

# Drinking Water Well Monitoring



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

[www.waterboards.ca.gov/centralvalley/water\\_issues/irrigated\\_lands](http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands)

For more information, please contact the Irrigated Lands Regulatory Program (ILRP):

ILRP  
Sacramento Office: ☎ : (916) 464-4611  
✉ : [irrlands@waterboards.ca.gov](mailto:irrlands@waterboards.ca.gov)

## New Requirement

On 7 February 2018 the State Water Board revised the Waste Discharge Requirements (Order) for the Eastern San Joaquin River Watershed. The revised Order includes a new drinking water well monitoring requirement. Beginning 1 January 2019, East San Joaquin Water Quality Coalition (ESJWQC) members must monitor drinking water wells on enrolled parcels for nitrates.

## Purpose of drinking water well monitoring

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



## Who is required to sample?

ESJWQC members or associated landowners with drinking water wells on parcels enrolled in the ILRP.

## Sampling Requirements

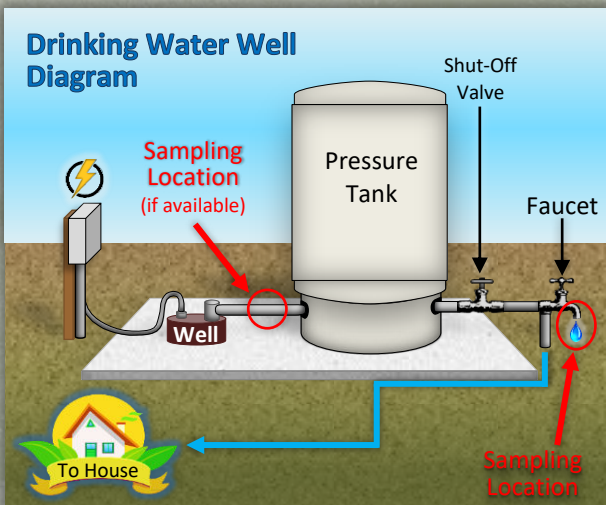
In 2019 and annually thereafter unless:

- 1) Nitrate + nitrite as nitrogen results are less than 8 mg/L for 3 consecutive years - sample every 5 years.
- 2) Nitrate + nitrite as nitrogen results are above 10 mg/L\*.
- 3) You have well data of nitrate + nitrite as nitrogen from last 5 years from an Environmental Laboratory Accreditation Program certified laboratory\*.

\*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.

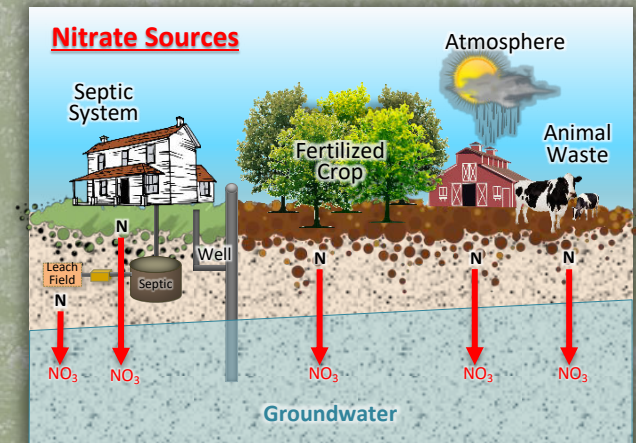


**For sampling assistance, laboratory and/or third-party consultants are available.**

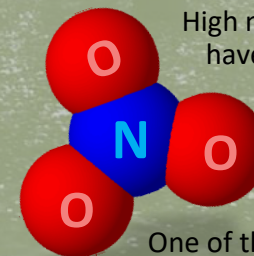
**For self-sampling, please see the reverse side for general guidance.**

## Common Sources of Nitrates

Excess nitrates ( $\text{NO}_3$ ) in soil are often found in rural and agricultural areas. The most common sources of nitrate are fertilizer, livestock waste, and septic systems. Nitrates in soil are highly mobile and can be easily transported to groundwater.

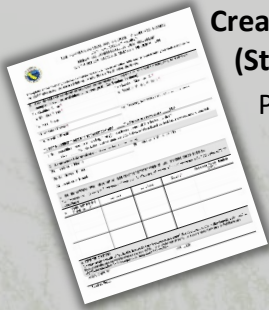


## Nitrates and Associated Health Risks



High nitrate levels in groundwater have been found in some agricultural areas. This is a concern because excess nitrates 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 certified laboratory certified for **nitrate + nitrite as nitrogen**.
- 2. Obtain chain of custody, sampling procedures and appropriate sample bottles.
- 3. Follow laboratory sampling procedures. Please be aware that sample bottles may have a liquid preservative in them (acid).
- 4. Sample **hold times** may vary. Please check with the laboratory.
- 5. Determine sampling location by choosing a point nearest the well head (well) and before any water treatment system. (See *water well diagram*.)
- 6. Collect sample using laboratory sampling procedures.
- 7. Place sample bottle(s) in cooler with ice if specified by sampling procedures.
- 8. Submit chain of custody and Drinking Water Well Member Information Form with sample(s).
- 9. Laboratory will provide you with the monitoring results and submit them into GeoTracker (State database).



### 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 (under More Information):

[www.waterboards.ca.gov/drinking\\_water/certlic/labs](http://www.waterboards.ca.gov/drinking_water/certlic/labs)

### 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, for 3 consecutive years.
2. If nitrate + nitrite as nitrogen results exceed 10 mg/L, the member does not need to continue to sample. Follow notification requirements listed below.

### Notification requirements

1. The member must notify water user(s) within 10 days using the Drinking Water Notification Template.

[www.waterboards.ca.gov/centralvalley/water\\_issues/irrigated\\_lands/forms\\_templates/](http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/forms_templates/)

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) within 9 days.
3. If the member, including family, are the only water users, no notification 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 nematicide 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](http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water)

