

# Arsenic in Well Water: Information for Well Owners

In response to community requests for more information about arsenic in well water, The University of Arizona and their agency partners have put together the following information. This information can be used to inform your personal decisions about well water testing and treatment at your home.

Please note, the Town of Dewey-Humboldt is not a public water provider. In other words, the Town does not provide municipal water to the community. Many residents in the Dewey-Humboldt area own their own private wells or are customers of two local private water companies.

## **Household private wells: what you need to know**

If you own a private well, you are responsible for maintaining the well and ensuring that your water is safe to drink. You can follow guidance from the [National Ground Water Association](#) and the [Centers for Disease Control and Prevention](#) to ensure the safety of your well water.

Because arsenic is a common groundwater contaminant in the Dewey-Humboldt area, The [University of Arizona Superfund Research Program](#) gathered the following information about arsenic in private wells for Dewey-Humboldt residents. However, well owners should be aware that arsenic is just one of several [potential contaminants](#) that could be present in your well water.

## **Why should I be concerned about arsenic in my well water?**

In parts of Arizona, including the Dewey-Humboldt area, arsenic can naturally occur at high levels in groundwater, often because rock touching the groundwater has arsenic in it. This can be a concern because groundwater is a primary source of drinking water in Arizona. Some private wells in the state have arsenic levels above the drinking water standard, while others have levels below it. It is important for well owners to pay special attention to arsenic levels in their wells.

Arsenic is colorless, odorless, and tasteless, so you cannot know it is there unless you test your well water. Drinking or cooking with water containing arsenic can harm your health; whether your health is affected depends on how much arsenic you are exposed to and for how long, as well as your sensitivity to arsenic. [Consuming small doses of arsenic](#) over many years can raise your risk for some cancers and other health effects. If you own a well, read below for steps you can take to protect yourself from being exposed to too much arsenic.

## **It is the responsibility of private well owners to test for arsenic and reduce it if needed.**

The U.S. Environmental Protection Agency (EPA) sets drinking water standards to protect consumers served by public water systems from health risks related to arsenic and other water contaminants. The EPA drinking water standard for arsenic is 10 ppb (parts per billion). Public water providers are required to reduce arsenic levels in drinking water to less than 10 ppb. However, private wells are not regulated and tested under federal drinking water regulations. If you have your own well, you are responsible for testing and maintaining its water quality.

## **How often should I test for arsenic in my drinking water?**

1. Use a state-certified laboratory to test your untreated well water (i.e., taken directly from the well, without filtration or any other treatment) every year for bacteria and nitrates and at least every three years for arsenic, lead, and radon.
2. Once you know your arsenic level, respond as follows:
  - 2.1. If arsenic in your well water is **less than 10 ppb**, it is OK for drinking and cooking. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.
  - 2.2. If arsenic in your well water is **between 10 – 200 ppb**, it is not an emergency, but make plans to get water for drinking and cooking from a different source, or install a home treatment system. Well water with arsenic levels **below 100 ppb** is considered safe to irrigate plants, including garden vegetables. Well water with arsenic levels **below 200 ppb** may be used as drinking water for livestock and poultry. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.
  - 2.3. If arsenic in your water is **over 200 ppb**, DO NOT use this water for drinking or cooking. Use another source immediately and consider installing and maintaining a home treatment system. If the arsenic is **less than 500 ppb**, you can continue to use this water for bathing and washing. Other sources of water include bottled water or connecting to a public water supply. If you choose bottled water, contact the supplier for information about impurities, including arsenic, and be sure to clean and disinfect your water containers regularly. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.
3. If you are treating your water for arsenic:
  - 3.1. Once you have established that treatment is effective (the arsenic level in your water is less than 10 ppb), continue to monitor the performance of your treatment system by testing your treated well water for arsenic every year, using a state-certified laboratory.
  - 3.2. If you install **any** water treatment system, whether it reduces arsenic or not, continue to test your treated well water for arsenic every year, using a state-certified laboratory.
  - 3.3. Maintain your treatment system according to manufacturer recommendations.

### **How can I reduce my exposure to arsenic?**

Click here to download a fact sheet containing basic information on arsenic in drinking water and treatment options from the University of Arizona: [\*Arsenic in drinking water: what you need to know.\*](#)

Click here to download a University of Arizona Cooperative Extension Bulletin containing more detailed information on arsenic treatment options: [\*How to Lower the Levels of Arsenic in Well Water: What Choices do Arizona Consumers Have?\*](#)

Click here to download a fact sheet from the Arizona Department of Health Services (ADHS): [\*How to Reduce Your Exposure to Arsenic and Lead in Dewey-Humboldt, Arizona.\*](#)

### **Who can I contact for more information?**

For questions about how often to test your private groundwater well, call ADHS at (602) 364-3128

For questions about which contaminants to test your well for, call ADHS at (602) 364-3128

To find a state-certified water testing laboratory, call the ADHS lab at (602) 364-0720

For questions about understanding water test results, call ADHS at (602) 364-3128

For questions about how to pick a water treatment system, call Dr. Janick Artiola at the University of Arizona at (520) 621-3516

For information about Humboldt Water System drinking water quality, contact Southwestern Utility Management at 520-623-5172 or <http://www.southwesternutility.com/contact.php>.

For questions about safe drinking water, call the Arizona Department of Environmental Quality (ADEQ), Water Quality Division at (602) 771-4641.

# Arizona Laboratories Certified for Drinking Water Samples

## Coconino County

Nortest Analytical  
2400 E Huntington Drive  
Flagstaff, AZ  
[www.nortestanalytical.com](http://www.nortestanalytical.com)  
(928) 774-2312

## Maricopa County

Apex Environmental Laboratory  
2105 S. 48<sup>th</sup> Street, Suite 102  
Tempe, AZ  
[www.azapexlab.com](http://www.azapexlab.com)  
(602) 437-0762

Aquatic Consulting & Testing  
1525 W. University Dr. Ste 106  
Tempe, AZ  
[www.aquaticconsulting.com](http://www.aquaticconsulting.com)  
(480) 921-8044

Chandler Analytical Laboratories  
571 N. 54<sup>th</sup> Street  
Chandler, AZ  
[www.chandleranalytical.com](http://www.chandleranalytical.com)  
(480) 963-2495

Transwest Analytical Services  
3725 E. Atlanta Avenue  
Phoenix, AZ  
[www.transwestanalytical.com](http://www.transwestanalytical.com)  
(602) 437-0330

Legend Technical Services  
17631 N. 25<sup>th</sup> Avenue  
Phoenix, AZ  
[www.legend-group.com](http://www.legend-group.com)  
(602) 324-6100

Statewide Disinfection Services  
344 S. Hawes Road  
Mesa, AZ  
[www.statedisinfectionservice.com](http://www.statedisinfectionservice.com)  
(480) 981-8859

Orange Coast Analytical  
4620 East Elwood Street, Suite 4  
Phoenix, AZ  
[www.ocalab.com](http://www.ocalab.com)  
(480) 736-0960

TestAmerica – Cotton Center  
4645 E. Cotton Center Blvd, Bldg 1  
Phoenix, AZ  
[www.testamericainc.com](http://www.testamericainc.com)  
(602) 437-3340

## Mohave County

Mohave Environmental Laboratory  
2850 Landon Dr., Ste A&B  
Bullhead City, AZ  
[www.mohavelabs.com](http://www.mohavelabs.com)  
(928)754-8101

## Navajo County

Mohave Environmental Laboratory  
200 N. 2<sup>nd</sup> Street  
Holbrook, AZ  
[www.mohavelabs.com](http://www.mohavelabs.com)  
(928)524-4635

## Pima County

Legend Technical Services  
4585 S. Palo Verde  
Tucson, AZ  
[www.legend-group.com](http://www.legend-group.com)  
(520) 327-1234

Turner Laboratories, Inc  
2445 N. Coyote Drive, Suite #104  
Tucson, AZ  
[www.turnerlabs.com](http://www.turnerlabs.com)  
(520) 882-5880

## Radon testing:

Radiation Safety Engineering, Inc.  
3245 N. Washington Street  
Chandler, Arizona 82445  
[www.radsafe.com](http://www.radsafe.com)  
(480) 897-9459

## How much arsenic is too much arsenic?

Arizona Department of Health Services has developed a simple method to determine if arsenic levels are too high, using the color code below

ppb is parts per billion and mg/L is milligrams per liter.

**Above  
200 ppb or  
0.2 mg/L**

This water should **not** be used for drinking or cooking! You should obtain your drinking water from another source immediately, or install and maintain a home treatment device.

**11-200 ppb or  
0.011-0.2 mg/L**

This water will increase the risk of long term or chronic health problems. Don't panic! Remember, chronic conditions develop over a long time. Make plans to obtain water from another source or install and maintain treatment.

**Less than  
10 ppb or  
0.01 mg/L**

It is ok to drink and cook with this water.

## Recommended well water testing schedule:

All new wells	Once a year	Every three years
Arsenic and other primary metals, total coliform bacteria, nitrates, total dissolved solids, pH	Total coliform bacteria, nitrates, total dissolved solids, pH	Arsenic and other primary metals

A well water professional should be consulted if you have a contaminated well. Visit [wellowner.org](http://wellowner.org) to find a well water contractor.

Office of Environmental Health  
150 N 18<sup>th</sup> Avenue, Suite 140  
Phoenix, Arizona 85007  
(602) 364-3118

[www.azhealth.gov](http://www.azhealth.gov)

