



Butte County Private Well Information

Post-fire well safety and testing guidelines.

Content updated on 5/14/19

WARNING: Recent testing conducted by the California State Water Board of creeks and rivers flowing from the fire affected areas on March 27th indicate elevated levels of heavy metals, including: Aluminum, Antimony, Arsenic, Cadmium, Selenium, Lead and Poly Aromatic Hydrocarbons (PAH's). Property owners who have private wells and also live near creeks or rivers should test for the presence of these heavy metals and PAH's in their well water. Residents in these areas should drink bottled water until well water is tested, treated and free of contamination.

How to determine well water safety

- If the casing or plumbing around the well was damaged by fire the water should be tested at a minimum for -bacteriological quality (i.e. Total and Fecal Coliform Bacteria). In this case a well owner should also consider testing the water for ash and debris contamination by testing for heavy metals and possibly for Benzene.
- If a well is near a creek or river that flows from the fire affected area, it should be tested for heavy metals, including but not limited to: Aluminum, Antimony, Arsenic, Cadmium, Selenium and Lead as well as, semi-volatile organic chemicals such as, Polynuclear Aromatic Hydrocarbons.
- If the fire was around the well, pressure tank, or any exterior plumbing including buried plastic piping, it is recommended to test the well water for the presence of Benzene. Benzene is a good indicator of the decomposition of plastics brought on by high temperatures. Samples of water for testing Benzene should be taken from a well after it is allowed to be dormant for 72 hours.
- If the house was damaged and a person is obtaining a permit to rebuild it, testing the well water for Benzene is a requirement.
- If there is further concern and/or need for additional water quality testing, especially for heavily impacted burn areas, it is recommended to test for the entire panel of Volatile Organic Chemicals and not just Benzene.

Water testing laboratories

Please note, the Public Health Laboratory only tests water for bacteria. If Benzene, PAH or heavy metal testing is needed, please contact one of the other labs listed below.

- **(Bacterial Only)** Butte County Public Health Laboratory: (530) 891-2747 | Oleander Ave. in Chico

- Fruit Growers Laboratory: (530) 343-5818 | 563 E Lindo Ave. in Chico
- Basic Laboratory: (530) 894-8966 | 3860 Morrow Ln. F in Chico

Sampling water for Bacteria

For accurate results, well water must be sampled correctly. Special care must be taken to assure that bacteria are not introduced into the sample when it is taken:

- Only use sterile bottles obtained from the approved laboratory; do not pre-rinse the bottle;
- Check that the well is tightly sealed to prevent the entrance of any surface contamination, either solid or liquid, to the water supply; vents should be screened, opening downward and above flooding; if the well is not sealed, take measures to have it sealed properly but allow for chlorine to be added to well now and in the future;
- Collect the sample from an outlet tap as close to the well as possible; the valve stem of the hose bib should not be leaking and should not be rusty or corroded; if a faucet is chosen inside the house the aeration screen, if present, needs to be removed from the end of the faucet;
- The water should be turned on and allowed to run full strength for 5 minutes; then adjust the water flow so that the sample bottle can be filled without splashing, but not so slow that the water curls back over the outlet of the hose bib;
- Remove the bottle's lid, fill the bottle to the line on the bottle's neck, and recap the bottle without touching the inside of the lid or bottle. Don't over or under fill the bottle or the sample might have to be rejected by the laboratory;
- Complete the laboratory's water sampling form;
- Transport water samples immediately to the laboratory, or refrigerate and submit to the laboratory less than 24 hours from the time the sample was taken.

Sampling water for Benzene

- Water in the well should be allowed to remain dormant for 72 hours. Therefore, do not turn on any faucet, inside or outside of the house within that 72 hour period.
- Use a water spigot that is closest to the well and preferably at the well head.
- Turn on the well pump. Open the valve to the water spigot slowly. Grab the first water that comes out of the spigot by capturing it in the sample bottles provided by the lab.
- Follow the labs instructions for filling the bottles, being careful not to allow any air to remain in the bottles. Store and transport the bottles as instructed by the lab.

Lab results and treatment

- To treat for bacteriological contaminants, the well can be disinfected by adding chlorine at the water source and allowing the chlorinated water to flow throughout the distribution system (turn all faucets and hose bibs on until chlorine is smelled, shut off all faucets and hose bibs and allow the chlorinated water to sit in the distribution system for 8-12 hours). After 8-12 hours, flush all of the chlorinated water and then take follow-up samples for

bacteriological contaminants. Note: for some wells, it may take time to flush all of the chlorinated water out of the system. If samples are taken before all chlorine has cleared the system, a false negative result could occur.

- For assistance with sampling, disinfection and other contamination and treatment concerns, contact a [Certified Distribution professional](#) for small water systems.
- To obtain permits for new or replacement well construction, contact Butte County Environmental Health: (530) 552-3880
- Learn more about [private well disinfection and sampling](#).