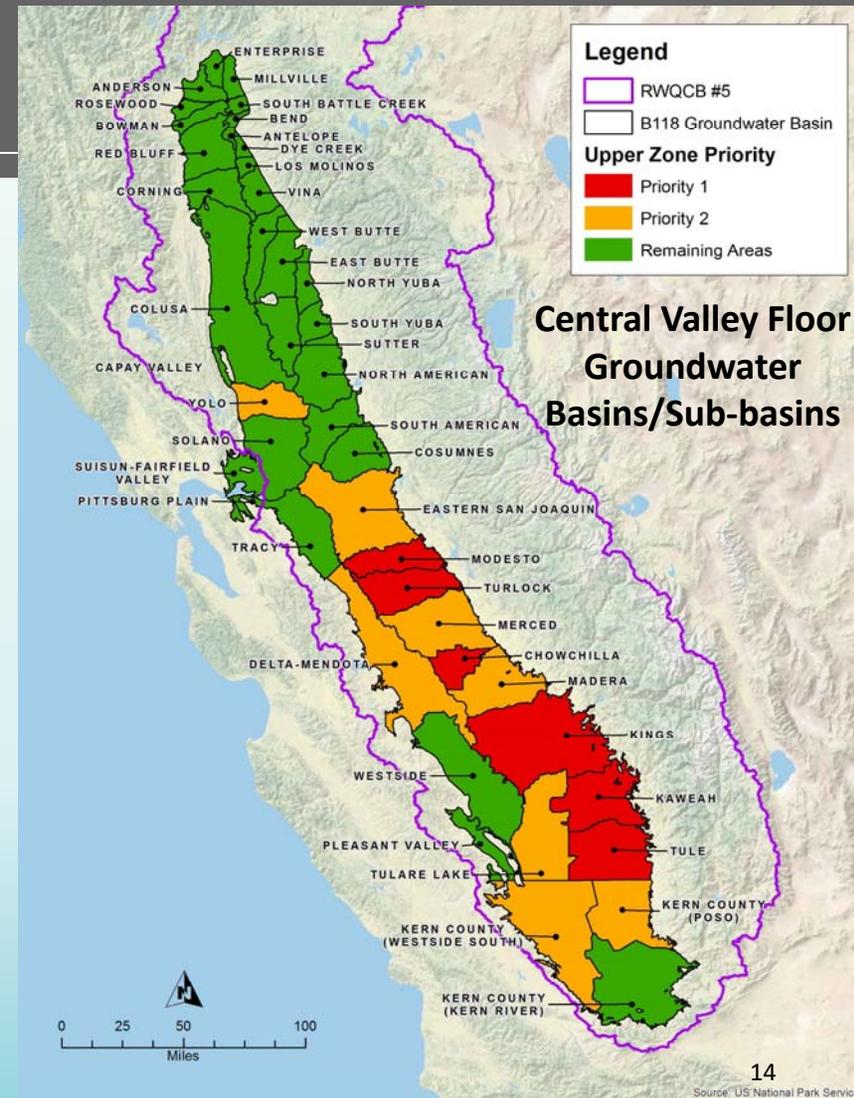


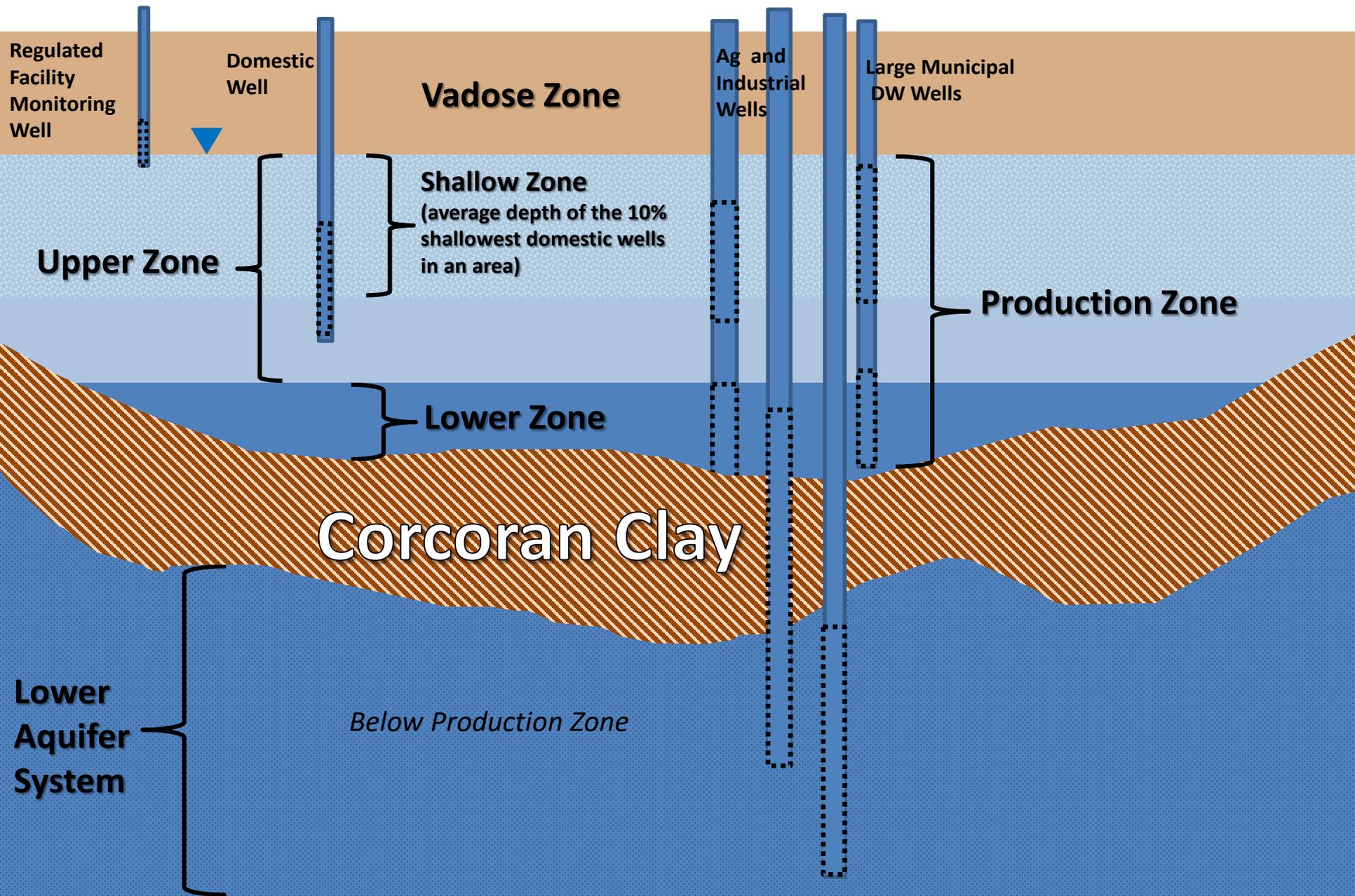
RECOMMENDED PRIORITY AREAS

- Groundwater Basins/Sub-basins
 - *Priority 1 Area (Central Valley Floor, Red) – Notice to Comply within one year of Basin Plan amendments becoming effective*
 - *Priority 2 Area (Central Valley Floor, Orange) – Notice to Comply within 2-4 years of Basin Plan amendments becoming effective*
 - *Remaining Areas (Central Valley Floor, Green, and other Basins/Sub-basins outside of the Valley Floor) – Based on available resources, and as determined necessary by the Executive Officer*
- Areas Not Part of a Groundwater Basin
 - *As determined necessary by the Executive Officer*



1/17/2018

Schematic of Aquifer System Within Corcoran Clay Extent



Nitrate Permitting Strategy

Central Valley Water Board Notification

Purpose: To notify all dischargers within a prioritized area of the need to comply with the SNMP's nitrate management requirements

Dischargers Develop Preliminary Management Zone Proposals

Priority 1 - Within 270 days of notification
Priority 2 - Within one (1) year of notification
All other areas – Upon written notice or request by Executive Officer of the Regional Board

Purpose: Provide all dischargers within a specified priority area where a management zone is in development with enough information to make an election for complying with the nitrate control program via Pathway A or Pathway B.

Pathway B: Management Zone

Step 1 - Dischargers Identified in Preliminary Management Zone Proposal or Submit Notice of Intent (NOI)

NOI Includes:
 Identification of the management zone in which the discharger intends to participate
 Acceptance of Preliminary Management Zone Proposal, which includes an EAP

Step 2 – Implementation of EAP and Submit Final Management Zone Proposal

Implement EAP (*within 60 days of submittal in Preliminary Management Zone Proposal if no objections received from CV Water Board*)

Submit Final Management Zone Proposal (*within 180 days of submittal of Preliminary Management Zone Proposal*) that includes:
 Milestones to develop Management Zone Implementation Plan in six months
 Indication whether management zone is seeking compliance through the allocation of assimilative capacity or through an exception

Step 3 – Revision of WDRs to Incorporate SNMP Compliance Requirements per Management Zone

(*WDR Revisions per Board schedule*)

Continue to implement EAP
 Develop Management Zone Implementation Plan
 Implement Management Zone Implementation Plan upon approval by Central Valley Water Board

Dischargers Elect to Implement Permitting Pathway A or Pathway B

Priority 1 – Within 330 days after receiving notice to comply
Priority 2 – Within 425 days after receiving notice to comply
New/Expanding Dischargers – With ROWD

Pathway A: Individual Discharger

Step 1 - Dischargers Submit Notice of Intent (NOI)

NOI Includes:
 Initial assessment of discharge to shallow zone
 Submittal of EAP, if applicable
 Discharge categorization
 Submittal of Alternative Compliance Project, if required

Step 2 - Implement Early Action Plan if Included in NOI

Begin implementation of EAP within 60 days after submittal unless a letter of objection is provided to the discharger by the Central Valley Water Board within that 60-day period

If no EAP necessary, dischargers go on to Step 3

Step 3 – SNMP Compliance Determination and Revision of WDRs to Incorporate Compliance Requirements

(*WDR Revisions per Central Valley Water Board schedule*)

Category 1 or 2 – Generally comply through existing WDR requirements
 Category 3– Compliance may include additional monitoring/trend evaluation
 Category 4 or 5 – To support an allocation of assimilative capacity or authorize an exception, the discharger will need to propose an ACP

EARLY ACTION PLAN COMPONENTS (PATH A & B)

- **Identification and Outreach** - Identify affected residents and the outreach to inform them of opportunity to participate in development of proposed solutions.
- **Coordination** – Coordinating with others not dischargers to address drinking water issues: must include affected communities, domestic well users and their representatives, DDW, local agencies, SGMA agencies.
- **Schedule** – Actions and schedule of implementation milestones that are as short as practicable to address immediate drinking water needs of those identified drinking groundwater that exceeds nitrate standard and don't have interim replacement water that meets drinking water standards.
- **Funding** – Funding mechanism for implementing EAP, which may include funding from Management Zone participants, and/or available local, state and federal funds available for such purposes.

ALTERNATIVE COMPLIANCE PROJECT (ACP) GUIDELINES

- **Components:**
 - Identification of public water supply and domestic wells contaminated by nitrates within the discharge area's zone of influence
 - Schedule with milestones for addressing nitrate drinking water issues and performance measures to be utilized to assess effectiveness of the drinking water solutions initiated
 - Identification of steps to be taken to meet SNMP Management Goals 2 and 3, which may be phased in over time
 - Description of process and outreach identifying representatives and stakeholders and/or communities within the zone of influence that utilize groundwater as a drinking water supply and how they are to be involved in the development of drinking water solutions
 - Description of the outreach process that has occurred and will continue to occur to ensure stakeholder or affected communities within the zone of influence are informed of, and given opportunity to participate in the development of any ACP proposal as well as ongoing activities designed to resolve their drinking water concerns
 - Description of process to ensure that drinking water that meets drinking water standards is available to all drinking water users utilizing groundwater within the zone of influence

For Management Zones, contain a governance framework that establishes:

 - a) Roles and responsibilities of all participants
 - b) Involvement of an entity with authority to manage water within the zone of influence including any identified SGMA management agency, as necessary
 - c) Involvement of representative(s) of stakeholders and/or communities that utilize the groundwater as a drinking water supply
 - d) Funding or cost-share agreements for short/long term projects
 - e) Mechanism to resolve disputes
- **Tracking Implementation:**
 - Public Review: Implementation Plan incorporated into WDRs
 - Progress report to Central Valley Water Board at a minimum of every five years during the first 20-years and every 10-years thereafter.

SALINITY CONTROL PROGRAM PATHWAYS TO COMPLIANCE

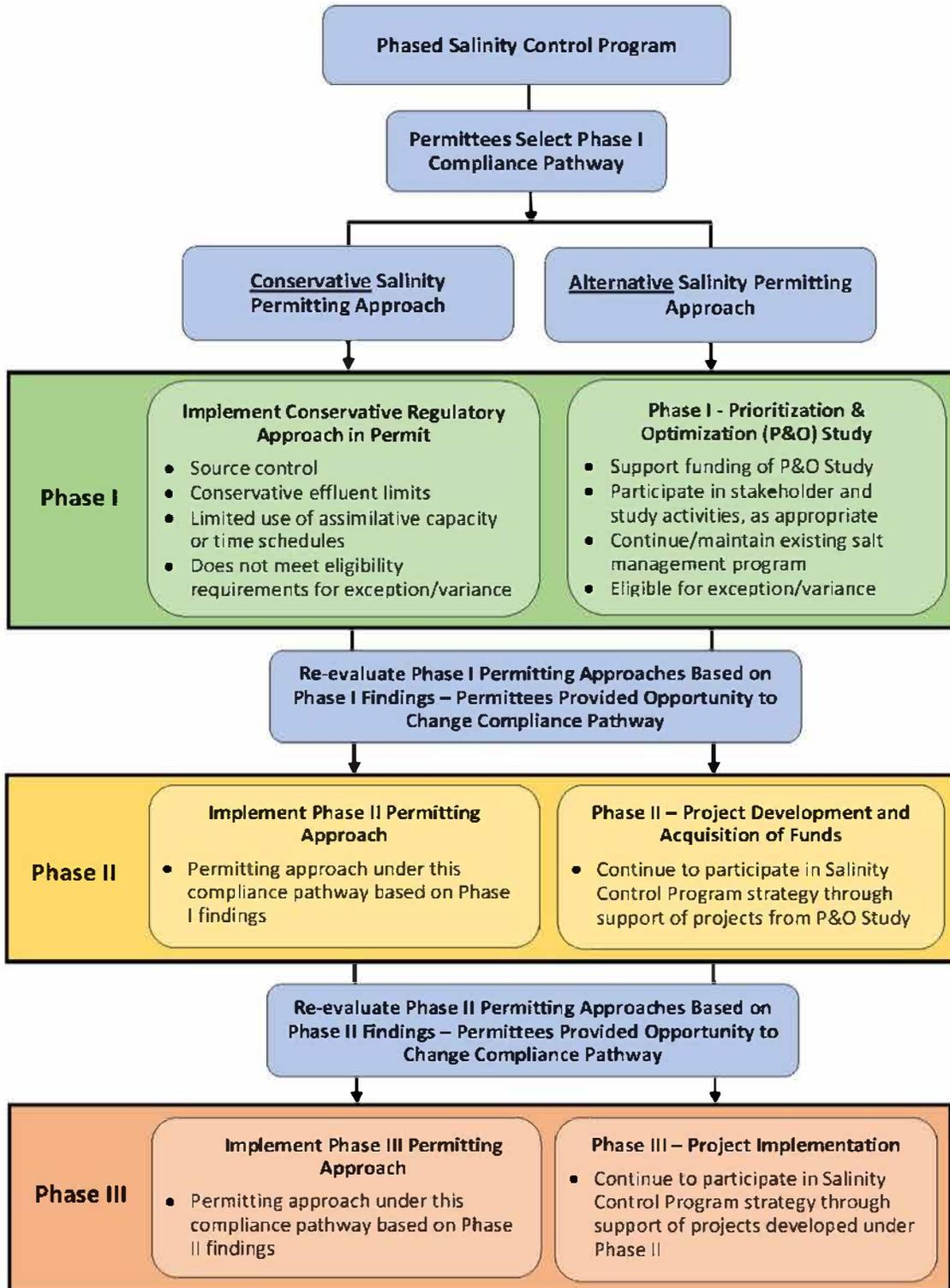


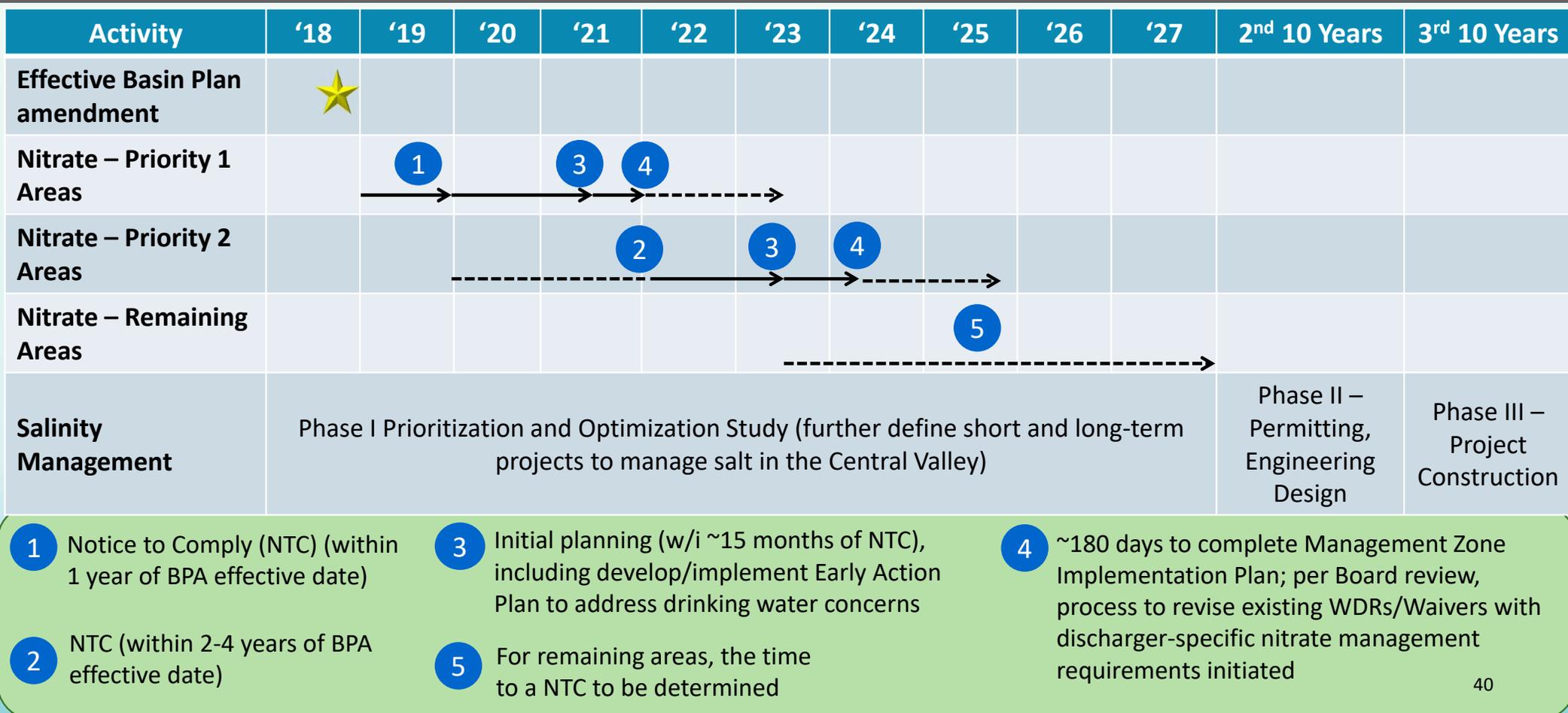
Table 1. Comparison between the Conservative and Alternative Salinity Permitting Approaches during Phase I

Conservative Salinity Permitting Approach	Alternative Salinity Permitting Approach
<p><u>All Discharges</u></p> <ul style="list-style-type: none"> Apply conservative assumptions for interpretation of the narrative objectives and application of numeric water quality objectives to protect AGR and MUN beneficial uses Limited availability of a compliance or time schedule to meet a salinity-related effluent limit or waste discharge requirement <p><u>Groundwater Discharge and Non-NPDES Discharge</u></p> <ul style="list-style-type: none"> Limited new or expanded allocation of assimilative capacity in groundwater Receiving water compliance determined using shallow groundwater Does not meet eligibility requirements for an exception <p><u>NPDES Surface Water Discharge</u></p> <ul style="list-style-type: none"> A new or expanded allocation of assimilative capacity may be authorized only where a discharger can show that the impact of the discharge is temporary or <i>de minimus</i> Does not meet eligibility requirements for a variance 	<p><u>All Discharges</u></p> <ul style="list-style-type: none"> Participate in the Phase I Prioritization and Optimization Study throughout its duration Continue implementing reasonable, feasible and practicable efforts to control salinity using performance-based limits, including: <ul style="list-style-type: none"> Salinity management practices Existing pollution prevention, watershed, and/or salt reduction plans Monitoring Maintenance of existing discharge concentration or loading levels of salinity <p><u>Groundwater and Non-NPDES Discharges</u></p> <ul style="list-style-type: none"> Deemed in compliance with salinity limits/eligible for a salinity exception <p><u>NPDES Surface Water Discharges</u></p> <ul style="list-style-type: none"> Eligible for a salinity variance

Figure 2. General Outline of Key Elements to be Included in Phase I P&O Study

Category	Year of Implementation									
	1	2	3	4	5	6	7	8	9	10
Stakeholder Coordination	Stakeholder Coordination Meetings (as needed frequency)									
	SGMA GSA Coordination Meetings (as needed frequency)									
Strategic Planning	Regulatory and Policy Evaluations							Phase II Planning, including Basin Plan amendment recommendations		
Governance	Governance Plan – Formation and Structure					Implementation and Refinement of Governance Plan				
Funding	Funding Plan and Financing Strategy					Implementation/Refinement of the Funding Plan and Financing Strategy				
Prioritization & Salinity Management Analyses	Prioritization/Salt Management Analyses to Support Identification of Salt Management Projects				Interim Report					
Conceptual Design of Salt Management Project						Concept Design for Subregional Salt Management Projects and Regional CVBL Project in Final Report				
Special Studies				Groundwater Quality Trace Constituent Stud						
			Emerging Tech Update No. 1			Emerging Tech Update No. 2			Emerging Tech Update No. 3	
						Recycled Water Imports Study				
								Stormwater Recharge Master Plan Study		

NITRATE/SALT MANAGEMENT STRATEGY: GENERAL TIMELINE FOR EXISTING DISCHARGERS



SALT MANAGEMENT STRATEGY: GENERAL TIMELINE FOR PHASED PROGRAM IMPLEMENTATION

Phase I Activity	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	2 nd 10 Years	3 rd 10 Years		
Effective Basin Plan Amendment	★			<div style="border: 1px solid green; padding: 5px; display: inline-block;"> 1 Groundwater Dischargers 2 Surface Water Dischargers </div>										Phase II – Permitting, Engineering Design	Phase III - Construction	
Notice to Comply		①	②													
Notice of Intent		→	→													
Phase I Workplan		→														
Phase I Funding & Governance Plans		→														
Interim Project Report (ID Preferred Projects)		→														
Technology Review				→			→			→						
Long-term Governance & Funding Plans		→														
Phase II Recommendations										→						
Final Project Report (Conceptual Designs)							→									
Annual Reports			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		41		

CV-SALTS

Options to Require Early Participation in P&O and Early Actions to Address Nitrates

Assuming Certified Mail for notification under all alternatives. Currently identifying all dischargers that must be notified.

Approach	Concept	Pros	Cons
1. General Amendment to Existing WDRs	Board would amend all existing WDRs in one single permitting action. (Action would be a General WDR Amendment with an attachment that would describe all of the WDRs that the amendment would apply to.) General Amendment would replace existing salt and nitrate requirements with new provisions. New salinity provisions would require dischargers to either comply with strict ¹ salinity limits or start participating in the P&O Study. New nitrate provisions would require dischargers to either comply with strict nitrate limits or implement early actions.	<ul style="list-style-type: none"> • Would have clearly-enforceable WDR provisions for every discharger after General Amendment issued. • Could tier off of CEQA work done for the Basin Plan Amendments. 	<ul style="list-style-type: none"> • WDRs set many, many different types of salt and nitrate provisions. General Amendment would require consideration of all of those different limits. • Would likely need additional CEQA work. • Could potentially require revision of Anti-deg provisions, time schedules, and other findings in existing permits (salt and nitrate limitations lie at the core of many WDRs).
2. Global Time Schedule Order (TSO)	Board would issue a Time Schedule Order that would cover every permittee. TSO would provide a time schedule that would set interim compliance requirements in lieu of compliance with existing permit limits. Interim compliance requirements would require participation in early phases of P&O study and/or implementation of early actions to address nitrate.	<ul style="list-style-type: none"> • Since Board has delegated authority to issue TSOs to the Executive Officer, no Board hearing would be required. • As an enforcement order, the TSOs would be exempt from CEQA. • Could discriminate between priority areas and non-priority areas. (TSO would not need to apply in areas where early action isn't required.) 	<ul style="list-style-type: none"> • WDRs must have a provision that is being violated in order for the Board to have authority to issue the TSO (i.e., the discharger would need to be violating whatever salt/nitrate limits are in their permit). Some permits have flexible requirements that are currently being met. • TSO would probably need to have an attachment reciting each permit term in each permit that the TSO would address. • Dischargers might be required to disclose that they are subject to "enforcement" on financial disclosures.

¹ It is acknowledged that what is meant by "strict" salinity or nitrate limits is still the subject of debate.

3. Conditional Prohibition	The Basin Plan Amendments would establish conditional prohibitions for salt and nitrate discharges. The prohibitions would prohibit any discharges of salt or nitrates unless the discharge was consistent with the implementation provisions in the proposed Basin Plan Amendments. (The salinity implementation provisions require dischargers to either comply with strict salinity limits or start participating in the P&O Study. The nitrate implementation provisions require dischargers to either comply with strict nitrate limit or implement early actions.)	<ul style="list-style-type: none"> • Doesn't require modifying individual permits to be enforceable. • Would require additional CEQA work, which would need to be incorporated into Staff Report/Env. Analysis before the Basin Plan Amendments are approved. 	<ul style="list-style-type: none"> • "Conditional Prohibition" is a term that could alienate many dischargers, particularly in ag community (avoiding a "prohibition" is why many are participating in CV-SALTS). Could be overcome by messaging, but probably not enough time to communicate the nuances of what this prohibition actually would do in the time remaining. • Difficult to craft language (including off-ramps) that addresses situations faced by a wide variety of dischargers. • Tracking participation is difficult.
4. Hybrid Approach: Revise ILRP General Orders (perhaps Dairy, too) and Establish Conditional Prohibition for All Others	ILRP WDRs would be amended in one single action as per Option 1. Conditional Prohibition described in Option 3 would apply to all other dischargers.	<ul style="list-style-type: none"> • By addressing ILRP General Orders separately, messaging regarding the conditional prohibition becomes much easier. • Doesn't require modifying non-ILRP WDRs in order to establish enforceable requirements on remaining dischargers. • Modification of ILRP General Orders likely falls within scope of ILRP Programmatic EIR, minimizing the amount of additional CEQA work. 	<ul style="list-style-type: none"> • Although the revisions to the ILRP General Orders would only target salt and nitrate provisions, this is still not an easy task. • Additional CEQA work required for conditional prohibition.
5. "Elective" General Order that could Replace Nitrate/Salinity Terms in existing WDRs	The Board would adopt a General Order that would replace WDR provisions relating to salt and nitrate for any discharger that chose to enroll in the General Order. After adopting the General Order, the Board would mail out 13260 notices to all dischargers - the notices would tell the dischargers that they would either need to sign up for the General Order or submit a ROWD to the Board to have their WDRs amended to incorporate strict salt and nitrate limits.	<ul style="list-style-type: none"> • Only need to update permits that don't apply for GO. • Could tier off of CEQA work done for the Basin Plan Amendments. • Would have clearly-enforceable WDR provisions after General Amendment Order issued and dischargers signed up or have their WDRs modified. 	<ul style="list-style-type: none"> • Tracking who has enrolled in the General Order and who has not is difficult. • GO would likely need additional CEQA work separate from the Basin Plan Amendment.

State Water Resources Control Board

TO: Pamela Creedon, Executive Officer
Central Valley Regional Water Quality Control Board

FROM: Darrin Polhemus 
Deputy Director
DIVISION OF DRINKING WATER

DATE: December 6, 2017

SUBJECT: SAMPLING AND COMPLIANCE WITH MCLS WHEN APPLYING THEM AS OBJECTIVES IN WASTEWATER REGULATORY PROGRAM - REVISED

This memorandum supersedes the one issued on December 14, 2016, pertaining to the same subject.

The Central Valley Water Board's water quality control plans (Basin Plans) establish Primary and Secondary Maximum Contaminant Levels (MCLs) as water quality objectives for surface and groundwater within the Central Valley. The Basin Plans, however, do not presently describe how the Central Valley Water Board will implement those water quality objectives when developing waste discharge requirements or determining compliance with water quality objectives.

Central Valley Water Board surface and groundwater permitting programs seek to implement objectives that are fully protective of beneficial uses, while also not applying them in an overly stringent manner. The Division of Drinking Water seeks to maintain the highest quality and best sources possible for use as drinking water supplies. In this case, these two goals combine when considering the beneficial use of municipal and domestic supply, and when Primary and Secondary MCLs are the water quality objectives established to protect municipal and domestic supply.

Central Valley Water Board staff have conferred with me and the Division of Drinking Water staff to assess appropriate ways to apply the Central Valley Water Board's objectives based on MCLs when implementing its regulatory programs for waste dischargers and when monitoring ambient waters to ensure protection of public health for Primary MCLs and public welfare as well as consumer acceptance for Secondary MCLs.

The following is a summary of the determinations made during our discussions. These conclusions are not regulatory in nature, but the Central Valley Water Board may use them to inform future revisions to its water quality control plans.

Sampling for Dissolved Fraction vs. Total When Determining Secondary MCLs

Secondary MCLs help to ensure “consumer acceptance” and public welfare in delivered drinking water, and are based on preventing objectionable taste/odors and also preventing costs associated with potential staining and corrosion of pipes, fixtures, valves, and other plumbing materials.

- Division of Drinking Water evaluates compliance with Secondary MCLs based on samples collected at either groundwater sources or distribution entry points to essentially evaluate the quality of the water that will be delivered to a customer “at the tap.”
 - For surface water, or groundwater under the influence of surface water, this means that in nearly all cases the water has been coagulated, filtered, and disinfected at a permitted drinking water treatment plant prior to sample collection.
 - For groundwater not under the influence of surface water, a community water system’s source has typically been pumped from a relatively deeper aquifer when compared to the shallower monitoring wells used in the wastewater program and, therefore, suspended solids levels should be negligible.
- Surface and groundwater discharge permitting programs set limits at levels intended to prevent any exceedances of water quality objectives, but as a safeguard they also include effluent and receiving water monitoring. If effluent or receiving water monitoring indicate that the discharge is causing the receiving water to exceed a water quality objective for a Secondary MCL, the Central Valley Water Board would require the permittee to implement management measures to ensure that the discharge does not continue to cause or contribute to an exceedance of water quality objectives.
- Sampling for Secondary MCL constituents in groundwater can be complicated because of changing ambient conditions. Also, monitoring wells used in wastewater compliance determinations do not operate on a frequent basis, have lower flow rates and entrance velocities than drinking water wells, and therefore, may contain higher than expected solids content when compared to samples drawn from drinking water wells. The presence of solids with absorbed metals can inflate the total metals value without increasing the dissolved fraction.
- For these reasons, Division of Drinking Water staff and Central Valley Water Board staff agree that the Basin Plans could be amended to authorize compliance monitoring for the metals listed in Secondary MCLs Table A, in source waters for the protection of the MUN beneficial use, using tests other than “total,” such as other methods using variations of filtered samples, where they have been analyzed for their appropriateness.

Averaging Periods and Sampling

- Primary MCLs
 - *Nitrate*. Nitrate is an acute contaminant. For this reason, the Primary MCL for nitrate should be considered as either a single sample or a daily maximum. With respect to a single sample, drinking water regulations require a confirmation sample within 48 hours. (Cal. Code Regs., tit. 22, § 64432.1.) The two samples are then averaged, unless there are concerns with the validity and representativeness of the first sample. The Division of Drinking Water recommends this process for the Central Valley Water Board's regulatory program sampling for nitrate.
 - *Arsenic and metals*. These constituents can be susceptible to seasonal fluctuations and in many cases are naturally occurring. For these constituents, Division of Drinking Water staff recommends annual running averages for compliance periods (the Division of Drinking Water uses quarterly sampling results). In addition, to ensure that treatment systems are operated properly, the Division of Drinking Water recommends increased sampling frequencies when individual sampling events are abnormally high. Division of Drinking Water staff recommend using language similar to Title 22 regulations for sampling and reporting of Primary MCLs.
- *Secondary MCLs*. Constituents below their Secondary MCL levels ensure consumer acceptance and protect public welfare. Because of this, Division of Drinking Water and Water Board staffs agree that authorizing an annual averaging period is acceptable for measuring compliance with these objectives.

cc: Jon Bishop, State Water Board, Exec
Karen Larsen, State Water Board, DWQ
Clay Rodgers, Central Valley Water Board (email)
Clint Snyder, Central Valley Water Board (email)
Andrew Altevogt, Central Valley Water Board (email)
Robert Brownwood, State Water Board, DDW (email)
Kurt Souza, State Water Board, DDW (email)
Bruce Burton, State Water Board, DDW (email)