



# New Nitrate Permitting Options for the Central Valley Region

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# Central Valley Water Quality Control Plan

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“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

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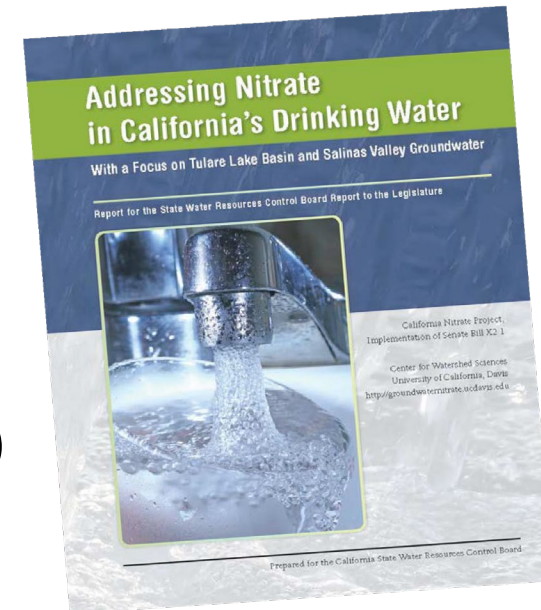
- ❖ Nitrate:  $<10$  mg/L (as Nitrogen)



# Increasing Regulatory Concern

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- ❖ SWRCB Adopts the Recycled Water Policy, 2009
- ❖ AB685: Human Right to Water Established (2012)
- ❖ 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 Action in Salinas Basin (2015)**
- ❖ SWRCB Res. No. 2016-0010 and Reg. Bd. Res. No. 2016-0018
- ❖ **Enforcement Order Actions in Kaweah, Tule & Kings Basins (2016)**
- ❖ Regional Board Amends Basin Plan to Enhance Nitrate Control (2018)

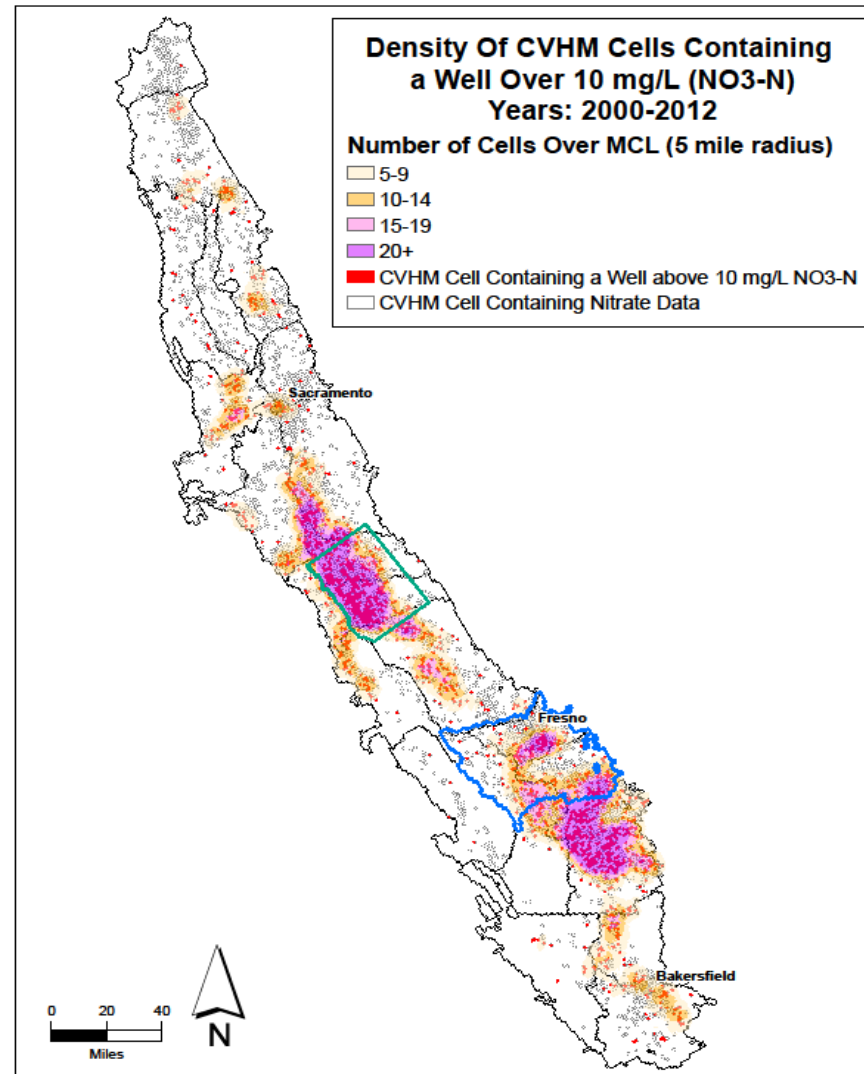


# Groundwater Basins & Sub-basins



# Nitrate in Central Valley Groundwaters

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# Current Permitting Requirements



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- ❖ “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*



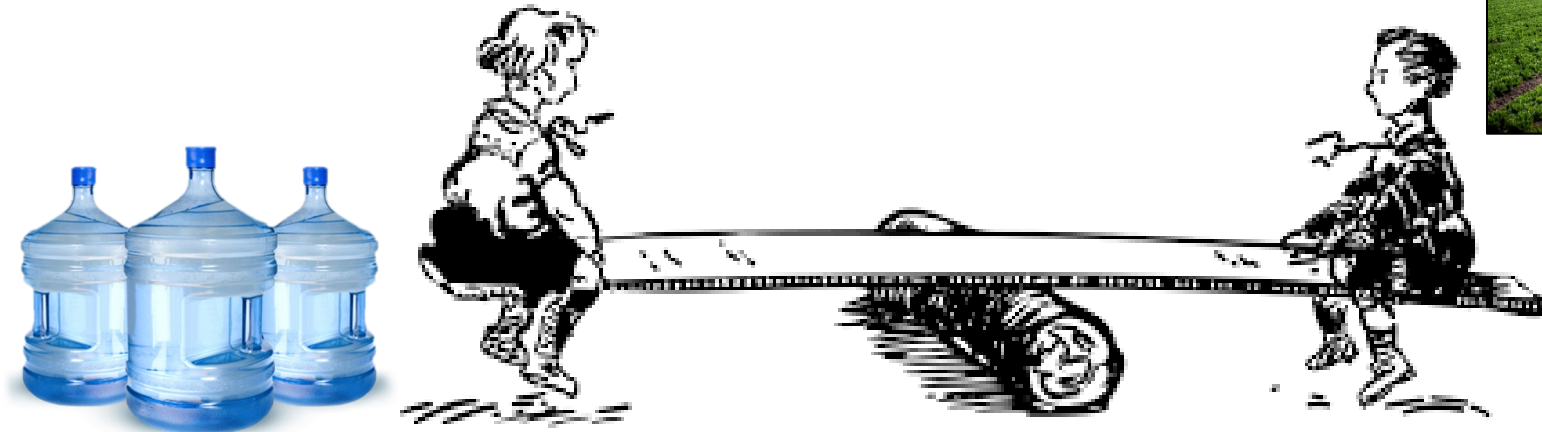
- ❖ In areas where groundwater quality is poor and there is no more assimilative capacity available, discharges to the basin must not exceed the applicable water quality standard.

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

# The Permit Balancing Act

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**Assure Safe Drinking Water**



**Preserve Agricultural Economy**

*“We must protect both ...  
... or we get neither”*



# Existing Water Board Options

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

Adopt time schedule for meeting objective

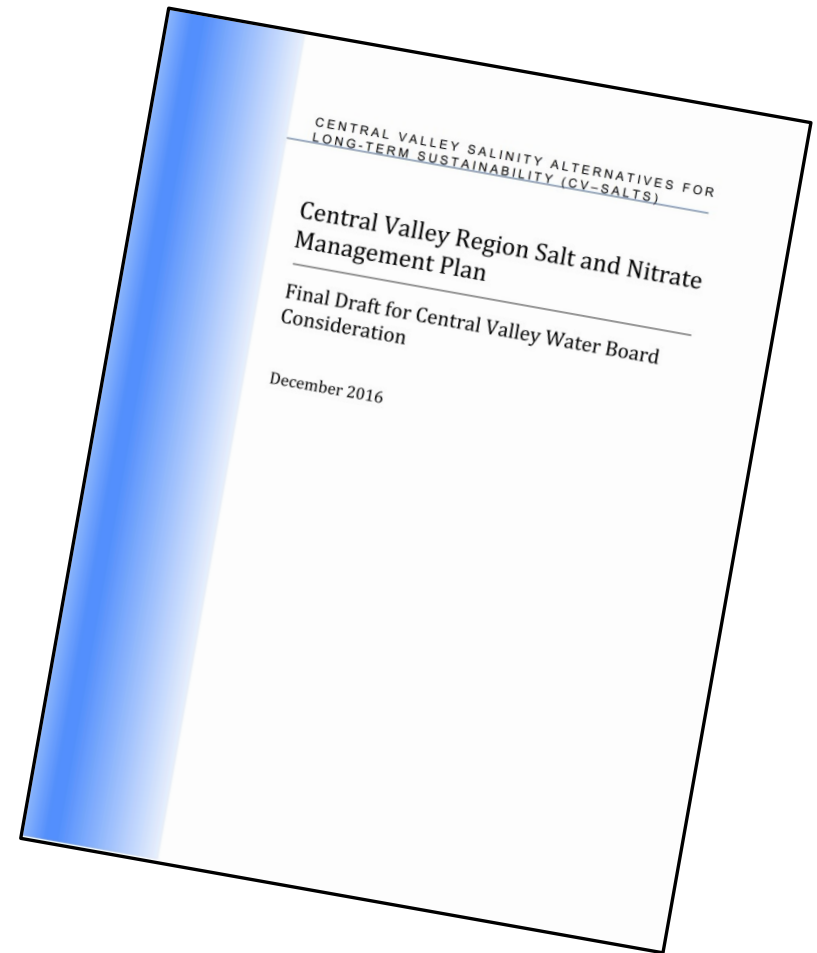
Allocate Assimilative Capacity Per Antidegradation Policy

Prohibit the discharge

# Alternative Compliance Options for Nitrate

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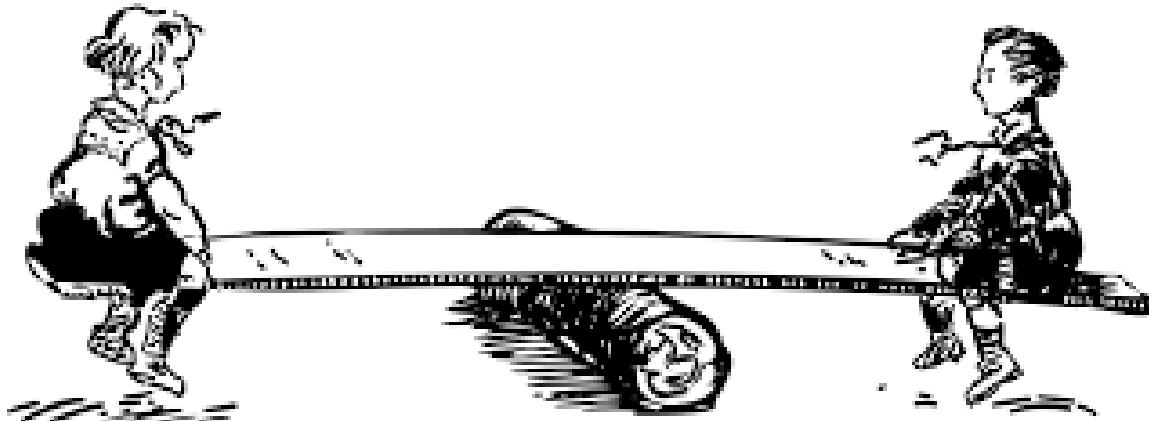
- ❖ Exceptions
- ❖ Phased Implementation
- ❖ Management Zones



# Alternative Compliance Requires:

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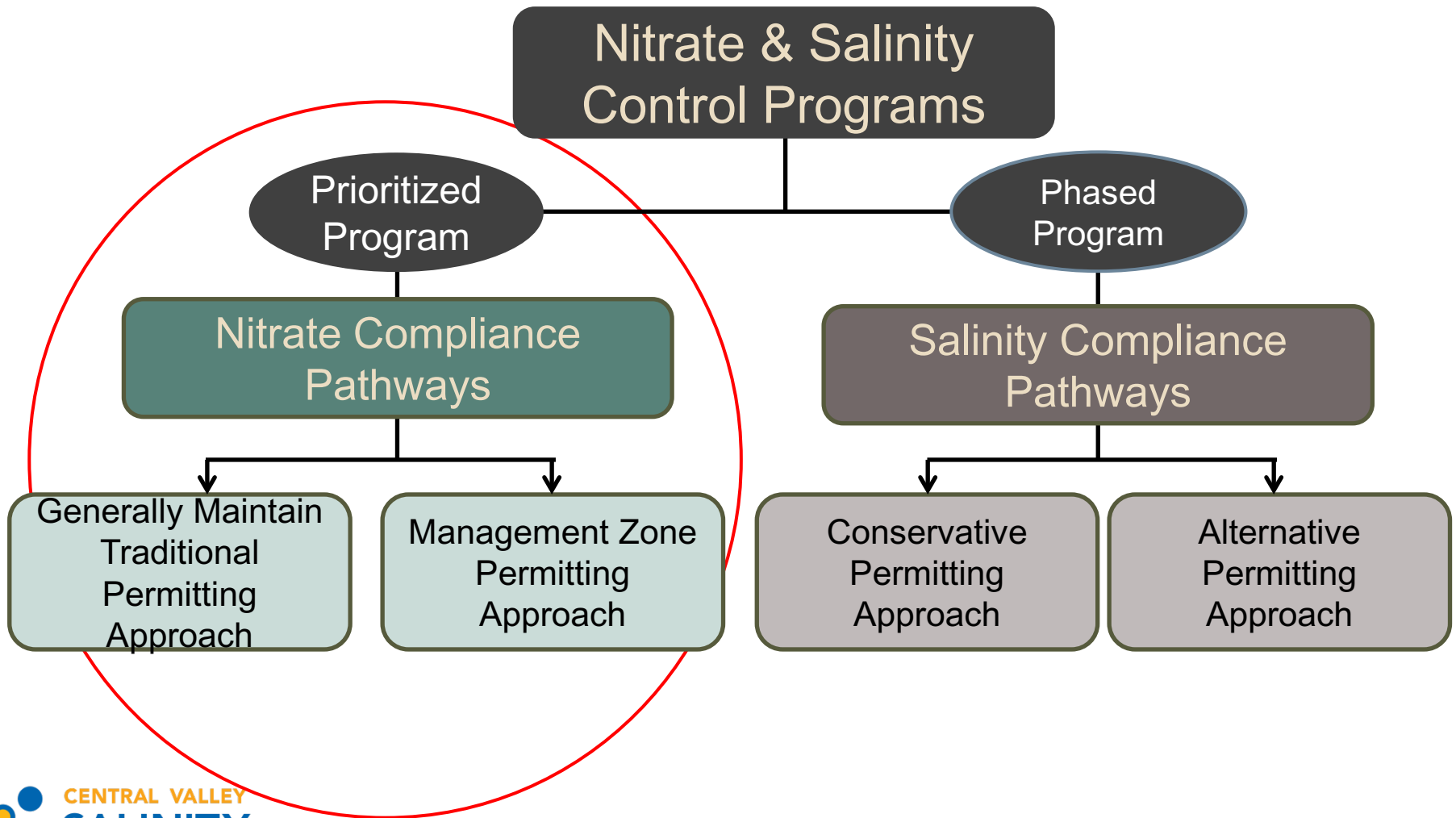
Assure Safe Drinking Water



Preserve the Central Valley's  
Economy

Either we achieve both or we get  
neither

# The Big Picture – Salt and Nitrate



# Nitrate Control Program



- ❖ Focuses on addressing drinking water first
- ❖ Provides Regional Board with new options
- ❖ Expands perception for time needed to address nitrate
- ❖ Looks to address nitrate in groundwater over the long-term

# New Regional Board Authorities for Nitrate

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- ❖ Allows for Exceptions to meeting nitrate water quality objective in discharges
  - Makes it legal to discharge above 10 mg/L
  - Will allow for up to 35 years
- ❖ Management Zones
  - Cooperative implementation
  - Near term and long term plan

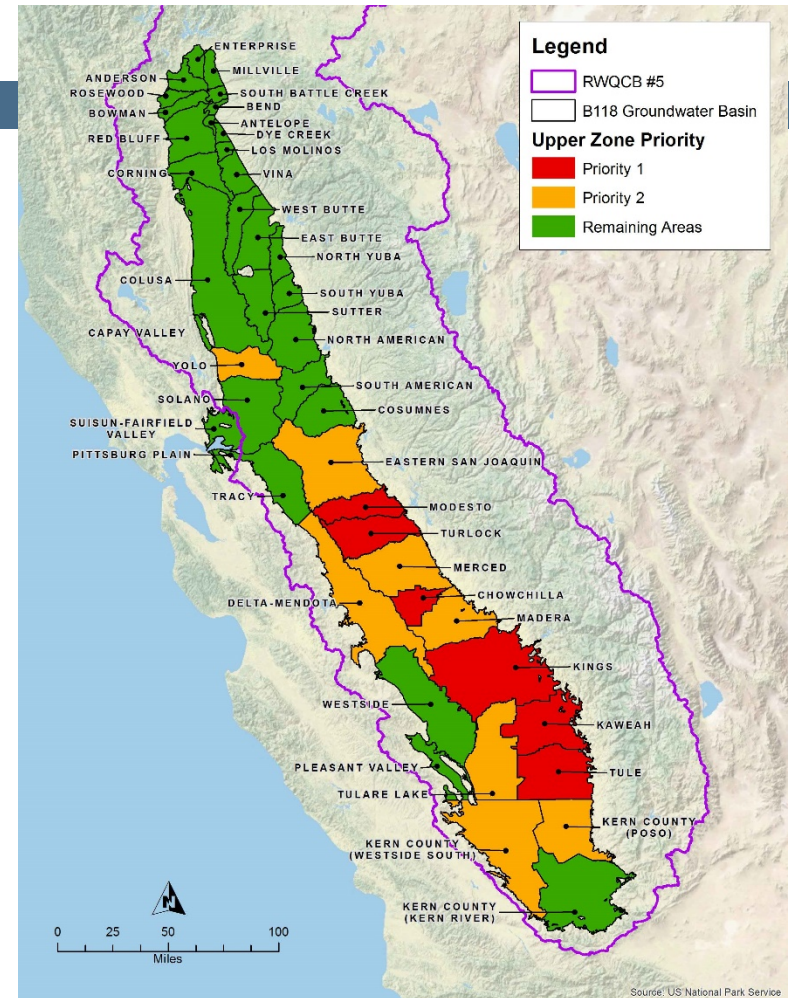




# Recommended Priority Areas

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- ❖ 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

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## 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

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## Individual Permitting Pathway

- 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

## Management Zone Pathway

- 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
- Looks at the upper zone of the aquifer – not shallow groundwater
- Serves as a discrete regulatory compliance unit for compliance

# Need to Address Drinking Water Contaminated by Nitrate

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- ❖ Identify nitrate contaminated municipal and domestic wells
- ❖ Prepare plan for assuring emergency or interim safe drinking
  - May include funding from federal, state, local and other sources

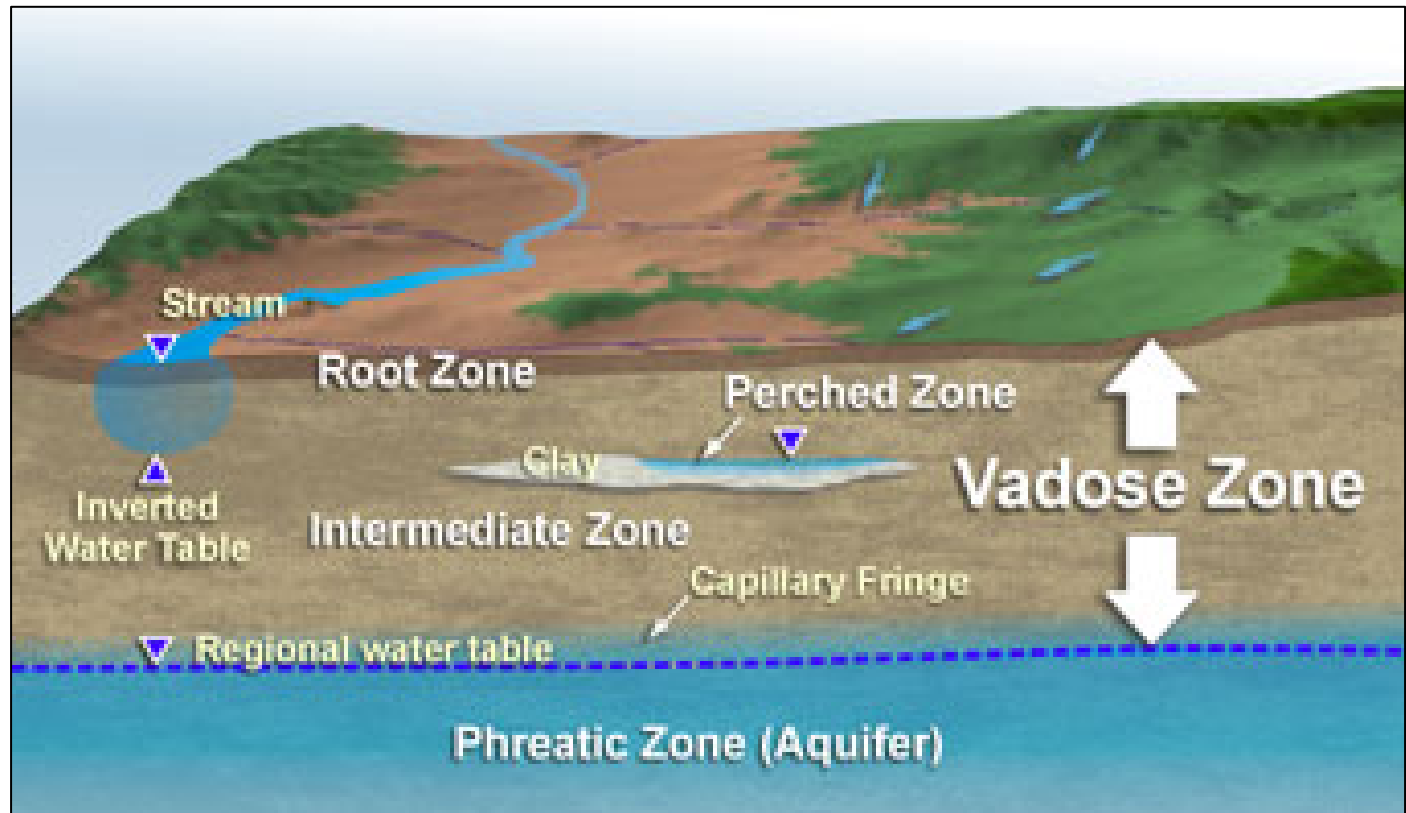
## EARLY ACTION PLANS



# Traditional Nitrate Permitting Option

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- ❖ Nitrate must be  $< 10$  mg/L...
- ❖ Before reaching the groundwater basin





# Management Zone Approach

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- ❖ **Exception from standards**
- ❖ **Must assure safe drinking water first**
- ❖ **Shared responsibility for implementation**







# Management Zones & SGMA

A side by side comparison of priorities, time horizons and implementation.

# What goes in versus how much comes out



# What is a Management Zone?

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- ❖ 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 nitrate into groundwater
  - Near term – implementation of best practicable treatment or control
  - Long term – no longer cause or contribute
- ❖ Collective implementation for ensuring nitrate impacted users of groundwater have safe water



# What is a Groundwater Sustainability Agency?

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- ❖ 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

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## Management Zone

- ❖ Regulatory alternative for dischargers that elect this path
- ❖ Contractual agreement amongst dischargers
- ❖ May be a local agency, but not necessary
- ❖ Water Board ensures implementation through waste discharge requirements
- ❖ Serves as alternative compliance for complying with nitrate water quality objective

## Groundwater Sustainability Agency

- ❖ State law requirement, or be subject to State Water Board
- ❖ Adopt rules, regulations & ordinances
- ❖ Conduct investigations
- ❖ Require well registration, submission of annual statements, etc.
- ❖ Regulate extractions
- ❖ Impose fees

# Formation of MZ versus GSA

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## 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

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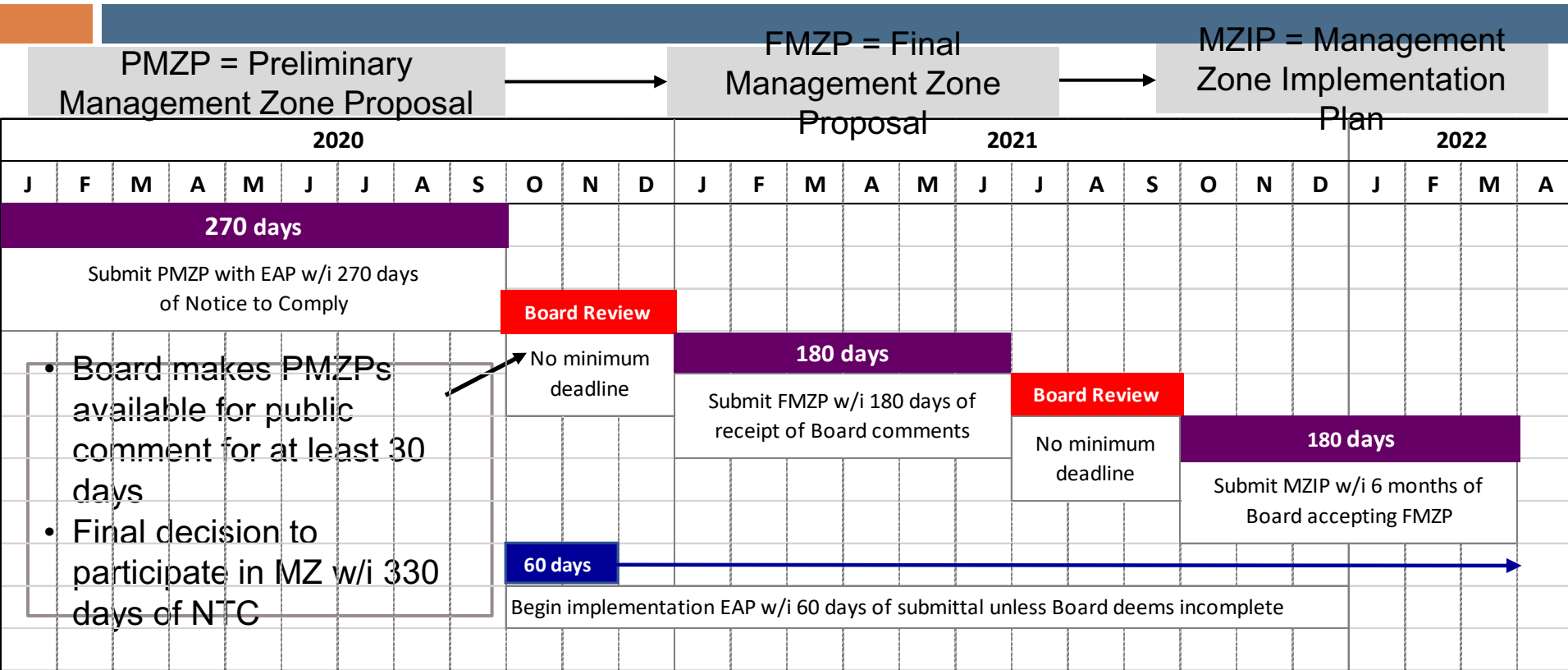
## Management Zone

- ❖ 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

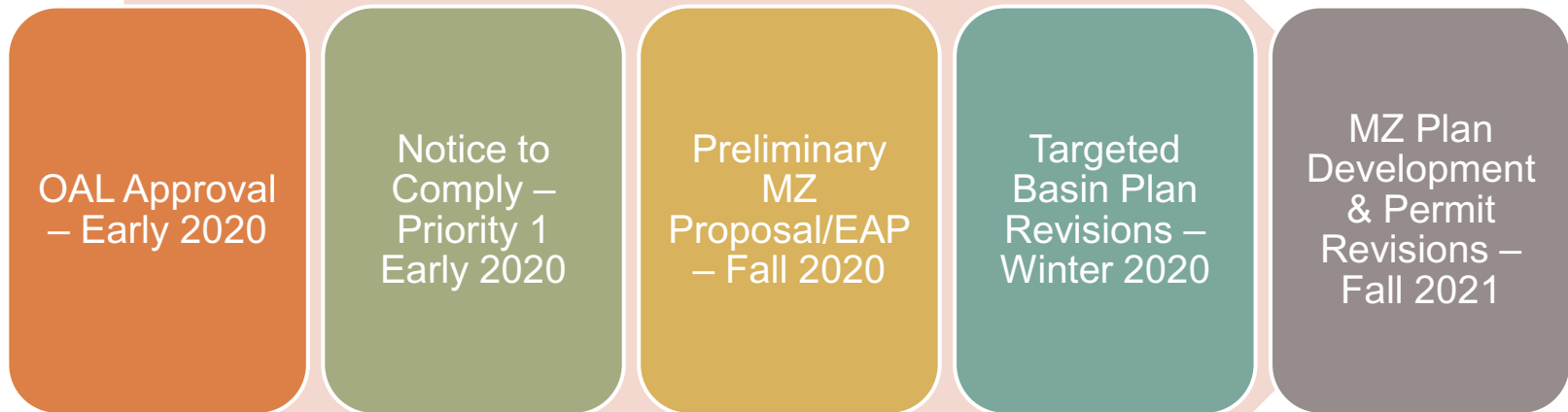
# Management Zone Regulatory Timeline



- Priority 1 - Notice to Comply (NTC) within one year of the BPA effective date
- Assumes that Regional Board review time between key deliverables is 90 days

# Next Steps

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# GSP Water Quality Element

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Degraded  
Water Quality

23 CCR  
§354.28(c)

- ❖ “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.”

# Content Requirements: Management Zone Implementation Plan & Groundwater Sustainability Plan

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## 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

# Brand New Day

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- ❖ Safe drinking water is the priority!
- ❖ Management of groundwater is changing
- ❖ Management of nitrate is nitrate