

Turlock Management Zone Early Action Plan (PUBLIC DRAFT)

Attachment E-2: Modesto and Turlock Preliminary
Management Zone Proposal

Prepared for:
Valley Water Collaborative



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Acronyms

Acronym	Definition
1,2,3-TCP	1,2,3-Trichloropropane
APN	Assessor Parcel Numbers
Basin Plans	Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin
Central Valley Water Board	Central Valley Regional Water Quality Control Board
Coalition	East San Joaquin Water Quality Coalition
CV-SALTS	Central Valley Salinity Alternatives for Long-term Sustainability
CSD	Community Services District
CWD	Community Water District
DDW	Division of Drinking Water
DWW	Drinking Water Watch
DWR	California Department of Water Resources
EAP	Early Action Plan
FAQ	Frequently Asked Questions
GAC	Granular Activated Carbon
GAMA	Groundwater Ambient Monitoring and Assessment
GIS	Geographic Information Systems
GSA	Groundwater Sustainability Agency
ILRP	Irrigated Lands Regulatory Program
IX	Ion Exchange
LPA	Local Primacy Agency
LSWS	Local Small Water System
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
MZIP	Management Zone Implementation Plan
N	Nitrogen
NGOs	Non-Governmental Organizations
O&M	Operation and Maintenance
PMZP	Preliminary Management Zone Proposal
POU	Point of Use
PWS	Public Water System
RO	Reverse Osmosis
SGMA	Sustainable Groundwater Management Act
SSWS	State Small Water System
State Water Board	State Water Resources Control Board
Strategy	Modesto and Turlock Community Engagement Strategy
VWC	Valley Water Collaborative
WCR	Well Completion Reports

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Executive Summary

La version en Español se encuentra al final de este Resumen Ejecutivo

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:

- *Goal 1* – Ensure a safe drinking water supply;
- *Goal 2* – Reduce nitrate loading so that ongoing discharges neither threaten to degrade high quality waters absent appropriate findings by the Central Valley Board nor cause or contribute to exceedances of nitrate water quality objectives; and
- *Goal 3* – Implement long-term, managed restoration of impaired water bodies.

The Valley Water Collaborative (VWC), a local non-profit organization, has established the Turlock Management Zone to achieve these three goals (Figure ES-1). VWC is managed by a 12-member Board of Directors representing local cities and industry operating in the basin including agriculture, dairies, poultry facilities, wineries, and food processors.

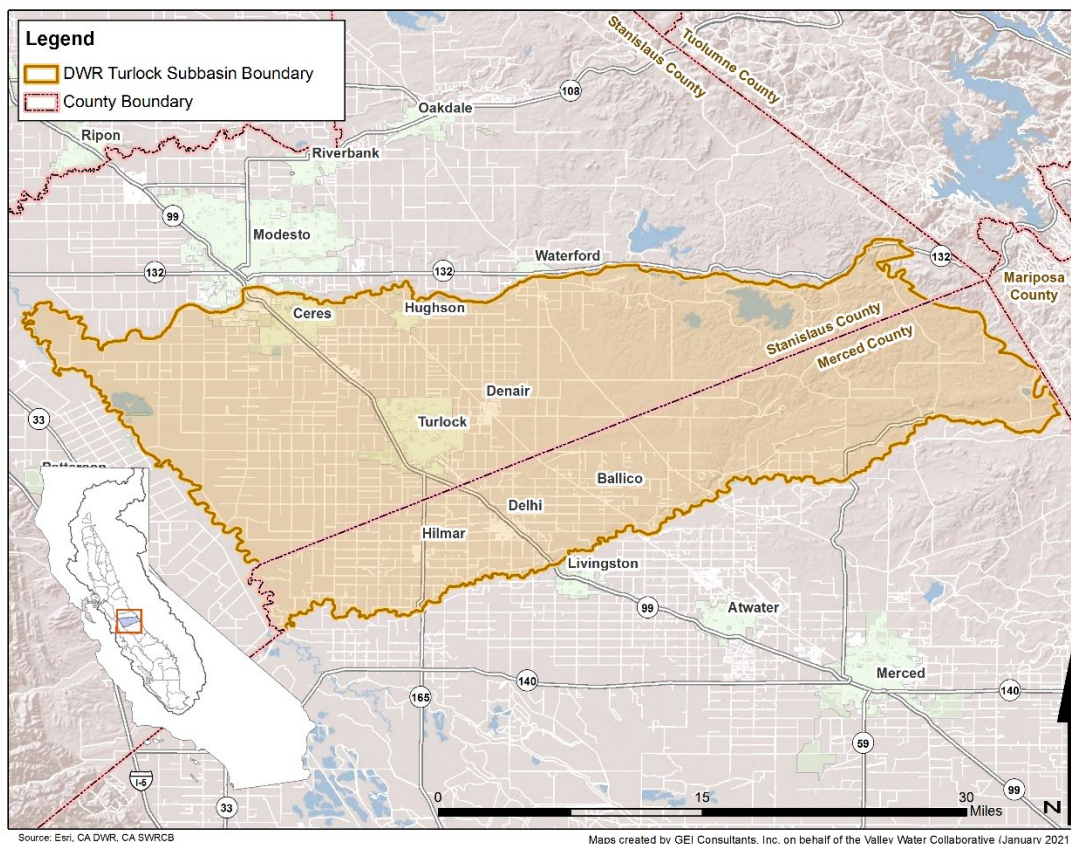


Figure ES-1. Location of the Turlock Management Zone

Establishment of this Management Zone required the preparation of an Early Action Plan (EAP) that identifies initial actions the VWC will carry 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 (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) .

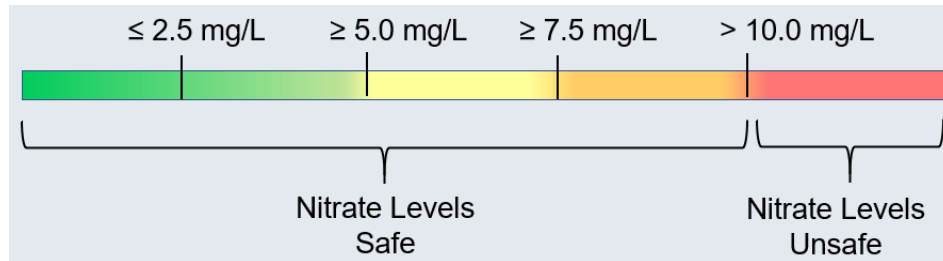


Figure ES-2. Scale Showing Nitrate Safe and Unsafe Levels

This EAP provides detailed information on:

- The nitrate problem in the Turlock Management Zone;
- How residents can be involved in its implementation; and
- How the VWC can assist a residence if a drinking water source is found to have unsafe levels of nitrate.

The VWC has identified the areas in the Turlock Management Zone where nitrate levels are most likely to be unsafe (see red areas in Figure ES-3). Implementation of the EAP will initially focus on these high-risk areas. However, anyone in the Management Zone area may contact the VWC to have their well tested to determine if their water has unsafe nitrate levels.

This 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.

There are three options to obtain safe water now at no cost:

- Home bottled water delivery;
- Installation of a Point-of-Use (POU) treatment system in your home; or
- Visiting a local fill station to fill water bottles.

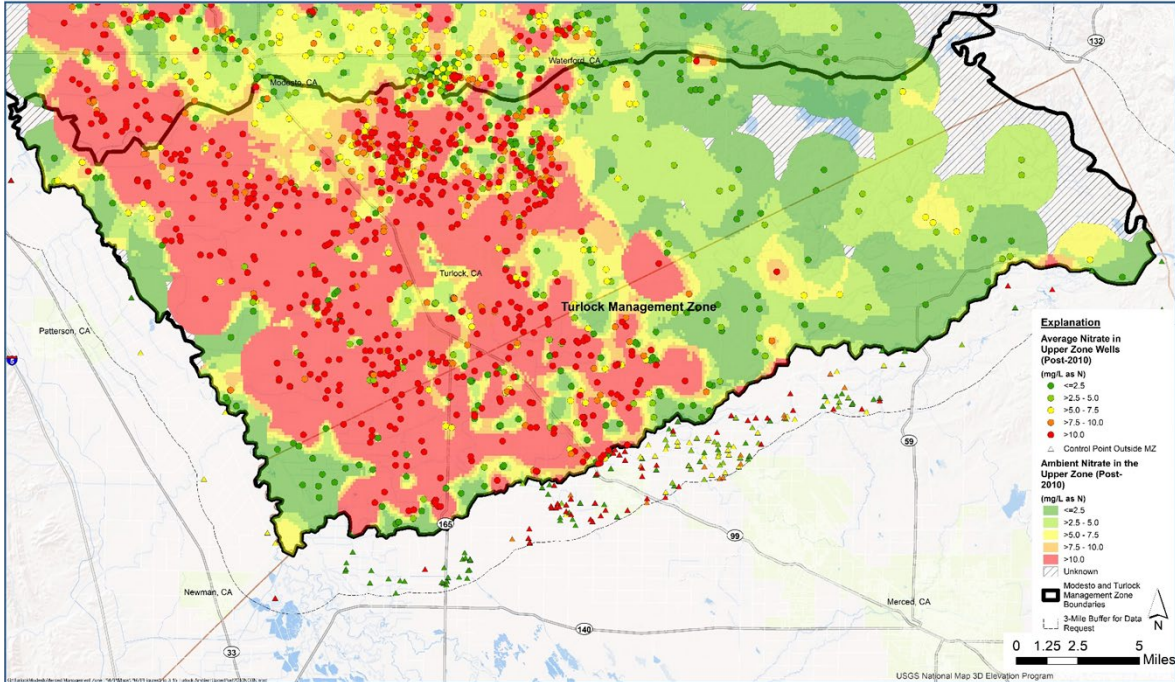


Figure ES-3. Areas in the Turlock Management Zone where Nitrate Levels in Groundwater Are Most Likely To Be Unsafe for Drinking (Red Areas)

A residence located in the Turlock subbasin may receive bottled water delivery or installation of a POU treatment system if a resident can answer yes to the following three statements:

1. My home is in the Turlock Management Zone;
2. I am willing to sign an agreement with the service provider; and
3. My well has unsafe nitrate levels (> 10 mg/L-N) (see Figure ES-2) 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 VWC and they will send a representative to your home to test your well at no cost to you. Results from the nitrate test, which will be provided to you, determines the next steps as shown in Figure ES-4. If your nitrate levels are unsafe the VWC will work with you immediately to obtain a safe source of drinking water. If nitrate levels are high but safe the VWC is offering to test your well the following year.

If you prefer to visit a local water fill station to obtain water, that option will be available. All fill stations use a certified source of safe and free drinking water and are available to the entire community at no cost. During the first year of EAP implementation, VWC will work closely with the community to determine the best locations to install fill stations in the Turlock Management Zone.

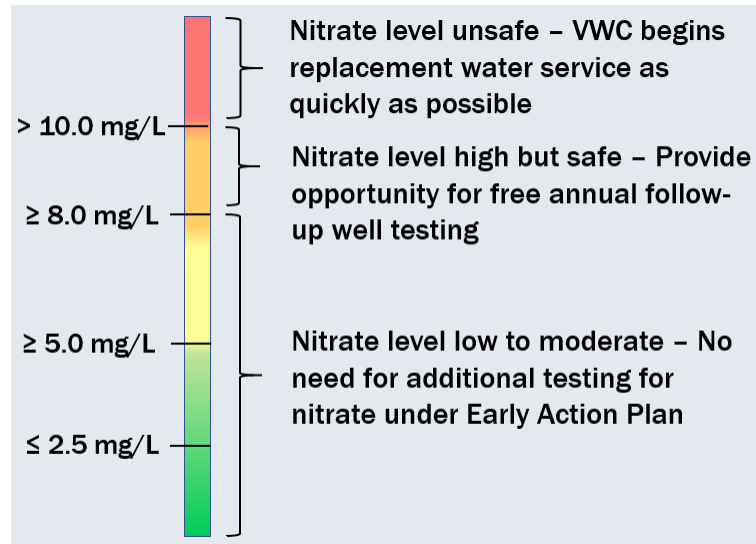


Figure ES-4. Nitrate Results and VWC Follow-Up Actions

VWC began holding community meetings in Fall 2020 to obtain input on the development of this EAP. Community meetings will continue during implementation to gain further input from residents on temporary solutions included in the Program and development of long-term drinking water solutions.

To support its community outreach efforts, the VWC established a website (<https://valleywaterc.org/>) to share information about the Program. The community is encouraged to sign up on VWC’s email list to receive Program updates and invitations to community meetings.

Once the program is launched in early Spring 2021, residences in the Management Zone can apply for well testing and replacement water on the VWC website. Anyone who signs up now to be included on the VWC email list to receive community notifications will be contacted when the program begins.

Resumen Ejecutivo

La Junta Regional de Control de Calidad de Agua del Valle Central (Central Valley Water Board en Inglés) comenzó a implementar un nuevo Programa de Control de Nitratos en el Valle Central que esta designado a lograr tres objetivos en el manejo de nitratos y son mencionados a continuación:

- *Objetivo No.1:* Garantizar el suministro seguro de agua potable
- *Objetivo No.2:* Reducir la carga de nitratos para que las descargas constantes no amenacen con degradar la alta calidad de agua sin los estudios apropiados de la Junta del Valle Central, además de no ser una causa o contribución a exceder los objetivos de calidad del nitrato en el agua.
- *Objetivo No. 3:* Implementar la restauración a largo plazo de los cuerpos de agua ya deteriorados

Valley Water Collaborative (VWC) es una organización sin fines de lucro que ha establecido la Zona de Gestion de Turlock para alcanzar estos tres objetivos. (Ver Figura ES-1). VWC es administrado por un junta directiva de 12 miembros que representan a las ciudades locales y a las industria que opera en la cuenca, incluyendo la agricultura, industria de lácteos, las instalaciones avícolas, las bodegas de vino y procesadores de alimentos.

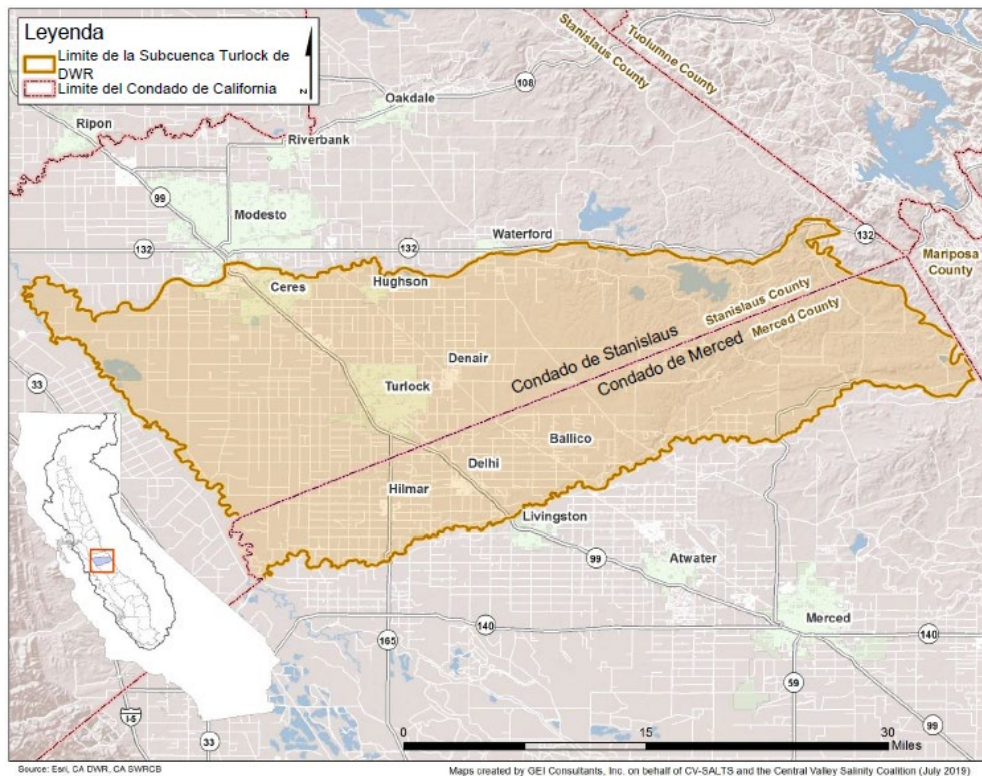


Figura ES-1. Area de la Zona de Gestión de Turlock

El establecimiento de la zona de gestión requirió la preparación de un Plan de Acción Temprana (EAP en Inglés) que identifica las acciones iniciales que VWC llevará a cabo para abordar el uso de agua potable en las residencias dentro de la cuenca que contenga niveles no seguro de nitrato. Lo más importante de este EAP es que se desarrolló con la colaboración de la comunidad y es un Programa Provisional de Reemplazo de Agua. Este programa proporciona fuentes alternativas inmediatas de agua potable que son usados para beber y cocinar en las residencias que dependen de agua subterránea con niveles no seguro de nitrato (El agua con niveles no seguros para el consumo contiene mas de 10 miligramos por litro de nitrato como nitrógeno (mg/L-N)).

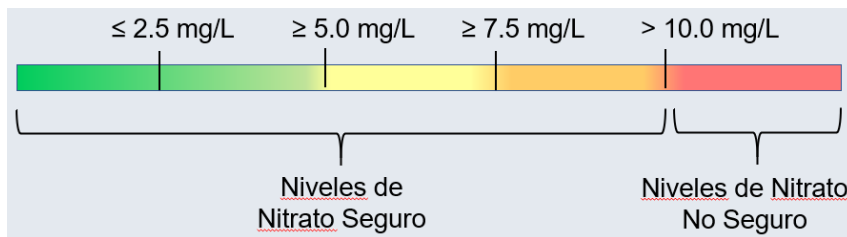


Figura ES-2. Niveles Seguros y No Seguros de Nitrato en el Agua.

El EAP proporciona información detallada acerca de:

- El problema de los nitratos en la zona de gestión de Turlock
- Como los residentes pueden participar en la implementación de los planes y
- Como el VWC puede ayudar a una residencia que contenga niveles no seguros de nitrato

El VWC ha indentificado las áreas en la Zona de gestión de Turlock donde los niveles de nitrato tienen altas probabilidades de ser no seguros (Ver areas de color rojo en la Figura ES-3). La implementación del EAP se enfocará inicialmente en estas áreas de alto riesgo. Sin embargo, cualquier persona que se encuentre en el área de la zona de gestión puede comunicarse con el VWC para que se analice el pozo y determinar si el agua tiene niveles de nitrato no seguros.

Este programa proporciona una solución inmediata para aquellos que actualmente experimentan niveles no seguro de nitrato en su fuente de agua potable. Sin embargo, estas soluciones son solo temporales y eventualmente serán reemplazadas por soluciones permanentes a largo plazo.

Hay tres opciones para obtener agua potable inmediatamente sin costo:

- Entrega de agua embotellada a domicilio
- Instalación de un sistema de tratamiento en el punto de uso (POU) en su hogar
- Visitar una estación de distribución local para llenar botellas de agua.

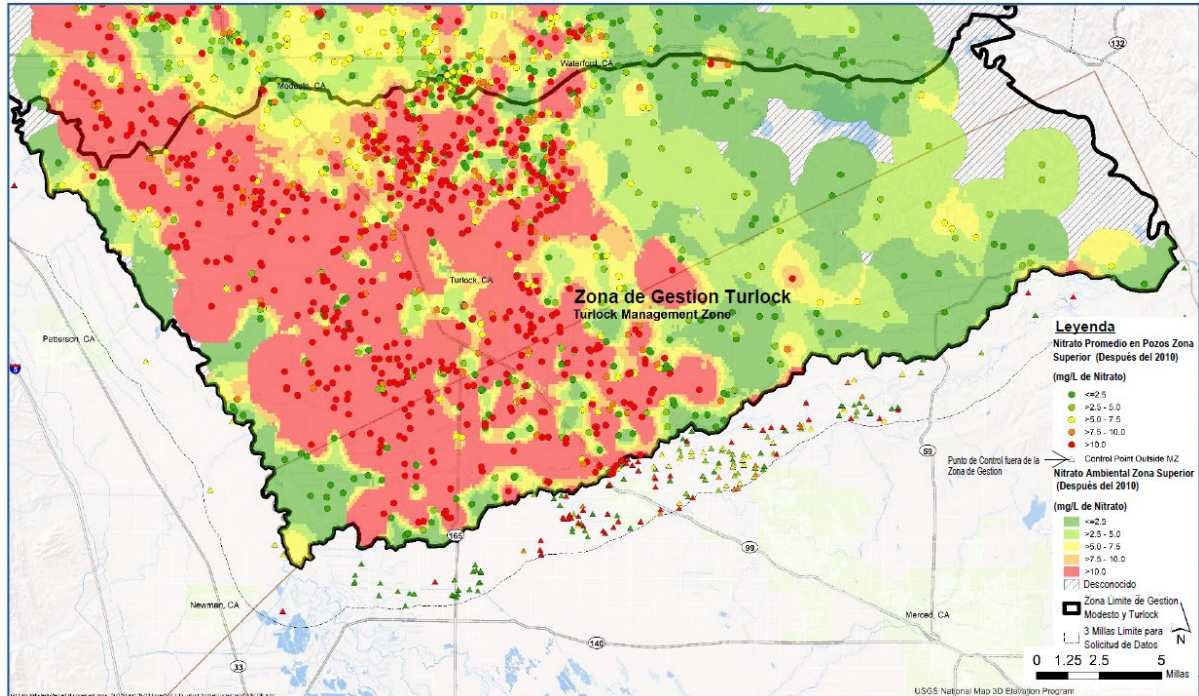


Figura ES-3. Areas en la Zona de Gestión de Turlock Donde el Nivel de Nitrato en la Cuencas de Agua Subterráneas Tienen Altas Probabilidades de ser No Seguro en color rojo.

Las residencias localizadas en la Cuenca de Turlock pueden recibir la entrega de agua embotellada o la instalación de un Sistema de tratamiento POU si dicha residencia esta de acuerdo con lo siguiente:

1. Mi casa esta en la Zona de Gestión de Turlock
2. Estoy dispuesto a firmar un acuerdo con el proveedor de servicios, y
3. Mi pozo tiene niveles no seguro de nitrato (mayor de 10 mg/L-N) (Ver Figura ES-2) de acuerdo con lo determinado por un análisis de calidad del agua realizado por un laboratorio certificado.

Si no sabe o desconoce si el agua de su pozo tiene niveles no seguro de nitrato, comuníquese con el VWC y ellos enviarán un representante a su residencia para realizar un examen en el pozo sin costo alguno. Los resultados de la prueba de nitrato se le enviaran y determinara los pasos a seguir como se muestra en la Figure ES-4. Si sus niveles de nitrato no son seguros, VWC trabajará con usted de inmediato para obtener una fuente segura de agua potable. Si los niveles de nitratos son altos pero seguros, el VWC se ofrece a realizar otra prueba el año siguiente.

Si prefiere visitar una estación de distribución de agua para obter agua potable, esta opción estará disponible. Todas las estaciones de servicio utilizan una fuente certificada de agua potable segura y gratuita y estan disponibles para toda la comunidad sin costo alguno. Durante el primer año de implementación del EAP, VWC trabajará estrechamente con la

comunidad para determinar las mejores ubicaciones para instalar estaciones de distribución de agua en la zona de gestión de Turlock.

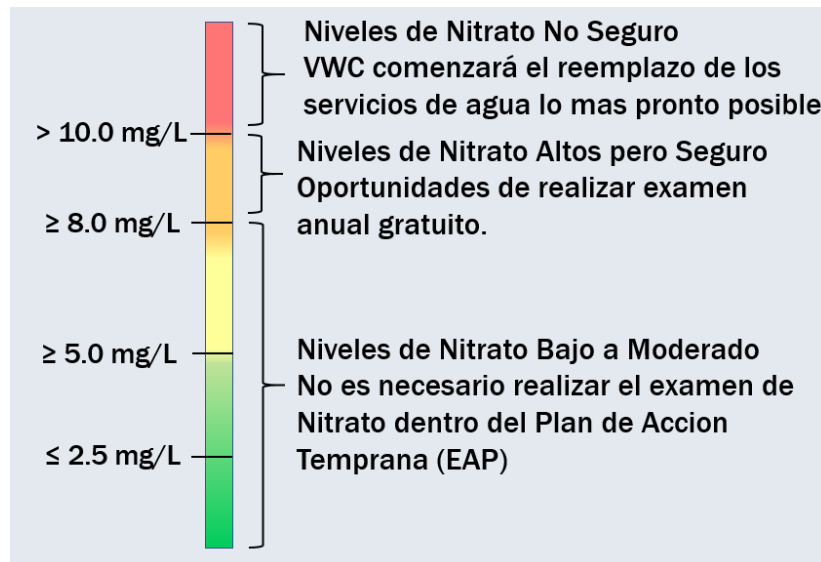


Figura ES-4. Resultados de Nitrato y VWC Plan de Acción

VWC comenzó a realizar reuniones comunitarias en el pasado otoño del 2020 para obtener información acerca del desarrollo de este EAP. Las reuniones comunitarias continuaran durante la implementación para obtener sugerencias de los residentes sobre las soluciones temporales incluidas en el Programa y el desarrollo de soluciones de agua potable a largo plazo. Para apoyar los esfuerzos de alcance a la comunidad VWC establecio un sitio web (<https://valleywaterc.org/>) para compartir información sobre este programa. Animamos a la comunidad a partipar e inscribirse en la lista de correo electrónico VWC para recibir actualizaciones del programa e invitaciones a las reuniones.

Cuando el programa sea lanzado a principios de la primavera de este año 2021 las residencias en la zona de gestión pueden solicitar pruebas de pozos y agua potable de reemplazo en el sitio web de VWC. Cualquiera que se registre ahora para ser incluido en la lista de correo electrónico de VWC para recibir notificaciones de la comunidad será contactado cuando comience el programa.

1. Background and Purpose

The Nitrate Control Program was established by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) in the Water Quality Control Plan for the Sacramento and San Joaquin River Basins. A requirement of the Nitrate Control Program is to develop an Early Action Plan (EAP), defined as a plan that identifies community outreach activities and an implementation schedule that will ensure access to safe drinking water for those dependent on groundwater wells exceeding the nitrate drinking water standard of 10 milligrams per liter nitrate as nitrogen (mg/L-N). While these wells are primarily domestic wells, this EAP also addresses areas where public water supply wells have nitrate levels exceeding the drinking water standard. This EAP provides temporary solutions for providing safe drinking water to those impacted by nitrate contamination in groundwater; it will be implemented until permanent solutions for safe drinking water are implemented through an approved Management Zone Implementation Plan (MZIP).

1.1 Early Action Plan Requirements

An EAP must include the following, unless otherwise approved by the Central Valley Water Board's Executive Officer:

- i. A process to identify affected residents and the outreach utilized to ensure that impacted groundwater users are informed of and given the opportunity to participate in the development of proposed solutions;
- ii. A process for coordinating with others that are not dischargers to address drinking water issues, which must include consideration of coordinating with impacted communities, domestic well users and their representatives, the State Water Resources Control Board's (State Water Board) Division of Drinking Water (DDW), Local Planning Departments, Local County Health Officials, Sustainable Groundwater Management Agencies (SGMA) and others as appropriate;
- iii. Specific actions and a schedule of implementation that is as short as practicable to address the immediate drinking water needs of those initially identified within the Management Zone, or area of contribution for a Path A discharger, that are drinking groundwater that exceeds nitrate standards and that do not otherwise have interim replacement water that meets drinking water standards; and
- iv. A funding mechanism for implementing the Early Action Plan, which may include seeking funding from Management Zone participants, and/or local, state and federal funds that are available for such purposes.

1.2 Early Action Plan Framework and Applicability

This EAP was submitted to the Central Valley Water Board as an attachment to the Valley Water Collaborative’s (VWC) Modesto and Turlock Preliminary Management Zone Proposal (PMZP), March 8, 2021. This PMZP submittal supports the establishment of the Turlock Management Zone, which is adjacent to the Modesto Management Zone (**Figure 1-1**). This EAP applies to all areas within the Turlock Management Zone boundary, but targets areas where nitrate in the Upper Zone of the underlying groundwater most likely exceeds the nitrate drinking water standard. Section 3 below identifies these target areas. Implementation of this EAP will begin within 60 days of submittal unless the Central Valley Water Board objects and notifies the VWC that this EAP is incomplete. If any objections are identified, the VWC will work with the Central Valley Water Board to address their concerns in a timely manner. Where appropriate, EAP activities implemented in the Turlock Management Zone may be coordinated with related EAP activities in the Modesto Management Zone.

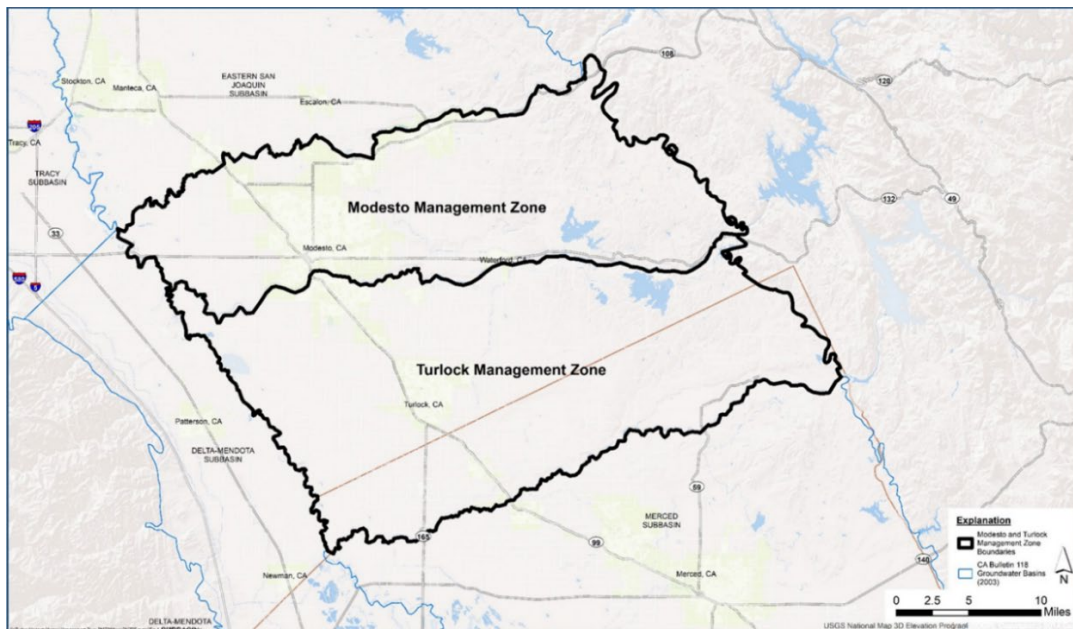


Figure 1-1. Turlock and Modesto Management Zones, Central Valley of California

1.3 Valley Water Collaborative

The Valley Water Collaborative (VWC) is a non-profit organization established to organize and operate the Modesto and Turlock Management Zones. The VWC combines the resources and expertise of its member organizations to ensure that all residents with wells impacted by elevated nitrate levels have access to safe drinking water. VWC’s mission is “to maintain and improve the quality of life in the northern San Joaquin Valley by implementing programs that provide access to safe drinking water for residents, and by engaging in activities with the goal of protecting or enhancing the quality of groundwater used as drinking water for residents in the region”. The VWC is responsible for the implementation of this EAP within the Turlock Subbasin.

2. Community Outreach to Develop Early Action Plan

This section describes the community outreach activities implemented during development of this EAP. These activities were guided by the Modesto and Turlock Community Engagement Strategy (“Strategy”) (see **Appendix A**) which is supported by the community profile developed for the area (**Appendix B**). The Modesto and Turlock Subbasins have separate EAPs but the community outreach activities described below were conducted jointly by both subbasins.

2.1 Community Engagement Strategy

This Strategy guided VWC outreach activities and targeted potential nitrate-impacted residents to provide them opportunities to participate in the development of this EAP. The Strategy was developed in accordance with the *Guidance for Engaging Communities During Development of Early Action Plans* (State Water Resources Control Board [State Water Board] 2020). **Appendix C** summarizes how the State Water Board’s community engagement recommendations were addressed during EAP development.

The Strategy established the following objectives for VWC’s outreach process:

- Objective 1 – Educate the public about the development and implementation of the EAP and their opportunities for participation.
- Objective 2 – Engage a diverse group of community members and non-dischargers representing different social, cultural, and economic elements of the population.
- Objective 3 – Make community and non-discharger participation easy and accessible.
- Objective 4 – Provide a roadmap for VWC leadership.

As the Strategy was implemented, it was adapted when needed to optimize engagement strategies. This Strategy will continue to be used during EAP implementation; it is considered a “living” document that will be updated, as needed.

Notably, COVID-19 limited the type of community outreach activities that could be implemented. As required by government directives, all community meetings held during development of this EAP were conducted virtually. These requirements prevented VWC from working directly with the community through in-person meetings. Moving forward, VWC will continue to coordinate outreach efforts with established community organizations and programs in the area as described in the Strategy. In addition, as soon as possible, VWC will hold in-person meetings to directly interact with local communities covered by this EAP.

Figure 2-1 provides an overview of the different entities with interests in the Management Zone that are referred to in this EAP. While all of these entities have a vested interest in the communities they live and work in, they may have very different interests or expectations in how the Nitrate Control Program requirements are implemented within the Management Zone. Collectively all of these groups or individuals are considered Management Zone “interested parties.”

Management Zone interested parties are often divided into two groups: permitted dischargers and non-dischargers. The former must comply with Nitrate Control Program due to requirements in the Basin Plan and their discharge permits. Non-dischargers include both community participants and other interested stakeholders. Community participants are residents of Stanislaus and Merced counties within the Management Zone, who rely on domestic wells or small water systems as their source of drinking water and whose well has been tested and found to have nitrate levels that exceed drinking water standards. Other stakeholders are those entities with roles or responsibilities in the Management Zone associated with local governance, land use planning and management of drinking water.

Implementation of the Strategy focused on engaging non-dischargers – both community participants and other stakeholders. Community participants are the primary focus of the EAP and its purpose to ensure residents have access to drinking water that meets the nitrate drinking water standard. The following sections describe the community engagement activities implemented to obtain input from non-dischargers during EAP development.

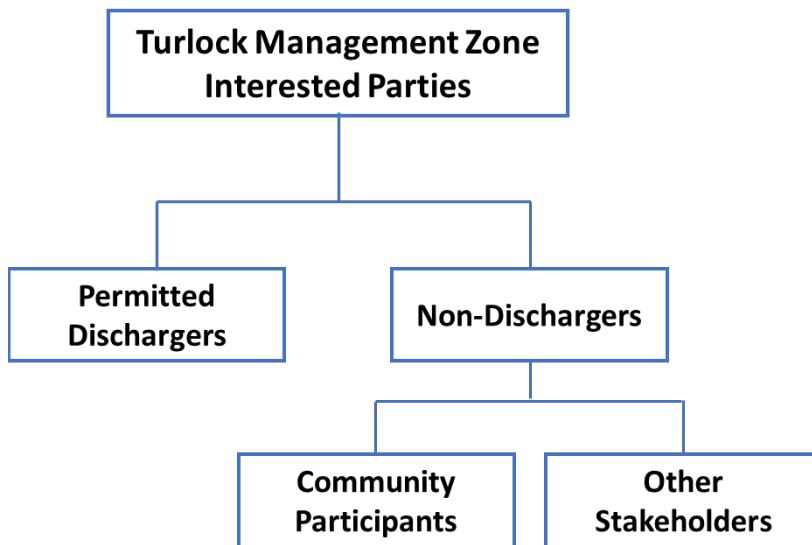


Figure 2-1. Turlock Management Zone Interested Parties

2.2 Community Engagement Activities

VWC conducted a variety of community engagement activities to encourage active involvement of diverse social, cultural, and economic elements of the community. (see **Appendix D** for supporting documentation). Following is a summary of these activities to reach out to all non-dischargers in the Management Zone.

2.2.1 Establishment of Management Zone Website

VWC established a website (<https://valleywaterc.org/>) in late October 2020 that includes the following:

- Information about the VWC, including its mission, Board of Directors and staff;
- Upcoming community outreach activities;
- Previously completed outreach meeting information, including recorded meeting presentations; and
- Frequently Asked Questions (FAQ) about nitrate and potential impacts to drinking water.

The VWC website provides an opportunity for interested parties to sign up for notification alerts so they may receive information related to Management Zone development and EAP implementation. Interested parties may provide their email address as a “Community Participant” or as a “Stakeholder.” Individuals providing their email will receive information about upcoming meetings, new postings to the VWC website, or other Management Zone activities. Encouragement to sign up to VWC’s website has been and will continue to be advertised in meeting flyers and outreach activities.

2.2.2 Outreach to Community Participants

VWC conducted regular meetings to provide opportunity for public participation in the development of the EAP’s interim replacement water program (**Table 2-1**). Meeting dates, times, and means to access the virtual events are posted at: <https://valleywaterc.org/meetings/>. Prior to each meeting, VWC also sent notices (English and Spanish) via email to all non-dischargers in its contact list to help facilitate outreach. For each community meeting, two different dates and times were provided to allow more opportunity for community participation. Beginning in December 2020, Spanish translation was provided during the meetings. VWC is committed to reaching as many residents as possible and will continue to hold community outreach meetings during EAP implementation. When possible, VWC will begin including in-person meetings as part of its community outreach efforts (see Section 5).

Table 2-1. Summary of Community Outreach Meetings during EAP Development

Activity	Purpose	Date/Time
Modesto and Turlock Management Zones Community Outreach Meeting #1	Introduction of the VWC and Nitrate Control Program. Overview of potentially nitrate-impacted areas, possible interim solutions, and how residents participate.	November 4, 2020 (3-4 pm)
		November 5, 2020 (6-7 pm)
Modesto and Turlock Management Zones Community Outreach Meeting #2	Overview of nitrate conditions and potential interim drinking water solutions under the EAP as well as the opportunity to provide feedback on potential interim replacement water program elements.	December 8, 2020 (3-4 pm)
		December 9, 2020 (6-7 pm)
Modesto and Turlock Management Zones Community Outreach Meeting #3	Present draft EAP to provide opportunity for community participants to review and comment on public draft EAP	February 9, 2021 (3-4 pm)
		February 10, 2021 (6-7 pm)

2.2.3 Outreach to Other Stakeholders

VWC developed an initial list of other stakeholders by identifying organizations within the Turlock Management Zone with knowledge of the local community and potential to assist in the development and implementation of the EAP. Direct contact by phone and email was made to entities such as school districts, local colleges and universities, County libraries, County health programs/services, e.g., Women, Infants and Children (WIC) and First 5, and local community-based organizations including Valley Improvement Projects and California Rural Legal Assistance. This contact list was expanded as additional stakeholders were identified. **Table 2-2** categorizes these stakeholders and identifies their potential roles to support EAP development (PMZP includes the current list of entities on this list). Outreach was conducted with many of these entities to obtain their assistance with outreach to the community. For example, many of these stakeholders assisted with the distribution of community meeting notices and materials.

Several virtual meetings were held to seek input from stakeholders (**Table 2-3**). Meeting dates, times, and the means to access the virtual events are posted at: <https://valleywaterc.org/meetings/>. Prior to each meeting, VWC directly contacted the County health programs/services to assist in community outreach and sent meeting notices via email to all the other stakeholders on the VWC’s contact list.

Table 2-2. Categories of Other Stakeholders in the Turlock Management Zone

Category	Key Role(s) in EAP Development or Implementation
Stanislaus County	Board of Supervisors – Dissemination of information to County residents; support approval of EAP-related projects
	Planning and Community Development – Support approval of EAP-related projects
	Health Services Agency – Support implementation of EAP-related activities
Merced County	Board of Supervisors – Dissemination of information to County residents; support approval of EAP-related projects
	Planning and Community Development – Support approval of EAP-related projects
	Department of Public Health – Support implementation of EAP-related activities
Incorporated Communities ¹	Given the presence of shopping centers ² in these locations, some of these communities may be targeted for establishment of water fill stations. Coordination with these communities can facilitate establishment of these facilities.
Unincorporated Communities/ Census-Designated Places	
Central Valley Water Board	Ensure that EAP development and implementation is consistent with Nitrate Control Program requirements
State Water Board DDW	Ensure that water fill stations or other replacement water alternatives meet state and federal regulations for drinking water
Non-Governmental Organizations (NGOs)	Organizations represent various community interests within the Management Zone and can assist with implementation of EAP elements, especially activities related to community outreach. Key participants to date have included, e.g., California Rural Legal Assistance, Valley Improvement Projects, Self-Help Enterprises, Clean Water Action, Leadership Counsel for Justice and Accountability.
Groundwater Sustainability Agencies (GSAs)	Nine GSAs are located within the Management Zone (See PMZP Attachment B-2). EAP implementation activities involving use of water will be coordinated with these agencies, which can also assist with dissemination of information within their jurisdictions
Representative Organizations	Trade organizations may represent various facilities that are dischargers within the Management Zone. Key participants to date have been the California League of Food Producers, Central Valley Dairy Representative Monitoring Program, Dairy Cares, East San Joaquin Water Quality Coalition, Western United Dairymen and the Madera, Merced, and Stanislaus County Farm Bureaus. These non-dischargers can assist EAP implementation through dissemination of information through their members (which may be dischargers) and community outreach activities.

¹ Some incorporated communities may be participating in the EAP as permitted dischargers subject to the requirements of the Nitrate Control Program.

² Shopping centers includes public access areas such as: strip malls, grocery stores, gas stations, etc.

Table 2-3. Summary of Other Stakeholder Meetings during EAP Development

Activity	Purpose	Date/Time
Modesto and Turlock Management Zones Stakeholder Meeting #1	Introduction of the VWC and Nitrate Control Program. Overview of potentially nitrate-impacted areas, discharger outreach, and Early Action Plan	October 29, 2020 (1:30 - 3:30 pm)
Modesto and Turlock Management Zones Stakeholder Meeting #2	Overview of nitrate conditions and potential interim drinking water solutions under the EAP	December 3, 2020 (1:30 – 3:30 pm)
Modesto and Turlock Management Zones Stakeholder Meeting #3	Present draft EAP to provide opportunity for community participants to review and comment on public draft EAP	February 2, 2021 (1:30 – 3:30 pm)

3. Identification of Potentially Impacted Groundwater Users

3.1 Nitrate-impacted Areas

To support the development of the Modesto and Turlock Preliminary Management Zone Proposal, nitrate groundwater data were updated using various publicly available sources, including the State Water Board’s DDW, GeoTracker Groundwater Ambient Monitoring and Assessment (GAMA) data, and the previously developed Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS) salt and nitrate database. These data were complemented by data requested from county environmental health departments. Groundwater data were categorized into depth zones, following previously developed CV-SALTS best management practices, and wells completed in the Upper Zone¹ of the groundwater aquifer were used to determine recent average ambient nitrate concentrations for data since the year 2010.

The Upper Zone average nitrate concentrations for wells in the Turlock Management Zone were used to produce a geospatial analysis of ambient conditions across the Turlock Subbasin. **Figure 3-1** shows the Turlock Management Zone with the estimated ambient nitrate conditions in the Upper Zone, representing average groundwater quality conditions since 2010. For this Management Zone, groundwater quality data for wells completed in the Upper Zone were sparse in the far eastern portion of the Management Zone. Most of the wells completed in the Upper Zone with post-2010 nitrate data were located in the western half of the Management Zone.

Using the available nitrate dataset, it is evident that there are several nitrate-impacted areas within the Management Zone; these areas are defined by average recent nitrate concentrations in the Upper Zone exceeding the primary maximum contaminant level (MCL) of 10 mg/L-N. Figure 3-1 depicts these nitrate-impacted areas (see Section 3 of the Preliminary Management Zone Proposal for information regarding the development of Figure 3-1). Most of the western half of the Turlock Management Zone has elevated nitrate conditions, based on post-2010 nitrate data in the Upper Zone.

¹ Upper Zone as defined by Central Valley Water Board is, “the portion of groundwater basin, sub-basin or Management Zone from which most domestic wells draw water.”

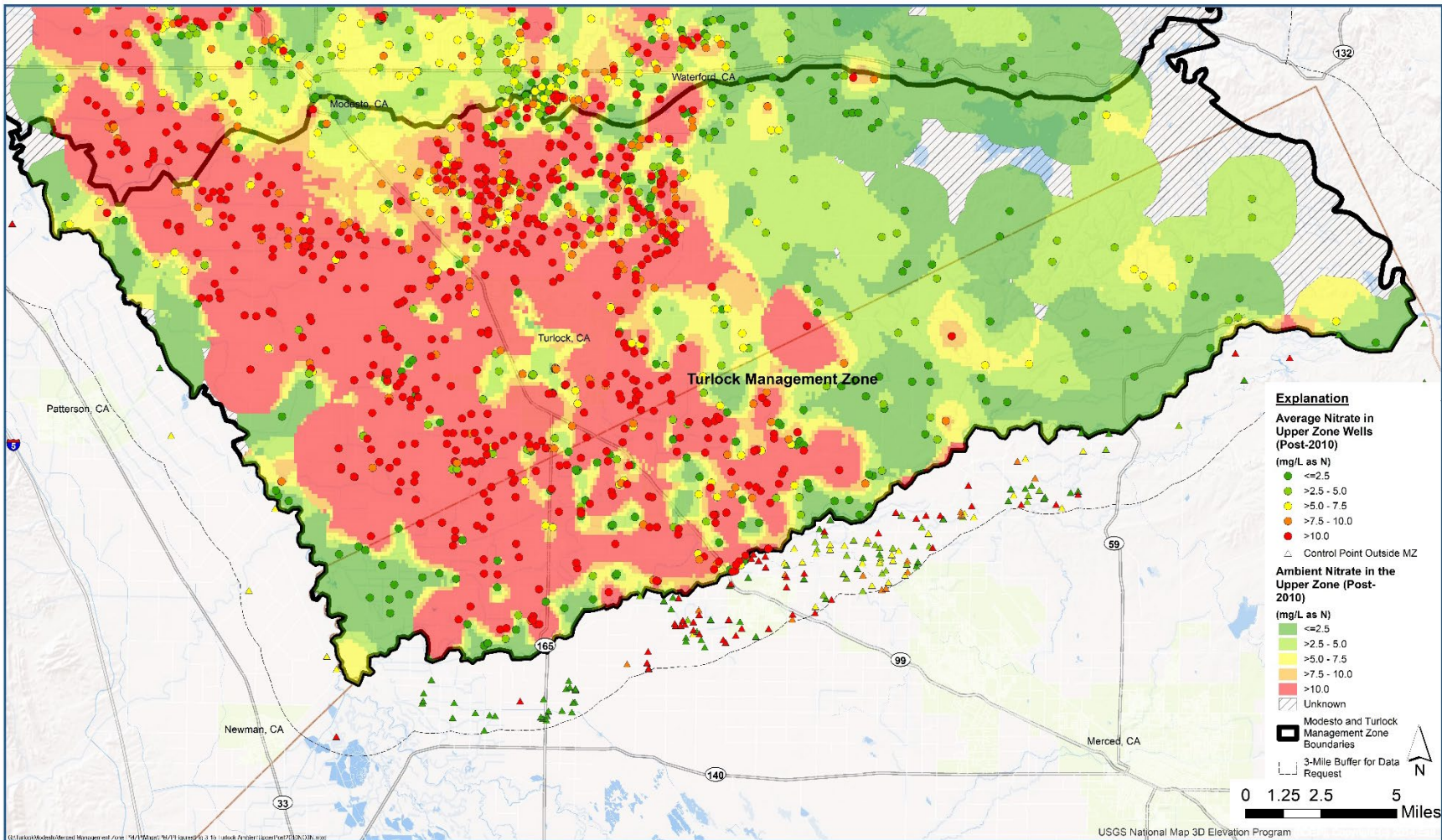


Figure 3-1. Ambient Post-2010 Nitrate Concentrations in the Upper Zone of Groundwater Underlying the Turlock Management Zone

3.2 Residential and Other Public Water Supply Sources

3.2.1 Public Water System

Public Water Systems (PWS) are defined as systems that provide drinking water to: (1) 15 or more service connections; or (2) regularly serves at least 25 individuals daily at least 60 days or more per year (**Table 3-1**). Non-Community systems include any facility that provides drinking water, such as churches, rest stops, stores, schools, businesses, etc.

Table 3-1. Classification of Drinking Water Systems by Constituency, Connections, and Duration of Service per Year (adapted from Boyle et al. 2012)

Duration of Service	Connections:		< 5	5 +	< 15	15 +	< 200	200 +	
	Persons Served:		< 25			25 +			
N/A	Small Water System (SWS) ¹	Classification Defined By	Connections						
< 60 days/year	Local Small Water System		Connections & (persons, duration)						
< 60 days/year	State Small Water System			Connections & (persons, duration)					
>= 60 days/year	Community Public Water System (PWS) ²					Connections or (persons, duration)			

¹ Classification as a SWS does not preclude classification as any of the other types. SWS may be regulated by DDW or by Local Primary Agency county.

² A PWS is a system for the provision of water for human consumption that has 15 or more service connections OR regularly serves at least 25 individuals at least 60 days per year.

Community PWS, which are regulated by DDW, are required to submit water samples of their raw and delivered water for a broad suite of regulated constituents on various schedules that depend on the constituent and the source water context. All PWS data on water quality, source locations, service areas, and historical data are publicly available on the State Water Board website².

3.2.2 State Small Water Systems

State Small Water Systems (SSWS) are defined as systems serving at least five but not more than 14 residential households. Mutual Water Companies are frequently classified as a SSWS. Typically, SSWS are regulated by county environmental health departments; regulatory oversight of these systems varies by county. Typically, counties require submission of water quality samples annually (at most) for a smaller set of constituents than monitored by a PWS.

² <https://data.ca.gov/dataset/drinking-water-public-water-system-information>. Accessed January 2021.

SSWS data are public; however, most counties in the state do not have these data compiled in any easily accessible format. Many counties require a fee for data retrieval for these systems. Typically, the data available include sporadic water quality data for a few constituents and the original permit for the system. The permit typically includes information on the construction of the water source (well) and the street where service is provided.

3.2.3 Local Small Water Systems

Local Small Water Systems (LSWS) include residential systems serving two to four households. Most counties regulate LSWS as if they are private wells – that is, they are unregulated except for the requirements associated with the drilling permit. Typically, no information is available to identify the difference between a single-household well and one used for a LSWS.

3.3 Potentially Impacted Public Supply Wells

Elevated nitrate concentrations have been found in many PWS wells in the Turlock Management Zone. The State Water Board’s Drinking Water Source and Water Systems identification documentation was accessed via the internet³ to provide water system information that complements water quality data from DDW. Together, these two sources provide information about many systems with active versus inactive wells that have nitrate (as N) exceeding the MCL. This documentation provides a status code for each well, as well as a population served and number of connections for each water system. The following subsections provide an overview of the public supply wells in each Management Zone that have exceeded the nitrate drinking water standard at any time in its reported history. This section also provides information about the treatment status and compliance status of various water systems in the Management Zone.

3.3.1 Public Supply Wells in the Management Zone

Public supply wells in the Turlock Subbasin with any measurement of raw untreated water having nitrate that exceeded the MCL were extracted from the database to determine if the wells are considered to be actively providing water to the water system or have been abandoned, destroyed, or inactive. Based on DDW data, 85 public supply wells in the Management Zone have exceeded the MCL for nitrate. Of those, 53 wells are considered “Active” (Active Raw, meaning the groundwater is sampled directly from the well; or Active Untreated, meaning the groundwater is sampled at a point between the well and a treatment system); the remainder are either abandoned wells (three wells), agricultural or irrigation wells (two wells), destroyed wells (seven wells), or inactive (20 wells). There are 54 unique water systems that have had wells in their system that have tested above the safe drinking water standard for nitrate. There are 41 systems whose well(s) that have tested above the

³ <https://sdwis.waterboards.ca.gov/PDWW/>. Accessed January 2021.

nitrate standard are listed as still being active. This does not mean that the system is out of compliance or serving water that exceeds the MCL, as many PWSs have treatment systems to remove or blend water with nitrate prior to delivery to customers.

California Department of Water Resources (DWR) provides approximate well locations for all well completion reports (WCR) they have on record. These records include location information for domestic wells drilled across the state. **Figure 3-2** shows the locations provided by DWR for the domestic drinking water wells in their WCR database, as well as the service area boundaries of PWSs available in the area. Publicly available PWS service area boundaries are compiled by the California Environmental Health Tracking Program. Active public water supply wells that have experienced nitrate concentrations exceeding the MCL are located throughout the Management Zone and are plotted alongside domestic well locations in Figure 3-2.

According to the DDW database, 84 public supply wells have experienced nitrate concentrations that have exceeded the MCL one or more times in their period of record within the Turlock Subbasin. **Table E-1 in Appendix E** provides the following information for each of these wells:

- (a) Summary of the nitrate data available for the individual well, including:
 - i. Date range of measurements;
 - ii. Number of measurements;
 - iii. Range of nitrate measurements; and
 - iv. Date of the most recent nitrate exceedance.
- (b) Well system characteristics, including:
 - i. Well status (active, inactive, etc.);
 - ii. Water system the well provides water to;
 - iii. Water system type (community, non-community non-transient, etc.);
 - iv. Number of connections; and
 - v. Population served by that water system.

Table E-2 in Appendix E provides information on the 53 unique public water supply systems that have had at least one well where nitrate concentrations have exceeded the MCL. This appendix provides the following information on each system:

- (a) Water system number (as identified by DDW);
- (b) Water system name;
- (c) Water system type;
- (d) Number of connections (which ranges from 1 to 69,766);
- (e) Number of wells in each well status category that have exceeded the nitrate MCL;
- (f) Population served by the PWS; and
- (g) If the PWS has an active impacted well, the population of potentially affected people served by the PWS.

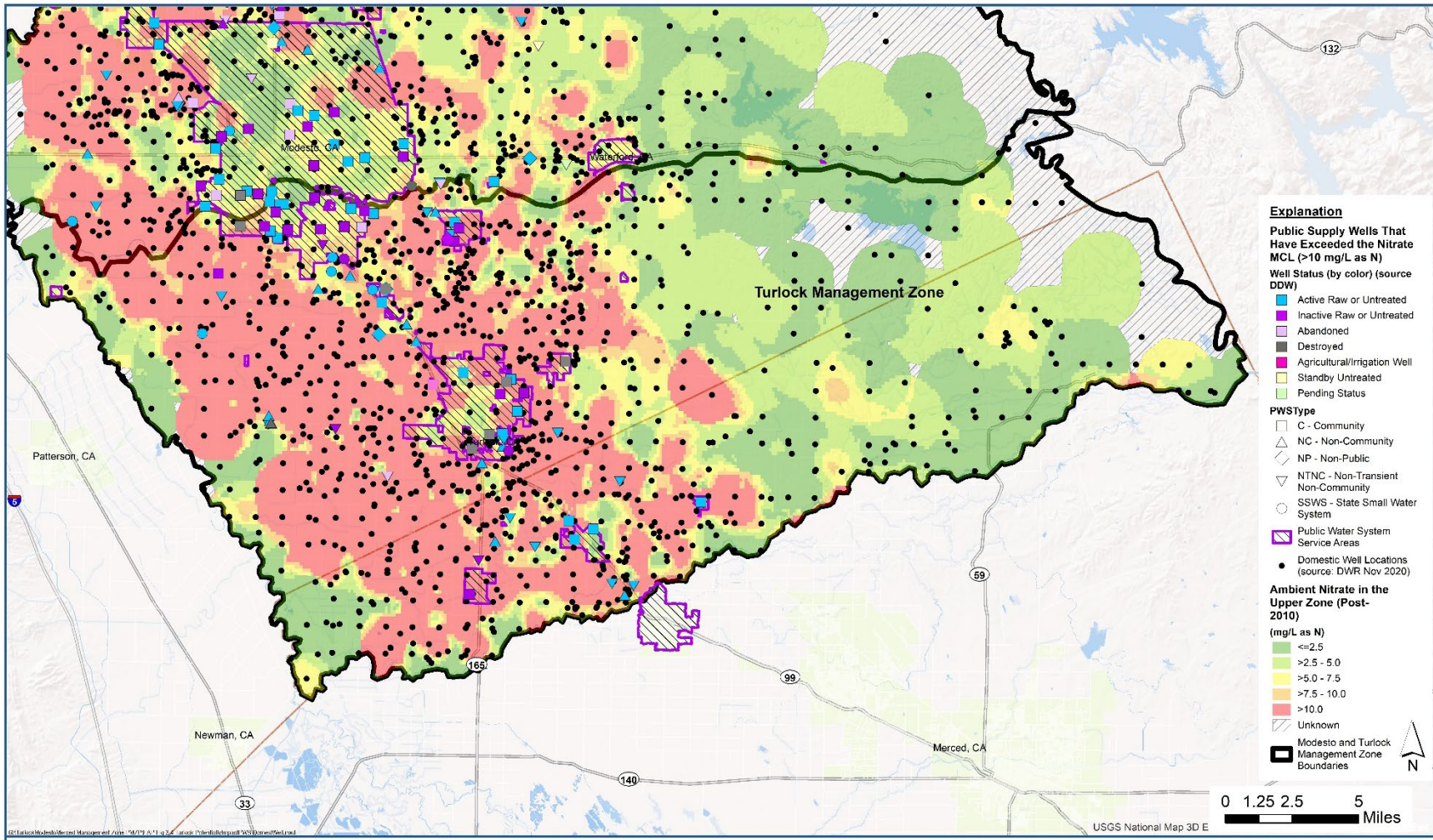


Figure 3-2. Potentially Impacted Public Water Supply Wells and All Domestic Wells, Turlock Management Zone

3.3.2 Public Water System Delivered Water Treatment Status

Although there are some active PWS wells that have been tested for nitrate with results indicating nitrate concentrations have exceeded the MCL of 10 mg/L-N, many PWSs have treatment facilities to remove nitrate or other contaminants prior to the water being delivered to consumers. Using the best information readily available, it is possible to find DDW sources of water for PWS that are categorized as “treated”. This includes the following potential DDW-defined well status categories:

- *AT – Active Treated:* An active source which is sampled after any treatment.
- *CT – Combined Treated:* Combined sources which are treated.
- *DT – Distribution System Sample Point, Treated:* Sample point within the distribution system after treatment.
- *IT – Inactive Treated:* A source which is not in service for periods of one year or greater and which provides treated water to a system.
- *ST – Standby Treated:* A source which is used less than 15 calendar days per year, with periods not to exceed five consecutive days and which provides raw water which is sampled after treatment.

Even when a water system has a documented treated source according to DDW, this does not ensure that the water system treats its water for nitrate (a treated source may mean chlorination prior to being distributed, or possible treatment for other contaminants such as arsenic, manganese, or organic chemicals). PWS typically treat elevated nitrate by using blending, reverse osmosis (RO; membrane technology), ion exchange (IX), granular activated carbon (GAC), or biological or chemical nitrate removal via denitrification (less common).

Out of the 54 PWSs with wells located within any portion of the Turlock Management Zone, 23 of them have treatment capabilities as indicated by having a treated source in the DDW records. Eleven of those 23 systems name some form of treatment that might treat nitrate (e.g., blending, RO, GAC, IX) (see Table E-3, Appendix E).

Table E-3 in Appendix E summarizes the water system treatment information that is available from DDW for the 54 PWSs that have experience elevated nitrate levels in their wells. **Figure 3-3** shows the Turlock Management Zone and the public supply wells that have exceeded the nitrate MCL. Water systems that have treated water sources (according to well status data from DDW) that might treat for nitrate are indicated with a circle. The color of the circle indicates whether the water system has had a nitrate sample from a treated source that exceeds the MCL (> 10 mg/L-N).

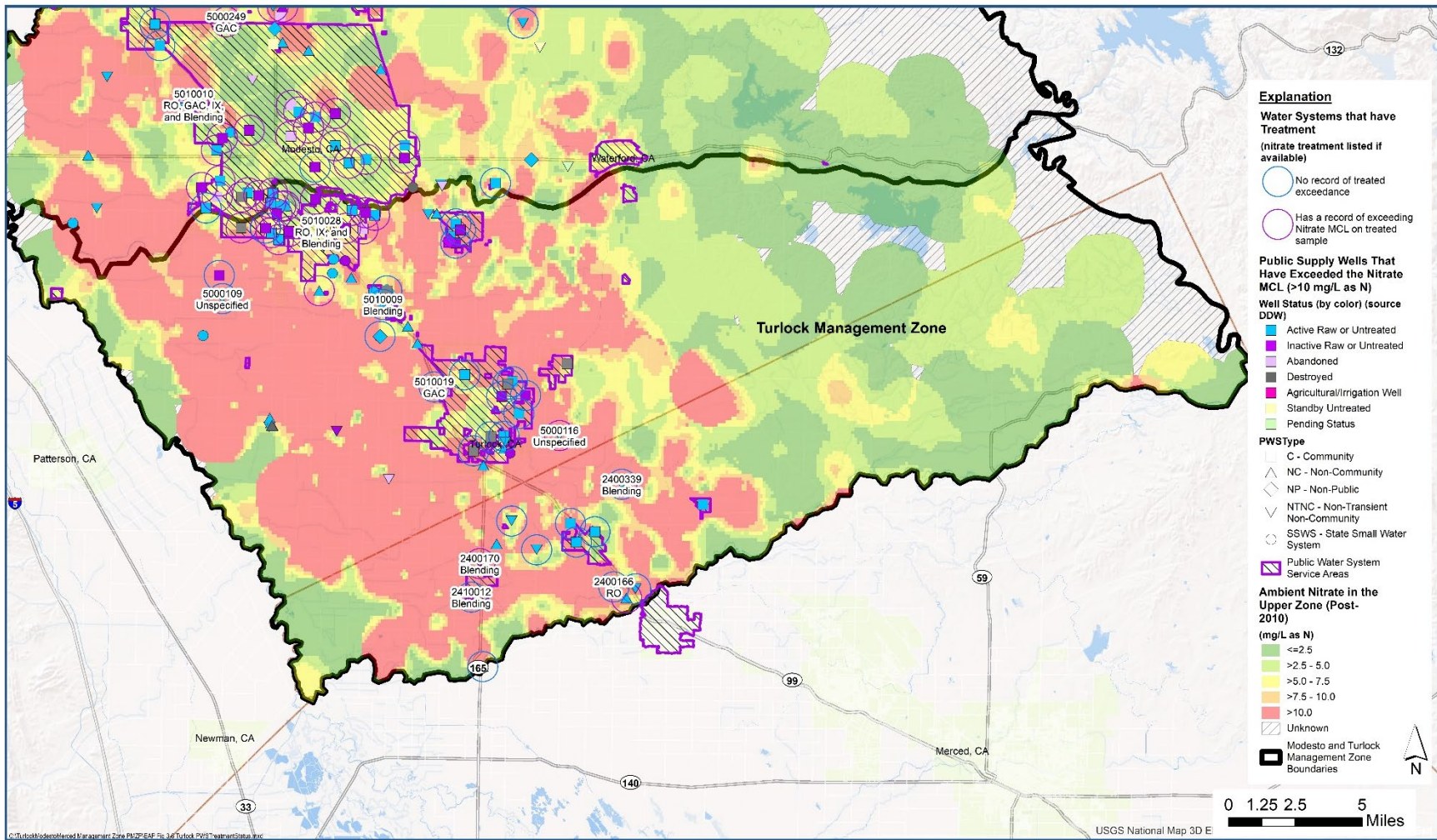


Figure 3-3. Treatment Status for Water Systems that have Wells with Nitrate-Impacted Samples, Turlock Management Zone

3.3.3 Public Water Systems Out of Compliance Due to Nitrate

Public supply wells impacted by nitrate have been identified, and information about treatment status has been summarized above. Based on further investigation of PWSs with potential nitrate issues, it is possible to determine current compliance status. If a PWS is fully in-compliance with all Title 22 drinking water standards, these systems will not have any open violations filed with the State Water Board (accessible via Drinking Water Watch [DWW]).

The Human Right to Water Data Portal⁴ (also through the State Water Board) provides a GIS point shapefile of PWSs and their compliance status (as of November 2020). This map file represents information available on community and non-transient non-community PWSs that are regulated by the State Water Board or Local Primacy Agency (LPA). PWSs included in this dataset have had or are in exceedance of a federal/state primary or secondary drinking water standard between January 2012 to November 2020. The State Water Board's regulatory authority does not include water systems that are defined as "SSWS", "LSWS", or private domestic wells.

The Human Right to Water Data Portal does not indicate specifics as to why PWSs may be out of compliance. This information is available, however, through individual investigation of each PWS through the DWW website. Using a combination of information gleaned from data summarized in Section 3.3.1, the Human Right to Water Data Portal, and the DWW website, a compilation of the compliance status of all PWSs in the Turlock Management Zone can be seen in **Appendix E Table E-4**. This table illustrates that besides nitrate, there are several other chemicals that are causing PWSs to be out of compliance (1,2,3-Trichloropropane (1,2,3-TCP), uranium, and arsenic). The following summary table was developed that lists the seven PWSs in the Turlock Management Zone that are currently (as of January 2021) out of compliance due to nitrate or nitrate PLUS a co-contaminant (such as 1,2,3-TCP or arsenic) (**Table 3-2**).

If PWSs are out of compliance due to nitrate conditions that exceed the safe drinking water limit, they are indicated in the table, and the population served by these systems is listed. A total of six PWSs, serving a population of 182, are currently out of compliance (as of January 2021) due to nitrate issues alone. There are two PWSs, serving a population of 105, that are currently out of compliance (as of January 2021) due to nitrate issues plus arsenic and/or 1,2,3-TCP. In total, the population served by PWSs that are currently out of compliance with a nitrate issue is 287 in the Turlock Management Zone.

⁴ https://www.waterboards.ca.gov/water_issues/programs/hr2w/. Accessed January 2021.

Table 3-2. Non-Compliant Public Water Systems (as of January 2021) due to Nitrate and Nitrate Plus Co-Contaminants

PWS ID	PWS Name	Number of Connections ¹	Population Served ¹	Violation Chemical(s) ²	Most Recent Date of Violation ²	MCL Exceedance		Pop. Served by Non-Compliant PWS (Nitrate Only)	Pop. Served by Non-Compliant PWS (Nitrate + Co-contaminant)
						Nitrate Only	Nitrate Plus Co-contaminant		
CA5000462	Best Western – Orchard Inn	1	26	Nitrate	2/27/2017	X		26	0
CA5000465	Duarte Nursery Inc. Water System	7	75	1,2,3-TCP; arsenic, nitrate	12/8/2020 6/13/2013 12/20/2017		X	0	75
CA5000525	Oasis Market	1	25	Nitrate	6/14/2019	X		25	0
CA2400335	Olivares Farms Water System	5	30	Arsenic, nitrate	10/19/2020 4/20/2017		X	0	30
CA5000402	Our Lady of Assumption Church	1	26	Nitrate	2/26/2018	X		26	0
Total Population								77	105

¹ Source: Human Right to Water or DWW Databases

² Source: DWW Database

3.4 Potentially Impacted Domestic Wells and Local Small Water Systems

Figure 3-4 illustrates the locations of potentially impacted domestic wells and areas of elevated nitrate (7.5 mg/L to 10 mg/L-N, and > 10 mg/L-N) for the Turlock Management Zone. These areas were used along with DWR’s domestic well locations based on WCRs⁵. It was assumed that any domestic wells located within the boundaries of a PWS would not be used for drinking and were removed from the estimation of the number of potentially impacted domestic wells. There are approximately 276 domestic wells within the PWS residential service areas in the Turlock Management Zone. It is unknown whether any of these wells are still being used even though they are potentially in a PWS area.

To estimate the number of domestic wells located outside PWS boundaries and potentially impacted by elevated nitrate, domestic wells were placed into six groups:

- *Group 1* - Groundwater in the Upper Zone at or below 2.5 mg/L-N;
- *Group 2* - Groundwater in the Upper Zone above 2.5 mg/L-N and at or below 5.0 mg/L-N;
- *Group 3* - Groundwater in the Upper Zone above 5.0 mg/L-N and at or below 7.5 mg/L-N;
- *Group 4* - Groundwater in the Upper Zone above 7.5 mg/L-N and at or below 10 mg/L-N;
- *Group 5* – Groundwater in the Upper Zone exceeding 10 mg/L-N; and
- *Group 6* - Unknown category because the domestic well(s) are located where insufficient nitrate data exist in the Upper Zone to perform the spatial interpolation of ambient nitrate conditions.

The total number of domestic wells located outside PWS boundaries was compared to the number of wells in each elevated nitrate category to provide an estimate of the percent of domestic wells potentially impacted by elevated nitrate in the groundwater. **Table 3-3** summarizes the results of this analysis.

To estimate the population potentially impacted by residents relying on domestic wells that may have elevated nitrate, 2010 census block data were mapped and joined with the ambient Upper Zone nitrate concentrations occurring outside of PWS boundaries. The population was summed for census blocks outside PWS boundaries and within the Management Zone for those areas with nitrate concentrations in the Upper Zone (using the six categories of nitrate concentration described above). **Table 3-3** summarizes the results of this analysis.

⁵ Several domestic well locations provided by DWR’s Well Completion Report (WCR) database may not be exact locations, but rather plot in the center of a 1-square mile township/range-section area. Therefore, several domestic wells may plot at the same location, and their locations are accurate up to one mile.

The total estimated number of domestic wells located outside of PWS boundaries and the potential population associated with residents relying on groundwater that may have elevated nitrate concentrations are derived from two very different methodologies. Based on the estimated population in the potentially affected areas, it is likely that the estimated number of domestic wells located in those areas is underestimated based on information from DWR’s WCR database. It may be possible during EAP implementation to improve the accuracy of current estimates by conducting additional parcel analysis, e.g., the comparing the number of parcels inside and outside of PWS boundaries.

Table 3-3. Summary of Domestic Wells and Population with Estimated Upper Zone Nitrate Area Categories Located Outside Public Water System Boundaries

Estimated Upper Zone Ambient	DWR Domestic Well Count		2010 Census Block Analysis
	Domestic Well Count Outside of PWS Boundaries	% of Total Domestic Wells Outside PWS	
Group 1: ≤ 2.5 mg/L-N	333	11%	2,006
Group 2: > 2.5 – 5.0 mg/L-N	316	10%	2,833
Group 3: > 5.0 – 7.5 mg/L-N	281	9%	4,763
Group 4: > 7.5 – 10.0 mg/L-N	447	14%	10,487
Group 5: > 10.0 mg/L-N	1,700	55%	37,441
Group 6: Unknown*	22	1%	187
Total (Outside PWS Boundaries)	3,099	100%	57,717

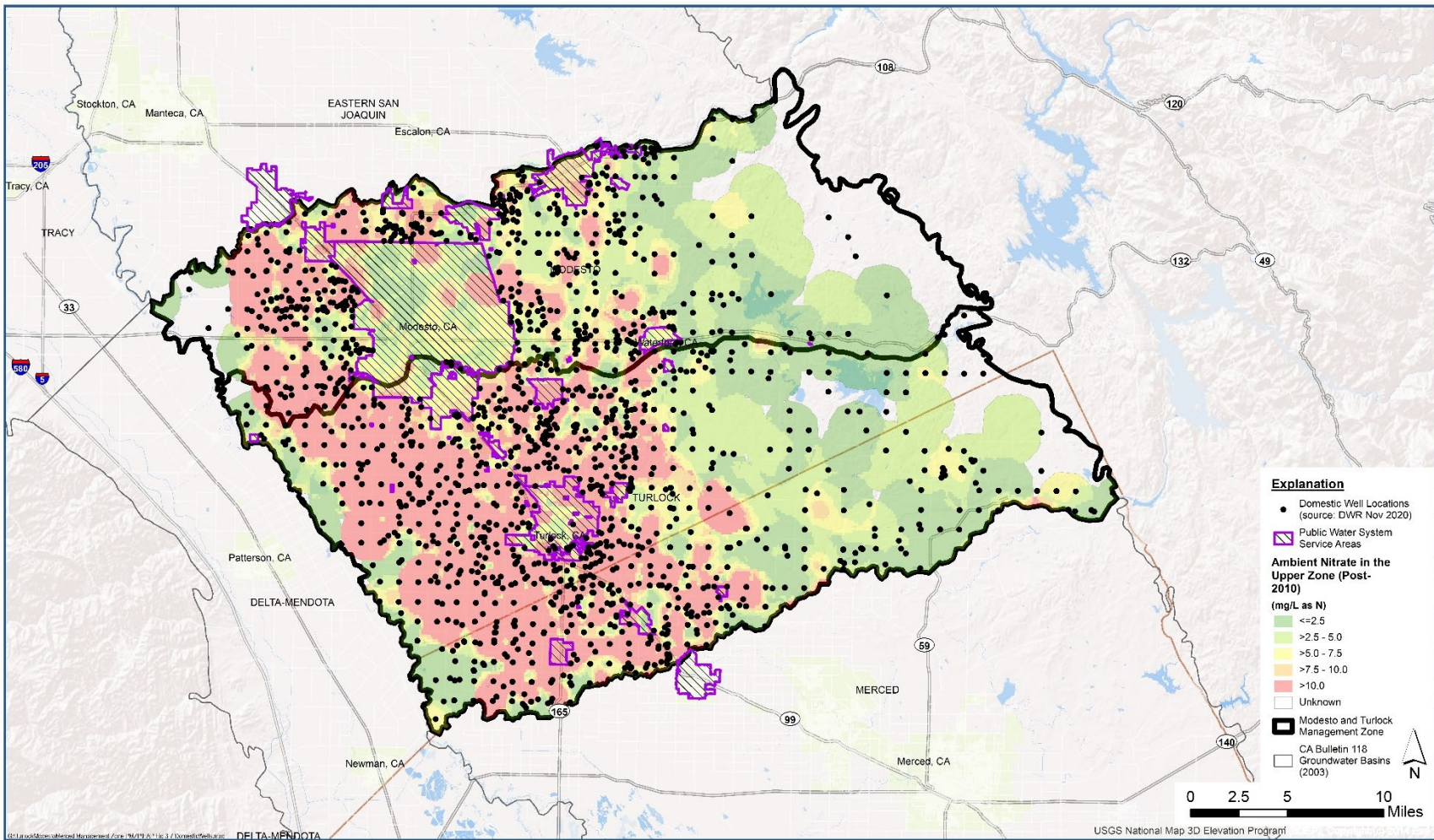


Figure 3-4. Domestic Wells Located Outside Public Water System Areas in the Turlock Management Zone and Adjacent Modesto Management Zone.

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4. Process to Identify Potentially Affected Areas

Figure 3-1 above identifies the portion of the Turlock Management Zone where nitrate conditions in the Upper Zone of the groundwater likely exceed 10 mg/L-N (see red-colored areas). Except for those areas which are served by a compliant public water system (PWS) (e.g., around the City of Turlock), the residences in these red-colored areas are most likely to be served by a domestic well that has potentially unsafe nitrate levels. VWC will target some of its outreach efforts specifically to those identified as being most likely affected by elevated nitrate. This will ensure that those most likely impacted by nitrate contamination learn about their replacement water options as quickly as possible. Targeted outreach will occur at the same time VWC is also implementing general community outreach activities to the entire Management Zone so that all residents in the Management Zone are aware of the Interim Replacement Water Program.

4.1 Process to Identify Affected Residents

Process to identify affected residents that may have a domestic well or may be connected to a PWS that is not compliant with the nitrate drinking water standard will be done in a timely manner as indicated in the EAP implementation schedule provided in Section 7.1. This stepwise process, which is described below, focuses on the development of a mailing list to facilitate the direct delivery of EAP-related information to potentially affected residents. Findings from Sections 3.1 and 3.4 that identified domestic wells and small water systems in nitrate-impacted areas will be used as starting point for this effort. The overall approach will be adaptively managed as needed to meet the EAP schedule; however, any modifications made to the process would not reduce the areas being targeted for direct mail outreach.

Step 1: Data Development – Identify PWS Boundaries and Obtain County Parcel Data

Public databases that provide PWS boundary information are often not accurate. Therefore, in Step 1, the VWC will reach out to all public water systems identified in Section 3.2 to request a list of Assessor Parcel Numbers (APN) and service addresses for their respective customers (no customer information will be requested). The outcome will be an accurate depiction of PWS service boundaries and identification parcels served by a nitrate compliant PWS. If a PWS is unwilling to share the requested data or is unable to provide the data in a timely manner, VWC will rely on what is available from public databases.

To identify the parcels within the Turlock Management Zone, Stanislaus and Merced County assessor parcel GIS data will be requested from each County. The parcel GIS data will be overlaid with the PWS data obtained above and groundwater quality data (as was used to develop Figure 3-1). The outcome will be a base map that identifies areas not served by a PWS and where nitrate is most likely > 10 mg/L-N.

Step 2: Remove Parcels Served by Nitrate Complaint PWS

Each PWS will be evaluated to determine if it is compliant with the nitrate drinking water standard. Parcels located within compliant PWS boundaries will be removed from further evaluation. If it is unclear whether the PWS is compliant with the nitrate requirements, the associated parcels will be retained. After Step 2 all remaining parcels should meet the following criteria:

- Located within the Turlock Management Zone;
- Not served by a nitrate compliant PWS or status of compliance of the associated PWS is unknown; and
- Located in an area where the Upper Zone of the groundwater subbasin potentially has elevated nitrate levels > 10 mg/L-N.

Step 3: Establish List of Potentially Affected Residences

GIS-based parcel information (APN or address) will be exported into an Excel spreadsheet to develop a targeted outreach list. Parcels that are part of the East San Joaquin Water Quality Coalition will be removed to the extent possible as residents on these parcels are already aware of Nitrate Control Program requirements. These residents will not be targeted for direct outreach under the EAP; however, their well will continue to be re-tested as required by Central Valley Water Board. The final spreadsheet will be provided to a third-party vendor to generate a mailing list. The outcome of this step will be a mailing list for targeted outreach activities. These are described in Section 5.2.3 below.

4.2 Process for Non-Compliant Public Water Systems

Corona Environmental Consulting (2021) identified three PWSs within the Turlock Management Zone that are not in compliance with the nitrate drinking water standard (based on a review of the Human Right to Water and DWW databases):⁶

- Our Lady of Assumption Church (Water System #: CA5000402)
- Best Western – Orchard Inn (Water System #: CA5000462)
- Oasis Market (Water System #: CA5000525)

Our review identified the same three systems (see Section 3.3.3 above and Table 3-2).

VWC intends to reach out and work with non-compliant PWSs to support efforts to bring them into compliance. VWC also will periodically re-evaluate these findings to verify that all PWSs in the area remain compliant with regards to nitrate. If any PWS is found to be non-compliant, VWC will collaborate with their representative(s) to identify potential solutions (temporary or permanent) for implementation.

⁶ Accessed October 28, 2019 per Corona Environmental Consulting (2021)

5. Community Outreach During EAP Implementation

Community outreach activities will continue during EAP implementation. As community input is received, modifications to this EAP may occur (see Section 6.5 on the process to amend the EAP). Where appropriate and to support a cost-effective strategy, these community outreach activities may be coordinated with the adjacent Modesto Management Zone.

5.1 Information Sharing

Several community outreach activities are designed to support establishment of interim replacement water until long-term solutions are implemented. These activities support both general community outreach efforts to the entire Management Zone and targeted residents identified from the process outlined in Section 4. The VWC will prepare informational materials in English and Spanish. Other language translations will be developed if the need arises.

5.1.1 *Maintain Management Zone Website*

VWC has already established a website to optimize outreach and engagement in the Modesto and Turlock Management Zones (<https://valleywaterc.org/>). This website will update the community on upcoming meetings, locations and operational hours of water fill stations and the process to request participation in the Tailored Water Delivery Program (see Section 6.2). VWC will continue to work with permitted dischargers and non-dischargers to provide links on their respective websites directing users to the VWC.

5.1.2 *Informational Materials*

Informational materials, provided in both hard copy and electronic formats, will be developed for use in various forums, such as, but limited to, flyers, public meeting handouts, information packets mailed out to residents, brochures made available to the public, or use of social media platforms (these materials may be tailored to specific audiences). Decision on which format and mechanism to present materials will be decided based on community feedback and input from key community leaders/organizations. Material distribution will be done in the most cost-effective manner at that time to inform residents. At a minimum, the following informational materials will be developed for EAP use (Note: Information for the first two bullets has already been developed and is currently on VWC's website):

- Educational material regarding nitrate in drinking water as a potential health concern.
- Purpose for establishment of the VWC and the EAP, including (a) the programs that have been established to ensure residents in the area have access to drinking water not impacted by nitrate; and (b) identification of program representatives or website to contact for more information.
- Notices such as “Save the Date”, flyers, and emails to alert stakeholders and community participants of upcoming community meetings and EAP implementation updates.
- Locations of water fill stations if established by the Management Zone, including information regarding how to properly clean and store water containers and how to use the facilities.
- Information regarding how to request participation in the Tailored Water Delivery Program.

5.2 General Management Zone Outreach

VWC will conduct periodic community outreach meetings to support EAP implementation (see Section 7.1 for general schedule of when meetings are planned in 2021 and 2022).

Upcoming meeting schedules will be shared with the community during outreach activities and through postings on VWC’s website.

5.2.1 Community Outreach Meetings

All Management Zone interested parties, including community participants, will be invited to the meetings. To provide frequent opportunities and updates on EAP implementation activities, it is anticipated community meetings will be held every other month for the first year of EAP implementation. After the first year, meeting frequency may be reduced based on community feedback. The content of each meeting may vary, but the primary purpose of these meetings is to inform the community of the following:

- Overall status of implementation of the EAP;
- Opportunity for residents with nitrate at a concentration greater than 10 mg/L-N in their domestic well to request participation in the bottled water delivery or POU treatment programs;
- Need for installation of water fill stations to support the Interim Replacement Water Program; if community supported, discuss potential locations a fill station;
- Obtain input from the community on how implementation of the EAP can be improved;
- Have discussions regarding potential long-term drinking water solutions as those planning efforts increase;

- Status of next steps in the Nitrate Control Program, e.g., development of Final Management Zone Proposal for the Modesto and Turlock Management Zones and Turlock MZIP; and
- Schedule for subsequent meetings and upcoming milestones.

VWC understands that virtual meetings are not the most ideal platform to engage with the community, however COVID-19 State and County restrictions and guidelines must be adhered to as long as they are in place. At the earliest available opportunity, VWC will make efforts to conduct in-person meetings and may provide a mixture of both in-person and virtual meetings to accommodate the needs of different individuals.

Table 5-1 summarizes the tasks to be completed to conduct a community outreach meeting. At a minimum, Spanish translation will be provided. However, based on community input from residents and key community leaders/organizations, VWC will evaluate the need for additional language translation support. Notification of these meetings will be conducted, but not limited to using one or more of the following methods:

- Direct mail marketing to all residents or targeted groups of residents, e.g., those most likely impacted by elevated nitrate in groundwater;
- Public announcements, e.g., through newspaper notices in local and regional media or radio advertisements on English and Spanish stations in the local area.
- Requests to other entities to facilitate outreach efforts, e.g., civic organizations, school and community service districts or houses of worship within the Stanislaus and Merced County areas;
- Social media platforms such as Nextdoor, Facebook, or PeachJar (schools);
- Organizational websites, e.g., VWC, Coalition, or Central Valley Water Board; or
- Others, as determined by VWC.

5.2.1 Coordination with Other Stakeholders

VWC will continue to coordinate with other stakeholders within the Management Zone, especially those entities with potential roles in the management of water that may be used as a drinking water supply. The purpose of this coordination is to facilitate the following:

- Identification of potentially affected residents (see Section 4);
- Establishment of interim replacement water program;
- Support of outreach activities to all residents within the Management Zone;
- Preparation of outreach materials tailored to the constituencies associated with each stakeholders organization;
- Informing stakeholders of EAP-related activities ongoing in the area, e.g., Stanislaus and Merced County Board of Supervisors, Stanislaus and Merced County Public Health Department, other interested County departments, trade groups, local community organizations, etc.;

Table 5-1. Process to Conduct Community Outreach Meetings

Task	Activities
1. Address meeting logistics (if meeting is virtual, 1a will not apply)	<ul style="list-style-type: none"> a. Secure public venue for in-person meeting b. Prepare and send out “Save the Date” meeting notice at least 10 days in advance of meeting date (English and Spanish); post same information on VWC website c. Send out follow-up meeting notice in English and Spanish within 3-4 days of the meeting date d. Send out meeting notice flyers to other interested stakeholders for dissemination and posting on their websites e. Secure necessary translation service for meeting
2. Prepare meeting materials	<ul style="list-style-type: none"> a. Prepare meeting agenda, handouts, PowerPoint presentation materials specific to the purpose of the meeting b. Bring copies of any VWC informational materials for distribution at the meeting (if in-person)
3. Post follow-up information after outreach meeting	<ul style="list-style-type: none"> a. Post meeting presentation materials and handouts to VWC website, social media platforms, etc. (Note: If meeting was virtual, post recording of the meeting on VWC website and other applicable social media platforms)
4. Follow-up directly with meeting participants after meeting, as needed	<ul style="list-style-type: none"> a. Follow-up on action items from meeting b. Respond to post-meeting emails/inquiries

- Keeping the Central Valley Water Board and DDW informed (outside of regular EAP status reports) of any issues or concerns that may be developing through program implementation;
- Identifying opportunities for grants that support not just implementation of the Nitrate Control Program but other area programs to ensure the community has safe drinking water;
- Working collaboratively with NGOs as needed to assist with outreach gaps; and
- Developing long-term solutions for providing safe drinking water to residents in the Management Zone.

5.2.2 Targeted Community Outreach

Section 3 identifies areas within the Management Zone where nitrate concentrations in the Upper Zone of the underlying groundwater are most likely to exceed 10 mg/L-N. Potentially affected residents identified through the process described in Section 4.1 will be targeted for direct outreach during EAP implementation. VWC will develop information to send to each resident targeted for outreach. The types of information that needs to be communicated (e.g., via a trifold flyer, letter or other form of communication) to each household includes, but may not be limited to:

- Explanation of the EAP and how its implementation may apply to their residence.
- Educational material regarding nitrate in drinking water as a potential health concern.
- Upcoming community meeting opportunities, as scheduled.
- Options available to obtain replacement water and, if needed, have their domestic well tested for nitrate.
- Opportunities to participate in EAP implementation and development of long-term drinking water solutions.
- Contact information for a VWC representative and website where the resident can obtain more information and to sign up for the emailing list.

Additional outreach to targeted residents will be conducted if residents are unresponsive to initial mailer. Such outreach activities may include, but not be limited to, a second mailout (unless previous mailed information was returned as undeliverable) or by other methods as recommended from discussions with key community leaders/organizations. VWC will look for opportunities to broadcast information at locations where people gather in local areas, for example, local community centers, schools, houses of worship, or farm labor centers.

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6. Interim Replacement Water Program

This EAP provides interim solutions while the Turlock Management Zone develops permanent, long-term solutions to ensure residents are not drinking water impacted by nitrate. The Interim Replacement Water Program described below will begin at the start of EAP implementation and continue until permanent solutions are in place. The Interim Replacement Water Program includes two elements: (1) Tailored Water Delivery Program to meet the needs of individual households, i.e., through bottled water delivery or installation of a Point-of-Use (POU) Treatment System; and (2) consideration of a Centralized Water Delivery Program that makes water available to any Management Zone resident through establishment of water fill stations.

6.1 Tailored Water Delivery Program

Tailored Water Delivery program is designed to meet needs of individual homeowners and is implemented in parallel with the Centralized Water Delivery program. Two replacement water options available in the Tailored Water Delivery program include: (1) bottled water delivery; and (2) POU treatment.

6.1.1 Request to Participate in Program

The VWC will communicate the availability of this Interim Replacement Water Program to residents in the Management Zone through its targeted and general community outreach program (see Section 5). Residents will be directed to contact the Management Zone to discuss available services. For residents that want home bottled water delivery, or a POU treatment system installed in their home, the resident will be asked to fill out a Tailored Water Delivery Program Request Form (**Appendix F**). A VWC representative will assist with the preparation of this form if needed. Once a completed request form is received, the VWC will confirm the resident making the request meets the following eligibility criteria:

- Residence is within the Turlock Management Zone and does not receive drinking water from a state or county regulated PWS that is compliant with the nitrate drinking water standard.
- Current drinking water source at the residence has a nitrate concentration that is > 10 mg/L-N. This may be verified by (a) the resident providing a nitrate test result from a laboratory certified under the California Environmental Laboratory Accreditation Program using an Environmental Protection Agency approved method collected within the last five years; or (b) a well test conducted by the VWC at no cost to the resident (see Section 6.3 below).
- If a third-party vendor requires the resident to sign an agreement to receive bottled water or POU treatment, resident must be willing to sign the agreement and meet the third-party provider agreement's terms and conditions.

If a resident meets the eligibility criteria, VWC will work with the resident to identify the best approach to receive interim replacement water from this program. Should a resident be ineligible to participate in this program, the VWC will notify them of the decision and make sure they are aware of alternative options to obtain safe drinking water, e.g., through the use of a water fill station, if available in the area or other safe drinking water programs.

6.1.2 Bottled Water Delivery Option

Through the bottled water delivery option, participating residents will be provided regular bottled water deliveries at no cost from a vendor contracted by the VWC. It is anticipated the vendor providing the bottled water service will: (a) provide a 5-gallon water dispenser (leased or purchased); (Note: Smaller sized bottle options, e.g., 3-gallon, may also be made available) (b) deliver 5-gallon water bottles on a regular schedule; and (c) pick-up the empty bottles. Initial volume of water allocated monthly to a household will be 60 gallons. If warranted, this initial volume may be modified on a case by case basis during the initial request to participate in this program option. (see Section 6.1.5).

6.1.3 Point-of-Use Treatment System Option

The POU treatment system option includes installation of a Reverse Osmosis (RO) treatment unit under a sink where water is obtained by the resident for drinking or cooking purposes (e.g., under the kitchen sink). The VWC will pay the cost for installation, maintenance, and monitoring of the POU treatment system.

Every request for a POU treatment system installation will require careful evaluation to be sure the appropriate treatment system can be installed in the household. In some cases, due to site-specific circumstances a POU treatment system may not be a viable interim replacement water option for the residence. Reasons why installation of a POU treatment system may not be a viable option include, but may not be limited to:

- Inadequate incoming pressure to the treatment system;
- High nitrate levels that limit the effectiveness of the POU treatment system to treat the water to a safe level; and
- Presence of other contaminants besides nitrate that limit the effectiveness of the POU treatment system and/or are not treatable through the treatment device.

To support implementation of this replacement water option, the VWC will coordinate with DDW and the vendor(s) as needed to assist with POU treatment system technical issues. If the technical problems are unresolvable, the residence may alternatively participate in the bottled water delivery program.

Where a POU treatment system is a feasible interim replacement water option, the VWC's vendor(s) will work with the resident to install the treatment system. If the resident is not the

owner of the residence, the process to install and maintain the POU System will require written approval of the property owner.

Once approved, resident will establish any necessary agreements (and schedule) with the VWC's vendor(s) to install and maintain a POU treatment system at the residence. It is anticipated that services will include: (a) installation of the treatment device; (b) initial and follow-up water testing to ensure the device is removing nitrate down to safe levels as expected; and (c) periodic maintenance of the POU treatment system (as required by the manufacturer, which may require that the vendor enter the home). The cost of these services will be borne by the Management Zone as long as the EAP is effective or until an alternative option is provided to ensure the residence has drinking water safe from nitrates. If the resident does not allow required maintenance and monitoring of the POU System to take place (as per the vendor agreement), then the Management Zone has the discretion to modify the approved interim replacement water option from a POU System to bottled water delivery.

Operation and maintenance of a POU treatment system requires periodic monitoring to verify the treatment system is effectively treating nitrate as intended. If not, the VWC will work with the vendor to determine if an alternative POU treatment system could be installed to provide the treatment necessary or the resident will be switched from POU to bottled water delivery immediately and the POU treatment system will be removed from the residence at no cost to the resident.

6.1.4 Agreements Between Residents and Vendors

VWC may select one or more vendors to implement the Tailored Water Delivery Program (Note: **Appendix G** lists potential vendors for the Turlock Management Zone; VWC may use the same vendor to support both the Modesto and Turlock Management Zones). It is the responsibility of the VWC to ensure that its agreements with vendors to provide services to the Management Zone remain in effect as long as the EAP is effective. Selected vendors may have their own terms and agreements that must be met for their organization to provide services at a residence. Residents participating in the Tailored Water Delivery Program are responsible for the following:

- If an agreement between the VWC's vendor and resident is required to receive services, residents are responsible for establishing the agreements and complying with the terms and conditions of any signed agreements. VWC will assist residents as needed with any questions or issues that arise during establishment of the agreement with the vendor.
- For residents receiving bottled water delivery, the resident is responsible for working with the third-party vendor to schedule delivery of bottled water and pickup of empty bottles.
- For residents that will have a POU treatment system installed, the resident is responsible for working with the VWC's vendor to schedule installation and abide by

any required maintenance of the POU treatment system. The cost of maintenance is the responsibility of the VWC, but once a long-term, permanent source of safe drinking water becomes available in the area that serves the residence, the VWC will no longer support the POU maintenance agreement. Some examples of long-term, permanent sources of safe drinking water may include, but not limited to, consolidation with a nearby compliant PWS, connection to a water well meeting nitrate drinking water standards, etc. As part of its ongoing community outreach efforts under this EAP, VWC will be obtaining input from residents on possible long-term, permanent solutions for the Management Zone. If a resident chooses to continue the use of the POU treatment system, the resident will be responsible for paying for maintenance services.

6.1.5 Program Assessment

Approximately 30 days after implementation of service at a residence, VWC will contact the residence by phone, email, postcard, or other means deemed appropriate at that time to verify one of the following:

- Amount of bottled water being provided is sufficient for the household. The VWC will increase or decrease the volume delivered, if needed.
- POU treatment system has been installed and the resident understands the operation and maintenance requirements.

A second check-in will be conducted within 90 days of the first check-in. VWC will have staff available to answer questions or address concerns from residents participating in the Tailored Water Delivery Program.

6.2 Centralized Water Delivery Program: Water Fill Stations

A water fill station is an independent water-dispensing facility connected directly to a PWS that meets drinking water standards and is constructed and operated as required by any applicable, local, county, state and federal regulations, such as the California Safe Drinking Water Act as defined in the California Health & Safety Code and Titles 17 and 22 of the California Code of Regulations. The goal of the Centralized Water Delivery Program is to provide an additional alternative source for safe drinking water to the local community that may be accessed by any resident. This option requires installation of water fill stations to meet the drinking water needs of as many residents as possible. Any resident will be able to bring their water bottles to fill them as often as possible at no cost to them.

6.2.1 Water Filling Station Locations

Section 3 identified the areas within the Turlock Management Zone most likely impacted by elevated nitrate in the Upper Zone. The areas with nitrate concentrations likely greater than 10 mg/L-N are fairly extensive, especially in the western part of the Management Zone.

Based on community feedback to date, the areas served by fill stations should not be too large to minimize the distance a residents' needs to drive to obtain water. Given water quality conditions, **Figure 6-1** provides an illustrative example of the areas that may be targeted within the Management Zone for establishment of a water filling station. Each planning area is represented as a five-mile radius circle. This figure is only for EAP planning and budgeting purposes. Scheduling and locations of fill stations will be based on discussions with the community. During the first year of EAP implementation, VWC will initiate these discussions with the community. Potential locations will be developed based on community consensus.

6.2.2 Requirements to Establish a Water Filling Station

Filling stations can provide an all-encompassing option to obtain safe drinking water in the Turlock Management Zone. Development of this interim solution will require additional community input. The first step will be to closely work with community residents to identify potential locations for a fill station. Criteria that will be used to identify viable locations include, but may not be limited to:

- Community has indicated its support for the installation of the fill station.
- VWC can obtain permission to install and operate a station on land or property owned by a third party.
- Station receives its water from an existing PWS that (a) complies with state requirements to provide safe drinking water; and (b) has sufficient capacity to dispense water at a reasonable rate to fill up multiple containers (up to five-gallons) within a short period of time (target of 1.5-2 gallons/minute, consistent with California regulations for faucets in new residential construction).
- To the extent practical, the station location is within an area where the public already goes to meet other family needs, e.g., at a governmental facility, shopping center, school, or house of worship.
- Establishment of a station is not expected to create any safety issues for users, e.g., location is in a well-lit area and typically regular traffic occurs in the area.
- Vehicle access/parking is available and enough to not cause any unnecessary congestion.
- Operation of the fill station does not create noise impacts to neighboring properties, especially during nighttime hours.
- To the extent possible, the location meets the goal to have a water fill station open 24 hours/7 days per week.

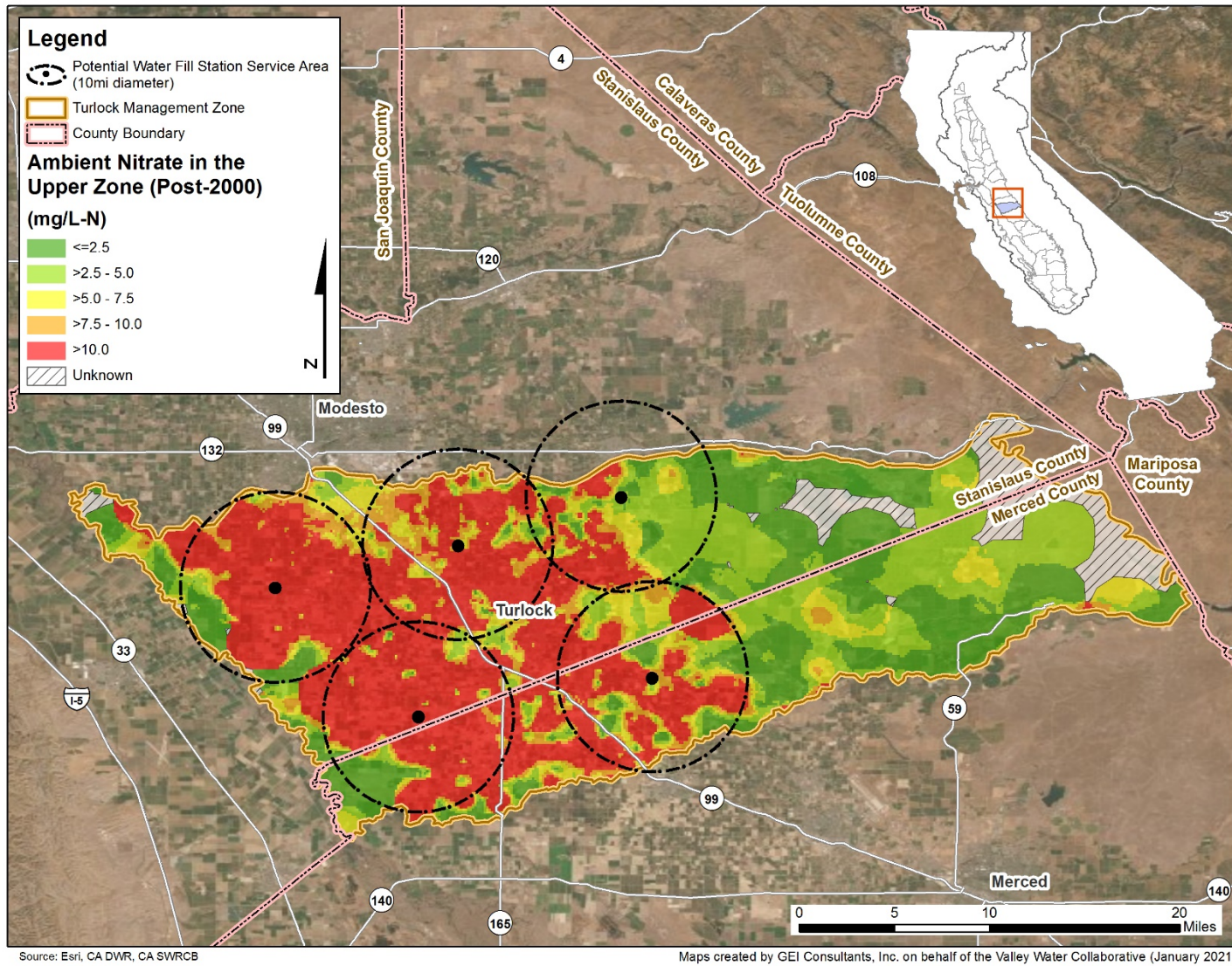


Figure 6-1. Targeted Planning Areas for Potential Water Fill Stations in Turlock Management Zone

6.2.3 Water Fill Station Development

Once water filling station locations have been identified, the process for design and installation will begin. The following activities will be completed to establish a water fill station:

- Obtain property use agreement, as needed.
- Compile documents for design, permitting, installation and operation and maintenance (O&M) of the fill station. The content of these documents will be consistent with any local, county, state and federal regulations (Note, if available, VWC may use the specifications from other approved filling stations in the Central Valley Region as a template for the design and implementation of its own fill station).
- Establish agreement with the PWS supplying water to the fill station.
- Construct and complete tasks to make water fill station operational.
- Notify interested parties that water fill station is operational, including community participants, the Central Valley Water Board, PWS providing water and other interested parties in the Management Zone.
- Inform public regarding how to use the water fill station, e.g., where residents may obtain bottles and how to properly clean and store their bottles and water.

6.3 Residential Well Testing Program

6.3.1 Well Test for Nitrate

The Residential Well Testing Program in this EAP focuses on verifying that the drinking water for residents requesting participation in the Tailored Water Delivery Program has nitrate levels that exceed 10 mg/L-N. Other well testing programs may be able to provide testing for water to evaluate other potential contaminants. As noted in Section 6.3.2 below, this EAP's nitrate testing program will be coordinated with those other well testing efforts to the extent practical while still meeting the Nitrate Control Program goal to address nitrate drinking water concerns as quickly as possible. While the Residential Well Testing Program supports requests to participate in the Tailored Water Delivery Program, any resident in the Management Zone may request to have their well tested for nitrate.

Table 6-1 describes the five-step well testing program that will be implemented at a residence requesting well testing. Key elements include:

- Well needs to be operational and used regularly.
- Permission from the property owner is required if the resident is not the owner of the property where the well test is requested (see Program Request Form in Appendix F).
- Requests to test a well may be received either from the resident or the property owner.

- Outreach will continue periodically to capture new residents that may have moved into the area.

Table 6-1. Stages of Residential Well Testing Program

Stage	Program Component
Step 1 – Resident Submits Request Form	Resident or property owner submits Tailored Water Delivery Program request form to VWC and indicates need to have well tested for nitrate. If form has not been received by the resident by mail or at a community workshop, the form will also be available on the VWC website. In cases where the resident is not the property owner, property owner’s permission and signature will be required.
Step 2 - Eligibility Determination	VWC will verify residence is within the Turlock Management Zone and that the resident is not already having their well sampled under any other regulatory state or federal program(s). Once verified the resident is eligible to have their well sampled under this EAP, the VWC will submit a work order to its contractor responsible for conducting wells sampling on behalf of the VWC. If the residence is not in the Turlock Management Zone, the VWC will advise the resident. If the residence is in the adjacent Modesto Management Zone, the resident will be referred to the VWC representative for the Modesto EAP.
Step 3 – Well Sampling	VWC’s contractor will contact the resident and schedule a date and time for sample collection. Contractor will collect the sample and deliver it to the VWC-approved laboratory within the required sample holding time.
Step 4 – Evaluation of Results and Resident Contact	Residents and property owners will receive a copy of the results of the well test in writing regardless of the nitrate concentration. However, if the test results indicate nitrate levels above the nitrate drinking water standard, the resident and property owner (if appropriate) also will be informed (phone or email) within 24 hours of the VWC receiving the test result and the VWC will immediately begin coordinating with the resident (and property owner if needed) to implement an interim replacement water option. If the test results show that nitrate levels are ≤ 10 mg/L-N, the resident will not be able to participate in VWC’s Tailored Water Delivery Program, but will be notified of other replacement water alternatives, e.g., water fill stations if available in the area. The resident or property owner may also be eligible for follow-up well testing under Step 5 below.
Step 5 – Follow-up Well Testing	<p>For a resident or property owner that has a well test showing nitrate levels that are ≥ 8.0 mg/L-N but ≤ 10 mg/L-N, VWC will offer the opportunity to have follow-up well testing conducted. Within one year of receiving the well test result VWC will contact the resident or property owner to offer an opportunity to retest the well at no cost:</p> <ul style="list-style-type: none"> • If the resident or property owner agrees to have the well retested and the result remains between 8.0 and 10 mg/L-N, then VWC will continue to reach out to the resident on an annual basis to provide the opportunity to have the well tested at no cost to the resident until the nitrate concentration is < 8.0 mg/L-N. • If nitrate concentration is < 8.0 mg/L-N, VWC will reach out to the resident every five years or during length of EAP implementation, whichever is longer, to offer an opportunity to retest the well at no cost to the resident.

Table 6-1. Stages of Residential Well Testing Program

Stage	Program Component
	<ul style="list-style-type: none"> If the resident or property owner does not want their well retested, no additional follow-up will occur with the resident in the future under this EAP.

6.3.2 Well Testing for Other Contaminants

Although nitrate is the focus of the Nitrate Control Program, VWC understands the possibility that other co-contaminants may be present in the groundwater aquifer. Other state and regulatory programs are also looking into well testing programs in the Central Valley targeting other groundwater constituents. VWC will work collaboratively with these other regulatory programs (e.g., Safe and Affordable Funding for Equity and Resilience [SAFER] under the Safe and Affordable Drinking Water Fund) if the opportunity arises to have a well tested for multiple constituents all at one time. This provides efficiency across regulatory programs and for the resident. Some regulatory programs provide grant funding opportunities and VWC will collaborate and coordinate with the appropriate agencies to obtain funding where available.

If at the time a resident or property owner requests their well be tested and funds for the testing of other constituents are not available, a resident may request to have other constituents analyzed at their expense. VWC will still sample the well for nitrate, but provide this additional opportunity to residents, where appropriate (participation by the resident is entirely voluntary). If the resident is interested in this option, VWC will coordinate with them directly regarding how to implement this option.

If the well is sampled for co-contaminants and the test results indicate constituents other than nitrate are detected in levels over drinking water standards, VWC will work with each resident to determine the best way for access to safe drinking water that may be available from other regional programs that are providing interim replacement water for constituents other than nitrate.

6.4 Monitoring and Data Management

VWC will gather data to understand the effectiveness of community outreach activities, community involvement, and progress of EAP implementation. The following sections describe the minimum the requirements for data collection and record-keeping.

6.4.1 Tailored Water Delivery Program

In the Tailored Water Delivery Program, VWC will maintain the following data: (1) number of requests received to participate; (2) database of residents approved to participate; (3) follow up contact with residents to verify implementation at their residence; and (4) documentation of residences that were approved, but did not follow through with implementation at their residence. Data will be obtained from third-party vendors periodically as follows for each residence where service is being provided:

- Bottled water delivery:
 - Initial bottled water delivery date
 - Usage of water
- POU treatment system:
 - Installation date of POU treatment system
 - Status of any recommended nitrate monitoring by POU manufacturer
 - Status of maintenance

6.4.2 Water Fill Stations

VWC will monitor each water fill station it installs to obtain the following data: (1) volume of water dispensed; (2) dates and times that water is dispensed; (3) fill station sampling plan analytical results; and (4) cleaning schedule. At a minimum, this information will be analyzed periodically to:

- Determine patterns of usage at each facility;
- Confirm fill station is meeting drinking water standards;
- Determine if cleaning schedule at each facility is adequate;
- Evaluate whether additional water fill stations are needed because of high demand at specific locations; and
- Provide a basis for compensating the land/property owner for water usage.

If periods of high usage are identified at any water fill station, additional site monitoring may be temporarily conducted to determine if there are significant delays in obtaining water or congestion at the site.

6.4.3 Residential Well Testing Program

The following information will be maintained by this program:

- Requests received from residents to have their water tested
- Laboratory reports indicating the sample date and the test results
- Record of responses to residents and property owners informing them of their test results
- Status of follow-up well sampling

6.5 Program Reporting and Adaptive Management

VWC will submit the first EAP status report within 30 days after six months of EAP implementation to the Central Valley Water Board. Following the first submittal, annual program status reports will be submitted per the EAP schedule. At a minimum, each report will address the following:

- Implementation status per the schedule (see Section 7.1). If scheduled activities were not completed, reasons for the delay and a revised schedule will be provided.
- Participation and status of the different components of the Interim Replacement Water Program (based knowledge gained, and data records maintained)
- Summary of public outreach efforts that have occurred since last reporting period.
- Program expenditures during the reporting period and anticipated costs to implement the next reporting period.
- Requests to modify the EAP based on knowledge gained and findings from program monitoring data.

The VWC may submit one report to fulfill the reporting requirements of both the Turlock and Modesto Management Zones. Recommended revisions to the Turlock EAP will be submitted to the Executive Officer of the Central Valley Water Board (recommendations may be submitted by letter or as part of an EAP status report). Unless the Central Valley Water Board objects to the recommended revisions to this EAP, VWC will begin implementation of the revised EAP within 60 days of submittal unless the Central Valley Water Board objects and notifies the VWC that this EAP is incomplete. If the Central Valley Water Board objects to the proposed revisions, the Management Zone will work with the Central Valley Water Board to address their concerns to the extent possible. If the proposed revisions are not approved, then the EAP will continue to be implemented as written.

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7. Early Action Plan Implementation

7.1 Schedule/Milestones

Figure 7-1 illustrates the general schedule and key milestones for EAP implementation.

Table 7-1 provides the detailed schedule of activities associated with each key component of this plan: General and Targeted Community Outreach, Interim Replacement Water Program, and Monitoring and Reporting. Where appropriate and to support a cost-effective strategy, some of these activities may be coordinated with the adjacent Modesto Management Zone.

If it is necessary to modify the EAP schedule, VWC will request modification by letter or as part of the submittal of an EAP status report. The request will be made to the Executive Officer of the Central Valley Water Board and include a description of the proposed modification, the reason(s) for the requested change and a proposed new schedule and/or milestone.

7.2 Funding Mechanism

EAP implementation is funded by fees collected from Management Zone participants who have Selected Pathway B of the Nitrate Control Program. A budget is in place and is reviewed and approved by the Board of Directors at each monthly meeting. In addition to financial support from VWC participants for the EAP implementation and development of the MZIP, where appropriate VWC will seek local, state, and federal funds that are available to support implementation of short-term and long-term nitrate management projects or activities. VWC has already begun to explore potential supplemental funding sources, including but not limited to, grant and loan programs administered by the State Water Board and Department of Water Resources, which are intended for drinking water and agricultural water quality improvement.

Task	Subtasks	2021			2022				2023			
		QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
General Community Outreach	Outreach to Management Zone	[Solid blue bar spanning all quarters from QTR 2 2021 to QTR 4 2023]										
	Conduct public community and stakeholder meetings	◆	◆	◆	◆	◆	◆	◆	2023 schedule determined in 2022			
Targeted Community Outreach	Develop mailing list of targeted residents	[Solid blue bar]										
	Mailout Interim Replacement Water Program materials		◆									
	Coordinated outreach to non-compliant public water systems	[Solid blue bar]										
	Conduct follow up outreach (as necessary)		[Solid blue bar]				[Solid blue bar]				[Solid blue bar]	
Interim Replacement Water: Bottled Water & POU Treatment Systems	Secure third-party vendor services	[Solid blue bar]										
	Process requests for services (eligibility verification, well-testing, initiate services)	[Solid blue bar spanning all quarters from QTR 2 2021 to QTR 4 2023]										
	Follow-up with residents to confirm provided services		[Solid blue bar spanning all quarters from QTR 3 2021 to QTR 4 2023]									
Interim Replacement Water: Water Filling Stations	Work closely with residents for planning locations of fill stations	[Solid blue bar]										
	Establish final list of locations and obtain property use and agreement				[Solid blue bar]							
	Develop and install up to two water fill stations (schedule and number dependent on community input)					[Solid blue bar]						
	Develop and install additional water fill station (as needed, based on usage and community input)								[Solid blue bar]			
	Operation and maintenance of water fill stations								[Solid blue bar]			
	Notify Central Valley Water Board and community of operational water fill stations								[Solid blue bar]			
Monitoring and Reporting	Gather monitoring data from all program activities	[Solid blue bar spanning all quarters from QTR 2 2021 to QTR 4 2023]										
	Prepare EAP status reports			◆		◆				◆		

Figure 7-1. General Implementation Schedule for Turlock Management Zone EAP

Table 7-1. Valley Water Collaborative Early Action Plan Implementation Schedule (see also Figure 7-1)

Task	Subtasks	Schedule (Assumes EAP Start Date: May 7, 2021)
General Community Outreach	Maintain VWC website	Ongoing
	Maintain existing and develop additional mechanisms to provide notice to the public of EAP implementation activities	Ongoing
	As needed, prepare materials to support community outreach activities (e.g., flyers for upcoming meetings, FAQs, etc.)	Ongoing
	Send out public notice of upcoming community meetings	<ul style="list-style-type: none"> • “Save the Date” public meeting notice – send within 10 business days prior to scheduled meeting • Final meeting notice – send within 3 business days of meeting date (include Zoom link if meeting will be virtual)
	<ul style="list-style-type: none"> • Conduct public community meetings to provide: <ul style="list-style-type: none"> – EAP status update; – Information on Interim Water Replacement Program options; – Implementation schedule; – Well-testing opportunity; and – Other topics as needed. 	<ul style="list-style-type: none"> • Initial EAP implementation kickoff meeting – May 2021 • Additional meetings – minimum of once every three months after May 2021 kickoff meeting (August, November 2021; February, May, August, November 2022) • 2023 schedule to be determined in 2022 <p>Note: Meetings will be virtual until the State of California lifts restrictions on public in-person meetings. Once restrictions lift, VWC will hold in-person meetings initially but may balance in-person vs. virtual meetings over the long-term.</p>

Table 7-1. Valley Water Collaborative Early Action Plan Implementation Schedule (see also Figure 7-1)

Task	Subtasks		Schedule (Assumes EAP Start Date: May 7, 2021)
Targeted Community Outreach	Establish mailing list for targeted residents (residents with domestic well in areas most likely impacted by nitrate at concentrations > 10 mg/L-N)		Complete by June 30, 2021
	Mailout Replacement Water Program information to residents on mailing list of targeted residents		Complete initial mailing by July 16, 2021. Conduct follow-up mailings, if needed.
	Conduct follow-up outreach to residents that did not respond to initial contact or had mailed information returned as undeliverable		As needed, but complete by August 15, 2021 for first mailing. Within 45 days after subsequent mailings when they occur.
Interim Replacement Water: Tailored Water Delivery Program	Establish third-party agreements with vendors to supply bottled water or install a POU treatment system		Prior to initial mailout of outreach packet to targeted residences (see above)
	Acknowledge receipt of service request from resident and initiate eligibility evaluation		Within 3 business days of receipt of request to receive services
	If well test required to verify eligibility of residents requesting services, schedule and conduct well test		Schedule well testing as quickly as possible in coordination with resident
	Advise residents of nitrate well test results	Result is > 10 mg/L-N	Within 24 hours of receipt of test results, contact resident via telephone or email to initiate bottled water or POU treatment system programs; follow-up with written information within 3 business days
Result is ≤ 10 mg/L-N		Within 3 business days of receipt of test results, send written notice to the resident of ineligibility to participate in bottled water or POU treatment system programs (see Section 6.1 regarding other information to be communicated)	

Table 7-1. Valley Water Collaborative Early Action Plan Implementation Schedule (see also Figure 7-1)

Task	Subtasks		Schedule (Assumes EAP Start Date: May 7, 2021)
<p>Interim Replacement Water: Tailored Water Delivery Program (ctd)</p>	<p>Follow-up well testing if initial well test is ≥ 8.0 mg/L but ≤ 10 mg/L-N</p>	<p>Initial well test is ≥ 8.0 mg/L but ≤ 10 mg/L-N</p>	<p>Within one-year offer resident the opportunity to retest the well at no cost. If the resident:</p> <ul style="list-style-type: none"> • Does not want their well retested, no additional follow-up is required • Agrees to have the well retested and the result remains between 8.0 and 10 mg/L-N, then the Management Zone will continue to reach out to the resident on an annual basis to provide the opportunity to have the well tested at no cost to the resident until the nitrate concentration is < 8.0 mg/L-N
	<p>Follow-up with residents participating in bottled water/POU program to verify: (a) services are being received as contracted; and (b) bottled water recipients have sufficient water being delivered</p>		<p>Conduct first check-in with each resident within 30 days after confirming eligibility to receive bottled water/POU treatment system programs; conduct second check-in within 90 days after first check-in</p>
<p>Interim Replacement Water: Fill Stations</p>	<p>Work closely with residents to develop planning locations of fill stations</p>		<p>Complete by December 31, 2021</p>
	<p>Complete first two fill stations (if supported by community – see Section 6.2)</p>	<p>Complete design/specifications; obtain necessary permits/approvals to install facility, including establishing agreements with land/property owner to operate stations</p>	<p>Within 120 days of finalization of site locations and establishment of agreement with land/property owner</p>
		<p>Complete installations and make operational (Target December 31, 2022 – if supported by community)</p>	<p>Within 90 days of obtaining necessary permits/approvals</p>
	<p>Complete all tasks to install up to three additional fill stations and make operational (dependent on outcome of community outreach efforts)</p>		<p>Target December 31, 2023</p>
	<p>Conduct necessary operation and maintenance of active water fill stations</p>		<p>Ongoing after installation</p>
	<p>Notify Central Valley Board and community</p>		<p>Within 14 days of a water fill station becoming operational</p>

Table 7-1. Valley Water Collaborative Early Action Plan Implementation Schedule (see also Figure 7-1)

Task	Subtasks	Schedule (Assumes EAP Start Date: May 7, 2021)
Monitoring and Reporting	Collect monitoring data/maintain records as described in Section 6.4	Ongoing
	Submit EAP status reports to the Central Valley Water Board (Note: For each required submittal, VWC may submit one report that provides information for both the Turlock and Modesto Management Zones)	<ul style="list-style-type: none"> • Within 30 days after the first six months of EAP implementation or by December 7, 2021 • Within 30 days after the first year of EAP implementation is completed or by June 7, 2022 • By June 7 of each year beginning in 2023 (as long as EAP continues to be implemented)

8. References

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Central Valley Water Board. 2020. *Revisions to the Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and Tulare Lake Basin to Incorporate a Central Valley-wide Salt and Nitrate Control Program*. Resolution R5-2020-0057. December 2020. https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf

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Appendices

Provided as a separate pdf file