



Chowchilla Management Zone

Early Action Plan *Executive Summary*

MARCH 8, 2021

PREPARED BY:

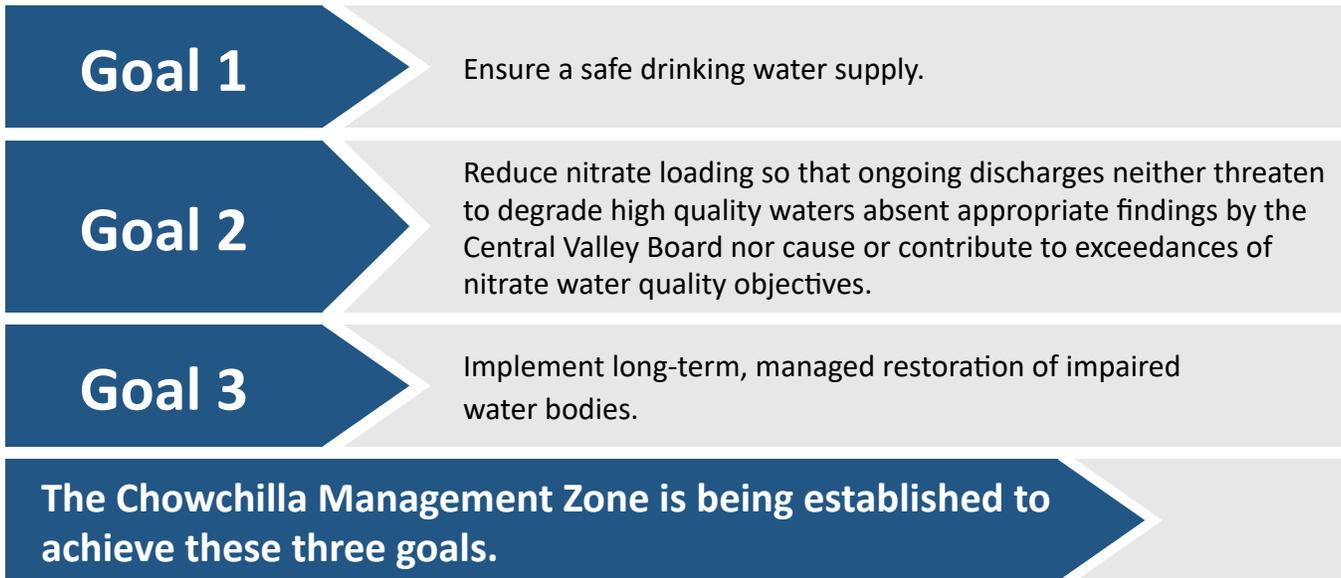


Executive Summary

ES. 1 Background

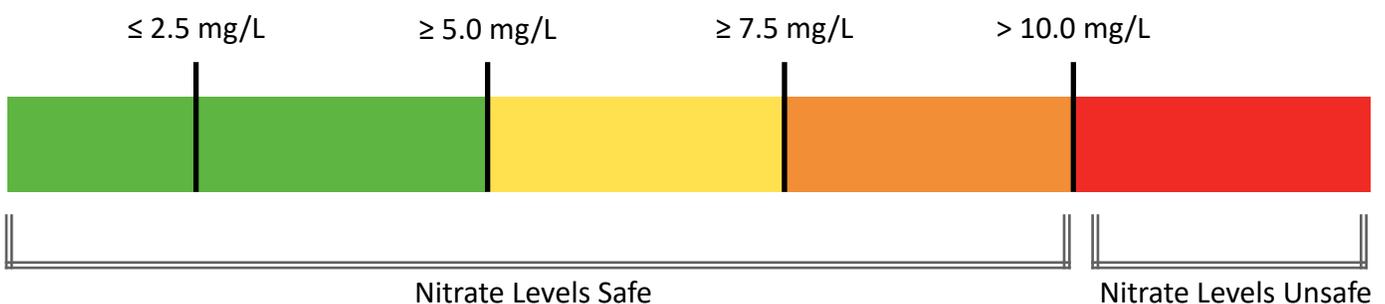
The Central Valley Regional Water Quality Control Board (Central Valley Water Board) has begun implementing a new Nitrate Control Program in the Central Valley that is designed to achieve three nitrate management goals.

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. 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)).

Scale Showing Nitrate Safe and Unsafe Levels



ES 2. Identification of Nitrate-Impacted Areas

As described in more detail within the Preliminary Management Zone Proposal, 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 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 milligrams per liter nitrate as nitrogen. 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 Plans), the ambient nitrate analysis will be repeated, and the ambient map will be updated (and potentially changed) prior to the Final Management Zone Proposal submittal date. The map of ambient Upper Zone nitrate is *not intended to be a substitute for well testing for 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 Water¹, 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 January 2021). The public water systems that had experienced nitrate problems have all taken steps to solve their problems by deepening, replacing, 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.

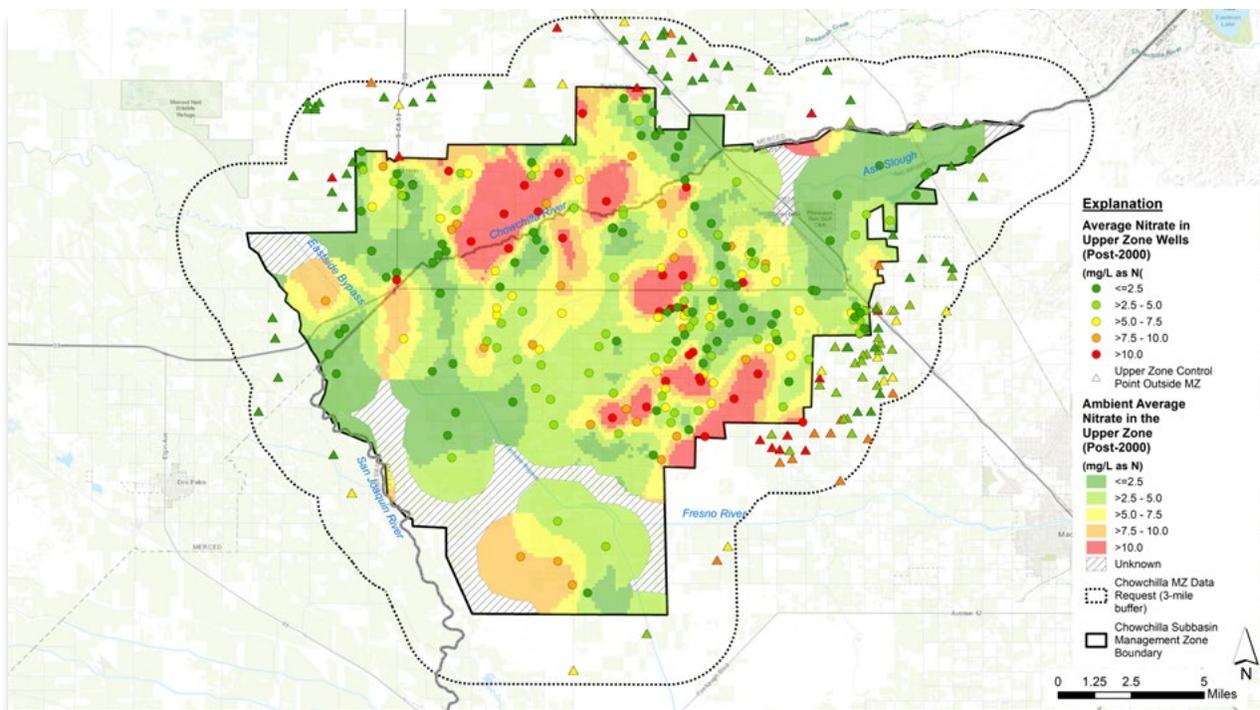
¹ Public Supply Well nitrate data was acquired from the Division of Drinking Water (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/EDTlibrary.html) accessed December 2020.

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. An estimate of 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 milligrams per liter nitrate as nitrogen). 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. The Management Zone will target some of its outreach efforts specifically to those identified as being most likely impacted by elevated nitrate (nitrate levels exceed 7.5 mg/L-N). This **targeted outreach** will occur at the same time the Management Zone is implementing general community outreach activities to the entire Management Zone. The process to identify residents or other entities in potentially affected areas will begin immediately upon EAP implementation using the steps described.



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

ES 4. Community Outreach Program

The Management Zone conducted a series of **community outreach meetings** to obtain input on the development of this EAP. During February 2021 the Management Zone provided the public with an opportunity to review the proposed Interim Replacement Water Program. This EAP reflects the input received from the public. General community outreach will continue during EAP implementation 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, this EAP includes a program to outreach directly to residences in areas most likely to have domestic wells contaminated by nitrate.

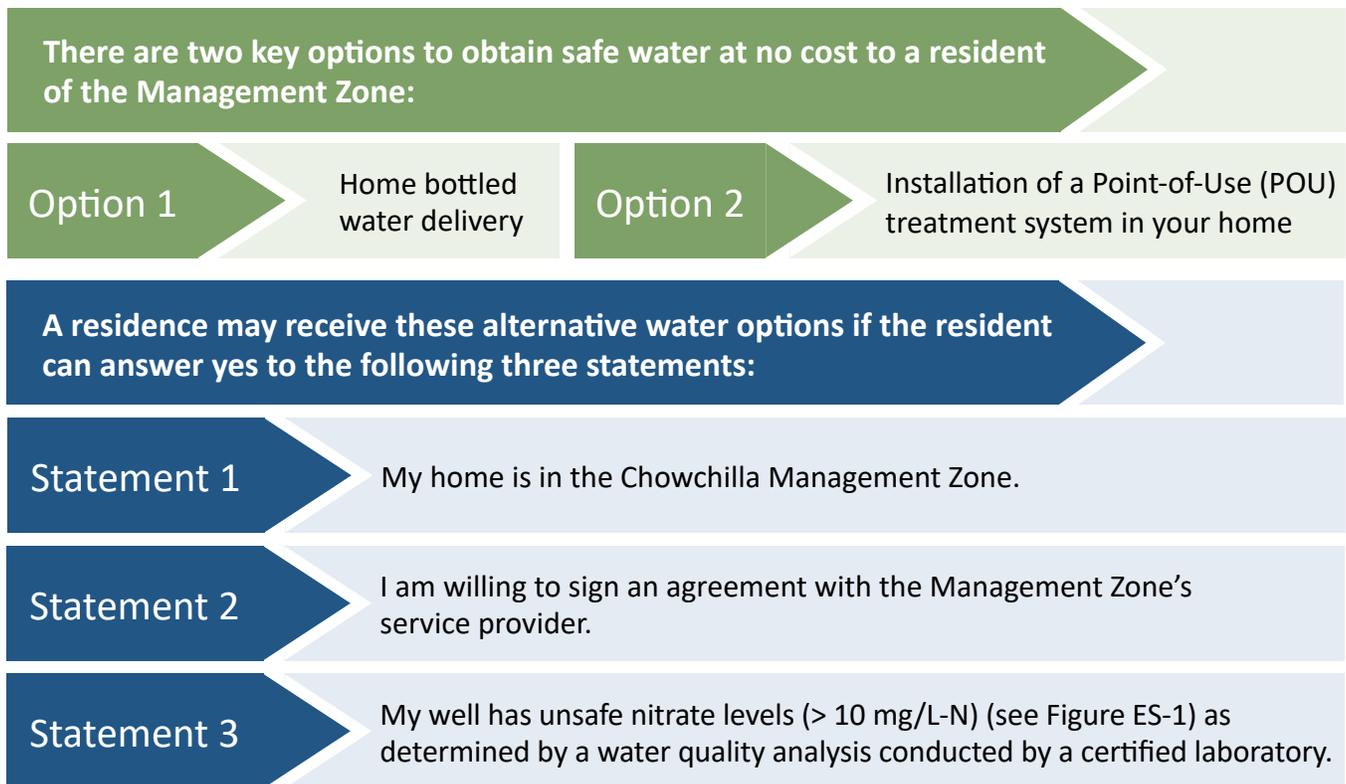


The Chowchilla Management Zone continues to engage the public with multiple community outreach meetings.

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/chowchilladrinkingwatersolutions/>) to share information about the Program. The Management Zone may also be reached directly by email: chowchilladrinkingwater@gmail.com.

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.



If you do not know if your well water has unsafe nitrate levels, contact the Management Zone (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 (> 8 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 will begin implementation of the EAP by May 7, 2021. A community outreach meeting will be held in May to kick-off the implementation of the program and inform residents regarding how to participate in the Interim Replacement Water Program. The Management Zone will also continue its outreach to the community regarding the need and/or approach for developing water fill stations.



The Well Testing Program provides free well testing and immediate drinking water solutions if well water is unsafe to drink due to nitrate.