

Drinking Water Well Monitoring



For *Frequently Asked Questions*, please visit us at:

www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water/

For more information, please contact the Central Valley Water Board, **Irrigated Lands Regulatory Program (ILRP)**:

Sacramento Office: 11020 Sun Center Dr., #200
 Rancho Cordova, CA 95670
 (916) 464-4611
irrlands@waterboards.ca.gov

Fresno Office: 1685 "E" Street
 Fresno, CA 93706
 (559) 488-4396
ilrpinfo@waterboards.ca.gov

New Drinking Water Well Monitoring requirements for all members with active drinking water wells that are located on enrolled parcels are required to sample for nitrate. These requirements started in each Coalition as follows:

- January 2019
 - East San Joaquin
- January 2020
 - Tulare Lake Basin Coalition

- January 2021
 - Westside San Joaquin
 - San Joaquin & Delta
 - Grassland Drainage Area
- January 2022
 - Sacramento Valley
 - California Rice Commission
 - Western Tulare Lake Basin

Purpose of drinking water well monitoring

- Identify drinking water wells with unsafe nitrate levels.
- Notify well users of potential human health impacts of nitrate in drinking water.



Who is required to sample?

All coalition members or associated landowners with active drinking water wells on parcels enrolled in the ILRP. An active well is used for human consumption. If your well is not active, you do not have to sample. Contact the Central Valley Water Board.

It is the requirement of the member to contact the landowner of these requirements if they have no access to the drinking water well.

Sampling Requirements

Coalition members/landowners are required to start monitoring, and sample annually thereafter, unless:

- Nitrate + nitrite as nitrogen results are less than 8 mg/L for 3 consecutive years - *monitoring reduced to once every 5 years.*
- Nitrate + nitrite as nitrogen results are above 10 mg/L* - *Notification is required.*
- You have well data of nitrate + nitrite as nitrogen from the last 5 years from an Environmental Laboratory Accreditation Program certified laboratory. *
- You are not using the well for human consumption. Contact the Central Valley Water Board and let us know.

**See Frequently Asked Questions document*

Where to Sample

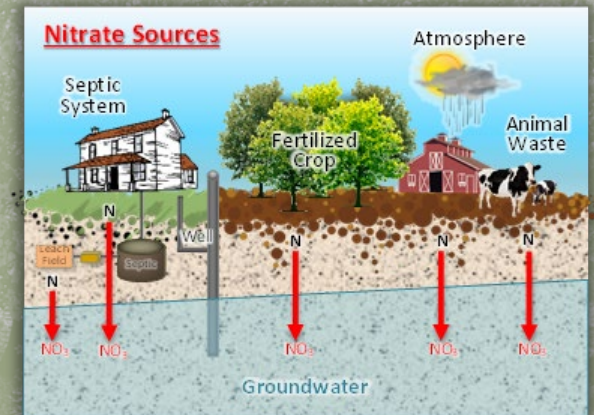
As close to pressure tank as possible, or from a cold-water spigot located before any filters or water treatment systems (*see diagram online*).

For sampling assistance, laboratory and/or third-party consultants are available.

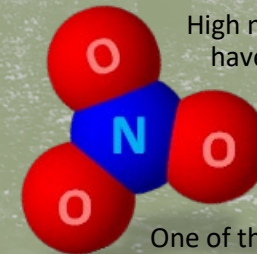
For self-sampling, please see the reverse side for general guidance.

Common Sources of Nitrate

Excess nitrate (NO₃) in soil is often found in rural and agricultural areas. The most common sources of nitrate are fertilizer, livestock waste, and septic systems. Nitrate in soil is highly mobile and can be easily transported to groundwater.

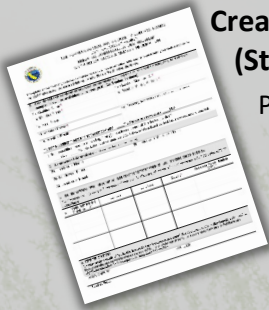


Nitrates and Associated Health Risks



High nitrate levels in groundwater have been found in some agricultural areas. This is a concern because excess nitrate can cause serious health effects if consumed.

One of the most serious effects is a condition called methemoglobinemia or "blue baby syndrome," which is caused by nitrate interfering with blood's ability to transport oxygen. Infants younger than six months old and pregnant women are generally at the highest risk of becoming seriously ill.



Create a GeoTracker Account (State database)

Provide the Drinking Water Well Member Information Form to the laboratory with the sample(s).

What are the steps involved in sampling?

- 1. Contact an Environmental Laboratory Accreditation Program (ELAP) certified laboratory certified for **nitrate + nitrite as nitrogen**.
- 2. Obtain chain of custody, sampling procedures and appropriate sample bottles.
- 3. Follow laboratory sampling procedures and hold times. Please be aware that sample bottles may have a liquid preservative in them (acid).
- 4. Determine sampling location by choosing a point nearest the well head (well) and before any water treatment system. (See *water well diagram on our webpage*.)
- 5. Collect sample using laboratory sampling procedures.
- 6. Place sample bottle(s) in cooler with ice if specified by sampling procedures.
- 7. Submit chain of custody and Drinking Water Well Member Information Form with sample(s).
- 8. Laboratory will submit your results into GeoTracker (State database) and provide you with a Global ID# for your well with your results. The Global ID# (ex.: AGW080012345) can be used for future sampling events.



Qualified laboratories for sample testing

An Environmental Laboratory Accreditation Program (ELAP) laboratory certified for nitrate + nitrite as nitrogen must be used.



ELAP certified laboratories can be found at:
www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water/dw_elap_labs_list.pdf

What to do with nitrate monitoring results

- 1. If nitrate + nitrite as nitrogen results are equal to or below 10 mg/L, the member must sample again the following year. See Sampling Requirements.
- 2. If nitrate + nitrite as nitrogen results exceed 10 mg/L, follow notification requirements listed below. No further sampling is required.

Notification requirements

- 1. The member must notify water user(s) and the Central Valley Water Board within 10 days, using the Drinking Water Notification Template found online at:

www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water/dw_notification_temp.pdf

- 2. If the member is not the landowner, they may instead provide notice to the landowner within 24 hours of learning of the exceedance, and the landowner must provide the Drinking Water Notification Template to water user(s) and the Central Valley Water Board within 9 days.
- 3. If the member, including family, are the only water users, and you answered Yes on question 1j. on the Drinking Water Member Information Form, no action is required. If you did not indicate you are the only user, notification to the Central Valley Water Board is required.



Landowner is expected to provide clean drinking water if the nitrate + nitrite as nitrogen results exceed 10 mg/L.

What legacy agricultural constituents might be in my groundwater?

In agricultural areas, the Central Valley Water Board also recommends (but does not require) testing well water for 1,2,3- TCP and the legacy soil fumigant DBCP, when that water is used for drinking.



What is 1,2,3- TCP?

In the 1940s, Dow Chemical and Shell started selling two soil

fumigants under the trade names of D-D and Telone to help farmers manage nematodes. 1,2,3- Trichloropropane (TCP) is a chemical in D-D and Telone that is particularly toxic to humans and persistent in the environment.

What is DBCP?

1, 2-Dibromo-3-chloropropane, or DBCP, is the active ingredient in the nematocide Nemagon, also known as Fumazone. It is a soil fumigant formerly used in agriculture.

For more information on drinking water well monitoring, please visit:

www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water

