

ANNUAL

WATER REPORT

*Water testing
performed in 2010*

QUALITY

Presented By



City of YUMA
"Making Yuma Better!"

PWS ID#: 14024

To Our Valued Water Customers:

The City of Yuma Water Services Department is pleased to provide you with its 2010 annual water quality report. This report gives our valued customers information about the quality of water that we strive to provide to you, our customers. We are pleased to announce that the City of Yuma's water supply meets or exceeds all federal and state water-quality standards. It is our goal to continue to provide you with a safe and dependable supply of drinking water. Under the requirements of the U.S. Environmental Protection Agency (U.S. EPA) and the Arizona Department of Environmental Quality (ADEQ), the City of Yuma monitors and tests drinking water from source to tap. Before the water reaches your tap, hundreds of tests have been performed to detect more than 80 different kinds of contaminants and ensure that your water meets all regulatory and health standards.

We hope this report will provide you with the necessary information to answer any questions you may have about the drinking water supplied to you by the City of Yuma, Water Services Department.

Respectfully,

Jay Simonton, Utilities Director

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/>.



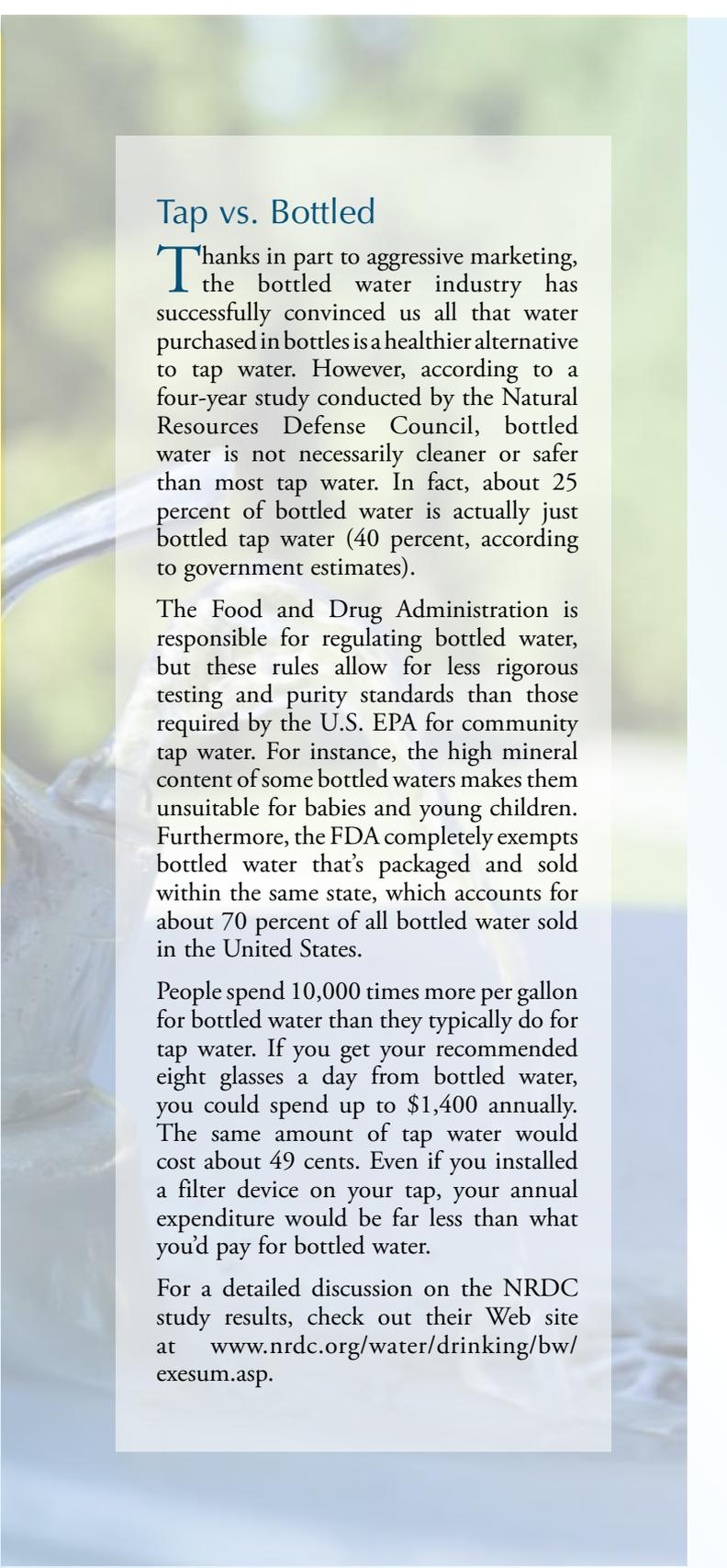
Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.



Fact OR Fiction

There is the same amount of water on Earth now as there was when the Earth was formed. (*Fact: The water that comes from your faucet could contain molecules that dinosaurs drank!*)

About half the water treated by public water systems is used for drinking and cooking. (*Fiction: Actually, the amount used for cooking and drinking is less than 1 percent of the total water produced!*)

A person can live about a month without food, but only about a week without water. (*Fact: Dehydration symptoms generally become noticeable after only 2 percent of one's normal water volume has been lost.*)

The first water pipes in the United States were made of cast iron. (*Fiction: The first water pipes were actually made of fire-charred bored logs.*)

The world's first municipal water filtration plant was opened in the United States. (*Fiction: The first plant was actually opened in Paisley, Scotland, in 1832.*)

A person must consume a half-gallon of water daily to live healthily. (*Fact: A person should drink at least 64 ounces, or 8 cups, of water each day.*)

One gallon of gasoline poured into a lake can contaminate approximately 750,000 gallons of water. (*Fact*)

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 groundwater wells used by the City of Yuma. The Assessment reviewed the adjacent land uses that may pose a potential risk to the water sources. The result of the assessment was that adjacent land use poses 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 website at www.azdeq.gov/environ/water/dw/swap.html.

Community Participation

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.

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 coagulant chemicals to help the sediment to collect and drop to the bottom of the sedimentation basins. The water is sent through slow sand filters, and chlorine is added for disinfection. Treated water is then sent out to the distribution system and storage tanks.

The Agua Viva Water Treatment Facility currently treats both ground water and surface water. In 2009 we completed the expansion of the Agua Viva Water Treatment Facility to produce 24 million gallons per day of surface water. Water drawn from a well is ground water, which is treated for iron and manganese. Treated ground water and surface water are blended together and disinfected prior to distribution in the system.

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 Safe Drinking Water Hot Line: (800) 426-4791

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

Lead and Drinking Water

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 Yuma Utilities Department is responsible for providing high-quality drinking water, but we 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 (800) 426-4791 or at www.epa.gov/safewater/lead.



Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA 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 <http://water.epa.gov/drink/>. Information on bottled water can be obtained from the U.S. Food and Drug Administration.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentration of these substances does not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

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 (TTHMs) remains below 64 ppb, and Haloacetic Acids (HAA5) remains below 48 ppb. (Variances and Exemptions are issued by ADEQ or U.S. EPA giving permission not to meet an MCL or a treatment technique under certain conditions)

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Main Street Treatment Facility		Agua Viva Treatment Facility		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Arsenic (ppb)	2010	10	0	1.5	NA	1.8	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2010	2	2	0.11	NA	0.1	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	2010	100	100	1.1	NA	1.3	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2010	4	4	0.29	NA	0.44	NA	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2010	10	10	0.44	NA	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity ¹ (NTU)	2010	TT	NA	0.169	0.065–0.169	0.320	0.012–0.320	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2010	TT	NA	100	NA	100	NA	No	Soil runoff

Distribution System

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2010	[4]	[4]	1.30	0.01–1.30	No	Water additive used to control microbes
Haloacetic Acids [HAAs] (ppb)	2010	60	NA	10.5	ND–20	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	52	26–110	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2010	5% of monthly samples are positive		0	NA	No	Naturally present in the environment

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)	2009	1.3	1.3	0.065	0/52	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2009	15	0	0.75	0/52	No	Corrosion of household plumbing systems; Erosion of natural deposits

INITIAL DISTRIBUTION SYSTEM EVALUATION RESULTS²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAAs]- IDSE Results (ppb)	2008	2–14	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2008	10–97	By-product of drinking water disinfection

¹Turbidity 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.

²We 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.

Definitions

AL (Action level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a community water system shall 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.

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 (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

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

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