

The background of the cover features a scenic photograph of a river flowing through a valley with rugged, reddish-brown mountains in the distance. The water is clear and reflects the sky and the surrounding landscape. The entire scene is framed by large, overlapping, stylized shapes in shades of blue and green, resembling water droplets or leaves. The text "2022 WATER QUALITY REPORT" is centered over the water in a bold, white, sans-serif font. A thin white horizontal line is positioned below the main title.

2022 WATER QUALITY REPORT

TUBAC

Clean. Fresh. Reliable.

EPCOR proudly provides high-quality water to our customers in Arizona and New Mexico. We take water quality very seriously, conducting more than 300,000 water quality tests annually.



EPCOR vigilantly monitors water supplies, carefully maintaining and treating them before the first drop reaches your tap. In addition to monitoring water supply, we also maintain and improve the miles of pipelines, water mains, wells, and hydrants that make up your water system.

The attached water quality report for your system, which includes data collected up through 2022, demonstrates our care and commitment as your water provider.

All of us recognize that water is a precious resource — and we work hard to minimize waste to help ensure that clean, fresh water will be available now and for the long term. EPCOR has a responsibility to our customers and our communities to continue finding sustainable ways to meet that demand.

We hope this report provides you with greater knowledge of your water and even more confidence in our team's skills, talents, and efforts that ensure the highest-quality water for all our customers.

EPCOR is proud of our water and we continue to pledge to you that we will continue to meet or exceed all water quality standards.

Sincerely,

Shawn Bradford

Senior Vice President, Regulated US Water

QUESTIONS?

EPCOR Customer Care:

1-800-383-0834 ■ mywater@epcor.com

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



YOU WANT TO KNOW WHAT'S IN THE WATER YOU'RE DRINKING

As your water service provider, we're committed to ensuring the quality and safety of that water. That's why you are receiving this annual water quality report from us. We hope it will help you understand your community's water a little better and what we're doing to protect it.

WHAT WILL I FIND IN THIS REPORT?

This report complies with state and U.S. Environmental Protection Agency (EPA) drinking water regulations.

In it you'll find information on:

- Where your water comes from
- Protecting your water
- What's in your water

Information in this report is compiled, in part, from analytical data generated by laboratories certified in drinking water analysis.

READ THIS REPORT - AND SHARE IT!

Reading this report and understanding your community's water is the first step. But it's also important to share this information with those who might not receive it directly. If you're a landlord, business, school or hospital, please share this report with water users in your community.



ABOUT YOUR WATER

TUBAC

ABOUT YOUR DISTRICT

- EPCOR provides water service to approximately 688 service connections in the Tubac district, located south of Tucson in southern Arizona near the U.S./Mexico border.

WHERE YOUR WATER COMES FROM

- Groundwater pumped from the southern section of the Upper Santa Cruz Valley (USCV) Sub-Basin.

Additional Information About the Groundwater in Your Area

- The Upper Santa Cruz Valley (USCV) Sub-Basin can principally be defined by the Santa Cruz River Valley from the Santa Cruz-Pima County line to the U.S./Mexico border.
- Groundwater is found in alluvium and other sediments along the Santa Cruz River Valley.
- Depth to groundwater in the Tubac area is typically less than 200 feet and is recharged primarily by the Santa Cruz River.

How We Protect Groundwater Together

Both groundwater and the associated pumping and delivery facilities are part of a complex system that needs not just monitoring, but also maintenance. From pipelines to water mains, wells to hydrants, we're ensuring that the groundwater supply is protected and accessible.

How You Can Help

Properly dispose of hazardous household chemicals on hazardous material collection days and limit your pesticide and fertilizer use. For information on household hazardous material collection days in your area, contact the **Arizona Department of Environmental Quality** at **602-771-2300** or **Earth911.com**.



NOTICE OF SOURCE WATER ASSESSMENT

In 2004 the Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for the three wells used by EPCOR-Tubac. The assessment reviewed the adjacent land uses that may pose a potential risk to the sources. These risks include, but are not limited to, gas stations, landfills, dry cleaners, agriculture fields, wastewater treatment plants and mining activities. Once ADEQ identified the adjacent land uses, they were ranked as to their potential to affect the water sources. The assessment found that there were no adjacent land uses that posed a risk to the sources.

The complete assessment is available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, AZ 85007, between the hours of 8 a.m. and 5 p.m. For more information please contact **ADEQ** at **602-771-2300**.

GETTING INVOLVED

Consulting with the community is important to us. If you have a question, concern or suggestion about your local water system, please contact our Customer Care team at **1-800-383-0834**.

WHAT YOU CAN EXPECT TO FIND IN YOUR WATER

SOURCES OF DRINKING 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 land surfaces or through the ground, it can acquire naturally occurring minerals. In some cases it can also acquire radioactive material and substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the **EPA's Safe Drinking Water Information Hotline** at **1-800-426-4791**.

Did You Know?

- **One-Part-Per-Million** (mg/L or ppm) is equivalent to one inch in 16 miles.
- **One-Part-Per-Billion** (ug/L or ppb) is equivalent to a single 4-inch hamburger in a chain of hamburgers long enough to circle the earth at the equator 2.5 times.
- **One-Part-Per-Trillion** (ng/L or ppt) is equal to a single drop of water being diluted into 20 Olympic-size swimming pools.

SUBSTANCES THAT MAY BE PRESENT IN SOURCE WATER

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

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

Pesticides and Herbicides, 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 may also come from gas stations, urban stormwater runoff and septic systems.

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



Since 2012, EPCOR has been recognized with more than 275 awards for safety and operational excellence in delivering your water every day.

ENSURING YOUR WATER IS SAFE

To ensure that tap water is safe to drink, the EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems.

To ensure bottled water is safe to drink, U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water.

WHAT YOU CAN EXPECT TO FIND IN YOUR WATER

SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 healthcare providers. 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 **EPA's Safe Drinking Water Information Hotline** at **1-800-426-4791**.

Lead

EPCOR monitored the water for lead and copper in 2022 at 10 residences throughout the community and met the federal lead and copper standards. The 10 houses sampled were representative of the types of houses throughout the system. If your house was sampled you would have received the analytical results. 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. EPCOR is responsible for providing high-quality drinking water, but 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 Information Hotline** or at **www.epa.gov/safewater/lead**.

Did You Know?

There are thousands of known PFAS substances found in daily life including food-handling materials, non-stick cookware, medical devices, personal care products, and even construction equipment. Because PFAS is found in so many everyday products, measuring the harmfulness of these chemicals is difficult and not yet fully understood. As the Environmental Protection Agency (EPA), Centers for Disease Control and Prevention (CDC) and other federal regulators continue to research these chemicals and determine a national standard for the safe level of exposure to these chemicals, EPCOR continues its role in testing for PFAS and finding ways to mitigate PFAS levels when found in drinking water sources.

LEARN MORE on page 10.

HOME WATER TREATMENT UNITS

Failure to perform maintenance on your home water treatment unit can result in poor water quality. If you installed a home water treatment system such as a water softener or reverse osmosis system, please remember to follow the manufacturer's instructions on operation and maintenance. For more information, contact the manufacturer of your treatment system for maintenance instructions or assistance. Additional information about home water treatment systems is available from the **Water Quality Association** at **630-505-0160** or by visiting **wqa.org**.

FREQUENTLY ASKED QUESTIONS

WHAT IS THE WHITE OR COLORED DEPOSIT ON MY DISHES OR FAUCETS?

In most cases, the deposits or sediments left behind after water evaporates are calcium carbonate. The amount of calcium in the water is referred to as hardness. Cleaning with white vinegar can help to dissolve and remove deposits. Using a commercial conditioner, liquid detergents or the “air-dry” option in dishwashers can help to decrease the calcium carbonate found on dishes.

ARE THE DEPOSITS OR HARD WATER HARMFUL?

Hardness and/or the deposits left by hard water don’t pose a health concern and may have health benefits. We don’t treat drinking water for water hardness that can result in hard water deposits.

WHAT IS THE LEVEL OF HARDNESS IN MY WATER?

The hardness in your water ranges from 2 to 17 grains per gallon (gpg).

Degree of water hardness range (gpg)

Soft	Less than 1
Slightly Hard	1 to 3.4
Moderately Hard	3.5 to 6.9
Hard	7 to 10.4
Very Hard	Greater than 10.5

WHY IS MY WATER CLOUDY OR MILKY IN APPEARANCE WHEN IT COMES OUT OF THE TAP?

Water that appears cloudy or milky is typically caused by trapped air (very small air bubbles) in the water. If this occurs, simply let the water stand for a few minutes—the air will dissipate leaving a clear glass of water.

The quality of your water depends on the source water itself as well as factors such as the geology and biology of the area where the water came from. For some elements that are known to have an effect on the aesthetics of the water quality parameters, the EPA has established guidance levels known as secondary maximum contaminant level standards (SMCLs). When levels of these contaminants are found to be above the SMCLs, they may impact the aesthetic quality of the water (e.g., color, taste and odor). Although aesthetic water qualities may vary, your water meets all state and federal regulatory standards and is safe to use for all drinking water purposes. Secondary contaminants include, but are not limited to, manganese, iron and total dissolved solids (TDS).

WHY IS CHLORINE ADDED TO MY DRINKING WATER?

Chlorine is added to your water for your protection and is used as a disinfectant to ensure that harmful organisms, such as bacteria and viruses, are destroyed in the treatment process.

ARE THERE OTHER WAYS TO REMOVE THE CHLORINE TASTE OR SMELL FROM MY WATER?

To remove the taste of chlorine from your water, try these tips:

- Place water in a glass container in the refrigerator overnight, uncovered. This will let the chlorine dissipate.
- Bring your water to a rolling boil for five minutes and let it stand to cool.
- Add a slice of lemon or a few drops of lemon juice to your glass of drinking water.

WILL MY HOME TREATMENT DEVICE REMOVE CHLORINE?

Some home treatment devices can remove chlorine. Once chlorine is removed, the water should be treated like any other beverage product and used as quickly as possible. We recommend that you follow the manufacturer’s instructions for maintaining the device to ensure water quality.



DEFINITION OF TERMS

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

GPG (grains per gallon): Used to describe the dissolved hardness minerals contained in water and is a unit of weight that equals 1/7,000 of a pound.

HAA5 (Haloacetic Acids): Consist of Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Bromoacetic Acid and Dibromoacetic Acid.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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 allow for a margin of safety.

MNR: Monitored, not regulated.

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: None Detected.

NTU: Nephelometric turbidity units.

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

pCi/L (Picocuries per Liter): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).



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

ppt (Parts per Trillion): One part substance per trillion parts water (or nanograms per liter).

SMCL (Secondary Maximum Contaminant Level): Non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water.

Total Dissolved Solids: An overall indicator of the amount of minerals in water.

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

TTHM (Total Trihalomethanes): Consist of Chloroform, Bromoform, Bromodichloromethane and Dibromochloromethane.

UCMR (Unregulated Contaminant Monitoring Rule): Unregulated substances are measured, but maximum contaminant levels have not been established by the government.

WHAT'S IN YOUR WATER

HOW TO READ YOUR WATER QUALITY TABLE

Below, you'll see an analysis of your drinking water. Here's an example of how to read these tables:



Start here and read across	2022 or year prior	The goal level for that substance	Highest level of substance allowed	Highest amount that was found	Highest and lowest amounts found	Yes means the amount found is below gov't requirements	Where substance usually originates
Substance (units)	Year Sampled	MCLG	MCL	Highest Amount Detected	Range of Detections	Compliance Achieved	Typical Sources

YOUR WATER QUALITY TABLE

The data shown in the tables below are results from commercial laboratories certified in drinking water analysis by the Arizona Department of Health Services. The table shows what substances were detected in your drinking water during 2022 or the last required sampling period within the last five years.

Regulated Substances Measured in the Water Leaving the Treatment Facility

Substance (units)	Year Sampled	MCLG	MCL	Highest Amount Detected	Range of Detections	Compliance Achieved	Typical Sources
Arsenic (ppb)	2022	0	10	6.3 ¹	2.1 - 11	YES	Erosion of natural deposits
Barium (ppm)	2020	2	2	0.024	0.012 - 0.024	YES	Erosion of natural deposits
Fluoride (ppm)	2020	4.0	4.0	1	0.98 - 1	YES	Erosion of natural deposits
Nitrate (ppm)	2022	10	10	0.9	0.62 - 0.9	YES	Runoff from fertilizer use; leaching from septic tanks
Gross Alpha including Radon and Uranium (pCi/L)	2017	0	15	6.8	5.9 - 6.8	YES	Erosion of natural deposits
Sodium (ppm)	2021	NA	MNR	46	46	YES	Erosion of natural deposits
Selenium (ppb)	2020	50	50	8.5	ND - 8.5	YES	Erosion of natural deposits
Cyanide (ppb)	2020	200	200	120	ND - 120	YES	Discharge from steel/metal factories; discharge from plastic and fertilizer factories

WHAT'S IN YOUR WATER

Regulated Substances Measured in the Distribution System

Substance (units)	Year Sampled	MCLG/ MRDLG	MCL/ MRDL	Highest Running Annual Average	Range of Detections	Compliance Achieved	Typical Sources
TTHMs (ppb)	2022	NA ²	80	15.3	10.3 - 15.3	YES	By-product of drinking water disinfection
Chlorine residual (ppm)	2022	4	4.0	0.65	0.48 - 0.74	YES	Water additive used to control microbes
HAA5 (ppb)	2022	NA ²	60	2.3	ND - 2.3	YES	By-product of drinking water disinfection

Tap Water Samples: Lead and Copper Results

Substance (units)	Year Sampled	MCLG	Action Level	Number of Samples	90th Percentile	Number of Samples Above Action Level	Compliance Achieved	Typical Sources
Copper (ppm)	2022	1.3	1.3	10	0.16	0	YES	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2022	0	15	10	ND	0	YES	Corrosion of household plumbing systems; erosion of natural deposits

Unregulated Substances Measured in the Water Leaving the Treatment Facility

Substance (units)	Year Sampled	Range of Detections	Typical Sources
Sulfate (ppm)	2014	23 - 34	Erosion of natural deposits
Hardness (grains/gallon)	2014	2 - 17	Natural calcium and magnesium content
pH (standard units)	2014	7.6 - 8.1	pH is a measure of acid/base properties

WHAT'S IN YOUR WATER

PFAS Substances Measured in the Water Leaving the Treatment Facility

Substance (units)	Year Sampled	EPA Proposed MCLG	EPA Proposed MCL	Highest Amount Detected	Range of Detections	Major Sources In Drinking Water
PFOA (ppt)	2022	0	4	ND	ND	Discharge from manufacturing and industrial chemical facilities, and certain firefighting activities
PFOS (ppt)	2022	0	4	44.5	3.6 - 44.5	Discharge from manufacturing and industrial chemical facilities, and certain firefighting activities
PFNA (ppt)	2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index	ND	ND	Discharge from manufacturing and industrial chemical facilities, and certain firefighting activities
PFHxS (ppt)	2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index	9.6	2.1 - 9.6	Discharge from manufacturing and industrial chemical facilities, and certain firefighting activities
PFBS (ppt)	2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index	11.8	2.5 - 11.8	Discharge from manufacturing and industrial chemical facilities, and certain firefighting activities
HFPO-DA/GenX (ppt)	2022	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index	ND	ND	Discharge from manufacturing and industrial chemical facilities, and certain firefighting activities

¹Arsenic: EPCOR's arsenic removal facility continues to produce water with arsenic levels below the current federal and state standards. While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. 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.

²THM/HAA5: Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants: Trihalomethanes: bromodichloromethane (0.0 mg/L); bromoform (0.0 mg/L); chloroform (0.07 mg/L); dibromochloromethane (0.06 mg/L). Haloacetic acids: dichloroacetic acid (0.0 mg/L; trichloroacetic acid (0.02 mg/L). Monochloroacetic acid (0.07 mg/L), bromoacetic acid and dibromoacetic acid are regulated with this group but have no MCLGs.

WHAT'S IN YOUR WATER

PFAS and Our Commitment to You

PFAS – Per- and polyfluoroalkyl substances – are widely used, manufactured chemicals that break down very slowly over a long period of time. There are thousands of known PFAS chemicals found in everyday life including food-handling materials, non-stick cookware like TEFLON™, medical devices, personal care products, stain and water repellants like Scotchgard™ and GORE-TEX™ and even construction equipment and industrial applications, like firefighting foam.

According to the Environmental Protection Agency (EPA), PFAS can be found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment. They are also found in water, air, fish, and soil at locations across the nation and the globe. Scientific studies have shown that exposure to some PFAS may be linked to harmful health effects in humans and animals.

EPA's proposed drinking water standard is that concentrations of two individual PFAS contaminants – PFOA and PFOS – should not exceed 4 parts per trillion (ppt), combined. One part per trillion is the equivalent of a single second in 31,500 years. The EPA determined that its proposed standard provides even the most sensitive populations with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water.

If you are concerned about potential health effects from exposure to these PFAS above the proposed new standards, contact your doctor or healthcare professional.

For more detailed information and EPA's answers to questions about its PFAS health advisories, visit www.epa.gov/pfas.

To learn more about what ADEQ is doing about PFAS in Arizona, visit azdeq.gov/pfas-resources.

ADDITIONAL MONITORING

In addition to the parameters listed in this table, other parameters were monitored for, including regulated pesticides, herbicides, petroleum by-products and metals. None of those parameters were detected in the water. If you have any questions about this report or your drinking water, please call our **Customer Care** team at **1-800-383-0834**.

EPCOR encourages feedback related to the quality of water that is provided to you.

Please feel free to submit comments to us directly at mywater@epcor.com.

You may also provide feedback to the Arizona Corporation Commission (ACC).



EPCOR

epcor.com