



CENTRAL VALLEY WATER BOARD PUBLIC WORKSHOP

Central Valley-wide Salt and Nitrate Control Programs

Proposed Basin Plan Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin



January 19, 2018



INTRODUCTION



PUBLIC WORKSHOP PURPOSE

We are here for:

- Open Discussion of Salt & Nitrate Control Programs and Supporting Components
- Public Input
- Summarize Next Steps



We are NOT here to:

- Take Action on Proposed Programs or Policies

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PUBLIC WORKSHOP SCHEDULE

Morning

- Introduction
- Control Program Overview
- Nitrate Control Program
- Salt Control Program
- Public Comment Period 1
- Lunch

Afternoon

- Secondary Maximum Contaminant Level Policy
- Drought and Conservation Policy
- Offsets Policy
- Exceptions Policy
- Variance Policy
- Definitions and Terminology
- Public Comment Period 2
- Next Steps

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CONTROL PROGRAM DEVELOPMENT PROCESS

- Salt and Nitrate Management Plan (SNMP) – Final Submittal January 12, 2017
- Public Hearing – March 9, 2017
 - Central Valley Water Board Resolution R5-2017-0031 – Accepted the SNMP and Directed Staff to Initiate Basin Plan Amendments As Appropriate to Implement the Plan
- Public Workshop – January 19, 2018
 - Discuss proposed Basin Plan Amendments to establish a Central Valley-wide Salt and Nitrate Control Program
- Materials posted at: www.waterboards.ca.gov/centralvalley/water_issues/salinity/

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CONTROL PROGRAM OVERVIEW



CENTRAL VALLEY SALT & NITRATE ISSUES

<p>Nitrate Issues</p> <ul style="list-style-type: none"> • Legacy and existing conditions • Direct impacts to drinking water supplies • Significant economic costs <ul style="list-style-type: none"> – Treatment – Alternate supply • Diverse sources of nitrate to managed 	<p>Salt Issues</p> <ul style="list-style-type: none"> • More salt enters the Central Valley Region than leaves <ul style="list-style-type: none"> – Impacts (current/legacy) <ul style="list-style-type: none"> ▪ <i>Agricultural Production</i> ▪ <i>Drinking Water Supplies</i> – Economic Cost <ul style="list-style-type: none"> ▪ <i>Direct Annual: \$1.5 Billion</i> ▪ <i>Statewide annual income impact: \$3.0 Billion</i> – Diverse Sources
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CONTROL PROGRAMS FOCUS ON ADDRESSING TWO PRIMARY GOALS

SNMP focused on addressing two primary goals:

Assure Safe Drinking Water

and

Sustain the Agricultural Economy

Basin Plan Amendments will establish:

- ✓ Mechanism to provide alternative water supplies
- ✓ Means to legally authorize discharges from modern farming practices
- ✓ Strategy to prevent further water quality degradation
- ✓ Implementable plan to restore degraded groundwater where it is reasonably feasible and practicable to do so
- ✓ An approach that recognizes diversity of conditions across the Central Valley

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CONTROL PROGRAMS FRAMED AROUND THREE PRIORITIZED MANAGEMENT GOALS

Management Goal 1

- Safe a Drinking Water Supply
 - Short & Long Term Solutions

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Management Goal 2

- Balanced Salt & Nitrate Loadings
 - Ongoing and Expanding Efforts

↕

Management Goal 3

- Implement Managed Aquifer Restoration
 - Where Reasonable, Feasible & Practicable

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NITRATE CONTROL PROGRAM

NEW OR REVISED REGIONAL BOARD AUTHORITIES FOR NITRATE

- Revised Exceptions Policy
- Management Zones
 - Alternative for calculating and allocating assimilative capacity
 - Exception for area
- Authorize Use of Offset Projects



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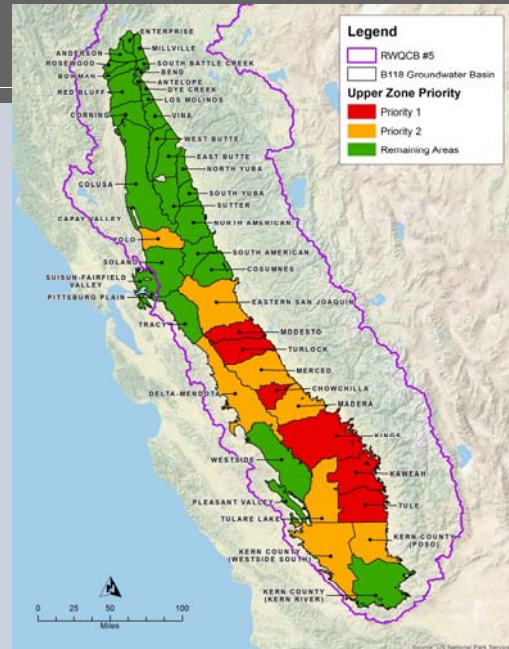
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NITRATE CONTROL PROGRAM SCHEDULE

Regulatory Actions (Current Estimate)		2018	2019	2020	2021	2022	2023	2024
Central Valley Board Approval (6/18)		★						
State Board Approval (9/18)		★						
OAL Approval (12/18)		★	<i>Trigger to Initiate Nitrate Control Program</i>					
Priority No. 1	Receive Notice to Comply (NTC)		→		<i>w/in 1-year of OAL approval</i>			
	Notice of Intent – Select Path A or Path B			→		<i>w/in 330 days of NTC</i>		
Priority No. 2	Notice to Comply				→			<i>w/in 2-4 years of OAL approval</i>
	Notice of Intent – Select Path A or Path B				→		<i>w/in ~15 months of NTC</i>	

RECOMMENDED PRIORITY AREAS

- 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



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PRIORITY GROUNDWATER BASINS/SUBBASINS

Priority 1

No.	Name
5-22.11	Kaweah
5-22.03	Turlock
5-22.05	Chowchilla
5-22.13	Tule
5-22.02	Modesto
5-22.08	Kings

Priority 2

No.	Name
5-21.67	Yolo
5-22.04	Merced
5-22.14	Kern County (Westside South)
5-22.12	Tulare Lake
5-22.14	Kern County (Poso)
5-22.07	Delta-Mendota
5-22.01	Eastern San Joaquin
5-22.06	Madera

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CONDITIONAL PROHIBITION OF NITRATE DISCHARGES TO GROUNDWATER

- Permittees that discharge nitrate pursuant to a WDR or Conditional Waiver and are not regulated under the Irrigated Lands Regulatory Program (ILRP):
 - Upon receiving a Notice to Comply, discharges of nitrate are prohibited unless a discharger implements the requirements of the Nitrate Control Program
 - Prohibition applies until such time that the permittees’ existing WDR or Waiver is updated or amended
- Permittees regulated under the ILRP will be required to comply with the Nitrate Control Program through an amendment to the ILRP General Orders

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NITRATE PERMITTING STRATEGY

Path A: Individual Permitting Pathway	Path B: Management Zone Pathway
<ul style="list-style-type: none"> • Discharger opts to comply as an individual, or third party maintains current approach • Defines receiving water as shallow groundwater • Establishes five discharge categories and associated compliance requirements • Establishes trigger levels for consideration with regard to Board allocation of available assimilative capacity 	<ul style="list-style-type: none"> • Discharger opts to work collectively with other dischargers through a Management Zone • Management zone is a defined area, e.g., a portion of a larger groundwater basin/subbasin • Serves as a discrete regulatory compliance unit for compliance

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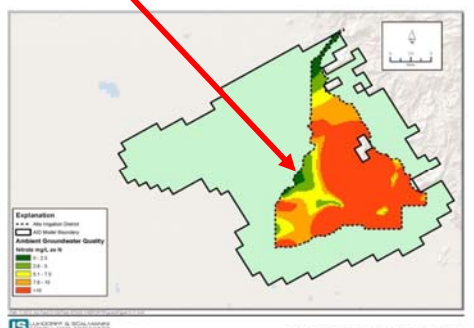
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MANAGEMENT ZONE

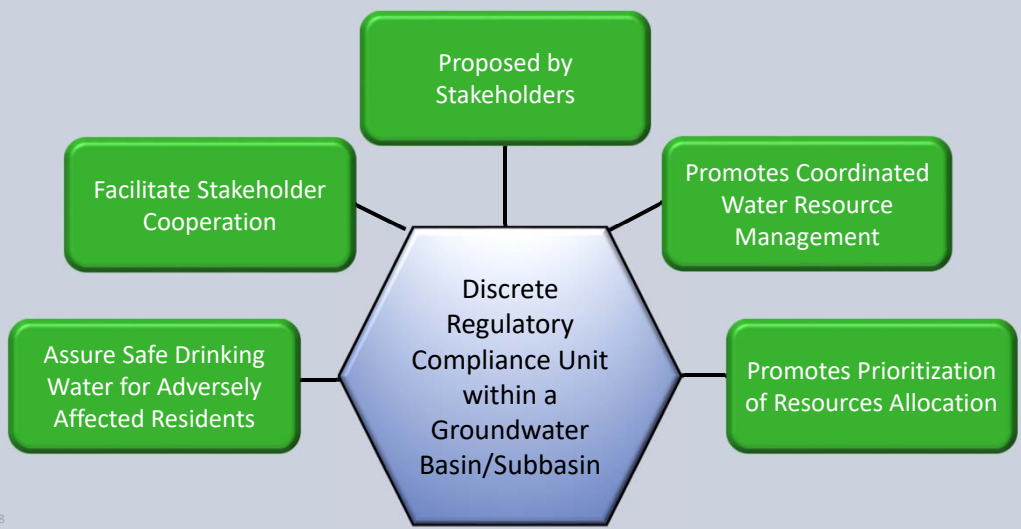
Management Zone = "Discrete Regulatory Compliance Unit within a Groundwater Basin/Subbasin"

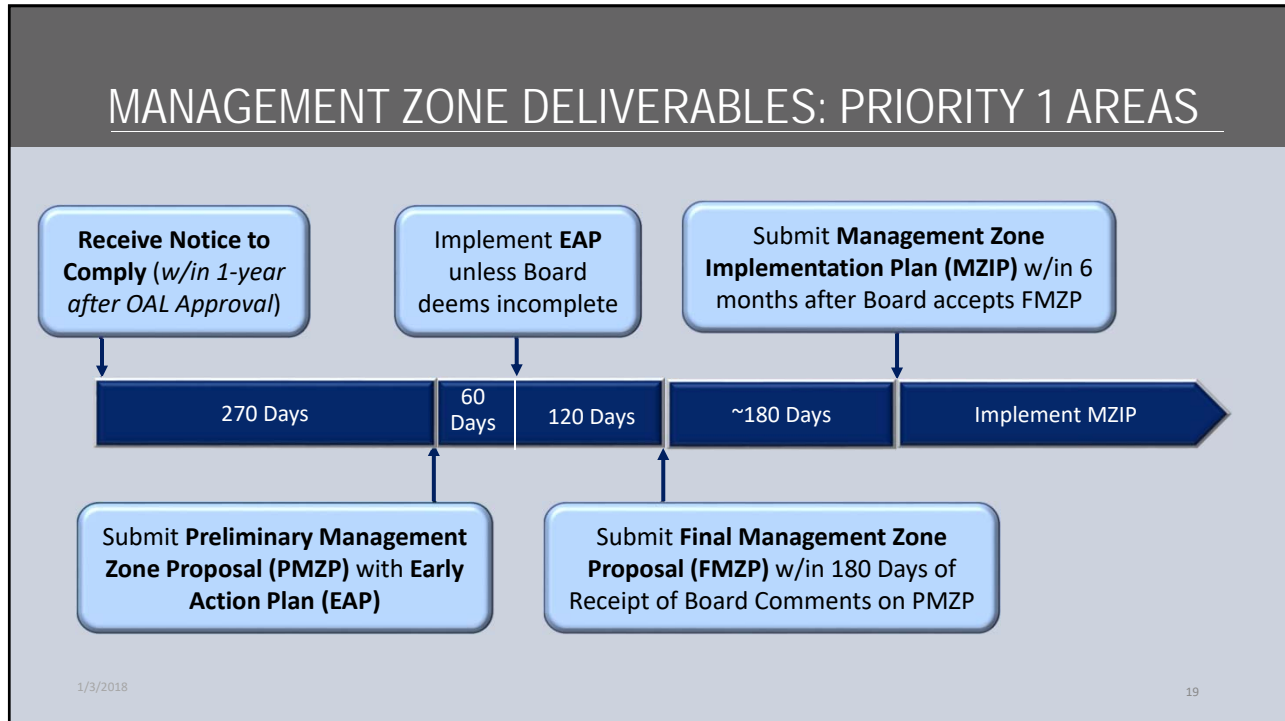


Outcome = Collaborative Nitrate Management in an Area within a Groundwater Basin/Subbasin



MANAGEMENT ZONE CHARACTERISTICS





- ## PRELIMINARY MANAGEMENT ZONE PROPOSAL
- Proposed boundaries
 - Participants
 - Stakeholders
 - Assessment
 - Summary of practices
 - Wells
 - Outreach efforts
 - Timeline
 - Additional Participants
 - Boundary Area
 - Governance
 - Funding
 - Preparation of Final
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EARLY ACTION PLAN

- Identification & outreach to users
- Coordination with others (e.g., Counties, Division of Drinking Water, GSAs)
- Actions & Implementation
- Funding mechanism

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FINAL MANAGEMENT ZONE PROPOSAL

- Participants
- Governance
- Groundwater Assessment Update
- Regulatory compliance approach
 - Volume-weighted assimilative capacity
 - Exception for meeting nitrate objective
- Coordination with GSAs
- Implementation of Early Action Plan
- Timeline for development of Management Zone Implementation Plan

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MANAGEMENT ZONE IMPLEMENTATION PLAN

Plan Must Address Management Goals

1. Drinking Water
2. Balance
3. Managed Restoration

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SALINITY CONTROL PROGRAM



SALINITY MANAGEMENT STRATEGY

- Salt Control Program Implements the Following Strategy:
 - Control the rate of degradation (“managed degradation”);
 - Implement salinity management activities to achieve long-term sustainability (salt balance) and prevent continued impacts to salt sensitive areas;
 - Where reasonable, feasible and practicable, protect beneficial uses by maintaining water quality that meets applicable water quality objectives and pursuing long-term managed restoration; and
 - Protect beneficial uses by applying appropriate antidegradation requirements for high quality water

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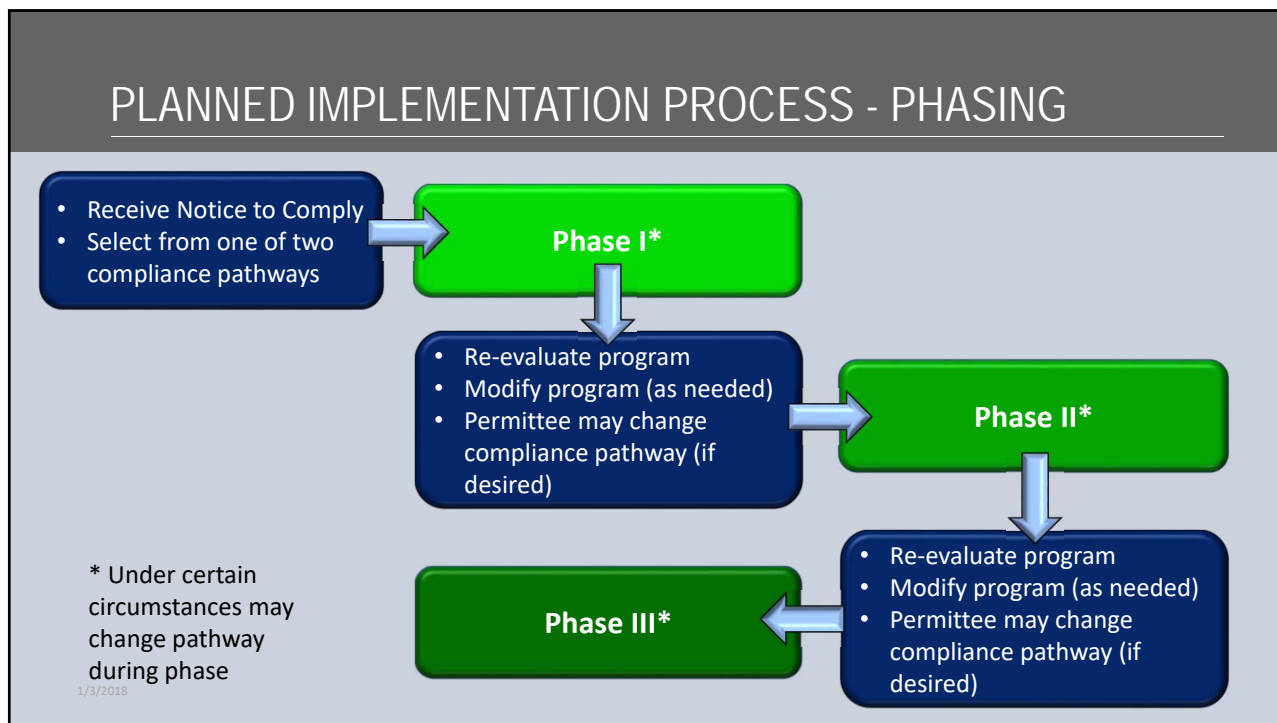
PHASED PROGRAM ALLOWS ADDITIONAL STUDY AND PRIORITIZATION OF REGIONAL RESOURCES

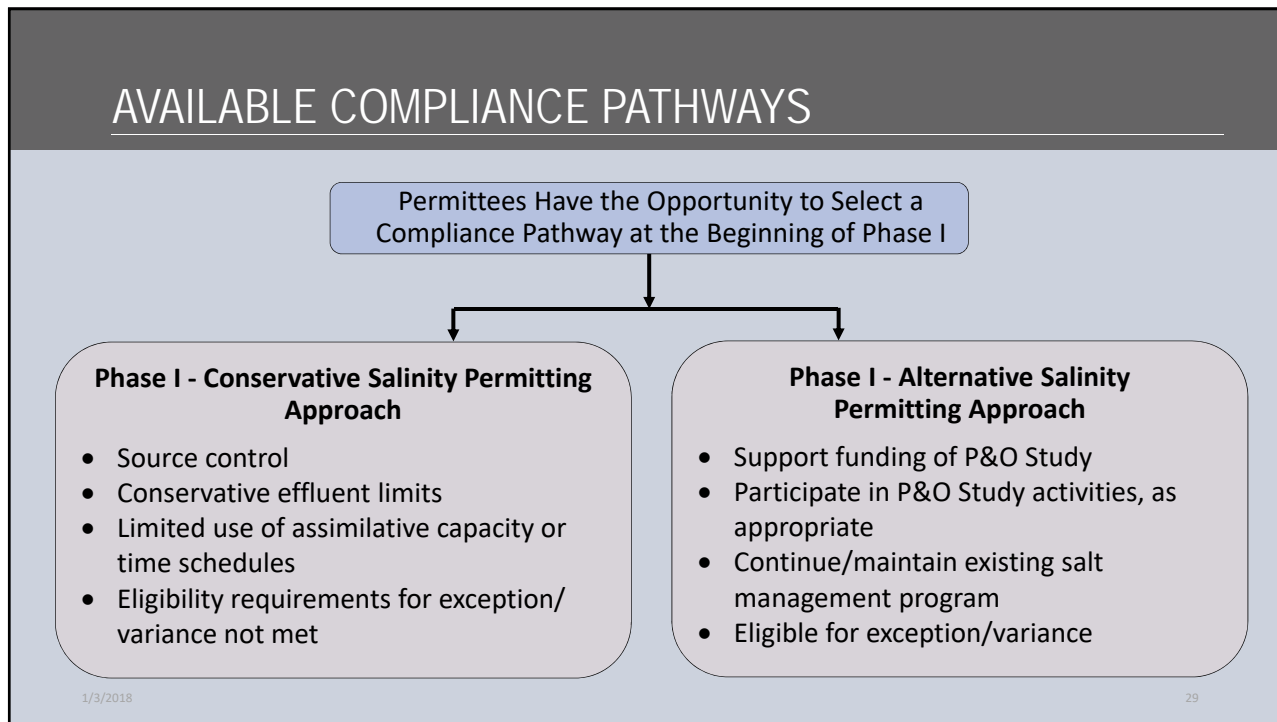
- Need more information to develop a long-term management strategy that considers:
 - Differences across hydrologic regions
 - Potential local or sub-regional solutions vs. a broad region-wide solution
 - Other relevant programs such as GSAs
 - Impacts of existing policies/programs that impact salt management
- Resource allocation must be prioritized to focus first and foremost on addressing nitrate drinking water issues
- Stepwise, adaptive process allows time to determine how best to manage salt

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PHASED PROGRAM ACTIVITIES	
Phase	Purpose/Activities
Phase I – Prioritization & Optimization (P&O) Study (10-15 years)	<ul style="list-style-type: none"> • Develop data/information for sensitive/non-sensitive areas for Central Valley hydrologic regions, including guidelines to protect salt sensitive crops; • Identify sources of salinity and actions that impact salinity concentrations; • Evaluate impacts of state policies and programs; • Identify/prioritize preferred physical projects for long-term salt management (e.g. regulated brine line(s), salt sinks, regional/subregional de-salters, recharge areas, deep well injection) • Develop preferred physical project conceptual designs/assess environmental permitting requirements/costs associated with projects; • Identify non-physical projects and plan for implementation; and • Develop a governance structure and funding plan.
Phase II – Project Development & Fund Acquisition (10-15 years)	<ul style="list-style-type: none"> • Obtain long-term funding; • Complete environmental permitting and engineering/design for physical projects identified in Phase I; • Implement non-physical projects
Phase III - Implementation (10+ years)	<ul style="list-style-type: none"> • Construct salt management projects as designed in previous phases



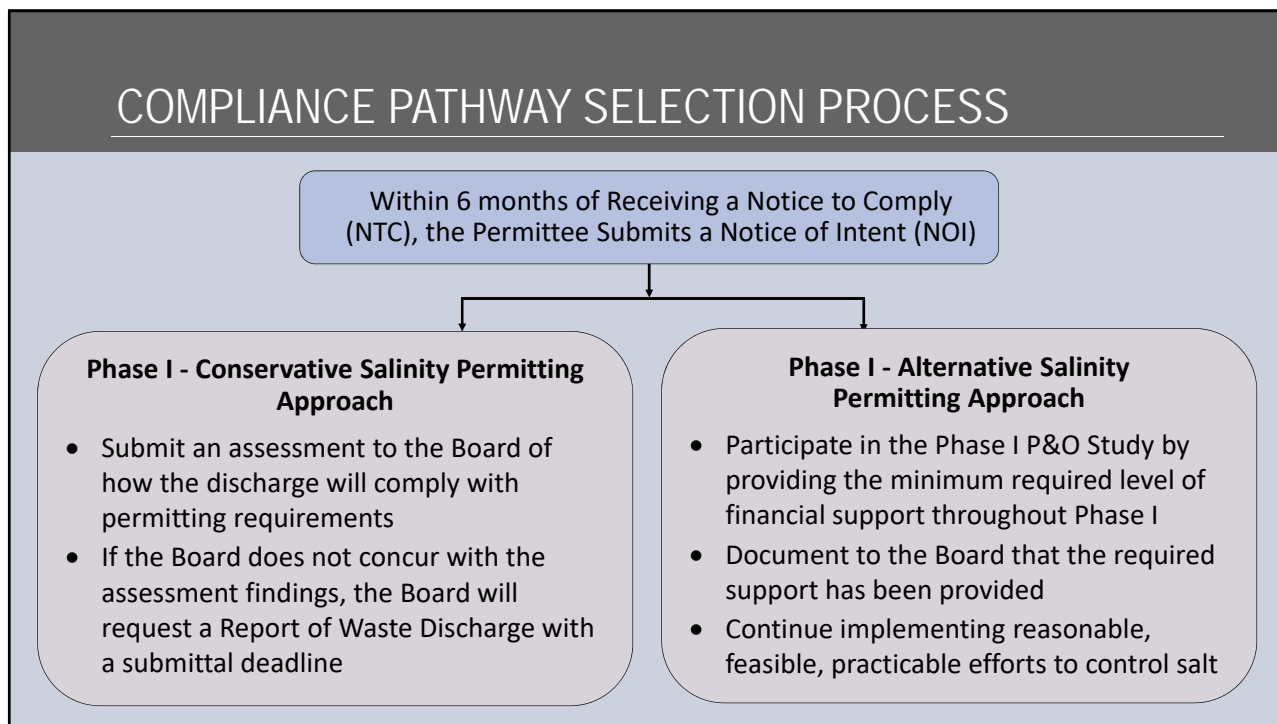


CONDITIONAL PROHIBITION OF SALT DISCHARGES TO GROUNDWATER DURING PHASE I

- Permittees that discharge nitrate pursuant to a WDR or Conditional Waiver and are not regulated under the Irrigated Lands Regulatory Program (ILRP):
 - Upon receiving a Notice to Comply, discharges of salt that exceed salinity numeric criteria identified in the Phase I Conservative Permitting Approach are prohibited unless a discharger implements the Phase I Salinity Control Program requirements
 - Prohibition applies until such time that the permittees’ existing WDR or Waiver is updated or amended to reflect the Phase I requirements
- Permittees regulated under the ILRP will be required to comply with the Nitrate Control Program through an amendment to the ILRP

General Orders

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SALINITY CONTROL PROGRAM SCHEDULE

Regulatory Actions (Current Estimate)	2018	2019	2020	2021 & following
Central Valley Board Approval (6/18)	★			
State Board Approval (9/18)		★		
Office Administrative Law (OAL) Approval (12/18)		★	<i>Trigger to Initiate GW implementation</i>	
EPA Approval (Surface Water only: 6/19)		★	<i>Trigger to Initiate SW implementation</i>	
Notice to Comply (NTC) Groundwater		→		<i>w/in 1-yr of OAL approval</i>
Notice of Intent (NOI) – Groundwater			→	<i>w/in 6-mo of NTC</i>
Notice to Comply - Surface Water		→		<i>w/in 1-yr of EPA approval</i>
Notice of Intent – Surface Water			→	<i>w/in 6-mo of NTC</i>
Phase I Implementation (10-15 years)			→	

PHASE I PRIORITIZATION & OPTIMIZATION STUDY IMPLEMENTATION	
Issue	Expectations
Who could potentially participate?	<ul style="list-style-type: none"> All (or almost all) permitted dischargers of salt (surface water or groundwater) Non-discharging entities that would benefit from Central Valley salinity management and control activities
Who will manage the Study?	<ul style="list-style-type: none"> Anticipated lead - Central Valley Salinity Coalition
How will the Study be implemented?	<ul style="list-style-type: none"> Activities to occur in an open stakeholder process Workplan (scope, budget, schedule) to be developed prior to implementation Meet milestones established in Phase I Salinity Control Program
How will required level of commitment be determined?	<ul style="list-style-type: none"> Anticipated to be determined based on a variety of factors, e.g., facility size/type; discharge volume, salt loading, others

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PHASE I P&O STUDY - KEY MILESTONES		
Time From Notice to Comply	Milestone	Deliverables
6 months	Phase I Workplan	Task descriptions, costs, schedule
12 months	Phase I Funding & Governance Plan	Process/procedures for P&O Study governance; secure funding
Annually	Annual Progress Report	Workplan progress; funding/costs; participation
5 years	Interim Project Report (by hydrologic region)	Preferred physical/non-physical projects; next steps/schedule for development
9 years	Long-term Governance Plan	Implementation approach for Phases II & III; stakeholder roles and responsibilities
9 years	Long-term Funding Plan for next phases	Long-term funding, equitable management approach for long-term, large-scale projects
9 years	Basin Plan Amendment Recommendations	Facilitate implementation of Phase II; modify permitting approaches, if appropriate
10 years	Final Project Report	Physical project conceptual designs, permitting requirements; non-physical project updates



SECONDARY MAXIMUM CONTAMINANT LEVEL POLICY



TBD

- TBD:
 - TBD
 - TBD

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DROUGHT AND CONSERVATION POLICY





TBD

- TBD:
 - TBD
 - TBD

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OFFSETS POLICY





TBD


- TBD:
 - TBD
 - TBD

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EXCEPTIONS POLICY




MODIFICATIONS TO EXISTING EXCEPTIONS POLICY

- Replaces references to SNMP development with description of Salt and Nitrate Control Program management goals
- Adds nitrate and boron to constituents for which an exception may be granted
- Revises general requirements for granting an exception:
 - Exception duration
 - Reporting
 - Participation in Salt and Nitrate Control Programs
 - Reauthorization/Renewal requirements
 - Relevance to modification of a water quality standard
 - Safe drinking water provision
- Establishes application-specific requirements for salinity, nitrate and boron

MODIFICATIONS TO EXISTING EXCEPTIONS POLICY

- Slides specific to salinity, nitrate, boron-specific requirements?

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VARIANCE POLICY



MODIFICATIONS TO EXISTING VARIANCE POLICY

- Key changes are to Section III – Variance Program for Salinity Water Quality Standards:
 - Replaces reference to SNMP development with description of Phased Salinity Control Program
 - Establishes that only permittees participating in the Phase I Prioritization & Optimization Study may apply for a variance
 - Modifies sunset provision from “30 June 2019” to “15 years from the effective date” of the Basin Plan amendments
 - Allows for multiple dischargers within a watershed or groundwater basin to apply for a variance if the dischargers are participating in the P& Study

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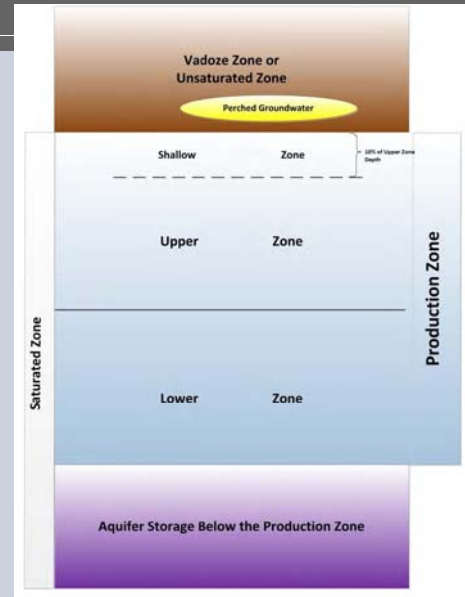


DEFINITIONS AND TERMINOLOGY



SUBDIVISIONS OF A GROUNDWATER BASIN OR SUB-BASIN

- Key Definitions:
 - Shallow Zone: 10% uppermost portion of the Upper Zone
 - Upper Zone: Portion from which most domestic wells draw water; generally extends from top of the Saturated Zone to bottom of the lowest screened domestic wells
 - Lower Zone: Remaining portion of a groundwater basin/ sub-basin's Production Zone; generally used for crop irrigation and some municipal supply
 - Production Zone: Portion from which ≈90% of groundwater pumped and utilized; generally extends from top of Saturated Zone to bottom of lowest screened production well



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OTHER DEFINITIONS TO HIGHLIGHT?

- TBD

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