CV-SALTS Public Education & Outreach Committee Meeting

When:      Tuesday, May 21, 2019 from 3:00 PM to 4:00 PM  
Location:  Teleconference Only  
Conference #:  (712) 770-5505   Code: 279295#

Agenda

1. Welcome and Introductions

2. Approval of April 23, 2019 Meeting Notes

3. Outreach Matrix Update – Mary and Charles  
   - Review Documented Activities and Feedback  
     - Outreach Tracking  
     - Press and broader outreach  
     - Need for targeted outreach prior to State Board consideration?  
     - Send new video to email addresses captured in Eventbrite last fall, what topic could we tie this to, perhaps a schedule update of State Board approval?

4. Development of CV-Salts PowerPoint Presentation  
   - Feedback on need for proposed versions  
     - 15-20-minute version  
     - 30-minute version

5. Draft P&O Study Dedesignation Fact Sheet – Mary/Charles  
   - Review and Approve - “Managing Salts Collaboratively in the Central Valley”

6. Recap Next Steps and Set Next Meeting  
   - The next PEOC meeting will be Tuesday, June 18 from 3:00-4:00 PM.

One or more Central Valley Regional Water Quality Control Board members may attend.
CV-SALTS Public Education and Outreach Committee Meeting ACTION NOTES

Convened: April 23, 2019 from 3:00 PM to 4:00PM

Participants: Nicole Bell (chair), Charles Gardiner, Mary Currie, Daniel Cozad, Cristel Tufenkjian, J.P. Cativiela, Walt Plachta, Anne Littlejohn, Patrick Pulupa

Discussion Items

Item 1: Welcome & Introductions
• Participants are as indicated above.

Item 2: Approval of Minutes of the March 26, 2019 Meeting Notes
• J.P. Cativiela moved, and Cristel Tufenkjian seconded, and by general acclamation the March 26, 2019 Meeting Action Notes were approved.

Item 3: Outreach Matrix
• Mary Currie provided an update on recent items added to the matrix.
  o The committee requested the outreach email outlining access to the video and the online outreach tracking tool be forwarded to Executive Committee and PEOC members directly after the PEOC call.

Item 4: Development of CV-Salts PowerPoint Presentation
• The committee discussed the presentation and were asked to send any comments or suggestions to Charles and/or Mary within one week. It was suggested that the word “leaking” should be deleted from the fourth bullet on Slide #12 since even properly installed septic tanks are a source of nitrates.

Item 5: Pilot Management Zones: Outreach Needs
• Charles Gardiner summarized the feedback received during conversations with Turlock and AID Area Management Zones. Some of the issues highlighted during those conversations:
  o The need to share lessons learned once the pilot zones are complete.
    ▪ Create a place on the website for management zones to share information.
  o How to identify community water needs and reach out to communities that will be receiving water.
    ▪ EJ advised information to those needing water should be really practical.
  o 2 types of outreach needs: community that needs water, regulated community.
    ▪ Do not wait too long to outreach to regulated community to ensure they are engaged and have input into the development.
  o The governance and funding are going to be the most difficult issue for the zones.
    ▪ Who runs the meetings? How are decisions made? Who pays for it?
• Other feedback received from the pilot zone areas:
  o The meetings tend to be too long and focused on technical CV-SALTS issues. There should be less information on CV-SALTS background and more focus on coming up with the plan to provide drinking water.
  o It is not clear what entity is chairing the groups.

Item 6: Draft P&O Study Fact Sheet
• The committee reviewed the draft of the P&O Fact Sheet and were asked to provide comments to Mary or Charles within one week. The fact sheet will be revised based on comments and the revised draft will come back to the PEOC for review.

Item 7: Recap Next Steps and Set Next Meeting – Tuesday, May 21 from 3:00-4:00 PM
Nitrate and Salt Permitting Improvements Coming for the Central Valley

2019 Prepared by the Central Valley Salinity Coalition

The Problem

Nitrates and Salts are threatening the long-term health of the people and economy in the Central Valley
There is a Nitrate Problem in the Central Valley

Nitrate Contamination in Groundwater
- Many small communities rely on groundwater for drinking water.
- Some of these communities can’t safely use groundwater for drinking water because nitrate levels present a potential for human health impacts.

There is a Salt Problem in the Central Valley

Salt Accumulations in the Central Valley
- 250,000 acres taken out of production
- 1.5 million acres have been declared salinity impaired
- Potential direct annual costs up to $1.5 billion by 2030
- Current management activities address 15% of the annual salt load
- Long-term solutions are needed to address the remaining 85%
Existing Regulations for Nitrates and Salts Fall Short

- Central Valley Regional Water Quality Control Board regulates Nitrate and Salt discharges
- Compliance with current regulations is difficult and, in some areas, even impossible.
- New, updated, flexible regulations are needed
  - Address natural diversities (climatic, hydrologic, geologic)
  - Protect water quality
  - Maintain economic activities

CV-SALTS

A Valley-wide effort to address salts and nitrate
What is CV-SALTS?

Central Valley Salinity Alternatives for Long-Term Sustainability

- Collective effort begun in 2006
  - Agriculture, city, and industry dischargers
  - Community and environmental interests
  - Regulators
- To support a strong Central Valley economy while ensuring safe drinking water supplies
  - Existing regulations were, for many, not effective or impossible to comply with
  - Develop new regulatory approaches for nitrate and salt
- Central Valley Salinity Coalition (CVSC) formed to fund technical and scientific studies.

CV-SALTS Goals

1. Provide Safe Drinking Water Supplies
   - Develop short-term and long-term solutions

2. Reduce Nitrate and Salt Impacts to Water Supplies
   - Develop short-term and long-term solutions

3. Restore Groundwater Quality
   - Where reasonable and feasible
The CV-SALTS Process

2006 to 2017
- Scientific and technical studies undertaken
- New regulatory approaches developed for Nitrates & Salts

2017 and 2018
- Salt and Nitrate Management Plan (SNMP) proposes new regulatory approaches
- Basin Plan Amendment developed to include new regulatory approaches
- Central Valley Regional Water Control Board adopts Basin Plan Amendment with new Nitrate Control Program and new Salt Control Program

State Water Board Adoption Anticipated in 2019

2019
- Basin Plan Amendment to be adopted by the State Water Resources Control Board, estimated June
- Office of Administrative Law to approve the Basin Plan Amendment, estimated September
  - Begin implementing new groundwater actions for nitrate and salt
- U.S. Environmental Protection Agency (EPA) to approve surface water provisions of Basin Plan Amendment, estimated November
  - Full implementation of Nitrate Control Plan and Salt Control Plan
Nitrates in the Groundwater

Nitrate problems result from 150 years of prosperous human activity in the Central Valley

These activities and sources include:
- Agriculture – irrigation, fertilizer use, manure
- Industry – manufacturing and processing facility wastewater
- Municipalities – wastewater treatment effluent, fertilizer use
- Rural Residents – leaking septic tanks, fertilizer use, and landfills
Nitrates in the Groundwater

High levels of nitrates in groundwater can result in negative health effects for people who drink the water.

Where will Implementation of New Nitrate Control Plan Begin?

- **Priority 1 Area (Red)**
  - Notice to Comply within one year of Basin Plan amendments becoming effective

- **Priority 2 Area (Orange)**
  - Notice to Comply within 2-4 years of Basin Plan amendments becoming effective

- **Remaining Areas (Green)**
  - Implementation to be phased in at a later date
Start with Priority 1 Basins

Priority 1 Groundwater Basins

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Priority 1 Examples:
Modesto & Turlock Groundwater Basins

Red areas are >10.0 mg/L as nitrogen

Safe water standard is <10mg/L as nitrogen
Goal 1: Provide safe drinking water supplies in small, often disadvantaged communities

New Nitrate Control Program

- More Flexible
- Locally Focused
- Two Options for Compliance
  1. Form a Management Zone with other dischargers
  2. Use existing traditional permitting with additional requirements to provide safe drinking water
Can we say something more descriptive than "existing traditional permitting" like "site-specific" or "single-permittee"?
Charles Gardiner, 4/16/2019
New Management Zone Approach

- Temporary exception from discharge standards
- Must assure safe drinking water first
- Shared responsibility for implementation

Management Zone Overview

- Locally led, Regional Board approved
  - Cooperative effort among dischargers, local government, and communities
  - Contractual agreement among dischargers
  - Regulated as a single entity by the Regional Board

Specified deliverables & timeline from Notice to Comply

- Management Zone Proposal and Early Action Plan (9 months)
  - Regional Board and public review
- Final Management Zone Proposal (6 months)
  - Regional Board and public review
- Management Zone Implementation Plan (6 months)
### What is a Management Zone?

- **Defined area** – a discrete regulatory compliance unit for nitrates into groundwater
- **Collective implementation** – for ensuring nitrate impacted users of groundwater have safe water
- **Discharger cooperative** – for management plan to control nitrates into groundwater
  - Shorter term: best practicable treatment/control
  - Longer term: achieve balance and restore groundwater, where feasible

### Management Zone Authorities

- Regulatory alternative for dischargers that elect this option
- Serves as alternative compliance for nitrate water quality objective
- Contractual agreement among dischargers
- May be a local agency, but not necessary
- Regional Board ensures implementation through waste discharge requirements (WDRs)
Management Zone Formation

Locally Led – Regional Board Approved

- Permitted dischargers work cooperatively to prepare proposal for a Management Zone
  - Identify specific geographic area/boundaries
  - Identify other permitted dischargers within geographic area
- Submit Preliminary and Final Proposals to Regional Board
  - Minimum 30-days for public comment

Management Zone Regulatory Timeline

- Notice to Comply: Within 1 year of effective date (expected within 6 months, Spring 2020)
- Preliminary Management Zone Proposal & Early Action Plan: 270 days
- Begin implementation within 60 days
- Board Review & Public Comment
- Final Management Zone Proposal: 180 days
- Board Review & Public Comment
- Management Zone Implementation Plan: 180 days

Dischargers
Regional Board

CENTRAL VALLEY SALINITY COALITION

4/20/2019
Approximate Expected Timeline

Notice to Comply
Within 1 year of effective date (expected within 6 months, Spring 2020)

Preliminary Management Zone Proposal
& Early Action Plan
270 days

Begin implementation within 60 days

2020
2021
2022

Board Review & Public Comment
Final Management Zone Proposal
180 days

Board Review & Public Comment
Management Zone Implementation Plan
180 days

Dischargers
Regional Board

Management Zone Implementation Plan Content Requirements

- Drinking water needs
- Time to achieve balance and restoration
- Community collaboration
- Funding and cost share agreements
- Nitrate management activities
- Water quality characterization
- Projects
  - Short term (<20 years)
  - Long term (>20 years)
- Milestones and implementation schedule
- Participant responsibilities
- Surveillance and monitoring
Who Should Join a Management Zone?

- Permitted Dischargers (agriculture, municipal, industrial, and others) that cannot comply with current nitrate limitations to protect groundwater
- Permitted Dischargers that value collaborating for
  - Prioritizing nitrate control strategies
  - Cost efficiencies
- Local governments representing communities with drinking water needs (cities and counties)
- Local water agencies and other agencies managing groundwater (GSAs)

Benefits & Results of Joining Management Zone

- Providing safe drinking water supplies to your community, where needed.
- Share the cost of nitrate management
- Locally manage area nitrate problems
- Apply local knowledge of soils, groundwater, and pumping to implement nitrate reduction actions
- Support a vision that manages nitrates for a viable local economy and community
Two Pilot Management Zone Formations Underway Now

- Turlock Groundwater Sub-basin
  - Stanislaus and Merced Counties
- Alta Irrigation District and Kings River East GSA
  - Fresno and Tulare Counties
- Both developing draft Management Zone Proposals
  - Management Zone boundaries and initial participants
  - Initial mapping of nitrate levels
  - Identification of water supplies exceeding nitrate objective
  - Early Action Plan

What’s Next

If you are in Priority 1 Areas
- Identify and convene potential leaders
- Discuss possible Management Zone boundaries
- Review template materials developed by the pilots (August)
- Reach out to local government and disadvantaged community support organizations

If you are in Priority 2 Areas
- Extra 2 to 4 years to comply

If you don’t want to participate in a Management Zone....
Option 1: Traditional Nitrate Permitting

- Nitrate discharges must be < 10 mg/L
- Below root zone, or before reaching the groundwater basin
- Attain or continue Best Practicable Treatment or Control (BPTC) and any permit conditions or compliance with general order or waiver requirements
- Not be contributing to an increase in nitrate in groundwater above background
- What are the additional requirements? Need to add

Salinity Management Strategy

Improved strategies for managing salts across the Valley
Salts Accumulation

Salt problems result from 150 years of prosperous human activity in the Central Valley

These activities and sources include:
- Agriculture – irrigation, fertilizer use, manure
- Industry – manufacturing and processing facility wastewater
- Municipalities – wastewater treatment effluent, water softeners
- Rural Residents – leaking septic tanks, fertilizer use and landfills

Impacts of Salt Accumulation

High levels of salts in streams, soils and groundwater can:
- Pollute the soil so that it can no longer grow crops
- Make water supplies unusable for certain uses
- Cause taste problems in drinking water
- Increase corrosion and damage equipment
- Change aquatic habitats
Salt Control Program

Goals and Strategies

- Control rate of degradation through a “managed degradation” program
- Achieve long-term sustainability and prevent continued impacts to salt sensitive areas
  - Implement salinity management activities
- Protect beneficial uses
  - Maintain water quality that meets applicable water quality objectives
  - Pursue long-term managed restoration where reasonable, feasible and practicable
  - Apply appropriate antidegradation requirements for high quality water

Regulators are considering and adopting proposed Salt Control Program
- Regional Board, State Board, and U.S. EPA
- Approvals expected in 2019
- Program includes long-term and short-term strategies
  - Priority & Optimization Study (P&O Study)
  - Interim Permitting Approach
- After approvals, Notices to Comply will be issued by the Regional Board (expected in 2020)
Long-Term Salinity Management

Priority & Optimization Study (P&O Study)
- Identify salt management projects and actions to achieve salt sustainability in the Central Valley
- Build on prior salinity studies
- Analyze existing conditions, policies, and engineering alternatives
- Consider a phased approach and funding options
- Approximately 10 years and $10 to $15 million

Short-Term Salinity Management

Interim Permitting Approach includes actions such as:
- Continued implementation of existing pollution prevention, watershed, and salt reduction plans
- Continued maintenance of current salinity discharge levels
- Enforced compliance with Interim Permit Limits
- Implementation of new salinity management practices and source control activities
- Monitoring of salinity discharge activities, where required
- Requiring either participation in the Prioritization & Optimization Study (P&O Study) or compliance with stringent water quality limitations
Interim Permitting Approach

Permitted dischargers must comply by selecting one of two compliance pathways:

- **Alternative Pathway**: Fund and participate in P&O Study
  - Continue existing monitoring and control activities
  - Allowed to defer more stringent and costly permitting requirements associated with Conservative Pathway until P&O Study is completed

- **Conservative**: Demonstrate compliance with stringent permitting requirements in Salt Control Program
  - Likely more costly than Alternative pathway

P&O Study is more likely to long-term sustainability than individual efforts through Conservative pathway

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Costs

Add P&O Study Costs per discharger when available
For More Information

CV-SALTS
- www.cvsalinity.org
- info@cvsalinity.org

Pilot Management Zones
- Turlock – Parry Klassen, klassenparry@gmail.com
- AID/Kings River East – Charlotte Gallock, cgallock@krcd.org

Regional Water Quality Control Board
- CONTACT?
Managing Salts Collaboratively in the Central Valley

Salinity Regulations
In May 2018, the Central Valley Regional Water Quality Control Board (Regional Board) adopted Basin Plan amendments to address the long-term accumulation of salts in the Central Valley (Valley). The goal is to protect and preserve the beneficial uses of water for people, the environment, and the economy. These new salinity requirements apply to all permitted dischargers in the Valley, including dischargers in areas where groundwater has been or will be de-designated for agricultural or municipal beneficial use.

With the anticipated approval of the Basin Plan amendments by the State Water Resources Control Board, a Prioritization and Optimization Study (P&O Study) over the next 10 years will identify strategies and projects for reducing and removing salts that otherwise would hinder crop production, impair water quality, harm ecological functions, and reduce water supply. During this time, water dischargers would operate under one of two permitting pathways: more stringent site-specific salinity control requirements or participation in the Valley-wide P&O Study.

Rationale
The Regional Board recognized that salinity accumulation is a Valley-wide problem and that all water users contribute to it. Even when a grower irrigates with high-quality water, salts from that water may remain in the soil or leach to groundwater. Left unchecked, salinity accumulation will bring ongoing harm to agriculture, the environment, and the economy. As the Regional Board explained:

The salt accumulations have resulted in 250,000 acres taken out of production and about 1.5 million acres being salinity impaired. If not addressed, the economic impacts could be staggering. For example, if salt accumulations are not managed, the resulting direct economic costs to the Valley could exceed $1.5 billion per year by 2030. The Valley’s economic future depends on addressing these impacts.

Tulare Lakebed De-Designation
In 2017, the Regional Board approved a Basin Plan amendment to remove municipal and agricultural beneficial use designations from a delineated portion of the groundwater in the historic Tulare Lakebed.

This area became the first area in the Central Valley to be de-designated, meaning the Regional Board relieved dischargers of requirements to ensure groundwater in this area was of high enough quality to meet municipal and agricultural water needs. This decision was made because the shallow groundwater within the Tulare Lakebed historically has contained high levels of salt and thus was deemed unsuitable for municipal use.

The de-designation process proceeded in coordination with the CV-SALTS program. CV-SALTS brought together a broad group of agricultural, municipal, industrial and regulatory interests to develop an overall vision and plan for addressing salinity and nitrate concerns in a comprehensive and sustainable manner.

Key Elements of the Basin Plan Amendments
The Basin Plan amendments give every salt discharger in the Valley a choice of permitting pathways: (1) eliminate the salt accumulation problem individually and meet stringent numeric water quality permit limitations or (2) work collaboratively toward a basin-wide salinity solution. The Regional Board set a high bar for Pathway 1, the Conservative Approach—individual dischargers must prove they have solved the salt accumulation problem by demonstrating that salt discharges will consistently remain below a stringent salinity threshold (700 μmhos/cm). For growers, that means that irrigation water leaching below the root zone must consistently remain below this threshold. Meeting this threshold means that dischargers are not adding salt at a concentration that is potentially harmful to agriculture.
Pathway 2, the Alternative Approach, entails a Valley-wide study (the P&O Study) of salt management actions that will lay the foundation for managing salinity accumulation long-term. This process will update information on salt sources and conditions and identify management strategies and projects to reduce and remove salts. The study is expected to take 10 years at a cost of $10 million to $15 million.

Under both pathways, existing salt management and monitoring requirements will continue. Dischargers will continue to conduct monitoring and implement actions to meet those requirements. If a discharger chooses Pathway 1, supplemental characterization studies would be required, and additional management actions may be needed to demonstrate compliance with the permitting strategy. If a discharger chooses Pathway 2, compliance includes paying a minor annual fee to support the P&O Study. However, additional salt management actions would be deferred for permittees on Pathway 2 until after the P&O Study is complete.

De-Designated Areas
In adopting the Basin Plan amendments, the Regional Board acknowledged that some areas of the Valley have been or will be de-designated for certain beneficial uses (e.g., Municipal and Domestic Supply and Agriculture) due to high salinity levels in underlying groundwater. The P&O Study will include identifying locations—such as these de-designated areas—that may serve as salt management areas that can be used to consolidate salts for desalinization or transport. In the course of adopting the amendments, the Regional Board expressed its intent that all permittees should financially support the P&O Study, including those with de-designated locations. The Board explained:

For example, a groundwater basin that has had one or more beneficial uses de-designated due to salinity may be considered a potential location for establishing a salt management area. Accordingly, under the Phase I Salt Control Program:

- Permittee(s) that selects either the Conservative [Pathway 1] or Alternative [Pathway 2] Permitting Approach and then requests the de-designation of one or more beneficial uses from a surface water body or all or part of a groundwater basin based on salinity shall participate in the P&O Study even after the beneficial use de-designation is approved by providing at least the minimum level of required financial support throughout the Phase I program. The P&O Study shall evaluate all areas de-designated based on salinity for suitability as salt management areas.
- Permittee(s) that discharges to a surface water body or a groundwater basin where one or more beneficial uses were de-designated due to salinity prior to the beginning of Phase I of the Salt Control Program shall participate in the P&O Study by providing at least the minimum level of required financial support.

Long-Term Goal for Salinity Management
The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) developed the Basin Plan amendments and the Salt Control Program as a rational way for the Regional Board and dischargers to collectively and efficiently tackle a salinity problem that threatens the Valley’s agricultural productivity. In carefully designing these efforts with extensive stakeholder input, the Regional Board and the Central Valley Salinity Coalition provided a reasonable means for all dischargers not only to participate in the P&O Study, which will be the roadmap toward salt sustainability, but to benefit on a long-term basis. The more conservative Pathway 1 is available to permittees on an individual permitting basis but would be more costly and is less likely to be a viable, achievable approach for many areas of the Valley.

Learn More About CV-SALTS, Help Shape Your Future
You are encouraged to participate and get involved now. To learn more, visit CV-SALTS at www.cvsalinity.org. CV-SALTS is working to ensure safe, reliable water supplies for everyone in the Central Valley.