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KERN WATER COLLABORATIVE
FINAL MANAGEMENT ZONE PROPOSAL
Executive Summary

PREPARED FOR



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EXECUTIVE SUMMARY

ES.1. Preliminary Management Zone Overview

The Kern Water Collaborative (KWC) initiated the formation of the KWC Management Zone to comply with the Central Valley Regional Water Quality Control Board (Central Valley Water Board or CVWB) Nitrate Control Program requirements. To address the growing needs of this large region of California to solve the nitrate problem in groundwater, representatives from local growers, dairies, and other permitted dischargers in the Priority 2 areas within the Kern County Subbasin and a portion of the Tulare Lake Subbasin formed the KWC. The KWC elected to pursue Path B to comply with the Nitrate Control Program, which meant forming a Management Zone.

The proposed KWC Management Zone includes the Kern County Subbasin and a small portion of the Tulare Lake Subbasin (**Figure ES-1**). Due to differences in nitrate groundwater conditions within the subbasins of the Central Valley, the Central Valley Water Board assigned priorities based on the urgency of addressing nitrate problems in each groundwater subbasin. The Modesto, Turlock, Chowchilla, Kings, Tule, and Kaweah Subbasins were deemed the highest priority, Priority 1, which meant that their compliance with the Nitrate Control Program was on a fast-track compared to the Tulare Lake Subbasin and portions of the Kern County Subbasin (and five other subbasins), which were deemed a Priority 2 basin.

The overarching management goals of the Nitrate Control Program are (Central Valley Water Board, 2020):

1. Ensure safe drinking water supply;
2. Reduce salt and nitrate loading so that ongoing discharges neither threaten to degrade high-quality waters absent appropriate findings by the CVWB nor cause or contribute to exceedances of water quality objectives; and
3. Implement long-term, managed restoration of impaired water bodies where reasonable and feasible.

Kern Water Collaborative Management Zone
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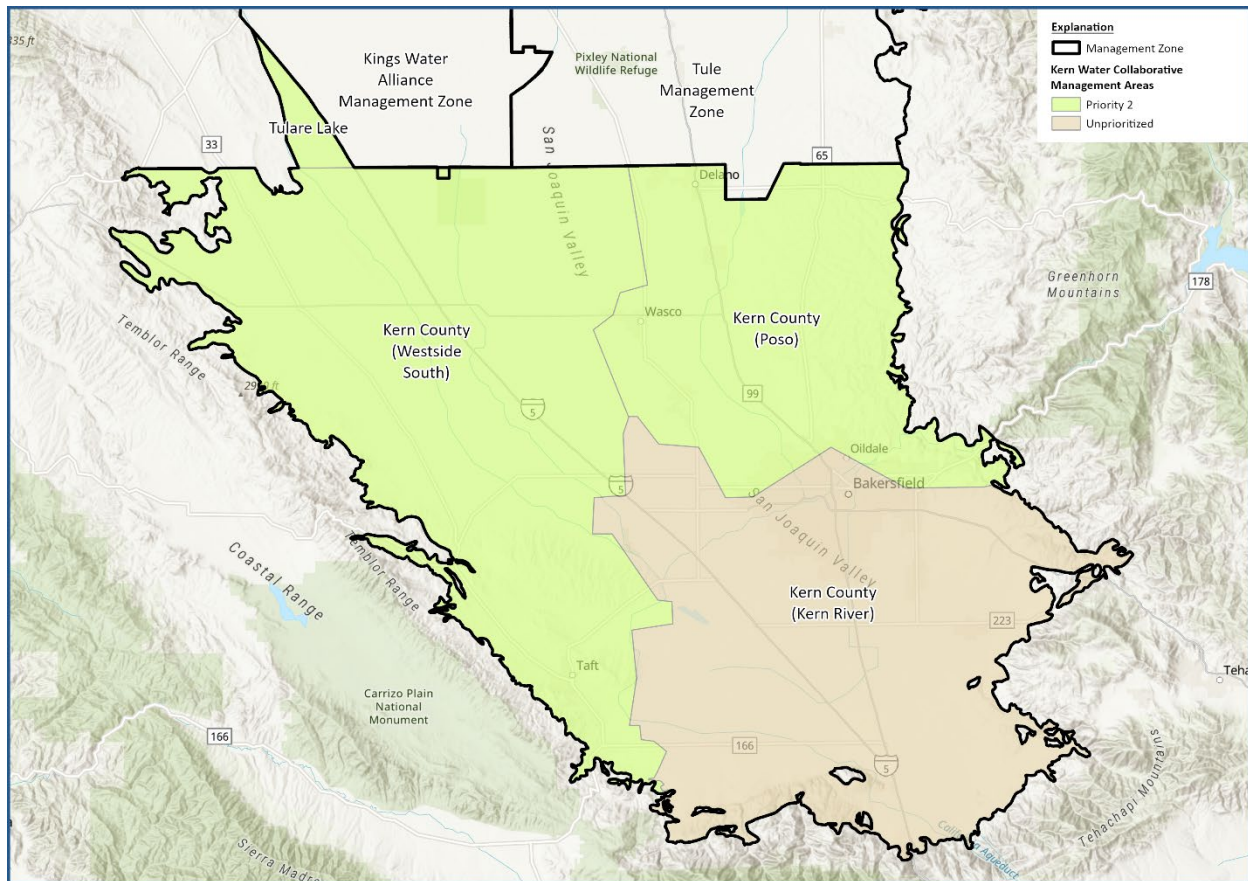


Figure ES-1. Kern Water Collaborative Management Zone

The Kern Water Collaborative worked collaboratively with permittees to form a Management Zone to achieve these goals. The proposed KWC Management Zone (Path B) to comply with the Nitrate Control Program allows an exception from the application of the nitrate standard compared to Path A. Path A is for Individual Permitting and imposes requirements to the discharger that may be difficult and expensive (potentially including: making significant upgrades to a discharger's facility, conducting extensive monitoring of discharge and local groundwater, providing replacement drinking water to local residents, etc.). The Path B option encourages partnership and teamwork among its discharging members to solve the nitrate problem within their Management Zone boundary.

Several documents are required to comply with Path B of the Nitrate Control Program. The first was the Preliminary Management Zone Proposal, including a key companion document, the Early Action Plan. For Priority 2 subbasin areas, these were submitted to the Central Valley Water Board on December 30, 2024. Implementation of the Early Action Plan began within 60 days of submittal, on February 26, 2025. The Final Management Zone Proposal (this document) is then due 180 days after public comment and the CVWB's review of the Preliminary Management Zone Proposal, which is February 16, 2026. The Management Zone Implementation Plan will be due six months after the CVWB's Executive Officer accepts the Final Management Zone Proposal.

This document, the Final Management Zone Proposal, along with one of its main attachments, the Early Action Plan, is the next step to complying with the Nitrate Control Program and continuing the process of solving the nitrate problems in the proposed Management Zone boundary. One of the most important components of the development of the Preliminary and Final Management Zone Proposals and Early Action Plan is public outreach and community engagement. California State law (AB 685) declares that “every person in the state has a right to clean, safe, and affordable drinking water.” This policy is commonly referred to as the Human Right to Water. To promote this effort, the KWC has been engaging the community through various outlets (including but not limited to, mailings, flyers, radio announcements, advertisements, emails, public webinars, and public surveys) to engage residents within the Management Zone to become involved in the decision-making process associated with solving their local nitrate problems.

This Final Management Zone Proposal document is purposely designed to address the three Priority 2 (P2) subbasin areas (a small portion of the Tulare Lake Subbasin, as well as the Kern County (Westside South) and Kern County (Poso) areas) in the Kern Water Collaborative domain. For purposes of this report, many of the descriptions of basic features and components that are similar across the P2 areas of the Management Zone are presented in the main FMZP document, and a series of Attachments provide specific local information for each of the three P2 areas.

The contents of this Final Management Zone Proposal include:

Section 1: Preliminary Management Zone Overview

This section provides an introduction and document roadmap, as well as background information about the Nitrate Control Program, more details on the Priority 2 timeline, the formation of the Kern Water Collaborative, a table cross referencing where in this document regulatory requirements are addressed, the preliminary governance, and the initial list of participants.

Section 2: Characterization of Proposed Management Zone

- This section describes the characterization of the P2 areas of the KWC Management Zone, including geography, jurisdictions, Groundwater Sustainability Agencies, water management entities, drinking water systems, Disadvantaged Communities and Severely Disadvantaged Communities, and land use.
- This section also includes the Initial Assessment of Groundwater Conditions, which is a crucial component in determining the extent of nitrate issues within the proposed Management Zone. This involves a summary of hydrogeology, groundwater elevations and flow, delineation of the Upper Zone of the groundwater system, and most importantly the nitrate water quality. This section contains several maps illustrating these elements within the proposed Management Zone and describes how the spatial interpretation of ambient nitrate conditions in groundwater is developed. The ambient nitrate map is used to identify areas within the Management Zone that have elevated nitrate conditions as determined by using scientific and analytical techniques with the most recent and complete dataset available at the time. A nitrate trend analysis is also presented.

Section 3: Management Zone Participants

- This section contains a description and list of Management Zone participants, including both permitted dischargers subject to the requirements of the Nitrate Control Program, as well as non-dischargers that have agreed to work collaboratively with the permitted dischargers to support the implementation of the Program.

Section 4: Current Nitrate Treatment and Control Efforts or Management Practices

- This section contains descriptions of current nitrate treatment and control efforts or management practices that exist within the Management Zone. These descriptions mainly originate from dischargers themselves, whether under a General Order (such as the Irrigated Lands Regulatory Program or Concentrated Animal Feeding Operations) or under individual permits.

Section 5: Early Action Plan Development and Implementation

- This section provides an overview of the Early Action Plan (which is an attachment to this Final Management Zone Proposal).

Section 6: Preparation of Management Zone Implementation Plan

- This section discusses how the Management Zone will next develop a Management Zone Implementation Plan in accordance with the requirements of the Nitrate Control Program.

The following table lists the Nitrate Control Program requirements for the Final Management Zone Proposal and where these requirements are addressed within this document (**Table ES-1**).

Table ES-1. Document Roadmap for FMZP Requirements (as described in Central Valley Water Board 2020)	
Requirement	FMZP Section
Proposed boundaries of the proposed P2 Management Zone areas	Section 1
Identification of initial and updated Participants/Dischargers	Section 1
Identification of other dischargers and stakeholders in the proposed P2 Management Zone areas that the initiating group is in contact with regarding participation in the Management Zone	Section 3
Assessment of groundwater quality conditions in the Upper Zone based on readily available existing data and information	Summary in Section 3; detailed information in Attachments B-2, C-2, D-2, E-2, and F-2

Table ES-1. Document Roadmap for FMZP Requirements (as described in Central Valley Water Board 2020)	
Requirement	FMZP Section
Identification/summary of current nitrate treatment and control efforts, or management practices of proposed P2 Management Zone participants	Section 5
Initial and updated identification of public water supplies or domestic wells within the Management Zone areas with nitrate concentrations exceeding the water quality objective	Summary in Section 2; detailed information in Attachments B, C, and D; Section 3 in proposed P2 Management Zone EAP (see Attachment F)
An EAP to address drinking water needs for those that rely on public water supply or domestic wells with nitrate levels exceeding the water quality objective	Summary in Section 5; complete proposed P2 Management Zone EAP in Attachment F
Documentation of process utilized to identify affected residents and the outreach utilized to ensure that they are given the opportunity to participate in development of an EAP	Summary in Section 5; Sections 3, 4 and 5 in the EAP (see Attachment F)
Identification of areas within or adjacent to the Management Zone that overlap with other management areas/activities	Section 2; Attachments B, C, and D
Any constituents of concern that the individual discharger/group of dischargers intend to address besides nitrate (not required but is an option available)	Section 5 discusses the use of Safe and Affordable Funding for Equity and Resilience (SAFER) funding to augment well sampling program.
Documentation of actions taken to implement the EAP	Section 5
Management Zone Implementation: <ul style="list-style-type: none"> • Timeline for development of the MZIP; • Governance and funding structure for administration of the Management Zone; Explanation of how the Management Zone intends to interact and/or coordinate with other programs such as Sustainable Groundwater Management Act (SGMA)	Section 6, 5.6, 5.7

ES.2. Characterization of the Proposed Management Zone

This section of the document describes the area encompassed by the KWC Management Zone, focusing on the Priority 2 areas: Tulare Lake portion, Kern County (Westside South), and Kern County (Poso). This section includes general descriptions of each area, as well as a description of drinking water systems, disadvantaged and severely disadvantaged communities, and land use. This section also includes the initial assessment of groundwater conditions, including hydrogeology, groundwater elevations and flow directions (with a discussion of areas of potential contribution), the delineation of the Upper Zone (which is the focus of the Nitrate Control Program), and nitrate water quality. The nitrate water quality section describes the data sources utilized for assessing nitrate conditions in groundwater, including a description of the data collection process, compilation and standardization of nitrate data, identification of outliers and imputation for non-detectable concentrations, well depth zone assignment, ambient and trends analyses, and an evaluation of inactive drinking water wells.

Section 2 is accompanied by a series of Attachments to this document that provide specific information and details for each P2 area of the proposed KWC Management Zone. **Attachments B-1** and **B-2** address these components for the proposed Tulare Lake area of the KWC Management Zone. **Attachments C-1** and **C-2** address these components for the proposed Kern County (Westside South) area of the KWC Management Zone. **Attachments D-1** and **D-2** address these components for the proposed Kern County (Poso) area of the KWC Management Zone.

ES.3. Management Zone Participants

Dischargers that received a Notice to Comply with the Nitrate Control Program include (a) coalitions that represent growers subject to the Irrigated Lands Regulatory Program (ILRP) General Order R5-2013-0120-09 (*Waste Discharge Requirements General Order for Growers within the Tulare Lake Basin Area that are Members of a Third-Party Group*); (b) permittees subject to various General Orders, including those applicable to concentrated animal feeding operations including milk cow dairies, confined bovine feeding operations, poultry operations, and oil and gas operations; and (c) permittees that discharge under individual waste discharge requirements. The KWC conducted outreach to the representatives of permittees under General Orders and individual dischargers. The FMZP identifies the permitted dischargers that have elected to participate in the KWC.

ES.4. Current Nitrate Treatment and Control Efforts or Management Practices

The current nitrate treatment and control efforts or management practices being implemented by each of the participating permittees located in the proposed P2 groundwater subbasin areas of the KWC are summarized in this FMZP. The FMZP provides a general summary of the permit requirements applicable to ILRP General Order R5-2013-0120-09 (*Waste Discharge Requirements General Order for Growers within the Tulare Lake Basin Area that are Members of a Third-Party Group*), or subject to a General Order for a concentrated animal feeding operation, or subject to a General Order for oil and gas operation. For permittees with an individual WDR that are participating in the KWC, the FMZP provides a brief summary of the nature of the permitted facility and their existing permit requirements related to the management of nitrate.

ES.5. Early Action Plan Development

Establishment of a Management Zone requires the preparation of an Early Action Plan (EAP) that identifies actions the KWC will carry out to address sources of drinking water with unsafe nitrate levels. The key element of the EAP, which was developed in collaboration with the community, is the Interim Replacement Water Program. This program provides immediate alternative sources of drinking water for those that depend on groundwater with unsafe levels of nitrate for their drinking and cooking needs, that is water with more than 10 mg/L- nitrogen (N).

The FMZP includes a summary of the key elements of the EAP including a summary of the wells potentially impacted by high nitrate levels, identification of areas within the Management Zone where the groundwater quality most likely exceeds 10 mg/L-N, a brief overview of key EAP elements such as community outreach, the interim replacement water options (e.g., bottled water delivery, point-of-use treatment systems and water fill stations), a well-testing program to support EAP implementation, and a general schedule for implementation. The actual EAP, which includes more comprehensive information is attached to this FMZP as Attachment F.

ES.6. Preparation of Management Zone Implementation Plan

The KWC Management Zone will work with the Central Valley Water Board during the review and acceptance of this FMZP. While that process is ongoing, the KWC Board will begin development of the Management Zone Implementation Plan (MZIP) for the Priority 2 areas within the Management Zone. The content of the MZIP will be consistent with the Nitrate Control Program regulations and outcome of ongoing discussions with Central Valley Water Board staff regarding interpretation of these regulations. The KWC Management Zone is committed to submitting its MZIP for its Priority 2 areas to the Central Valley Water Board within six months after this FMZP is accepted by the Executive Officer, as required by the Nitrate Control Program.