

Presented By



Annual
WATER
QUALITY
REPORT

Reporting Year 2013



PWS ID#: 3610073

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Meeting the Challenge

Our mission is to provide a safe, reliable water supply and wastewater reclamation system for the customers of the Hi-Desert Water District in an efficient and financially responsible manner.”

We are once again proud to present our annual water quality report covering all by testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all State and Federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Community Participation

You are invited to attend Hi-Desert Water District's Board of Directors meetings normally scheduled on the 1st and 3rd Wednesdays of each month beginning at 6 p.m. Meetings are held at the District's administration office at 55439 29 Palms Hwy. Information on regular meetings is available online at www.hdwd.com or by calling (760) 228-6267.

Your Elected Board of Directors:

- Roger Mayes - President
- Sheldon Hough - Director
- Sarann Graham - Director
- Bob Stadum - Vice President
- Dan Munsey - Director

Where Does My Water Come From?

The Hi-Desert Water District relies on local groundwater supplies supplemented by imported State Water Project (SWP) water, which is used to recharge the groundwater basin. The District extracts approximately 3,040 acre-ft/yr from two aquifers and has a maximum allocation of 4,282 acre-ft/yr from the SWP.

The existing water system consists of 11 active groundwater wells; approximately 300 miles of distribution piping over an approximately 57-square-mile area, 16 water storage reservoirs, and 18 pressure zones. The system maintains approximately 10,109 active service connections and serves over 24,000 residents in the Town of Yucca Valley and the unincorporated areas of San Bernardino County known as the Mesa.

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production and that can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Milky Water

Why does the water coming from my tap seem cloudy? Air may be introduced into the District's distribution system as the water is produced by groundwater wells. The air becomes entrained within the water as it is placed under pressure within the District's pipelines and is released as you open your tap. This process can give the water a cloudy appearance, but it does not pose any health risks. The water will begin to clear as it is allowed to sit for a few moments. More information can be found at: water.usgs.gov/edu/qa-chemical-cloudy.html.



Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please feel free to contact Steve Schwab, Water Quality Tech, at (760) 365-8333.

Treatment

Some wells within the district that extract water from the deeper portions of our aquifer can exceed the State's maximum contaminant level (MCL) for arsenic and nitrates. Water from one or more of these wells may require treatment before placing it into the distribution system for consumption. The District currently treats one well, Well 16 E, for arsenic by utilizing an approved treatment technique known as blending. In this process, the well water with the high concentrations of arsenic is blended with water from a second well that has a lower concentration of arsenic. The water is then pumped into a blending tank, thus lowering the overall arsenic levels before pumping it into the system and to our customers' taps. The District routinely monitors the delivered water and reports the results to the California Department of Public Health.

Infrastructure Improvements

The District is dedicated to providing its customers with a dependable, safe, and efficient water supply. In order to ensure that its mission can be met for years to come, the District is currently making improvements to its water supply infrastructure. These improvements include the addition of one production well capable of delivering 800 gallons per minute; a reservoir repair and rehabilitation project that consists of refurbishing the District's current water storage reservoirs; and the replacement of over 35,000 feet of old steel water main infrastructure to reduce leaks and enhance water quality.



Source Water Assessment

A Source Water Assessment Plan (SWAP) is available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

The greatest known potential contaminant within the District is septage caused from septic tank discharges. Septage can infiltrate the groundwater supply causing nitrate contamination in excess of Maximum Contaminant Levels (MCLs). Nitrates in excess of the MCL can cause a condition known as Methemoglobinemia, also referred to as Blue Baby Syndrome. The District is working hard to address this issue by moving forward with the construction of a Waste Water Treatment and Water Reclamation Facility that will reduce the number of septic tanks that are polluting our aquifer.

Spurts of Air

As leaks or other problems are fixed within the District or new piping is added, air can become trapped within the system. As it arrives at your tap, the air creates a sputtering sound. This condition is normally temporary and can be remedied by flushing the water until the air has been evacuated. If you experience any air problems, please contact the District.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The State requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL [MRDL] | PHG (MCLG) [MRDLG] | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|--|-----------------|--|-----------------------|--------------------|-------------------|-----------|--|
| Arsenic ¹ (ppb) | 2013 | 10 | 0.004 | 8.5 | ND–12 | No | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Chromium (ppb) | 2013 | 50 | (100) | 1.37 | ND–5.4 | No | Discharge from steel and pulp mills and chrome plating; erosion of natural deposits |
| Fluoride (ppm) | 2012 | 2.0 | 1 | 0.041 | 0.03–0.08 | No | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Gross Alpha Particle Activity (pCi/L) | 2013 | 15 | (0) | 6.71 | 3.95–12.3 | No | Erosion of natural deposits |
| Nitrate [as nitrate] ² (ppm) | 2013 | 45 | 45 | 16.23 | 4.3–45 | No | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| TTHMs [Total Trihalomethanes]–Stage 2 (ppb) | 2013 | 80 | NA | 11.5 | 6–20 | No | By-product of drinking water disinfection |
| Total Coliform Bacteria [Total Coliform Rule] (% positive samples) | 2013 | More than 5.0% of monthly samples are positive | (0) | 2 | NA | No | Naturally present in the environment |
| Uranium (pCi/L) | 2013 | 20 | 0.43 | 7.60 | 2.93–13.9 | No | Erosion of natural deposits |

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL | PHG (MCLG) | AMOUNT DETECTED (90TH% TILE) | SITES ABOVE AL/ TOTAL SITES | VIOLATION | TYPICAL SOURCE |
|--------------------------------|-----------------|-----|---------------|---------------------------------|--------------------------------|-----------|---|
| Copper (ppm) | 2011 | 1.3 | 0.3 | 0.02 | 0/33 | No | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

SECONDARY SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | SMCL | PHG (MCLG) | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|-------------------------------------|-----------------|-------|---------------|--------------------|-------------------|-----------|---|
| Chloride (ppm) | 2012 | 500 | NS | 31.96 | 3.2–63 | No | Runoff/leaching from natural deposits; seawater influence |
| Color (Units) | 2013 | 15 | NS | 0.21 | ND–5 | No | Naturally occurring organic materials |
| Iron (ppb) | 2012 | 300 | NS | 17.77 | ND–160 | No | Leaching from natural deposits; industrial wastes |
| Specific Conductance (µS/cm) | 2012 | 1,600 | NS | 409 | 280–500 | No | Substances that form ions when in water; seawater influence |
| Sulfate (ppm) | 2012 | 500 | NS | 25.22 | 2.2–42 | No | Runoff/leaching from natural deposits; industrial wastes |
| Total Dissolved Solids (ppm) | 2013 | 1,000 | NS | 243.8 | 170–300 | No | Runoff/leaching from natural deposits |
| Turbidity (Units) | 2013 | 5 | NS | 0.12 | ND–0.78 | No | Soil runoff |

OTHER SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH |
|--|-----------------|--------------------|-------------------|
| Bicarbonate (ppm) | 2012 | 118.6 | 89–210 |
| Calcium (ppm) | 2012 | 35.2 | 18–45 |
| Chromium VI [Hexavalent Chromium] (ppb) | 2013 | 1.59 | 0.31–5 |
| Magnesium (ppm) | 2012 | 8.5 | 1.4–9.2 |
| pH (Units) | 2012 | 7.77 | 7.5–8.2 |
| Potassium (ppm) | 2012 | 1.14 | ND–2.1 |
| Sodium (ppm) | 2012 | 34.9 | 27–54 |
| Total Alkalinity (ppm) | 2012 | 98.6 | 73–180 |
| Total Hardness (ppm) | 2012 | 113.6 | 55–150 |

¹The well with the arsenic level at 12 ppb is part of a blending treatment facility. The highest level of arsenic out of this treatment facility was 2.9 ppb in 2013. While your drinking water meets the Federal and State standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

²The well with the nitrate level of 45 ppm is part of a blending treatment facility. The highest nitrate level out of the treatment facility was 33 ppm in 2013.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).