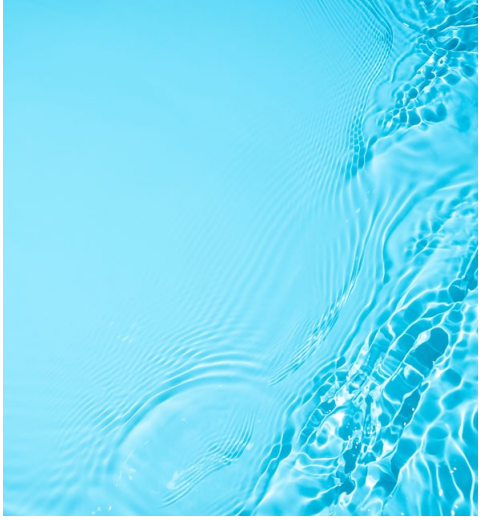


ANNUAL WATER QUALITY REPORT

Reporting Year 2023

Presented By

HI-DESERT WATER DISTRICT

PWS ID#: CA3610073

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

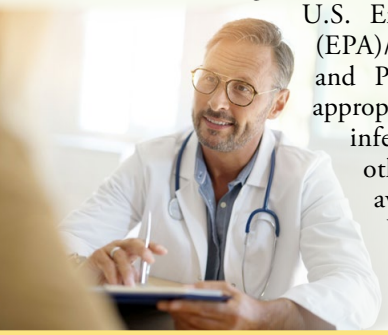
Where Does My Water Come From?

The Warren Basin, located in the heart of Yucca Valley, is the main source of our drinking water. It runs west to east, with the Ames Basin located in the northern part of the district. To maintain a healthy groundwater basin and water levels, HDWD imports water through the State Water Project via the Mojave Water Agency (MWA) into three recharge locations: Sites 3, 6, and 7. In 2023 HDWD extracted approximately 2,765 acre-feet (1 acre-foot = 325,851 gallons), with a daily average demand of 7.58 acre-feet, from the two aquifers and was able to recharge approximately 2,608 acre-feet into the Warren Basin from the State Water Project.

The district's distribution system serves approximately 26,221 residents with 11,070 service connections. The distribution system covers over 300 miles of piping and is served by 11 active groundwater wells supplying a total of 6,600 gallons per minute. There are 16 water storage reservoirs that feed 18 pressure zones for a total storage capacity of 13.34 million gallons to the active service connections serving the Town of Yucca Valley and unincorporated areas of San Bernardino County known as the Mesa.

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. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (CDC) 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 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 Marty Stockstell, Water Quality Technician, at (760) 365-8333, ext. 6276.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is available for review 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 water source. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the basin's susceptibility to contamination by the identified potential sources. HDWD's SWAP was completed in December 2002; newer wells were added later.

Septic systems within the Warren Basin have the highest potential for contaminants that can affect the groundwater. 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 new sewer collection system will help reduce nitrate levels.

HDWD began installation of its sewer collection system in January 2017. The project reached substantial completion in March 2020. In approximately three years, over 76 miles of 6- to 21-inch-diameter sewer collection system was installed, along with related appurtenances (manholes, laterals). HDWD also completed over 76 miles of roadway repair and restoration throughout the Town of Yucca Valley.

HDWD's wastewater reclamation facility was constructed over an 18-month period. Substantial completion was reached in fall 2019, and the facility began receiving local effluent in November 2019 and discharging clean water into its percolation ponds in February 2020. This will reduce the number of septic systems, which will help remove the threat of nitrate infiltration to the aquifer.

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. EPA and the State Water Resources Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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, which are by-products of industrial processes and petroleum production and which 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.

What Are PFAS?

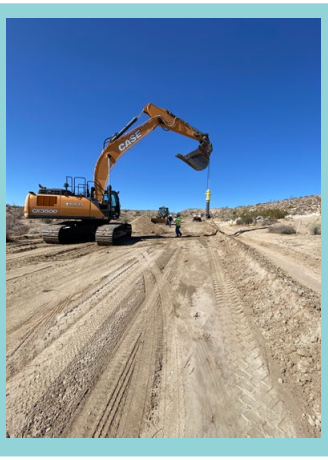
Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid {PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/ wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit bit. ly/3Z5AMm8.



Infrastructure Repair and Improvements

HDWD's continued commitment to supplying its customers safe drinking water requires ongoing improvements within the distribution system. Water mains, tanks, wells, pressure-regulating stations, booster stations, and equipment are all part of the system that we upgrade and maintain throughout the district. In 2020 HDWD completed its scheduled tank maintenance program, which involved inspection, rehab, and restoration of tanks throughout the district. In 2023 HDWD upgraded two of its CL2 generators. This will improve the quality and quantity of chlorine made at these sites. HDWD's Capital Replacement Program crew installed over 12,520 feet of new water main and 13 new fire hydrants.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

The state recommends monitoring for certain substances less 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 (ppb)	2023	10	0.004	1.9	ND–3.4	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chlorine (ppm)	2023	[4.0 (as Cl2)]	[4 (as Cl2)]	0.82	ND–1.25	No	Drinking water disinfectant added for treatment
Chromium, Total (ppb)	2023	50	(100)	1.0	ND–2	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2023	2.0	1	0.24	NA	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2023	15	(0)	4.17	1.13–12.8	No	Erosion of natural deposits
Nitrate [as nitrogen] (ppm)	2023	10	10	2.48	0.87–4.2	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	7	ND–14	No	By-product of drinking water disinfection
Uranium (pCi/L)	2023	20	0.43	4.7	2.48–10.1	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 %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2023	1.3	0.3	0.15	0/34	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2023	15	0.2	1.7	0/34	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2023	500	NS	43.5	25–63	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2023	300	NS	ND	NA	No	Leaching from natural deposits; industrial wastes
Specific Conductance (µmho/cm)	2023	1,600	NS	350	300–400	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2023	500	NS	25	16–34	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2023	1,000	NS	245.7	160–330	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2023	5	NS	0.05	ND–0.74	No	Soil runoff

UNREGULATED SUBSTANCES [2]				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bicarbonate (ppm)	01/09/2023	92	84–100	Naturally occurring
Calcium (ppm)	01/09/2023	32	27–37	Naturally occurring
Chromium VI [hexavalent chromium][1] (ppb)	2014	1.48	ND–4.7	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Magnesium (ppm)	01/09/2023	4.65	4.2–5.1	Naturally occurring
Perfluorodecanoic Acid [PFDA] (ppb)	2020	0.45	ND–1.4	NA
pH (units)	2023	7.9	7.3–8.4	Naturally occurring
Potassium (ppm)	01/09/2023	1.25	1.2–1.3	Naturally occurring
Sodium (ppm)	01/09/2023	34.5	31–38	Naturally occurring
Total Alkalinity (ppm)	01/09/2023	92	84–100	Naturally occurring
Total Hardness (ppm)	01/09/2023	97	84–110	Naturally occurring

[1] There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

[2] Unregulated contaminant monitoring helps U.S. EPA and the SWRCB determine where certain contaminants occur and whether the contaminants need to be regulated.

Treatment Train Description

HDWD continuously chlorinates the water supply year round. The chlorine is made on-site into a sodium hypochlorite solution below 1 percent and injected into the distribution system at 1 part per million (ppm) with a goal of at least 0.2 ppm at the end of the distribution system. HDWD has a few wells that extract water from the deeper portions of our aquifer, which have exceeded the state's maximum contaminant level (MCL) for arsenic and nitrate. Water from these wells may require treatment before placing them into the distribution system for consumption. The district currently treats one active well, 16 E, for arsenic by utilizing an approved treatment technique known as blending. In this process, the well water with high concentrations of arsenic is blended with two other wells with lower concentrations. The district monitors the delivered water weekly and reports all results on a monthly basis to SWRCB.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

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.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

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

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 two minutes before using water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) 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 at (800) 426-4791 or epa.gov/safewater/lead.

Community Participation

You are invited to attend the Hi-Desert Water District (HDWD) Board of Directors meetings in person or via Zoom, regularly scheduled twice a month, on the first and third Wednesday, at 4:00 p.m. Board meetings are held at the administration office, 55439 29 Palms Highway, Yucca Valley. Information on regularly scheduled meetings is available at hdwd.com or by contacting the secretary at (760) 228-6285 or the information desk at info@hdwd.com. Informative tours of HDWD's operations, including our new wastewater plant, are available to our customers.

Your Board of Directors

Scot McKone, President
Sue Tsuda, Vice President
Bob Stadum, Director
Roger Mayes, Director
Sheldon Hough, Director

School Lead Sampling

In 2017 six schools within the district's boundaries requested lead sampling. Five different sampling locations per school were tested.

Milky Water

It's not uncommon to see a glass of water looking cloudy, but after a few seconds, it clears up. The cloudiness is caused by tiny air bubbles in the water; like any air, it'll work its way to the surface of the water and return to the atmosphere. Cloudy or milky water is completely harmless. Just let it sit for a minute or two, and it will clear up.

BY THE NUMBERS

5.1
TRILLION
The dollar value needed to keep water, wastewater, and stormwater systems in good repair.

12
THOUSAND
The average amount in gallons of water used to produce one megawatt-hour of electricity.

2
How often in minutes a water main breaks.

47.5
TRILLION
The amount in gallons of water used to meet U.S. electric power needs in 2020.

1.7
TRILLION
The gallons of drinking water lost each year to faulty, aging, or leaky pipes.

33
The percentage of water sector employees who will be eligible to retire in 2033.