New Nitrate Permitting Requirements & Options for the Central Valley Region
“All groundwaters in the Central Valley region are considered suitable, or potentially suitable, at a minimum, for municipal and domestic water supply…”
Drinking Water Standards

Nitrate: <10 mg/L (as Nitrogen)
Increasing Regulatory Concern

- SWRCB Adopts the Recycled Water Policy, 2009
- Dairy Permit Remanded by Courts (2012)
- SWRCB’s Nitrate Report to Legislature (2013)
- SGMA Enacted (2014)
- Division of Drinking Water transferred to SWRCB (2014)
- SWRCB Publishes the Safe Drinking Water Plan (2015)
- Enforcement Order Actions in Kaweah, Tule & Kings Basins (2016)
- Regional Board Amends Basin Plan to Enhance Nitrate Control (2018)
Groundwater Basins & Sub-basins
Nitrate in Central Valley Groundwaters
Kings Groundwater Basin
Economically Disadvantaged Areas
Regulated Discharges of Nitrate
Putting It All Together
Current Permitting Requirements

“The Water Boards will evaluate all existing Waste Discharge Requirements to determine whether existing regulatory permitting is sufficiently protective of groundwater quality…”

SWRCB Report to Legislature, 2013

In areas where groundwater quality is poor and there is no more assimilative capacity available, discharges to the basin must not exceed the applicable water quality standard.

SWRCB WQO #73-04 and WQO #81-05
The Permit Balancing Act

Assure Safe Drinking Water

Preserve Agricultural Economy

“We must protect both ... ... or we get neither”
Traditional Nitrate Permitting Option

- Nitrate must be < 10 mg/L...
- **Before** reaching the groundwater basin
The New Management Zone Approach

- Temporary exception from standards
- Must assure safe drinking water first
- Shared responsibility for implementation
The Big Picture:
The Details:

Nitrate Compliance through Management Zones

Tess Dunham
Management Zones & SGMA

A side by side comparison of priorities, time horizons and implementation.
What goes in versus how much comes out
Nitrate Priority Areas – Focus of Management Zones

- **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
- **Non-priority Areas (Green)** – Implementation to be phased in at a later date
## Priority Groundwater Basins/Subbasins

### Priority 1

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
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<tbody>
<tr>
<td>5-22.11</td>
<td>Kaweah</td>
</tr>
<tr>
<td>5-22.03</td>
<td>Turlock</td>
</tr>
<tr>
<td>5-22.05</td>
<td>Chowchilla</td>
</tr>
<tr>
<td>5-22.13</td>
<td>Tule</td>
</tr>
<tr>
<td>5-22.02</td>
<td>Modesto</td>
</tr>
<tr>
<td>5-22.08</td>
<td>Kings</td>
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</table>

### Priority 2

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<tbody>
<tr>
<td>5-21.67</td>
<td>Yolo</td>
</tr>
<tr>
<td>5-22.04</td>
<td>Merced</td>
</tr>
<tr>
<td>5-22.14</td>
<td>Kern County (Westside South)</td>
</tr>
<tr>
<td>5-22.12</td>
<td>Tulare Lake</td>
</tr>
<tr>
<td>5-22.14</td>
<td>Kern County (Pozo)</td>
</tr>
<tr>
<td>5-22.07</td>
<td>Delta-Mendota</td>
</tr>
<tr>
<td>5-22.01</td>
<td>Eastern San Joaquin</td>
</tr>
<tr>
<td>5-22.06</td>
<td>Madera</td>
</tr>
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</table>
SGMA Priorities
DWR’s Critically over-drafted basins/subbasins (2016)
Central Valley Irrigated Lands Coalition Groups
Kings River Water Quality Coalition
What is a Management Zone?

- Regulatory construct in Basin Plans
- Defined area that serves as discrete regulatory compliance unit for nitrates into groundwater
- Discharger cooperative for implementation of management plan for nitrates into groundwater
  - Shorter term – implementation of best practicable treatment or control
  - Longer term – balance and management restoration
- Collective implementation for ensuring nitrate impacted users of groundwater have safe water
What is a Groundwater Sustainability Agency?

- Statutory construct in California Water Code
  - Sustainable Groundwater Management Act of 2014
- Local management entity with authority to manage and regulate groundwater use in a basin or subbasin
- State intervention where no local agency, or inadequate local plan
- Sustainable groundwater management over 20 years
## Differences in Authorities

<table>
<thead>
<tr>
<th>Management Zone</th>
<th>Groundwater Sustainability Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>✚ Regulatory alternative for dischargers that elect this path</td>
<td>✚ State law requirement, or be subject to State Water Board</td>
</tr>
<tr>
<td>✚ Contractual agreement amongst dischargers</td>
<td>✚ Adopt rules, regulations &amp; ordinances</td>
</tr>
<tr>
<td>✚ May be a local agency, but not necessary</td>
<td>✚ Conduct investigations</td>
</tr>
<tr>
<td>✚ Water Board ensures implementation through waste discharge requirements</td>
<td>✚ Require well registration, submission of annual statements, etc.</td>
</tr>
<tr>
<td>✚ Serves as alternative compliance for complying with nitrate water quality objective</td>
<td>✚ Regulate extractions</td>
</tr>
<tr>
<td></td>
<td>✚ Impose fees</td>
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Formation of MZ versus GSA

Management Zone Formation

- Locally Led – Water Board Approved
  - Permitted dischargers to work cooperatively to prepare proposal
  - Identify geographic area
  - Identify other permitted discharges within geographic area
  - Submit Preliminary and Final Proposals to Central Valley Water Board that meets all specified requirements
  - Preliminary and Final Proposals to be posted for at least 30-days for public comment

GSA Formation

- Locally Led & Approved - Water Board oversight
  - Notice and public hearing in each county overlying the proposed GSA boundary
  - Must consider interests of all beneficial uses and users of groundwater
  - Formation and election
  - County presumed to be GSA in any area of a basin not elected
  - If no GSA, SWRCB oversight triggered
## Timing of Deliverables

### Management Zone

- **Preliminary Management Zone Proposal**
  - 270 days or 1 year after receiving Notice to Comply (est. mid to late 2020)

- **Early Action Plan**
  - With Preliminary Management Zone Proposal

- **Final Management Zone Proposal**
  - 180 days after receiving comments on Preliminary Proposal

- **Management Zone Implementation Plan**
  - 6 months after Final Proposal is accepted
  - Includes schedule for implementation

### Groundwater Sustainability Agency

- **Formation of GSA**
  - By June 30, 2017

- **Develop Groundwater Sustainability Plan**
  - Critically Overdraft Basins by January 31, 2020
  - Other High & Medium Basins by January 31, 2022

- **Alternative to Groundwater Sustainability Plan**
  - By January 1, 2017

- **Achieve Sustainability**
  - January 31, 2040/2042
Management Zone Regulatory Timeline

- **Priority 1 - Notice to Comply (NTC) within one year of the BPA effective date**
- **Assumes July 1, 2019 effective date; NTC no later than six months later**
- **Board review time between key deliverables is 90 days**

**PMZP = Preliminary Management Zone Proposal**

- 2020
  - **J F M A M J J A S O N D**
  - **Board makes PMZPs available for public comment for at least 30 days**
  - **Final decision to participate in MZ w/i 330 days of NTC**
  - **Submit PMZP with EAP w/i 270 days of Notice to Comply**

- **2021**
  - **J F M A M J J A S O N D**
  - **Board Review**
  - **180 days**
  - **Submit FMZP w/i 180 days of receipt of Board comments**
  - **Board Review**
  - **180 days**
  - **Submit MZIP w/i 6 months of Board accepting FMZP**

- **2022**
  - **J F M A M J J A S O N D**
  - **Begin implementation EAP w/i 60 days of submittal unless Board deems incomplete**

**FMZP = Final Management Zone Proposal**

**MZIP = Management Zone Implementation Plan**

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**CENTRAL VALLEY SALINITY COALITION**

12/13/2018
Content Requirements: Management Zone Implementation Plan & Groundwater Sustainability Plan

Management Zone Implementation Plan

- Drinking water needs
- Time to achieve balance & restoration
- Community collaboration
- Funding & Cost Share Agreements
- Nitrate management activities
- Water quality characterization
  - Short term (<20 years) & long term (>20 years) projects
  - Milestones
  - Schedule of implementation
- Participant Responsibilities
- Surveillance and Monitoring

Groundwater Sustainability Plan

- Basin characteristics
- Hydrogeologic conceptual model
- Groundwater conditions
- Water budget
- Identification of management areas (if applicable)
- Sustainability goal (i.e., sustainable yield)
- Identification of undesirable results
- Minimum thresholds
- Measurable Objectives/Milestones
- Monitoring Network
- Projects & Management Actions
“Minimum threshold for degraded water quality shall be the degradation of water quality, … as determined by the Agency that may lead to undesirable results. … In setting minimum thresholds for degraded water quality, the Agency shall consider local, state, and federal water quality standards applicable to the basin.”
Key Commonalities

Groundwater

Ground zero for over-draft and nitrates

Similar implementation actions

Same folks paying for both
Learn More, Stay in Touch

Website: www.cvsalinity.org

Contact us to get involved locally:

info@cvsalinity.org