2000 Water-Quality Report



This brochure exprains how drinking water provided by City of Tempe is of the highest quality. Included is a listing of results from water-quality tests as well as an explanation of where our water comes from and tips on how to interpret the data. This "Consumer Confidence Report" is required by law. We're proud to share our results with you. Please read them carefully.

El informe contiene informacion importante sobre la calidad del agua en su comunidad. Tradùzcalo o hable con alguien que lo entienda bien. Póngase en contacto con el Departamento do Comunicaciones de la Ciudad de Tempe al (480) 350-8909.

We are proud to report that the water provided by City of Tempe meets or exceeds established water-quality standards.

Overview

In 2000, your water department distributed 19.03 billion gallons of water to Tempe customers. In addition to testing that we are required to perform, our water system voluntarily tests for hundreds of additional substances and microscopic organisms to make certain our water is safe and of the highest quality. If you are interested in a more detailed report, contact Sherman McCutcheon (480) 350-8330.

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Water Source

The drinking water in Tempe is produced at two water treatment plants. The Johnny Martinez Treatment Plant is located at 255 E. Marigold Lane and the South Tempe Treatment Plant is located at 6600 S. Price Road.

Western Canal

Guadalupe

Lake Pleasant The City of Tempe has several sources of water available to it:

Salt F Granite Reef Dam

Central Arizona Project water

Beginning its journey from Lake Havasu, CAP water travels to Lake Pleasant and on to Tucson. Tempe purchased 4,766 acre feet of CAP water in 2000.

Salt River Project water

This water is collected from the Salt and Verde River watersheds, and diverted into SRP canals at the Granite Reef Dam, in Mesa. Tempe's allotment of SRP water depends on the amount of water available in the system, and therefore varies from year to year. Tempe's water use for 2000 was 55,471 acre feet.

Groundwater

Lake

Bartlett

Reservoir

Tempe has seven (7) groundwater wells that it uces as a back-up water supply in times of water shortages. The wells are tested quarterly to assure that the water

meets safe drinking water standards. In 2000 Tempe pumped 1.31 acre feet.

Theodore Roosevelt Lake

Apache Saguaro Lake Lake Canyon Salt River Lake

Learn more about the City of Tempe water system at www.tempe.gov/water.

■ Tempe Water Treatment Plants

Substance	Unit	MCL	MCLG	Average Level	Range	Major Sources
Arsenic	ppb	50	None	2.8	ND - 6.8	Erosion of natural deposits; Runoff from orchards
Barium	ppm	2	2	0.07	0.04 - 0.08	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine	ppm	4.0 MRDL	4 MRDLG	0.94	0.10 - 1.26	Disinfectant added to control microbial contaminants
Fluoride	ppm	4	4	0.78	0.35 - 0.98	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate	ppm	10	10	0.68	ND - 1.6	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Lead	ppb	AL=15	0	< 5	ND - 17	Corrosion of household plumbing systems
Copper	ppm	AL = 1.3	1.3	0.14	ND - 0.81	Corrosion of household plumbing systems
Sodium	ppm	No MCL's		130	49 - 210	Erosion of natural deposits
Chloride	ppm	No MCL's	Bandingunin gan'i an'ingan-1 paositra (Labi Dami, an'ingan'i an'ingan'i A	172	31 - 314	Erosion of natural deposits
Sulfate	ppm	No MCL's		121	71 - 180	Erosion of natural deposits
Gross Alpha	pCi/L	15	0	3.9	ND - 4.8	Erosion of natural deposits
Gross Beta	pCl/L	50#	0	7.9	ND - 14	Decay of natural and man-made deposits
Turbidity	NTU	TT = 0.5 TT = perc samples <	~	0.11* 100%**	0.04 - 0.24 100%	Soil runoff
Total Coliform	% of Samples	<5	0	0.8*	0 - 0.8	Naturally present in the environment
Total Haloacetic acids	ppb	60		15.4	3.9 - 23.7	By-product of drinking water chlorination.
Total Trihalomethanes	ppb	80		37.5	19.4 - 73.5	By-product of drinking water chlorination

Key To Table

MCL = Maximum Contaminant Level

 ${\bf NTU = Nephelometric\ Turbidity\ Units}$

TT = Treatment Technique

AL = Action Level

MCLG = Maximum Contaminant Level Goal ppm = parts per million, or milligrams per liter (mg/l) ppb = parts per billion, or micrograms per liter (ug/l) #50 pCi/L is equivalent to 4 mrem/yr

- * maximum monthly average value
- ** Minimum monthly average value

The analysis of Gross Alpha and Gross Beta is required every four years, data is from 1999.

EPA established a new MCL for Arsenic of 10 ppb in 2001. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations. Although EPA will allow large systems until January 2006 to comply with the new MCL, all City of Tempe drinking water sources meet this standard today.

Explanation of the Water-Quality Data Table

The following table shows the substances for which the Water Quality Laboratory tests. Every regulated substance that we detected in the water, even in the most minute traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. Please note, the simple presence of a substance in drinking water does NOT necessarily indicate the drinking water poses a health risk. Certain quantities of some substances are essential to good health, but excessive quantities can be hazardous. Definitions of MCL and MCLG are important.

Maximum Contaminant Level or MCL: 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.

Maximum Contaminant Level Goal or MCLG: 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.

Maximum Residual Disinfectant Level Goal or MRDLG: 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.

Maximum Residual Disinfectant Level or MRDL: 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.

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

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

Unregulated Contaminants

The City of Tempe has sampled our drinking water for the presence of the protozoan Cryptosporidium. Though rarely, Crytosporidium has been identified in the source water we receive, it has never been detected in our finished water supply.

During testing in January 2000, Radon was not detected in our drinking water. The U.S. Environmental Protection Agency (EPA) is preparing a regulation which will specify a Maximum Contaminant Level for radon. Radon is a radioactive gas that occurs naturally in ground water and is released from water into the air during household use.

MTBE is a volatile, organic chemical. MTBE promotes more complete burning of gasoline, reducing carbon monoxide and ozone levels. In the Clean Air Act of 1990, Congress mandated the use of reformulated gasoline. There have been cases of contamination of the groundwater due to leaks from storage tanks. MTBE has been detected in one of Tempe's wells, but has never been detected in the drinking water.

To learn more about the City of Tempe water system and a complete listing of all analytical results visit our web site at [www.tempe.gov/water].

Required Additional Health Information

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled 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 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. Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- (E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Special Information for Immuno-compromised People

Some people may be more vulnerable to contaminants in drinking water than is 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/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

If other people, such as tenants, residents, patients, students, or employees, receive water from you, it is important that you provide this notice to them by posting it in a conspicuous location or by direct hand or mail delivery.

Consult our Web site at [www.tempe.gov/water] and, for further information, see U.S. Environmental Protection Agency (EPA) water information at www.epa.gov/safewater/. Water Quality Data for community water systems throughout the United States is available at www.waterdata.com.

For more information, call City of Tempe at 480-350-8330.

Substance of Interest	Unit	Typical Value	Range of Values
Magnesium	ppm	29	24-32
Hardness	ppm	243	184 - 298
Hardness	grains/galfon	14	11 - 17
Aluminum	ppm	0.10	ND - 0.24
Boron	ppm	0.15	0.13 - 0.18
Calcium	ppm	63	58 - 67
Potassium	ppm	7.8	ND - 12
Silica	ppm	13	9.2 - 18
pH	pH units	7.47	7.22 - 8.03
Alkalinity	ppm	142	100 - 208

One penny is all you pay for five gallons of fresh tap water. You won't find a better value for quality water when you need to quench your thirst fast. You may even want to add a slice of lemon, orange and lime to give it a fresh citrus flavor.

So if you want Quality drinking water at a most affordable cost...

Tap into Quality... the bargain of tap water.



Brought to you by Valley cities, Arizona Department of Environmental Quality, Maricopa County, the Salt River Project (SRP) and the Central Arizona Project (CAP).