

## Attachment A-1

# Groundwater Management Zone Policy

### 1.0 Regulatory Basis for Establishment of a Nitrate-Based Groundwater Management Zone

The Central Valley Salt and Nitrate Management Plan (SNMP) looks to establish a programmatic approach to nitrate management in the Central Valley Region. As part of the programmatic approach, the SNMP recommends that the Basin Plans<sup>1</sup> be amended to allow and encourage management of nitrate through the establishment of management zones. In general, a management zone would consist of multiple dischargers working collectively to ensure safe drinking water, manage nitrates to first create a balance within the defined management area, and then ultimately to develop and implement a long-term plan for restoration of groundwater (where feasible) to meet applicable water quality objectives. Although the Basin Plans do not currently prevent the management of nitrates through the creation of management zones, the SNMP recommends the inclusion of a Groundwater Management Zone Policy within the Basin Plans so that what constitutes a proper management zone is clearly defined and to ensure that criteria for approval of a management zone by the Central Valley Water Board are properly established in regulation. The justification for authorizing the establishment of management zones is expressed in various statewide and Central Valley Water Board policies, which are summarized below. With respect to salinity, management zones may be an appropriate regulatory tool in the future so nothing in this policy should be interpreted to exclude salinity regulation under this construct. However, guidelines specific to salinity have not been developed since salinity is being addressed independently from nitrates in the Salinity Management Strategy (see SNMP Attachment A-3).

#### 1.1 Recycled Water Policy SNMP Requirements

The Recycled Water Policy<sup>2</sup> (RWP) makes key findings with regard to SNMPs<sup>3</sup> and management of salt and nitrate within geographically defined areas. These findings encourage the management of salts and nitrates on a groundwater basin/sub-basin level, which logically leads to the need for management zones:

- Salts and nutrients from all sources should be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses (Section 6.a.(2)).

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<sup>1</sup> The Central Valley Region has two Basin Plans: Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (SRSJR Basin Plan), and the Water Quality Control Plan for the Tulare Lake Basin (TLB Basin Plan), (collectively referred to as Basin Plans).

<sup>2</sup> State Water Board Recycled Water Policy, Resolution 2009-0011, adopted February 3, 2009, as amended by Resolution 2013-003, adopted January 22, 2013.

<sup>3</sup> In the list below the use of the word “nutrient” is used to be consistent with the text of the RWP; however, for the Central Valley Region it has been determined that the Central Valley SNMP as well as local SNMPs will focus on nitrate rather than nutrients in general.

- The appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects (Section 6.a.(2)).
- It is the intent of the RWP for every groundwater basin/sub-basin in California to have a consistent salt and nutrient management plan (Section 6.b.(1)(a)).
- It is recognized that the local water and wastewater entities, together with local salt and nutrient contributing stakeholders, will fund locally driven and controlled, collaborative processes open to all stakeholders that will prepare salt and nutrient management plans for each basin/sub-basin in California (Section 6.b.(1)).
- The degree of specificity within these plans and the length of these plans will be dependent on a variety of site-specific factors, including but not limited to size and complexity of a basin, source water quality, stormwater recharge, hydrogeology, and aquifer water quality (Section 6.b.(1)(a)).
- Plans shall be tailored to address the water quality concerns in each basin/sub-basin and may include constituents other than salt and nutrients that impact water quality in the basin/sub-basin. Such plans shall address and implement provisions, as appropriate, for all sources of salt and/or nutrients to groundwater basins, including recycled water irrigation projects and groundwater recharge reuse projects (Section 6.b.(1)(b)).
- SNMPs should include local implementation plans for those groundwater basins where water quality objectives for salts or nutrients are being, or are threatening to be, exceeded (Section 6.b.(2)).

In general, the RWP promotes the management of salt and nitrate at the appropriate scale through the adoption of local SNMPs that are tailored to the water quality concerns of specific areas. While the Central Valley SNMP is intended to guide salt and nitrate management at the programmatic level throughout the entire Central Valley Region, this policy establishes the guidelines for the establishment of management zones for nitrate management at the local or subregional level, consistent with the RWP. As indicated above, management of salinity at a management zone level may be appropriate in the future and nothing in this policy should be interpreted as preventing salinity management zones.

## **1.2 Protection of Groundwater Quality in Groundwater Basins/Subbasins in the Central Valley Region**

California law has long recognized that groundwater is a valuable natural resource in California, and should be managed to ensure both its safe production and its quality.<sup>4</sup> Over the years, the California Legislature has encouraged local agencies to work cooperatively to manage groundwater resources within their jurisdiction.<sup>5</sup> Recently, and effective January 1, 2015, the California Legislature enacted the Sustainable Groundwater Management Act (SGMA), which is intended to enhance local

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<sup>4</sup> California Water Code §10750.

<sup>5</sup> Id.

management of groundwater, and provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater.<sup>6</sup>

Moreover, the regional water quality control boards are required to formulate and adopt water quality control plans that consist of designating or establishing, for all waters within the region including groundwaters, beneficial uses to be protected, water quality objectives, and a program of implementation for achieving water quality objectives.<sup>7</sup> For the Central Valley Water Board, the delineated basins/sub-basins in Department of Water Resources (DWR) Bulletin 118<sup>8</sup> can provide a basis for identifying beneficial uses of groundwater within the Central Valley. For example, the TLB Basin Plan identifies groundwater basins and sub-basins in Table II-2 that for the most part match those shown in DWR Bulletin 118.<sup>9</sup> The SRSJB Basin Plan<sup>10</sup> does not currently identify or enumerate specific groundwater basins or sub-basins.

### 1.3 Management Zones Facilitate Management of Groundwater Quality

The primary concerns regarding nitrate in the Central Valley Region are associated with the Central Valley floor. Accordingly, Central Valley SNMP development has been focused on the areas of the Central Valley with the most significant water quality impairments due to nitrate concentrations. To identify these areas of concern, preparation of the Central Valley SNMP included development of the Initial Conceptual Model (ICM),<sup>11</sup> which relied on Initial Analysis Zones (IAZ) to characterize water balance and water quality for nitrate in groundwaters in the Central Valley floor. The ICM analysis was supplemented by additional groundwater quality analyses to update existing nitrate conditions throughout the Central Valley Region.<sup>12</sup>

The findings from these studies, which are summarized in Section 3 of the SNMP, demonstrate that there are significant areas of water quality concern on the valley floor and that some of these areas of concern are large in geographic area. The SNMP finds that to effectively manage nitrate in these areas, an approach is needed that considers the scale of the water quality problem so that nitrate management activities can be coordinated amongst various dischargers and be tied as closely as possible to other local management efforts.

The DWR-designated groundwater basins and CV-SALTS IAZs are very large - often encompassing more than 1,000 square miles. Activities at the surface and groundwater quality may vary dramatically within such large areas. This reality makes it more difficult to:

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<sup>6</sup> California Water Code §10750, et seq.

<sup>7</sup> California Water Code section 13050(j).

<sup>8</sup> *California's Groundwater*, 2003. DWR Bulletin 118, Update 2003. October 2003. See Sacramento River, San Joaquin River and Tulare Lake Hydrological Regions. Notably, DWR updates Bulletin 118 periodically, and such updates may change the basin/sub-basin delineations.

<sup>9</sup> Water Quality Control Plan for the Tulare Lake Basin (TLB Basin Plan). Second Edition. Central Valley Water Quality Control Board. Revised October 2011, pages II-5 & II-6)

<sup>10</sup> Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (SRSJR Basin Plan). Fourth Edition. Central Valley Water Quality Control Board. Revised October 2011.

<sup>11</sup> *Initial Conceptual Model Final Report: Task 7 and 8 - Salt and Nitrate Analysis for the Central Valley Floor and a Focused Analysis of Modesto and Kings Subregions*. Prepared by Larry Walker Associates et al. on behalf of CV-SALTS. December 2013.

<sup>12</sup> *Draft Region 5: Updated Groundwater Quality Analysis and High Resolution Mapping for Central Valley Salt and Nitrate Management Plan*; prepared by Larry Walker Associates and Luhdorff & Scalmanini on behalf of CV-SALTS. May 2016.

- Develop appropriate waste discharge requirements (WDRs) for individual facilities, or WDRs in general orders for certain types of discharges like irrigated agriculture and dairies.
- Tailor nitrate management programs to mitigate non-compliance with nitrate water quality objectives by assuring safe drinking water for those that rely on groundwater.
- Determine where and how to allocate resources to focus on the most critical water quality problems first, while at the same time addressing the need for nitrate management to occur at a sufficient level to achieve balanced nitrate loadings (where feasible and reasonable) and begin the process of restoring nitrate levels in groundwater to concentrations that are below the applicable water quality objective.
- Calculate and allocate assimilative capacity. The distribution and allocation of assimilative capacity is particularly important when pollutant concentrations at some groundwater supply wells exceed the nitrate water quality objective for protection of the MUN beneficial use even though average water quality in the broader groundwater basin, subbasin or managed area indicates there is assimilative capacity available.

Given these findings, it is appropriate in some areas to allow management of groundwater quality on a scale commensurate with regulatory and resource management decisions that must be made to manage nitrate in a practical manner.<sup>13</sup> For example, a large basin could be partitioned into smaller sub-basins or zones where the relationship between existing land use activities, water sources and uses, and pollutant levels can be more accurately described and managed. Where basins are partitioned into smaller areas to facilitate nitrate management at a more appropriate scale, this partitioned area shall be referred to as a management zone.

## 2.0 Establishment of a Management Zone

The Central Valley SNMP recommends and encourages the establishment of management zones as an option for groundwater quality management at the local or subregional level, especially within the Central Valley floor. The establishment of a management zone, as a discrete regulatory compliance unit for nitrates for the purposes of complying with the Central Valley Region's SNMP, is most appropriate in areas where the interactions among land use, water quality and water users are complex and significant concerns exist with meeting the nitrate water quality objective established to protect the MUN beneficial use in groundwater. In areas where these complexities or water quality concerns do not exist, establishment of a management zone for nitrate may not be appropriate for managing discharges to groundwater. This may be particularly true for dischargers located in basins or sub-basins where existing groundwater quality with respect to nitrates is good and long-term water quality trends are not a concern. Similarly, establishment of a management zone for nitrate may not be appropriate outside of the Central Valley floor in the surrounding foothills and valleys. In either of these situations, compliance with the nitrate management requirements of the Central Valley SNMP

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<sup>13</sup> A key finding in a recent study conducted in the Kings and Tulare Lake groundwater sub-basins within Fresno, Kings and Tulare Counties was that given sub-basin interdependencies it is unlikely for groundwater management to be successful when done in isolation or on too small a scale. *Transitioning to Sustainability: Modeling Groundwater Sustainability in the Kings-Tulare Lake Region*, Report prepared on behalf of the California Water Foundation. November 2015.

may be best accomplished through existing water quality management programs implemented through individual WDRs.<sup>14</sup>

In general, a management zone is:

- A defined area which incorporates a portion of a larger groundwater basin/sub-basin or land area that serves as a discrete regulatory compliance unit for compliance with the nitrate components of the Central Valley SNMP;
- Intended to include all of the groundwater and all of the regulated dischargers that discharge nitrate that choose to participate in the management zone within the land area encompassed by the management zone boundary.
- Intended, where nitrates in groundwater are impacting groundwater being used as a drinking water supply, to facilitate the assurance of safe drinking water for all residents in an area adversely affected by dischargers participating in the management zone,<sup>15</sup> encourage stakeholder coordination and cooperation, promote better water resource management through appropriate allocation of resources, and provide greater regulatory flexibility where needed to prioritize nitrate management activities and allow time to achieve compliance with the Central Valley SNMP's nitrate management goals.
- The basis for the establishment of local management plans to manage nitrate within the management zone's boundary in accordance with the Central Valley Region's overall nitrate management goals established in the Central Valley SNMP.
- Voluntarily proposed by those regulated dischargers located within the proposed management zone boundary that have decided to work collectively and collaboratively to comply with the nitrate management requirements of the Central Valley SNMP

## 2.1 Proposed Process and Requirements for Approval of a Management Zone

The Central Valley SNMP allows dischargers to determine the most effective approach for complying with the SNMP's nitrate management requirements. However, because the Central Valley SNMP encourages development of management zones and management zone implementation plans as the preferred pathway for areas where nitrates are a great concern, the Central Valley SNMP recommends that a certain period of time be built into the process to allow for development of such zones. For dischargers within a geographic area that decide to manage impacts of nitrate discharges collectively and collaboratively with other dischargers through the establishment of a management zone, the SNMP recommends a Groundwater Management Zone Policy, to be adopted into the Basin Plans, that (a) sets forth the general criteria and process for establishing a management zone; and (b)

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<sup>14</sup> The Nitrate Permitting Strategy sets forth a recommended approach for addressing nitrates in WDRs for individuals, or groups of dischargers covered by a single WDR, that are either in an area not covered by a management zone, or that choose to not participate in a management zone.

<sup>15</sup> Where there are dischargers within a management zone boundary that choose not to participate in the management zone, they must be able to provide assurance to the Central Valley Water Board that they are addressing any adverse effects directly or indirectly associated with their discharge.

establishes the minimum requirements necessary for a proposed management zone and management zone implementation plan to be approved by the Central Valley Water Board.

The proposed process for development and application of a management zone is closely linked with the SNMP Nitrate Permitting Strategy (NPS) and its requirements for implementation (see Attachment A-2). Implementation of the NPS begins with a notice to dischargers that they have a responsibility to comply followed by dischargers having to make a decision regarding how they wish to comply – either individually or as part of a management zone. If the latter, then a Preliminary Management Zone Proposal is required. Following is a description of these first two key implementation activities and associated requirements: :

**Notice to Comply** - Dischargers receive notice from the Central Valley Water Board that their basin/subbasin is a priority area and that the dischargers have a responsibility to comply with the SNMP. Such notification by the Central Valley Water Board shall include notification to appropriate County officials responsible for implementing Onsite Septic System regulations. To the extent that information is available, such notice shall provide contact information, or links to information, to dischargers with respect to efforts that may be underway in their area for development of a groundwater management zone.

**Development of Preliminary Management Zone Proposal for Dischargers Forming a Management Zone**<sup>16</sup> - An initiating group of dischargers<sup>17</sup> shall develop a Preliminary Management Zone Proposal (Preliminary Proposal), and submit the Preliminary Proposal to the Central Valley Water Board. For dischargers that are within the first priority area(s), the SNMP recommends that a Preliminary Proposal be submitted within 270 days of the effective date of the Basin Plan Amendments, as long as the Central Valley Water Board has provided the notice to comply described above to dischargers in advance of the Basin Plan Amendments becoming effective. For dischargers not in the first priority area(s), the SNMP recommends that a Preliminary Proposal be due within 1 year from the notification provided by the Central Valley Water Board. The Executive Officer of the Central Valley Water Board shall retain discretion to extend the timelines for submittal of a Preliminary Proposal if proper justification is provided to the Executive Officer at least 30 days prior to the deadline for submitting the Preliminary Proposal. The Preliminary Proposal needs to include the following information:

- Proposed preliminary boundary areas;
- Identification of Initial Participants/Dischargers;
- Identification of other dischargers and stakeholders in the management zone area that the initiating group is in contact with regarding participation in the management zone;
- Identification of process for coordinating with others that are not dischargers to address nitrate-related drinking water issues, which must include consideration of coordinating with affected

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<sup>16</sup> Although the actions are conveyed here in a stepwise process, nothing here should prevent, or be interpreted as preventing, dischargers from starting the process of developing a preliminary management zone proposal prior to receiving the notification to comply.

<sup>17</sup> An initiating group of dischargers may consist of an ad hoc group that has come together to develop a preliminary proposal, or could consist of an existing entity or organization made up of dischargers that takes the lead in developing a preliminary proposal.

communities, domestic well users and their representatives, the State Water Board’s Division of Drinking Water, Local County Health Officials, Sustainable Groundwater Management Agencies and others as appropriate;

- Initial identification of public supply wells, and/or domestic wells that exceed the drinking water standard for nitrate;
- An Early Action Plan (EAP), that includes specific actions and a schedule of implementation, to address immediate drinking water needs of those initially identified within the management zone boundary that are drinking groundwater that exceeds nitrate standards;
- Initial assessment of groundwater conditions based on existing data and information<sup>18</sup>;
- Identified constituents of concern the group intends to address with the management zone besides nitrates (the group has the option to consider other constituents of concern, but is not required to do so);
- Proposed timeline for:
  - Identifying additional participants;
  - Further defining boundary areas;
  - Developing proposed governance and funding structure;
  - Additional evaluation of groundwater conditions across the management zone boundary area, if necessary;
  - Identification of regulatory compliance pathway for participating dischargers (i.e., intend to request approval of use of assimilative capacity that may be available on a volume-weighted basis in the upper zone, or need for obtaining an approved exception from meeting the nitrate water quality objective for protection of the MUN beneficial use); and
  - Preparing and submitting a Final Management Zone Proposal and a Management Zone Implementation Plan.

After submittal of the Preliminary Management Zone Proposal and consistent with the NPS, dischargers that have opted to comply with the SNMP nitrate management requirements through participation in a management zone shall implement the following three steps:

**Step 1** – As soon as the Central Valley Water Board receives a Preliminary Proposal, it shall be prominently posted on the Central Valley Water Board’s website, circulated publically through the State Water Board’s Lyris list-serve, and individual postcard notices shall be sent to dischargers in the management zone area of the Preliminary Proposal to the extent that the Central Valley Water Board has staff resources available to provide such notices. The postcards will provide a link to a list of all

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<sup>18</sup> The Central Valley SNMP includes significant data and information with respect to groundwater quality throughout the Central Valley. Participants of a Groundwater Management Zone may rely on the previously developed information that is part of the Central Valley SNMP. However, participants may also supplement the available data and information to more accurately characterize groundwater quality conditions for the proposed management zone area.

dischargers notified, and contact information for the preliminary management zone. Within 60 days of submittal and posting of the Preliminary Proposal(s), individual dischargers must submit a notice of intent (NOI) to the Central Valley Water Board of their intent to participate in a management zone. The NOI must include the name or description of the management zone in which they intend to participate, and acknowledge that they have reviewed and understand the commitments associated with participation in the management zone based on the Preliminary Proposal for their area. For individual dischargers that are subject to a General Order and are members of an approved Third Party Group, the Third Party Group may submit the NOI for its members.<sup>19</sup> For individual dischargers that decide not to participate in a management zone, they shall submit a NOI as outlined in Section 3.2.1.2 of the Nitrate Permitting Strategy (see SNMP Attachment A-3).

The Central Valley Water Board's Executive Officer shall have the discretion to allow dischargers to join/participate in a management zone even in circumstances where they may have originally provided a NOI that first indicated that they were not going to participate. In cases where a discharger first indicates an intent to participate in a management zone, and then decides to not participate later in the process, the Executive Officer shall retain discretion to allow the discharger to select Path A under the Nitrate Permitting Strategy, however, in such instances, the discharger must provide justification demonstrating why participation in the management zone is no longer appropriate for the discharger. In such cases, the discharger must show how permitting under Path A for their discharge is better for water quality and/or in the public interest as compared to their continued participation in the management zone.

**Step 2** – Within 60 days after submittal of the Preliminary Proposal to the Central Valley Water Board and if no objections to the EAP are provided in writing by the Central Valley Water Board, the management zone must begin implementing the EAP. Implementation of the EAP, as provided in the Preliminary Proposal, must consider any comments provided by the Central Valley Water Board as well as comments submitted by the public. The Executive Officer maintains the discretion to extend the time for implementation of the EAP as determined necessary.

Within a 180 days after submittal of a Preliminary Proposal, the management zone must submit a Final Management Zone Proposal.

The Final Management Zone Proposal must include the following:

- Timeline for development of a Management Zone Implementation Plan.
- Updated list of participants.
- Governance structure that, at a minimum, establishes the following: (a) roles and responsibilities of all participants; (b) funding or cost-share agreements to implement short term nitrate management projects/activities<sup>20</sup>; and (c) a mechanism to resolve disputes among participating dischargers.

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<sup>19</sup> Third Party groups need to make every effort to inform members of the decision to proceed forward in developing and/or participating in a groundwater management zone for nitrates.

<sup>20</sup> If future legislative efforts result in the development of funds available for addressing short term and/or long term nitrate drinking water issues, the Final Management Zone proposal may include and/or indicate how use of such funds are

- Additional evaluation of groundwater conditions across management zone area, if necessary.
- Identification of proposed approach for regulatory compliance (i.e., use of assimilative capacity and/or seeking approval of an exception for meeting nitrate water quality objectives).
- Explanation of how the management zone intends to interact and/or coordinate with other similar efforts such as those underway pursuant to the SGMA.

**Step 3** – Upon receipt of the Final Management Zone Proposal and after the Executive Officer of the Central Valley Water Board has deemed the Final Management Zone Proposal to be complete, which must include the timeline for development of the Management Zone Implementation Plan (see below), the Central Valley Water Board may revise WDRs for those dischargers participating in the management zone to incorporate necessary components of the Final Proposal. Revisions to WDRs may be made through a Resolution that revises specified WDRs to include requirements for participation in the management zone, and for implementation of the relevant Management Zone Implementation Plan after it has been approved by the Central Valley Water Board. In determining the appropriate timeline for development of the management zone Implementation Plan, the SNMP recommends that the Central Valley Water Board consider the size and complexity of the area covered by the Final Management Zone Proposal, and the number of residences or community water systems that are depending on implementation of the Management Zone Implementation Plan for obtaining drinking water that no longer exceeds nitrate drinking water standards. The Management Zone Implementation Plan must be posted and be made available for public review and comment prior to approval by the Central Valley Water Board’s Executive Officer.

Upon timely submittal of the Final Management Zone Proposal and after it has been deemed complete by the Executive Officer of the Central Valley Water Board, dischargers identified as being participants of the management zone shall be deemed to be in compliance with nitrate requirements in individual or general waste discharge requirements or in Conditional Waivers as long as the discharger continues to be an active participant in the management zone, and as long as the management zone is meeting identified timelines and milestones in a timely manner. This includes implementing the EAP in a timely manner.

## 2.2 Minimum Requirements for Management Zone Implementation Plan

An Implementation Plan prepared for a management zone shall meet the following minimum requirements:

- It must be consistent with the management goals of the Central Valley SNMP, including, addressing short-term and long-term drinking water needs affected by nitrates, plan for achieving balanced nitrate loadings within the management zone (to the extent feasible and reasonable), and plan for establishing a managed aquifer restoration program to restore nitrate levels to concentrations at or below the water quality objectives to the extent it is feasible and reasonable to do so.

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coordinated to address nitrate drinking water related issues that would otherwise be the responsibility of the management zone participants.

- The highest water quality priority within any management zone where groundwater is impaired by nitrate contamination is the assurance that a drinking water supply that meets drinking water standards is available to all drinking water users within the management zone boundary.
- It must document collaboration with residents that are the intended beneficiaries of short/long-term efforts to provide safe drinking water.
- Funding or cost-share agreements, or a process for developing such funding or cost-share agreements, to implement intermediate and long-term nitrate management projects/activities.<sup>21</sup>
- Implementation of nitrate management activities within a management zone may be prioritized based on factors identified in the Central Valley SNMP and the results of the characterization of nitrate conditions. Prioritization provides the basis for allocating resources with resources directed to the highest water quality priorities first.
- It shall include a water quality characterization and nitrate management measures consistent with the requirements established in the Central Valley SNMP, including:
  - Characterization of nitrate conditions within the proposed management zone which will be used as the basis for demonstrating how nitrate will be managed within the management zone over short and long-term periods to meet the management goals established in the Central Valley Region SNMP.
  - Short ( $\leq 20$  years) and long-term ( $> 20$  years) projects and/or planning activities that will be implemented within the management zone, and in particular within prioritized areas (if such areas are identified in the Implementation Plan) to make progress towards attaining each of the management goals established by the Central Valley SNMP. Over time as water quality is managed in prioritized areas, updates to the plan may shift the priorities in the management zone.
  - Milestones related to achievement of the overall Central Valley SNMP's long-term goal of achieving balanced nitrate loadings and managed aquifer restoration.
  - A short and long-term schedule for implementation of nitrate management activities with interim milestones.
  - Identification of triggers for the implementation of alternative procedures or measures to be implemented if the interim milestones are not met.
  - A water quality surveillance and monitoring program that is adequate to assure that the plan when implemented is achieving the expected progress towards attainment of management goals.
  - Consideration of areas outside of the management zone that may be impacted by discharges that occur within the management zone boundary areas.

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<sup>21</sup> As indicated previously, should future legislative efforts result in the development of funds specific to addressing drinking water issues, such funding should be considered as an appropriate funding source for providing short and/or long-term drinking water, subject to the terms, conditions and restrictions for the funding.

- The plan may be modified periodically to incorporate changes based on new data or information, and should generally be changes that will benefit water quality in the management zone. Any modifications to the plan that impact or change timelines, milestones or deliverables identified in the Implementation Plan must be approved by the Central Valley Water Board's Executive Officer.
- Identify the responsibilities of each regulated discharger, or groups of regulated dischargers participating in the management zone to manage nitrate within the Zone.
- Include a proposed monitoring program, or in the alternative, participate in a valley-wide and/or regional groundwater monitoring, if appropriate.
- Before the Central Valley Water Board may modify any WDRs to incorporate the use of assimilative capacity on a management zone basis or to adopt an exception to meeting a water quality objective in a WDR for a discharger participating in the management zone, the Central Valley Water Board's Executive Officer must approve the establishment of the management zone and its Implementation Plan after providing public notice and opportunity to comment. Prior to approval of a management zone and a Management Zone Implementation Plan, the Central Valley Water Board may adopt and/or modify WDRs to include time schedules that allow dischargers participating in a management zone an appropriate amount of time before being required to comply immediately with limitations related directly nitrate WQOs. Executive Officer approval of the management zone in no way changes the requirement that any modifications to WDRs must be approved by the Central Valley Water Board after public notice and hearing.

### **2.3 Requirements for Allocating Assimilative Capacity on a Management Zone Basis**

- Within a management zone, available assimilative capacity will generally be determined based on the volume-weighted average<sup>22</sup> of groundwater quality within the upper zone for nitrates within the management zone. While management zones may be larger than DWR Bulletin 118 basins or sub-basins, the allocation of assimilative capacity may not be granted for an area that is larger than an identified basin or sub-basin from Bulletin 118.
- Assimilative capacity, calculated using a volume-weighted average approach within the upper zone of the delineated management zone, can only be allocated to participating stakeholders within the management zone. Otherwise, assimilative capacity for non-participating stakeholders within the management zone may only be granted under the Central Valley Water Board's more traditional approach, which is set forth in the Section 3.2.1 of the Nitrate Permitting Strategy (see SNMP Attachment A-3). Further, where there is a management zone, the Central Valley Water Board must consider the impact that allocating assimilative capacity to the non-participant may have on the management zone, and the Central Valley Water Board may require that additional conditions/demonstrations be made by a discharger that chooses to not participate in the management zone.
- Before the Central Valley Water Board can authorize any allocation of assimilative capacity to a management zone, a management zone proposal shall include a comprehensive antidegradation

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<sup>22</sup> See Section 3.3.1.4 of the Central Valley SNMP for acceptable method to calculate a volume-weighted average for the production zone.

analysis, consistent with the statewide Antidegradation Policy.<sup>23</sup> Management zone participants seeking an allocation of assimilative capacity (individually or collectively), shall as part of the development of the Implementation Plan:

- Demonstrate there is sufficient assimilative capacity to ensure that the proposed discharge, together with discharges from participants to the same management zone, including discharges to recharge projects, will not cause the volume-weighted average water quality in the upper zone underlying the management zone to exceed the applicable Basin Plan objective(s);
  - Demonstrate that the proposed discharges covered by the management zone will not unreasonably affect present and anticipated beneficial uses in or down-gradient to the management zone;
  - Demonstrate that the allocation of assimilative capacity, and the resulting net effect on receiving water quality, is consistent with maximum benefit to the people of the State; and
  - Demonstrate that Best Practicable Treatment or Control will be implemented to assure that a pollution or nuisance will not occur and will be consistent with maximum benefit.
- Where water quality for drinking water wells within the management zone does not meet drinking water standards for nitrate, and dischargers propose to rely on the calculated assimilative capacity of the upper zone to demonstrate compliance for nitrate, then the dischargers within the management zone must accept responsibility to mitigate localized impacts of discharges within the management zone as well as down-gradient users, and provide "maximum benefit" by implementing and maintaining an alternative drinking water source for impacted areas (e.g., alternate water supply, well-head treatment, point-of-entry treatment, etc.). Providing an alternative drinking water source may rely on temporary methods in the short-term (e.g., < 5 years), but the Implementation Plan for the management zone shall establish a permanent solution for providing safe drinking water along with a schedule for implementation within a reasonable time frame. Dischargers participating in the management zone must demonstrate that the short and long-term solutions were developed collaboratively with the users to be protected.
  - Where assimilative capacity is not available for allocation, the management zone may propose that an exception to meeting the nitrate water quality objective be granted in the management zone, subject to the requirements for granting an exception established in the Exceptions Policy.
  - In general, the Central Valley Water Board should not allocate use of assimilative capacity based on a volume weighted average in the upper zone that would result in groundwater exceeding a trigger level of 75% of the nitrate water quality objective over a 20-year time frame, unless the Central Valley Water Board can properly find that use of assimilative capacity above this trigger level will not result in pollution or nuisance over the longer term.

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<sup>23</sup> State Water Board Resolution 68-16. *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Antidegradation Policy).

### **3.0 Proposed Modifications to the Basin Plans to Support Policy Implementation**

The following subsections summarize the key changes anticipated for each Basin Plan to support adoption of this policy.

#### ***Existing and Potential Beneficial Uses***

No modifications anticipated.

#### ***Water Quality Objectives***

No modifications anticipated.

#### ***Implementation***

Incorporate the relevant elements of this Policy into the Basin Plans to encourage the use of management zones for the management of nitrate, especially in areas with significant water quality concerns.