Agenda

• Recycled Water Policy
  ✓ Goals
  ✓ Requirements

• CV-SALTS
  ✓ Framework
  ✓ Status

• Central Valley SNMP

7 November 2013
Recycled Water Policy
(Resolution 2009-0011, as amended in Resolution 2013-0003)

GOALS

Increase recycled water use from municipal wastewater sources over 2002 levels
- 200K afy by 2020
- Additional 300K afy by 2030

Increase stormwater use over 2007 level
- 500K afy by 2020
- 1-million afy by 2030

Increase conserved water 20% over 2007 by 2020

Substitute as much recycled water for potable as possible

7 November 2013
Recycled Water Policy

**OBJECTIVE:** Establish criteria for permitting RW projects
- Maximize consistency while allowing regional flexibility

**APPROACH:** Develop Salt and Nutrient Management Plans (SNMPs) which facilitate RW project permitting
- Locally Developed
- Locally Controlled
- Sustainable on Long-Term Basis

7 November 2013 Slide 4
Recycled Water Policy

Includes requirement for SNMPs in **all** groundwater basins

- **SNMP to include:**
  - Salt/nutrient source identification
  - Fate/transport of analysis
  - Assimilative capacity/ loading estimates by basin/sub-basin
  - Water recycling & stormwater recharge/use goals & objectives
  - Implementation measures to manage salt and nutrient loadings on a sustainable basis
  - Basin/sub-basin Monitoring plan
  - Constituents of emerging concern monitoring
  - **Anti-degradation analysis (Resolution 68-16)**

7 November 2013
Recycled Water Policy

**Timeline**

**14 May 2014:** SNMP Submitted to Regional Water Board
- 2-yr extension if Regional Water Board finds substantial progress

**Within 1-year:** Regional Water Board considers SNMP for adoption as a Basin Plan Amendment, then...
- State Water Board Approval
- Office of Administrative Law
- USEPA if changes to Surface Water Beneficial Uses or WQOs

*Becomes Basis for Future Salt/Nutrient Regulation*
SNMP Status

- Locally Driven
- Funded thru IRWMP
- Approximately 25% on schedule
- Remaining evaluating time extension

Central Valley utilizing unique approach: CV-SALTS

7 November 2013
Collaborative stakeholder process to develop a comprehensive Salt and Nitrate Management Plan (SNMP).

- Components will satisfy Recycled Water Policy requirements
- Formed in 2006
- Adjusted in 2009 (*Recycled Water Policy*)
For Central Valley Consistency

Central Valley Water Board, Resolution R5-2010-0024

“. . . to ensure coordination and consistency of planning and in order to avoid duplication of efforts and conserve resources, parties developing salinity and nutrient management plans pursuant to the [Recycled Water] Policy conduct the work in conjunction with the CV-SALTS initiative and have resulting plans reviewed by the CV-SALTS Executive Committee prior to consideration by the Central Valley Water Board for approval. . . “
CV-SALTS Mission

• Develop an SNMP to address salinity and nitrate concerns in a comprehensive, consistent, and sustainable manner. Goals include:
  ✓ Sustain the Valley’s lifestyle
  ✓ Support regional economic growth
  ✓ Retain a world-class agricultural economy
  ✓ Maintain a reliable, high-quality water supply
  ✓ Protect and enhance the environment

CV-SALTS is committed to evaluating, promoting, and initiating options to provide safe drinking water to communities already impacted by salt and nitrates

7 November 2013
Designate Beneficial Uses

Establish Water Quality Objectives

Implementation Requirements

Monitoring and Assessment

Identify Water Bodies

Surface Water

Ground Water

MUN

AGR

Salinity

Nitrate

Point Sources

Non-Point Sources

Discharges

Receiving Waters

CV-SALTS Starting Point

Recycled Water Policy
### Considerations for Salt & Nitrate Management

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<tr>
<th>USE</th>
<th>Objective</th>
<th>Policy Discussions</th>
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<td><strong>MUN</strong></td>
<td>Salinity</td>
<td>1) Application of Secondary MCLs as numeric WQOs</td>
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<td>2) Point-of-Compliance Policy</td>
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<td>3) Application of MUN use (surface and groundwater)</td>
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<td>Nitrate</td>
<td>1) Affirm WQO = 10 mg/L Nitrate-N</td>
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<td>2) Establish Zone-of-Influence Evaluation Process</td>
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<td>3) Alternate Compliance Options:</td>
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<td><strong>AGR</strong></td>
<td>Salinity</td>
<td>1) Translators for Narrative Objective</td>
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<td>2) Multi-Factor Flowchart for Reasonable Protection</td>
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<td>3) Ag Zoning Map (dependence and salt-sensitivity)</td>
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<td>Nitrate</td>
<td>Agriculture is not the most sensitive use and is unlikely to drive more stringent water quality standards for nitrate.</td>
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</table>

**2012/2013 Stakeholder Policy Discussions**

7 November 2013
Designate Beneficial Uses

Establish Water Quality Objectives

Implementation Requirements

Surface Water
Ground Water

MUN
AGR

Salinity
Nitrate

Point Sources
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Receiving Waters

Identify Water Bodies

CV-SALTS
Starting Point

Recycled Water Policy

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Potential Salt Management Implementation Provisions

- No Action
- Controlled Degradation
  - Sac/SJR Basins
- In Valley Containment
- Out of Valley Transport
- Combination

7 November 2013
## Salt Management Alternatives

<table>
<thead>
<tr>
<th>In-Valley</th>
<th>Out-of-Valley</th>
<th>Hybrid</th>
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<tr>
<td>• <em>Agriculture</em> – irrigation/fertilizer use BMPs, evaporation ponds, land retirement, etc.</td>
<td>• Real-Time Management Program</td>
<td>• Combinations of in-valley and out-of-valley disposal strategies, e.g., truck salt to brine line for ocean disposal</td>
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<td>• <em>Municipal</em> – source controls, landscape irrigation BMPs, local pretreatment limits, etc.</td>
<td>• Pipeline to treatment facility outside of Central Valley</td>
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<td>• <em>Industrial</em> – desalters, deep well injection, mechanical evaporation, landfill disposal, etc.</td>
<td>• Direct ocean disposal</td>
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Conceptual Model (Technical Approach)

Supports

Policy

Central Valley SNMP
(Management Zones)

Area Specific
(SNMPs; archetypes; prototypes)

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Technical Projects

Data Compilation and Modeling
- Conceptual Model
- GIS Beneficial Use/ AGR Zone Efforts

Beneficial Use
- Tulare Lake Groundwater
- MUN in Ag Dominated Water bodies

Water Quality Objectives
- Aquatic Life
- Stock Watering
- Salt Effects on Irrigated Ag
- Salt Effects on MUN
- Lower San Joaquin River

Implementation
- Economic Review
- SSALTS (Accumulation and Transport)

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Initial Analysis Zones (IAZs) & Prototype Areas

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Cross-Sectional View of Groundwater Layers/Well Depth
Three Dimensional View of an IAZ

Legend
- Surface Water Mass Component
- Groundwater Mass Component

horizontal movement of ground water
- Surface water in/outflow between IAZs
- Surface water diversion/delivery
- Horizontal groundwater in/outflow between IAZs
- Groundwater Recharge

groundwater pumping
- Vertical groundwater in/outflow between lower aquifer
- Stream Leakage
Density Of CVHM Cells Containing a Well Over 10 mg/L (NO3-N)
Years: 2000-2012
Number of Cells Over MCL (5 mile radius)
- 5-9
- 10-14
- 15-19
- 20+
- CVHM Cell Containing a Well above 10 mg/L NO3-N
- CVHM Cell Containing Nitrile Data
Data Compilation and Modeling

- Conceptual Model
- GIS Beneficial Use/ AGR Zone Efforts

Beneficial Use

- Tulare Lake Groundwater
- MUN in Ag Dominated Water bodies

Water Quality Objectives

- Aquatic Life
- Stock Watering
- Salt Effects on Irrigated Ag
- Salt Effects on MUN

Implementation

- Economic Review
- SSALTS (Accumulation and Transport)
**Anticipated Outcome:** Adoption of a CV-SNMP that complies with SRWP

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<tr>
<th>Recycled Water Policy Elements</th>
<th>CV-SALTS</th>
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<td>Water recycling and stormwater management goals/objectives</td>
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<td>Conceptual model</td>
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<td>--Source/fate; assimilative capacity; etc.</td>
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<td>Implementation methods</td>
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<tr>
<td>--Including templates for modifying BUs, WQOs, and developing area specific SNMPs</td>
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<td>Management activities</td>
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**Anticipated Outcome:** Ability to fold in more area specific plans as needed

Utilize Master CV-SNMP as default management approach

Periodic updates to include area-specific SNMP in the future

- Utilize process templates from master plan
  - Area-specific SNMPs
  - Archetypes
  - Prototypes
Project Schedule

- October 2013: CEQA Scoping Sessions
- 6 December 2013: Central Valley Water Board Workshop
- 7 January 2014: State Water Board Annual Update
- 2014 - Draft SNMP
- 2016 - Final SNMP
- 2018 - Final Staff Report & Proposed Basin Plan Amendments

7 November 2013
For More Information

• For more information, please see:
  ✓ http://www.swrcb.ca.gov/rwqcb5/water_issues/salinity/
  ✓ http://www.cvsalinity.org

• Sign up for email updates at:
  http://www.waterboards.ca.gov/resources/email_subscriptions/reg5_subscribe.shtml
  (Check the box titled “Salinity (CV-SALTS)”)
Questions?

Comments?
## CV-SALTS Summary Program Timeline

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