City of Peoria - Main System

WATER REPORT 2009

Provide reliable, quality water services to Peoria customers today and tomorrow.

Este informe contiene información importante sobre su agua potable. Si usted tiene preguntas sobre este informe, por favor llame al 623-773-7286.

Director's Corner:

This annual Consumer Confidence Report (CCR) provides information on water quality in areas that are serviced by Peoria for calendar year 2009. The City of Peoria Public Works - Utilities Department is committed to providing a sustainable, high-quality, water supply. We make the commitment to distribute water that is treated, tested and safe every time you turn on the tap.

In our desert environment, water resources planning and management are critical to our future water supply. An important aspect of living in the desert is water conservation.

Please visit the City's website for more information on how we provide you, our valued customer, with a safe and sustainable water supply both now and in the future.

Sincerely,

William Mattingly, P.E., R.L.S.
Public Works - Utilities Director
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The information and data contained in this report apply only to those who receive their water from the City of Peoria. There are several private water companies that serve residents in certain areas of the City. If you receive your water from the Sunrise, New River, Rose Valley or Arizona-American water companies, you should contact your water supplier directly for water data that affects you:

Sunrise: 623-972-6133
New River: 623-561-1848
Rose Valley: 800-850-4482
Arizona-American: 800-383-0834

Treated, Tested and Safe: Exceptional Service in Every Drop

The City of Peoria Public Works - Utilities Department is committed to providing a safe, healthy, assured water supply to the community at a reasonable cost. City of Peoria drinking water is "treated, tested, and safe." This is a phrase commonly used, but what does it mean to you as a consumer?

Treated – Since the City's drinking water originates from groundwater and surface water, two different treatment methods are used. Water from wells is disinfected prior to delivery. Surface water undergoes extensive treatment at either the Pyramid Peak or Greenway Water Treatment Plants to meet drinking water standards. These facilities use conventional and chemical treatment including ozone to mitigate taste and odor and minimize disinfection by-products.

Tested – Over 200 tests are performed by plant operators each day and several parameters are monitored continuously using state-of-the-art equipment, which notifies staff members of any deviations from acceptable conditions. Once the water leaves the water supply well or water treatment plant, water quality is measured within the distribution system to ensure drinking water standards are maintained.

Safe – Drinking water safety is the primary concern of the Public Works - Utilities Department. Safety is achieved by coordinating technology and qualified staff members to monitor production systems, sample the distribution system, and evaluate opportunities to continually enhance the program while minimizing cost to our customers.

Water is treated and tested at groundwater wells and treatment plants and then monitored to ensure it remains safe on the way to your tap. Numerous chemical and biological analyses are conducted daily. A wide variety of compounds are monitored and analyzed in your drinking water in accordance with federal and state laws and local water quality guidelines.

The Peoria Public Works - Utilities Department supports a committee of the AZ Water Association called Tap Into Quality. It provides educational materials to schools and the public on tap water safety and quality. For more information on Tap Into Quality, please visit tapintoquality.com

TAP INTO QUALITY

Where your water comes from

Peoria has invested in four distinct water supplies. Three of these, the Salt River Project (SRP), the Central Arizona Project (CAP) and groundwater are all used for drinking water. This redundancy in our drinking water supply helps ensure the availability of water. When one drinking water supply is experiencing below-normal water levels, the city has two other supplies it can rely upon to provide drinking water to our customers. Reclaimed water, a non drinking water source is the fourth supply. It offsets some uses where drinking quality water is not needed, such as for irrigation and decorative water features.

In 2009, SRP delivered approximately 34% of Peoria's water supply from its reservoirs on the Salt and Verde Rivers through the Arizona Canal. Approximately 34% of Peoria's water was supplied from the Colorado River via the 336-mile long CAP canal, which starts in Lake Havasu. Nearly 30% of the city's water supply came from groundwater. This groundwater use is offset by the recharge of renewable supplies of water (i.e. CAP and reclaimed water). The remaining 2% was directly reused for irrigation of large landscaped areas and filling of decorative water features.

What's in my water?

The data presented provides a detailed microbiological and chemical analysis of Peoria's water supply for calendar year 2009 in its main water system (PWS 04-07-096).

Analyte	Units	Groundwater Concentrations		Greenway Surface Water Concentrations		Pyramid Peak Surface Water Concentrations		EPA Limit MCL	EPA Limit MCLG	Sample Date	Possible Sources
		Range	Average	Range	Average	Range	Average				
Aesthetics											
Alkalinity	mg/L	NR	NR	120-190	138	NR	NR	NA	NA	2009	Naturally present.
Hardness	grains/gal	3.8-15.1	9.5	15‡	15‡	NR	NR	NA	NA	2007	Naturally present.
pH	pH Units	6.97-8.34	7.6	6.9-8.07	7.6	NR	NR	NA	NA	2009	NA
Sulfate	mg/L	NR	NR	48‡	48‡	NR	NR	NA	250	2008	Naturally present.
Sodium	mg/L	NR	NR	147‡	147‡	NR	NR	NA	NA	2009	Naturally present.
Inorganics											
Antimony	µg/L	NR	NR	0.2‡	0.2‡	NR	NR	6	6	2009	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic*	µg/L	2.6-10*	5.8*	1.3-7.7*	3.1*	ND	ND	10	0	2009	Erosion of natural deposits; Runoff from orchards.
Barium	mg/L	NR	NR	0.05‡	0.05‡	0.14	0.14	2	2	2009	Erosion of natural deposits.
Fluoride	mg/L	0.13-0.74	0.74**	0.29-0.37	0.37**	0.4-0.63	0.63**	4	NA	2009	Erosion of natural deposits.
Nitrate	mg/L	0.86-7.87	7.87**	0.49‡	0.49‡	ND	ND	10	10	2009	Fertilizer runoff, erosion of natural deposits
Thallium	µg/L	NR	NR	ND	ND	ND	ND	2	0.5	2009	Leaching from ore-processing sites; Discharge from electronics, glass and drug factories
Organics											
Dinoseb	µg/L	ND	ND	NR	NR	NR	NR	7	7	2009	Runoff from herbicides used on soybeans and vegetables.
Some people who drink water containing Dinoseb well in excess of the MCL over many years could experience reproductive difficulties.											
Radiologicals											
Gross Alpha	pCi/L	NR	NR	ND-1.1	1.1	6	6	15	0	2008	Erosion of natural deposits.
Gross Beta	mrem	NR	NR	ND	ND	ND	ND	4	0	2008	Decay of natural and man-made deposits.
Radium 226	pCi/L	NR	NR	ND	ND	NR	NR	NA	NA	2008	Erosion of natural deposits.
Combined Radium	pCi/L	NR	NR	ND	ND	ND	ND	5	0	2008	Erosion of natural deposits.
Uranium	µg/L	NR	NR	1.5‡	1.5‡	3.7-5.7	4.9	30	0	2008	Erosion of natural deposits.
Radon	pCi/L	NR	NR	ND	ND	NR	NR	NA	NA	2008	Erosion of natural deposits.

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Definitions and Abbreviations

AL Action level The concentration of a contaminant that, 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. 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.

µg/L micrograms per liter Unit of measurement equal to ppb (parts per billion)

mg/L milligrams per liter Unit of measurement equal to ppm (parts per million)

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.

Lead and Copper

Analyte	Units	90th Percentile Reported	EPA Action Level (AL)	EPA Limit MCLG	Sample Date	Number of sites above AL	Possible Sources
Copper	mg/L	0.29	1.3	1.3	2007	Zero	Erosion of natural deposits, home plumbing systems.
Lead	µg/L	4	15	0	2007	Zero	Erosion of natural deposits, home plumbing systems.

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.

The City of Peoria 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 drinking 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 or at http://www.epa.gov/safewater/lead.

Analyte	Units	Water System Concentrations		Greenway Surface Water Concentrations		Pyramid Peak Surface Water Concentrations		EPA Limit MCL	EPA Limit MCLG	EPA Limit MRDL	Sample Date	Possible Sources
		Range	Highest Average	Range	Highest Average	Range	Highest					
Disinfection By-Products												
Bromate	µg/L	NR	NR	ND-20	1.92	NR	NR	10	0	NA	2009	By-product of ozonation.
Total Organic Carbon % Removal	%	NR	NR	35-68%	59% (15% required)	NR	NR	TT	NA	NA	2009	Naturally present.
Total Trihalomethanes	µg/L	ND-120*	49.4*	NR	NR	NR	NR	80*	NA	NA	2009	By-product of drinking water chlorination.
Total Haloacetic Acids	µg/L	ND-33	13.9*	NR	NR	NR	NR	60*	NA	NA	2009	By-product of drinking water chlorination.
Other Analysis												
Total Coliforms	P / A	0-1.0%	1.0%	0.0%	0.0%	0.00%	0.00%	5% positive monthly	0	NA	2009	Naturally present.
Chlorine Residual	mg/L	0.4-2.07	2.07**	0-2.03	2.03**	1.12-1.46	1.46**	4	4	4	2009	Water additive used to control microbes.

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Turbidity

Surface Water Treatment Plant	Analyte	Units	Level Found	MCL	MCLG	Possible Sources
Greenway	Turbidity	NTU	0.26	TT=1 NTU	0	Soil Runoff
			100.0%	TT= % of samples <0.3 NTU	0	Soil Runoff
Pyramid Peak	Turbidity	NTU	0.084	TT=1 NTU	0	Soil Runoff
			100.0%	TT= % of samples <0.3 NTU	0	Soil Runoff

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Giardia and *Cryptosporidium* were tested for, **but not found,** at both Pyramid Peak and Greenway Water Treatment Plants.

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

NR not required

NTU Nephelometric Turbidity Unit Measure of how light is scattered by particulate matter in water

pCi/L pico-Curies per liter Measure of radioactivity

TT Treatment Technique Required process intended to reduce the level of a contaminant in drinking water.

* MCL is based on a running annual average. The average given is the highest average.

** Highest concentration detected.

‡ Only one sample collected as required.

From the Environmental Protection Agency

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

The sources of drinking water (both tap 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 be from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;
Inorganic contaminants, such as salts and metals, that 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 that 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, that 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 that can be naturally-occurring or can be the result of oil and gas production and mining activities.

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

Nitrate & Arsenic

The City has five wells with nitrate concentrations between 5 and 10 mg/L. Nitrate at levels above 10 mg/L 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 short periods of time because of rainfall or agricultural activity. If you are caring for an infant, ask advice from your health care provider.

While your drinking water meets EPA's standard for Arsenic, it does contain low levels. 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. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.

Conservation

Peoria's water resources are critical for our future. The City encourages its citizens to implement water conservation measures in and around their homes. We offer free information booklets and brochures to those interested in learning more about water conservation, Xeriscape, landscape irrigation and indoor water conservation. If you would like to request a literature packet, visit www.conserve.peoriaaz.gov or call 623-773-7286.

The Peoria Public Works - Utilities Department also offers a variety of free water conservation classes and has information booths at various City events. In addition the City has a rebate program to provide an incentive for citizens to do their part in conserving our precious water resources.

Source Water Assessment

The Arizona Department of Environmental Quality performed a source water assessment for 24 wells used by the City. The assessment reviewed the adjacent land uses that may pose a potential risk to the sources. One of Peoria's wells was found to have one adjacent land use that posed a high risk of contamination.

The complete assessment report is available for review at all Peoria Public Libraries and the Utilities Department office at 8401 W. Monroe Street.

To Learn More About Water Quality...

USEPA: www.epa.gov/OGWDW
ADEQ: www.azdeq.gov
Maricopa County: www.maricopa.gov/envsvc

More water quality information and answers to frequently asked questions are available at the department website at www.peoriaaz.gov.

City of Peoria
Public Works - Utilities Department
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