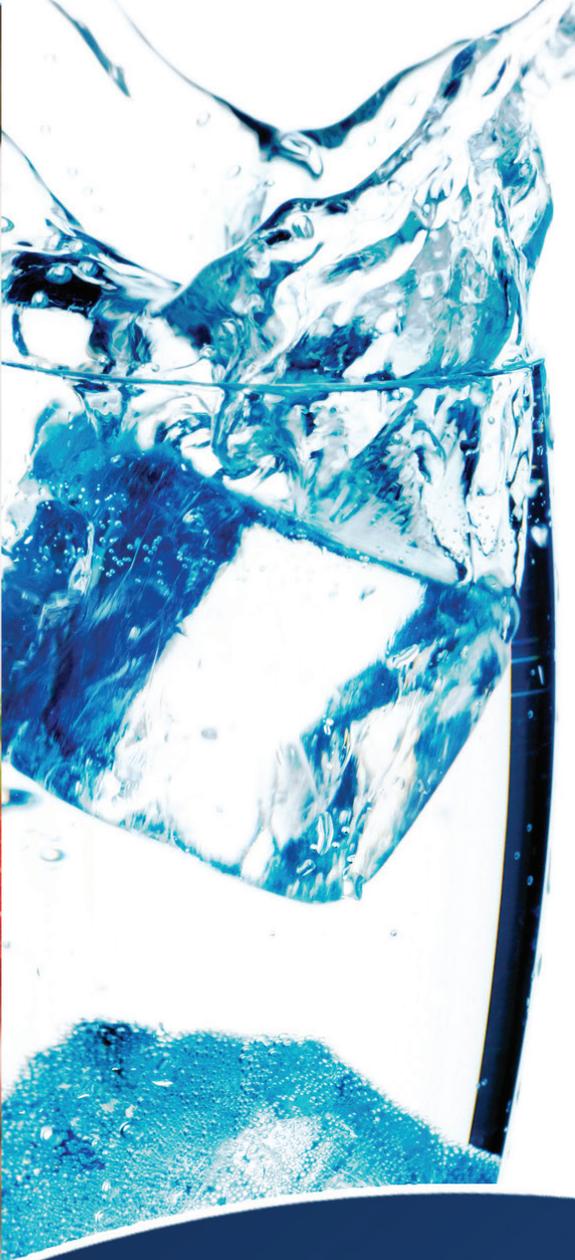


ANNUAL WATER QUALITY REPORT

WATER TESTING
PERFORMED
IN 2014



Presented By
City of Buckeye

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

PWS ID#: 0407089, 0407154, 0407526, 0407765

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2014. 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 remember that we are always available to assist you should you ever have any questions or concerns about your water. For additional information, please see our Web site at www.buckeyeaz.gov.

Community Participation

You are invited to participate in our public forums related to your drinking water. The City of Buckeye council meets two times per month on the first and third Tuesdays beginning at 6:00 p.m. at City Hall, 530 E. Monroe Ave., Buckeye, AZ 85326. For more information on the exact meeting days, please see our Web site at www.buckeyeaz.gov/events or call the City Clerk's Office at (623) 349-6000.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

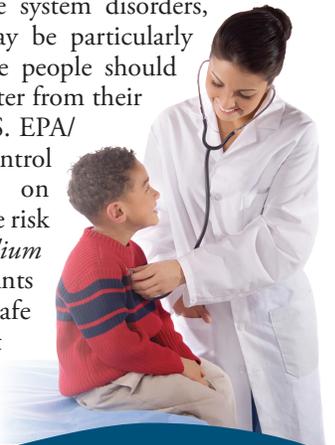
- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Where Does My Water Come From?

Our water source is supplied by groundwater pumped from the West Salt River Valley and Hassayampa Sub-Basins. This water is treated, disinfected, and stored in reservoirs in various locations and elevations within the City of Buckeye's four service areas. Production facilities within these service areas operate 24 hours a day, 7 days a week. The Water Production Division continually monitors the treatment process, making any necessary adjustments for the changing water supply. The treated water then leaves the storage reservoirs and is distributed to the City's many customers through its extensive distribution systems within those areas. The Environmental Compliance Division performs over 1,000 tests per year to monitor the quality of the water that is sent to the customers within the City's service areas. Through this continuous process, the Water Resources Department ensures that all drinking water delivered is safe and in full regulatory compliance.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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?

For more information about this report, or for any questions relating to your drinking water, please contact Water Resources at (623) 349-6800 during the normal business hours of 7:00 a.m. to 6:00 p.m., Monday through Thursday.

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. Further, 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.

Fluoride

A concentration above 2ppm is above the secondary standard level (MCL). This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2ppm of fluoride may develop cosmetic discoloration (called dental fluorosis) of their permanent teeth.

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 themselves 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 and 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 such times. 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.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

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.



Source Water Assessment

The Source Water Assessment Program (SWAP) is part of a nationwide effort initiated in 1996 by amendments to the Safe Drinking Water Act (SDWA). The intent of the program is to complete an evaluation of all sources of water (wells, surface water intakes, and springs) that provide drinking water to public water systems in Arizona. This evaluation determines the degree to which the source of water is protected. Arizona's SWAP was approved by the U.S. EPA in November 1999. The goal of the SWAP is to promote community awareness and to facilitate and encourage source water protection at the community level. These sources are currently protected by well contraction and system operations and management.

SWAP provides detailed information on public water system drinking water sources by evaluating the hydrogeologic setting in which each source is located and any adjacent land uses that are in a specified proximity of the drinking water source. Once this information is gathered, it is evaluated to determine the extent to which the drinking water sources are protected from future natural or man-made contamination. Water sources are then categorized as either high risk or low risk. A designation of high risk indicates there are additional source water protection measures that can be implemented at the local level. A low risk designation indicates that either most source water protection measures are already implemented, and/or the hydrogeologic setting is such that it is protective of the source water.

All public water systems are required to comply with the federal and state laws for monitoring and reporting to ensure the water they serve to the public meets national drinking water standards. Regardless of the risk rating, ADEQ encourages local communities to actively engage in source water protection activities. If you have any questions regarding the Source Water Assessments, please contact ADEQ at (602) 771-4644 or view ADEQ's Source Water Assessment and Protection Unit Web site at www.azdeq.gov/environ/water/dw/swap/html or the EPA's Web site at www.epa.gov.

For water systems Tartesso 0407526 and Festival Ranch 0407765:

Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of the public water system, the Arizona Department of Environmental Quality (ADEQ) has not performed a Source Water Assessment for water systems Tartesso 0407526 and Festival Ranch 0407765. Once an assessment is completed by ADEQ, we will include a summary of the report in our Water Quality Report.

For water system Town of Buckeye 0407089: SWA conducted in November 2002

Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of Environmental Quality (ADEQ) has given a high risk designation for the degree to which this public water system's drinking water source(s) are protected. A designation of high risk indicates there may be additional source water protection measures which can be implemented on the local level. This does not imply that the source water is contaminated nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination.

For water system Sundance/Sunora 0407154: SWA conducted in May 2003

Based on the information currently available on the hydrogeologic settings of and the adjacent land uses that are in the specified proximity of the drinking water source(s) of the public water system, the department has given a low risk designation for the degree to which this public water system's drinking water source(s) are protected. A low risk designation indicates that either most source water drinking water protection measures are already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection.



About Our Violation

This notice is to reiterate the Public Notice that was released on September 30, 2014, and to inform the residents of the Tartesso PWS ID # 07526 service area that on September 03, 2014, the City of Buckeye Water Resources Department collected 4 routine microbiological samples, of which 2 tested positive for total coliform bacteria. Once notified of the positive results, the Water Resources Department resampled the 4 original sites and also collected 3 additional samples, of which 1 sample was taken directly from the source water. All resamples and additional samples were analyzed and indicated no presence of the coliform bacteria. Additional samples were also taken for the month of October 2014 as part of the Water Resources sampling protocol, with those samples also reporting back as not present.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Public Notice

PWS ID #07-154 Sundance/Sunora Failure to Monitor

Between the months of January to March of 2014, we did not monitor our drinking water for the contaminants Benzo (a) pyrene or Xylenes. Upon being notified by Arizona Department of Environmental Quality (ADEQ), we immediately analyzed our water supply for these contaminants. Results of the analyses have been received and properly recorded as required by state and federal law. We have already taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

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

What Is “Hard” Water?

Hard water is probably the most common water problem found in the home. According to the Water Quality Association of the United States, hard water contains dissolved hardness minerals above 1 gpg (grains per gallon). Hardness in drinking water is caused by two nontoxic chemicals (called minerals), calcium and magnesium, that are dissolved in a water supply. If calcium and/or magnesium is present in your water in substantial amounts, the water is said to be hard, making a lather or suds for washing difficult to do. Water containing little calcium or magnesium is called soft water; it is easier to make a lather or suds for washing. Parts per million (ppm) or grains per gallon (gpg) are both units of measure used to describe the dissolved hardness of minerals contained in water. One ppm is one unit of a substance out of one million units of water. Grains, or gpg, is a unit of weight. One grain is 1/7,000 of a pound. One gpg (1 gpg), is equal to 17.1 ppm.

The most common mechanical way to soften water is through the use of an ion exchange water softener. This device uses an ion exchange process to replace hardness minerals in the water with some other substance. The vast majority of water softening equipment today uses the exchange of hardness minerals for sodium.

Public water supplies in the City of Buckeye are all from underground sources and all pass through sand, gravel, and naturally occurring evaporated salt deposits that are typical in the arid environment of Arizona and help contribute in making the water in this area hard and salty in taste. Typically, water softeners should be set to at least 10 gpg and adjusted 3± (up or down) as needed. Iron levels found in our distribution system are typically below 0.050 mg/L, and manganese is below 0.0050.

Hardness levels for your water system are:

	Town of Buckeye	Sundance/Sunora	Tartesso	Festival Ranch
	ppm/gpg	ppm/gpg	ppm/gpg	ppm/gpg
Hardness	168/10	72/4	57/3	86/5
Iron	0.050	0.050	0.050	0.050
Manganese	0.0050	0.0050	0.0050	0.0050

Soft water – less than 1 gpg

Slightly hard water – 1 to 3.5 gpg

Moderately hard water – 3.5 to 7 gpg

Hard water – 7 to 10.5 gpg

Very hard water – 10.5 and higher gpg

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic 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 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 samples were taken.

The City participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality.

REGULATED SUBSTANCES													
				City of Buckeye 0407089		Sundance/Sunora 0407154		Tartesso 0407526		Festival Ranch 0407765			
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	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014	15	0	2.5	1.7–3.3	NA	NA	3.7 ¹	3.7–3.7 ¹	3.9 ¹	3.9–3.9 ¹	No	Erosion of natural deposits
Arsenic ² (ppb)	2014	10	0	4.6	NA	3.13	ND–8.13	3	4.54–11	8.4	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2014	2	2	0.24	NA	0.17	0.0244–0.17	0.08	NA	0.055	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2014	[4]	[4]	0.99	0.66–0.99	0.97	0.76–0.97	0.71	0.45–0.71	0.87	0.59–0.87	No	Water additive used to control microbes
Chromium (ppb)	2014	100	100	22	NA	27.5	22–27.5	11	NA	7.6	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Diquat (ppb)	2014	20	20	NA	NA	0.33	0–0.33	NA	NA	NA	NA	No	Runoff from herbicide use
Ethylbenzene (ppb)	2014	700	700	NA	NA	5.7	NA	NA	NA	NA	NA	No	Discharge from petroleum refineries
Fluoride (ppm)	2014	4	4	0.89	NA	1.61	1.33–1.61	1.3	2.29–4.5	2.6	NA	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2014	60	NA	4	3.31–4.62	2.1	1.13–6.44	6.1	4.87–7.36	3.5	NA	No	By-product of drinking water disinfection
Nitrate ³ (ppm)	2014	10	10	9.1	4.57–9.1	2.92	1.52–2.92	1.3	NA	3.3	3.38–3.59	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2014	50	50	11	NA	2.93	ND–2.93	NA	NA	NA	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	9.9	7.87–11.9	8.9	1.52–56.8	31.3	23.6–38.9	3.6	NA	No	By-product of drinking water disinfection
Total Coliform Bacteria (# positive samples)	2014	1 positive monthly sample	0	NA	NA	NA	NA	2	NA	NA	NA	Yes	Naturally present in the environment
Xylenes (ppm)	2014	10	10	NA	NA	2.85	0–2.85	NA	NA	NA	NA	No	Discharge from petroleum factories; Discharge from chemical factories

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

				City of Buckeye 0407089		Sundance/Sunora 0407154		Tartesso 0407526		Festival Ranch 0407765			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	1.3	1.3	0.34	1/20	0.0522 ¹	0/20 ¹	0.0675 ⁴	0/10 ⁴	0.181 ⁴	0/20 ⁴	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2012	15	0	2.6	1/20	ND ¹	0/20 ¹	ND ⁴	0/10 ⁴	2.11 ⁴	0/20 ⁴	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES

		Sundance/Sunora 0407154		Tartesso 0407526		Festival Ranch 0407765			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
Sodium (ppm)	2014	209	139–209	92	NA	59	NA	Naturally occurring	

UNREGULATED CONTAMINANT MONITORING REGULATION 3 (UCMR3)
SUNDANCE/SUNORA 0407154

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Chlorate (ppb)	2014	52	28–52
Chromium (ppb)	2014	29	22–29
Hexavalent Chromium [Dissolved] (ppb)	2014	33	25–33
Molybdenum (ppb)	2014	9.1	6.3–9.1
Strontium (ppb)	2014	1,000	110–1,000
Vanadium (ppb)	2014	38	20–38

¹ Sampled in 2011.

² While your drinking water meets the U.S. EPA's standard for arsenic, it does contain low levels of arsenic. The EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The 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.

³ Nitrate in drinking water at levels above 10 ppm 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, you should ask advice from your health care provider.

⁴ Sampled in 2014.

Definitions

AL (Action level): The concentration of a contaminant that, 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.

pCi/L (picocuries per liter): A measure of radioactivity.

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).