

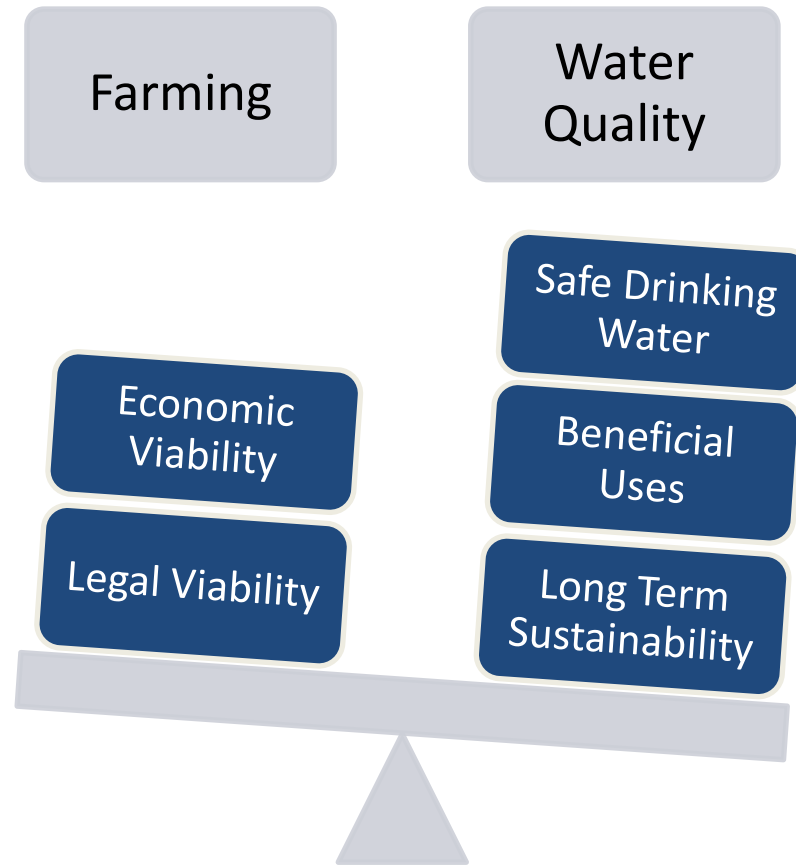
FARMING AND WATER QUALITY: FINDING THE RIGHT BALANCE

TESS DUNHAM
SOMACH SIMMONS & DUNN

CV SALTS: Central Valley Salinity Alternatives for Long-term Sustainability

- Ten year long stakeholder process
- Long term management of salt and nitrate in Central Valley groundwaters
- Increased flexibility in regulating discharges to those groundwaters

Balancing Factors



The Importance of Agriculture

Crop Sales

- 2016 Sales in California - \$46 billion
- 2016 Exports - \$20.04 billion

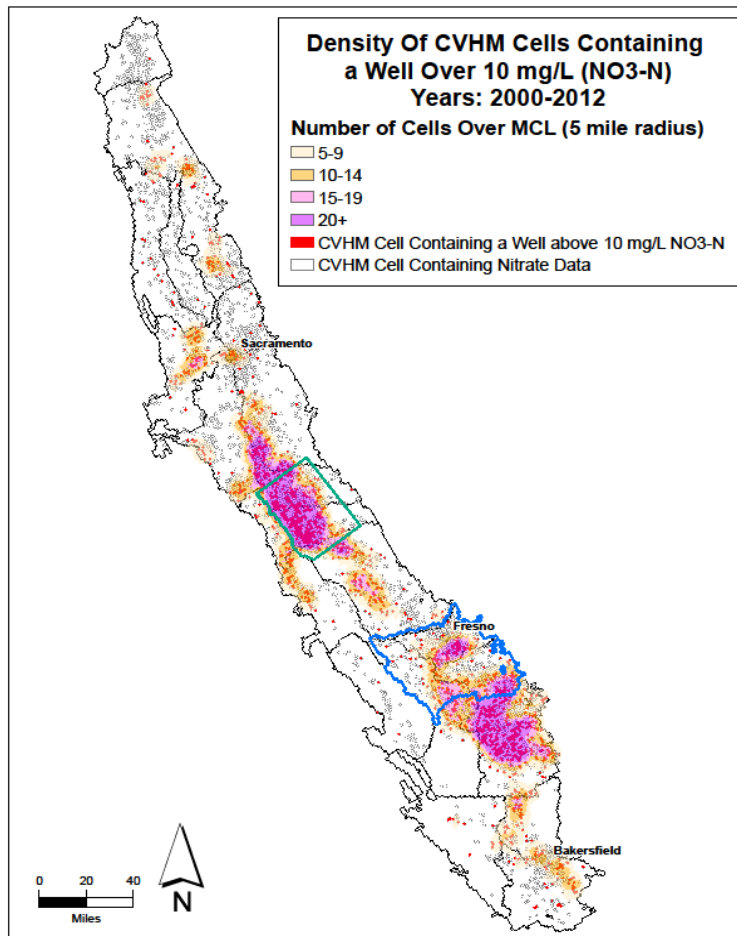
Commodities

- Over 400 commodities
- 1/3 of America's Vegetables
- 2/3 of America's Fruit and Nuts

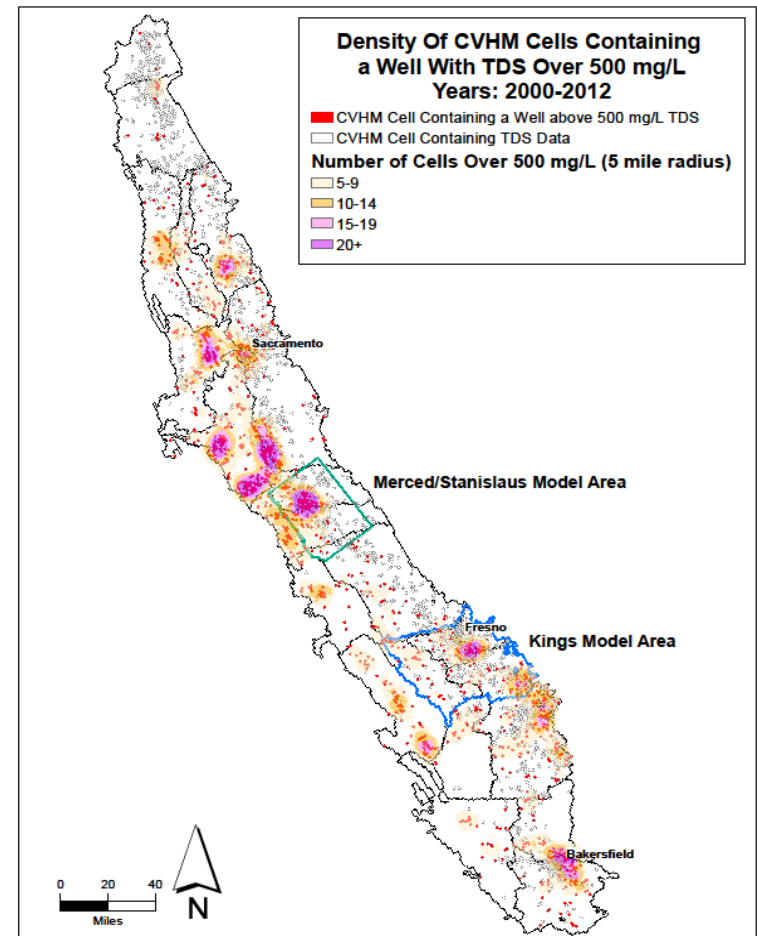
Employment

- 1.1 million directly employed
- For every \$1 billion in sales – another 18,000 jobs created

Groundwaters of the Central Valley Region:

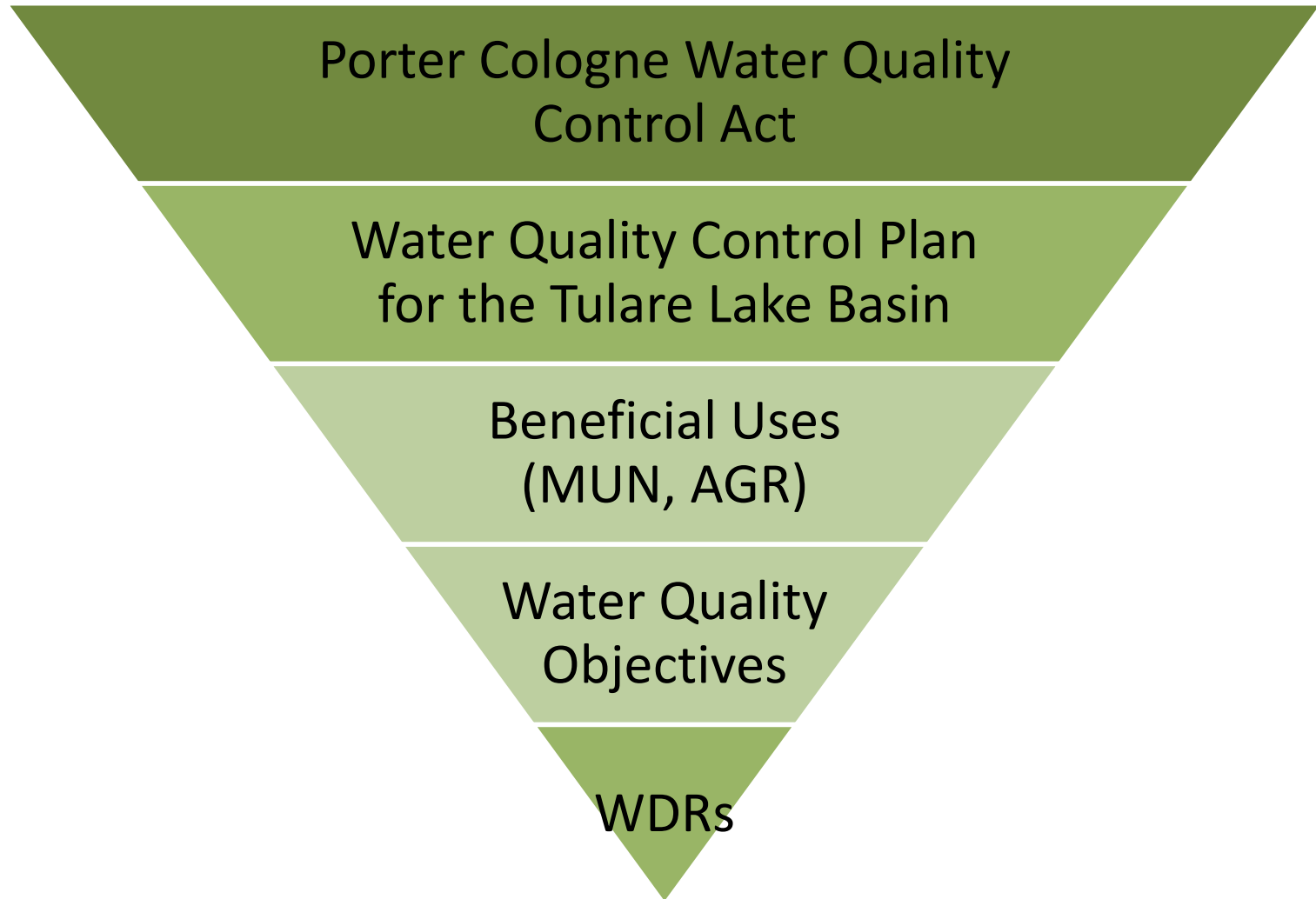


Nitrate



Salinity

Legal Foundations



“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 N)
- Salinity (as TDS): 500 - 1,000 mg/L



Current Permitting Requirements

- In areas where groundwater quality is poor (e.g. does not meet water quality objectives), discharges to the basin must not exceed the applicable water quality objective.

SWRCB WQO #73-04 and WQO #81-05

- In areas where the groundwater quality is good, discharges are generally regulated to prevent further degradation except under special conditions.

SWRCB Res. No. 68-16

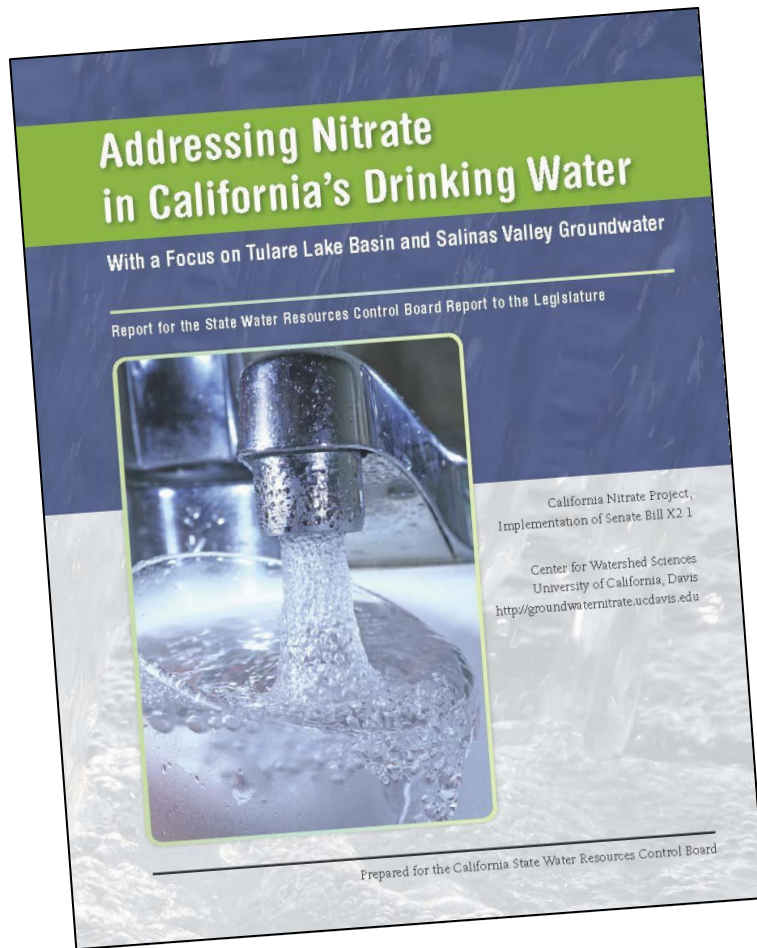


Existing Water Board Options

Require discharge to meet water quality objective (e.g., must meet 10 mg/L below root zone)

Adopt time schedule for meeting objective

Prohibit the discharge



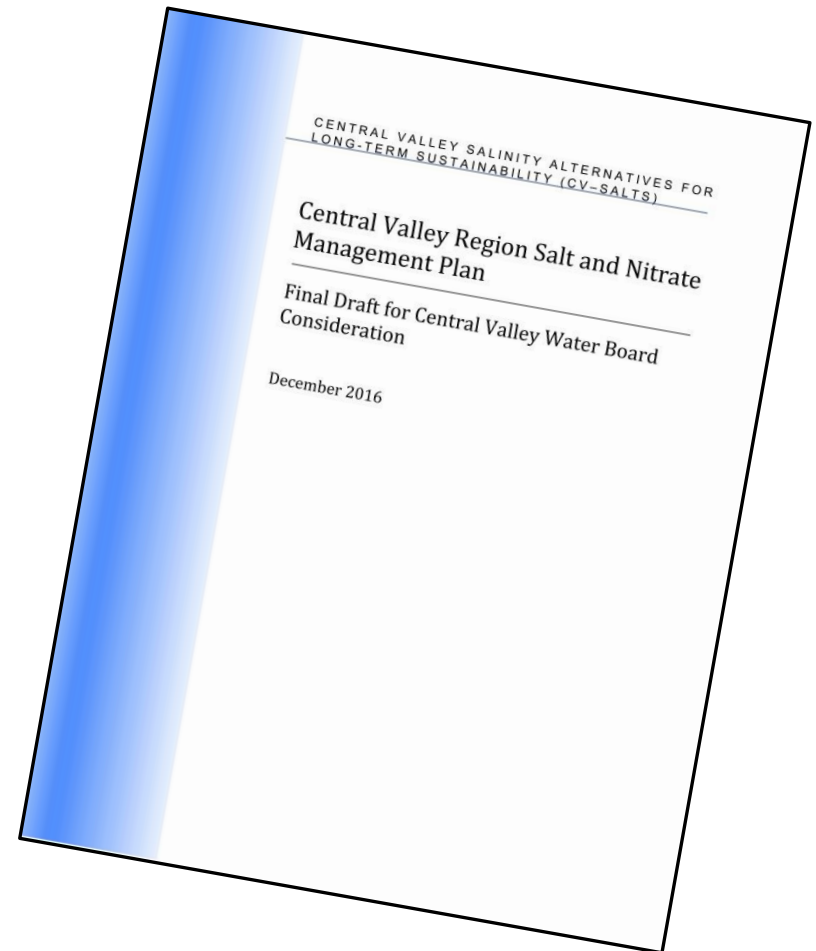
“The Water Boards will evaluate all existing Waste Discharge Requirements to determine whether existing regulatory permitting is sufficiently protective of groundwater quality...”

SWRCB Report to Legislature, 2013

SNMP Requirement (2009)
AB685: Human Right to Water (2012)
Dairy Permit Remand (2012)
DDW moved to SWRCB (2014)
SGMA (2014)
Safe Drinking Water Policy (2015)
SWRCB Res. No. 2016-0010
CVRWQCB Res. No. 2016-0018
Salinas Basin Enforcement (2015)
Kaweah, Tule, Kings Enforcement (2016)

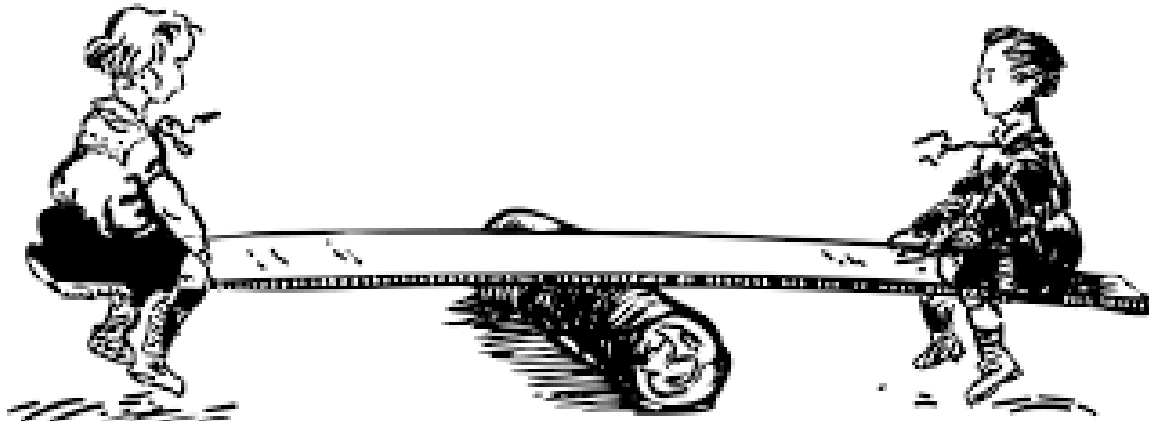
To Achieve Balance CVSALTS is Creating New Alternative Compliance Options

- Exceptions & Variances
- Offset Projects
- Authorized Degradation
- Phased Implementation
- Management Zones



Alternative Compliance Requires:

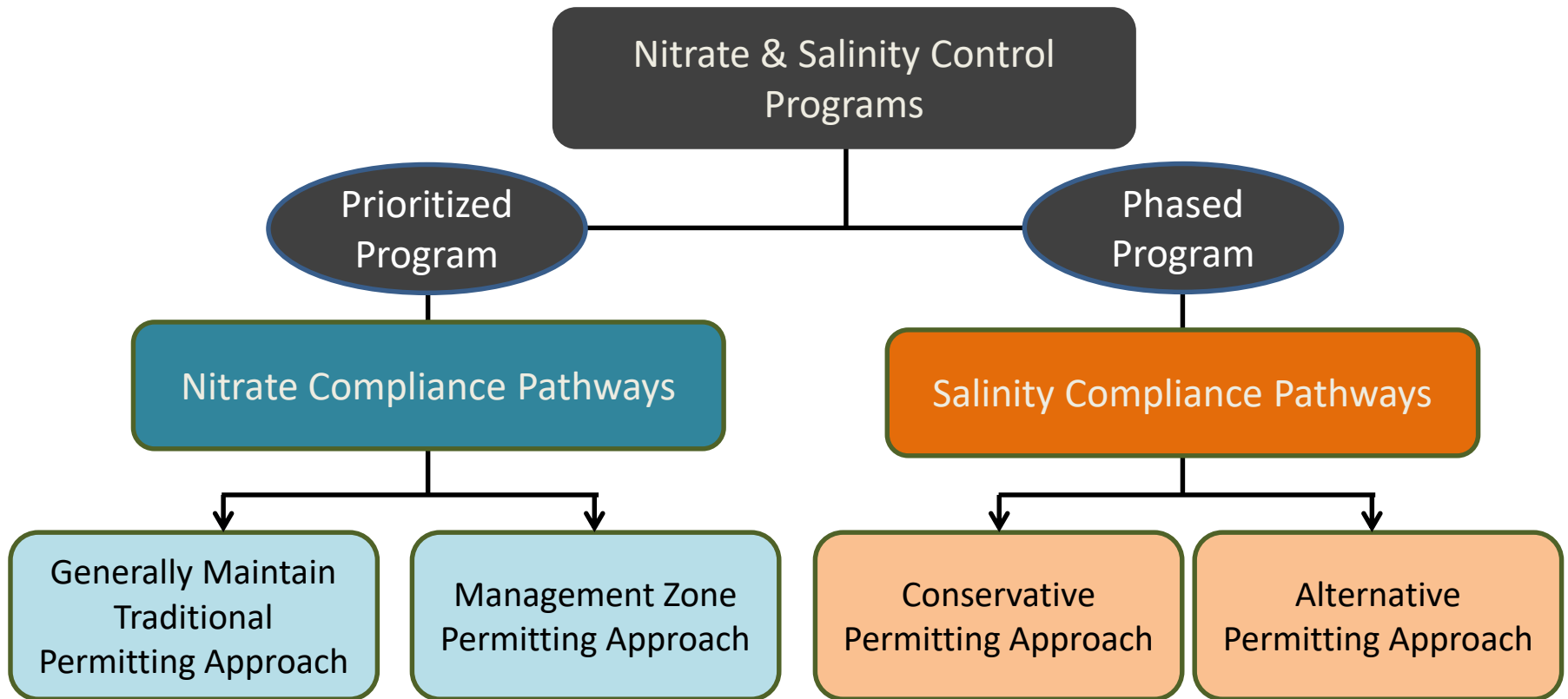
Assure Safe Drinking Water



Preserve the Agricultural Economy

Either we achieve both or we get neither

The Big Picture – Salt and Nitrate





Nitrate Control Program

- Focuses on addressing drinking water issues first
- Provides Regional Board with flexibility in how it regulates nitrate discharges
- Looks to address nitrate in groundwater over the long-term

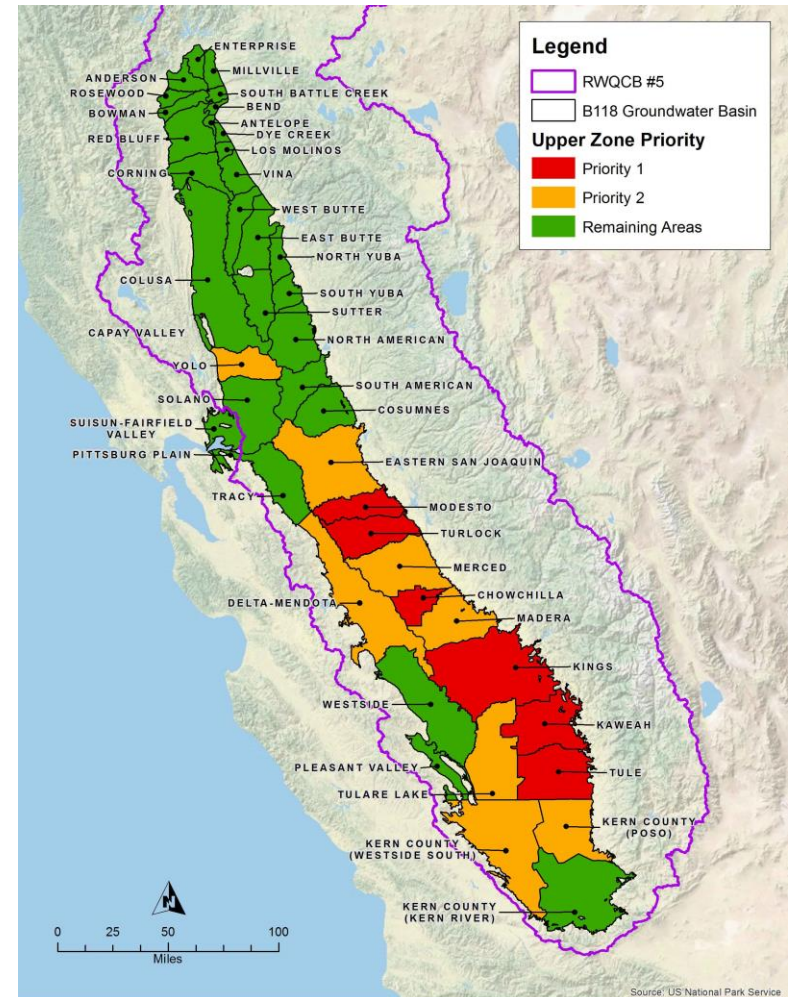
New/Revised Regional Board Authorities for Nitrate

- Allows for Exceptions to meeting nitrate water quality objective
- Management Zones
 - Alternative for calculating and allocating assimilative capacity
 - Exception for area
- Offset Projects



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
- Non-priority Areas (Green) – Implementation to be phased in at a later date



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

Nitrate Permitting Strategy: Two Options

Individual Permitting Pathway	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">• Dischargers opt 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

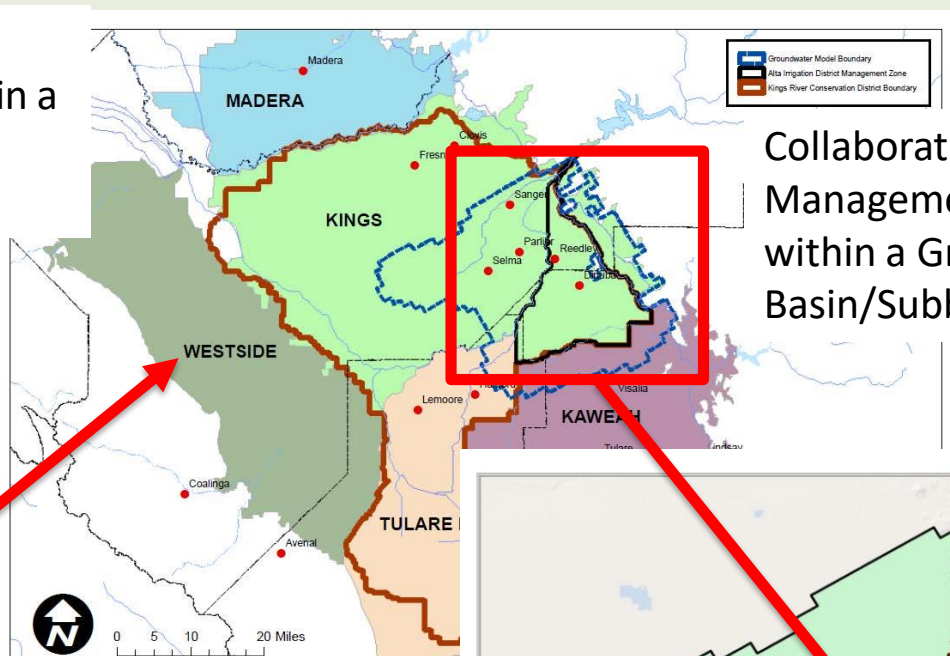
Need to Address Nitrate Drinking Water

Early Action Plans

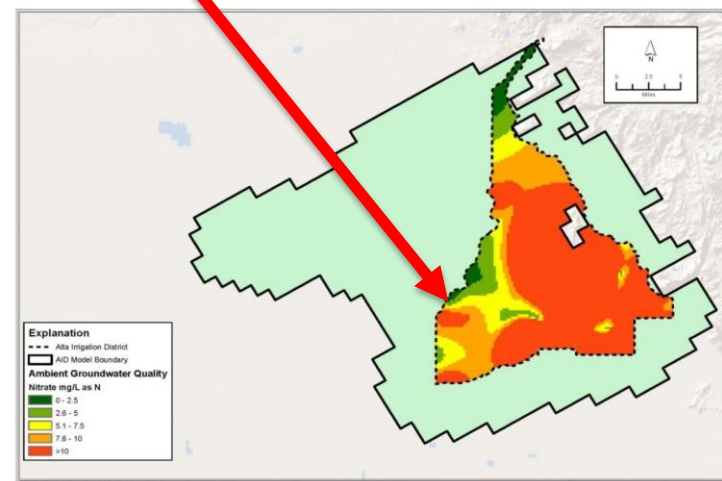
- Identify nitrate contaminated municipal and domestic wells in area that may be impacted by discharge
- Prepare plan for assuring emergency safe drinking water for those impacted
 - May include funding from federal, state, local and other sources

Management Zone

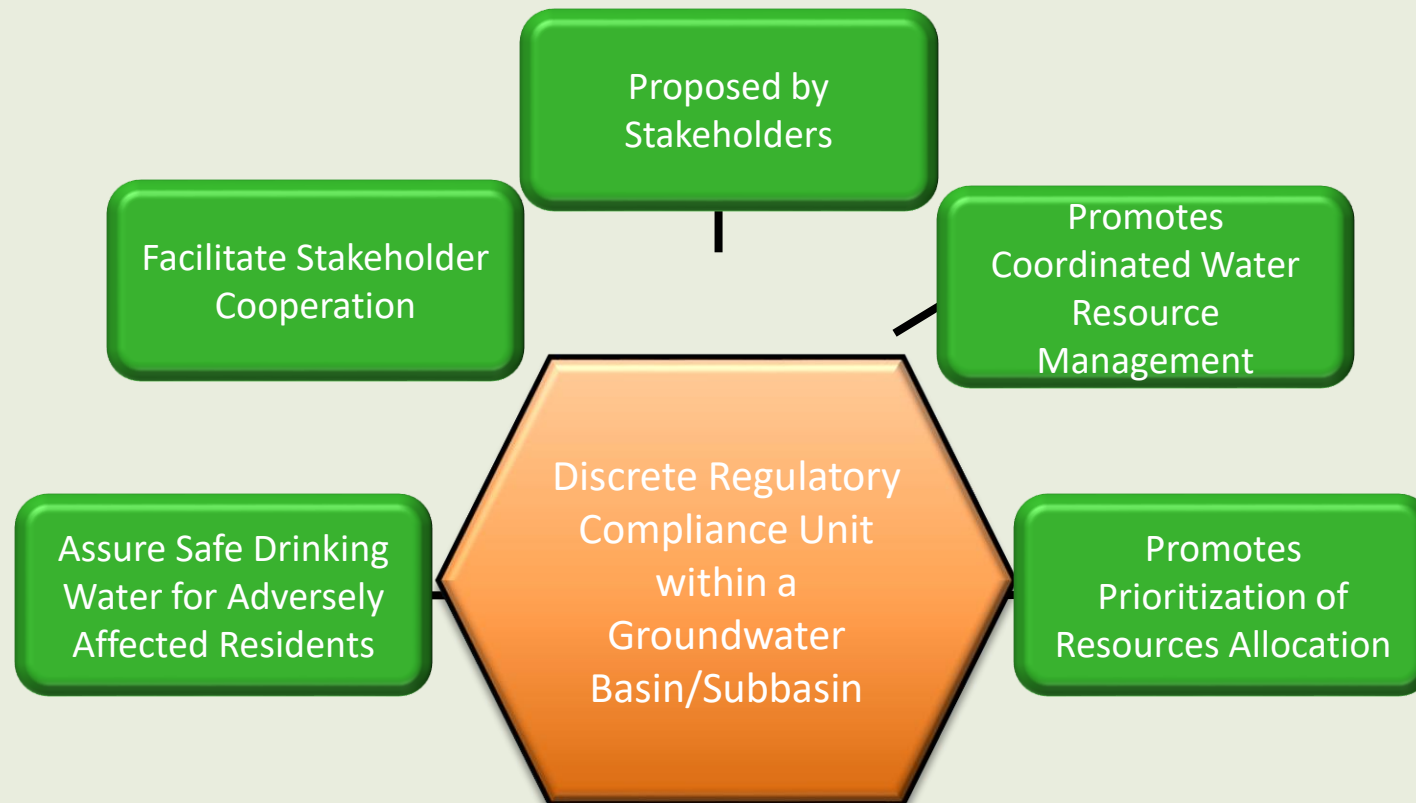
“Discrete Regulatory Compliance Unit within a Groundwater Basin/Subbasin”



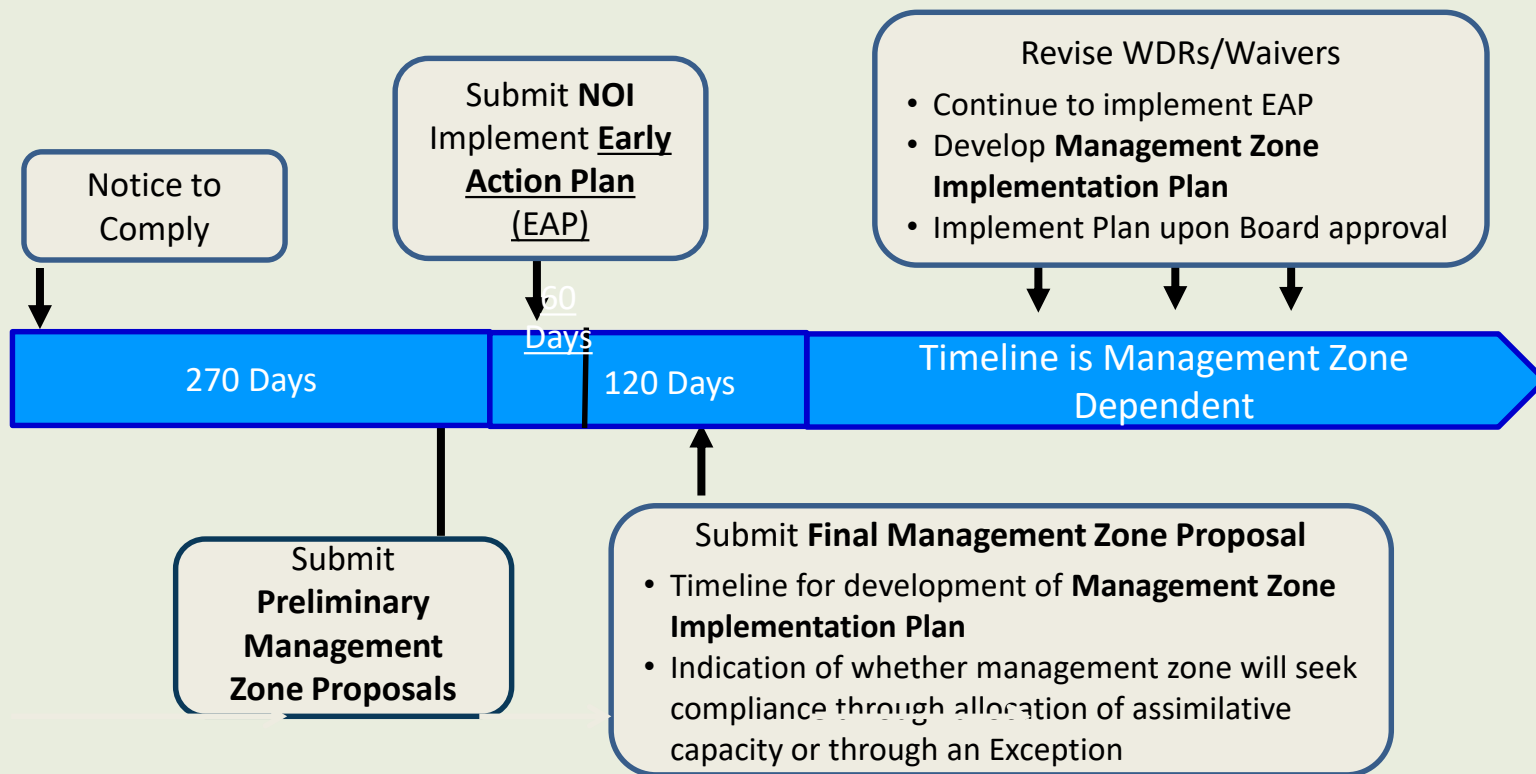
Collaborative Nitrate Management in an Area within a Groundwater Basin/Subbasin



Management Zone Characteristics



Timeline



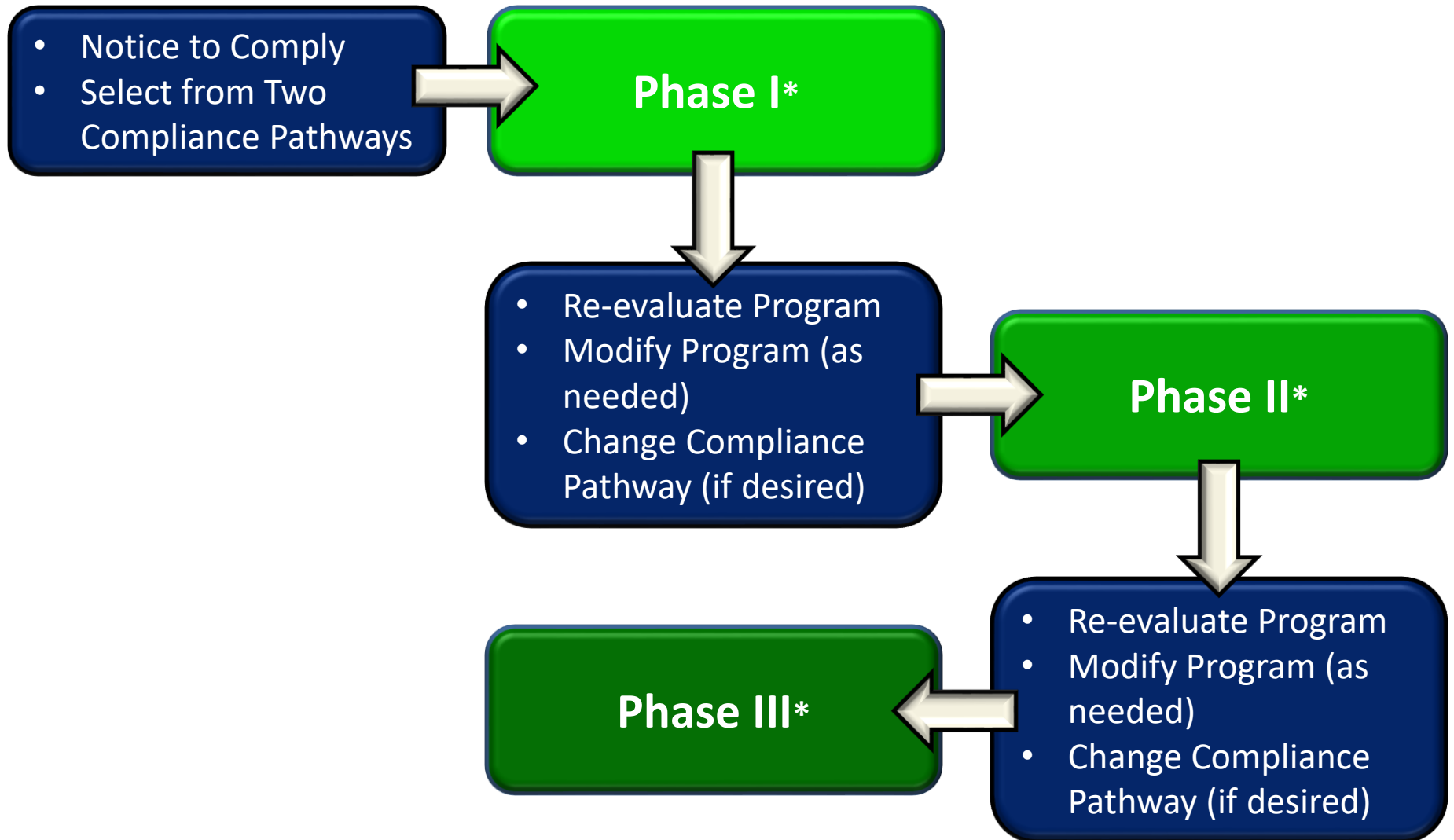


- Manage rate of degradation
- Implement salt management activities to achieve balance, to the extent reasonable, feasible and practicable
- Protect beneficial uses to the extent reasonable, feasible and practicable

Phased Salinity Program

- 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

What does Phasing look like?



What happens during each phase?

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

What are my compliance pathway options for phase I?

Permittees Have the Opportunity to Select a Compliance Pathway at the Beginning of Phase I

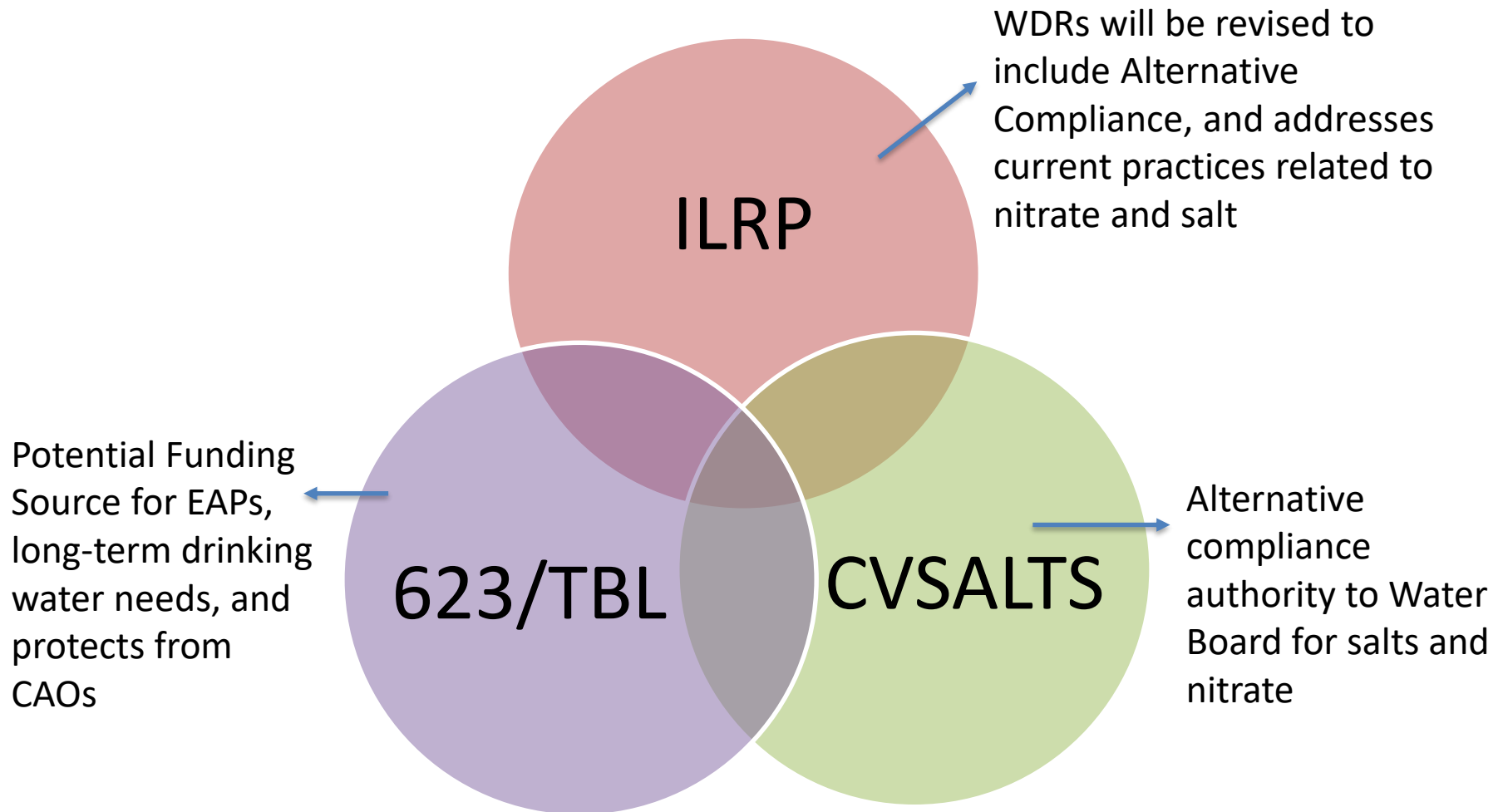
Phase I - Conservative Salinity Permitting Approach

- Source control
- Conservative effluent and/or receiving water limits
- Limited use of assimilative capacity or time schedules
- Eligibility requirements for exception/ variance not met

Phase I - Alternative Salinity Permitting Approach

- Support funding of P&O Study
- Participate in P&O Study activities, as appropriate
- Continue/maintain existing salt management program
- Eligible for exception/variance

Other related efforts



Achieving Balance

- Address nitrate drinking water issues
- Coordinate with other groundwater efforts
- Legal viability = Economic viability
- Long-term managed restoration (i.e., management – not remediation)