TOWN OF BUCKEYE 2008 WATER QUALITY REPORT

The Town of Buckeye is pleased to provide you with the 2008 Water Quality Report.
The Federal Safe Drinking Water Act requires all public water systems to provide this report to their customers.

The Safe Drinking Water Act (SDWA) requires public water systems to provide an annual report on the type and quantity of substances that are in the water. The SDWA, as amended in 1996, has specific guidelines concerning drinking water which includes methods of testing and sampling frequency. The data in this report was a result of the water quality sampling and testing performed in 2008.

The U.S. Environmental Protection Agency (EPA) administers the SDWA to ensure tap water is safe to drink by restricting the presence of contaminants in the public water systems. Bottled water on the other hand, is regulated by the Food and Drug Administration (FDA), which limits contaminants for similar protection to the public health.

The Town of Buckeye Commitment

The Town of Buckeye Water Resources Department works hard to provide Buckeye with safe and reliable water. The Water Resources, Fire & Police Departments continually plan and prepare for emergency situations to ensure rapid response times and the water quality is maintained within the Town of Buckeye service areas.

The Town of Buckeye has an ongoing Capital Improvement Program (CIP) designed to help address critical water infrasture needs and meet new state and federal quality regulations. The CIP commitment is to deliver safe and reliable water by planning, designing and constructing projects that will both upgrade and expand the Town water system.

The Town of Buckeye has provided fresh, clean, safe drinking water for the Buckeye Community since the mid 1940's. Our commitment is to provide a sufficient supply of quality drinking water for our growing community.

This report is a summary of the quality of water we provide to our customers and will describe the water quality and services we deliver. The Town of Buckeye continually improves the water treatment process and protects our water resources. Each year, the Water Resources Department collects drinking water samples throughout the five water systems within the Town of Buckeye service area. These tests ensure that your water meets every health and safety standard set by the state and/or federal government.

The analyses were made by using data from the most recent U.S. EPA required testing methods which are presented in the following pages. We hope this information helps you become more knowledgeable about your drinking water.

Where Do We Get Our Drinking Water?

Our water source is supplied by groundwater pumped from the West Salt River Valley Sub-Basin and the Hassayampa Sub-Basin. The fresh water is treated, disinfected and stored in reservoirs which are located in various locations and elevations within the Town of Buckeye's five 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 Town's many customers through its extensive distribution systems within those areas. The Environmental Compliance Division performs over 1000 tests per year in order to monitor the quality of the water that is sent to the customers within the Town's service areas. Through this continuous process, the Water Resources Department ensures that all drinking water delivered is safe and in full regulatory compliance.

The Source Water Assessment Program (SWAP)

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 SWAP 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 construction and system operations and management. The Arizona Department of Environmental Quality (ADEQ) has not performed a Source Water Assessment for these systems. Once an assessment is completed by ADEQ we will include a summary of the report in our Water Quality Report.

SWAP provides detailed information on public water system drinking water sources by evaluating the hydrogeologic setting in which the 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 most source water protection measures are either 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 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 from ADEQ's Source Water Assessment and Protection Unit website at www.azdeq.gov/environ/water/dw/swap/html or the EPA's website at www.epa.gov.

What we do to protect groundwater:

The Town of Buckeye protects the sources by ensuring proper well construction and system operations and management..

What you can do to protect groundwater:

Residents can help by taking hazardous household chemicals to hazardous material collection days, and limiting the use of pesticides & fertilizer's.

Este informe contiene información muy importante en la calidad del agua potable en su área. Para la ayuda en espanol con este informe, por favor pongase en contacto con el departamento de la direccion de agua de la Town of Buckeye, en (623) 349-6800.

THIS REPORT SHOWS OUR WATER QUALITY AND WHAT IT MEANS

Sample Results:

We are pleased to report during the past year, the water delivered to your home or business complied with all state and federal drinking water health standards. The tables below list all of the drinking water contaminants that were detected in our drinking water during the 2008 calendar year. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The data presented in these tables are from testing performed in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

The tables below show the results of our monitoring for the period of January 1 to December 31, 2008 unless otherwise noted.

Microbiological Contaminants

Contaminant in mg/L	MCL	MCLG	Units		Town of Buckeye	Sundance /Sunora	Tartesso	Sun City Festival Ranch	Likely Source of Contamination
Total Coliform Bacteria for Systems that collects >40 samples per month	No more than 5% of monthly samples can be positive	0	Absent or Present	Result	0	0	0	0	Naturally present in the environment
				Violation	No	No	No	No	
Fecal Coliform and E. Coli	A routine sample & a repeat sample are total coliform positive, & one is also fecal coliform or E. Coli positive	0	Absent or Present	Result	0	0	0	0	Human and animal fecal waste
				Violation	No	No	No	No	

Lead and Copper

Contaminant	AL	ALG	Units	Town of Buckeye 90th Percentile	Sundance /Sunora 90th Percentile	Tartesso 90th Percentile	Sun City Festival Ranch 90th Percentile	Violation (Yes or No)	Likely Source of Contamination
Lead	15	0	ppb	2.4	1.5	<1.0	<1.0	No	Corrosion of household plumbing systems: erosion of natural deposits
Copper	1.3	1.3	ppm	0.29	0.18	0.032	0.16	No	Corrosion of household plumbing systems: erosion of natural deposits; leaching from wood preservatives

Disinfectants

	MRDL	MRDLG	Units	Town of Buckeye Low/High	Sundance /Sunora Low/High	Tartesso Low/High	Sun City Festival Ranch Low/High	Violation (Yes or No)	Likely Source of Contamination
Chlorine	4	4	ppm	0.77 / 0.87	0.89 / 0.97	0.84 / 1.11	0.79 / 1.01	No	Water additive used to control microbes

Disinfection Byproducts

Contaminant	MCL	MCLG	Units	Town of Buckeye Low/High	Sundance /Sunora Low/High	Tartesso Low/High	Sun City Festival Ranch Low/High	Violation (Yes or No)	Likely Source of Contamination
Haloacetic Acids (HAA5)	80	N/A	ppb	<2.0 / 1.1	<2.0 / 3.3	<2.0	<2.0	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	60	N/A	ppb	<2.0 / 6.6	4.3 / 5.0	4.8	2.8 / 38	No	By-product of drinking water disinfection

Inorganic Contaminants

Contaminant	MCL	MCLG	Units	Town of Buckeye Low/High	Sundance /Sunora Low/High	Tartesso Low/High	Sun City Festival Ranch Low/High	Violation (Yes or No)	Likely Source of Contamination
Antimony	6	6	ppb	N/A	1.0	1.0	1.0	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	10	0	ppb	N/A	1.2 / 4.7	4.0	9.0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos	7	7	MFL	N/A	N/A	<0.2	<0.2	No	Decay of asbestos cement water mains; erosion of natural deposits
Barium	2	2	ppm	N/A	0.15	0.064	0.079	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	4	4	ppb	N/A	<2.0	<1.0	<1.0	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium	5	5	ppb	N/A	<0.5	<0.5	<0.5	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	100	100	ppb	N/A	25	3.2	7.8	No	Discharge from steel and pulp mills; erosion of natural deposits
Cyanide	200	200	ppb	N/A	30	30	30	No	Discharge from steel/metal factories; discharge from plastic and fertilizer factories

Contaminant	MCL	MCLG	Units	Town of Buckeye Low/High	Sundance /Sunora Low/High	Tartesso Low/High	Sun City Festival Ranch Low/High	Violation (Yes or No)	Likely Source of Contamination
Fluoride	4	4	ppm	N/A	1.9	2.5	1.2	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (inorganic)	2	2	ppb	N/A	<0.2	<0.2	<0.2	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate	10	10	ppm	6.4 / 10	1.7	<0.2	1.2	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite	1	1	ppm	N/A	N/A	<0.2	<0.1	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50	50	ppb	N/A	<5.0	<5.0	<1.0	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium	2	0.5	ppb	N/A	<1.0	<1.0	<1.0	No	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

For more information on the "likely source of contamination" go to www.epa.gov/safewater/contaminants/index.html.

Understanding water terminology definitions:

AL (action level) – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

ALG (action level goal) – the "goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health, the ALG allows for a margin of safety.

MCL (maximum contaminant level) – the "maximum allowed" is 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 "goal is the level of a contaminant in drinking water below which there is no know or expected risk to health. The MCLGs allows 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 know or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A – not applicable (or not required)

ND – non detect (laboratory analysis indicates that the constituent is not present).

ppb (parts per billion) or ug/L (micrograms per liter) – one part per billion corresponds to one minute in 2,000 years or a single penny in $10,000,000.

ppm (parts per million) or mg/L (milligrams per liter) – one part per million corresponds to one minute in two years or a single penny $10,000.

DRINKING WATER AND YOUR HEALTH:

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 (EPA) Safe Drinking Water Hotline (800-426-4791). 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 (listed below).

Some people may be more vulnerable to contaminates 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 about drinking water from their health care providers.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. For more information about contaminants and potential health effects, or to receive a copy of the EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (800-426-4791).

Contaminants that may be present in source water include:

- **Microbial contaminants,** such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **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 framing.
- **Radioactive contaminants,** which can be naturally occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants,** including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Pesticides and herbicides,** which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Health effects information:

Nitrate: 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, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

Fluoride: A concentration above 2.0 mg/L 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 2 mg/L of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis).

Arsenic: If arsenic is less than the MCL, your drinking water meets EPA's standards. 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.

Lead: 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. Town of Buckeye is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When you 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 you 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.

For more information about health effects, please visit the Center for Disease Control's web site www.cdc.gov.

FOR YOUR INFORMATION:

We respect our customer's rights to purchase home water treatment systems or bottled water and offer information to help you make an informed choice and perhaps even save money. A variety of home treatment systems can improve the flavor of tap water by filtering out the after taste of chlorine, an essential part of the water treatment process. We cannot recommend a specific brand, but below are some frequently asked questions about water softeners.

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 is water that 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 and making a lather or suds for washing is difficult to do. Water containing little calcium or magnesium is called soft water and makes it easier to make a lather or suds for washing. Parts per million (ppm) or grains per gallon (gpg) are both 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. It is 1/7000 of a pound. One gpg (1gpg), 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 Town of Buckeye are all from underground sources and all pass through sand, gravel and naturally occurring evaporated salt deposits which 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 grains per gallon 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 PPM/GPG	Sundance /Sunora PPM/GPG	Tartesso PPM/GPG	Sun City Festival Ranch PPM/GPG
Hardness	171 / **10**	68.4 / **4**	68.4 / **4**	136.8 / **8**
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

Conservation Tips

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily, there are many low-cost or no-cost ways to conserve water.

- Water your lawn at the least sunny times of the day and typically not during windy conditions.
- Fix toilet and faucet leaks.
- Take short showers – a 5 minute shower uses about 8 gallons of water compared to up to 50 gallons for a bath.
- Turn the faucet off while brushing your teeth and shaving; 3-5 gallons go down the drain per minute.
- Teach your kids about water conservation to ensure a future generation that uses water wisely.

Make it a family effort to reduce next month's water bill.

EPA WaterSense

Community Participation:

You are invited to participate in our public forum and voice your concerns about your drinking water. The Town of Buckeye council meets two times per month beginning at 6:00 p.m. at the Town of Buckeye Council Chamber at 100 Apache Rd., Buckeye, AZ 85326. For more information on the exact meeting days, please see our website at www.buckeyeaz.gov/currentevents.aspp or call the Town Clerks Office (623) 349-6000.

Town of Buckeye Contact Information:

- If you have any questions about your water or the information in this report, please (623) 349-6800 during normal business hours 7:00 a.m. to 6:00 p.m., Monday through Thursday.
- If you have questions about your utility bill please call (623) 349-6100. You can also visit our website at http://www.buckeyeaz.gov

Links to other sites:

Precautions Required for Immune-Compromised Individuals (e.g. HIV/AIDS Patients, Patients in Chemotherapy)	USEPA Safe Drinking Water Hotline: 1-800-426-4791 www.epa.gov/safewater
Arizona Department of Environmental Health Services (ADHS) Bureau of State Laboratory Services	(602) 542-1188 www.azdhs.gov/lab/index.html
Arizona Department of Environmental Quality (ADEQ) ADEQ Water Quality Division	(602) 771-2300 or 1-800-234-5677 www.azdeq.gov/environ/water/index.html
Maricopa County Environmental Services Department (MCESD) MCESD Water & Waste Management	(602) 506-6666 www.maricopa.gov/envsvc/default.asp
Water Quality (All Aspects)	USEPA Safe Drinking Water Hotline: 1-800-426-4791 www.epa.gov/safewater USEPA Questions & Answers safewater.custhelp.com