



# Chowchilla Management Zone

## Early Action Plan *Executive Summary*

AUGUST 29, 2022

PREPARED BY:

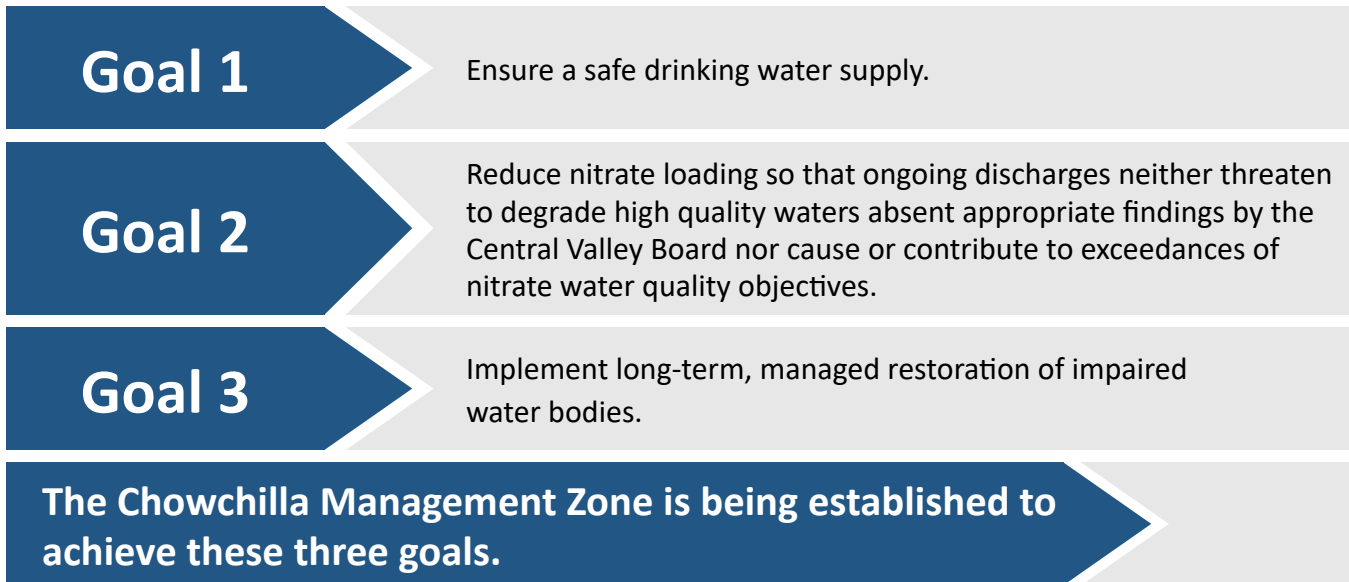


# Executive Summary

## ES. 1 Background

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) has begun implementing a new Nitrate Control Program in the Central Valley that is designed to achieve three nitrate management goals.

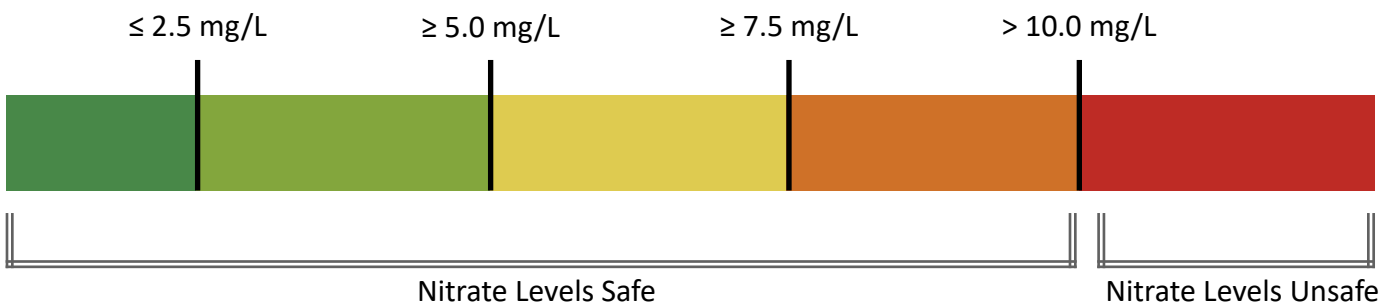
### Nitrate Management Goals



As required by the Nitrate Control Program, the Management Zone prepared this Early Action Plan (EAP), which identifies the initial actions that will be carried out to address drinking water being used by residences in the basin with unsafe nitrate levels (Figure ES-1). This EAP is an updated version of the original EAP, which began implementation on May 8, 2021. This updated EAP has been prepared as part the preparation of the Final Management Zone Proposal (FMZP) for the Chowchilla Management Zone.

The key element of this 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 residences that depend on groundwater that contains unsafe levels of nitrate used for drinking and cooking (water with more than 10 milligrams per liter nitrate as nitrogen (mg/L-N)).

**Figure ES-1. Scale Showing Nitrate Safe and Unsafe Levels**



## ES 2. Identification of Nitrate-Impacted Areas

As described in more detail within the FMZP, nitrate groundwater data were requested, downloaded, and compiled using various publicly available sources and complemented by data requested from Madera, Merced, and Fresno County departments. These nitrate groundwater data compilations were meticulously vetted and categorized into depth zones, following previously developed CV-SALTS best management practices. Wells constructed in the Upper Zone of the groundwater system and with nitrate data since the year 2000 were used to determine recent average ambient nitrate conditions. The best readily available groundwater nitrate dataset compiled and analyzed included sample results for Upper Zone wells between February 2000 and October 2020. These nitrate data were temporally and spatially declustered for use in determining ambient nitrate conditions in the Upper Zone for the Management Zone.

The Upper Zone average nitrate concentrations were used to produce a map showing the spatial interpolation (kriging using a search radius of 1.5 miles) of ambient nitrate conditions within the Management Zone for conditions between 2000 and 2020. Using this map, it is possible to locate several nitrate-impacted areas that occur within the Management Zone. These areas are defined by average recent nitrate concentrations in the Upper Zone that exceed the drinking water Maximum Contaminant Level (MCL) of 10 mg/L N. As illustrated in **Figure ES 1**, there are several pockets of nitrate-impacted areas, mostly in the central portions of the Management Zone. The Management Zone recognizes that the map of ambient nitrate in the Upper Zone has inherent uncertainty and is adaptive in nature. As more Upper Zone nitrate data become available (through EAP well testing implementation or other monitoring programs such as the Irrigated Lands Regulatory Program or Groundwater Sustainability Agencies), the ambient nitrate analysis will be repeated, and the ambient map will be updated (and potentially changed) during the development of the Management Zone Implementation Plan. The map of ambient Upper Zone nitrate is *not intended to be a substitute for well testing or interim water replacement requirements*.

In addition to the map that shows several areas potentially impacted by nitrate in groundwater in the Upper Zone, the groundwater nitrate data compilation also contains all available public water system supply well nitrate sample results. From the available records downloaded from the State Division of Drinking Water<sup>1</sup>, it appears that seven (7) public supply wells located within the Management Zone have exceeded the nitrate MCL in their past. None of the four (4) public water systems that these wells belong to have wells that are currently exceeding the drinking water standard for nitrate and are all in compliance with Title 22 Drinking Water Standards (as of July 2022). The public water systems that had experienced nitrate problems have all taken steps to solve their problems by deepening, replacing, abandoning, or destroying problem wells.




The Chowchilla Management Zone created a map that shows recent ambient nitrate groundwater conditions.



All public water systems in the Chowchilla Management Zone are currently providing safe drinking water.

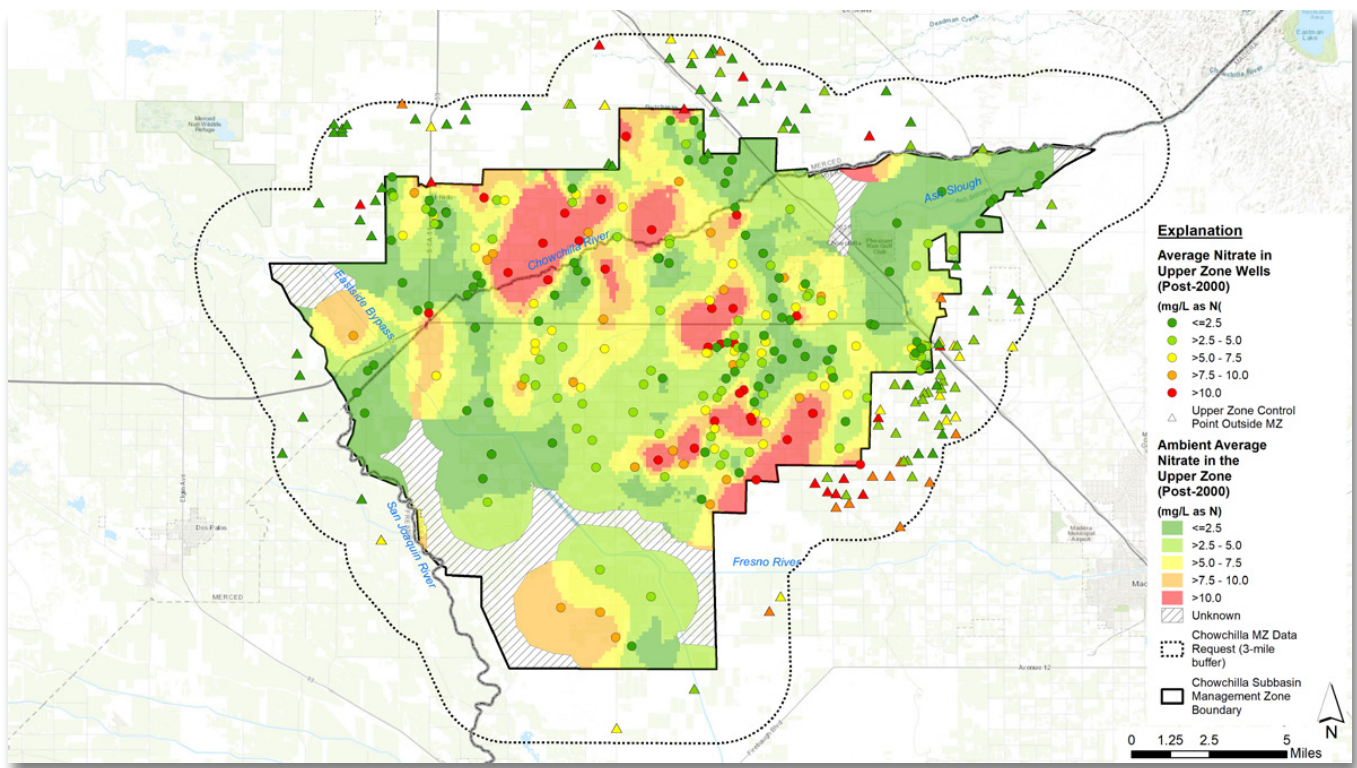
1 Public Supply Well nitrate data was acquired from the Division of Drinking Water ([https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/EDTlibrary.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/EDTlibrary.html)) accessed December 2020.

Continuing with this effort to identify nitrate-impacted areas, the spatial interpolation map of ambient nitrate conditions in the Upper Zone was overlain by known public water system boundaries and approximate domestic well locations. Approximately 64 domestic wells, located outside of known public water system boundaries, are located within mapped areas with estimated Upper Zone ambient nitrate above the safe drinking water standard (of 10 mg/L N). Using census block data from the 2010 U.S. Census, the estimated population of residents living outside known public water system boundaries and within mapped areas with potentially unsafe drinking water (estimated Upper Zone ambient nitrate above the MCL) is just over 400.



Approximately 64 domestic wells and a population of just over 400 has been mapped to be potentially impacted by elevated nitrate in groundwater.

**Figure ES-1. Ambient Post-2000 Nitrate Concentrations in the Upper Zone of Groundwater in the Chowchilla Management Zone**



### ES 3. Identification of Potentially Affected Areas

A key component of the EAP is identification of residents or other entities in the Chowchilla Management Zone that may be obtaining their drinking water from a well impacted by nitrate levels that exceed 10 mg/L-N. While the Management Zone is conducting outreach to the entire Management Zone, it is also targeting some of its outreach efforts specifically to those areas identified as being most likely impacted by elevated nitrate (nitrate levels exceeding 7.5 mg/L as N). This targeted outreach will occur at the same time the Management

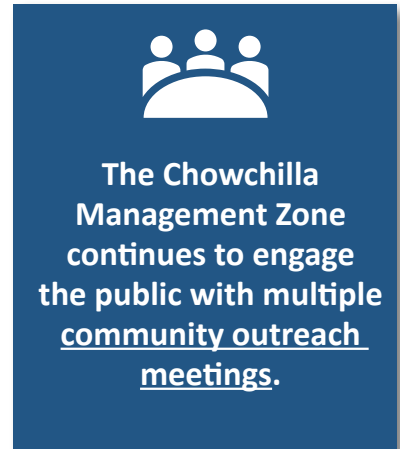


**Targeted Outreach** will occur to identify residents who may be impacted by elevated nitrate levels

Zone is implementing general community outreach activities to the entire Management Zone. The process to identify residents or other entities in potentially affected areas began May 8, 2021, upon EAP implementation using the steps described.

## ES 4. Community Outreach Program

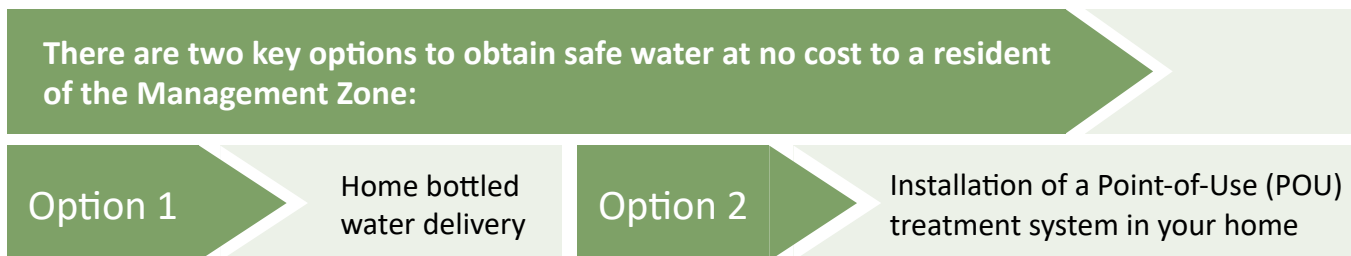
The Management Zone began conducting community outreach meetings in 2021 to obtain input on the development of this EAP, including the Interim Replacement Water Program. During February 2021, the Management Zone provided the public with an opportunity to review the proposed Interim Replacement Water Program. The initial EAP reflected the input received from the public. Since EAP implementation began on May 8, 2021, general community outreach has continued through a variety of mechanisms, including regular community meetings, sharing information through the Management Zone’s website or through entities that are locally collaborating with the Management Zone’s efforts to provide safe drinking water. In addition to this ongoing broad community outreach, the initial and updated EAP includes a program to outreach directly to residences in areas most likely to have domestic wells contaminated by nitrate.



To support its community outreach efforts, the Chowchilla Management Zone established a website with Madera County (<https://www.maderacountywater.com/cv-salts/>) and a Facebook page (<https://www.facebook.com/search/top/?q=chowchilla%20drinking%20water>) to share information about the Program. The Management Zone may also be reached directly by email: [chowchilladrinkingwater@gmail.com](mailto:chowchilladrinkingwater@gmail.com). The Management Zone is currently developing a new website ([www.chowchillamanagementzone.com](http://www.chowchillamanagementzone.com)) to connect directly to those seeking to apply for well testing or additional program information. The new website is anticipated to launch in the first part of September 2022.

## ES 5. Interim Replacement Water Program

The Interim Replacement Water Program provides an immediate solution for those currently experiencing unsafe levels of nitrate in their drinking water source. However, these solutions are only temporary and will eventually be replaced by long-term, permanent solutions.



A residence may receive these alternative water options if the resident can answer yes to the following three statements:

Statement 1

My home is in the Chowchilla Management Zone.

Statement 2

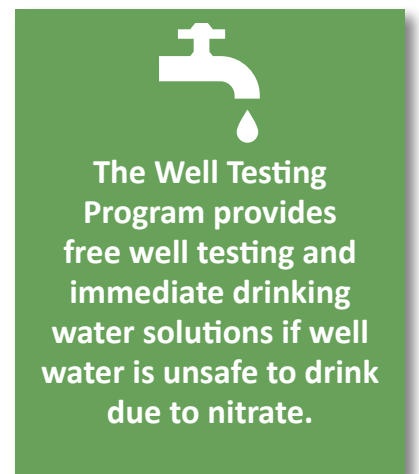
I am willing to sign an agreement with the Management Zone's service provider.

Statement 3

My well has unsafe nitrate levels ( $> 10$  mg/L-N) (see Figure ES-1) as determined by a water quality analysis conducted by a certified laboratory.

If you do not know if your well water has unsafe nitrate levels, contact the Management Zone ([chowchilladrinkingwater@gmail.com](mailto:chowchilladrinkingwater@gmail.com) or <https://www.maderacountywater.com/cv-salts/>) and request that your well be tested at no cost to you. Results from the nitrate test, which will be provided to you will be used to determine the next steps. Most importantly, if your nitrate levels are unsafe the Management Zone will work with you immediately to obtain a safe source of drinking water. If nitrate levels are high ( $> 7.5$  mg/L N) but safe, the Management Zone will offer the opportunity to have your well tested again at no cost to you in the future.

Finally, the Management Zone may also install one or more local water fill stations in the Management Zone based on the needs of the community. If this option becomes available, outreach will be conducted in the community to advise residents of the availability of this alternative water source. All established fill stations will use a certified source of safe and free drinking water and will be available to the entire community at no cost.



## ES 6. Early Action Plan Implementation

The Management Zone began implementation of the EAP on May 8, 2021. Since then, the Management Zone has implemented regular community outreach activities, received numerous requests for well testing and has provided replacement water where needed, based on the findings from those tests. The Management Zone will continue in its outreach to the community and provide safe drinking water where well testing shows replacement water is needed.