Salinity
From a Thorny Past
to a Complex Future

ACWA May 2010
Thorny Devil from Australia
Salty Session

- **History of Salt & Nitrate Issues in California**, Dr. Karl Longley, PE Professor, Lyle's College of Engineering, Fresno State, CVRWQCB Member

- **History and future of Salt Regulatory Issues**, Pamela Creedon Executive Officer, Central Valley Regional Water Quality Control Board

- **The Future Salinity & Nutrient Mgt. Plans**, Ken Harris, Manager Regulatory Section, State Water Resources Control Board

- **Local Implementation - CV-SALTS**, Daniel Cozad, President, Integrated Planning & Management
Problem Board View

- Increasing salinity and nitrate in groundwater, increased use of groundwater drought demands
- Salinity and nitrate exceedences require attention
- No economic method for salt removal or ocean discharge
- Uncoordinated regulatory approach to solutions and stepwise optimization limits successes
- Old outdated basin plan results in overly conservative or inadequate standards today
Problem Industry View

The Environmental Maze of Uncertainty

Slide Courtesy of Hilmar Cheese
Solution

- Alternative regulatory process
- Stakeholders lead collaborative funding and oversight
- Maximum benefits + sustainability
- Program funding for study and implementation
- Requirement 2009 Recycled Water Policy
- Strategy 2009 State Water Plan
“The boards should emulate the model created by the Santa Ana Regional Water Quality Control Board, which created a stakeholder task force that led to robust research, consensus building and a largely re-written basin plan in 2004. Stakeholders ...funded the basin plan update.”
“Therefore salt management should be fully integrated into water management such as through integrated regional water management plans”
CV-SALTS Initiative Partners

Established Partnership by MOA
- State Water Resources Control Board
- CV Regional Water Quality Control Board
- Central Valley Salinity Coalition

Other Partners
- DWR, Reclamation, Environmental Water Quality, Environmental Justice
CV Salinity Coalition and CV SALTS Initiative
Ensuring Sustainable High Quality Water Supply
For All users of Central Valley Waters

CV Salinity Coalition
CV Salinity Leadership (formerly policy) Group
CV SALTS Executive Committee
Maximum of 30 Members
Leadership Group 6
SWRCB, RWQCB
DWR, BOR, EJ, Env WQ
Committee Chairs
Up to 6
Regional Board and State Board Members and Exec. Management
Regional and State Board Staff
Public Education and Outreach
Economic and Social Cost
Technical
Other (future)
Other Groups (Future)

Collaborative Stakeholder Planning, Projects, Funding Efforts
Research and Studies
Individual Efforts
Projects
Stakeholder/Discharger Efforts

Group membership is nonexclusive

Leadership
Steering
Groups
Efforts
Approval
Outcome
Working
and Review
Groups
11
Executive, Technical and Economic and Public Education and Outreach

- Governance clarity, Standing Rules and MOA
- Levels of Participation
- Policy Issues

- Sound science and policy
- Scope work for studies and planning
- Outreach Video
- Education materials
Central Valley Salinity Coalition

- Non-Profit coalition of users of Central Valley Water
  - Water and wastewater
  - Agricultural and irrigation
  - Industry and others
- Effective efficient manner developing and funding studies, planning and implementation efforts
Central Valley Salinity Coalition

**Founding Members:**
- California League of Food Processors*
- The Wine Institute*
- Western United Dairymen
- City of Fresno*
- San Joaquin Valley Drainage Authority*
- California Assoc of Sanitation Agencies*
- Central Valley Clean Water Agencies*

**New Members 2009/2010:**
- E. San Joaquin Water Quality Coalition*
- City of Manteca*
- California Rice Commission*

**New Members Continued:**
- Pacific Water Quality Association
- City of Modesto*
- Sacramento Reg. Co. Sanitation District*
- San Joaquin River Group Authority*
- Discovery Bay CSD
- Iron House Sanitary District
- City of Tracy*
- City of Stockton*
- Mountain House CSD
- Agricultural Council of CA
- Western Plant Health Association*
- Tulare Lake Drainage and Water Storage Districts*
- Stockton East Water District*

* Denotes Board of Directors Member
Basin Plan Amendment without
CV Salinity Coalition and CV SALTS Initiative

Leadership Steering Committee

Regional Board and State Board Members and Exec. Management

Stakeholders Scoping

Efforts Approval

Regional and State Board Staff

Public Review and Comment

Approval

Regional Board and State Board

Implement

Regulatory Implementation

Permit Limits  WDRs  Prohibitions  Discharger Compliance Efforts
Science & Policy Development

- CV-SALTS Work Plan Description and Development
- Accomplishments and Current Status of specific projects
- Results and Conclusions of the Salt and Nitrate Pilot Implementation Study for each area
Salt Issues and What We are Learning
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Yolo</th>
<th>Modesto</th>
<th>Tule River</th>
<th>Central Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (acres)</td>
<td>720,778</td>
<td>548,201</td>
<td>871,083</td>
<td>26,880,000</td>
</tr>
<tr>
<td>Population</td>
<td>165,000</td>
<td>523,000</td>
<td>178,000</td>
<td>6,500,000</td>
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</tbody>
</table>
Thorny Past—Complex Future

Dead Sea is Dying Estimated to be dry by 2050

River Jordan will go dry in 2011

Salinity attacks houses in Au
Thorny Past - Complex Future

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- River Jordan will go dry in 2011
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Thorny Past-Complex Future

- Dead Sea is Dying Estimated to be dry by 2050
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Thorny Past-
Complex Future

- Chronic issue
- Drought
- Complex
- Manageable
- Focus, funding and foresight
Thorny Past-
Complex Future

Thorny Devil from Australia