcanism and erosion over a period as long as 2 million years. It is considered a shallow lake ranging from 27 to 60 feet and is feed by volcanic springs. It lies at the base of the 4,200 foot Mt. Konocti, a volcanic cone. The Lake is 68 square miles with 100 miles of shoreline including the Upper, Lower and Oaks Arms. Temperatures range from 61-40 degrees in the winter and 76 in the summer. The only outlet to this large lake is Cache Creek which is located in the Lower Arm of the Lake. A dam is located 5 miles below the Lake. The Clear Lake watershed is 441 square miles. The beneficial uses of this unique Lake are: municipal, agriculture, recreation, warm freshwater, warm spawning, wildlife and cold freshwater habitats. The two largest streams are Scotts Creek and Middle Creek, which join in the Middle Creek marsh area before draining into the Upper Arm through Rodman Slough. These two creeks drain 30% of the watershed. Vegetation ranges from grasslands, chaparral-type plants in

the lowlands to coniferous forest to the upper elevations. The confluence of Cache Creek is the Sacramento River, hence the Delta, hence the San Francisco Bay estuary.

FOOD WEB

A total of 260 aquatic species have been found in Clear Lake. Most of these are 101 algae species and 94 invertebrates, macrophytes (aquatic plants near the water surface that provide habitat/food for fish plus and if in decline show water quality problems) (23 species), microheterotrophs (8 species) and 29 species of fish (13 native and 16 introduced). The major amphibious/terrestrial links to these aquatic species are frogs, mink, otter, birds and humans. (Thomas H. Suchanek)

Clear Lake is considered 'a naturally productive lake' due to its biomass abundance consisting of diatoms, green algae, water plants and macrophytes which where considered to be the first abundant life according to core samples. Macrophytes were dominant until 1920s when mining released sediments to the Lake changing the clarity of the Lake thus increasing the turbidity. Clear Lake supports abundant aquatic and terrestrial biological resources.

CLEAR LAKE HITCH

Clear Lake Hitch, is an ancient fish endemic to Clear Lake and it lives in deep water but spawns in the tributaries of Clear Lake. The Chi-Council for the Clear Lake Hitch, a local group that tracks the status of Clear Lake Chi, document that Hitch is in 'precipitous decline'. This decline is in keeping with water quality decline. Clear Lake Splittail became extinct in 1970 along with Pacific Lamprey, Thicktail Chub and Hardhead in 2000. While little is known about their disappearance, fish need clean water, healthy habitats with adequate flows throughout their life cycle. Human impacts to Clear Lake fish habitats are certain to be causing fish declines.

Limnologist recommend that the native fish assemblage be restored to help correct the imbalance of algae blooms and improve the water quality of Clear Lake.

In 2009 during the three year drought in California Clear Lake suffered a devastating infestation of cyanbacteria/blue-green algae with mats forming around the entire Lake. These mats extended hundreds of feet from the shore line. The Lower Arms of the Lake were particularly impacted completely eliminating beneficial uses. The blue-green algae produced toxins which caused public health alarms to go off.

Additionally, there have been numerous fish kills as oxygen was sucked out of the water. People reported to LRC seeing fish near the shorelines jumping out of the water.

Cyanobacteria AKA blue-green algae

Cyanobacteria are true bacteria but differ from other bacteria by having photosynthetic ability. Blue-green algae can occur as single cells, strands of cells called trichomes, or accumulated cells called colonies. A 'bloom' or increase in cells to form colonies causes reduced water quality and can produce toxins.

Life cycle of cyanobacteria: they fix gaseous nitrogen and are efficient at storing phosphorous. Buoyancy of this species varies due to the changing size of their internal pockets of gas. They will migrate to calm water in response to nutrient or light gradients. They produce spores (akinetes) which will lie dormant for years and then when conditions are ripe they will seed a water body. Optimal conditions for this bacteria are: high temperatures, long sunny days, high levels of phosphorus and nitrogen and calm winds which allow the cells to migrate to the surface. Reproduction takes place through trichome fragmentation, the splitting of the chain of cells, and is promoted by photosynthesis. They can produce an oily looking film or blue-green scums many inches thick. (Resource #10)

CLEAR LAKE NUTRIENT TMDL

Clear Lake is on the 303(d) of the Clean Water Act since 1998 and 2002 due to impairments of water quality from excessive nutrients causing 'intense algae growth' that severely impacts the surrounding economy and stops all beneficial uses (2009, 2011) of the Lake during the algae blooms of cyanbacteria also known as blue-green algae. Cyanobacteria algae blooms are destructive to the lake's natural ecology and they destroy beneficial uses of the lake.

The purpose of developing the Nutrient TMDL for Clear Lake is to reduce the frequency and intensity of the algae blooms that are a result of nutrient cycling. (TR 4.2.1.3)

<u>The primary goal of the Nutrient Total Maximum Daily Load, TMDL,is to reduce external phosphorous from the watershed in order to meet the Nutrient TMDL of chlorophyll-a which shall not exceed 73 ug/l.</u>

In reports from the 19th and early 20th centuries, scum forming algae are hardly mentioned, but vegetation growth from the bottom of the lake was frequently observed. Bottom dwelling plants need relatively clear water to

thrive. Increased turbidity and blue-green-algae scums were conspicuous by the late 1930's and bottom dwelling algae and waterweeds have been absent in most recent years since that time. The cause of this increased turbidity comes from sediment entering the lake from human activities in the watershed such as: mining, forestry, vineyards and other agricultural activities, construction, roads and grazing. Mobilized sediment carries pollution such as nutrients (phosphorus) and mercury directly into the Lake.

The delicate natural ecology of the lake consisting of an equilibrium of water plants, algae and diatoms, has been severely altered by humans causing a shift in the lake water quality. The blue-green algae or cyanobacteria becomes opportunistic given warm days and high nutrients and then it explodes and infests the lake. Some infestations are now toxic.

Nutrients (phosphorus) sources are mostly from fertilizers used by irrigated agriculture, residents and massive sewer spills over the years totaling 7,390,306 gallons or 140 spill events (attachment herein 1 Big Valley Rancheria map 2003-2010). Again, cyanobacteria have seeds that lie in the sediment for years.

Lakebed core samples from the last 15,000 years historically shows that Clear Lake has high total phosphorus coming from lakebed sediments. However, external phosphorus has been determined to be excessive coming from the tributaries draining the watershed. The external phosphorus loading of the Lake comes from water running overland either by sheet flow or stream flows where phosphorus mobilizes with sediment and overloads the Lake. It then severely impairs water quality and ultimately, when the conditions are ripe can explode into a cyanobacteria infestations also known as an 'algae bloom'.

LRC prefers to call 'algae bloom' a 'cyanobacteria infestation'. While cyanobacteria is frequently described as 'ancient bacteria naturally occurring in the environment for millions of years' it turns opportunistic given the right conditions in the lake and can over populate quickly and dominate the fragile Lake ecosystem due to: 1)unnatural loading of nutrients and metals to the Lake causing an increase in food for the cyanobacteria that otherwise would be in equilibrium with other algae 2) lack of fresh water flows caused by diversion to the Central Valley for farm lands 3) failure of precipitation or drought 4) climate change/warming of the lake 4) increase in pollution like sediment loading to the Lake during storm events 5) severe damage to native fish assemblage where the native fish once fed on the 'eutrophic' elements of the Lake. These variables interact to cause significant cumulative impacts to Clear Lake water quality that results in total loss of beneficial uses of the Lake with devastating economic impacts.

Scum producing cyanobacteria engulfs the Lake with algae mats that can be as thick as three feet at the shoreline and extend 100s of feet into the lake (2009, 2010 and 2011). LRC has witnessed this personally by its members. The smell will drive you away from the Lake as it is a dead stench like rotting eggs.

Some cyanobacteria such as Microcystis, Aphanizomenon, Anabaena spiroides, Lyngbya cincinnati produce cyanotoxins such as: dedromoaphlysiatoxin (neurotoxins-paralytic) and lyngbyatoxin a dermotoxin causing 'swimmer's itch'. (resource #3) In 2009 Clear Lake was plagued with Lyngbya and public officials were forced to warn people not to enter the water that rashes might occur and pets could be at risk of death if they drank the water. Cyanobacteria can become toxic at anytime. The dominant Anabaena species growing in Clear Lake in 2010 was identified as Anabaena spiroides. This scum-forming filamentous cyanobactrium species can produce at least two types of toxins: anatozin-a and microcystins, a hepatoxin capable of causing liver failure and acting as tumor-promoters. (resource #4 see pictures of these bacteria).

In 2009-2011, Clear Lake had summers plagued with scum producing algae mats. While 2009 was a drought year, 2011 has not been a drought year. In fact 2011 has had high amounts of rainfall into June and the Lake has been plagued with scums regardless of high rainfall years. This suggests that the Nutrient TMDL is not effective and or the responsible parties are not compliant with the Nutrient TMDL limit. The 2004 Technical Report bases the Clear Lake Nutrient TMDL on the argument that drought conditions exacerbate the natural chemical balance of the lake and can cause an infestation of toxin producing cyanobacteria/blue-green algae. Further the 2004 Technical Report makes the claim that normal to high rainfall shows that the Lake water quality improves.

Tetra Tech did extensive modeling for the 2004 Technical Report to determine the amount of chlorophyll-a the Lake can tolerate. However, this modeling could be inaccurate and the actual tipping point for which algae blooms occur is much below 73ug/l. Recent data results by UC Santa Cruz for the SWAMP 2011 Monitoring of Clear Lake shows that on June 16, 2011 the chlorophyll-a sample was highest at 27.89 ug/L and four days later the Lake exploded in an cyanobacteria infestation/bloom. (see resource #4)

LRC requests that the CVRWQCB re-evaluate the efficacy of the current Nutrient TMDL limit of 73 ug/L adopted by the SWRCB based on this new research that the Water Board funded.

Additionally, the interactions of metals with cyanobacteria could exacerbate onset of blooms. Little is known about this variable but all the literature done over the years by top experts on the recurrent algae blooms suggests that metals (phosphorous, mercury, iron) influence algae growth. (see all resources listed)

There is a tipping point with algae blooms such that so much nutrient/phosphorous (other metals) is entering the lake from external sources that dilution from rain events is not enough any longer to achieve the current Nutrient TMDL limit. Additonally, it is not clear that responsible parties who are suppose to reduce sediment to the lake are compliant.

Clear Lake has had cyanobacteria/blue-green scum mats depriving the people of public trust values even during high rainfall years.

2007	*2008*	*2009*	*2010*	*2011*
Drought Scum Toxins	*drought scums toxins*	*drought scums toxins*	*Normal rainfall Scums*	*Above normal rainfall Scums/toxins toxins*

The Basin Plan contains an implementation program for nutrients in Clear Lake that includes the total maximum daily load allocations. The implementation program requires responsible parties take certain actions. To allow adequate time to collect and evaluate information, the Basin Plan required that the Central Valley Water Board consider collected information to determine whether the implementation program should be modified by 19 September 2012. The public will have an opportunity to comment on the information and make suggestions for Board consideration.

78. CYANOBACTERIA GLOBAL PROBLEM

More importantly, the Basin Plan should reflect that multiple contaminants to the State water bodies are collectively causing toxic stews that create toxic cyanobacteria infestations throughout fresh and salt water resources around the globe. Scientists are studying these mysterious cyanobacteria mats. The Basin Plan should discuss the significant cumulative impacts to watersheds where human impacts severely change the water quality such that multiple impacts are exacerbating fresh water resources in ways we have never seen before i.e., Japan's fishing industry is all put shut down due to invasions of jelly fish that feed off of nutrient loading to the oceans around this island nation. Floating algae mats miles long have been spotted off the Pacific coast and estuaries around the globe. National

Marine Fisheries have found dead dolphins where their livers have been poisoned by cyanobacteria.

The Basin Plan contains the Central Valley Water Board's plans and policies for protecting the quality of waters in the Sacramento River and San Joaquin River Basins and is not the appropriate venue to discuss global investigations of potential water quality issues. Outside the Basin Plan, the Central Valley Water Board investigates water quality within the Central Valley. Findings are compiled in reports which are released to the public when the investigations are completed. A current Water Board funded study on cyanobacteria in Clear Lake and the Bay Delta is expected to be completed by March 2012.

79. MONITORING

Monitoring data from 2007-2011 that tracks chlorophyll-a throughout the drought and high rainfall years is NOT available to the public in analytic form so that the public can see that TMDL limits are NOT being met. Responsible parties lack the will to get aggressive in cleaning up the water quality and public officials lay claim that they do not know why the lake has blooms or that the lake naturally has algae blooms.

The Clear Lake Nutrient 2004 Technical Report, TR, which the TMDL is based on (and is on line for the public) is severely out of date with the actual conditions going on with the Lake for example:

1. *Irrigated agriculture land uses such as vineyards has increased significantly since 2004 which produces a large amounts of the erosion runoff to the lake. Fertilizers are a source pollution to the lake and contribute to the excessive phosphorous that is causing the blue-green algae blooms. The Basin Plan should be updated regarding these important pollution source.*

2. *The State Department of Water Resources, DWR, has water quality data available on their website in their water quality library. DWR does not sample consistently during the warmest months when water quality plummets. (2011 sampling dates were more frequent during the summer but this data does not have easy access to the public). Chlorophyll-a is not posted by the DWR library but instead is sent to the CVRWQCB, Holly Grover. LRC had to personally request the data. It should be readily available to the public, since public funds paid for the study.*

3. *Lake County Water Resources Department with funds from the Water Board, is now working with a UC Santa Cruz, PhD, Cecile Mioni, who is documenting 2011 water quality data including*

Chlorophyll-a but this data has not gone public nor has it been anlyized for the public. Holly Grover, CVRWQCB, states that she is using this data to update the 2012-14 TMDL. This research project shows that chlorophyll-a quickly climbs to 27.89 ug/l in the Clear Lake Lower Arms on June 16th, 2011. Additionally phosphorous and temperatures were high and secchi depths dropped dramatically. Four days after these data were collected, Clear Lake suffered a devastating cyanobacteria bloom and it continues to date (August 24, 2011) LRC was notified by Lake County Department of Water Resources, that July 2011 data collection is more shocking than June's data. July 2011 data of chlorophyll-a more than tripled. (recent data from CVRWQCB, Holly Grover) These data have been collected during severe scum infestations of cyanobacteria and this shows the lake is not compliant with the Nutrient TMDL. (see chart inserted herein page 10)

	1./25/2011	*6/12/2011*	*7/19/2011*
	mg/m3 (ppb)		
CL-01 0.5M	*8.07*	*3.07*	*60.6*
CL-01 0.5M dup	*6.33*	*4.78*	
CL-01 3M	*6.34*	*12.3*	*32.3*
CL-01 3M dup			
CL-01 6M	*5.13*	*9.9*	*21.6*
CL-01 6M dup			
CL-03 0.5M	*75.6*	*13.6*	*136*
CL-03 3M	*62.4*	*13.5*	*78.5*
CL-03 6M	*35.6*	*14*	*67*
CL-03 9M	*56.3*	*12.1*	*55.3*
CL-04 0.5M	*37.4*	*16.7*	
CL-04 3M	*37.3*	*14.6*	
CL-04 6M	*60.4*	*15.7*	
CL-04 9M	*54.2*	*18*	
CL-04 12M	*93.8*	*17.1*	
Secchi Depth CL-01	*4.6 m*		
Secchi Depth CL-03	*3.0 m*		
Secchi Depth CL-04	*3.9 m*		

4. *Page 26 of the TR states that Lake County Monitoring lacks monitoring data (1999) therefore eluding to the fact that the 2006 Nutrient TMDL modeling could have been ineffective and not valid for today's conditions.*

5. *Stream incision due to increased rate of runoff from wildland conversions to vineyards is a major cause of channel erosion but the Nutrient and the Mercury TMDL fails to discuss this major landuse source of nutrient and mercury loading to the Lake.*

The Basin Plan Implementation Program includes appropriate time for development and implementation of studies and for water quality improvement measures to be implemented. The Basin Plan requires that the Central Valley Water Board consider collected information to determine whether the implementation program should be modified by 19 September 2012. The public will have an opportunity to comment on the information and make suggestions for Board consideration at that time. The goal of the Water Boards is to make water quality data easily accessible. However, development of an appropriate database is still in progress. In the meantime, we will continue to provide water quality monitoring data to individuals upon request.

80. MERCURY (Hg)

Mercury is a heavy metal which is detrimental to life and it bio-accumulates in the environment. One thermometer of mercury entering the natural aquatic environment can pollute 9,000 cans of tuna.

Clear Lake was listed on the 303 (d) list of the Clean Water Act in 1988 due to high levels of mercury (Hg) in fish and the lakebed sediments. The Mercury TMDL for Clear Lake was approved by the State Water Resources Control Board in 2010.

<u>The primary goal of the Mercury TMDL is to reduce mercury in 'trophic levels 3 & 4 to .09 & .19 mg/kg Hg. This is a high priority of this Basin Plan Amendment.</u>

However, the current TMDL for mercury does not clean up mercury contamination to safe levels for native populations who historically ate 1½-3 pounds of fish daily. There are tribes identified in the Mercury TMDL: Big Valley Rancheria, Elem Pomo, Habematolel Pomo Upperlake, Lower Lake Rancheria Koi Nation, Middletown Rancheria, Robinson Rancheria, Scotts Valley Band of Pomo Indians.

The Mercury TMDL lacks environmental justice for Native Americans who depend on the native fish for their food.

The Sulphur Banks Mercury Mine/Herman Pit (1840-1960) is located in the Oaks Arm of the Lake. This site was abandoned by the Bradly Mining Company who did open pit mining. Expert research (resource #7) states that it is the main pollution source of mercury attaching to sediment during

storm events and entering the Lake. This site contributes to significant pollution to Clear Lake, hence the Sacramento River, hence the San Francisco Bay Delta hence the Pacific Ocean. Clear Lake is considered one of the most polluted lakes for mercury in the world.

When the Herman Pit overflows into the natural environment of the Lake microbes convert mercury to methyl Hg which is more toxic.

According to the 1994 research document, The Causes and Control of Algal Blooms in Clear Lake, (page III-8) the Lake is now a USEPA SuperFund cleanup site (Chamberlin et.al., 1990; Suchanek et al., 1993). Larger individuals of largemouth bass and other sport fish often have body burdens in excess of .5 ppm mercury, which has lead to a health advisory on eating fish from Clear Lake. The problem stems from the large quantity of inorganic mercury stored in the sediments, mostly in the Oaks Arm. There may also be an interaction between excessive algal growth and the mercury problem. Some data indicates that heavy loads of organic matter to the sediment, as it might result from the collapse of blue-green blooms, may fuel microbial activities (microbes methylate mercury).

The Mercury TMDL relies on the EPA's superfund designation to clean up Hg as a source pollutant.

Resource (7) T. H. Suchanek, ' These data provide preliminary evidence of how a relatively extensive aquatic ecosystem has been contaminated with methyl Hg from a point source (Sulphur Banks mercury mine inorganic Hg) over several decades.

The research literature shows that cyanobacteria/blue-green algae thrive in the presence of metals such as iron, phosphorous and mercury.

The Regional Board adopted a Basin Plan Implementation Program to control mercury in Clear Lake in 2002. The Central Valley Water Board was provided with a progress report last year and the staff report may be found on the Board's website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/clear_lake_hg/cl_final_tmdl_5yr_update.pdf

The report describes actions undertaken by stakeholders to reduce the mercury in Clear Lake. Another progress report will be provided to the Central Valley Water Board in five years.

At the time that the Basin Plan was amended to include the implementation program to control mercury in Clear Lake, the Basin Plan was also amended to include fish tissue objectives to protect the

commercial and sportfishing beneficial uses (COMM) in Clear Lake. The fish tissue objectives were adopted in compliance with state and federal laws and regulations that require a sound scientific rationale and that the objective be reasonable achievable. (40 CFR Part 131.11 and CWC §13241) While staff was aware that there were individuals that historically consumed large quantities of fish, the fish tissue objective was based on the information available at the time of what was reasonably achievable. Concentrations of mercury in fish vary by species and size. For example, the average mercury concentration in largemouth bass is five times the concentration in hitch. The Basin Plan contains objectives for mercury in Clear Lake that are the average concentrations in large predatory (such as bass and catfish) and non-predatory fish (such as bluegill, Sacramento blackfish, and carp). The objectives assume people eat a mix of large, predatory and non-predatory fish. If people eat small fish or species that that are relatively low in mercury, they can safely eat more than about one meal per week. The Basin Plan requires that the Central Valley Water Board review the progress towards meeting the fish tissue objectives every five years. Public comments may be made at that time. If appropriate, the Central Valley Water Board may direct staff to re-evaluate the fish tissue objectives or the implementation program.

81. CLEAR LAKE WATER DIVERSIONS

The State Water Resource Control Board, SWRCB, has on-going jurisdiction over water diversions in the State. Clear Lake supplies the Central Valley with water for farmers. During drought conditions Clear Lake's water quality plummets causing a total loss of public trust values such as fishing, swimming and recreation. The SWRCB should assert their jurisdiction and protect the natural environment of Clear Lake by reducing the water allocations to farmers during droughts. This should be part of the Basin Plan update. Clear Lake has numerous water diversions that send water to farmers in the Central Valley. The SWRCB has documented, 1,777 illegal water diversions in Napa, Marin, Sonoma, Mendocino and Humboldt Counties.

<u>How many illegal water diversions are contributing to the decline of fish and water quality in the Clear Lake Basin?</u>

The State Water Resources Control Board, Division of Water Rights, is responsible for permitting, assessing compliance and carrying out enforcement in regards to water rights and diversions. If there are specific incidents that require investigations, please direct that information to the enforcement staff at the State Water Board's Division of Water Rights.

82. CLIMATE CHANGE

The Basin Plan should take into consideration the impacts to Clear Lake associated with climate change. The lake is shallow and warm naturally. Since 1920 human impacts have caused the Lake to increase in temperature and become contaminated by sediment loads. Diversions lower the Lake during the warm months. As temperatures increase and drought becomes more frequent, Clear Lake is vulnerable to increases in scum producing algae infestations.

The Central Valley Water Board is responsible for coordinating and controlling water quality in its Region. To carry out its duties, the Central Valley Water Board regulates controllable water quality factors. Climate change is not a controllable water quality factor. When the Central Valley Water Board adopts basin plan amendments, it assesses the greenhouse gas emissions of the proposed policy as part of its environmental analysis. As appropriate, the Board will include measures as part of the basin plan amendments to avoid or mitigate these impacts.

83. TMDL LIMITS FOR NUTRIENTS ARE NOT ADEQUATE

The 2004 Nutrient Technical Report repeatedly relies on data that says that Clear Lake experiences out breaks of blue-green algae during drought conditions. This is incorrect because in 2010 and 2011 when precipitation/water year rainfall was above normal, Clear Lake had repeated outbreaks of cyanbacteria mats plaguing the entire Lake especially in the Arm's shoreline where temperature and turbidity increase and secchi depth dramatically decreases. The TMDL relies on this information which is incorrect given the on-going nutrient loading, increased development in the watershed, lack of enforcement and utter disregard for construction and road Best Management Practices (BMPs). Irrigated agriculture escapes the nutrient and mercury TMDLs by lack of BMPS and no regulations over increased rate of runoff due to deforestation of wildlands.

Modeling to establish the limits of pollution for nutrients loading to Clear Lake must be recalibrated because algae blooms have increased in frequency and intensity dramatically despite high rainfall in to June of 2011. <u>The 73 ug/l chlorophyll-a limits were determined by modeling to be the target for reducing nutrient loading, however this is more the tipping point than a 'target'. This limit should be reduced because the lake is experiencing increase blue-green infestations during high precipitation years, which indicates that the target is not low enough.</u>

Enforcement :

The responsible parties for preventing pollution to the Lake do not enforce the Clean Water Act such as:

- *Developers do not always install BMPs or if they install them, they often are not installed properly*
- *After storm events, BMPs are not properly maintained*
- *Yearly, sewer leaks pollute the Lake due to inadequate and old leaking infrastructure, (see Map attachment) by Big Valley Rancheria EPA. Current bond measures and infrastructure plans are moving forward. However, the Lake County Special District must prevent further spills*
- *CVRWQCB should issue fines for continued sewer pollution events to the Lake*
- *Illegal water diversion must be stopped*
- *LRC made a formal complaint to the SWRCB regarding water diversions in 2009 that were exacerbating the cyanobacteria infestation.*

The Basin Plan Implementation Program to control nutrients in Clear Lake does not specify when nuisance algae blooms occur. The Implementation Program requires control of phosphorus to address the impairment in Clear Lake by 19 June 2017. The Central Valley Water Board is required to consider any new information by 19 September 2012 to determine whether the Implementation Program should be modified.

The Basin Plan describes the Central Valley Water Board's plans and policies to achieve water quality objectives and protect beneficial uses. Implementation of the Basin Plan provisions is not a triennial review issue. The Central Valley Water Board has administrative tools and remedies to implement the Basin Plan. Specific incidents of violations of waste discharge requirements and Basin Plan provisions should be brought to the attention of the Central Valley Water Board enforcement staff for waste discharges and to the attention of the State Water Board's Division of Water Rights enforcement staff for incidents of illegal water diversions.

84. MORITORIUM

There should be a moratorium on any new construction in the basin until sewer infrastructure has been updated to carry the current capacity and projected growth. The nutrient loading to the Lake as a result of the failing sewer systems throughout the Lake County Special District is causing tremendous damage to the Lake's ecosystem and water quality.

Laws should be put in place locally to protect the Lake from development that will cause sewer leaks in the future.

The Basin Plan Implementation Program to control nutrients in Clear Lake did not include sewage discharges as a significant contributing factor to the impairment in Clear Lake. The Central Valley Water Board would be interested if there is information that shows sewage to be a significant contributing factor. The Basin Plan requires that the Central Valley Water Board consider collected information to determine whether the implementation program should be modified by 19 September 2012. At that time, staff can assess any information that you have on sewage discharges that significantly contribute to the nutrient loadings to Clear Lake.

85. BASIN PLAN AMMENDMENT RECOMMENDATIONS FOR CLEAR LAKE:

1. *Lake County Public Works, the Department of Water Resources and the State Department of Water Resources, DWR, and any other public resource agencies should post all monitoring data on the internet for easy public access to this important information. This should include:*
2. *Responsible agencies should post to the internet all sewer discharges to the Lake.*
3. *Revise the months that data collection of chlorophyll-a is being done. The Department of Water Resources, DWR, collects/or posts (makes public) data for months of December and June. This is not the height of the cyanobacteria/blue-green algae blooms. Chlorophyll-a data collection must be collected during the warmest months i.e., July, August and possibly September.*
4. *The Mercury TMDL relies on the EPA Plan aka Record of Decision for Operable Unit 1 by 7/31/2011 and Operable Unit 2 by 3/31/2013. However, the Sulphur Banks Mercury Mine Herman Pit could spill into Clear Lake toxic water when at flood stage of the pit. Given climate change and possible intense storm events, the sooner the EPA's project plan is implemented the better.*
5. *Secchi or clarity of the Lake: Now you can hardly see your hand in front of your face when your able to swim. While the DWR, collects Secchi data the current TMDL does not utilize this data and interpret it for the TMDL.*
6. *Fish kills-shoreline residents document to the local resource agencies fish kills. Some have actually witnessed fish leaping out of the water near the shoreline or they wash up on the shoreline. There is little information about this available to the public.*
7. *Limnologist recommend restoration efforts should take place to restore the natural fish assemblage of the Lake which will help deplete the algae blooms. Every effort should be made to diminish the introduction of non-native fish.*

8. *Responsible agencies should be accountable to the public for their non responsiveness to the TMDL implementation plans, lack of enforcement and irresponsible actions that lead to pollution events to the Lake.*
9. *The responsible agencies must enforce the Clean Water Act and issue fines to developers that do not install and utilize BMPs properly.*
10. *Water Diversions-the 2004 Technical Report fails to adequately discuss the impacts of water diversions on the health of the lake. During drought conditions the SWRCB could reduce water diversions/allocations due to harm to native fish.*
11. *Public figures, politicians and some environmental groups, announce and proclaim that the Lake is 'naturally eutrophic' or 'naturally productive' and they dismiss cries for help this way. Time and time again, Lake County leadership falls flat when teachable moments present themselves to educate the public about cyanobacteria and the causes of poor water quality. We the public can not count on the 'authorities' to speak the truth about Clear Lake's devastating water quality problems to urge the stakeholders to roll up their sleeves and get busy reducing sediment at every opportunity.*
12. *The Basin Plan must discuss the environmental impacts to Clear Lake as a result of climate change.*
13. *The Nutrient TR states that 'biostimulatory substances in Clear Lake shall not contain stimulate or promote aquatic growths in concentrations that cause aquatic growths that adversely affect beneficial uses. The 73 ug/l limit for nutrients allowed to the Lake is too high. The Bain Plan should reduce this limit to improve water quality conditions.*
14. *In 1990 the EPA required NPDES Phase I permits to discharge polluted storm water to water bodies. Phase one applies to municipalities of 100,000 populations and Phase II applies to certain municipalities of 10,000 population. The Mercury TMDL states that the County has a MS4 Phase II NPDES Permit CAS000004-2003b. The Basin Plan should require the County to post their permit and show monitoring results for transparency for the public to show compliance with the Clean Water Act.*
15. *Mercury and other metal contamination to the Lake likely exacerbate blue-green algae growth. The Nutrient TMDL relies on the Mercury TMDL success and the restoration of the Sulphur Banks/Herman Pit superfund project!*
16. *Modeling for Clear Lake Nutrient TMDL has been ineffective and may be completely off target for improving water quality.*
17. *TMDLs require that the Water Boards (WB) consider all other impairments/limiting factors in the basin and find nexus where WBs can help improve water quality. Clear Lake is an important water*

body in rapid decline of the water quality and far from achieving or even moving towards the TMDL that was established in 2006. In fact, the Lake's water quality is getting precipitously worse. The WB should have an integrated approach to water quality improvement such as: 1) reduce water diversions both in the future and with current water rights 2) cancel any conditional waiver programs and step up the TMDL program to closer supervision by the WB.

The Central Valley Water Board adopted Basin Plan Implementation Programs to control mercury in Clear Lake in 2002 and to control nutrients in Clear Lake in 2006. The Basin Plan includes time to conduct any necessary studies and monitoring and to implement any necessary control measures.

The Central Valley Water Board was provided with a progress report on the mercury control program last year and the staff report may be found on the Board's website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/clear_lake_hg/cl_final_tmdl_5yr_update.pdf

The report describes actions undertaken by stakeholders to reduce the mercury in Clear Lake. Another progress report on the mercury control program will be provided to the Central Valley Water board in five years.

The Basin Plan requires that the Central Valley Water Board consider collected information to determine whether the Implementation Program to control nutrients in Clear Lake should be modified by 19 September 2012.

During these review periods stakeholders are welcome to provide information for the Board's consideration.

The Basin Plan describes the Central Valley Water Board's plans and policies to achieve water quality objectives and protect beneficial uses. However, implementation of the Basin Plan is not a triennial review issue. The Central Valley Water Board has administrative tools and remedies to implement the Basin Plan. Specific incidents of violations of waste discharge requirements and Basin Plan provisions should be brought to the attention of the Central Valley Water Board enforcement staff for waste discharges and to the attention of the State Water Board's Division of Water Rights enforcement staff for incidents of illegal water diversions.

For Recommendations 1 – 5, the Water Boards have a goal of making water quality data readily accessible. However, an appropriate database is still under development. In the meantime, interested persons can contact staff for water quality data generated by or for the Central Valley

Water Board. For Recommendation 6, the Department of Fish and Game is responsible for protecting the State's waters from invasive species. Please contact the Department of Fish and Game for more information. Recommendations 7 – 8 refer to enforcement of laws and regulations. As discussed above, the Central Valley Water Board has administrative tools and remedies to enforce the Basin Plan and other water quality laws and regulations. In regards to Recommendation 9, the Implementation Programs for controlling mercury and nutrients at Clear Lake do not identify water diversions as contributing to the water quality impairments. During the review of these Implementation Programs, interested parties may provide information for the Central Valley Water Board's consideration. Recommendations 10 and 11 are not basin planning issues. Information regarding Recommendation 12, 15 and 16 should be provided when the Central Valley Water Board considers collected information to determine whether the Implementation Program to control nutrients in Clear Lake should be modified. The Basin Plan specifies that the Board will consider this information by 19 September 2012. For Recommendation 13, the Phase II Small Municipal Separate Storm Sewer System (MS4) information may be found on the State Water Board's website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

The webpage includes the permit and the storm water management plans submitted by the applicants. Annual reports may be reviewed by contacting the Central Valley Water Board Storm Water staff. Recommendation 14 is noted but it is unclear what is being requested. The Implementation Program to control nutrients in Clear Lake is not related to the Implementation Program to control mercury in Clear Lake. However, recognizing that there is potential for overlap with the two control programs, staff have been assigned to work with responsible parties to coordinate activities.

86. SUMMARY:

Between drought conditions, increased land uses such as wildland conversion to vineyards, poor road conditions, lack of effective best management practices and numerous sewer leaks that discharge nutrients to the Lake and over allocations of water to down stream diverters combined with defunct and out of date nutrient TMDL modeling along with lack of current data all have put Clear Lake in jeopardy. Living River Council is concerned about the lack of improvement to the water quality of Clear Lake. During the summer and warm months Clear Lake's water quality plummeted causing fish kills and loss of public trust values such as fishing, swimming and recreation. Mercury impacts to the Lake

are dependent on the Superfund Record of decision now on hold due to 'technical difficulties' for restoration efforts. Heavy metals are contributing to significant cumulative impacts to water quality and are dangerously not fully understood by the Water Boards. The Triennial update for Clear Lake must reevaluate modeling that sets TMDL limits to improve future water quality for this important watershed to the Delta.

The Central Valley Water Board adopted Basin Plan Implementation Programs to control mercury in Clear Lake in 2002 and to control nutrients in Clear Lake in 2006. The Basin Plan includes time to conduct any necessary studies and monitoring and to implement any necessary control measures.

The Central Valley Water Board was provided with a progress report on the mercury control program last year and the staff report may be found on the Board's website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/clear_lake_hg/cl_final_tmdl_5yr_update.pdf

The report describes actions undertaken by stakeholders to reduce the mercury in Clear Lake. Another progress report on the mercury control program will be provided to the Central Valley Water Board in five years.

The Basin Plan requires that the Central Valley Water Board consider collected information to determine whether the Implementation Program to control nutrients in Clear Lake should be modified by 19 September 2012.

During these review periods stakeholders are welcome to provide information for the Board's consideration.

California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair

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Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown Jr.
Governor

NOTICE OF PUBLIC HEARING
concerning
TRIENNIAL REVIEW FOR THE
SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will be holding a public hearing to complete the Triennial Review of the Water Quality Control Plan for the Central Valley Region, Sacramento River and San Joaquin River Basins (Basin Plan). This Basin Plan covers the watersheds of the Sacramento and the San Joaquin Rivers. The Basin Plan identifies beneficial uses of surface water and groundwater, establishes water quality objectives to protect beneficial uses, and describes an implementation plan to achieve the objectives.

The public hearing will be conducted during the October 2011 Central Valley Water Board meeting which is tentatively scheduled as follows:

Date: 12/13/14 October 2011 (please contact the Central Valley Water Board office two weeks prior to the meeting for the exact date)
Time: 8:30 am
Place: California Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

On 13 August 2009, the Central Valley Water Board conducted a workshop to receive comments from the public on issues that should be considered in the review of the Basin Plan and the priority that should be given to each issue. Based on comments received in writing and at the workshop, staff has prepared a workplan which summarizes the issues identified and presents staff recommendations for the priority for addressing them.

Interested persons may download the draft triennial review workplan and the response to the triennial review comments in PDF format from the Central Valley Water Board's Internet website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/triennialreviews.shtml

Copies of these documents can also be obtained by contacting or visiting the Water Board's office at 11020 Sun Center Drive, #200, Rancho Cordova, California 95670-6114 weekdays between 8:00 a.m. and 5:00 p.m.

The deadline for written comments is **29 August 2011**. Please submit comments to Ms. Betty Yee, Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive, #200, Rancho Cordova, CA 95670 or electronically to byee@waterboards.ca.gov. Interested persons will be provided the opportunity to present oral comments to the Water Board at the hearing, and are expected to orally summarize their written submittals. Oral testimony will be limited in time by the Board Chair.

Confirmation of the hearing date and any questions regarding the triennial review should be directed to Ms. Yee at (916) 464-4643 or byee@waterboards.ca.gov. The hearing facilities will be accessible to persons with disabilities. Individuals requiring special accommodations are requested to contact Ms. Kiran Lanfranchi-Rizzardi at (916) 464-4839 at least 5 working days prior to the meeting. TTY users may contact the California Relay Service at 1-800-735-2929 or voice line at 1-800-735-2922.

Please bring the above information to the attention of anyone you know who would be interested in this matter.

_____

Kenneth D. Landau, Assistant Executive Officer

11 July 2011

ITEM: 17

SUBJECT: Non-regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin Providing Estimates of Total Costs and Sources of Financing for the Long-Term Irrigated Lands Regulatory Program

BOARD ACTION: Consideration of Adoption of Proposed Amendments

BACKGROUND: On 7 April 2011, the Central Valley Water Board certified a program environmental impact report (Program EIR), which described a range of alternatives for implementing the Long-Term Irrigated Lands Regulatory Program (Long-term Program). In the course of preparing the Program EIR, the Central Valley Water Board commissioned an analysis of the potential economic impacts of the alternatives, which included an analysis of the costs of the alternatives and identification of potential sources of financing.

Water Code section 13141 states, in part, that, "… prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan." The proposed Basin Plan amendments are consistent with this provision of the Water Code and supplement existing cost estimates for agricultural programs provided in the Sacramento River and San Joaquin River Basins Water Quality Control Plan. Since the Long-term Program would affect the entire Central Valley, amendments are needed for both the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, and the Water Quality Control Plan for the Tulare Lake Basin.

The estimate of total cost ranges from $216 million to $1,321 million per year. Most of those costs are associated with implementation of improved management practices to protect water quality and represent the greatest source of uncertainty in the cost estimate. Although some management practice information has been provided as part of the current irrigated lands regulatory program, information on management practices currently implemented and how effectively they are being employed to protect water quality is limited. The improved practices are not mandated by the Central Valley Water Board, but represent the potential responses by growers to new regulatory requirements. Since the practices evaluated are often employed to provide other, non-water quality, farm related benefits (e.g., more efficient irrigation reduces water costs and generally increases yields), it is not possible to determine which practices would be put in place in response to a new water quality program or in response to other economic or market demands.

Given the available information, the cost estimates provide a reasonable indication of cost impacts due to a new regulatory program and the potential response of growers to those new requirements. Should growers successfully address water quality problems as part of a regional effort led by third parties, actual costs would be near the lower end of the range. If growers and third parties are not successful in their regional efforts, the costs will be at the higher end of the cost range.

Staff recommends that the Board approve the Basin Plan amendments.

Mgmt. Review_____
Legal Review____APM_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

CENTRAL VALLEY REGIONAL
WATER QUALITY CONTROL BOARD

Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide a Cost Estimate and Potential Sources of Funding for a Long-Term Irrigated Lands Program

Staff Report

September 2011

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Edmund G. Brown Jr., Governor

California Environmental Protection Agency
Matthew Rodriguez, Secretary for Environmental Protection

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CENTRAL VALLEY REGION

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DISCLAIMER

This publication is a report by staff of the California Regional Water Quality Control Board, Central Valley Region. The Regional Water Board will be considering the proposed policies and regulations contained in this report during a Regional Water Board hearing. Mention of specific products does not represent endorsement of those products by the Regional Water Board.

Non- Regulatory Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide a Cost Estimate and Potential Sources of Funding for a Long-Term Irrigated Lands Regulatory Program

Staff Report

September 2011

REPORT PREPARED BY:

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REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

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1 EXECUTIVE SUMMARY

Staff of the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) proposes for Central Valley Water Board consideration non-regulatory amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, and the Water Quality Control Plan for the Tulare Lake Basin. The amendments will add an estimate of the total cost of a Long-Term Irrigated Lands Regulatory Program ("LTP" or "Long-term Program"), and identify potential sources of financing for the LTP.

The estimate of total cost ranges from $216 million to $1,321 million per year. Most of those costs are associated with implementation of improved management practices to protect water quality and represent the greatest source of uncertainty in the cost estimate. Although some management practice information has been provided as part of the current irrigated lands regulatory program, information on management practices currently implemented and how effectively they are being employed to protect water quality is limited. The improved practices are not mandated by the Central Valley Water Board, but represent the potential responses by growers to new regulatory requirements. Since the practices evaluated are often employed to provide other, non-water quality, farm related benefits, it is not possible to determine which practices would be put in place in response to a new water quality program or in response to other economic or market demands.

Given the available information, the cost estimates provide a reasonable indication of cost impacts due to the new regulatory program and the potential response of growers to those new requirements. Should growers successfully address water quality problems as part of a regional effort led by third parties, actual costs would be near the lower end of the range. If growers and third parties are not successful in their regional efforts, the costs will be at the higher end of the cost range.

2 INTRODUCTION

Basin Plans form the basis for regulatory actions by Regional Water Boards taken to protect waters of the state and to assure compliance with the California Water Code (CWC). The preparation and adoption of a Basin Plan is required by CWC section 13240. Pursuant to state law, Basin Plans must consist of all of the following (CWC § 13240-13244):

a) beneficial uses to be protected;
b) water quality objectives;
c) a program of implementation needed for achieving water quality objectives; and
d) surveillance and monitoring to evaluate the effectiveness of the program.

Basin Plans are adopted and amended by the Regional Water Boards using a structured process involving peer review, full public participation, state environmental review, and state and federal agency review and approval. Each of the nine Regional Water Boards in California has adopted Basin Plans for its geographic region. The Central Valley Water Board has adopted two Basin Plans, one for the Sacramento River and San Joaquin River Basins and one for the Tulare Lake Basin.

The authority for the Regional Water Boards to formulate and adopt Basin Plans and to periodically review these plans is derived from CWC section 13240. However, a Basin Plan does not become effective until approved by the State Water Board (CWC § 13245), and the Office of Administrative Law (OAL). If the amendment involves adopting or revising a standard which relates to surface water, it falls under federal CWA jurisdiction and must also be approved by the US Environmental Protection Agency (USEPA) (Title 40 Code of Federal Regulations Part 131.21) before it becomes effective. Because the proposed amendments do not affect surface water quality standards, USEPA approval will not be required.

2.1 Mandates for Basin Plan Amendments

Water Code section 13141 states, in part, that, "… prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan." The proposed Basin Plan amendments have been prepared to be consistent with this provision of the Water Code[1]. Since the Long-term Program would affect the entire Central Valley, amendments are needed for both the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, and the Water Quality Control Plan for the Tulare Lake Basin.

The Regional Water Boards must comply with applicable requirements of the California Environmental Quality Act (CEQA) (Public Resources Code § 21000 et seq.) when amending Basin Plans. The Secretary of Resources has determined that the Central Valley Water Board's Basin Planning Process qualifies as a certified regulatory program pursuant to Public Resources Code section 21080.5 and California Code of Regulations, title 14, section 15251(g). For Basin Plan Amendments, staff ordinarily establishes compliance with CEQA by following the requirements of State Water Resources Control Board's Regulations for Implementation of CEQA, Exempt Regulatory Programs, which are found in the California Code of Regulations, title 23, section 3775 et seq. However, as described below, these non-regulatory amendments are not a "project" for the purposes of CEQA, and are not subject to the requirements of CEQA nor the State Water Board's certified regulatory program.

The proposed amendments, which estimate costs and identify pre-existing sources of financing, are non-regulatory in that no party is required to take action in response to the amendments. As described more fully in section 5.1, adding this information to the Basin Plan will not cause a direct physical change in the environment, or a reasonably foreseeable indirect

[1] Note that 13141, in whole, refers to the relationship between the California Water Plan and the water boards' water quality control plans. The context of the requirement to provide a cost estimate suggests that such an estimate may only be required when a program of implementation for agriculture is established as part of a Basin Plan Amendment. However, the Central Valley Water Board has developed cost estimates for the long-term regulation of irrigated agricultural discharges and believes it is appropriate to include those estimates in the Basin Plans.

physical change in the environment. Therefore, the proposed amendments are not a "project"[2] for purposes of CEQA compliance, and are therefore legally exempt from CEQA requirements.[3] Likewise, the proposed amendments are exempt from the State Water Board's certified regulatory program requirements because those requirements do not apply if the board determines that the activity is exempt from CEQA. Despite the exemption from certified regulatory program requirements, Board staff has implemented the remaining regulatory procedures used in the Basin Planning process.

2.2 Water Quality Control Plan for the Sacramento River & San Joaquin River Basins

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins was first adopted in 1975. Triennial reviews were completed in 1984, 1988, 1999, 2002 and 2005. This Basin Plan was revised and updated in 1989 and 1994. The current edition (Fourth Edition, 2007) incorporates all new amendments adopted since 1994.

2.3 Water Quality Control Plan for the Tulare Lake Basin

The Water Quality Control Plan for the Tulare Lake Basin was first adopted in 1975. This Basin Plan was updated in 1995 and revised in 2002, with amendments becoming effective in 2004. The current edition (Second Edition, 2004) incorporates all new amendments adopted since 1995.

3 IRRIGATED LANDS LONG-TERM PROGRAM DEVELOPMENT

In June 2006, the Central Valley Water Board approved coalition and individual conditional waivers applicable to discharges from irrigated agriculture to surface waters. The individual conditional waiver expired on 30 June 2011. However, in June 2011 the Board renewed the coalition conditional waiver for an additional two years. When the Board approved the 2006 conditional waivers, it directed staff to begin developing a long-term irrigated lands regulatory program ("LTP" or "Long-term Program") to protect water quality in accordance with state law. The Board also directed staff, in developing the Long-term Program, to continue preparation of an Environmental Impact Report (EIR).

In fall 2008, the Central Valley Water Board convened the Long-Term Program Stakeholder Advisory Workgroup. The Workgroup included a range of stakeholder interests representing local, State, and federal government, industry, agricultural, and environmental/environmental justice groups throughout the Central Valley. In August 2009, the Workgroup approved long-term ILRP goals and objectives and a range of alternatives to be considered in the EIR.

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[2] "Project" is defined by CEQA as a governmental activity "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment…." Pub. Resources Code § 21065.

[3] Pub. Resources Code § 21080, subd. (a) (defining CEQA to apply only to discretionary "projects"); see also, 14 C.C.R. § 15060, subd. (c)(3) (clarifying that an activity is not subject to CEQA if it is not a project.)

In July 2010, the Central Valley Water Board released the *Irrigated Lands Regulatory Program Draft Environmental Impact Report* (Draft PEIR; ICF International) for the Long-Term Irrigated Lands Regulatory Program (ILRP). The Draft PEIR provides programmatic analysis of impacts resulting from the implementation of six alternatives. Five of the alternatives were developed with the Long-Term ILRP Stakeholder Advisory Workgroup. The sixth alternative was developed by staff in an attempt to fulfill program goals and objectives, meet applicable state policy and law, and minimize potentially adverse environmental impacts and economic effects.

On 7 April 2011, the Central Valley Water Board adopted Resolution R5-2011-0017, which certified the *Irrigated Lands Regulatory Program Final Environmental Impact Report* (Final PEIR; ICF International 2011). This report evaluated six program alternatives for the long-term regulation of irrigated lands, including an Alternative 6 that was the Board staff-recommended alternative when the Draft PEIR was released to the public. The cost estimates provided by this Basin Plan Amendment include an upper-end and lower-end range estimate of costs encompassing the full range of alternatives described in the Final PEIR.

3.1 Final Program EIR Long-Term Program Alternatives

The six Long-Term Program alternatives are evaluated and presented in detail in the Final PEIR. The descriptions of the alternatives provided below are partially excerpted from the Final PEIR.

- <u>Alternative 1 – Full Implementation of Current Program (No Program Alternative):</u> Under Alternative 1, the Central Valley Water Board would renew the current program and continue to implement it into the future. This would be considered the "No Project Alternative" per California Environmental Quality Act (CEQA) guidelines (Title 14 California Code of Regulations (CCR) Section 15126.6(e)(3)(A)).

  Coalition groups would continue to function as lead entities representing growers (owners of irrigated lands, wetland managers, nursery owners, and water districts). This alternative is based on continuing watershed monitoring to determine whether operations are causing water quality problems. Where monitoring indicates a problem, third-party groups and growers would be required to implement management practices[4] to address the problem and work toward compliance with applicable water quality standards. This alternative would not establish any new Central Valley Water Board requirements for discharges to groundwater from irrigated agricultural lands.

  Under this alternative, the Central Valley Water Board would renew the current program through Waste Discharge Requirements (WDRs) or a waiver of the WDRs. Water quality coalition groups have formed throughout the Central Valley to function as representative or "lead" entities that administer the current ILRP. Coalitions represent

[4] In the context of this cost analysis, the term "management practices" means conservation or agricultural practices typically employed on farms that, among other benefits, result in reduction of the discharge of wastes from irrigated agricultural lands. "Management practices" do not include practices that would be atypical for a farming operation, such as wastewater treatment processes.

growers, provide education, organize monitoring, and work with the Central Valley Water Board to help ensure that the current program is effectively implemented. These third-party water quality coalition groups would continue to function as lead entities for their members to ensure that all Central Valley Water Board requirements are met.

Monitoring under this alternative would be the same as the watershed-based assessment and core monitoring required under the current ILRP. Under this monitoring scheme, coalition groups would work with the Central Valley Water Board to develop monitoring plans for Central Valley Water Board approval. These plans would specify monitoring parameters and site locations.

- Alternative 2 – Third Party Lead Entity: Under Alternative 2, the Central Valley Water Board would develop a single mechanism or a series of regulatory mechanisms for waste discharge from irrigated agricultural lands to groundwater and surface water. The series of regulatory mechanisms would be designed to provide flexibility in establishing requirements for growers considering the variety of environmental conditions and agricultural operations throughout the Central Valley. These could include WDRs, conditional waivers of WDRs, or conditional prohibitions of discharge.

  Under Alternative 2, third-party groups (e.g., water quality coalitions) would function as lead entities representing growers. Regulation of discharges to surface water would be similar to Alternative 1 (the current ILRP). However, this alternative allows for a reduction in monitoring under lower threat circumstances and where watershed or area management objective plans are being developed. This alternative also includes requirements for development of groundwater quality management plans (GQMPs) to minimize discharge of waste to groundwater from irrigated lands. However, GQMPs under this alternative would not involve monitoring of groundwater to determine the performance of these management plans. These GQMPs would be reviewed every five years by the Central Valley Water Board and the third-party groups to determine whether and how the GQMPs should be updated. This alternative also relies on coordination with the California Department of Pesticide Regulation (DPR) for regulating discharges of pesticides to groundwater.

  Under this alternative, water quality coalitions or other third-party groups would be responsible for general administration of the ILRP and would need to agree to assume greater responsibilities than under Alternative 1.

  Third-party groups would have the option of developing a watershed or area management objectives plan. The goal of this plan would be to meet source control management objectives that would reduce the threat to surface water quality from waste discharge associated with irrigated agriculture. In areas implementing a Central Valley Water Board-approved watershed or area management objectives plan, surface water monitoring would be reduced. Plans would specify optional water quality management practices that could be implemented to achieve plan objectives. Further, the plan would be developed consistent with the area or watershed commodity types, common agricultural practices, pesticides commonly used, and local land characteristics.

Optional practices would be provided to allow growers to adapt to their specific conditions for compliance with the ILRP. The plan also would consider the results of previous water quality sampling.

Growers would be required to track implemented management practices and submit the results to the third-party group. The third-party group would report summary results to the Central Valley Water Board. The third-party group would be required to summarize the results of groundwater and surface water monitoring and tracking in an annual monitoring report to the Central Valley Water Board.

- Alternative 3 – Individual Farm Water Quality Management Plan: Under Alternative 3, growers would have the option of working directly with the Central Valley Water Board or another implementing entity (e.g., county agricultural commissioners [CACs]) in development of a farm water quality management plan (FWQMP). Growers would individually apply for a conditional waiver or WDRs that would require Central Valley Water Board approval of their FWQMP.

  On-farm implementation of effective water quality management practices would be the mechanism to reduce or eliminate waste discharged to state waters. This alternative would provide incentive for individual growers to participate by providing growers with Central Valley Water Board certification that they are implementing farm management practices to protect state waters. This alternative relies on coordination with DPR for regulating discharges of pesticides to groundwater.

  Under Alternative 3, growers would be the lead entities working directly with the Central Valley Water Board and would be responsible for applying for coverage, developing FWQMPs, and conducting any required reporting.

  Unless specifically required in response to water quality problems, owners/operators would not be required to conduct water quality monitoring of adjacent receiving waters or underlying groundwater. Required monitoring would include evaluation of management practice effectiveness. The Central Valley Water Board, or a designated third-party entity, would conduct annual site inspections on a selected number of operations. They also would review available applicable water quality monitoring data as additional means of monitoring the implementation of management practices and program effectiveness.

- Alternative 4 – Direct Oversight with Regional Monitoring: Under this alternative, the Central Valley Water Board would develop WDRs and/or a conditional waiver of WDRs for waste discharge from irrigated agricultural lands to groundwater and surface water. As in Alternative 3, growers, or legal entities responsible for waste discharges by a group of growers, would apply directly to the Central Valley Water Board in order to obtain coverage ("direct oversight"). Also as in Alternative 3, growers would be required to develop and implement individual FWQMPs in order to minimize discharge of waste to groundwater and surface water from irrigated agricultural lands. However, Alternative

4 would include an option for regional monitoring run by a third party instead of monitoring conducted by individual growers.

Discharge of waste to groundwater and surface water would be regulated using a tiered approach. Fields would be placed in one of three tiers based on their threat to water quality. The tiers represent fields with minimal (Tier 1), low (Tier 2), and high (Tier 3) potential threat to water quality. Requirements to avoid or minimize discharge of waste would be the least stringent for Tier 1 fields and the most stringent for Tier 3 fields. This would allow for less regulatory oversight for low-threat operations while establishing necessary requirements to protect water quality from higher-threat discharges. This alternative relies on coordination with DPR for regulating discharges of pesticides to groundwater.

Growers would be lead entities working directly with the Central Valley Water Board; they would be responsible for applying for coverage, developing FWQMPs, and conducting any required monitoring and reporting. This alternative would allow for formation of responsible legal entities that could serve a group of growers who discharge to the same general location and thus could share monitoring locations. In such cases, the legal entity would be required to assume responsibility for the waste discharges of member growers, to be approved by the Central Valley Water Board, and ultimately to be responsible for compliance with ILRP requirements.

For monitoring, growers would have the option of enrolling in a third-party group regional monitoring program instead of conducting individual monitoring. In cases where responsible legal entities were formed, these entities would be responsible for conducting monitoring. All growers would be required to track nutrient, pesticide, and implemented management practices and submit the results to the Central Valley Water Board (or an approved third-party monitoring group) annually. Other monitoring requirements would depend on designation of the fields as Tier 1, Tier 2, or Tier 3.

- <u>Alternative 5 – Direct Oversight with Farm Monitoring:</u> Alternative 5 would consist of general WDRs designed to protect groundwater and surface water from discharges associated with irrigated agriculture.

  All growers would be required to apply for and obtain coverage under the general WDRs. This alternative would include requirements to (1) develop and implement a FWQMP; (2) monitor (a) discharges of tail water, drainage water, and storm water to surface water; (b) applications of irrigation water, nutrients, and pesticides; and (c) groundwater; (3) keep records of (a) irrigation water; (b) pesticide applications; and (c) the nutrients applied, harvested, and moved off the site; and (4) submit an annual monitoring report to the Central Valley Water Board.

  Alternative 5 relies on coordination with DPR for regulating discharges of pesticides to groundwater. The Central Valley Water Board would develop general WDRs for irrigated agriculture. Growers would be the lead entity in working with the Central Valley Water Board. The Central Valley Water Board would adopt the WDRs, enroll individual

growers under the program, provide regulatory oversight, and enforce the requirements of the program.

Each grower would be required to monitor tail water discharges, storm water discharges, and drainage system discharges. In addition, each grower would be required to conduct nutrient and pesticide tracking as well as groundwater monitoring.

- Alternative 6 – Staff Recommended Alternative in the Final PEIR: Per the Final PEIR, each of the above alternatives was found to achieve some of the program evaluation measures, but not others. Because no single alternative achieved complete consistency with all evaluation measures, Board staff constructed Alternative 6 by selecting from the best-performing elements of Alternatives 1 through 5.

  Under Alternative 6, eight to twelve general WDRs or conditional waivers of WDRs would be developed that would be geographic and/or commodity-based. The alternative would establish requirements for waste discharge from irrigated agricultural lands to groundwater and surface water. Similar to Alternatives 1 and 2, water quality coalitions or other third-party groups would be responsible for general administration of the ILRP. The alternative would establish prioritization factors for determining the type of requirements and monitoring that would be applied. The prioritization would be applied geographically as a two tier system, where Tier 1 areas would be "low priority", and Tier 2 would be "high priority".

  Program requirements, monitoring and management would be dependent on the priority (Tier 1 or 2). Generally, this alternative requires regional management plans to address water quality concerns and regional monitoring to provide feedback on whether the practices implemented are working to solve identified water quality concerns. In Tier 1 areas, irrigated agricultural operations and third-party groups would be required to describe management objectives to be achieved, report on management practices implemented, and make an assessment of ground and surface water quality every five years. In Tier 2 areas, irrigated agricultural operations and third-party groups would be required to develop and implement ground and/or surface water quality management plans, as appropriate to address water quality concerns, report on management practices, and provide annual regional ground and surface water quality monitoring. Similar to Alternative 2, Alternative 6 would allow local groundwater management plans or integrated regional water management plans to substitute, all, or in part for ILRP GQMPs, with Central Valley Water Board approval.

  Alternative 6 would establish a time schedule for compliance for addressing surface and groundwater quality problems. The schedule would require compliance with water quality objectives within five to ten years for surface water problems and demonstrated improvement within five to ten years for groundwater problems.

When the Central Valley Water Board certified the Final PEIR, it did not select a specific Long-Term Program alternative for implementation. Instead, it directed staff to begin developing

proposed orders and other regulatory actions that will establish the Long-Term Program. At a subsequent Board meeting, staff updated the Board on its progress in developing the orders. Staff indicated that it would develop an approach modeled after a *Recommended Irrigated Lands Regulatory Program Framework Staff Report* (ILRP Framework Report), *March 2011*. The approach would be composed of elements from the range of alternatives evaluated in the Final PEIR. While the staff's approach is subject to change, and is modeled after a staff report that was not adopted by the Board, it provides additional information upon which to estimate future costs of the Long-Term Program.

Under staff's current approach, the proposed orders and regulatory actions would likely include the following elements: regulation of discharges to surface water and groundwater; a three-tiered approach to ensure regulatory requirements are appropriately tailored to the water quality conditions in the area[5]; conditional authorization of third-party groups to represent growers and proxy with staff; requirements for regional surface water and groundwater management plans; requirements for regional surface water and groundwater monitoring; individual farm evaluation; and individual certified nutrient management plans in groundwater basins impacted by nitrates. Individual dischargers not represented by third-party groups would be governed by general WDRs.

3.2 Estimated Total Costs

The Final PEIR was supported by a *Draft Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program* (Economics Report; ICF International 2010). An extensive economic analysis was presented in this report to estimate the cost and broader economic impact on irrigated agricultural operations associated with the five alternatives developed by the Stakeholder Advisory Workgroup. Staff was also able to use that analysis to estimate costs of the recommended program alternative (Alternative 6), since the recommended program alternative fell within the range of the five alternatives. This cost estimate is found in Appendix A of the Draft PEIR.

Information on the extent of management practice implementation is limited, and much of the available data are approximately 10 years old. The estimated cost of management practice implementation represents the largest cost, with the greatest uncertainty. However, a number of comments received on the Draft PEIR from growers and agricultural representatives indicated that many of the improved practices are being implemented already, suggesting that the cost estimates are likely too high.

Cost estimates were drawn from a number of sources, described in the Economics Report. As described above, the largest components of the costs were associated with management practices undertaken by growers to comply with the program. In particular, the costs of irrigation system modifications and tailwater recycling dominated the estimates. These specific man-

[5] The three tiers can be summarized as: Tier 1 applies to parameters and waters for which there is no or a limited threat to water quality from irrigated agricultural discharges; Tier 2 applies when the threat to water quality from irrigated agricultural discharges is unknown; and Tier 3 applies when there is a high threat from irrigated agricultural discharges.

agement practices are not required for compliance, but are representative of the kinds of practices that growers could implement in order to comply with the program alternatives. Correspondingly, the total annualized costs (Table 1) and associated initial capital costs (Table 2) displayed below are representative, and should not be viewed as required for compliance. The largest single component of the estimated cost is tailwater recycling, a system whereby water flowing to the lower end of an irrigated field is collected and pumped back to the head of the same or an adjacent field for reuse.

Capital costs were converted to annual costs by amortizing the cost of each capital item of the system over its expected life at a real interest rate of 4 percent. In the determination of annual costs, a program lifetime was not considered, rather it was assumed that when a management practice reaches the end of its expected life, it would be replaced or overhauled in order to continue the practice. Annual operation costs (primarily pumping energy and labor) and annual maintenance costs were also included and considered. Other components that had initial capital costs were: pressurized irrigation systems, hedgerows, and, for the high-end estimate, monitoring wells and farm plans. Calculations of capital costs for these other components were similar to that described for tailwater recycling.

Staff received many comments on the Draft PEIR from agricultural representatives suggesting that additional groundwater monitoring is not necessary because sufficient data are available to characterize groundwater quality conditions. Should this be the case, additional costs associated with groundwater quality monitoring should be minimal. If, in fact, data are limited and it is not possible to determine groundwater quality conditions or the effectiveness of irrigated agricultural efforts to reduce groundwater quality impacts, additional monitoring will be needed.

The estimated total annual costs presented in Table 1 below were estimated for administration of the Long-Term Program alternatives (e.g., Board oversight and third-party activities), monitoring (for groundwater and surface water quality), and implementation of management practices. Annualized cost is the constant annual equivalent payment needed to cover all program costs including interest. For individual program components, the annualized cost includes the amortized initial cost of each capital item, plus annual operation and maintenance (O&M) costs. The costs that dominated the estimates are associated with the category for which data are most sparse – management practice implementation. In addition, the management practices evaluated generally result in multiple benefits, not only protection of water quality (e.g., more efficient irrigation reduces water costs and generally increases yields).

Table 1: Estimates of Total Annualized Costs[6] for the Long-Term Program Alternatives

	Low-End Estimate	High-End Estimate
Total administration	$6.5 million	$67 million
Monitoring	$10.6 million	$302 million
Management practices	$199 million	$952 million
Total	**$216 million**	**$1,321 million**

The estimates of total annualized costs for the Long-Term Program alternatives provided above are based on the cost estimates provided in the Economics Report and specific management practice estimates for the Long-Term Program alternatives provided by a member of the economics consulting team (Roberson 2011a & 2011b). The total estimated cost was found to range from $216 and $1,321 million per year as expressed in 2007 dollars.

The table below (Table 2) summarizes the initial capital cost corresponding to the total annualized costs displayed in Table 1 above (Hatchett & Roberson, 2011). (Note that the table below is **not** simply the capital component of the annualized cost, which would necessarily be less than the total annualized cost.)

Table 2: Estimated Initial Capital Costs for the Long-Term Program Alternatives

	Low-End Estimate	High-End Estimate
Total administration	$0	$59 million
Monitoring	$0	$12 million
Management practices*	$552 million	$1,929 million
Total	**$552 million**	**$2,000 million**

* Capital cost estimates are based on the assumed mix of management practices used for the Economics Report. Actual practices could be different, so capital costs would be different.

The need for capital expenditure could be spread over a period of time depending on Long-Term Program implementation. The estimate of capital cost for administration represents the initial cost of preparing individual farm plans; the estimate of capital cost for monitoring represents installation of monitoring wells. Other parts of those two Long-Term Program components may also include expenditures for capital items such as equipment, but these would be small relative to the capital cost estimates shown in the table above.

Costs at the low end of the range (similar to Alternative 2 of the PEIR in terms of the regulatory structure) assumed that (1) the third-party coalition structure will be successful in addressing identified water quality problems; (2) existing groundwater monitoring networks will be adequate; (3) irrigated pasture will not require “hardware” management practices (e.g., tail water recovery systems) to address any pasture-related issues; (4) the existing use of improved management practices on field crops in areas with constituents of concern is greater

[6] Total annualized cost is the constant annual equivalent payment needed to cover all Long-Term Program costs, including interest.

than assumed in the Final PEIR; and (5) for constituents identified as Tier 2, with an unknown contribution by irrigated lands, irrigated lands will be found not to cause or contribute to the identified water quality problem.

Costs at the high end of the range (similar to Alternative 5 of the PEIR in terms of the regulatory structure) assumed that (1) direct regulatory oversight by the Board will be required due to widespread failure of the third-party framework; (2) individual groundwater monitoring and surface water monitoring will be required; (3) irrigated pasture will require hardware management practices; (4) the estimates of management practice implementation reflect current conditions; and (5) for all constituents identified as Tier 2, with an unknown irrigated lands contribution, irrigated lands will be found to cause or contribute to the identified water quality problem (necessitating additional water quality management practices).

In terms of staff's current approach to developing the Long-Term Program, the approach would primarily rely on third-party groups (similar to the Program EIR's Alternative 2), but has a backstop of direct Board regulation (similar to the Program EIR's Alternative 5), if the third-party coalition structure is not successful. Staff cannot reliably predict whether growers will successfully address water quality issues within the third-party framework or whether more direct regulation will be required. The administrative and monitoring costs of the current approach would therefore fall within the range of those two analyzed alternatives. Accordingly, the range of costs for staff's current approach is included in Table 1's range of Long-Term Program alternatives.

Distribution of Program Costs

Besides total costs, it is also important to understand how potential program costs might be distributed when reviewing the above estimates (i.e., entities that will bear program costs). In carrying out the economic modeling and analysis summarized in the Economics Report, the Board assumed that all additional program costs would be paid for by irrigated agricultural operations that enroll in the program. This is a reasonable assumption considering that State general fund support for the irrigated lands program were limited to begin with and has since been eliminated. Therefore, any costs associated with increased staffing would be born by enrolled growers through increased fees. Water quality coalition groups pass along program costs to member growers for monitoring and administration; and the major estimated costs are associated with implementation of management practices, which generally would be incurred solely by growers. It is important to note, however, that grants and low interest loans are available to fund some of the program costs (see section 3.3 below).

3.3 Potential Sources of Financing

Below is a discussion of potential sources of financing for irrigated agricultural operations. Financing that is targeted toward lands, crops, or growers with the greatest potential for losses and economic hardship would be most effective at reducing economic impacts. Many of the financing mechanisms would help reduce and defray the costs associated with implementing water quality management practices, thereby reducing the economic impact of the Long-Term Program alternatives.

In general, the potential sources of financing for agricultural water quality programs do not change significantly by crop type. The sources of financing identified in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the agricultural subsurface drainage program and rice pesticide program are also potential financing sources for this program. These sources include:

1. Private financing by individual sources.
2. Bonded indebtedness or loans from government institutions.
3. Surcharge on water deliveries to lands contributing to the water quality problem.
4. Ad Valorem tax on lands contributing to the water quality problem.
5. Taxes and fees levied by a district created for the purpose of drainage management.
6. State and federal grants or low-interest loan programs.
7. Single purpose appropriations from federal or State legislative bodies (including land retirement programs.

Specific state and federal grant and loan programs include:

1. Federal Farm Bill – Title II of the 2008 Farm Bill (the Food, Conservation, and Energy Act of 2008, in effect through 2012) authorizes funding for conservation programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program.
2. The State Water Board, Division of Financial Assistance, currently administers two programs that improve water quality: the Agricultural Drainage Management Loan Program and the Agricultural Drainage Loan Program. Both of these programs were implemented to reduce the impacts of agricultural drainage on surface water. The State Water Board also administers Clean Water Act funds that can be used for agricultural water quality improvements.
3. The Agricultural Water Quality Grant Program provides funding to reduce or eliminate the discharge of nonpoint source pollution from agricultural lands into surface water and groundwater. It is funded through bonds authorized by Proposition 84.
4. The State Water Pollution Control State Revolving Fund Program also has funding authorized through Proposition 84. It provides loan funds to a wide variety of point source and nonpoint source water quality control activities.
5. Other funding programs exist, including Integrated Regional Water Management grants that were authorized and funded by Proposition 50 and now by Proposition 84.

4 PROPOSED AMENDMENTS

4.1 Amendments to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins already has a section titled *Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing*. This section begins on Page IV-38. The proposed amendments presented below will appear at the end of this section.

"**Long-Term Irrigated Lands Regulatory Program**

The Central Valley Water Board intends on establishing a long-term irrigated lands regulatory program (Long-Term Program) by adopting one or more general waste discharge requirements and/or conditional waivers of WDRs to regulate the discharge of waste to ground and surface waters from irrigated agricultural operations. The Long-Term Program will be based, in whole or in part, on six alternatives described in the *Irrigated Lands Regulatory Program Final Environmental Impact Report* (Final PEIR; ICF International 2011) certified by resolution R5-2011-0017. The cost estimate below is based upon and encompasses the full range of those alternatives.

The cost estimate for the Long-Term Program accounts for program administration (e.g., Board oversight and third-party activities), monitoring for groundwater and surface water quality, and implementation of management practices throughout the Central Valley. The estimated cost for the annual capital and operational costs to comply with the Long-Term Program range from $216 million to $1,321 million (2007 dollars). This cost estimate is a cumulative total that includes costs from the Sacramento River and San Joaquin River Basins, and the Tulare Lake Basin.

Potential financing sources include:

1. The Federal Farm Bill, which authorizes funding for conservation programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program.

2. Grant and loan programs administered by the State Water Resources Control Board and Department of Water Resources, which are targeted for agricultural drainage management, water use efficiency, and water quality improvement. These programs include:
    a. Agricultural Drainage Management Program (State Water Resources Control Board)
    b. Agricultural Drainage Loan Program (State Water Resources Control Board)
    c. Clean Water Act funds (State Water Resources Control Board)
    d. Agricultural Water Quality Grant Program (State Water Resources Control Board)

e. Clean Water State Revolving Fund (State Water Resources Control Board)
f. Integrated Regional Water Management grants (State Water Resources Control Board, Department of Water Resources)

3. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program."

4.2 Amendments to the Water Quality Control Plan for the Tulare Lake Basin

The Water Quality Control Plan for the Tulare Lake Basin currently does not include a section titled *Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing*. The proposed amendments will add this section on Page IV-30, after the section titled *Continuous Planning for Implementation of Water Quality Control*. The proposed amendments presented below will appear in this new section.

"**Estimated Costs of Agricultural Water Quality Control Programs**

Long-Term Irrigated Lands Regulatory Program

The Central Valley Water Board intends on establishing a long-term irrigated lands regulatory program (Long-Term Program) by adopting one or more general waste discharge requirements and/or conditional waivers of WDRs to regulate the discharge of waste to ground and surface waters from irrigated agricultural operations. While the Central Valley Water Board has not established the Long-Term Program yet, it will be based, in whole or in part, on six alternatives described in the *Irrigated Lands Regulatory Program Final Environmental Impact Report* (Final PEIR; ICF International 2011) certified by resolution R5-2011-0017. The cost estimate below is based upon and encompasses the full range of those alternatives.

The cost estimate for the Long-Term Program accounts for program administration (e.g., Board oversight and third-party activities), monitoring for groundwater and surface water quality, and implementation of management practices throughout the Central Valley. The estimated cost for the annual capital and operational costs to comply with the Long-Term Program range from $216 million to $1,321 million (2007 dollars). This cost estimate is a cumulative total that includes costs from the Sacramento River and San Joaquin River Basin, and the Tulare Lake Basin.

Potential financing sources include:

1. The Federal Farm Bill, which authorizes funding for conservation programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program.

2. Grant and loan programs administered by the State Water Resources Control Board and Department of Water Resources, which are targeted for agricultural

drainage management, water use efficiency, and water quality improvement. These programs include:

a. Agricultural Drainage Management Program (State Water Resources Control Board)
b. Agricultural Drainage Loan Program (State Water Resources Control Board)
c. Clean Water Act funds (State Water Resources Control Board)
d. Agricultural Water Quality Grant Program (State Water Resources Control Board)
e. Clean Water State Revolving Fund (State Water Resources Control Board)
f. Integrated Regional Water Management grants (State Water Resources Control Board, Department of Water Resources)

3. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins), which are listed below:
    a. Private financing by individual sources.
    b. Bonded indebtedness or loans from governmental institutions.
    c. Surcharge on water deliveries to lands contributing to the drainage problem.
    d. Ad Valorem tax on lands contributing to the drainage problem.
    e. Taxes and fees levied by a district created for the purpose of drainage management.
    f. State or federal grants or low-interest loan programs.
    g. Single-purpose appropriations from federal or State legislative bodies (including land retirement programs).

5 OTHER CONSIDERATIONS

5.1 Environmental Considerations

The proposed amendments amend the two Basin Plans to include a cost estimate and potential sources of funding for a new regulatory program affecting agriculture. Because these amendments are non-regulatory (i.e., they require no action by any party), there will be no direct physical change in the environment, or reasonably foreseeable indirect physical change in the environment as a result of the amendments. Any direct or indirect physical changes will be a result of the Long-Term Program, not the cost estimates or identified pre-existing funding sources.

5.2 Economic Considerations

The proposed amendments amend the two Basin Plans to include a cost estimate and potential sources of funding for a new regulatory program affecting agriculture. Because these amendments are non-regulatory, there are no anticipated economic costs associated with these amendments.

5.3 Necessity

The proposed Basin Plan amendments are necessary to update the existing description of potential costs and sources of financing already in the Basin Plan for agricultural water quality control programs created by Basin Plan Amendments. Inclusion of these estimates will provide a more complete and updated description of potential costs and sources of financing. Because the LTP affects the entire Central Valley, amendments are needed for both the Basin Plan for the Sacramento River and San Joaquin River Basins, and the Basin Plan for the Tulare Lake Basin.

5.4 Consistency with Federal and other State laws and regulations

The proposed amendments are intended to be consistent with Water Code section 13141. There are no other applicable Federal or State laws or regulations that apply to developing estimates of costs and potential sources of financing for agricultural water quality control programs. Therefore, these proposed amendments are consistent with Federal and other State laws and regulations.

6 REFERENCES

Central Valley Regional Water Quality Control Board. 2011. *Staff Report on Recommended Irrigated Lands Regulatory Framework.* March. Sacramento, CA. Available: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1104/ilrp_framewrk_res/06_ilrp_frmwrk_att_d.pdf

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Roberson, M. 2011a. *Recommended ILRP Framework Management Practice Cost Analysis*. Memorandum dated 28 February 2011, from Mark Roberson (ILRP sub-consultant) to Adam Laputz (Central Valley Regional Water Quality Control Board). Prepared for: Central Valley Regional Water Quality Control Board, Rancho Cordova, CA.

Roberson, M. 2011b. *ILRP Costs for Basin Plan Update*. Memorandum dated 3 June 2011, from Mark Roberson (ILRP sub-consultant) to Adam Laputz (Central Valley Regional Water Quality Control Board). Prepared for: Central Valley Regional Water Quality Control Board, Rancho Cordova, CA.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2011-XXXX

NON-REGULATORY AMENDMENTS TO THE WATER QUALITY CONTROL PLANS FOR THE SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS AND THE TULARE LAKE BASIN TO PROVIDE A COST ESTIMATE AND POTENTIAL SOURCES OF FINANCING FOR A LONG-TERM IRRIGATED LANDS PROGRAM

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region (hereafter Central Valley Water Board) finds that:

1. In 1975 the Central Valley Water Board adopted the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Sacramento River and San Joaquin River Basin Plan), which has been amended occasionally.

2. Also in 1975, the Central Valley Water Board adopted the Water Quality Control Plan for the Tulare Lake Basin (Tulare Lake Basin Plan), which has been amended occasionally.

3. The Sacramento River and San Joaquin River Basin Plan and the Tulare Lake Basin Plan (collectively, the Basin Plans) may be amended in accordance with the California Water Code Section 13240, et seq.

4. On 7 April 2011, the Central Valley Water Board certified a program environmental impact report (Program EIR), which described a range of alternatives for implementing a Long-Term Irrigated Lands Regulatory Program (Long-Term Program). In the course of preparing the Program EIR, the Central Valley Water Board commissioned an analysis of the potential economic impacts of the alternatives, which included an analysis of the costs of the alternatives and identification of potential sources of financing.

5. California Water Code section 13141 addresses the relationship between the water boards' water quality control plans and the California Water Plan and also states, in part, that, "… prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan." Although the context of 13141 may limit its applicability to the establishment of agricultural water quality control programs in the Basin Plans, the cost estimates for the Long-Term Irrigated Lands Program have already been prepared and are consistent with the provisions of Water Code section 13141. Further, the inclusion of the cost estimates is necessary to supplement and update existing estimates of cost for agricultural water quality control programs already included in the Sacramento River and San Joaquin River Basin Plan. Since the Long-term Irrigated Lands Program will affect the entire Central Valley, amendments are needed for both the Sacramento River and San Joaquin River Basin Plan, and the Tulare Lake Basin Plan.

6. The Central Valley Water Board finds that the amendments merely provide information and will not require a change in discharge conditions or the nature of any discharge.

7. The action proposed meets the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b).

8. Central Valley Water Board staff has prepared a draft staff report dated July 2011, which was revised in response to comments. The draft staff report and revised staff report (dated September 2011) include a description of the proposed amendments. No potential environmental impacts were identified because the proposed amendments merely provide information on cost estimates and potential sources of financing for an agricultural water quality control program. Accordingly, these amendments are exempt from the California Environmental Quality Act (CEQA) because they will not affect the environment and are not a "project." (Pub. Res. Code §§ 21065, 21080, subd. (a); Cal. Code of Regs., tit. 14, § 15060, subd. (c)(3).)

9. The basin planning process has been certified by the Resources Agency as a certified regulatory program because its process adequately fulfills the purposes of CEQA. However, the proposed amendments are exempt from the certified regulatory program requirements because those requirements do not apply if the proposed amendments are exempt from CEQA. (Cal. Code of Regs., tit. 23, § 3720, subd. (b).)

10. Central Valley Water Board staff has circulated a Notice of Public Hearing, a written staff report, and draft proposed amendments to interested individuals and public agencies, for review and comment in accordance with state law (Wat. Code § 13245).

11. Responses to all comments have been prepared and the draft amendments and staff report have been revised as appropriate in response to comments.

12. Based on the record as a whole, including the draft Basin Plan amendments, the accompanying written documentation, and public comments received, the Central Valley Water Board concurs with staff's conclusion that the amendments will result in no effect on the environment.

13. These Basin Plan amendments must be approved by the State Water Board, Office of Administrative Law (OAL). (Wat. Code § 13245; Gov. Code § 13353). The proposed amendments become effective under State law after OAL approval.

14. The Central Valley Water Board finds that the amendments to the Basin Plans as described herein were developed in accordance with California Water Code section 13240, et seq.

THEREFORE BE IT RESOLVED:

1. Pursuant to California Water Code section 13240, et seq., the Central Valley Water Board, after considering the entire record, including oral testimony at the hearing,

hereby approves the staff report and adopts the amendments to the Sacramento River and San Joaquin River Basin Plan and the Tulare Lake Basin Plan as set forth in Attachments 1 and 2.

2. The Executive Officer is directed to forward copies of these Basin Plan amendments to the State Water Board in accordance with the requirements of California Water Code section 13245.

3. The Central Valley Water Board requests that the State Water Board approve the Basin Plan amendment in accordance with the requirements of California Water Code sections 13245 and 13246 and forward it to OAL.

4. If during its approval process the Central Valley Water Board staff, State Water Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed, the Executive Officer may make such changes, and shall inform the Central Valley Water Board of any such changes.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 13 October 2011.

_____
PAMELA C. CREEDON, Executive Officer

Attachment 1: Non-Regulatory Amendments to the Sacramento and San Joaquin River Basin Plan

Attachment 2: Non-Regulatory Amendments to the Tulare Lake Basin Plan

ATTACHMENT 1
RESOLUTION NO. R5-2011-XXXX
NON-REGULATORY AMENDMENTS TO THE
SACRAMENTO AND SAN JOAQUIN RIVER BASIN PLAN

Revise Basin Plan sections as follows:

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins has a section titled *Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing*. This section begins on Page IV-38. The amendments presented below will appear at the end of this section.

Long-Term Irrigated Lands Regulatory Program

The Central Valley Water Board intends on establishing a long-term irrigated lands regulatory program (Long-Term Program) by adopting one or more general waste discharge requirements and/or conditional waivers of WDRs to regulate the discharge of waste to ground and surface waters from irrigated agricultural operations. The Long-Term Program will be based, in whole or in part, on six alternatives described in the *Irrigated Lands Regulatory Program Final Environmental Impact Report* (Final PEIR; ICF International 2011) certified by resolution R5-2011-0017. The cost estimate below is based upon and encompasses the full range of those alternatives.

The cost estimate for the Long-Term Program accounts for program administration (e.g., Board oversight and third-party activities), monitoring for groundwater and surface water quality, and implementation of management practices throughout the Central Valley. The estimated cost for the annual capital and operational costs to comply with the Long-Term Program range from $216 million to $1,321 million (2007 dollars). This cost estimate is a cumulative total that includes costs from the Sacramento River and San Joaquin River Basins, and the Tulare Lake Basin.

Potential financing sources include:

1. The Federal Farm Bill, which authorizes funding for conservation programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program.

2. Grant and loan programs administered by the State Water Resources Control Board and Department of Water Resources, which are targeted for agricultural drainage management, water use efficiency, and water quality improvement. These programs include:
    a. Agricultural Drainage Management Program (State Water Resources Control Board)
    b. Agricultural Drainage Loan Program (State Water Resources Control Board)
    c. Clean Water Act funds (State Water Resources Control Board)
    d. Agricultural Water Quality Grant Program (State Water Resources Control Board)

e. Clean Water State Revolving Fund (State Water Resources Control Board)
f. Integrated Regional Water Management grants (State Water Resources Control Board, Department of Water Resources)

3. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program.

ATTACHMENT 2
RESOLUTION NO. R5-2011-XXXX
NON-REGULATORY AMENDMENTS TO THE
TULARE LAKE BASIN PLAN

Revise Basin Plan sections as follows:

The Water Quality Control Plan for the Tulare Lake Basin currently does not include a section titled *Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing*. The proposed amendments will add this section on Page IV-30, after the section titled *Continuous Planning for Implementation of Water Quality Control*. The amendments presented below will appear in this new section.

Estimated Costs of Agricultural Water Quality Control Programs

Long-Term Irrigated Lands Regulatory Program

The Central Valley Water Board intends on establishing a long-term irrigated lands regulatory program (Long-Term Program) by adopting one or more general waste discharge requirements and/or conditional waivers of WDRs to regulate the discharge of waste to ground and surface waters from irrigated agricultural operations. While the Central Valley Water Board has not established the Long-Term Program yet, it will be based, in whole or in part, on six alternatives described in the *Irrigated Lands Regulatory Program Final Environmental Impact Report* (Final PEIR; ICF International 2011) certified by resolution R5-2011-0017. The cost estimate below is based upon and encompasses the full range of those alternatives.

The cost estimate for the Long-Term Program accounts for program administration (e.g., Board oversight and third-party activities), monitoring for groundwater and surface water quality, and implementation of management practices throughout the Central Valley. The estimated cost for the annual capital and operational costs to comply with the Long-Term Program range from $216 million to $1,321 million (2007 dollars). This cost estimate is a cumulative total that includes costs from the Sacramento River and San Joaquin River Basin, and the Tulare Lake Basin.

Potential financing sources include:

1. The Federal Farm Bill, which authorizes funding for conservation programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program.

2. Grant and loan programs administered by the State Water Resources Control Board and Department of Water Resources, which are targeted for agricultural drainage management, water use efficiency, and water quality improvement. These programs include:
    a. Agricultural Drainage Management Program (State Water Resources Control Board)
    b. Agricultural Drainage Loan Program (State Water Resources Control Board)

c. Clean Water Act funds (State Water Resources Control Board)
d. Agricultural Water Quality Grant Program (State Water Resources Control Board)
e. Clean Water State Revolving Fund (State Water Resources Control Board)
f. Integrated Regional Water Management grants (State Water Resources Control Board, Department of Water Resources)

3. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins), which are listed below:
   a. Private financing by individual sources.
   b. Bonded indebtedness or loans from governmental institutions.
   c. Surcharge on water deliveries to lands contributing to the drainage problem.
   d. Ad Valorem tax on lands contributing to the drainage problem.
   e. Taxes and fees levied by a district created for the purpose of drainage management.
   f. State or federal grants or low-interest loan programs.
   g. Single-purpose appropriations from federal or State legislative bodies (including land retirement programs).

California Rice Commission
East San Joaquin Water Quality Coalition
Sacramento Valley Water Quality Coalition
Westside San Joaquin River Watershed Coalition

August 15, 2011

Via Electronic Mail Only

Mr. Brett Stevens
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670
bstevens@waterboards.ca.gov

SUBJECT: Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins, and the Tulare Lake Basin, to Provide a Cost Estimate and Potential Sources of Financing for the Long-Term Irrigated Lands Regulatory Program (Draft Basin Plan Amendments)

Dear Mr. Stevens:

The California Rice Commission, East San Joaquin Water Quality Coalition, Sacramento Valley Water Quality Coalition and Westside San Joaquin River Watershed Coalition appreciate the opportunity to provide comments on the Draft Basin Plan Amendments. We have been active participants in the Central Valley Regional Water Quality Control Board's (Central Valley Water Board) process for the development of a Long-Term Irrigated Lands Program (LTILP) and recognize that this action represents one part in the development of that program. Our comments below are specific to the Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program (Technical Memorandum), the Staff Report for the Draft Basin Plan Amendments, and the proposed amendments.

As a preliminary matter, the Central Valley Water Board members must understand the significance of the action being proposed. Specifically, Water Code section 13141 requires the Central Valley Water Board to estimate the cost of the LTILP and identify potential sources of funding prior to adopting and implementing the program in part or whole. When Water Code section 13141 was adopted, the State Water Resources Control Board (State Water Board) clearly indicated the information would be a material consideration for any regional board. More specifically, the State Water Board stated in its Enrolled Bill Report to the Governor's office that "[t]his bill will not prevent implementation and enforcement of agricultural water quality control programs. It will require, however, that the State and Regional Boards consider, and include in the basin plans, an economic study of an agricultural water quality control program in terms of total cost estimate and potential sources of financing *before* implementing such a program." (See Attachment 1, Enrolled Bill Report to SB 904 from State Water Board at p. 1, emphasis added.) The purpose of this provision,

and the State Water Board's reason for encouraging signature of the legislation, was further expressed as follows:

> This bill is consistent with existing SWRCB policy regarding regulation of agricultural wastewater discharges.
>
> Agriculture is presently the largest user of the State's freshwater resources. The Board recognizes that in many instances discharges of agricultural wastewaters create water quality problems. However, the Board also recognizes that there are inadequate institutional, financial, and technological means at this time for the development and management of a comprehensive and effective agricultural water quality control program. While, in specific instances, agricultural discharges can and should be dealt with under existing law, long-term water quality problems, such as nonpoint source control and salinity control programs, represent more difficult problems and the costs associated with implementation of these programs can be enormous. *Therefore, it is the Board's policy that any agricultural water quality control program must be carefully examined and formulated before it is implemented, and the costs and sources of financing would be a material consideration before any decision is made.* (Attachment 1, Enrolled Bill Report to SB 904 from State Water Board at p. 2, emphasis added.)

Accordingly, the Central Valley Water Board is required to materially consider the estimated cost of this program before adopting or implementing the LTILP, or any of its individual elements.

Unfortunately, this has not occurred. Instead, the Central Valley Water Board was asked to evaluate and comment on the LTILP framework in advance of their consideration of these Draft Basin Plan Amendments. We contend that the Central Valley Water Board and its members improperly considered the LTILP framework because it did not properly consider costs prior to, or at the time of, consideration of the LTILP framework. Thus, any reliance that Central Valley Water Board staff place on the staff's LTILP framework is misplaced, including the use of the LTILP framework to estimate costs in the Draft Basin Plan Amendments.

I. Technical Memorandum

As we, and many others, indicated in our September 27, 2010 comments on the Draft Program Environmental Impact Report, we are concerned that the economic analysis in the Technical Memorandum is inadequate and excludes substantial costs associated with practices compelled or prohibited by the various alternatives. Specifically, we are concerned that the Technical Memorandum underestimates the acreage for which new or additional management practices may be required once the general waste discharge requirements are adopted.

Accordingly, the management practice costs in the Technical Memorandum, and therefore the Staff Report, are underestimated.

Further, and contrary to comments in the Staff Report, the Technical Memorandum does not include a cost estimate for staff's alternative 6. The Technical Memorandum evaluates alternatives 1 through 5 that were included in the Draft PEIR. Attached to the Draft PEIR was an appendix that included staff's preferred project alternative. Subsequent to circulation of the Draft PEIR and staff's preferred project alternative, the now referred to LTILP framework was released. The LTILP framework is significantly different from the five (5) alternatives contained in the Draft PEIR as well as staff's preferred project alternative, which was in the appendix of the Draft PEIR. In other words, the Technical Memorandum used to prepare the cost estimate for these Draft Basin Plan Amendments did not include or estimate costs associated with the LTILP framework, which will be the basis for future Central Valley Water Board actions. (See Staff Report, p. 8 ["Staff indicated that it would develop an approach modeled after a *Recommended Irrigated Lands Regulatory Program Framework Staff Report* (ILRP Framework Report), *March 2011* . . . . While the staff's approach is subject to change, and is modeled after a staff report that was not adopted by the Board, it provides additional information upon which to estimate future costs of the Long-Term Program."].) Because the LTILP framework is actually a conglomeration of other project alternatives subject to change, the Technical Memorandum does not truly analyze the cost estimates or economic impacts of the proposed agricultural water quality control program. There is no indication that the cost estimates and economic analysis for the individual alternatives in the Technical Memorandum are applicable to the LTILP framework. Assumptions contained in the actual independent economic analysis may not remain true if variant pieces of each alternative are selectively taken out and subsequently reassembled, as is the case with the LTILP framework. Taking isolated figures from an economic analysis that was designed to summarize the ramifications of different alternatives in their entirety may not accurately reflect the true economic impacts. Before relying the Technical Memorandum from the Draft PEIR, it should be revised to contain a full economic impact analysis of the LTILP framework not based exclusively on the estimated costs of pieces assembled from the other alternatives.

Moreover, by staff's own admission in the Staff Report, staff's approach may change after adoption and approval of the Draft Basin Plan Amendments. Thus, any reliance on the Technical Memorandum is useless considering the fact that none of us know exactly what will be proposed in the future. Accordingly, it is inappropriate for the Central Valley Water Board to use it and its information to estimate costs for the Draft Basin Plan Amendments.

II. Staff Report

The Staff Report implies that six (6) alternatives were properly analyzed as part of the Central Valley Water Board's California Environmental Quality Act (CEQA) process. As explained previously, that is not the case. The Staff Report, which becomes part of the

administrative record for the Basin Plan Amendments, must be modified to accurately reflect what alternatives were actually analyzed, and what were not.

More importantly, the Staff Report fails to include any discussion of economic impacts. The Staff Report provides only estimated costs of the program and does not provide the Central Valley Water Board members with material and relevant information with respect to the economic impacts that the five alternatives (and staff's subsequent amalgamation of these alternatives) may have on Central Valley agriculture and the Central Valley economy. Economic impacts are clearly part of the "total cost" of a program and should not be excluded here.

Moreover, the broad range of estimated costs presented in the Staff Report fails to provide the Central Valley Water Board members with any meaningful information in order to materially consider the costs of the proposed agricultural water quality control program (i.e., the LTILP framework), assuming that the agricultural water quality control program does not change substantially from what has been presented to date. The range goes from $216 million to $1.321 billion. The Staff Report does not articulate estimated costs associated with each alternative, or staff's LTILP framework. Instead, the Staff Report just states that the LTILP framework is likely to fall somewhere within this range. (See Staff Report, p. 10 ["Accordingly, the range of costs for staff's current approach are included in Table 1's range of Long-Term Program alternatives."].) Information this vague fails to provide the Central Valley Water Board members with useful information that they could use and consider in their decisions with respect to the LTILP framework as a whole, or for its individual parts. Further, by staff's own admission, the program may change further as it is implemented.

The Staff Report also fails to include a comprehensive discussion on the potential sources of financing. The information provided in the Staff Report is fairly generic and broad. It does not clearly explain how the agricultural community will actually pay for the increased costs of this program. Nor does it explain that the potential sources of financing are limited and that most, if not all, of the costs will be placed on individual growers with no public assistance. It does not provide any assessment at all of the availability or cost to private growers of financing for purposes of complying with the additional regulation nor of the incremental and cumulative effect on growers' ability to remain economically viable with the added regulatory burden. The potential sources of financing discussion also fails to explain how farmers are "price-takers," in that they are unable to pass on increased costs to consumers. By not including this type of information, Central Valley Water Board members cannot properly and materially consider the Draft Basin Plan Amendments.

III. Draft Basin Plan Amendments

Like with the information contained in the Staff Report, the Draft Basin Plan Amendments inadequately address or explain the costs and economic impacts of the LTILP, and fail to provide a clear discussion with respect to potential sources of funding. The cost estimate language merely parrots the range of costs, which varies to such a degree as to be meaningless. And the language for potential sources of funding is only a list of grant and loan

programs. There is no meaningful analysis with respect to the economic implications of the Central Valley Water Board's potential actions. There is also no meaningful analysis as to how much financing or funding is available from other sources as compared to what individual growers may be required to spend to implement the LTILP framework. Clearly, based on the material presented in the Staff Report and the Draft Basin Plan Amendments, Central Valley Water Board staff are merely putting forward language in an effort to state that the Central Valley Water Board complied with Water Code section 13141. However, the Staff Report and the Draft Basin Plan Amendments collectively fail to satisfy the requirements of Water Code section 13141, which requires the development of meaningful information so that it can be part of the Central Valley Water Board's material considerations. Due to the lack of clear and material information, the Central Valley Water Board should reject the Draft Basin Plan Amendments.

Overall, the Staff Report, the Draft Basin Plan Amendments, and their reliance on the Technical Memorandum are insufficient to comply with the mandates of Water Code section 13141. As explained, the information is vague and nebulous. To be meaningful, the Staff Report and the Draft Basin Plan Amendments need to collectively explain the costs for implementing the LTILP framework as the chosen regulatory program, and staff's intended implementation of that framework. Without this information, the Central Valley Water Board members cannot properly and materially consider costs and economics in their future actions for implementing the LTILP.

Sincerely,

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Bruce Houdesheldt
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Attachment
TAD:cr

ENROLLED BILL REPORT

ENVIRONMENTAL QUALITY AGENCY STATE WATER RESOURCES CONTROL BOARD	BILL NUMBER SB 904 AUTHOR Way

BILL SUMMARY

This bill requires, prior to implementation of any agricultural water quality control program, that there must be identified in a regional water quality control plan (basin plan) an estimate of the total costs and potential sources of financing for such programs.

ANALYSIS

A. Specific Findings:

1. Existing law requires that each of California's nine Regional Water Quality Control Boards formulate and adopt, in conformance with the State Water Resources Control Board's (SWRCB) policies, water quality control plans for all areas within their regions. These basin plans are effective when approved by the SWRCB. Before approval, the SWRCB is required to consider various factors, including economic considerations.

2. Existing law also provides that basin plans become part of the California Water Plan when they are reported to the Legislature.

3. This bill requires that, prior to any implementation of an agricultural water quality control program, there must be indicated in the appropriate basin plan:

   (a) An estimate of the total cost; and

   (b) An identification of potential sources of financing for agricultural water quality control programs.

4. This bill will not prevent implementation and enforcement of agricultural water quality control programs. It will require, however, that the State and Regional Boards consider, and include in the basin plans, an economic study of an agricultural water quality control program in terms of a total cost estimate and potential sources of financing before implementing such a program. It will not prevent inclusion of revised basin plans into the California Water Plan.

B. Fiscal Analysis:

There may be a small increase in administrative costs imposed by this bill. This can be absorbed within the existing budget by existing staff.

(Cont'd on page 2)

RECOMMENDATION	DATE	AGENCY HEAD	DATE
SIGN.			
DEPARTMENT HEAD	5/6/76	Lawrence H. Haas, Legislative Representative Office: 322-2896 Res.: 966-1737	

For Information Call: Tim Yaryan, Attorney--Work: 2-3580; Home: 392-0800.

LEGISLATIVE HISTORY

This is an original bill by the author. It was introduced because of the author's concern for the economic impact that implementation of basin plan objectives would have on agriculture. As introduced, this bill was opposed by the SWRCB both on policy and fiscal grounds. However, after considerable discussion, the SWRCB and author reached an agreement and this bill was amended accordingly. The SWRCB's position on the amended bill was neutral.

REASONS FOR RECOMMENDED POSITION

This bill is consistent with existing SWRCB policy regarding regulation of agricultural wastewater discharges.

Agriculture is presently the largest user of the State's freshwater resources. The Board recognizes that in many instances discharges of agricultural wastewaters create water quality problems. However, the Board also recognizes that there are inadequate institutional, financial, and technological means at this time for the development and management of a comprehensive and effective agricultural water quality control program. While, in specific instances, agricultural discharges can and should be dealt with under existing law, long-term water quality problems, such as nonpoint source control and salinity control programs, represent more difficult problems and the costs associated with implementation of these programs can be enormous. Therefore, it is the Board's policy that any agricultural water quality control program must be carefully examined and formulated before it is implemented, and the costs and sources of financing would be a material consideration before any decision was made. This, in our opinion, is the problem that the author is addressing in his bill. Accordingly, the Board recommends that the bill be signed.

VOTE

Senate	: Ayes, 30; Noes, 0.	(6/18/75)
Assembly	: Ayes, 73; Noes, 0.	(4/8/76)
Senate Concurrence	: Ayes, 27; Noes, 0.	(4/29/76)

CALIFORNIA FARM BUREAU FEDERATION
OFFICE OF THE GENERAL COUNSEL
2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 · PHONE (916) 561-5665 · FAX (916) 561-5691

Sent via E-Mail
bstevens@waterboards.ca.gov

August 15, 2011

Ms. Katherine Hart, Chairwoman
Central Valley Regional Water Quality Control Board
Attn: Brett Stevens
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Re: ***Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide a Cost Estimate and Potential Sources of Funding for a Long-Term Irrigated Lands Program***

Dear Chairwoman Hart and Members of the Board:

The California Farm Bureau Federation ("Farm Bureau") is a non-governmental, non-profit, voluntary membership California corporation whose purpose is to protect and promote agricultural interests throughout the state of California and to find solutions to the problems of the farm, the farm home, and the rural community. Farm Bureau is California's largest farm organization, comprised of 53 county Farm Bureaus currently representing approximately 76,500 agricultural and associate members in 56 counties. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

Farm Bureau appreciates the opportunity provided by the Central Valley Regional Water Quality Control Board ("Regional Board") to submit comments on the Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide a Cost Estimate and Potential Sources of Funding for a Long-Term Irrigated Lands Program ("Basin Plan Amendments"). Farm Bureau has numerous reservations and concerns regarding the Basin Plan Amendments and offers the following specific comments contained herein.

NANCY N. MCDONOUGH, GENERAL COUNSEL
ASSOCIATE COUNSEL:
CARL G. BORDEN · KAREN NORENE MILLS · CHRISTIAN C. SCHEURING · KARI E. FISHER · JACK L. RICE

A. Improper Reliance on the Economic Analysis to Amend the Basin Plan

The Basin Plan Amendments addressing the economic costs associated with the Long-Term Irrigated Lands Program ("LT-ILRP") rely upon the Economic Analysis[1] released in conjunction with the LT-ILRP Draft Environmental Impact Report ("Draft PEIR") and the LT-ILRP Final Environmental Impact Report ("Final PEIR"). Unfortunately, the Economic Analysis is flawed and failed to properly evaluate the potentially substantial costs associated with practices required or prohibited by the various program alternatives, including but not limited to nutrient management, irrigation practices, and the installation and operation of monitoring wells.

The Economic Analysis cursorily estimated the associated costs of the five Alternatives analyzed within the Draft PEIR and Final PEIR. Although the economic assessment of these five Alternatives was insufficient and flawed, a larger concern is the Economic Analysis' failure to analyze the impacts of Staff's Recommended Project Alternative ("Alternative 6") or the Regulatory Framework Alternative ("Alternative 7").[2] Alternatives 6 and 7 were the two alternatives favored by staff. Further, Alternative 7 is now "staff's current approach" and will be used by staff in "developing proposed orders and other regulatory actions that will establish the Long-Term Program." (See *Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide a Cost Estimate and Potential Sources of Funding for a Long-Term Irrigated Lands Program Staff Report* (July 2011) p. 3 ("BPA Staff Report").) In combination with the flawed analysis of the five Alternatives that were evaluated, the Economic Analysis' failure to analyze *any* of the costs associated with Alternatives 6 and 7 amounts to a grave error, and thus, cannot be relied upon to amend the Basin Plan.

B. Failure to Adequately Analyze the Economic Impacts of the Regulatory Framework Alternative Under Porter-Cologne

The requirement to consider economics under the Porter-Cologne Water Quality Control Act ("Porter-Cologne") is absolute. Water Code, section 13141 explicitly mandates:

> State policy for water quality control adopted or revised in accordance with the provisions of this article, and regional water quality control plans

---

[1] Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program (July 2010) ("Economic Analysis").

[2] The Draft PEIR analyzed five program alternatives and a separate document, Appendix A, contained a section describing the Staff Recommended Program Alternative (Alternative 6). In conjunction with the release of the Final PEIR, a staff report was released in March 2011 containing the Regulatory Program Framework, an entirely new alternative (Alternative 7). The Regulatory Framework Alternative contained wholly new regulatory concepts and requirements, as well as a conglomeration of some elements presented in the five alternatives that were analyzed in the Draft PEIR.

> approved or revised in accordance with Section 13245, shall become a part of the California Water Plan effective when such state policy for water quality control, and such regional water quality control plans have been reported to the Legislature at any session thereof.
>
> However, prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan.

(Wat. Code, § 13141.) Before a Regional Board can impose waste discharge requirements or condition water quality certification for discharges from irrigated lands, Porter-Cologne requires that the Regional Board "shall take into consideration" the following factors: "the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241." (Wat. Code, § 13263.) Section 13241 in turn lists six "factors to be considered," including "economic considerations" and "water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." (Wat. Code, § 13241.)

As discussed *supra*, while an economic analysis was conducted for the five Alternatives contained within the Draft PEIR and Final PEIR, no proper economic analysis has been conducted for Alternatives 6 and 7. The *brief* reference within the April 2011 Staff Report estimating the total costs of the Regulatory Framework Alternative is insufficient and does not comply with Porter-Cologne. Rather than a full analysis, the paragraphs within the April 2011 Staff Report consisted of conclusory statements which failed to properly acknowledge the total cost of an agricultural water quality control program and the potential sources of financing. Anticipated program implementation costs to the agricultural community include increases in potential fees, management practice implementation, monitoring costs, report preparation, and cost for education, as well as other costs. Given that the impacts of water quality regulations frequently take years to materialize, the Regional Board should analyze the economic costs and impacts within a dynamic structure taking into account the projected changes in the economic situation *over time*.

In addition to direct costs imposed on the agricultural community, the Regional Board should evaluate indirect costs, including the economic consequences that are transmitted via market interactions to other groups, such as consumers. Water quality regulation, such as the LT-ILRP, increases the average cost of production and has a direct negative effect on the producer and the consumer through the resulting increase in variable costs and the output price. The propagation of the impacts of a regulation, such as this, through the economy is well documented and can be quantified by economic analysis. Further, such analysis shall be conducted prior to adoption or implementation of any program. (Wat. Code, § 13141.) Thus, a proper economic analysis of the Staff Recommended Program Alternative and Regulatory Framework Alternative, which by its

very purpose is the implementing framework for the LT-ILRP, must be conducted immediately.

C. The Economic Analysis is Insufficient and Cannot Be Relied Upon By Alternatives 6 and 7 Since Underlying Assumptions Have Substantially Changed

As stated in the beginning pages of the Economic Analysis, "a change in the underlying assumptions … could substantially alter the study results." (Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program (July 2010) p. 1-3, ("Economic Analysis").) This statement acknowledges that if the program alternatives change, the cost assumptions within the Economic Analysis will be altered. If new alternatives are developed, new cost assumptions will also have to be developed.

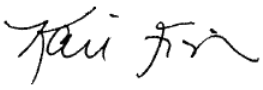
Here, Alternatives 6 and 7 propose dramatically different regulatory structures from Alternatives 1 through 5. For example, Alternative 6 consists of a tiering and prioritization system "where Tier 1 areas would be 'low priority', and Tier 2 would be 'high priority'." (BPA Staff Report, p. 7.) Alternative 7, on the other hand, consists of "a three-tiered approach to ensure regulatory requirements are appropriately tailored to the water quality conditions in the area." (BPA Staff Report, p. 8.) Alternatives 1 through 5, *the only alternatives that received consideration within the Economic Analysis*, do not contain any type of "tiering" structure or "prioritization" scheme. Further, the economic evaluation of Alternatives 1 through 5 was limited to each discrete alterative. The evaluation did not separately evaluate components of each alternative, but rather only looked at each alternative, in its entirety, in order to estimate costs. Thus, attempting to rely upon the Economic Analysis for Alternative 6, which consists of a conglomeration of *some* elements presented in the five Alternatives as well as entirely new program elements and new combinations of existing elements, is improper. Further, Alternatives 6 and 7 were not existing alternatives at the time the economic evaluation was conducted.

Given the substantial deviations from Alternatives 1 through 5, "a change in the underlying assumptions" that "could substantially alter the study results" has occurred. (Economic Analysis, p. 1-3.) The fundamental "underlying assumptions" that were used to estimate the LT-ILPR economic costs do not and cannot apply to Alternatives 6 and 7. Without proper analysis of Alternative 6 and 7's economic impacts, the true economic impact of the forthcoming LT-ILRP is unknown. Thus, the Economic Analysis cannot be relied upon for the Basin Plan Amendment in light of the fact that "staff's current approach" is predicated upon Alternative 7.

Conclusion

Farm Bureau appreciates the opportunity to submit comments on the proposed Basin Plan Amendments to provide a cost estimate for the LT-ILPR. Farm Bureau urges the Regional Board to reassess the adequacy of Economic Analysis prepared for the LT-ILPR and refrain from amending the Basin Plan until the Economic Analysis is substantially revised to properly reflect the costs associated with the LT-ILRP.

Sincerely,



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August 15, 2011

VIA EMAIL
BSTEVENS@WATERBOARDS.CA.GOV

Brett Stevens
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

Re: COMMENTS ON AMENDMENTS TO THE TULARE LAKE BASIN, BASIN PLAN ON ILRP COST ESTIMATES

Dear Mr. Stevens:

The Southern San Joaquin Valley Water Quality Coalition (SSJVWQC) files these comments on what it regards as erroneous estimates of costs associated with the newly certified EIR and adopted ILRP, and representations it makes relative to the source of funds which pay for this program.

I. PRELIMINARY ISSUES.

A. TIMING

It seems strange to schedule a mid-October hearing on this topic, yet cut off comments August 15th, some 60 days before the hearing.

B. APPEAL TO STATE BOARD

The economic evaluation engaged for the ILRP EIR was defective and inaccurate. This Economic Analysis has been the target of appeals filed with the State Board by each the environmental plaintiffs and the agricultural coalitions. Unless the State Board overturns the ILRP EIR and sends it back for reconsideration, the ILRP, EIR and Economic Analysis will likely be the target of a legal challenge.

Consequently, it appears to be improper for the Regional Board to take a faulty Economic Analysis which is presently under direct challenge and propose to compound the problem by advancing it as a basin plan amendment in both of the Region's basin plans.

II. SUBSTANTIVE PROBLEMS WITH THE JULY STAFF REPORT AND PROPOSED BASIN PLAN AMENDMENTS

A. THE STAFF REPORT ERRONEOUSLY (P. 3) IDENTIFIES THE EIR AS HAVING CONTAINED SIX ALTERNATIVES

Since first introducing the staff alternative as Exhibit A to the Draft EIR, it has become in the interest of the Regional Board staff to misrepresent the EIR as having a "sixth alternative." However, this is completely false and is merely an attempt to camouflage the fact that the staff alternative, which was adopted by the Board, did not undergo environmental review or economic analysis. At this time, the same staff that promulgated the staff alternative and did not subject that alternative to the Economic Analysis now advances the July Staff Report seeking the Board to repeat this mistake.

Regional Board staff state in their July Staff Report:

> "3. Irrigated Lands Long-Term Program Development
>
> … This report evaluated six program alternatives for the long-term regulation of irrigated lands, including an Alternative 6 that was the Board staff recommended alternative when the Final PEIR was released to the public."
>
> * * *
>
> "3.1 Final Program EIR Long-Term Program Alternatives
>
> The six Long-Term Program alternatives are evaluated and presented in detail in the Final PEIR…"

These statements are completely false, and those contentions were directly refuted by the Economic Analysis itself as it states throughout the document that the Economic Analysis reviewed only five alternatives, not six, as staff alleges. (See, e.g., Economic Analysis, pp. 1-2.) Pages 7 and 8 of the staff report also falsely references a phantom sixth alternative. That false misrepresentation should be stricken in its entirety.

B. THE ECONOMIC ANALYSIS COULD NOT HAVE POSSIBLY EVALUATED THE STAFF ALTERNATIVE, WHICH HAD NOT BEEN PRODUCED UNTIL AFTER THE ECONOMIC ANALYSIS WAS RELEASED

The Economic Analysis evolved over many months. In addition to the research completed by the independent contractors, there were meetings with a number of stakeholders.

Throughout this process, only the five alternatives were available and were in fact the specific target of the Economic Analysis.

The staff alternative was a completely new and novel alternative that was attached as Appendix A to the Draft EIR and which was labeled as the "Recommended Long-Term Irrigated Lands Program." The staff alternative differed from the five other alternatives and did not undergo the multiple years of review that the five other alternatives had previously undergone. Only concurrently with the release of the Draft EIR, including the Economic Analysis, was the staff alternative first made publically available. The staff alternative was never mentioned in either the body of the Draft EIR or the Economic Analysis.

The staff alternative fails to satisfy the standards for both economic and environmental review. Although, the introduction of the staff alternative provides that it was developed from elements of the five alternatives included in the EIR, the staff alternative was not in and of itself evaluated to determine if it has significant environmental impacts. Moreover, the staff alternative was not evaluated to assess its economic impacts. Because the staff alternative is actually a conglomeration of new requirements and select elements of other project alternatives, neither the EIR nor the Economic Analysis are applicable. The staff alternative now alleges that parts of it trace back to select relevant pieces of Alternatives 2 and 4 which should allow an estimate of economic impact and cost. However, there is no indication that the independent economic analysis on which those estimates are based is supported by using pieces of other alternatives. Taking isolated figures from an economic analysis that was designed to summarize the ramifications of different alternatives in their entirety will not accurately reflect the true economic impacts of the staff alternative. To be adequate, the Draft EIR should, but failed to, contain a full economic impact analysis of the actual staff alternative adopted, not based only on the estimated costs of pieces assembled from the other five alternatives. Due to its failure, there is no basis on which to accurately calculate the economic impacts or costs of the staff alternative. As discussed below, the staff alternative had many additional components not analyzed whatsoever.

C. THE ECONOMIC ANALYSIS CANNOT BE RELIED UPON AS HAVING ANALYZED THE PRESENT ILRP WHICH IS NOW BEING ADOPTED AS GUIDED BY THE FRAMEWORK DOCUMENT

The July Staff Report erroneously identifies the EIR as having a sixth alternative, which was not even drafted or available when the environmental or Economic Analysis were being finalized. (July Staff Report, p. 3.) The staff alternative, which was adopted by the Board, is presently being further amended as guided by a new Framework document. Like the staff alternative, the Framework was not environmentally or economically reviewed. Further, the Framework does not resemble any of the alternatives analyzed as part of the Draft EIR. The

Framework document advances many new provisions and extends the staff alternative well beyond any alternative that was included and reviewed in the Draft EIR or Economic Analysis.

Specifically, major impacts, such as, but not limited to, a new system for imposing a mix of general order waste discharge requirements and conditional waivers, a new process for public input on surface quality management plans and groundwater quality management plans, nutrient management plans in nitrate impact areas, possible fertilizer application limits, drilling new groundwater monitoring wells, hiring thousands of certified crop specialists to qualify and develop farm plans, newly regulating millions of acres under a new Tier 2, which were not previously regulated, and are all new regulatory elements, and were never analyzed in the EIR or the Economic Analysis. These impacts may cost the agricultural community more than double the $1.32 billion that was projected by the Economic Analysis, and which itself was defective in underestimating the costs of the alternatives it did analyze.

D. THE ECONOMIC ANALYSIS WAS DEFECTIVE AND IS UNDER CHALLENGE BY BOTH THE ENVIRONMENTAL AND AGRICULTURAL STAKEHOLDERS

The Regional Board's Economic Analysis is substantially deficient and fails to comply with the law. The Economic Analysis fails to satisfy either CEQA or the Porter-Cologne Water Quality Control Act, which both require the Regional Board to present and identify the economic impacts of the EIR, the Framework and the staff alternative. Water Code section 13141 requires that "prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan. The Framework document represents the beginning of implementation of an agricultural water quality control program, and the Regional Board has not yet provided an estimate of the total cost of the program or identified potential sources of funding for the program.

Secondly, the staff alternative combined with the Framework contains potentially costly and time-consuming additional requirements, such as the requirement that all irrigated agricultural operations in all tiered areas complete a farm-specific evaluation and identification of management practices for Regional Board inspection. The costs of such requirements and those addressed above in point C. were not analyzed in the EIR or accompanying Economic Analysis.

E. THE SECTION ON "POTENTIAL SOURCES OF FINANCING" IS NAÏVE/UNREALISTIC/AND A DEPARTURE FROM REALITY

The report indicates that there are seven potential sources of funding to pay the program costs which the analysis anticipated (although inaccurate when reported) and as indicated above,

most of the elements which are now driving the real costs were not even available when analyzed.

Those reported seven funding sources are:

1. Private financing by individual sources.

2. Bonded indebtedness or loans from government institutions.

3. Surcharge on water deliveries to lands contributing to the water quality problem.

4. Ad Valorem tax on lands contributing to the water quality problem.

5. Taxes and fees levied by a district created for the purpose of drainage management.

6. State and federal grants or low-interest loan programs.

7. Single purpose appropriations from federal or state legislative bodies (including land retirement programs).

This is so inaccurate that it amounts to an insult to the farmers and coalitions that are actually paying for the ILRP, and will continue to be the only funding sources for this runaway new regulatory program. The only viable funding is Option 1, "Private Financing by Individuals", however, it is a deceptive title. That title should truthfully state "additional fees to be paid by the farm community".

There will be no bonds, taxes, grants, loans, or general fund appropriation. The Economic Analysis of $1.32 billion of new costs to the agricultural community seriously under-evaluated the true costs of the alternatives available at that time. The belated staff program proposal, which was adopted by the Board and subsequently enhanced by the Framework document, will impose perhaps two to three times the costs of the program. Therefore, this new program, as imposed on Central Valley agriculture, may increase farm fees in the amount of $3 to $5 billion.

III. AMENDMENT OF BASIN PLAN LANGUAGE

Section 4.2 specifically addresses the Tulare Lake Basin Plan and clarifies that there is presently no similar section in this basin plan. The Tulare Lake Basin Plan does not presently have a section on estimated costs as does the northern basin plan, therefore, there is no compelling reason to make <u>any</u> such amendment.

Our basin has functioned adequately since 2004 in administering the ILRP without any basin plan section addressing costs. Therefore, it is apparent that we can continue to operate under the ILRP without any reference to funding in the basin plan.

It is even more apparent that it is far more prudent to remain silent than it would be to include in the basin plan any language which is clearly incorrect, and therefore invite additional appeals and challenges. It should also be clear that nothing should be advanced in the basin plan which is presently under appeal and therefore likely to be amended.

1. As addressed above, the first proposed paragraph must be amended to omit any false reference to a sixth alternative.

2, Also as mentioned above, the section on "potential funding sources" also needs fundamental amendments.

The EQIP and conservation programs do not compensate farmers for complying with the ILRP. The State Board and DWR programs likewise do not compensate farmers for their regulatory compliance.

3. Lastly, the reference to the San Joaquin River programs are not applicable to the Tulare Lake Basin and should be stricken.

If the Board is compelled to place any amendment in the Tulare Lake Basin, Basin Plan, it should be amended as follows:

> "4.2 Amendments to the Water Quality Control Plan for the Tulare Lake Basin
>
> Long-Term Irrigated Lands Regulatory Program
>
> …While the Central Valley Water Board has not established the Long-Term Program yet, it will not be ~~based in whole or in part, on six alternatives described~~ on any of the five alternatives evaluated in the EIR or economically analyzed in the *Irrigated Lands Regulatory Program Final Environmental Impact Report* (Final PEIR; ICF International 2011) certified by resolution $56-2011-0017. It will instead be based on a staff alternative subsequently developed and adopted by the Board. The cost estimate below was~~is~~ based upon ~~and encompasses~~ the five ~~full range of those~~ alternatives.

"The cost estimate for the Long-Term Program accounts for program administration (e.g., Board oversight and third-party activities), monitoring for groundwater and surface water quality, and implementation of management practices throughout the Central Valley. The estimated cost for the annual capital and operational costs to comply with the Long-Term Program range from $216 million to $1,321 million (2007 dollars) based on the five alternatives analyzed. This cost estimate was~~is~~ a cumulative total that includes costs from the Sacramento River and San Joaquin River Basin, and the Tulare Lake Basin. The ILRP which was adopted from the staff alternative will, however, result in substantially greater, but as now, yet undetermined costs.

Potential funding sources ~~include:~~for the ILRP are from fees imposed on the Region's farmers."

~~1. The Federal Farm Bill, which authorizes funding for conservation programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program.~~

~~2. Grant and loan programs administered by the State Water Resources Control Board and Department of Water Resources, which are targeted for agricultural drainage management, water use efficiency, and water quality improvement. These programs include:~~

~~a. Agricultural Drainage Management Program (State Water Resources Control Board)~~

~~b. Agricultural Drainage Loan Program (State Water Resources Control Board)~~

~~c. Clean Water Act funds (State Water Resources Control Board)~~

~~d. Agricultural Water Quality Grant Program (State Water Resources Control Board)~~

~~e. Clean Water State Revolving Fund (State Water Resources Control Board)~~

~~f. Integrated Regional Water Management grants (State Water Resources Control Board, Department of Water Resources)~~

~~3. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins).”~~

Sincerely,

William J. Thomas
for BEST BEST & KRIEGER LLP

WJT:lmg

Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide a Cost Estimate and Potential Sources of Funding for a Long-Term Irrigated Lands Program

Response to Comments

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or Board) has provided opportunities for the public to submit written comments on the proposed Basin Plan amendments described above. This document contains written responses to comments received pertaining to these proposed amendments.

The proposed amendments had a 45-day public comment period that ended on 15 August 2011. Written comments were received during this comment period from:

A. California Rice Commission, East San Joaquin Water Quality Coalition, Sacramento Valley Water Quality Coalition, and Westside San Joaquin River Watershed Coalition
B. Ms. Kari E. Fisher, General Counsel, California Farm Bureau Federation
C. Mr. William J. Thomas, Best, Best & Krieger, counsel for Southern San Joaquin Valley Water Quality Coalition

Following are the responses to the comments.

<u>California Rice Commission, East San Joaquin Water Quality Commission, Sacramento Valley Water Quality Coalition, and Westside San Joaquin River Watershed Coalition</u>

A1. *As a preliminary matter, the Central Valley Water Board members must understand the significance of the action being proposed. Specifically, Water Code section 13141 requires the Central Valley Water Board to estimate the cost of the Long-Term Irrigated Lands Program (LTILP) and identify potential sources of funding prior to adopting and implementing the program in part or whole. When Water Code section 13141 was adopted, the State Water Resources Control Board (State Water Board) clearly indicated the information would be a material consideration for any regional board. More specifically, the State Water Board stated in its Enrolled Bill Report to the Governor's office that "[t]his bill will not prevent implementation and enforcement of agricultural water quality control programs. It will require, however, that the State and Regional Boards consider, and include in the basin plans, an economic study of an agricultural water quality control program in terms of total cost estimate and potential sources of financing before implementing such a program." (See Attachment 1, Enrolled Bill Report to SB 904 from State Water Board at p. 1, emphasis added.) The purpose of this provision, and the State Water Board's reason for encouraging signature of the legislation, was further expressed as follows:*

> *This bill is consistent with existing SWRCB policy regarding regulation of agricultural wastewater discharges.*
>
> *Agriculture is presently the largest user of the State's freshwater resources. The Board recognizes that in many instances discharges of agricultural wastewaters create water quality problems. However, the Board also recognizes that there are inadequate institutional, financial, and technological means at this time for the development and management of a comprehensive and effective agricultural water quality control program. While, in specific instances, agricultural discharges can and should be dealt with under existing law, long-term water quality problems, such as nonpoint source control and salinity control programs, represent more difficult problems and the costs associated with implementation of these programs can be enormous. Therefore, it is the Board's policy that any agricultural water quality control program must be carefully examined and formulated before it is implemented, and the costs and sources of financing would be a material consideration before any decision is made. (Attachment 1, Enrolled Bill Report to SB 904 from State Water Board at p. 2, emphasis added.)*

Accordingly, the Central Valley Water Board is required to materially consider the estimated cost of this program before adopting or implementing the LTILP, or any of its individual elements.

Unfortunately, this has not occurred. Instead, the Central Valley Water Board was asked to evaluate and comment on the LTILP framework in advance of their consideration of these Draft Basin Plan Amendments. We contend that the Central Valley Water Board and its members improperly considered the LTILP framework because it did not properly consider costs prior to, or at the time of, consideration of the LTILP framework. Thus, any reliance that Central Valley Water Board staff place on the staff's LTILP framework is misplaced, including the use of the LTILP framework to estimate costs in the Draft Basin Plan Amendments.

Response to Comment A1.

It is questionable whether section 13141 applies to the upcoming orders that will constitute the long-term irrigated lands regulatory program. Porter-Cologne requires waste dischargers to submit reports of waste discharge and obtain waste discharge requirements or waivers. (Wat. Code, §§ 13260, 13263, 13269.) The 1999 amendments to section 13269 (Senate Bill 390) require waivers to be conditional and include specific fee provisions applicable to irrigated agriculture waivers.

The first sentence of section 13141 does nothing more than provide an effective date for various plans and policies to become part of the California Water Plan. The requirement to indicate the costs and financing sources of an "agricultural water quality control program" in a basin plan before "implementation" of the program could simply be an exception to the general provisions of the first sentence. The Regional Board concurs that section 13141 would most clearly apply when an "agricultural water quality control program" is established in a water quality control plan. Potentially conflicting statutes must be read in context. (Voices of the Wetlands v. State Water Resources Control Bd. (2011) 52 Cal.4th 499, ___, 128 Cal.Rptr.3d 658, 672.) Water Code section 13141 does not explicitly apply to the issuance or waiver of waste discharge requirements for discharges of waste from irrigated lands. Section 13141 is silent about the requirement that all waste dischargers, including dischargers from agricultural lands, must obtain WDRs or waivers. Section 13141 is also silent about the enforcement remedies available for unpermitted discharges. (See, e.g., Wat. Code §§ 13264, subd. (b); 13265.) This silence may signify that Section 13141 is not intended to apply to issuance of WDRs or waivers.

Section 13141 does not define "agricultural water quality control program." The issuance of a waiver or waste discharge requirements does not necessarily constitute the adoption of a regulatory program. Section 13141 is part of Chapter 3 of Porter-Cologne, which authorizes the State Water Board to formulate state policy for water quality control and establishes related powers and duties of the State Water Board. The relevant powers and duties of the regional water boards, are in Chapters 4, articles 1-2 (general powers and duties), article 3 (basin plan requirements) and article 4 (waste discharge requirements and waivers).

Although it is questionable whether a regional water board's issuance of a general waiver, one or more general WDRs, or site-specific WDRs for all dischargers constitutes the "implementation" of an "agricultural water quality control program" within the meaning of section 13141, the Central Valley Water Board staff has nevertheless proposed Basin Plan Amendments to update the existing description of potential costs and sources of financing already in the Basin Plan for agricultural water quality control programs created by Basin Plan Amendments. Inclusion of these estimates will provide a more complete and updated description of potential costs and sources of financing. Further, these estimates were designed and crafted to be consistent with the provisions of section 13141, should that section be deemed to apply to the implementation of orders contemplated by the Long Term Program.

The commenter incorrectly describes the staff-developed Long-term Irrigated Lands Regulatory Program Framework (Central Valley Water Board, March 2011, Recommended Irrigated Lands Regulatory Program Framework Staff Report) (Framework)[1] as "implementation" of a water quality control program for agriculture. The Framework was not a regulation or a Board order, but rather, described a proposed

[1] Central Valley Regional Water Quality Control Board. 2011. *Recommended Irrigated Lands Regulatory Program* Framework Staff Report. March. Rancho Cordova, CA.

approach for developing the orders that would collectively comprise the irrigated lands regulatory program. The Framework was considered for adoption at the April 2011 hearing, but ultimately was not adopted.

The commenter has also erred in stating that there was no consideration of cost associated with the Framework. The Framework Staff Report describes the estimated costs and potential sources of financing associated with adoption of the orders described in the Framework (see pp. 31-32 of the Framework Staff Report). As described in the Framework Staff Report, the estimated cost range was based on Economics Report. The higher end of the cost range described in the Framework Staff Report was identical to the high end cost estimate provided in the Economics Report. The lower end of the cost range identified in the Framework Staff Report was based on an adjustment to the cost estimate based on comments received. A member of the consulting team that authored the Economics Report provided a revised cost estimate based on assumptions that "…(1) the third-party framework will be successful in addressing identified water quality problems; (2) existing groundwater monitoring networks will be adequate; (3) irrigated pasture will not require 'hardware' management practices (e.g., tailwater recovery systems) to address any pasture-related issues; (4) the existing use of improved management practices on field crops in areas with constituents of concern is greater than assumed in the PEIR; and (5) for constituents identified as Tier 2, with an unknown contribution by irrigated lands, irrigated lands will be found not to cause or contribute to the identified water quality problem" (Framework Staff Report, pp. 31-32).

During the April 2011 hearing on the Framework, the Board indicated that staff should develop for Board consideration waste discharge requirements (orders) that will implement the long-term program. The Board also indicated that the Framework should be considered a starting point for drafting the orders. These orders are expected to fall within the range of programmatic alternatives considered in the *Final Irrigated Lands Regulatory Program, Program Environmental Impact Report* (PEIR)[2] and *Draft Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program* (hereafter "Economics Report")[3].

Early on in the development of the long-term program, Stakeholder Advisory Workgroup (Workgroup) members and staff realized that agricultural operations vary significantly throughout the Central Valley and that not one regulatory option would easily fit for all agricultural operations. Consequently, it was decided to evaluate equally, a range of potential alternatives for the long-term program.

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[2] ICF International. 2011. *Irrigated Lands Regulatory Program Final Program Environmental Impact Report*. Final. March. (ICF 05508.05.) Sacramento, CA. Prepared for: Central Valley Regional Water Quality Control Board, Sacramento, CA.

[3] ICF International. 2010. *Draft Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program*. July. (ICF 05508.05.) Sacramento, CA. Prepared for Central Valley Regional Water Quality Control Board, Sacramento, CA.

Since the Board has preserved its flexibility and not selected a single program alternative, it is reasonable to expect that the Board will adjust its regulatory requirements based on the results of discharger efforts to protect and improve water quality. If efforts within the third-party structure described in Alternative 2 of the PEIR are successful, the costs will be at the lower end of the estimated range. If the Board determines that the third-party structure is not effective, direct regulation of growers will occur in a manner similar to that described in Alternative 5. In fact, the approach discussed with the Board at its April 2011 and June 2011 meetings included a flexible structure: staff will develop geographic/commodity-based orders that can be administered by third parties, as well as an order that would apply to individual dischargers in absence of a third party or sufficient progress to address water quality problems.

Based on this realistic assessment of the likely evolution of the program, it would not be accurate to assign a single cost to the long-term program. Instead, program cost will likely vary within the range of alternatives considered in the PEIR. The Framework is not the long-term program, but rather a staff assessment of a reasonable set of elements that the Board may include in the long-term program orders. The estimated range of total costs for the Framework discussed above are, therefore, appropriate as staff's best estimate for the potential total costs of the program.

The commenter also points to an enrolled bill report to suggest that the section 13141 cost estimates must "materially consider" estimated costs. In later comments, the commenter suggests that such "material consideration" includes indirect economic impacts of an agricultural water quality control program. As a threshold matter, the enrolled bill report is being introduced as an attempt to establish legislative intent as to the meaning of the phrase "estimate of total costs." However, under the plain meaning canon of statutory construction, legislative history is not to be consulted unless there is "ambiguity in the language" of a statute. *Hunt v. Superior Court* (1999) 21 Cal.4th 984, 1000. There is no ambiguity as to the ordinary meaning of a cost estimate.

Even assuming the phrase is ambiguous, and that an enrolled bill report affords some insight into the Legislature's intent in comparison with other sources of legislative history (see *Elsner v. Uveges* (2004) 34 Cal.4th 915, 934, fn. 19), the excerpted language is taken out of context and does nothing to suggest that the Central Valley Water Board's cost estimate is unreasonable. The cited sentence merely explains that agricultural water quality programs "must be carefully examined" and that cost is an important factor consider prior to reaching a decision. In developing the long-term program, including completion of a PEIR with cost estimates, and considering a Basin Plan Amendment providing updated cost estimates, the Central Valley Water Board has "carefully examined" many factors, including cost.

In fact, the enrolled bill report also states that, "there may be a small increase in administrative costs imposed by this bill. This can be absorbed within existing budget by existing staff." Here, considerable staff costs and consultants' fees were expended in preparing the Long-Term Program cost estimates. This extraordinary effort was

largely driven by stakeholder requests for a more robust evaluation of the potential economic impacts of any long-term irrigated lands program. Board staff has, therefore, far exceeded any anticipated level of effort and analysis described in the enrolled bill report.

A2. *As we, and many others, indicated in our September 27, 2010, comments on the Draft Program Environmental Impact Report, we are concerned that the economic analysis in the Technical Memorandum is inadequate and excludes substantial costs associated with practices compelled or prohibited by the various alternatives. Specifically, we are concerned that the Technical Memorandum underestimates the acreage for which new or additional management practices may be required once the general waste discharge requirements are adopted. Accordingly, the management practice costs in the Technical Memorandum, and therefore the Staff Report, are underestimated.*

Response to Comment A2.

Costs were developed for management practices and other compliance costs based on the best information available. Sources included technical service agencies, literature, governmental agencies, coalitions, and laboratories that provide monitoring services. The Economics Report relied on the most recent California Department of Water Resources land use survey to develop baseline agricultural acreage. Economic models were then used to estimate the acreage for which new or additional management practices may be required under the long-term program (LTP). The models assumed that agricultural lands in areas with multiple water quality problems would require more aggressive, and more expensive, source control measures.

Board staff recognizes that there is a lack of data regarding the status of implemented on-farm management practices. This source of uncertainty is acknowledged in the Economics Report. This uncertainty aside, staff and our consultants used the best available information and appropriate economic analysis to estimate agricultural acreage potentially affected by management practices.

Staff would consider alternative estimates developed by the Coalitions or other stakeholders; however, no alternative estimates, with any verifiable basis for the estimate, have been submitted. In addition, although some management practice information has been provided as part of the current irrigated lands regulatory program, the Coalitions did not provide comprehensive quantifiable/verifiable data on current management practice implementation. Such information could have provided a more up to date baseline and would have allowed the Coalitions to provide an assessment of which new practices (along with associated costs) would be implemented in response to the long-term program. However, no such data or assessment has been provided to support their contentions that the costs are underestimated.

The commenter also suggests that there are “practices compelled or prohibited by various alternatives.” The program alternatives considered in the PEIR do not prohibit or

require specific management practices. The Economics Report makes assumptions that growers will react to program alternatives by implementing a range of practices. However, it is clearly indicated that the program would not require these or any other specific practices. The program will require compliance with water quality objectives and comply with applicable antidegradation requirements. Selection of water quality management practices will be left to individual operators.

A3. *Further, and contrary to comments in the Staff Report, the Technical Memorandum does not include a cost estimate for staff's alternative 6. The Technical Memorandum evaluates alternatives 1 through 5 that were included in the Draft PEIR.*

Response to Comment A3.

Section 3.2, titled "Estimated Total Costs", of the July 2011 Staff Report erroneously states that the Economics Report contains cost estimates for Alternative 6. The statement should have indicated that a cost estimate for Alternative 6 was prepared based on the analysis contained in the Economics Report. This error has been corrected in the final Staff Report by including a statement that staff prepared cost estimates within the draft program EIR (Appendix A) that relied upon and were consistent with the approach described in the Economics Report.

A4. *Attached to the Draft PEIR was an appendix that included staff's preferred project alternative. Subsequent to circulation of the Draft PEIR and staff's preferred project alternative, the now referred to LTILP framework was released. The LTILP framework is significantly different from the five (5) alternatives contained in the Draft PEIR as well as staff's preferred project alternative, which was in the appendix of the Draft PEIR. In other words, the Technical Memorandum used to prepare the cost estimate for these Draft Basin Plan Amendments did not include or estimate costs associated with the LTILP framework, which will be the basis for future Central Valley Water Board actions. (See Staff Report, p. 8 ["Staff indicated that it would develop an approach modeled after a Recommended Irrigated Lands Regulatory Program Framework Staff Report (ILRP Framework Report), March 2011 . . . . While the staff's approach is subject to change, and is modeled after a staff report that was not adopted by the Board, it provides additional information upon which to estimate future costs of the Long-Term Program."].) Because the LTILP framework is actually a conglomeration of other project alternatives subject to change, the Technical Memorandum does not truly analyze the cost estimates or economic impacts of the proposed agricultural water quality control program. There is no indication that the cost estimates and economic analysis for the individual alternatives in the Technical Memorandum are applicable to the LTILP framework. Assumptions contained in the actual independent economic analysis may not remain true if variant pieces of each alternative are selectively taken out and subsequently reassembled, as is the case with the LTILP framework. Taking isolated figures from an economic analysis that was designed to summarize the*

ramifications of different alternatives in their entirety may not accurately reflect the true economic impacts. Before relying on the Technical Memorandum from the Draft PEIR, it should be revised to contain a full economic impact analysis of the LTILP framework not based exclusively on the estimated costs of pieces assembled from the other alternatives.

Response to Comment A4.

The commenter contends that the economic impacts and estimated costs of the Framework have not been considered and that the Economics Report should be revised to consider the economic impacts of the Framework. The reader is referred to response to comments A1 and B5.

It must be reiterated here that the Framework is not the long-term program, but rather a staff estimate for the requirements that the Board may adopt for long-term program orders. Section 13141, to the extent it is applicable to the long-term program orders, states that the estimated total cost be indicated in the Basin Plan. Contrary to the commenter's assertion, this section does not require that economic impacts be included in the cost estimate.

Contrary to the Commenter's suggestion, an estimate of costs for the long-term program can be constructed from components of the different alternatives. Estimates of costs were categorized based on expected management plan implementation; expected monitoring efforts; and expected administrative requirements. The costs associated with those categories were constructed as independent estimates, therefore, it is possible to construct a reasonably accurate picture of costs by assembling components of different alternatives. As stated previously, the estimated range of costs is based a program similar to Alternative 2 being successful (low-end cost range) versus a program similar to Alternative 5 being required (high-end cost range).

A5. *Moreover, by staff's own admission in the Staff Report, staff's approach may change after adoption and approval of the Draft Basin Plan Amendments. Thus, any reliance on the Technical Memorandum is useless considering the fact that none of us knows exactly what will be proposed in the future. Accordingly, it is inappropriate for the Central Valley Water Board to use it and its information to estimate costs for the Draft Basin Plan Amendments.*

Response to Comment A5.

See responses to comments A1 and A4. The Commenter in this instance appears to make statements in conflict with its other comments. The Commenter appears to be indicating that it is "useless" for staff to estimate costs at this time, since what staff proposes (and the Board adopts) in the future is not known. However, the Commenter also argues that prior to adopting the orders that will collectively comprise the long-term program, costs must be estimated and included in the Basin Plans. When taken together, such arguments suggest that the Board can neither adopt orders to regulate

agricultural discharges, nor provide estimates of costs prior to their adoption. As discussed in previous responses, Board staff believes the economic analysis provides a reasonable basis for estimating a range of potential costs associated with implementation of orders to regulate discharges from irrigated agriculture.

A6. *The Staff Report implies that six (6) alternatives were properly analyzed as part of the Central Valley Water Board's California Environmental Quality Act (CEQA) process. As explained previously, that is not the case. The Staff Report, which becomes part of the administrative record for the Basin Plan Amendments, must be modified to accurately reflect what alternatives were actually analyzed, and what were not.*

Response to Comment A6.

This is a comment on the adequacy of the analysis within the PEIR certified by the Board in April 2011. The comment is outside the scope of the proposed basin plan amendment.

A7. *More importantly, the Staff Report fails to include any discussion of economic impacts. The Staff Report provides only estimated costs of the program and does not provide the Central Valley Water Board members with material and relevant information with respect to the economic impacts that the five alternatives (and staff's subsequent amalgamation of these alternatives) may have on Central Valley agriculture and the Central Valley economy. Economic impacts are clearly part of the "total cost" of a program and should not be excluded here.*

Response to Comment A7.

See response to comment A4. As described in response to comment A1, the purpose of the Staff Report is to provide update the Basin Plan's cost estimates in a manner consistent with Water Code section 13141's provisions. As discussed previously and referenced in the comments, one of these provisions is to provide an estimate of total costs and potential sources of financing. This proposed amendment clearly provides cost estimates. Broader economic impacts (both positive and negative) are not a required part of a section 13141 total cost estimate, and staff are not aware of any instance in which such broader analysis was required to comply with this provision of Water Code section 13141.

Although not included in the July 2011 Staff Report for this amendment, the broader economic impacts were considered in the Economics Report and the economic impacts of agricultural production were considered as part of the Program EIR.

A8. *Moreover, the broad range of estimated costs presented in the Staff Report fails to provide the Central Valley Water Board members with any meaningful*

information in order to materially consider the costs of the proposed agricultural water quality control program (i.e., the LTILP framework), assuming that the agricultural water quality control program does not change substantially from what has been presented to date. The range goes from $216 million to $1.321 billion. The Staff Report does not articulate estimated costs associated with each alternative, or staff's LTILP framework. Instead, the Staff Report just states that the LTILP framework is likely to fall somewhere within this range. (See Staff Report, p. 10 ["Accordingly, the range of costs for staff's current approach are included in Table 1's range of Long-Term Program alternatives."].) Information this vague fails to provide the Central Valley Water Board members with useful information that they could use and consider in their decisions with respect to the LTILP framework as a whole, or for its individual parts. Further, by staff's own admission, the program may change further as it is implemented.

Response to Comment A8.

See response to comments A1, A2 and A5.

Providing a broad estimated cost range to account for uncertainties is consistent with other Board adopted Basin Plan amendments addressing estimated costs of agricultural water quality control programs (see section IV of the Sacramento and San Joaquin River Basin Plan). The broad range of cost estimates presented in the Staff Report accounts for the implementation of third-party oversight of the LTP (i.e., the Coalition option) and the individual permit option for regulating growers. The low-end cost estimate represents a scenario in which the Coalitions prove effective at administering the LTP on behalf of the growers; the high-end estimate represents a scenario in which the majority of growers require individual enrollment under a general permit with more direct oversight by the Board.

Neither the Board, nor its staff, can reliably predict which regulatory approach will ultimately be the most effective and most broadly employed in the long-term. Much of the ultimate costs will be determined by how effectively growers work within the third-party framework to address water quality problems and how effective the third-parties are in carrying out their responsibilities. It would be misleading to the Board members to present a single cost estimate given this uncertainty. Given staff's analysis that the regulatory requirements may vary over time, it is reasonable to provide the Board members and the public with a range and not a single cost estimate.

A9. *The Staff Report also fails to include a comprehensive discussion on the potential sources of financing. The information provided in the Staff Report is fairly generic and broad. It does not clearly explain how the agricultural community will actually pay for the increased costs of this program. Nor does it explain that the potential sources of financing are limited and that most, if not all, of the costs will be placed on individual growers with no public assistance. It does not provide any assessment at all of the availability or cost to private growers of financing for purposes of complying with the additional regulation nor*

of the incremental and cumulative effect on growers' ability to remain economically viable with the added regulatory burden. The potential sources of financing discussion also fail to explain how farmers are "price-takers," in that they are unable to pass on increased costs to consumers. By not including this type of information, Central Valley Water Board members cannot properly and materially consider the Draft Basin Plan Amendments.

Response to Comment A9.

Consistent with the provisions of section 13141 of the Water Code (should they apply to Long-Term Program), potential sources of financing have been identified in the Staff Report and this Basin Plan amendment. The plain language of the Water Code does not specify the level of detail for identification of financing sources and, in fact, the details provided are greater than has been provided previously in the Basin Plan. The proposed Basin Plan Amendment is consistent with the provisions of section 13141 even without additional analysis and discussion suggested by the Commenter. In addition, it would not be reasonable for the Board to evaluate the capability of acquiring financing for each of the over 30,000 individual farmers.

The Board recognizes that program costs will be the responsibility of individual operators. Individuals will have the responsibility for applying for any available grants and loans to try to offset any increased costs associated with program requirements. Text has been added to the Staff Report that indicates that program costs will be generally be borne by Central Valley agricultural operators, who are discharging wastes that could affect the quality of waters of the State. The commenter also asserts that financing costs have not been considered. This assertion is in error, as Table 1 costs are annualized total costs that include real costs associated with financing capital improvements (e.g., management practices, monitoring wells, etc.). Clarifying text has been added to the Staff Report to address this concern. In summary, the Board has sufficient information in the Staff Report and supporting documents to consider whether the cost estimates are reasonable and sources of financing reasonably described.

A10. *Like with the information contained in the Staff Report, the Draft Basin Plan Amendments inadequately address or explain the costs and economic impacts of the LTILP, and fail to provide a clear discussion with respect to potential sources of funding. The cost estimate language merely parrots the range of costs, which varies to such a degree as to be meaningless. And the language for potential sources of funding is only a list of grant and loan programs. There is no meaningful analysis with respect to the economic implications of the Central Valley Water Board's potential actions. There is also no meaningful analysis as to how much financing or funding is available from other sources as compared to what individual growers may be required to spend to implement the LTILP framework. Clearly, based on the material presented in the Staff Report and the Draft Basin Plan Amendments, Central Valley Water Board staff are merely putting forward language in an effort to state that the Central Valley Water Board complied with Water Code section 13141. However, the Staff Report and the*

Draft Basin Plan Amendments collectively fail to satisfy the requirements of Water Code section 13141, which requires the development of meaningful information so that it can be part of the Central Valley Water Board's material considerations. Due to the lack of clear and material information, the Central Valley Water Board should reject the Draft Basin Plan Amendments.

Response to Comment A10.

See responses to Comment Nos. A8 and A9 above. Water Code section 13141, should it be deemed to apply to the Long-Term Program, requires estimated total costs and potential sources of financing to be identified. The information put forward in this proposed amendment clearly provides estimated total costs and potential financing sources. Further, none of the commenters have provided verifiable alternative cost estimates or potential funding sources beyond those already indicated in the proposed amendments.

A11. *Overall, the Staff Report, the Draft Basin Plan Amendments, and their reliance on the Technical Memorandum are insufficient to comply with the mandates of Water Code section 13141. As explained, the information is vague and nebulous. To be meaningful, the Staff Report and the Draft Basin Plan Amendments need to collectively explain the costs for implementing the LTILP framework as the chosen regulatory program, and staff's intended implementation of that framework. Without this information, the Central Valley Water Board members cannot properly and materially consider costs and economics in their future actions for implementing the LTILP.*

Response to Comment A11.

See responses to comments A1, A4, A9, and A10.

<u>Ms. Kari E. Fisher, General Counsel, California Farm Bureau Federation</u>

B1. *<u>Improper Reliance on the Economic Analysis to Amend the Basin Plan</u>: The Basin Plan Amendments addressing the economic costs associated with the Long-Term Irrigated Lands Program ("LT-ILRP") rely upon the Economic Analysis released in conjunction with the LT-ILRP Draft Environmental Impact Report ("Draft PEIR") and the LT-ILRP Final Environmental Impact Report ("Final PEIR"). Unfortunately, the Economic Analysis is flawed and failed to properly evaluate the potentially substantial costs associated with practices required or prohibited by the various program alternatives, including but not limited to nutrient management, irrigation practices, and the installation and operation of monitoring wells.*

Response to Comment B1.

See response to comment A1, A2, and C6.

B2. *The Economic Analysis cursorily estimated the associated costs of the five Alternatives analyzed within the Draft PEIR and Final PEIR. Although the economic assessment of these five Alternatives was insufficient and flawed, a larger concern is the Economic Analysis' failure to analyze the impacts of Staff's Recommended Project Alternative ("Alternative 6") or the Regulatory Framework Alternative ("Alternative 7"). Alternatives 6 and 7 were the two alternatives favored by staff. Further, Alternative 7 is now "staff's current approach" and will be used by staff in "developing proposed orders and other regulatory actions that will establish the Long-Term Program." (See Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Provide a Cost Estimate and Potential Sources of Funding for a Long-Term Irrigated Lands Program Staff Report (July 2011) p. 3 ("BPA Staff Report").) In combination with the flawed analysis of the five Alternatives that were evaluated, the Economic Analysis' failure to analyze any of the costs associated with Alternatives 6 and 7 amounts to a grave error, and thus, cannot be relied upon to amend the Basin Plan.*

Response to Comment B2.

This comment was previously addressed in responses to comments A1, A3, A4, A9, and A10. Moreover, the comment does not provide any specific examples of shortcomings of the economic analysis. Staff therefore cannot specifically respond to these claims.

B3. *<u>Failure to Adequately Analyze the Economic Impacts of the Regulatory Framework Alternative Under Porter-Cologne</u>: The requirement to consider economics under the Porter-Cologne Water Quality Control Act ("Porter-Cologne") is absolute. Water Code, section 13141 explicitly mandates:*

> *State policy for water quality control adopted or revised in accordance with the provisions of this article, and regional water quality control plans approved or revised in accordance with Section 13245, shall become a part of the California Water Plan effective when such state policy for water quality control, and such regional water quality control plans have been reported to the Legislature at any session thereof.*
>
> *However, prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan.*

(Wat. Code, § 13141.) Before a Regional Board can impose waste discharge requirements or condition water quality certification for discharges from irrigated lands, Porter-Cologne requires that the Regional Board "shall take into consideration" the following factors: "the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste

discharges, the need to prevent nuisance, and the provisions of Section 13241." (Wat. Code, § 13263.) Section 13241 in turn lists six "factors to be considered," including "economic considerations" and "water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." (Wat. Code, § 13241.)

As discussed supra, while an economic analysis was conducted for the five Alternatives contained within the Draft PEIR and Final PEIR, no proper economic analysis has been conducted for Alternatives 6 and 7. The brief reference within the April 2011 Staff Report estimating the total costs of the Regulatory Framework Alternative is insufficient and does not comply with Porter-Cologne. Rather than a full analysis, the paragraphs within the April 2011 Staff Report consisted of conclusory statements which failed to properly acknowledge the total cost of an agricultural water quality control program and the potential sources of financing. Anticipated program implementation costs to the agricultural community include increases in potential fees, management practice implementation, monitoring costs, report preparation, and cost for education, as well as other costs. Given that the impacts of water quality regulations frequently take years to materialize, the Regional Board should analyze the economic costs and impacts within a dynamic structure taking into account the projected changes in the economic situation over time.

Response to Comment B3.

See response to comment A1 regarding the applicability of 13141 with respect to issuance or waiver of waste discharge requirements.

See response to comment A11 with regards to whether appropriate cost and economic information has been considered in this proposed amendment. The commenter describes that the requirements of Water Code section 13263 and its reference to section 13241 apply to this proposed amendment. This application of 13263 is not correct, as the section clearly states that the requirements apply to Board consideration of waste discharge requirements. This action does not include Board consideration of waste discharge requirements.

In response to the comment that the estimates of costs of the non-adopted Framework are insufficient, please see response to comment A1. In regards to the sufficiency of the cost estimates for Alternative 6 in the Program EIR, please see response to comments A3 and B5. The Commenter provides no evidence to support that statement and, in fact, the specific costs mentioned (i.e. fee increases, management practice implementation, monitoring costs, report preparation, and costs for education) were estimated and are reflected in the proposed amendments (see the Economics Report; Draft PEIR Appendix A; and Framework Staff Report).

B4. *In addition to direct costs imposed on the agricultural community, the Regional Board should evaluate indirect costs, including the economic consequences that*

are transmitted via market interactions to other groups, such as consumers. Water quality regulation, such as the LT-ILRP, increases the average cost of production and has a direct negative effect on the producer and the consumer through the resulting increase in variable costs and the output price. The propagation of the impacts of a regulation, such as this, through the economy is well documented and can be quantified by economic analysis. Further, such analysis shall be conducted prior to adoption or implementation of any program. (Wat. Code, § 13141.) Thus, a proper economic analysis of the Staff Recommended Program Alternative and Regulatory Framework Alternative, which by its very purpose is the implementing framework for the LT-ILRP, must be conducted immediately.

Response to Comment B4.

See response to comment A1. The cost estimates provided by the proposed Basin Plan Amendments are consistent with the provisions of Water Code section 13141 (should they apply) even without the broader economic analysis suggested by the Commenter. It is not necessary to perform the suggested level of analysis for the Basin Plan Amendments. However, such an analysis has been conducted as part of development of the program EIR in the Economics Report referenced by the Commenter.

This comment suggests that in addition to estimating total regulatory program costs, Water Code section 13141 compliance would require that increased costs of products be considered (e.g., potential cost increase to consumer in reaction to increased product costs). It must be noted here that other comments received indicate that agricultural operators are "price takers," and cannot pass along increased costs to the consumer (see comment A9). Regardless, effectually passing costs along to consumers does not change the total program costs, only the distribution of the costs. If, for example, operators can pass costs along to consumers, then the cost impacts on agricultural operations would be lessened. In this case, consumers would take on some of the financial burden of program requirements. However, total program cost would not change in this example.

B5. *<u>The Economic Analysis is Insufficient and Cannot Be Relied Upon By Alternatives 6 and 7 Since Underlying Assumptions Have Substantially Changed</u>: As stated in the beginning pages of the Economic Analysis, "a change in the underlying assumptions … could substantially alter the study results." (Technical Memorandum Concerning the Economic Analysis of the Irrigated Lands Regulatory Program (July 2010) p. 1-3, ("Economic Analysis").) This statement acknowledges that if the program alternatives change, the cost assumptions within the Economic Analysis will be altered. If new alternatives are developed, new cost assumptions will also have to be developed.*

Here, Alternatives 6 and 7 propose dramatically different regulatory structures from Alternatives 1 through 5. For example, Alternative 6 consists of a tiering

and prioritization system "where Tier 1 areas would be 'low priority' and Tier 2 would be 'high priority'." (BPA Staff Report, p. 7.) Alternative 7, on the other hand, consists of "a three-tiered approach to ensure regulatory requirements are appropriately tailored to the water quality conditions in the area." (BPA Staff Report, p. 8.) Alternatives 1 through 5, the only alternatives that received consideration within the Economic Analysis, do not contain any type of "tiering" structure or "prioritization" scheme. Further, the economic evaluation of Alternatives 1 through 5 was limited to each discrete alterative. The evaluation did not separately evaluate components of each alternative, but rather only looked at each alternative, in its entirety, in order to estimate costs. Thus, attempting to rely upon the Economic Analysis for Alternative 6, which consists of a conglomeration of some elements presented in the five Alternatives as well as entirely new program elements and new combinations of existing elements, is improper. Further, Alternatives 6 and 7 were not existing alternatives at the time the economic evaluation was conducted.

Given the substantial deviations from Alternatives 1 through 5, "a change in the underlying assumptions" that "could substantially alter the study results" has occurred. (Economic Analysis, p. 1-3.) The fundamental "underlying assumptions" that were used to estimate the LT-ILPR economic costs do not and cannot apply to Alternatives 6 and 7. Without proper analysis of Alternative 6 and 7's economic impacts, the true economic impact of the forthcoming LT-ILRP is unknown. Thus, the Economic Analysis cannot be relied upon for the Basin Plan Amendment in light of the fact that "staff's current approach" is predicated upon Alternative 7.

Response to Comment B5.

See response to comment A11 in regards to whether the Economics Report can be relied upon for this proposed amendment. As stated previously, Alternative 6 described in the program EIR and the non-adopted Framework were both composed of elements described by the five alternatives prepared by the Stakeholder Advisory Workgroup and included in the Economics Report. The draft program EIR (Appendix A) and the Framework Staff Report both included estimates of costs that relied upon and were consistent with the approach described in the Economics Report.

The Commenter has also erred in the characterization of the purported absence of a tiering structure or prioritization approach associated with Alternatives 1-5. The Commenter uses this mis-characterization to assert that underlying assumptions regarding the analysis have been changed.

Alternative 4 prescribes a three-tier prioritization structure. Also, Alternative 2 prescribes a low-threat, management practices-based approach, which is based on lowering the water quality threat by ensuring practices are in place. The prioritization schemes for Alternatives 2 and 4 were in fact the basis for the systems given in Alternative 6 and the Framework (see section X of the Draft PEIR for additional discussion).

The Commenter also incorrectly states that only total costs were calculated and not separate cost components. In fact, the Economics Report provides a breakdown of cost elements, by type and region. This can be seen, for example in Tables 2-18 through 2-22 of the report. In these tables, costs are broken down into components (e.g., fees, local administration, tier analysis and administration, farm planning, inspection, education, etc.). Contrary to this concern, the report was designed with the express purpose of being useful in estimating the cost of an alternative constructed from the elements of Alternatives 1-5. The reader is referred to response to comment A1.

Mr. William J. Thomas, Best, Best & Krieger, counsel for Southern San Joaquin Valley Water Quality Coalition

C1. *Timing: It seems strange to schedule a mid-October hearing on this topic, yet cut off comments August 15th, some 60 days before the hearing.*

Response to Comment C1.

The public and stakeholders have been provided 45-days to review and comment on the proposed amendment per Water Code requirements. The Commenter did not indicate a need for additional time beyond what is legally required to prepare comments.

C2. *Appeal to State Board: The economic evaluation engaged for the ILRP EIR was defective and inaccurate. This Economic Analysis has been the target of appeals filed with the State Board by each the environmental plaintiffs and the agricultural coalitions. Unless the State Board overturns the ILRP EIR and sends it back for reconsideration, the ILRP, EIR and Economic Analysis will likely be the target of a legal challenge.*

Consequently, it appears to be improper for the Regional Board to take a faulty Economic Analysis which is presently under direct challenge and propose to compound the problem by advancing it as a basin plan amendment in both of the Region's basin plans.

Response to Comment C2.

Board staff believes that the estimates of total costs and the technical analysis supporting those estimates are consistent with the cost estimate provisions of Water Code section 13141, should they apply to the implementation of the Long-Term Program. To the extent the comment challenges the adequacy of the analysis within the PEIR certified by the Board in April 2011, the sufficiency of the PEIR is outside the scope of the proposed basin plan amendment.

C3. *<u>Substantive Problems with the July Staff Report and Proposed Basin Plan Amendments</u>: The Staff Report erroneously (p. 3) identifies the EIR as having contained six alternatives. Since first introducing the staff alternative as Exhibit A to the Draft EIR, it has become in the interest of the Regional Board staff to misrepresent the EIR as having a "sixth alternative." However, this is completely false and is merely an attempt to camouflage the fact that the staff alternative, which was adopted by the Board, did not undergo environmental review or economic analysis. At this time, the same staff that promulgated the staff alternative and did not subject that alternative to the Economic Analysis now advances the July Staff Report seeking the Board to repeat this mistake.*

Regional Board staff state in their July Staff Report:

> *"3. Irrigated Lands Long-Term Program Development*
>
> *… This report evaluated six program alternatives for the long-term regulation of irrigated lands, including an Alternative 6 that was the Board staff recommended alternative when the Final PEIR was released to the public."*
>
> * * *
>
> *"3.1 Final Program EIR Long-Term Program Alternatives*
>
> *The six Long-Term Program alternatives are evaluated and presented in detail in the Final PEIR…"*

These statements are completely false, and those contentions were directly refuted by the Economic Analysis itself as it states throughout the document that the Economic Analysis reviewed only <u>five</u> alternatives, not six, as staff alleges. (See, e.g., Economic Analysis, pp. 1-2.) Pages 7 and 8 of the staff report also falsely references a phantom sixth alternative. That false misrepresentation should be stricken in its entirety.

Response to Comment C3.

The Commenter has erred in stating that the Board adopted a staff alternative as part of the program EIR, since the Board has not taken such an action. In addition, staff disagrees with the Commenter's assertion that there were only five alternatives analyzed in the program EIR. To the extent the comment challenges the adequacy of the analysis within the PEIR certified by the Board in April 2011, the sufficiency of the PEIR is outside the scope of the proposed basin plan amendments. Regarding the reference to six alternatives analyzed in the Economics Report, staff has corrected that statement in the final Staff Report by including a statement that staff used the Economics Report to estimate costs of the recommended program alternative since the recommended program alternative fell within the range of the five alternatives.

C4. *<u>The Economic Analysis could not have possibly evaluated the Staff alternative, which had not been produced until after the Economic Analysis was released</u>: The Economic Analysis evolved over many months. In addition to the research completed by the independent contractors, there were meetings with a number of stakeholders. Throughout this process, only the five alternatives were available and were in fact the specific target of the Economic Analysis.*

The staff alternative was a completely new and novel alternative that was attached as Appendix A to the Draft EIR and which was labeled as the "Recommended Long-Term Irrigated Lands Program." The staff alternative differed from the five other alternatives and did not undergo the multiple years of review that the five other alternatives had previously undergone. Only concurrently with the release of the Draft EIR, including the Economic Analysis, was the staff alternative first made publically available. The staff alternative was <u>never</u> mentioned in either the body of the Draft EIR or the Economic Analysis.

Response to Comment C4.

As stated previously, the total estimated cost provided in these proposed Amendments represents the range of costs reflected in the Economics Report. The range of costs is a reasonable reflection of the potential costs of the long-term irrigated program - see responses to comments A6 and A11 for more information. Although staff believe the Commenter has mischaracterized the placement of the staff recommended alternative in the program EIR, those comments are not material to the content or substance of the proposed amendments. With respect to the consideration of the staff recommended alternative in the Economics Report, please see response to comment A3.

C5. *The staff alternative fails to satisfy the standards for both economic and environmental review. Although, the introduction of the staff alternative provides that it was developed from elements of the five alternatives included in the EIR, the staff alternative was not in and of itself evaluated to determine if it has significant environmental impacts. Moreover, the staff alternative was not evaluated to assess its economic impacts. Because the staff alternative is actually a conglomeration of new requirements and select elements of other project alternatives, neither the EIR nor the Economic Analysis are applicable. The staff alternative now alleges that parts of it trace back to select relevant pieces of Alternatives 2 and 4 which should allow an estimate of economic impact and cost. However, there is no indication that the independent economic analysis on which those estimates are based is supported by using pieces of other alternatives. Taking isolated figures from an economic analysis that was designed to summarize the ramifications of different alternatives in their entirety will not accurately reflect the true economic impacts of the staff alternative. To be adequate, the Draft EIR should, but failed to, contain a full economic impact analysis of the actual staff alternative adopted, not based only on the estimated costs of pieces assembled from the other five alternatives. Due to its failure, there is no basis on which to accurately calculate the economic impacts or costs*

of the staff alternative. As discussed below, the staff alternative had many additional components not analyzed whatsoever.

Response to Comment C5.

To the extent that the comment addresses the adequacy of the environmental review of the staff recommended alternative found in Appendix A of the Program EIR certified by the Board in April 2011, the sufficiency of the PEIR is outside the scope of the proposed basin plan amendment. In regards to the sufficiency of the economic analysis of the staff recommended alternative, see responses to comments A11, B5, and C4.

C6. *The Economic Analysis cannot be relied upon as having analyzed the present ILRP which is now being adopted as guided by the framework document: The July Staff Report erroneously identifies the EIR as having a sixth alternative, which was not even drafted or available when the environmental or Economic Analysis were being finalized. (July Staff Report, p. 3.) The staff alternative, which was adopted by the Board, is presently being further amended as guided by a new Framework document. Like the staff alternative, the Framework was not environmentally or economically reviewed. Further, the Framework does not resemble any of the alternatives analyzed as part of the Draft EIR. The Framework document advances many new provisions and extends the staff alternative well beyond any alternative that was included and reviewed in the Draft EIR or Economic Analysis.*

Specifically, major impacts, such as, but not limited to, a new system for imposing a mix of general order waste discharge requirements and conditional waivers, a new process for public input on surface quality management plans and groundwater quality management plans, nutrient management plans in nitrate impact areas, possible fertilizer application limits, drilling new groundwater monitoring wells, hiring thousands of certified crop specialists to qualify and develop farm plans, newly regulating millions of acres under a new Tier 2, which were not previously regulated, and are all new regulatory elements, and were never analyzed in the EIR or the Economic Analysis. These impacts may cost the agricultural community more than double the $1.32 billion that was projected by the Economic Analysis, and which itself was defective in underestimating the costs of the alternatives it did analyze.

Response to Comment C6.

See response to comment A11 in regards to whether the Economics Report (commenter refers to this as the “Economic Analysis”) can be relied upon for this proposed amendment. In regards to adequacy of environmental review of the non-adopted Framework, the Central Valley Water Board did not adopt staff’s proposed Framework. As such, the non-adopted Framework is not a “project” within the meaning

of the CEQA,[4] and was not required to undergo environmental review by the Central Valley Water Board.

The Commenter's specific assertions regarding "major impacts" that have not been previously analyzed are either incorrect, are not attributable to any alternative contained in the program EIR or staff proposal, or have no clear cost impact. The Commenter also provides no analysis of how the alleged impacts of the purported unexamined costs would lead to a doubling of the high end estimate. The Commenter's statements regarding potential unconsidered costs are discussed below:

- *"…a new system for imposing a mix of general order waste discharge requirements and conditional waivers…"* The Commenter is referred to Alternative 2 in the program EIR, which states that "Implementation mechanisms for this alternative could include conditional waivers of waste discharge requirements, waste discharge requirements, or conditional prohibitions of discharge," as well as the staff recommended program alternative. Alternative 2 was analyzed in the Economics Report and there was no identified cost impact from having a mix of general WDRs and conditional waivers. Also, there were no comments provided at the time suggesting that Alternative 2 would have a higher cost based on having multiple implementation mechanisms.
- *"…a new process for public input on surface quality management plans and groundwater quality management plans…"* Staff agrees that a process for public input on water quality management plans is not described in the program EIR alternatives. However, it is not anticipated that gathering public comments on these plans will move program costs outside the current range of cost estimates.
- *"…nutrient management plans in nitrate impact areas…"* This element has been analyzed as part of Alternative 4 (see page 3-23 of the Draft PEIR) and as a general requirement for Alternative 5.
- *"…possible fertilizer application limits…"* None of the alternatives have provisions that would directly impose limits on fertilizer application. Growers might choose to reduce their application of fertilizers to comply with requirements to protect groundwater quality.
- *"...drilling new groundwater monitoring wells…"* This element has been analyzed as part of Alternative 5 (see page 3-28 of the Draft PEIR).
- *"…hiring thousands of certified crop specialists to qualify and develop farm plans…"* This element has been analyzed as part of Alternative 3 as development and approval/certification of individual farm plans (see page 3-15 of the Draft PEIR).
- *"…newly regulating millions of acres under a new Tier 2, which were not previously regulated…"* The additional program acreage has been considered as part of Alternatives 2-5 (see pages 2-4 and 2-5 of the Economics Report) and was considered in the estimate of costs for Alternative 6. The additional acreage is not attributable to tiering or prioritization, rather it is the result of the inclusion of

[4] See Public Resources Code section 21065.

groundwater protection in the program. In the Framework document, "Tier 2" was used to describe areas where further investigation was needed to determine whether irrigated agriculture was contributing to water quality problems. In the Economic Analysis, those areas had been assumed to require implementation of management practices due to identified water quality problems attributable to irrigated agriculture. Therefore, the Economic Analysis cost estimates were conservative (i.e., high) for areas that were subsequently classified as "Tier 2" in the Framework document.

C7. *<u>The Economic Analysis was defective and is under challenge by both the environmental and agricultural stakeholders</u>: The Regional Board's Economic Analysis is substantially deficient and fails to comply with the law. The Economic Analysis fails to satisfy either CEQA or the Porter-Cologne Water Quality Control Act, which both require the Regional Board to present and identify the economic impacts of the EIR, the Framework and the staff alternative. Water Code section 13141 requires that "prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of financing, shall be indicated in any regional water quality control plan. The Framework document represents the beginning of implementation of an agricultural water quality control program, and the Regional Board has not yet provided an estimate of the total cost of the program or identified potential sources of funding for the program.*

Secondly, the staff alternative combined with the Framework contains potentially costly and time-consuming additional requirements, such as the requirement that all irrigated agricultural operations in all tiered areas complete a farm-specific evaluation and identification of management practices for Regional Board inspection. The costs of such requirements and those addressed above in point C. were not analyzed in the EIR or accompanying Economic Analysis.

Response to Comment C7.

See response to comments A1, A4, A9, and A10 regarding whether the Economics Report may be relied upon for this proposed amendment and whether the Framework can be considered "implementation" of the long-term program. See also response to comment C6. To the extent the comment challenges the adequacy of the analysis within the PEIR certified by the Board in April 2011, the sufficiency of the PEIR is outside the scope of the proposed basin plan amendment.

The commenter provides that the Framework and Alternative 6, combined, contain costs not evaluated in the Economics Report. Specifically, the comment references the following:

- *"…all irrigated agricultural operations in all tiered areas complete a farm-specific evaluation and identification of management practices for Regional Board*

inspection." While Alternatives 1-5 do not specifically require a "farm-specific evaluation," the requirement for a farm-specific evaluation is covered by the analysis of farm plan water quality management plan (FWQMP) requirements of Alternatives 3, 4, and 5. While, full-fledged FWQMPs would likely cost more than farm-evaluations, the estimated cost provides a high-end estimate.

C8. *<u>The section on "Potential Sources of Financing" is naïve, unrealistic, and a departure from reality</u>: The report indicates that there are seven potential sources of funding to pay the program costs which the analysis anticipated (although inaccurate when reported) and as indicated above, most of the elements which are now driving the real costs were not even available when analyzed.*

Those reported seven funding sources are:

1. *Private financing by individual sources.*
2. *Bonded indebtedness or loans from government institutions.*
3. *Surcharge on water deliveries to lands contributing to the water quality problem.*
4. *Ad Valorem tax on lands contributing to the water quality problem.*
5. *Taxes and fees levied by a district created for the purpose of drainage management.*
6. *State and federal grants or low-interest loan programs.*
7. *Single purpose appropriations from federal or state legislative bodies (including land retirement programs).*

This is so inaccurate that it amounts to an insult to the farmers and coalitions that are actually paying for the ILRP, and will continue to be the only funding sources for this runaway new regulatory program. The only viable funding is Option 1, "Private Financing by Individuals", however, it is a deceptive title. That title should truthfully state "additional fees to be paid by the farm community".

There will be no bonds, taxes, grants, loans, or general fund appropriation. The Economic Analysis of $1.32 billion of new costs to the agricultural community seriously under-evaluated the true costs of the alternatives available at that time. The belated staff program proposal, which was adopted by the Board and subsequently enhanced by the Framework document, will impose perhaps two to three times the costs of the program. Therefore, this new program, as imposed on Central Valley agriculture, may increase farm fees in the amount of $3 to $5 billion.

Response to Comment C8.

See response to comment A9 in regards to consideration of potential sources of financing and costs borne by individual growers. See response to comment A2 regarding estimation of costs. The Commenters' statement regarding funding outside of financing by individuals is inaccurate. There are currently, and have been, both State and federal programs that have either provided outright grants or loans for growers to implement improved management practices. The Commenter provides no basis for the assertion that "farm fees" will amount to $3 billion to $5 billion.

C9. *Amendment of Basin Plan Language: Section 4.2 specifically addresses the Tulare Lake Basin Plan and clarifies that there is presently no similar section in this basin plan. The Tulare Lake Basin Plan does not presently have a section on estimated costs as does the northern basin plan, therefore, there is no compelling reason to make any such amendment.*

Our basin has functioned adequately since 2004 in administering the ILRP without any basin plan section addressing costs. Therefore, it is apparent that we can continue to operate under the ILRP without any reference to funding in the basin plan.

It is even more apparent that it is far more prudent to remain silent than it would be to include in the basin plan any language which is clearly incorrect, and therefore invite additional appeals and challenges. It should also be clear that nothing should be advanced in the basin plan which is presently under appeal and therefore likely to be amended.

1. *As addressed above, the first proposed paragraph must be amended to omit any false reference to a sixth alternative.*

2. *Also as mentioned above, the section on "potential funding sources" also needs fundamental amendments. The EQIP and conservation programs do not compensate farmers for complying with the ILRP. The State Board and DWR programs likewise do not compensate farmers for their regulatory compliance.*

3. *Lastly, the reference to the San Joaquin River programs are not applicable to the Tulare Lake Basin and should be stricken.*

If the Board is compelled to place any amendment in the Tulare Lake Basin, Basin Plan, it should be amended as follows:

"4.2 Amendments to the Water Quality Control Plan for the Tulare Lake Basin

Long-Term Irrigated Lands Regulatory Program

While the Central Valley Water Board has not established the Long-Term Program yet, it will not be on any of the five alternatives evaluated in the EIR or economically analyzed in the Irrigated Lands Regulatory Program Final Environmental Impact Report (Final PEIR; ICF International 2011) certified by resolution R5-2011-0017. It will instead be based on a staff alternative subsequently developed and adopted by the Board. The cost estimate below was based upon the five alternatives.

The cost estimate for the Long-Term Program accounts for program administration (e.g., Board oversight and third-party activities), monitoring for groundwater and surface water quality, and implementation of management practices throughout the Central Valley. The estimated cost for the annual capital and operational costs to comply with the Long-Term Program range from $216 million to $1,321 million (2007 dollars) based on the five alternatives analyzed. This cost estimate was a cumulative total that includes costs from the Sacramento River and San Joaquin River Basin, and the Tulare Lake Basin. The ILRP which was adopted from the staff alternative will, however, result in substantially greater, but as now, yet undetermined costs.

Potential funding sources for the ILRP are from fees imposed on the Region's farmers."

Response to Comment C9.

Board staff agrees that Porter-Cologne does not necessarily require an estimate of cost and identification of sources of financing as a precondition to the issuance of waivers or waste discharge requirements to regulate discharges from irrigated agriculture. However, there are such estimates in the Sacramento River and San Joaquin River Basins Water Quality Control Plans. Although those estimates were prepared as part of Basin Plan Amendments, inclusion of these estimates will provide a more complete and updated description of potential costs of agricultural water quality control programs.

Staff cannot recommend the Commenter's proposed changes to the Basin Plan amendment. In general, the proposed changes are not supported by any information provided for in the record or are not accurate. It is not accurate to state that the program will be based on a staff alternative adopted by the Board, since the Board did not adopt a specific alternative. There was no evidence to support the statement that the costs will be substantially greater than described. Finally, it would be inaccurate to state that the only sources of financing are "fees" imposed on farmers, since there are other sources of financing besides fees.

NOTICE OF PUBLIC HEARING
concerning
Non-Regulatory Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins, and the Tulare Lake Basin, to Provide a Cost Estimate and Potential Sources of Financing for the Long-Term Irrigated Lands Regulatory Program

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) will hold a public hearing to consider adopting amendments to the Water Quality Control Plans for the Sacramento and San Joaquin River Basins, and the Tulare Lake Basin (Basin Plans). The proposed amendments will provide a cost estimate and potential sources of financing for its Long-Term Irrigated Lands Regulatory Program (ILRP). The alternatives for the Long-Term ILRP are described in the Final Program Environmental Impact Report certified by the Board by Resolution R5-2011-0017. After hearing testimony, the Central Valley Water Board may choose to act on the proposal, or may choose to continue or close the hearing and vote on the proposal at a future meeting. The public hearing, to be conducted during the Central Valley Water Board meeting, is scheduled at the time and location noted below:

Date: 12/13/14 October 2011 (the exact date will be identified in the meeting agenda at least 10 days prior to the meeting)
Time: 8:30 am
Place: Regional Water Quality Control Board office
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

A draft staff report will be prepared to describe the rationale for the proposed amendments. Beginning 1 July 2011, interested persons may download the draft staff report for the proposed Basin Plan amendments in PDF format from the Central Valley Water Board's Internet website at

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

A copy of these documents can also be obtained by contacting or visiting the Central Valley Water Board's offices in Rancho Cordova or Fresno:

11020 Sun Center Drive, #200, Rancho Cordova, California 95670-6114 weekdays between 8:00 a.m. and 5:00 p.m. [Brett Stevens -916-464-4642]

1685 "E" Street, Suite 100, Fresno, California 93706-2007 weekdays between 8:00 a.m. and 5:00 p.m. [Pam Buford – 559-445-5576]

Written comments must be submitted by **15 August 2011** if they are to receive a written response. After the deadline, staff will not accept written comments

unless the Board Chair determines such comments should be accepted. Comments shall be addressed to:

Attn: Brett Stevens
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

At the hearing, staff will summarize written comments and will present a final recommendation for Board consideration. Interested persons will be provided the opportunity to present oral comments to the Central Valley Water Board at the hearing, and are expected to orally summarize their written submittals. Oral testimony will be limited in time by the Board Chair.

Confirmation of the hearing date and any questions regarding the proposed amendments should be directed to Brett Stevens at (916) 464-4642 number or bstevens@waterboards.ca.gov. The hearing facilities will be accessible to persons with disabilities. Individuals requiring special accommodations are requested to contact Kiran Lanfranchi-Rizzardi at (916) 464-4839 at least five working days prior to the meeting. TTY users may contact the California Relay Service at 1-800-735-2929 or voice line at 1-800-735-2922.

Questions regarding this amendment should be directed to Brett Stevens at (916) 464-4642 or bstevens@waterboards.ca.gov. Future notifications regarding this amendment will be made through the mailing list for the Irrigated Lands Regulatory Program. Persons wishing to subscribe to the electronic mailing list can do so through our website by clicking on the "Subscribe" button on the right side of our webpage at:

http://www.waterboards.ca.gov/resources/email_subscriptions/reg5_subscribe.shtml

[Note: Check the box titled "Irrigated Lands Regulatory Program"].

If you have already signed up for the mailing list in the past, you need not sign up a second time. Or, you may fill out the attached form to receive future notifications regarding this amendment via US mail.

Please bring the above information to the attention of anyone you know who would be interested in this matter.

Kenneth D. Landau, Assistant Executive Officer

27 May 2011

ITEM: 18

SUBJECT: Update of Drinking Water Policy Development

BOARD ACTION: This is an informational item.

BACKGROUND: The Sacramento-San Joaquin Delta provides drinking water for two thirds of the people in California. The 2000 CALFED Record of Decision identified the need for a Drinking Water Policy (Policy) for the Delta and upstream tributaries. In the 2002 Implementation MOU for the CALFED Drinking Water Quality Program, the Central Valley Water Board (Board), in consultation with DPH, SWRCB and USEPA, was given primary responsibility for developing the Policy. A Central Valley Drinking Water Policy Workgroup was formed, comprised of federal and state agencies, drinking water agencies, and wastewater, municipal storm water and agricultural interests. Workgroup members have provided funding as well as received grant funding to conduct technical studies and analytical modeling to support Policy development.

The Board committed to development of the Policy in Resolution R5-2004-0091 and later in Resolution R5-2010-0079. The 2010 Resolution also documented progress to date, provided direction for future actions and set deadlines for interim deliverables associated with Policy development by July 2013.

Since the 2010 Resolution, staff has coordinated with the Workgroup to complete the grant funded technical studies and analytical modeling. Staff is now coordinating the completion of a Workgroup Synthesis Report of work done since the initiation of the Workgroup to support Policy development.

Staff has worked closely with the Workgroup to develop the draft Policy Outline and Work Plan/Funding Proposal as required by the 2010 Resolution. The following issues will likely be highlighted by Workgroup members:

- Need for MOU between Water Boards and DPH regarding source water quality protection
- Need to refine analytical models
- Need for scientific process to evaluate pathogen levels

RECOMMENDATION: This is an informational item.

Mgmt. Review_____
Legal Review_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Drinking Water Policy for Surface Waters
Draft Policy Outline
September 2011

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

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

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

<u>Water Quality Objectives</u>
The existing Basin Plan includes a number of water quality objectives and provisions that address drinking water, including the following.

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

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

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

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

Implementation Chapter

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

- A policy statement recognizing the importance of protecting the municipal beneficial use and sources of drinking water for the Sacramento-San Joaquin Delta and its tributaries.

- Summary of current Basin Plan elements that address drinking water protection, such as:
    - Water quality objectives are developed to protect all applicable beneficial uses, including the MUN beneficial use unless otherwise stated.
    - Implementation Chapter contains a number of policies relevant to drinking water protection:
        - ✓ Resolution No. 68-16, Policy with Respect to Maintaining High Quality of Water in California (IV – 8.00).
        - ✓ Resolution No. 88-63, Sources of Drinking Water Policy (IV – 9.00).
        - ✓ Antidegradation Implementation Policy (IV – 15.01).
        - ✓ Policy for Application of Water Quality Objectives (IV – 16.00).
        - ✓ Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California; a.k.a. State Implementation Plan or SIP (IV-26.02)

- A very concise summary of Workgroup findings (most of the details will be in the accompanying resolution and staff report) such as the following:
    - Source evaluation and modeling results to date do not support initial concern that water quality would decline over time.
    - Monitoring and studies may be needed to fill data gaps, to ensure that modeling predictions are accurate and to further refine modeling efforts.
    - Workgroup findings pertain to organic carbon, *Cryptosporidium, Giardia*, salt and nutrients that were identified as the constituents of concern early in the process.

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

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

<u>Surveillance and Monitoring</u>

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

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

Drinking Water Policy for Surface Waters
Draft Policy Workplan/Funding Proposal
September 2011

Introduction

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

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

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

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

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

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

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

Tasks

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Expected Completion: April 2012

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

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

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

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

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

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

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

   Expected Completion: April 2012

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

   Expected Completion: December 2012

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

   Expected Completion: February 2013

4. Respond to public comments.

   Expected Completion: May 2013

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

   Expected Completion: May 2013

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

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

   Expected Completion: July 2013

   If approved, then:

7. Assemble administrative record.

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

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

Schedule for Draft Policy Workplan

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

ITEM: 19

SUBJECT: Yolo County Planning and Public Works Department, Yolo County Central Landfill

BOARD ACTION: Consideration of Cease and Desist Order

BACKGROUND: On 6 December 2007, the Central Valley Water Board adopted Waste Discharge Requirements ("WDRs") Order R5-2007-0180, prescribing waste discharge requirements and compliance schedules for the Yolo County Central Landfill. The landfill is owned and operated by Yolo County Planning and Public Works Department and has been in operation since 1975.

This Cease and Desist Order applies to four of the unlined Class III Waste Management Units (WMUs). These WMUs cover approximately 102.8 acres, and are still open and accepting waste. The WDRs anticipate that these units would be filled with waste on a year-round basis. The WDRs require that WMUs 1 and 2 be brought to final grade by the end of 2011 and the final closure cap constructed by the end of 2012. WMUs 4 and 5 were to be filled by 2013 and closed by 2014. The closure dates are required in the WDRs.

However, due to reduced tonnages of municipal waste entering the landfill and the fact that the County chose to fill other WMUs during the winter, the County will be unable to meet the closure schedule in the WDRs. This CDO provides a new schedule for closure of WMUs 1, 2, 4, and 5. WMU 2 is to be partially closed in 2012, with final closure of WMUs 1 and 2 to be completed by 2014. Final closure of WMUs 4 and 5 will be completed by the end of construction season 2017. The CDO also specifically requires that all waste received at the landfill be placed in these four units.

RECOMMENDATION: Adopt the proposed order.

Mgmt. Review____WSW_____
Legal Review____PEP_____

13 October 2011 Board meeting
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CEASE AND DESIST ORDER R5-2011-XXXX

FOR
COUNTY OF YOLO PLANNING AND PUBLIC WORKS DEPARTMENT
YOLO COUNTY CENTRAL LANDFILL, YOLO COUNTY

TO CEASE AND DESIST

FROM DISCHARGING CONTRARY TO REQUIREMENTS

The California Regional Water Quality Control Board, Central Valley Region, ("Central Valley Water Board" or "Board") finds that:

1. On 6 December 2007, the Central Valley Water Board adopted Waste Discharge Requirements ("WDRs") Order R5-2007-0180, prescribing waste discharge requirements and compliance schedules for the Yolo County Central Landfill. The landfill is owned and operated by Yolo County Planning and Public Works Department ("Discharger"). The landfill has been in operation since 1975, servicing the incorporated and unincorporated areas of Yolo County.

2. The landfill is about four miles northeast of Davis and three miles southeast of Woodland, near the intersection of Roads 28H and 104 in Yolo County. The site covers 725 acres, corresponding to Assessor's Parcel Numbers (APNs) 042-140-01, 042-140-02, and 042-140-06. The facility includes lined and unlined Class III landfills including lined bioreactor units, lined Class II surface impoundments, a construction and demolition debris processing facility, a wood and yard waste processing facility, a concrete and asphalt debris facility, a metal recovery facility, a household hazardous waste facility, and a landfill gas-to-energy plant.

3. This Order applies to four of the Class III Waste Management Units ("WMUs"). These WMUs cover approximately 102.8 acres and include unlined WMUs 1, 2, 4 and clay-lined WMU 5. WMUs 1, 2, 4, and 5 have not yet been brought to final grade for closure. WMU 3 received final closure during 2007.

4. On 1 June 2004, the Discharger submitted a revised Final Closure and Post-Closure Maintenance Plan for WMUs 1 through 5 that included a justification report for a proposed alternative geomembrane final cover, a justification report for year-round filling, and a revised closure schedule for WMUs 1 through 5. These changes were approved in previous WDRs, and Order R5-2007-0180 includes the current schedule for closure of WMUs 1 through 5 based on the 2004 closure plan.

CLOSURE OF WMUs 1 THROUGH 5

5. Previous WDRs Order R5-2002-0118 limited filling in unlined WMUs 1 through 4 to the dry season. This requirement was intended to prevent excessive storm water infiltration into these unlined units by keeping the intermediate cover in place

during the wet season. In 2004, the Discharger submitted a *Justification Report for the Proposed Year-Round Filling of Waste Management Units 1 - 5*. The report included estimates of infiltration rate into the waste for each of these WMUs with and without wintertime filling. The report indicates that the difference in infiltration caused by removing the intermediate cover in the fill area is negligible compared to the benefit derived from reaching final grades years sooner so that the final cover could be installed. WDRs Order R5-2007-0180 allows for year-round filling in the five WMUs.

6. The Discharger submitted a revised Final Closure and Post-Closure Maintenance Plan ("FCP") in 2004 for WMUs 1 through 5, which proposed phased closure beginning with WMU 3. WMU 3 received final closure during 2007. Order R5-2007-0180 incorporates the Discharger's revised Closure Plan and proposed closure dates.

7. Closure Specification E.3. of WDRs Order R5-2007-0180 states: "The closure schedule for WMUs 1 through 5 shall be as follows:

Closure Schedule for WMUs 1-5

WMUs to be Closed	Date to Complete Filling	Date to Complete Closure Construction
WMU 1/2	2011	2012
WMU 3	2006	2007
WMU 4/5	2013	2014

8. On 21 March 2011, the Discharger discovered a leachate seep on the western side slope of WMU 2 and notified Board staff. Board staff concluded that the leachate seep was evidence of insufficient cover on the WMU and requested information concerning the closure schedule of WMUs 1 and 2.

9. In a response dated 30 March 2011, the Discharger indicated that winter filling had not taken place in WMU 1 or 2 for the 2009/2010 and 2010/2011 wet seasons because there is only room for a single lift of waste and access to the landfill's soil borrow sources make it impractical to continue wet season filling of these units. The Discharger did not anticipate completion of filling WMU 1 and 2 in accordance with the schedule in the WDRs. The Discharger estimated that filling of WMU 1 and 2 would be completed by 2013 and final construction of the closure cover would be 2014, in violation of the WDRs.

10. In a letter dated 19 May 2011, Board staff requested that the Discharger complete filling and closure construction of WMU 1 and 2 in accordance with the closure schedule in the WDRs. Board staff also requested a schedule by 15 June 2011 showing tasks needed to complete filling of these units and to complete closure construction in accordance with the WDRs.

11. The Discharger submitted a schedule dated 15 June 2011 to complete closure construction of WMUs 1 and 2 by 2014. However, the Discharger stated there was "*insufficient waste currently being received at the YCCL to complete filling of WMUs 1 and 2 to final fill configuration by December 31, 2011*." County waste tonnage, which is the majority of waste disposed at County Landfill, has declined about 20 percent since 2006 and continues to decline. However, the submitted schedule assumes that the current waste tonnage and waste compaction rates will continue through closure of WMUs 4 and 5 in 2017.

12. The Discharger has proposed to fill WMUs 1 and 2 year-round until final grades are achieved. In addition, the Discharger has proposed to partially close approximately 28 to 34 acres of WMU 2 during the summer of 2012, with the remaining portion of WMU 2 and all of WMU 1 to be closed in 2014. Attachment A to this Order depicts the Discharger's proposed schedule for filling based on the current available airspace and current rate at which the facility has been receiving waste. This Order incorporates the Discharger's schedule.

13. In the 15 June 2011 submittal, the Discharger stated that extending the closure schedule for WMUs 1 and 2 will also extend the closure schedule of WMUs 4 and 5. The Discharger has proposed filling WMUs 4 and 5 year-round after achieving final grade of WMUs 1 and 2, and estimated that two years of capacity exist in WMUs 4 and 5, based on current available airspace and the current rate at which the facility has been receiving waste. Therefore, filling activities for WMUs 4 and 5 will extend to 2016 with closure construction in 2017. The County is actively looking for additional waste to reduce the waste filling timeline, and is currently in negotiations for waste disposal contracts, in addition to the existing contracts from outside of Yolo County that were signed in 2008.

14. The Discharger is unable to fill and close WMUs 1, 2, 4 and 5 in accordance with the schedule in WDRs R5-2007-0180, which would be considered a violation of the WDRs. This Order provides a revised schedule for the Discharger to fill WMUs 1 and 2 to achieve final grades, and to conduct partial closure of approximately 28 to 34 acres of WMU 2 during the summer 2012, with the remaining portion of WMU 2 and all of WMU 1 to be closed in 2014. The revised schedule also requires closure of WMUs 4 and 5 by 2017, based on the current available airspace and the current rate at which the facility has been receiving waste.

GROUNDWATER CONDITIONS

15. The natural gradient for shallow groundwater in the area is to the south and southeast. However, groundwater flow beneath the site is controlled by the Discharger's extraction well system as indicated by the potentiometric maps provided in the 2010 Annual Monitoring Report. Groundwater flows northward toward the extraction system at a gradient of 0.0025 to 0.0050 feet per foot according to the 4th quarter 2010 measurements.

16. The extraction well system includes 16 groundwater extraction wells along the northern portion of the site to lower groundwater elevations and to capture VOCs released from the WMUs. A slurry wall was also installed along the northern boundary of WMUs 4, 5 and 6 to help facilitate groundwater extraction and lowering of the water table.

17. The groundwater monitoring system for WMUs 1 through 5 consists of corrective action wells OW-1, OW-4 through OW-7, OW-17, OW-18, OW-21, OW-24, OW-26, OW-27, EW-2, EW-7, DW-2, and DW-6 through DW-8. Background wells OW-7 and OW-24 are the only two monitoring wells located north of the slurry wall. All other monitoring points surrounding WMUs 1 through 5 and extraction wells are located south (upgradient) of the slurry wall.

18. During the second semester 2010 monitoring event, VOCs were not detected in the shallow wells monitoring WMUs 1 through 5 with the exception of wells EW-2 and OW-27. Well EW-2 is located in the vicinity of the northwest corner (downgradient) of WMUs 3, 4 and 5, and contained five VOCs. OW-27 is located in the vicinity of the southeastern boundary of WMU 3 and contained two VOCS. Compounds detected in wells EW-2 and OW-27 are summarized below.

VOCs in Shallow Zone Monitoring Wells
(Concentrations in micrograms per liter, ug/L)

CONSTITUENT	CONCENTRATION LIMIT	EW-2*	OW-27*	OW-27FD**
1,1 Dichloroethane	0.5	0.55tr	ND	ND
cis-1,2-Dichloroethene	0.5	1.5	2.4	2.8
Trichloroethene (TCE)	0.5	1.4	0.40tr	0.34tr
Tetrachloroethene (PCE)	0.5	0.67tr	ND	ND
Vinyl Chloride	0.5	1.1	ND	ND

*= point of compliance well
**=Field Duplicate
tr = The reported value was obtained from a reading that was less than the practical quantitation limit (PQL) but greater than or equal to the Method Detection Limit (MDL).
ND = not detected

19. The deep groundwater monitoring wells did not contain detectable VOCs during the third quarter 2010 monitoring event. However, deep well DW-2 located downgradient of WMU 2 is considered impacted due to past detections of VOCs.

20. Several inorganic constituents detected in the wells monitoring WMUs 1 through 5 have increasing and decreasing trends. Water quality beneath the landfill is variable and observed trends reported are not indicative of whether groundwater impacts are related to landfill impacts or natural variation in groundwater. Central Landfill is surrounded by active agricultural fields and it is unclear whether those impacts are due to applications to the surrounding fields. The potentiometric maps

provided in the 2010 Annual Report indicate groundwater beneath the landfill is under the influence of the groundwater extraction system and is likely capturing groundwater from the surrounding offsite fields, which is influencing groundwater quality beneath the landfill.

21. Based upon the analytical results discussed above, groundwater wells in the vicinity of WMUs 1 and 2 do not appear to be impacted by VOCs. Historical analytical results indicates that VOCs have not been detected in wells OW-1, OW-4, OW-5, OW-17, OW-18, or OW-21 since 2006, and that current VOC detections are being reported from wells EW-2 (WMUs 3, 4 and 5) and OW-27 (WMU 3). The likely source of VOCs impacting groundwater in the vicinity of these wells is the closed WMU 3, which is under the influence of the groundwater extraction wells.

22. Since groundwater separation from WMUs 4, 5 and 6 is required by the WDRs, the Discharger has plans to maintain the separation of groundwater from waste in the future by continuing to upgrade extraction well pumps and control systems, and by default, capture impacted groundwater.

23. The groundwater extraction system and slurry wall at Central Landfill appears to be capturing groundwater impacts and controlling the groundwater flow regime beneath the site, and additional corrective action at this time does not appear warranted.

REGULATORY CONSIDERATIONS

24. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised September 2009 (hereafter "Basin Plan"), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

25. The designated beneficial uses of underlying groundwater, as stated in the Basin Plan, are domestic and municipal supply, agricultural supply, industrial service supply, and industrial process supply.

26. Surface water runoff from the site drains to the north and south. The southern part of the site is drained by the Willow Slough Bypass and an unnamed canal drains the northern part of the site. The Willow Slough and the unnamed canal empty into the Yolo Bypass to the east, which drains to the Sacramento San Joaquin Delta.

27. As described in the Basin Plan, the beneficial uses of the Sacramento San Joaquin Delta are municipal and domestic supply; agricultural supply, industrial supply, industrial process supply, water contact recreation, non-contact water recreation, warm fresh water habitat, cold freshwater habitat, migration of aquatic organisms, spawning, reproduction, and/or early development, wildlife habitat, and navigation.

28. Water Code section 13301 states in part,

> When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in Section 13302.

29. As a result of the events and activities described in this Order, the Central Valley Water Board finds that the discharge of waste is threatening to take place in violation of WDRs Order R5-2007-0180. This Order requires the Discharger to take appropriate remedial action and to comply in accordance with the time schedule set forth below.

30. Water Code section 13267(b)(1) states that:

> In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region… shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

31. The Discharger owns and operates the facility subject to this Order. The technical reports required by this Order are necessary to determine compliance with the facility's WDRs and this Order.

32. The issuance of this Order is an enforcement action by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to California Code of Regulations, title 14, section 15321(a)(2).

33. On XX, XXXX 2011, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

SUMMARY OF ACTIONS REQUIRED BY THIS ORDER

34. As described and defined in detail below, this Order requires compliance with the WDRs by compelling the Discharger to fill WMUs 1, 2, 4, and 5 as proposed in its 15 June 2011 letter:

    a. Continue filling WMUs 1 and 2 during the summer of 2011, within the areas labeled A and C of Attachment A to this Order.

    b. Conduct winter time filling activities (anticipated October 2011 through April 2012) in area B (see Attachment A).

    c. Remove existing access ramp in area A in the spring of 2012, and fill any remaining areas to finished grade.

    d. Complete partial closure design of WMU 2, and submit to the Board for review by 15 October 2011.

    e. Conduct partial closure construction of WMU 2 area A (approximately 28 acres) through 2012 construction season. Continue filling in remaining portion of WMU 2 and all of WMU 1 through December 2013, and if necessary, through the spring of 2014.

    f. Complete remaining closure design of WMU 2 and all of WMU 1 and submit to Central Valley Water Board by September 2013.

    g. Complete remaining closure construction of WMU 1 and WMU 2 during 2014 construction season.

    h. Fill WMUs 4 and 5 and bring to closure grade by 2016. Complete final closure of WMUs 4 and 5 by end of construction season 2017.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13301 and 13267, the County of Yolo Planning and Public Works Department, its agents, successors, and assigns shall, in accordance with the following tasks and time schedule, implement the following closure schedule and activities to ensure compliance with WDRs Order R5-2007-0180.

Each report submitted to the Central Valley Water Board shall be included in the Discharger's Operating Record. Furthermore, any person signing a document submitted under this Order shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my

knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

1. Unless extreme weather conditions, such as high winds, lightning, hail, etc. make the current fill areas too dangerous for waste placement operations in these WMUs, all Class III waste disposed at the landfill shall be placed into WMUs 1, 2, 4, and 5 year-round, until final grade is reached. If extreme weather does not allow for filling in these units, the Discharger must immediately notify staff and describe steps to be performed to get back into compliance.

2. The Discharger shall comply with the filling and closure schedule proposed in its 15 June 2011 letter, and summarized in Finding 34, above.

3. By **15 October 2011**, the Discharger shall submit a partial Final Closure Design ("FCD") for WMU 2, Area A, which is approximately 28 acres (as shown in Attachment A). This partial FCD will encompass the closure design as described in WDRs R5-2007-0180, Findings 72 through 77.

4. By **15 March 2012**, the Discharger shall submit a Construction Quality Assurance ("CQA") Plan in accordance with California Code of Regulations, title 27 ("Title 27"), section 20323 for the partial closure of WMU 2, Area A, during the 2012 construction season. The CQA Plan shall comply with Title 27, section 20234 (b)(1) and (2). Closure construction performed during the 2012 season shall be complete by 15 October 2012.

5. By **2 January 2013**, the Discharger shall submit a Final CQA Report in accordance with Title 27, section 20324 for the partial closure construction of WMU 2, Area A (approximately 28 acres).

6. By **15 September 2013**, the Discharger shall submit the FCD for the remaining closure of WMU 2, Area B, and all of WMU 1 as described in WDRs Order R5-2007-0180. This report should include a CQA Plan as required in Item 4 of this section.

7. By **15 October 2014**, the Discharger shall complete the final closure construction of WMU 1 and 2 in accordance with Findings 72 through 77 of WDRs Order R5-2007-0180.

8. By **2 January 2015**, the Discharger shall submit a Final CQA Report for WMUs 1 and 2, Area B, in accordance with Title 27, section20324.

9. By **15 October 2015**, the Discharger shall submit a FCD and CQA Plan for WMUs 4 and 5.

10. By **15 October 2017**, the Discharger shall complete final closure construction of WMUs 4 and 5 in accordance Findings 72 through 77 of WDRs Order R5-2007-0180.

11. By **2 January 2018**, the Discharger shall submit a Final CQA Report in accordance with Title 27, section 20324.

12. Beginning with the fourth quarter of 2011, the Discharger shall submit quarterly progress reports describing the work completed to date to comply with each of the requirements above. In addition, the reports shall clearly show the volume of Class III waste accepted for disposal and estimated total airspace used by the landfill during the quarter, and the volume of that waste placed and estimated airspace remaining in WMUs 1, 2, 4, or 5. The quarterly progress reports shall be submitted by the **15th day of the month following the end of the quarter** (i.e., by 15 January, 15 April, 15 July, and 15 October).

In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

The Executive Officer may extend the deadlines contained in this Order if the Discharger demonstrates that circumstances beyond the Discharger's control have created delays, provided that the Discharger continues to undertake all appropriate measures to meet the deadlines. The Discharger shall make any deadline extension request in writing at least 30 days prior to the deadline. The Discharger must obtain written approval from the Assistant Executive Officer for any departure from the time schedule shown above. Failure to obtain written approval for any departures may result in enforcement action.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions.

Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

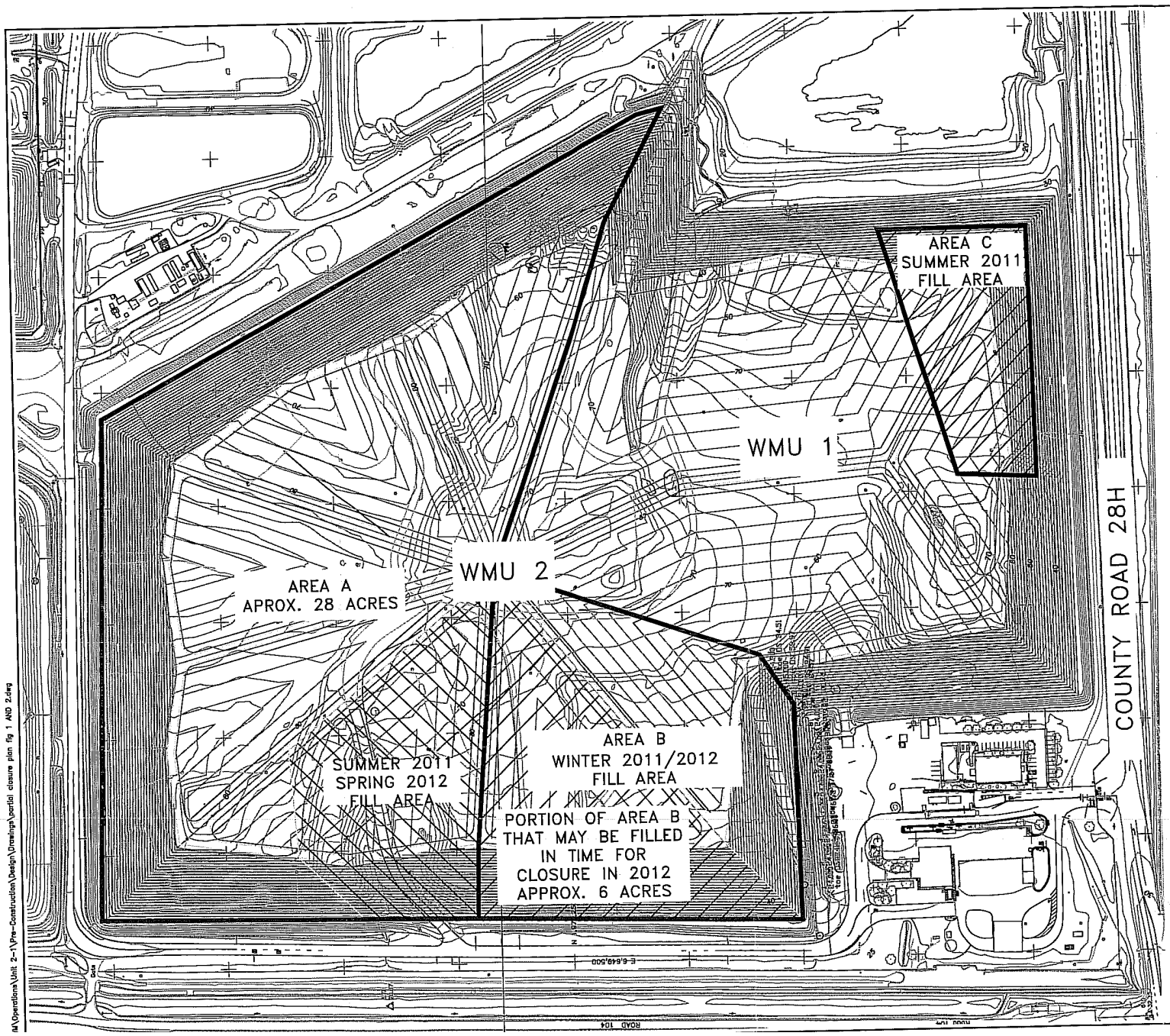
or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

_____
PAMELA C. CREEDON, Executive Officer

Attachment A: Site Map

TAD/SER/WSW: 8/02/2011



PROJECT
YOLO COUNTY CENTRAL LANDFILL
UNIT 1&2 FILL PLAN

SHEET NUMBER | DUAL SHEETS

REGISTERED CIVIL ENGINEER — DATE
DEPARTMENT APPROVAL — DATE

WARNING: THE ORIGINAL DOCUMENTS CONTAIN A RED COLORED PROFESSIONAL SEAL AND A BLACK COLORED SIGNATURE

LEGEND

- EXISTING 10 FT. CONTOURS
- EXISTING 2 FT. CONTOURS
- EXISTING GAS COLLECTION PIPES
- EXISTING ACCESS ROADS
- EXISTING PERIMETER DRAINAGE
- EXISTING FENCE
- EXISTING CULVERT
- EXISTING PAVED ROAD
- VERTICAL GAS WELL HEAD
- HORIZONTAL GAS WELL HEAD
- PROPOSED GAS COLLECTION PIPE

ATTACHMENT A

CDO R5-2011-XXXX

Yolo County Central Landfill
Yolo County
Site Map
WMU 1 & 2

GRAPHIC SCALE
100' 0 50' 100' 200' 400'

REVISIONS

DESIGN BY JK 06/09/11
DRAWN BY JK 06/09/11
CHECK BY LS 06/09/11
SCALE: 1" = 100'

YOLO COUNTY
PLANNING AND PUBLIC WORKS
DIVISION OF INTEGRATED WASTE MANAGEMENT
44090 COUNTY RD. 28H
Woodland, CA 95776
Phone: (530) 666-8863 FAX: (530) 666-8623

YOLO COUNTY CENTRAL LANDFILL

WASTE MANAGEMENT UNITS 1&2
2011/2012 PROPOSED FILL PLAN

SHEET NUMBER
FIG. 2

N:\Operations\Unit 2-1\Pre-Construction\Design\Drawings\partial closure plan fig 1 AND 2.dwg

ITEM: 20

SUBJECT: River Highlands Community Services District and Yuba County, Hammonton Gold Village Wastewater Treatment Plant, Yuba County

BOARD ACTION: *Consideration of NPDES Permit Renewal*

BACKGROUND: River Highlands Community Services District and Yuba County (Discharger) collectively own and operate the Hammonton Gold Village Wastewater Treatment Plant (Facility). Gold Village Land Development LLC owns the property. (Gold Village's only obligation under the proposed Order is to provide unfettered access to the Facility.)

The Facility serves about 84 households, and is permitted to discharge up to 0.026 million gallons per day of treated municipal wastewater to irrigate fields, or to an unnamed tributary of Sanford Creek which ultimately flows into the Yuba River below Englebright Dam. The Facility includes a new tertiary-level treatment and ultraviolet light disinfection system. Treated wastewater is discharged to surface water during wet weather months only.

The tentative Permit that was issued for public comments prohibited discharges to the unnamed tributary from 1 April through 30 September. Based on the Discharger's comments, the tentative Permit has been modified to prohibits discharges to the unnamed tributary from 1 May through 30 September, allowing one extra month of discharge during wet weather months.

The Discharger also commented that the current contract operator will no longer operate the Facility as of 30 September 2011.

ISSUES: Public comments were received from the Discharger on 26 July 2011, after close of the 30-day public comment period. No other comments were received. The Discharger's comments do not oppose the tentative Permit and are included in the Agenda Package. Staff considered the Discharger's comments and made the following modifications to the tentative Permit:

1. Removal of the Yuba City Utilities Department as operator,
2. Clarified Gold Village's (property owner) regulatory obligation,
3. Made corrections regarding biosolids management at the Facility, and
4. Modified the surface water discharge prohibition.

Mgmt. Review _____
Legal Review _____
13 October 2011
Central Valley Water Board Meeting
11020 Sun Center Dr. #200Rancho Cordova, CA 95670

ITEM: 21

SUBJECT: Hathaway, LLC, Reuse of Oil Field Production Wastewater for Irrigation, Kern County

BOARD ACTION: *Consideration of: A. Resolution Adopting a Negative Declaration and Approving an Initial Study, and B. Resolution Adopting a Conditional Waiver of Waste Discharge Requirements and a Monitoring and Reporting Program*

BACKGROUND: Hathaway proposes to reuse good quality oil field production wastewater for irrigation purposes. Wastewater will be piped to an irrigation reservoir on the Concordia Ranch, approximately ¾ of a mile southwest of the Lease, where approximately 120 acres of citrus are farmed and irrigated by groundwater from an irrigation well on the Ranch. During the months of February through November, approximately 3.5 acre-feet of water per day are applied as irrigation. The wastewater (7%) and groundwater (93%) will be blended in an existing irrigation reservoir. Use of the reclaimed wastewater may reduce the amount of groundwater currently used for irrigation on the Ranch by approximately 70 acre-feet-per-year. When irrigation is not needed, wastewater will be discharged to a Class II injection well on the Lease permitted by the California Division of Oil, Gas and Geothermal Resources. The Kern River Formation is the principle groundwater aquifer. The produced wastewater meets Basin Plan oilfield numerical limitations and is similar in character, but of slightly lower quality than groundwater produced from the Ranch irrigation water supply well. Based on weighted average calculations, the quality of the blended irrigation water will not cause degradation of underlying groundwater. The reuse of good quality wastewater is consistent with water reclamation policy.

ISSUES No comments were received.

RECOMMENDATION: Adopt the proposed resolutions

Mgmt. Review_____
Legal Review_____

13 October 2011
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

ITEM: 22

SUBJECT: Rescinding NPDES/WDR Requirements

REPORT: Following are proposed orders rescinding Waste Discharge Requirements and NPDES Permits

RECOMMENDATION: Adopt the proposed Order

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2011-

RESCINDING WASTE DISCHARGE REQUIREMENTS/NPDES PERMITS

a) Order No. 90-072 adopted on 23 March 1990 prescribes waste discharge requirements for Almonike Enterprises and the U.S. Forest Service (land manager) for the discharge of mining waste to land and process ponds. The Discharger, Mr. Richard Thomas (Almonike Enterprises) has been deceased for at least 5 years and the Tahoe National Forest decommissioned the mine in 2010. This included permanent closure of the mine site, elimination of all infrastructure associated with the operation of the facility (including the removal of all equipment and structures), and revegetation. The U.S. Forest Service will ensure that there is no possibility of future mine discharge, or surface water runoff from the former mine site. Continued post-closure monitoring is unnecessary. (JSH)

b) Waste Discharge Requirements (WDRs) Order No. 90-150 regulates the Lake Berryessa Marina Resort Wastewater Treatment Facility in Napa County. The facility has been closed and demolished, and the Discharger completed closure of the wastewater treatment ponds in February 2011. Therefore WDRs Order No. 90-150 is no longer necessary and therefore should be rescinded.

c) Waste Discharge Requirements (WDRs) Order No. 98-085 regulates the operation of a septic system and ten evaporation-percolation ponds at the Rancho Monticello Resort in Napa County. The facility has been closed and demolished, and the Discharger completed closure of the wastewater treatment ponds prior to August 2011. Therefore, WDRs Order No. 98-085 is no longer necessary and therefore should be rescinded.

d) Waste Discharge Requirements (WDRs) Order No. 5-00-020 regulates the operation and maintenance of the wastewater collection treatment and disposal facilities at the Putah Creek Resort in Napa County. The facility has been closed and demolished, and the Discharger completed closure of the wastewater treatment ponds prior to May 2011. Therefore, WDRs Order No. 5-00-020 is no longer necessary and therefore should be rescinded.

e) Gallo Glass Company, Sisk Ranch Site, Groundwater Treatment System, Order No. 5-00-138, Stanislaus County. Waste Discharge Requirements Order No. 5-00-138 (WDR), adopted on16 June 2000 prescribes the requirements for the discharge to land of extracted groundwater treated to remove hexavalent chromium, but still containing inorganic constituents such as sulfate and chloride. The treated water was discharged to a percolation area and leach lines. The treatment system was operated from November 1992 until August 2001, when the Department of Toxic Substances Control and the California Regional Water Quality Control Board, Central Valley Region approved shutdown of the system. Since there have been no discharges under the WDR, and there are no future plans for ex-situ groundwater treatment, it is appropriate to rescind WDR 5-00-138. (KDA)

f) Waste Discharge Requirements Order No. 5-00-212 was issued to River City Aggregates and Fern Pilliken to regulate the mining operations south of Meiss Road in Sacramento County. Teichert Aggregates is the current owner and operator of the facility. On 21 July 2011, Teichert Aggregates submitted a request to the Central Valley Water Quality Control Board to rescind WDRs Order No. 5-00-212. The mining facility has been idle and no mining operations have taken place since Teichert's ownership in 2003. WDRs Order No. 5-00-212 is no longer necessary, and therefore should be rescinded.

g) Waste Discharge Requirements Order R5-2002-0111 (NPDES No. CA0004146), adopted on 7 June 2002 by the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board), prescribe requirements for the discharge of process water and domestic wastewater from the Sconza Candy Company (Discharger) to the Oakdale Irrigation District's Riverbank Lateral Canal, a tributary to the Stanislaus River. Order R5-2002-0111 was originally issued to the Hershey Chocolate and Confectionary Corporation for its Oakdale Plant. During the term of the existing Order the Facility was sold to the Sconza Candy Company. On 5 May 2008, the Discharger submitted a Report of Waste Discharge (ROWD) and applied for an NPDES permit renewal. Based on the information in the ROWD and the supplemental information dated 16 August 2011, the Central Valley Water Board staff determined that the discharge meets the required conditions for approval under the NPDES General Order for Limited Threat Discharges (General Order R5-2008-0082). A Notice of Applicability for coverage under R5-2008-0082 has been issued by the Central Valley Water Board's Executive Officer, and the project was assigned General Order R5-2008-0082-015. Consequently, Order R5-2002-0111 is no longer necessary and is rescinded.

h) John Taylor Fertilizers Co., Yuba City Facility, Enhanced Bioremediation Project, Order No. R5-2004-0055, Sutter County. Waste Discharge Requirements Order No. R5-2004-0055 was adopted on 23 April 2004 and prescribes requirements for John Taylor Fertilizers to inject Hydrogen Releasing Compound® (HRC) into shallow groundwater, and to monitor resultant water quality changes. By 2010, the analytical data show that the HRC has been consumed, and secondary water quality changes have returned to baseline conditions. Therefore, Order No. R5-2004-0055 is no longer necessary.

i) Waste Discharge Requirements (WDRs) Order No. R5-2008-0048 waives waste discharge requirements for the Contra Costa Water District Alternative Intake Project for dewatering discharge to land. The project was completed in June 2010 and there will be no further dewatering operations at the construction site. Therefore, WDRs Order No. R5-2008-0048 is no longer necessary and therefore should be rescinded.

IT IS HEREBY ORDERED that the above Waste Discharge Orders and NPDES Permits are rescinded.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region on 13 October 2011

_____

PAMELA C. CREEDON, Executive Officer

ITEM:	23
SUBJECT:	Change of Name and/or Ownership of Facilities having Waste Discharge Requirements
REPORT:	Following is a proposed order that changes the owners and/or facilities and/or operators names on waste discharge requirements
RECOMMENDATION:	Adopt the proposed Order

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2011-

CHANGE OF NAME AND/OR OWNERSHIP OF FACILITIES
HAVING WASTE DISCHARGE REQUIREMENTS

The California Regional Water Quality Control Board, Central Valley Region, finds that:

1. The Regional Board Orders listed below are for facilities that have had a change of name and/or ownership and/or operator status since adoption of the Orders.

2. These Orders need to be revised to show the current name and/or ownership of these facilities.

3. The Board has notified each discharger of its intent to amend the Orders by substituting the current name and/or ownership and/or operator status of the facilities.

4. The Board heard and considered all comments pertaining to the proposed change of name and/or ownership and/or operator status of each facility.

5. This action is exempt from provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with section 15301, Title 14, California Code of Regulations.

IT IS HEREBY ORDERED, that the following Orders and Resolutions are amended by updating the discharge facility name and/or ownership name and address as shown below:

Order Number	Current Facility Name	Current Owner	New Facility Name	New Owner	New Operator
92-157	Unimin Byron Sand Plant	Unimin Corporation P.O. Box 216 Byron CA 94514	G3 Minerals, Byron Sand Plant	G3 Enterprises Inc. 520 E Whitmore Modesto CA 95358	G3 Minerals, Byron Plant 520 E Whitmore Modesto CA 95358
R5-2002-0075	Renwood Winery	Renwood Vineyard Properties, Ltd. 8795 Folsom Blvd,. Ste. 203 Sacramento, CA 95826	Renwood Winery	Ren Acquisition, Inc. 12225 Steiner Road Plymouth, CA 95669	Ren Acquisition, Inc. 12225 Steiner Road Plymouth, CA 95669.
R5-2002-0225	Alpine Packing Company	Alpine Packing Company, Inc.	Alpine Meats, Inc.	Alpine Meats, Inc. and Alpine Packing Company 9900 Lower Sacramento Roar Stockton, CA 95210	Alpine Meats, Inc. 9900 Lower Sacramento Roar Stockton, CA 95210

Order Number	Current Facility Name	Current Owner	New Facility Name	New Owner	New Operator
R5-2003-0176	Chevreaux Aggregates, Inc	Chevreaux Family Trust, 1973 Chevreaux Concrete, Inc. Chevreaux Aggregates, Inc. 890 Grass Valley Highway Auburn, CA 95603 Arp Ranch, Inc. P.O. Box 545 Weimar, CA 95763	Bear River Aggregates – Meadow Vista Quarry	Green Vista Holdings, LLC 2701 Combie Road Meadow Vista CA 95722	Green Vista Holdings, LLC 2701 Combie Road Meadow Vista CA 95722
R5-2007-0019	Grizzly Lake Resort Improvement District	Grizzly Lake Resort Improvement District 119 Delleker Dr, Portola, CA 96122	Grizzly Lake Community Services District	Grizzly Lake Community Services District, 119 Delleker Dr, Portola, CA 96122	Randy Mark, Grizzly Lake Community Services District, 119 Delleker Dr, Portola, CA 96122

I, PAMELA CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 13 October 2011

PAMELA C. CREEDON, EXECUTIVE OFFICER