

Annual
**WATER
QUALITY
REPORT**
Reporting Year 2012



Presented By _____



City of YUMA
"Making Yuma Better!"

PWS ID#: 14024

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

Meeting the Challenge

We are once again proud to present our annual Water Quality Report, covering all testing performed between January 1, 2012, and December 31, 2012. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

Sincerely,

Jay Simonton, M.P.A.
Utilities Director

Where Does My Water Come From?

The main source of Yuma's drinking water is surface water from the Colorado River, which is delivered to the treatment facilities via the canal system.

The Main Street Treatment Facility is a conventional water treatment plant. Surface water is treated with alum to help the sediment drop to the bottom of the sedimentation basins. The water is sent through slow sand-filters, and chlorine is added for disinfection. The treated water is then sent out to the distribution system and storage tanks.

The Agua Viva Water Treatment Facility presently treats ground water and surface water. Iron and manganese are removed from the ground water. Water drawn from a well is ground water. The Agua Viva Water Treatment Facility can produce 20 million gallons of drinking water per day, using surface water from the nearby canal. Treated ground water and surface water are blended together and disinfected prior to distribution in the system.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the Arizona Department of Environmental Quality prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

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, which 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.

More information about contaminants in tap water and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791, or visit online at www.epa.gov/safewater/hotline. Information on bottled water can be obtained from the U.S. Food and Drug Administration.

You're Invited to Participate in Yuma's Water Quality Future

The City of Yuma's Water and Sewer Commission is a group of citizens developing ideas and providing advice to the Utilities Director on a range of water and wastewater issues. Our Water and Sewer Commission meets on-call at 5:00 p.m. in the Department of Public Works Administrative Conference Room. The public is invited. You can contact the Department of Public Works at (928) 373-4500 for more information regarding meeting dates.

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 <http://water.epa.gov/drink/hotline>.

QUESTIONS?

If you have any questions about this report or the quality of our drinking water, please contact Betsy Bowman, Laboratory Director, at the Utility Treatment Laboratory, (928) 329-2893.

E-mail address: Betsy.Bowman@yumaaz.gov

City of Yuma Home Page: www.yumaaz.gov

Laboratory Direct Web Page: www.yumaaz.gov/7666.htm

Environmental Protection Agency: (800) 426-4791

Arizona Department of Environmental Quality: (800) 234-5677

Low Fat Wastewater

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.

Variances and Exemptions

The ADEQ or EPA gives permission not to meet an MCL or a treatment technique under certain conditions. The City of Yuma was granted a waiver from the Enhanced Coagulation and Enhanced Softening rules on July 2, 2002, by the Arizona Department of Environmental Quality. The waiver was based on two years of research performed on City of Yuma water. The data confirmed that the Colorado River water at Yuma is not amenable to the requirements of the rule. The waiver remains in effect as long as the running annual average for Total Trihalomethanes (TTHM) remains below 64 ppb and Haloacetic Acids(HAA5) remains below 48 ppb.

Source Water Assessment

In 2004, the Arizona Department of Environmental Quality completed a source water assessment for the Yuma Main Canal, "A" Main Canal, and ground water wells used by the City of Yuma. The assessment reviewed the adjacent land uses that may pose a potential risk to the sources. The result of the assessment was that adjacent land use causes low risk to all source water. For a complete copy of the assessment, contact dml@azdeq.gov or call (602) 771-4641 or visit the ADEQ's Source Water Assessment and Protection Unit Web site at www.azdeq.gov/environ/water/dw/swap.html.

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 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 Hotline or at www.epa.gov/safewater/lead.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

You can contact us if you have any questions or if you would like more information on our water main flushing schedule: call the Public Works Department at (928) 373-4500.



Water Quality Testing Results

The City of Yuma conducted all the water quality testing in 2012 required by federal and state regulations. Indeed, the city conducted many more tests than regulations required. Testing revealed the city's drinking water quality met all regulatory standards set to safeguard public health. The data tables present 2012 results and corresponding water quality standards.

The state requires us to monitor 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											
				Main Street Treatment Facility		City of Yuma Distribution System		Agua Viva Treatment Facility			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2011	15	0	1.3	NA	NA	NA	ND	NA	No	Erosion of natural deposits
Arsenic (ppb)	2012	10	0	1.7	NA	NA	NA	1.7	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2012	2	2	0.10	NA	NA	NA	0.11	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2012	[4]	[4]	NA	NA	1.10	0.10–1.10	NA	NA	No	Water additive used to control microbes
Fluoride (ppm)	2012	4	4	0.53	NA	NA	NA	0.42	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA]–Stage 1 (ppb)	2012	60	NA	NA	NA	12	1.2–20	NA	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2012	10	10	0.31	0.28–0.31	NA	NA	0.23	ND–0.23	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2012	80	NA	NA	NA	46	22–89	NA	NA	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2012	5% of monthly samples are positive	0	NA	NA	0.0	NA	NA	NA	No	Naturally present in the environment
Turbidity ¹ (NTU)	2012	TT=< 1 NTU	NA	0.713	0.030–0.713	NA	NA	0.280	0.011–0.280	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2012	TT=95% of samples < 0.3 NTU	NA	100	NA	NA	NA	100	NA	No	Soil runoff
Uranium (ppb)	2011	30	0	2.8	NA	NA	NA	5.8	NA	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	1.3	1.3	0.068	0/100	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2012	15	0	0.62	0/100	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹ 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.

² We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

UNREGULATED SUBSTANCES						
		Main Street Treatment Facility		Agua Viva Treatment Facility		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium (ppm)	2012	120	NA	130	NA	Naturally present in the environment

INITIAL DISTRIBUTION SYSTEM EVALUATION (IDSE) ²						
SUBSTANCE (UNIT OF MEASURE)		YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
Haloacetic Acids [HAA]–IDSE Results (ppb)		2008	NA	2–4	By-product of drinking water disinfection	
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)		2008	NA	10–97	By-product of drinking water disinfection	