

gilbert

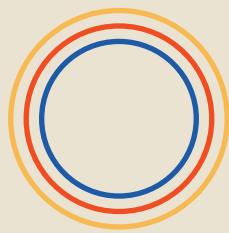


2020 Water Quality Report

What is a Water Quality Report?

Gilbert is excited to present the 2020 annual drinking water quality report. This report is designed to provide details about where your water comes from, what it contains, and how it compares to the standards set by the Environmental Protection Agency's (EPA) under the Safe Drinking Water Act (SDWA). This report is a snapshot of your water quality in Gilbert in 2020, and discloses information on any contaminants detected in your water. This report is also an opportunity to tell the story of Gilbert water's activities, programs and process improvements. We are excited to share this information with you.





WATER TREATMENT

How we make clean water



Source water

Delivered through SRP and CAP canals to one of Gilbert's two surface water treatment plants



Coagulation and Flocculation

Water treatment chemicals are added to encourage suspended material in the water to sink and be removed in settling basins



Ozone

Ozone gas is added to remove organic material and eliminate compounds in the water that cause undesirable taste or odors



Filtration

Water passes through a filter to remove any remaining solids and impurities



Chlorination

Chlorine is added to the water as a disinfectant to kill any remaining microorganisms and pathogens



Fluoridation

Fluoride is added to a level of 0.7 parts per million. For more information on fluoride see page 8 of this report.



pH adjustment

The pH of your water is adjusted to balance the level of scale formation with corrosion protection in the distribution system and in your home



Storage Reservoirs

Water is stored in reservoirs around Gilbert to ensure sufficient supply for fire flows and to meet peak daytime demands

Where does my water come from?

Gilbert's water comes from a combination of several surface water and groundwater sources. Surface water is supplied to Gilbert's two water treatment plants by an extensive canal network from the Salt River Project (SRP) and the Central Arizona Project (CAP). SRP manages a series of dams and reservoirs along the Salt River and Verde River watersheds, storing water for times of low rainfall and drought. Water collected in these reservoirs is released into SRP canals. CAP operates and maintains a 336 mile long canal system which carries Colorado River water from Lake Havasu, through Phoenix, to south of Tucson.

• North Water Treatment Plant

Called the North Water Treatment Plant (NWTP) due to its location in northern Gilbert, this plant is situated on the eastern canal and receives water from SRP. The SRP canal delivers a mixture of water from the Salt River, the Verde River and groundwater wells to the plant where it is then treated using conventional treatment methods of coagulation, flocculation, sedimentation, and filtration with ozonation and chlorine disinfection. The NWTP can produce as much as 45 million gallons of water per day (MGD) and has a 16 million gallon (MG) reservoir for onsite water storage.

• Santan Vista Water Treatment Plant

Called Santan Vista because of the stunning view of the San Tan Mountains from the control room, this plant receives water from the Central Arizona Project (CAP) canal system, which diverts water from the Colorado River watershed. From the CAP canal turnout, water is brought to the plant through 14 miles of 48" diameter ductile iron pipeline. This plant was built and operates in partnership with the City of Chandler which uses 24 MGD of Santan Vista's 48 MGD production capacity. The Santan Vista water treatment plant operates using ballasted flocculation and filtration with ozone and on-site generation of sodium hypochlorite for disinfection.

- **Groundwater**

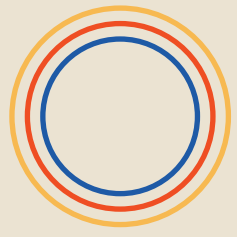
Groundwater is used in Gilbert to supplement the surface water supplies to meet water demand during times of high water use and during canal and water treatment plant scheduled maintenance. Groundwater is pumped from any number of the 19 wells located throughout Gilbert where it can be put directly into the distribution system or can be used to fill a water storage reservoir. At some well sites, ion exchange or adsorptive media are used to reduce the concentration of inorganic contaminants native to the groundwater to below EPA maximum contaminant levels (MCLs) prior to delivery.

How does Gilbert deliver water?

Gilbert's water distribution system is comprised of over 1,400 miles of underground piping ranging in size from 4-inches in diameter to 48-inches in diameter. Gilbert's underground piping network is essential to ensure the safe delivery of water to all water customers. Gilbert serves various types of customers including; private homes, industrial facilities, commercial properties and institutional establishments. Gilbert's water distribution piping network is designed to maintain a positive pressure and typically operates between 50 and 80 psi (pounds per square inch). Positive pressure is needed to ensure treated drinking water reaches all parts of Gilbert's underground piping network. Gilbert's water distribution division works hard to ensure that every Gilbert customer and resident has access to this water, and to do so they operate, inspect, repair and replace these critical components of our drinking water infrastructure:

WATER DISTRIBUTION

How we deliver clean water



13,392 Fire Hydrants

- Inspected annually to make sure they're always in working order.
- Fully serviced every 4 years to protect the lifespan of our critical infrastructure



1,474 Miles of Pipe

- Gilbert experiences 2.44 main breaks per 100 miles of distribution system pipe, well below the national average of 11 breaks per 100 miles.
- Water main breaks can be caused by construction activities, or by natural environmental changes including extreme temperature fluctuations as well as the age and condition of the pipe.



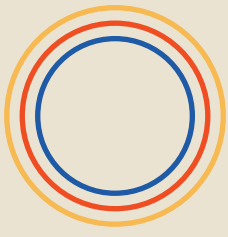
88,081 Water Meters

- Gilbert's water meter department reads all meters monthly, and replaces over 5,000 meters every year.
- Gilbert's water meter testing program ensures that water meters accurately record consumption. Each water meter must be accurate within +/- 1.5% to pass.



38,769 System Valves

- Gilbert's water department maintains valves by exercising them on a regular basis. This year, over 9,144 valves were exercised by opening and closing them with a valve key.
- Valves range in size from 4 to 48 inches in diameter. A 48 inch valve takes a full 450 revolutions of a valve key in order to open or close the valve.



WATER CONSERVATION

Helping Gilbert save water

How can you save water?



Eliminate leaks

Use the smart-home watering guide to find and fix leaks in your home. Visit Smarthomewaterguide.org for more information.

Water your landscape efficiently

Up to 70% of water use is outdoors. Find out how much water your plants need at gilbertaz.gov/wisewatering



Take a FREE Landscaping class

Learn how to optimize your irrigation system and sign up for a class at gilbertaz.gov/waterworkshops

Hire a Smartscape trained landscape professional

Find a landscape professional trained in conserving water at smartscape.org/directory



Is your water bill high and you're not sure why?

We're here to help! Request a FREE water efficiency checkup from gilbertaz.gov/watercheckup

Want to know more about using water efficiently?

Learn more about water conservation at gilbertaz.gov/water

Resources for businesses, schools, churches and HOAs:

Join the HOA Water Budget Program

Visit gilbertaz.gov/HOA-Irrigation to reduce water use and maintain an attractive landscape.

Become a Water Wise Gilbert organization

Visit gilbertaz.gov/waterwise to save your business water and money.

Does your water use add up?

gilbertaz.gov/watercalculator

- **Are there contaminants in my drinking water?**

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

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: 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, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

- **Do I need to take special precautions?**

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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Additional information on Contaminants

- **Nitrate**

Nitrate in drinking water at levels above 10ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for a short period of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

- **Arsenic**

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

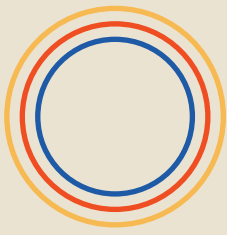
- **Fluoride**

In Gilbert, voters have mandated that fluoride be added to the water supply at our two water treatment plants. These water treatment plants have maintained a target level of 0.7ppm which is consistent with the United States Department of Health and Human Services most recent recommendations.

- **Lead**

Lead, in drinking water, is primarily from materials and components

associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Gilbert 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. 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 QUALITY

How we test your water

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The following tables list all of the drinking water contaminants that were detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in these tables are from testing done in 2020. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In these tables you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions.

• Definitions

Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements

Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected risk to health

Not Detected (ND)

Concentration too low to be detected

Nephelometric Turbidity Units (NTU)

a measure of the clarity of water

Picocuries per liter (pCi/L)

a measure of the radioactivity in water

Parts Per Million (ppm)

milligrams per liter drinking water. (mg/L)

Parts Per Billion (ppb)

micrograms per liter (ug/L), 1000 ppb = 1 ppm

Running Annual Average (RAA)

Average value of a contaminant at a location in a year

Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in your water

Legend



Erosion of natural deposits



Naturally present in the environment



Byproduct or discharge from metal processing facilities



Byproduct from drinking water disinfection



Drinking water additive



Runoff from fertilizers



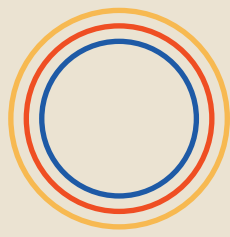
Corrosion of house-hold plumbing systems



Runoff from herbicide



Discharge from dry cleaners



WATER QUALITY

2020 Drinking Water Testing Results

Contaminant	Units	Violation	Range	Average	MCL	MCLG	Likely source
Alpha emitters	pCi/L	No	1.3 - 3.1	2.15	15	0	
Arsenic	ppb	No	ND - 9.6	6.36	10	0	
Barium	ppm	No	ND - 0.12	0.06	2	2	
Bromate	ppb	No	ND - 28*	4.9	10	0	
Chlorine	ppm	No	0.20 - 2.04	0.85	4	4	
Chromium (total)	ppb	No	ND - 16	6.95	100	100	
Fluoride	ppm	No	0.24 - 0.96	0.65	4	4	
Haloacetic Acids (HAA5)	ppb	No	ND - 38	18.3	60	NA	
Nitrate	ppm	No	0.17 - 8.4	4.33	10	10	
Radium (combined 226/228)	pCi/L	No	ND - 0.5	0.13	5	0	
Tetrachloroethylene (PCE)	ppb	No	ND - 0.53	0.2	5	0	
Total Coliform	% +	No	0 - 1.16	0.24	5	0	
Total Trihalomethanes	ppb	No	0.6 - 86*	47.3	80	NA	
Total Organic Carbon	% removal	No	11.8 - 44.5	25.2	15 - 25%	NA	
Uranium	ppb	No	2.1 - 3.2	2.7	30	0	

*Compliance is based on a local running average, not the highest individual result.

Contaminant	Units	Violation	% < 0.3 NTU	Requirement	Maximum	MCL	Likely source
Turbidity	NTU	No	100	> 95%	0.25	1.0	







Contaminant	Units	Violation	90th percentile	Number over AL	AL	AL Goal	Likely source
Copper	ppm	No	0.17	0	1.3	NA	
Lead	ppb	No	2.1	0	15	0	

2019 Unregulated Contaminant Monitoring

Unregulated contaminants are substances for which EPA has not established drinking water standards. Gilbert monitors for these substances to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In this round of unregulated contaminant monitoring, Gilbert tested for:

- 10 cyanotoxins
- 2 metals
- 8 pesticides and 1 pesticide manufacturing
- 3 disinfection byproduct groups
- 3 alcohols
- 3 semivolatile organic chemicals

From June of 2019 through January of 2020 Gilbert has been testing for these unregulated substances. Any detected substances in are reported in the following table. If the EPA determines that regulation is warranted for any of the monitored substances, Gilbert will take whatever steps that are necessary to comply with the new requirements.

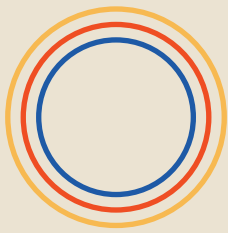
Contaminant	Units	Range (Low - High)	Average	MCL	Likely source
Bromide	ppm	0.45 - 1.1	0.83	None	
Germanium	ppb	ND - 1.80	0.51	None	
Haloacetic Acids (HAA6Br)	ppb	0.44 - 33	16.8	60*	
Haloacetic Acids (HAA9)	ppb	0.44 - 61	28.1	60*	
Manganese	ppb	ND - 7.1	1.35	None	
Total Organic Carbon	ppm	2.9 - 5	4.29	None	

* The MCL for the five currently regulated Haloacetic Acids (HAA5) is 60ppb. HAA6Br and HAA9 contain all of the

Additional Monitoring

In addition to sampling and testing your water as required by state, county and federal regulations, Gilbert's water division performs additional monitoring daily to ensure that the water treatment plants are operating efficiently, and to ensure the highest level of quality for your water. The following table shows the results of some of this additional monitoring. The compounds listed in this table do not have maximum contaminant levels enforceable by the EPA, and are used to characterize the aesthetic quality of the water.

Analyte	Units	Average	Range
pH	NA	7.76	7.41 - 8.19
Alkalinity	mg/L	135	112 - 182
Conductivity	us/cm	1044	509 - 1855
TDS	ppm	731	356 - 1299
Total Hardness	mg/L	191	104 - 273
Total Hardness	grains/gallon	11	6 - 15
Iron	ppb	ND	ND



WATER QUALITY

Gilbert's commitment to quality

Gilbert's Water Quality staff collects and analyzes the drinking water you receive at your home or business. These tests ensure that your water meets health and safety standards set by the state and federal government. Gilbert has a state certified laboratory which analyzes daily process, distribution and regulatory compliance samples. Each month, the Water Quality staff collects bacteriological samples from 150 designated water quality sampling stations across Gilbert to monitor the chlorine disinfectant level in the distribution system and to test for the presence of the microbial activity in the water. Our staff works diligently to ensure compliance with all drinking water regulations and to supply safe, high quality drinking water at a reasonable cost. Here are some of the ways that Gilbert's Water Quality department ensures that your water meets the highest standards:



Continuous Monitoring

- In addition to the instruments in our laboratories, Gilbert uses 95 online instruments to monitor water quality parameters every second to continuously analyze your water.
- These online instruments are located at Gilbert's two surface water treatment plants, as well as across the 18 well sites and 14 water storage reservoirs in Gilbert.
- Gilbert's two surface water treatment plants are staffed 24 hours a day, 365 days per year to ensure that your water is clean, safe and reliable.



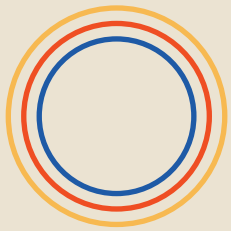
Compliance Testing

- Gilbert's Water Quality Department operates a state-certified compliance laboratory which is used to ensure your water meets rigorous state and federal water quality regulations.
- Samples are collected from the water treatment plants, well sites and dedicated Water Quality sample stations across Gilbert and tested to ensure quality, safety and compliance.
- For specialized testing, samples are also sent to a certified drinking water testing laboratory for in-depth analysis.



Process Control

- In addition to all of the testing required by the state and federal government, your water undergoes rigorous additional monitoring to ensure the highest quality water.
- This additional monitoring includes frequent testing for bacteriological contaminants, inorganic contaminants, trace metals and organic materials.
- This testing is used to optimize surface water treatment plant operations to adjust to changes in incoming water quality and guarantee safe drinking water is produced.



WATER DIVISION

News and Highlights

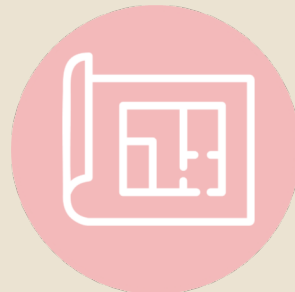
Contact us:
Water Quality Division
480-503-6400
WaterQuality@Gilbertaz.gov

Automatic Metering Infrastructure



This year, Gilbert's water division is embracing innovation by installing the backbone of our Automated Metering Infrastructure (AMI) system. AMI allows the town to better understand residential and commercial water use and is an important tool for Gilbert's water production, water distribution and water conservation operations. Customers will also benefit by having access to more information on their day-to-day water use, and can receive notifications for high water usage or alerts when leaks are detected on the customer side of the meter. This project is on-track and expected to be phased in for all Gilbert residents within the next 5 years.

North Water Treatment Plant



Gilbert's water department is hard at work with the North Water Treatment Plant capital improvement project. This project has reached 30% design and, following council approval, is scheduled to break ground in January of 2022! The designed facility will replace the existing North Water Treatment Plant and will include new water treatment technologies designed to meet the changing source-water quality and will increase the plant's production capacity so that we can continue to meet the water needs of the community well into the future. The project is on-schedule and is expected to be operational by December of 2025.

How can I get involved?

The Gilbert Town Council consists of the Mayor and six council members who serve four year terms. Unless otherwise noted, the council meets monthly on the first and third Tuesday at 6:30p.m. in the Gilbert Municipal Center, 50 E. Civic Center Drive. Council agendas are posted on this website at least 24 hours prior to meeting time at gilbertaz.gov/council.