

ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By
City of Ukiah

2021 Executive Summary

The City of Ukiah's Water Resources Department is responsible for providing drinking water to over 5,000 connections. The water that we produce continues to consistently meet or exceed both state and federal standards for drinking water. Our ability to achieve this high standard is made possible by a combination of well-trained staff, an excellent water system, and outstanding sources of water.

In 2021 the city completed the second full year of operation of its recycled water system. This system offsets approximately 1,000 acre-feet of demand from the city's surface water sources. This savings has continued to greatly improve our drought resiliency and aid conservation efforts. With extreme drought and widespread curtailments in the region, this new source of water was vital for preserving agriculture and recreation in Ukiah.

The city also assisted our neighbors on the coast during the drought. The city was a signatory to a multiagency mutual aid agreement that allowed its water to be trucked to the coast. While the program was relatively short-lived, it was critical in helping communities meet human health and safety demand until the onset of precipitation.

In 2022 we will be continuing replacement of significant spans of distribution line as part of the Streetscape Project and the rebuilding of Dora Street. Our department could not perform the job that we do without the hard work and support of our distribution crew, and their continual dedication is greatly appreciated. The combined efforts of the distribution and water resources departments ensure that exceptional drinking water is consistently delivered throughout our entire system.

Source Water Assessment

In December 2016, the City of Ukiah completed a source water assessment. This study considered the topography, vegetative cover, soil type, animal life, and climate conditions of our watershed. As a result of these factors combined with human recreation, industry, and lifestyle, several areas were considered to have influence on our raw water. The influence was considered to be minimal, and several areas of concern have been mitigated. Mitigation operations included closing the landfill and replacing leaking underground storage tanks and bulk fuel containment. The City of Ukiah is continually upgrading its system and monitors for a variety of possible hazards. Our water is still considered safe and reliable. If you would like to view the complete report, contact water treatment plant staff at (707) 467-2842 or email mwagenet@cityofukiah.com.

Vulnerability Summary

According to the results of the vulnerability analysis, the surface water source is considered most vulnerable (vulnerability score of 15) to the following activities not associated with any detected contaminants:

- Gas stations
- Plastic synthetic producers
- Historic gas stations
- Historic waste dumps/landfills
- Historic mining operations
- Confirmed leaking tanks
- Wastewater treatment and disposal facilities
- Managed forests
- Septic systems

Community Participation

Regularly scheduled Ukiah City Council meetings convene on the first and third Wednesday of each month at 6:00 p.m. at the Ukiah Civic Center, 300 Seminary Avenue, Ukiah. These meetings provide citizens with the opportunity to express concerns regarding the city's drinking water.

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 water.epa.gov/drink/hotline.

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.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please contact Shelly Wagenet, Water Treatment Plant Supervisor, at (707) 467-2842.

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 State Water Resources Control Board (State Board) 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.

Where Does My Water Come From?

The City of Ukiah supplies its customers with underflow from the Russian River as well as water from four ground-water sources. The amounts of water delivered from each source and when they are used depend on demand on the system and the time of year. There are times of emergency when the city may have to purchase water from our neighboring water systems, including Millview and Willow County water districts.



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and 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.

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]	Distribution System		Surface Water		Groundwater		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2021	1	2	ND	NA	ND	NA	0.042 ¹	ND–0.11 ¹	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2021	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.82	0.30–1.75	NA	NA	NA	NA	No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2021	2.0	1	ND	NA	ND	NA	0.02	ND–0.11	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [as nitrate] (ppm)	2021	45	45	ND	NA	ND	NA	1.3	1.6–2.7	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Turbidity² (NTU)	2021	TT	NA	NA	NA	0.152	0.007–0.152	NA	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	NA	NA	No	Soil runoff

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)	2019	1.3	0.3	0.470	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2019	15	0.2	ND	0/32	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)	Distribution System		Surface Water		Groundwater		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Chloride (ppm)	2021	500	NS	10	NA	5.9	NA	8.7	7.1–13	No	Runoff/leaching from natural deposits; seawater influence
Corrosivity (units)	2021	Non-corrosive	NS	11.2	NA	10.7	NA	11.3	10.5–11.6	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen affected by temperature and other factors
Specific Conductance (µmho/cm)	2021	1,600	NS	310	NA	220	NA	298	210–350	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2021	500	NS	13	NA	12	NA	15	12–19	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2021	1,000	NS	170	NA	140	NA	194	150–220	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2021	5	NS	0.091	0.042–0.231	NA	NA	0.047	0.004–1	No	Soil runoff

UNREGULATED SUBSTANCES³

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Distribution System		Surface Water		Groundwater	
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2021	160	NA	120	NA	160	100–210
Boron (ppb)	2021	260	NA	350	NA	112	ND–430
Calcium (ppm)	2021	26	NA	21	NA	29	21–33
Chlorate (ppb)	2015	64	41–98	8.75	ND–35	125	52–290
Chromium-6 (ppb)	2015	0.113	0.033–0.180	0.10	0.06–0.14	0.09	0.035–0.13
Chromium, Total (ppb)	2015	0.15	ND–0.38	0.2	ND–0.4	0.11	ND–0.33
Magnesium (ppm)	2021	16	NA	11	NA	18	17–20
Molybdenum (ppb)	2015	0.67	ND–2.1	ND	NA	0.68	ND–2.1
Sodium (ppm)	2021	19	NA	11	NA	16	11–20
Strontium (ppb)	2015	251	210–320	213	200–220	263	230–300
Total Alkalinity (ppm)	2021	130	NA	99	NA	144	110–170
Total Hardness (ppm)	2021	130	NA	99	NA	148	128–163
Vanadium (ppb)	2015	1.2	0.57–1.8	0.72	0.41–1.3	1.18	0.35–1.8

¹ Three groundwater sources were sampled in 2019.

² Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

³ Unregulated contaminant monitoring helps U.S. EPA and the State Board determine where certain contaminants occur and whether the contaminants need to be regulated.

Distribution System Disinfection By-Products						
TOTAL TRIHALOMETHANES (ppb)	MCL	2020 2ND QRT	2020 3RD QRT	2020 4TH QRT	2020 LRAA	SOURCE
Site #1	80	0.0	10.6	12.2	5.7	By-product of drinking water disinfection.
Site #2	80	0.0	6.5	11.3	4.5	By-product of drinking water disinfection.
Site #3	80	2.7	17.0	21.0	12.0	By-product of drinking water disinfection.
Site #4	80	0.0	18.9	23.0	13.2	By-product of drinking water disinfection.
TOTAL TRIHALOMETHANES (ppb)	MCL	2021 2ND QRT	2021 3RD QRT	2021 4TH QRT	2021 LRAA	SOURCE
Site #1	80	0.0	1.1	7.0	0.0	By-product of drinking water disinfection.
Site #2	80	0.0	0.0	0.0	0.0	By-product of drinking water disinfection.
Site #3	80	4.3	4.6	8.9	6.7	By-product of drinking water disinfection.
Site #4	80	3.9	3.9	10.8	6.9	By-product of drinking water disinfection.
TOTAL HALOACETIC ACIDS (ppb)	MCL	2020 2ND QRT	2020 3RD QRT	2020 4TH QRT	2020 LRAA	SOURCE
Site #1	60	0.0	11.7	12.5	6.1	By-product of drinking water disinfection.
Site #2	60	0.0	5.9	10.5	4.1	By-product of drinking water disinfection.
Site #3	60	0.0	13.2	18.9	8.9	By-product of drinking water disinfection.
Site #4	60	0.0	14.6	18.1	9.3	By-product of drinking water disinfection.
TOTAL HALOACETIC ACIDS (ppb)	MCL	2021 2ND QRT	2021 3RD QRT	2021 4TH QRT	2021 LRAA	SOURCE
Site #1	60	0.0	9.7	0.0	2.4	By-product of drinking water disinfection.
Site #2	60	0.0	0.0	0.0	0.0	By-product of drinking water disinfection.
Site #3	60	6.4	7.6	6.9	5.6	By-product of drinking water disinfection.
Site #4	60	6.2	10.0	6.3	6.4	By-product of drinking water disinfection.

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.

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).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

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