

Meeting Notes

Appropriate MUN Beneficial Use for Agricultural Dominated Water Bodies

August 9, 2012

9:00 AM -3:00 PM

Location: Central Valley Regional Water Quality Control Board Office, 11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670: Training Room

Attendees:

California Department of Fish and Game (Fresno) – Rachel McNeal *(by phone)*

California Department of Food and Agriculture – Crystal D’Souza *(by phone)*

California Rice Commission - Roberta Firoved, Tim Johnson

Central Valley Water Board - Anne Littlejohn, Betty Yee, Calvin Yang, Greg Cash *(by phone)*, Heidi Bauer, Jeanne Chilcott

Central Valley Clean Water Association - Debbie Webster

City of Colusa - Dale Klever, Jesse Cain

City of Live Oak - Bill Lewis

City of Willows – Skyler Lipski

Delta Stewardship Council - Carl Lischeske *(by phone)*

Larry Walker Associates - Tom Grovhoug

San Joaquin River Drainage Authority - David Cory

State Water Resources Control Board – Rik Rasmussen *(by phone)*

United States Environmental Protection Agency - Matthew Mitchell

Meeting Summary

3-month Review of the Sacramento Archetype Monitoring Program (PPT presentation available)

- Central Valley Water Board staff provided a review of monitoring results from the four monitoring areas of Biggs, Colusa, Live Oak and Willows (April – June 2012)
 - Summary of Exceedances

- All four POTWs' effluent samples had Total Dissolved Solids (TDS) results above the recommended secondary MCL range of 500 mg/L.
- Exceedances were measured above the low end of the secondary MCL range (900 $\mu\text{S}/\text{cm}$) for specific conductivity in the upstream, downstream and effluent samples of Colusa and Live Oak. However, most of the specific conductivity readings were below the secondary MCL high end of the range (1600 $\mu\text{S}/\text{cm}$). The highest values were on the west side in the Colusa study area, especially in the New Ditch upstream of the effluent discharge. The New Ditch had one reading in April above the secondary MCL short term range of 2200 $\mu\text{S}/\text{cm}$.
- Total Aluminum, Iron and Manganese all exceeded the secondary MCL concentrations (0.2 mg/L, 0.3 mg/L and 0.05 mg/L, respectively) in upstream and downstream water bodies. Of all effluent samples collected, only one Biggs' sample exceeded the 2nd MCL for iron. No effluent sample exceeded the secondary MCL for aluminum or manganese.
- Arsenic exceedances were only seen in Live Oak's effluent, and the immediate upstream and downstream of Live Oak's effluent
- Chloroform, Bromodichloromethane, and Dibromochloromethane exceedances were only seen in Willows' effluent. There were no exceedances in the first site downstream of Willows' effluent, nor in any of the further downstream sites.
- All of the effluent samples exceeded the primary MCL of 10 mg/L for Nitrate as Nitrogen except Biggs. Biggs is the only plant that does not include nitrification and its effluent was the only one that had an exceedance over the odor threshold (1.5 mg/L) for ammonia.

Discussion of Future MUN Archetype Monitoring

- Suggestions were made to change the current Monitoring Plan as follows:
 - Increase Total Dissolved Solids (TDS), Chloride, and Sulfate sampling to 1x/Month and continue monthly sodium and hardness analyses
 - These constituents are important to CV-SALTS
 - Reduce Total: Aluminum (Al), Iron (Fe), and Manganese (Mn) sampling to 1x/Quarter
 - Although the effluent of the POTWs does not appear to contribute Al, Fe and Mn, the elevated levels in the various channels raised the issue of relative background concentrations and whether or not standard filtration techniques would remove detectable concentrations (dissolved metals versus total metals). There was a general agreement by the group to a reduction in sampling frequency for the three constituents identified in Reasonable Potential Studies to quarterly and continue remaining trace element analyses as well as the three key constituents for both total and dissolved concentrations.

- There was additional discussion as to the importance of metal sampling to CV-SALTS. Metal analyses could be linked to “Natural Contamination” exceptions identified in the Sources of Drinking Water Policy (Resolution 88-63).
 - Remove Methylene Blue Active Substances (MBAS) sampling
 - All MBAS samples had zero exceedances
 - Remove Nitrite Nitrogen sampling
 - All Nitrite Nitrogen samples had zero exceedances
 - Reduce Arsenic (As) sampling to only Live Oak and Biggs sites
 - Reduce Total Trihalomethanes (THMs) sampling to only Willows’ effluent and the first downstream site of Willows’ effluent. Also consider keeping the monitoring at Biggs because these two treatment plants do not have UV-disinfection.
 - Remove pesticides, herbicides, PCB’s, Dioxin and semi-volatiles scans
 - No exceedances at the four effluent sites
 - Sample Ammonia only at the Biggs sites and change frequency to 1x/month
 - Add Total Coliform/*E. coli* sampling
 - No additional cost to lab contract because the bacteria processing is conducted in-house
 - Bacteria and the ammonia sampling above provide “collateral benefits” as they pertain to other beneficial uses (collecting samples while monitoring crews are already out in the field saves on resources and time)
- Review of Lab Budget
 - The original monitoring plan had a budget of approximately \$209,000
 - The potential revised monitoring plan would cost approximately \$110,000. Of this, approximately \$90,000 will be needed for the remainder of the project.
 - The Central Valley Water Board has potentially \$30,000 available, but this is subject to change at any time due to office needs.
 - Additional lab funds will still be needed if adjustments are made to the Monitoring Plan.

Action Items:

- *Central Valley staff will review comments and suggested changes to the Sacramento MUN Archetype Monitoring Plan and bring them forth to the CV-SALTS Technical Advisory Committee by the end of August 2012 for review and approval.*

- *Approved recommendations by the CV-SALTS Technical Advisory Committee will result in a proposal for funding to the CV-SALTS Administrative meeting in September 2012.*

Review of Water Body Category Flow Chart Options

- Central Valley Water Board staff provided a review of water body categorization flow chart options based on feedback provided during and after the May 3rd stakeholder meeting
 - Flowchart 1: Water Body Categorization

This flow chart differentiates between the following Ag. dominated water body types:

 - Ancillary Structure
 - Ag. Recirculating System
 - Ag. drainage dominated natural waterway (N1)
 - Ag. supply dominated natural waterway (N2)
 - Ag. drainage dominated modified waterway (M1)
 - Ag. supply dominated modified waterway (M2)
 - Ag. drainage dominated constructed Ag. waterway (C1)
 - Ag. supply dominated constructed Ag. waterway (C2)
 - Using Flowchart 1 and applying the logic to the four Sacramento Archetype study areas, the following observations were made:
 - Live Oak waterways would most likely fall under the C1 classification
 - Biggs waterways would most likely fall under the C1 classification
 - Colusa’s Unnamed Tributary and New Ditch would most likely fall under the C1 classification, but depending on how “modified” and “natural” are defined in the chart, Powell Slough could be a M1 or N1 waterway.
 - Willow’s waterways would most likely fall under the M1 classification, although segments running through the Sacramento Wildlife Refuge could be classified as N1, depending on definitions of “modified” and “natural”.

No other case studies were provided by participants.
 - Comments to Flowchart 1 were as follows:
 - There are too many categories of water bodies – too complicated for the current evaluation, but may have some importance if the basis for review of other beneficial uses

- Can Google maps or some other map layer be considered other than USGS quad maps?
- Review of Flowcharts 2a, 2b, 3a, 3b, and 4
 - Flowcharts 2a (focus on water body category) and 2b (focus on Resolution 88-63) showed a decision process for the evaluation of the MUN Exception in constructed and/or modified water ways.
 - The general consensus was that 2b's focus on Resolution 88-63 was preferred over using the water body categorization focus.
 - Concern was voiced as to what type of monitoring would be required to fulfill the Resolution 88-63 exception that requires protection of downstream beneficial uses. Will the Irrigated Lands Regulatory Program monitoring be adequate? Where will the compliance points be?
 - Flowcharts 3a (focus on water body category) and 3b (focus on Resolution 88-63) showed a decision process for the evaluation of the MUN beneficial use in constructed, modified and/or natural water body.
 - Participants, in general, expressed that while the flow charts were asking the right questions, more thought needed to be given to how the questions were ordered.
 - There were concerns regarding the question of the "potential to meet MUN water quality standards with treatment" and how it applied in the decision process. In addition, more clarity is needed for the type of water treatment and the definition of "potential".
 - There was no time to review Flow Chart 4 on Recirculating systems, but the definitions were discussed in a broader context during the afternoon session.

Action Items:

- *Central Valley Water Board staff will reevaluate how the questions were ordered in Flowcharts 3a and 3b*
- *Stakeholders will provide recommendations to staff*

Working Definitions

- To start the afternoon session, Central Valley Water Board staff initiated a discussion on terms that were identified during the last stakeholder meeting as needing clearer definitions. Due to a shortage of time, only a few of the definitions were evaluated:
 - Ancillary Structures and Closed Recirculating Systems
 - The Central Valley Water Board's proposed approach is that an ancillary structure would be exempt from beneficial uses. However, there have been

conflicting opinions as to what an ancillary structure really is. Is an ancillary structure limited to on-farm structures like a field furrow or could a whole series of closed waterways be considered ancillary to a farming operation based on function (e.g. the Tulare Lake Drainage District)? And how does a closed recirculating system differ from an ancillary structure – is there a size factor that needs to be considered?

- Meeting participants were divided on how to define ancillary and closed recirculating systems. There was a discussion on whether or not to use “function” as a primary consideration or “size”. Those who focused on “function” preferred leaving the water quality issues at the local level with dischargers and users operating and managing their own systems. By not focusing on a single private owner’s property, more efficiency can be built into farming operations with multiple owners sharing resources and working together. Others felt that size did matter, especially if water bodies were crossing into jurisdictional areas (e.g. “Water of the Nation”) or mixing with natural or non-agricultural waters.
- The general consensus was that ancillary structures and closed recirculating systems needed very specific requirements and real-world examples as part of defining their characteristics.
- Modified Waterways, Constructed Waterways and Natural Waterways
 - One potential key issue with differentiating “modified waterway”, “constructed waterway” and “natural waterway” is the time period any construction occurred. Does the time period when the waterway was constructed or modified matter and if so, what year do we use? For example, if the natural headwaters for a creek were diverted 100 years ago and channels using some of the natural low points in the ground were built downstream, is it safe to assume these are “constructed waterways” and not “modified”? And if a named “stream, creek or slough” has been physically altered, at what point does it fall into the “modified” category?
 - As with the ancillary structures and closed recirculating systems, the general consensus with meeting participants was that very clear descriptions and characteristics must be used to define these categories, along with specific real-world examples in each Central Valley Basin.

Action Items:

- *Central Valley Water Board staff will draft a list of key characteristics and examples for each water body category based on stakeholder feedback and provided examples.*

Review Decision Tree Process for Long Term Compliance

- Tom Grovhoug presented his Decision Tree diagram to the group, which showed a general picture or approach for dischargers on how to navigate regulations from the Federal and State regulatory agencies to meet long term compliance. The diagram and accompanying Concept Paper describe a “how do we get to where we need to go” approach and point out the potential constraints.
 - Meeting participants liked the decision tree’s discharger perspective and thought it was useful to step back and look at the big picture.
 - This approach is also useful to show that compliance is not just about meeting the MUN water quality objectives, but also the other beneficial uses like aquatic life, recreation, etc. For example, a discharger may meet the Nitrate requirements for MUN, but changes to the aquatic life objectives may end up being more restrictive and still end up impacting the discharger.

Discuss Project Schedule and Future Meetings

- Central Valley Water Board staff provided a tentative plan for future meetings as follows:
 - October/early November – CEQA scoping meetings/public workshops held throughout the Central Valley
 - Early December 2012—Stakeholder meeting
 - Review Feedback from CEQA Scoping Sessions and CV-SALTS Policy Discussions
 - CV-SALTS: Appropriate level of Protection/Water Quality Objectives for AGR/MUN
 - January 2013—Stakeholder meeting
 - Refine Beneficial Uses/Water Quality Objectives
 - Initiate Implementation Discussion
 - Develop Scope of Work for Contract to address Economic Considerations
 - February/March 2013—Stakeholder meeting
 - Continue Implementation
 - Initiate Monitoring/Surveillance Discussion
 - April/May 2013—Stakeholder meeting
 - Continue previous topics as needed
 - June/July 2013—Stakeholder meeting
 - Continue previous topics as needed
 - Initiate discussions on other Policy Issues (*e.g. Water Conservation Clause, Net Environmental Benefit etc.*)

Next Steps

In addition to the action items already identified, Central Valley Water Board staff will complete the action items below in September 2012.

Action Items:

- *Compile meeting notes*
- *Send out CEQA scoping notice for meetings in October/November 2012*
- *Draft informational report for the CEQA meetings, with project alternatives*
- *Hold CEQA scoping sessions*
- *Compile CEQA comments and CV-SALTS summaries*
- *Set December stakeholder meeting and provide materials*