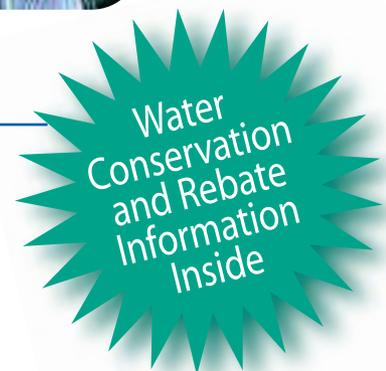




2006

WATER  
QUALITY  
REPORT





## YOUR DRINKING WATER

The City of Scottsdale is pleased to provide our customers with the 2006 Annual Water Quality Report. Except where indicated, this report is based on the results of monitoring for the period of January 1, 2005 to December 31, 2005.

In 2005, your drinking water met or surpassed all federal and state drinking water standards. Scottsdale water is extensively tested for over 100 substances the Environmental Protection Agency (EPA) has determined may be unhealthy to humans if consumed over extended periods of time above the health standards. Health standards are set to detect and/or eliminate unwanted substances long before they pose a health threat.

The EPA, the Arizona Department of Environmental Quality (ADEQ), and the Maricopa County Environmental Services Department require public water systems to fund, prepare and distribute an annual report about the quality of the water. The Water Quality Report provides valuable information about where your drinking water comes from, how it is treated, and summarizes recent analytical tests completed.

To ensure your tap water is safe to drink, the EPA issues 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 substances in commercial bottled water.

Sources of drinking water include rivers, lakes, reservoirs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive materials, and can pick up substances resulting from the presence of animals or from human activity.

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 a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

## CONSUMER CONFIDENCE REPORT

The United States Environmental Protection Agency (EPA), the Arizona Department of Environmental Quality and the Maricopa County Environmental Services Department require public water systems to fund, prepare and distribute an annual report about the quality of the water. The Water Quality Report provides valuable information about where your drinking water comes from, how it is treated, and summarizes the most recent analytical tests completed.

## WHERE YOUR WATER COMES FROM

Your water comes from both surface water and groundwater sources. Throughout the year you may receive water from any one of these sources, or a combination of water sources. Consumer demand, weather and the time of year are all factors that can influence where your water supply originates.

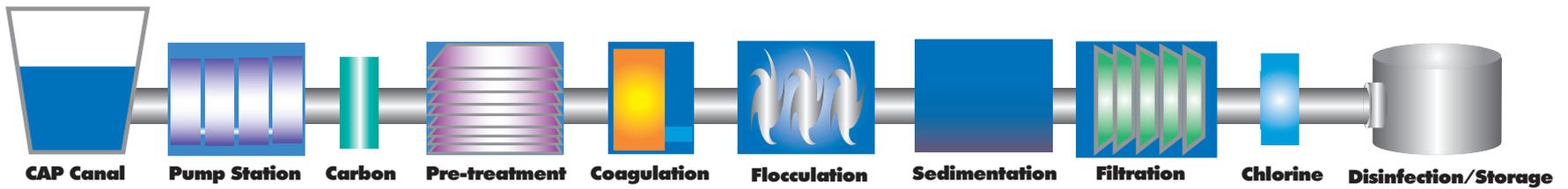
The City's main surface water supply is from the Colorado River. This water is transported through the Central Arizona Project (CAP) aqueduct to the Scottsdale CAP Water Treatment Plant where it is treated to drinking water standards before being served to customers.

Scottsdale also receives surface water from the Salt River Project (SRP), which originates from the Verde and Salt Rivers. Under contract with the city of Phoenix, Scottsdale's SRP supply is treated to drinking water standards and is delivered to Scottsdale where it is served to customers.

Besides these surface water sources, Scottsdale water comes from a groundwater aquifer stored deep below ground. The water is pumped from the ground through one of the City's 34 wells and disinfected prior to entering the distribution system, before being served to customers.

## ATTENTION IMMUNO-COMPROMISED CITIZENS

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; and some elderly people and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency / Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).



*Water from the Colorado River is treated to drinking water standards at the City's CAP Water Treatment Plant and then delivered to Scottsdale citizens.*

*Pre-treatment  
In large basins, the water is treated with activated carbon to control unpleasant tastes and odors.*

*Coagulation/Flocculation  
Large mixers called flocculators and an additive called "alum" are used to draw small particles together to form larger heavier particles.*

*Sedimentation  
The water is moved to large rectangular basins where the large particles settle to the bottom of the basins where they are removed.*

*Filtration  
Very small particles that remain in the water are removed by a filtering process.*

*Disinfection  
The final step is disinfection with chlorine. Water carrying a slight chlorine residual is distributed to water customers. A chlorine residual is required by regulation to ensure adequate destruction of harmful microbes before the water is distributed to customers.*

## CENTRAL GROUNDWATER TREATMENT FACILITY (CGTF)

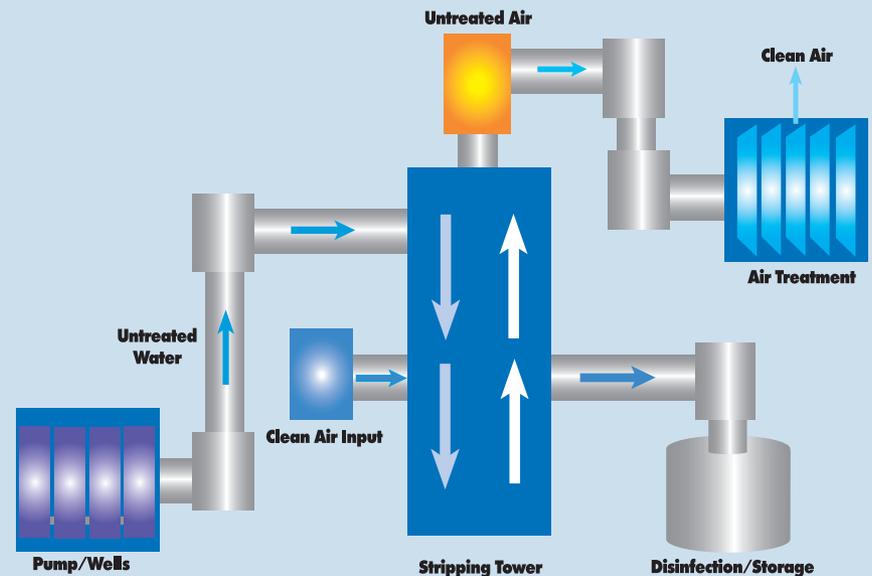
The North Indian Bend Wash (NIBW) Central Groundwater Treatment Facility (CGTF) treats water pumped from four groundwater wells that contain trichloroethylene (TCE), an industrial chemical. The CGTF facility located at Pima and Thomas Roads was built by private companies deemed potentially responsible for contaminating the groundwater with TCE. The private companies are responsible for the cost of operating and maintaining the facility. The facility pumps groundwater from an area designated by EPA as the NIBW Superfund site. The groundwater is treated to federal and state drinking water standards, with regulatory oversight by EPA, Arizona Department of Environmental Quality, and Maricopa County.

For more information on the NIBW Superfund site, please call EPA's message line (800-231-3075). For more information on the NIBW Central Groundwater Treatment Facility, please contact the City of Scottsdale at (480) 312-8732 or visit our water quality website at [www.scottsdaleaz.gov/water/quality](http://www.scottsdaleaz.gov/water/quality).

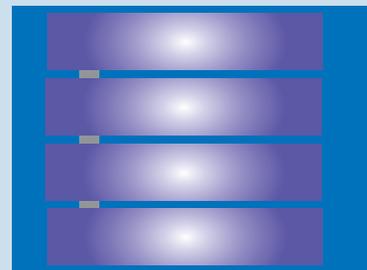
### How does the NIBW Central Groundwater Treatment Facility work?

- Water pumped from the four wells flows down through three treatment columns.
- The treatment facility uses a process that "strips" the water of contaminants by mixing the water with air. As the water and air mix, the contaminants attach themselves to the air.

- The air used in the treatment process is passed through activated carbon filters to remove the contaminants before the air is released.
- The treated water is then moved to a reservoir for disinfection before it is delivered to the City of Scottsdale drinking water system. The water in the reservoir is combined with other treated water source(s) to meet customer demand.

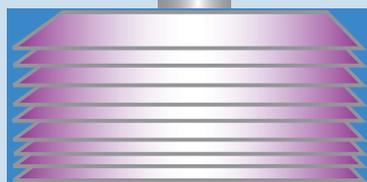


## HOW DOES THE ARSENIC TREATMENT FACILITY WORK?



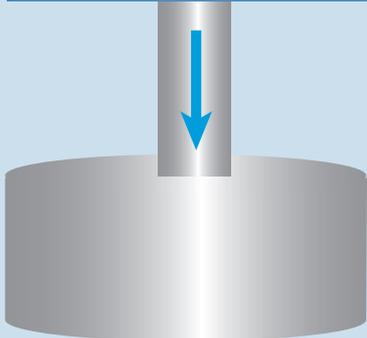
### **Pump/Wells**

Water pumped from 2 wells flows through adsorption treatment contactors.



### **Treatment**

The treatment facilities use an adsorption process that adsorbs arsenic by passing water through the adsorption-based media. As the water passes through the media the arsenic attaches itself to the media.



### **Disinfection/Storage**

The treated water is then moved to a reservoir for disinfection and storage before it is delivered to the City of Scottsdale drinking water system.

#### TREATING THE WATER TO DRINKING WATER QUALITY | ARSENIC TREATMENT FACILITY

Groundwater in Scottsdale and throughout Arizona contains varying levels of naturally occurring arsenic. In 2005, the City completed construction of its first Arsenic Treatment Facility within the CAP service area. The facility is supplied by 2 wells that require arsenic treatment. For more information about arsenic, see Upcoming Drinking Water Regulations on page 10.

## PUBLIC NOTIFICATION

The City of Scottsdale is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the month of June 2005, a monitoring sample was missed for 1 out of 150 total coliform samples. While we cannot verify the levels of total coliform bacteria in the distribution system during that time, testing conducted prior to and after the missed monitoring event confirmed compliance with the federal drinking water standards. The appropriate regulatory agencies for drinking water were informed of the missed monitoring event. As required, the City has monitored and continues to monitor the distribution system for total coliform bacteria.

*\*Total coliform bacteria are naturally present in the environment.*



## IMPORTANT DEFINITIONS

### *Contaminant*

Any physical, chemical, biological, or radiological substance or matter in the water.

### *Maximum Contaminant Level Goal (MCLG)*

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.

### *Maximum Contaminant Level (MCL)*

The highest level of a contaminant allowed in drinking water. MCLs are set by the EPA as close to MCLGs as feasible using the best available treatment technology.

### *Maximum Residual Disinfectant Level (MRDL)*

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is required for control of microbial contaminants.

### *Maximum Residual Disinfectant Level Goal (MRDLG)*

The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

### *Treatment Technique (TT)*

A required process intended to reduce the level of a contaminant in drinking water.

### *Action Level (AL)*

The concentration of a contaminant, which if exceeded, triggers treatment or other requirements which a water system must follow.

### *Part per million (ppm) / Part per billion (ppb)*

These units describe the levels of detected substances. One part per million can be described as one minute in two years. One part per billion is one second in thirty-two years.

### *Picocuries per liter (pCi/L)*

A measure of the radioactivity of a substance.

### *Health Based Guidance Level (HBGL)*

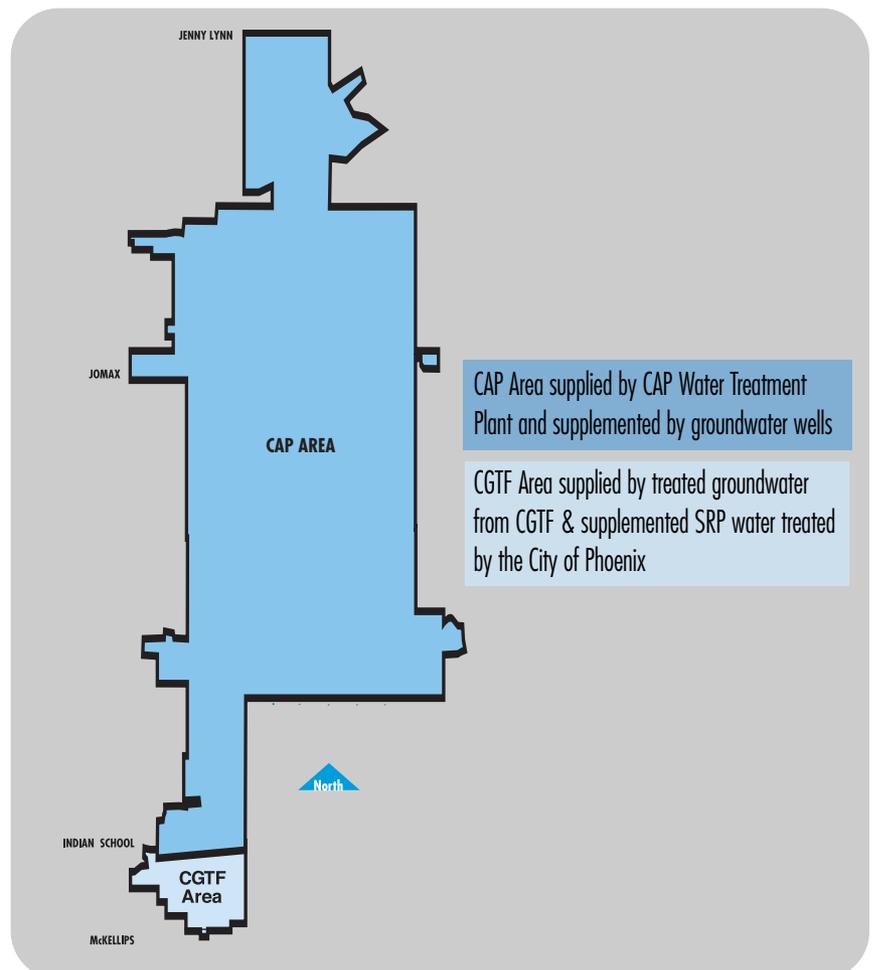
Developed by Arizona Department of Health Services (ADHS). They represent levels that are unlikely to result in adverse health effects with long-term exposure to humans.

### *GPM*

Gallon per minute

## CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

- ▶ Microbial Contaminants including viruses, bacteria or parasites (such as Cryptosporidium or Giardia), which may come from agricultural or livestock operations and wildlife.
- ▶ Inorganic contaminants such as salts and metals, which can be naturally occurring or result from urban storm 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, storm water runoff and residential uses.
- ▶ Organic chemical contaminants including synthetic and volatile organic compounds, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- ▶ Radiochemical contaminants which occur naturally or result from oil and gas production and mining activities.



## 2005 DETECTED RESULTS

The results of Scottsdale's water quality analysis are contained in the following tables. The water service areas are divided into two different zones: CGTF Area and CAP Area. Use the map to determine which area you receive your water from and refer to the tables for your water quality results. Scottsdale water is tested for over 100 substances: however, only the substances that are detected in the water are listed in this report. A complete list of all substances that the City monitors is available upon request, as is information on monitoring waivers. In 2005, ADEQ granted waivers for monitoring for cyanide, glyphosate, and dioxin due to previous non-detect results and the continuous chlorination used in the drinking water system.

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## TABLES KEY -

These abbreviations are used and referenced in all the following tables.

ND = non-detectable  
(the substance was analyzed but not detected)

NA = non-applicable



## 2005 INORGANICS

SUBSTANCE	UNIT	MCL	MCLG	CAP AREA		CGTF AREA		LIKELY SOURCE IN DRINKING WATER
				AVERAGE	RANGE	AVERAGE	RANGE	
Arsenic*	ppb	50	NA	ND	25.8	ND	6.1	Erosion of natural deposits
Barium	ppb	2000	2000	ND	315	20	36	Erosion of natural deposits
Chromium	ppb	100	100	ND	35	ND		Erosion of natural deposits
Fluoride	ppm	4	4	0.4	1.4	0.4	1.0	Erosion of natural deposits
Nitrate (as N)**	ppm	10	10	ND	6	ND	6	Runoff from fertilizer use Leaching from septic tanks

\* Arsenic is a naturally occurring mineral commonly found in water due to erosion from rocks and soil. Some people who drink water containing arsenic in excess of the arsenic standard or Maximum Contaminant Level over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

\*\* Nitrate is an inorganic substance that is monitored due to run off from fertilizer use. Nitrate in drinking water at levels greater than 10 ppm is a health risk for infants of less than six months of age. In 2005, the highest nitrate level detected in Scottsdale water was 6 ppm. High nitrate levels above 10 ppm in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time due to rainfall or agricultural activity. If you are caring for an infant you should seek advice from your health care provider.

## 2005 ORGANICS

SUBSTANCE	UNIT	MCL	MCLG	CAP AREA		CGTF AREA		LIKELY SOURCE IN DRINKING WATER
				AVERAGE	RANGE	AVERAGE	RANGE	
Bromodichloromethane	ppb	NA	NA	5.9	ND - 27.2	3.8	ND - 10.0	Byproduct of drinking water chlorination
Bromoform	ppb	NA	NA	1.5	ND - 20.7	2.6	ND - 7.1	Byproduct of drinking water chlorination
Chloroform	ppb	NA	NA	6.4	ND - 48.8	8.5	ND - 59.8	Byproduct of drinking water chlorination
Dibromochloromethane	ppb	NA	NA	4.1	ND - 13.6	3.0	ND - 8.5	Byproduct of drinking water chlorination
Dalapon	ppb	200	200	ND	ND	0.23	ND - 1.6	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) phthalate	ppb	6	0	0.07	ND - 0.9	0.37	ND - 2.6	Discharge from rubber and chemical factories
Ethylbenzene	ppb	700	700	0.1	ND - 3.4	ND	ND	Discharge from petroleum factories
Xylenes	ppm	10	10	0.0006	ND - 0.014	ND	ND	Discharge from petroleum factories

## 2005 RADIOCHEMICALS

SUBSTANCE	UNIT	MCL	MCLG	CAP AREA		CGTF AREA+		LIKELY SOURCE IN DRINKING WATER
				HIGHEST	AVERAGE RANGE	HIGHEST	AVERAGE RANGE	
Gross Alpha	pCi/L	15	0	2.8	ND - 2.8	1.6	ND - 4.9	Erosion of natural deposits
Radium 226	pCi/L	5	0	0.3	ND - 0.3	2.4	ND - 0.7	Erosion of natural deposits
Radium 228	pCi/L	5	0	ND	ND	1.0	ND - 1.0	Erosion of natural deposits
Uranium	pCi/L	30	0	4.1	ND - 8.6	4.0	ND - 7.2	Erosion of natural deposits

+ Results are from 2002. All other data is from the most recent testing done in accordance with the regulations.

## 2005 SECONDARY INORGANICS

SUBSTANCE	UNIT	MCL	MCLG	CAP AREA RANGE	CGTF AREA RANGE
Alkalinity	ppm	NA	NA	110 – 246	100 – 180
Calcium	ppm	NA	NA	14 – 69	29 – 60
Chloride	ppm	NA	NA	25 - 211	19 – 280
Hardness, Total	ppm	NA	NA	2.1 – 284	2 – 390
	grains/gallon			0.1 – 16.6	0.1 - 22.8
Iron	ppm	NA	NA	ND – 0.78	ND
Manganese	ppm	NA	NA	ND – 0.02	ND
Magnesium	ppm	NA	NA	11 – 27.4	9 – 59
pH	Std. Unit	NA	NA	7.0 – 9.0	7.5 – 8.1
Sodium	ppm	NA	NA	39 – 159	18 – 122
Sulfate	ppm	NA	NA	ND – 237	43 – 103
Temperature	oC	NA	NA	11.9 – 39.8	15.4 – 33.9
	oF	NA	NA	53 – 104	60 – 93
Total Dissolved Solids	ppm	NA	NA	270 – 610	180 – 810
Zinc	ppm	NA	NA	ND – 0.03	ND

## TURBIDITY RESULTS

SUBSTANCE	TREATMENT TECHNIQUE TECHNIQUE	MCLG	HIGHEST MEASUREMENT	LOWEST MONTHLY PERCENTAGE	LIKELY SOURCE IN DRINKING WATER
Turbidity	No turbidity measurement can be above 1 NTU at any time. At least 95% of turbidity measurements of any month must be less than or equal to 0.3 NTU.	NA	0.66	97.8 % of monthly samples met treatment technique requirements	Soil runoff

## 2005 DETECTED SECONDARY STANDARDS

Secondary inorganic substances do not have an MCL and are measured voluntarily because these substances primarily relate to the taste, odor, or appearance of drinking water. These inorganic substances are found naturally in the soil.

## 2005 TURBIDITY RESULTS AFTER TREATMENT AT THE CAP WATER TREATMENT PLANT

Turbidity is a measure of clarity in the water and is reported as Nephelometric Turbidity Units (NTU). It is caused by suspended matter such as organic and inorganic matter, silt, algae or tiny microorganisms. Turbidity is a good indicator of the effectiveness of the water treatment process. A treatment technique standard applies instead of an MCL. In accordance with the Interim Enhanced Surface Water Treatment Rule (IESWTR) the City has collected continuous turbidity samples from individual filters at the water treatment plant. All samples collected were in compliance with the regulation.



## 2005 RESULTS OF SAMPLES COLLECTED IN THE DISTRIBUTION SYSTEM

Microbial, Disinfection Residual and Disinfection Byproduct samples are collected throughout the City at 147 dedicated sampling stations. These distribution system samples are representative of water delivered to homes and businesses.

Drinking water is treated with chlorine to ensure adequate microbial disinfection. Every month throughout the City over 150 samples are collected to ensure adequate disinfection and verify the absence of microbes within the distribution system pipes. Scottsdale's goal is to have a chlorine residual between 0.8 ppm and 1.2 ppm in all monthly samples. When chlorine residuals are outside the preferred range, the City makes necessary adjustments to return the residual to the preferred range.

Disinfectant Byproducts (Total Trihalomethanes and Haloacetic Acids) are formed as a result of a chemical reaction between chlorine and naturally occurring organic matter in the water. The disinfection process is carefully controlled so that disinfection is effective, while minimizing levels of disinfection byproducts. To control those disinfectant byproducts, Total Organic Carbon (TOC) is measured in the surface water before and after treatment. TOC is reduced during the water treatment process at the plant, therefore, reducing formation of disinfectant byproducts in the distribution system.

## 2005 MICROBIAL MONITORING

SUBSTANCE	MCL	MCLG	ENTIRE DISTRIBUTION SYSTEM	LIKELY SOURCE IN DRINKING WATER
Total Coliform	Presence in no more than 5% of monthly samples	0	Highest monthly percentage of positive Total Coliform samples: 1.9%	Naturally present in the environment

## 2005 DISINFECTANT AND DISINFECTANT BYPRODUCT MONITORING

SUBSTANCE	UNITS	MCL*	MCLG	LOWEST LEVEL	HIGHEST LEVEL	ANNUAL RUNNING AVERAGE	MAJOR SOURCE IN DRINKING WATER
Chlorine	ppm	MRDL=4.0	MRDL=4.0	0.11	1.94	1.18	Water additive used to control microbes Naturally present in the environment
Total Organic Carbon	NA	TT	NA	2.2	3.6	2.7	Byproduct of drinking water disinfection
Total Trihalomethane (TTHM)	ppb	80	NA	ND	123	56	Byproduct of drinking water disinfection
Haloacetic Acids (HAA)	ppb	60	NA	ND	65	11	Byproduct of drinking water disinfection

\*The MCL is based on a system wide annual running average. Based on the annual running average, the City was below the MCL.



## RESULTS OF LEAD AND COPPER MONITORING IN RESIDENTIAL HOUSEHOLDS

Substance	Units	Action Level (AL)	MCLG	Amount Detected	Likely Sources in Drinking Water
Lead	ppb	90% of homes tested must have lead levels less than 15 ppb	0	90% of the homes tested had lead levels less than 5 ppb	Corrosion of household plumbing
Lead - from City water sources	ppb	NA	NA	ND -- 2.1	Erosion of natural deposits
Copper	ppm	90% of homes tested must have copper levels less than 1.3	1.3	90% of homes tested had copper levels less than 0.28 ppm	Corrosion of household plumbing
Copper - from City water sources	ppm	NA	NA	ND-0.020	Erosion of natural deposits

## RESULTS OF UNREGULATED CONTAMINANT MONITORING

Substance	Unit	MCL	MCLG	CAP Area	CGTF Area
Perchlorate	ppb	NA	NA	ND-6.9	ND
2,4-dinitrotoluene	ppb	NA	NA	ND	ND
2,6-dinitrotoluene	ppb	NA	NA	ND	ND
Acetochlor	ppb	NA	NA	ND	ND
DCPA mono-acid degradate	ppb	NA	NA	ND	ND
DCPA di-acid degradate	ppb	NA	NA	ND	ND
4,4'- DDE	ppb	NA	NA	ND	ND
EPTC	ppb	NA	NA	ND	ND
Molinate	ppb	NA	NA	ND	ND
MTBE	ppb	NA	NA	ND	ND
Nitrobenzene	ppb	NA	NA	ND	ND
Terbacil	ppb	NA	NA	ND	ND

## RESULTS OF LEAD AND COPPER MONITORING IN RESIDENTIAL HOUSEHOLDS

Lead and copper are used to make household plumbing fixtures and pipes. Lead and copper may leach from faucets or plumbing components into water when the water stands in pipes for several hours. Leaching may also occur in copper pipes joined with lead-based solder. Because the water in your pipes can pick up these metals, installation of lead solder, pipes and fittings was banned in 1986. The 2005 lead and copper levels reported are from water faucets inside 50 Scottsdale homes that were built before the lead ban. Results from one home exceeded the 15 ppb action level for lead; the homeowner was contacted for further follow-up.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. Lead levels at your home may be higher than other homes as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels you may want to have your water tested. If you have elevated levels of lead in your home, run your faucet when the water has not been used for more than six hours and use only cold water for consumption. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

## RESULTS OF UNREGULATED CONTAMINANT MONITORING

During 2002, The City was required to monitor for List 1 Contaminants under the Unregulated Contaminant Monitoring Rule (UCMR). List 1 consists of 12 chemical contaminants. The data generated by the UCMR will be used to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List. This is a list of contaminants the EPA is considering for possible new drinking water standards.

## ADDITIONAL WATER QUALITY INFORMATION

### PERCHLORATE

Perchlorate is a man-made inorganic salt, which is used as a component of solid rocket fuel munitions and in the pyrotechnics fireworks industry. In February 2006, EPA set a reference health level of 24.5 ppb. Arizona has a health based guidance level of 14 ppb. The EPA is not currently requiring perchlorate monitoring in drinking water. However, Scottsdale has been monitoring for perchlorate in the CAP surface water supply because of detections in Lake Mead, which flows to the Colorado River.

During voluntary monitoring in 2005, perchlorate was not detected in a sample taken from the Scottsdale CAP water supply.

EPA risk studies will determine if there may be an impact to the environment or human health from low concentration perchlorate levels in water. Additional information about perchlorate can be obtained from the EPA Safe Drinking Water Hotline. (800-426-4791).

### MTBE (METHYL-T-BUTYL ETHER)

MTBE is a member of a group of volatile organic chemicals commonly known as fuel oxygenates. Oxygenates are added to fuel to increase its oxygen content. MTBE is used in gasoline throughout the United States to reduce carbon monoxide and ozone levels caused by auto emissions.

The EPA is not currently requiring MTBE monitoring in drinking water. In the interim EPA has recommended that MTBE concentration not exceed 20-40 ppb. During the UCMR monitoring originally conducted in 2002, Scottsdale tested MTBE at all drinking water sources. Sampling in 2005 also showed no detection of MTBE. There has been no detectable MTBE in drinking water served to Scottsdale customers. Additional information about MTBE can be obtained from the EPA Safe Drinking Water Hotline. (800-426-4791)

### SOURCE WATER PROTECTION PROGRAM (SWAP)

During 2004, the City of Scottsdale worked with the Arizona Department of Environmental Quality to review and finalize a source water assessment for the groundwater wells and surface water sources used by the City. The

Assessment reviewed the adjacent land uses that may pose a potential risk to the sources. These risks include, but are not limited to, gas stations, landfills, dry cleaners, agriculture fields, and waste water treatment plants. Once the adjacent land uses were identified, they were ranked as to their potential to affect the water source. The result of the assessment was that the risk to the various sources depended both on nearby activities and the physical structure of the source itself.

The City's groundwater wells have low to medium risk, with the exception of the wells linked to the Central Groundwater Treatment Facility. Those wells were identified as having a high risk of contamination, but the water produced by the wells is treated to drinking water standards and monitored closely by the City, ADEQ, and the EPA. All surface water sources, which include Lake Pleasant and the Verde River watershed, are considered high risk due to their exposure to the open air. The overall risk posed to surface waters is addressed by the EPA through its increased monitoring requirements for surface water sources.

The City continually protects our sources by carefully siting future wells, monitoring water quality of all sources, providing security, and continuing public education. Residents can help protect sources by practicing good septic system maintenance (if you use a septic tank), taking household hazardous chemicals to hazardous material collection days, and limiting pesticide and fertilizer use.

The complete Assessment is available for inspection at the Arizona Department of Environmental Quality, 1110 W. Washington, Phoenix, Arizona 85007, between the hours of 8:00 a.m. and 5:00 p.m. or at the City of Scottsdale Water Resources. For more information, call the City of Scottsdale Water Resources Department at 480-312-8732 or visit the ADEQ's Source Water Assessment and Protection Unit website at: [www.azdeq.gov/environ/water/dw/swap.html](http://www.azdeq.gov/environ/water/dw/swap.html)

### RECLAMATION

In the early nineties, the City of Scottsdale embarked upon a major water reclamation and reuse program with the construction of the Scottsdale Water Campus. Through the Water Campus, the City treats and reclaims wastewater for both golf course irrigation and groundwater recharge. During periods of low golf course demand (typically in the winter), the effluent

is purified using a three step process: The first step is Micro Filtration, an advanced membrane filtration process that can remove minute particles and bacteria. The second step is Reverse Osmosis, a membrane process capable of removing even the smallest particles or contaminants. The third step is natural soil filtration, where the treated water flows through several hundred feet of soil before reaching our ground water supply. These three steps provide a safe and drought proof source of water that recharges, or replenishes, our valuable ground water resources.

### CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal illness. Cryptosporidium must be ingested to cause this illness, and it may be spread through means other than drinking water. In preparation for the upcoming Federal water quality regulation entitled the Long Term 2 Enhanced Surface Water Treatment Rule, Scottsdale has begun required sampling for Cryptosporidium. While the City in 2005 had a single Cryptosporidium detection in our untreated source water, the City's treatment process effectively removes this organism and ensures regulatory compliance.

### EPA CERTIFICATION

New EPA surface water quality regulations require water utilities throughout the country to perform additional sampling for microorganisms that can be present in lakes and canals. Scottsdale's water quality laboratory was the first laboratory in Arizona to be certified by the EPA in 2004 for cryptosporidium. In fact, the City's laboratory was the first, public or private, in Arizona to achieve this certification, and was one of only 26 nationally at the time of receiving certification.

Since the City's lab opened in 1999, the City has been monitoring and treating for these organisms. To comply with this new rule, however, the EPA must certify labs before results are accepted. After a two-year process, including on site evaluation by EPA staff, Scottsdale's laboratory was certified for these analyses.

## UPCOMING DRINKING WATER REGULATIONS

### ARSENIC

In 2005, the Federal standard for arsenic was 50 ppb. While the City of Scottsdale's drinking water contained low levels of arsenic, it fully complied with EPA's standard for arsenic. Effective January 2006, the EPA lowered the arsenic standard from 50 ppb to 10 ppb. In preparation for the compliance date, Scottsdale initiated construction of a series of arsenic treatment facilities to ensure compliance with the new Federal standard for arsenic.

There will initially be three "satellite" treatment facilities throughout the City. Informational fliers were dis-

tributed to nearby residents prior to construction of these treatment facilities. Public outreach with the neighbors, Home Owners Associations, schools and businesses has and will be ongoing throughout the projects.

### RADON

Radon is a naturally occurring radioactive gas that people cannot see, taste or smell. Breathing elevated levels of radon in indoor air has been linked to lung cancer. Radon is released to the air from the soil and can migrate into a building through the foundation. Radon can also be released into the air from tap water. However, it is estimated that less than two percent of radon in the air comes from drinking water.

Preparing for a pending regulation, Scottsdale's Water Resources Department staff began collecting radon samples from wells and treatment plants. This monitoring was conducted in 1999 through 2000. Sample results varied depending on the water source, ranging from non-detect to 1,110 picocuries per liter (pCi/L). The state has the option to adopt a program to address the health risks from radon in indoor air with a proposed alternate drinking water standard of 4,000 pCi/L. Additional monitoring will occur once the rule is finalized.

If you are concerned about radon in your home or office, test the air in the building. Testing is inexpensive and easy, and there are simple ways to fix a radon problem that are not too costly. For additional information, call EPA's Radon Hotline (800-SOS-RADON).

## FUTURE PLANNING

### CHAPARRAL TREATMENT PLANT

A new state of the art water treatment facility is nearing completion at the southeast corner of Hayden Road and McDonald Drive. The Chaparral Water Treatment Plant will treat Scottsdale's allocation of Salt River Project water from the Arizona canal, which is now treated by the City of Phoenix. The design capacity of the facility is 30 million gallons a day.

The Chaparral Water Treatment Plant incorporates some of the most advanced technologies in the water treatment industry. Utilizing ultrafiltration membranes and activated carbon filtration, the facility provides high quality and aesthetically pleasing water to our residents

south of Indian Bend Road. The Chaparral Water Treatment Plant will be one of the largest facilities in the country incorporating this ultrafiltration process. The plant is scheduled for final completion in summer 2006.

### XERISCAPE DEMONSTRATION GARDEN

Another great addition at the plant will be a Xeriscape demonstration garden. With the support of the City's Water Conservation Office, the garden will be designed as a teaching garden that will present information on using Xeriscape principles to create water-conserving landscapes and beautiful examples of low-water-use plants.

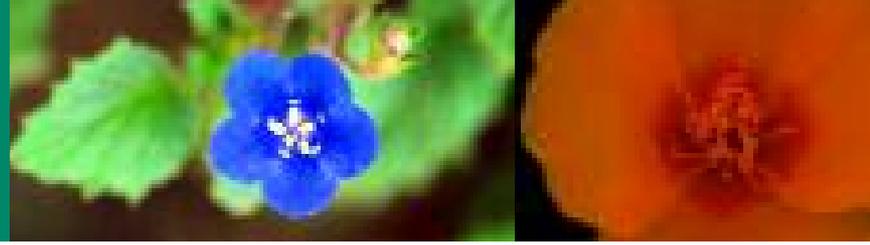
### CENTRAL ARIZONA PROJECT WATER TREATMENT PLANT (CAP)

During the fall every year, the CAP canal experiences growth of harmless algae. This algae release a "musty" taste and odor some people may notice. It is only an aesthetic issue; the water is safe to drink and meets all regulatory standards.

The addition of an advanced absorption process entitled granular activated carbon adsorption to the existing CAP treatment plant is under construction, with completion scheduled for summer 2007. The process is the same as that installed in the new Chaparral Water Treatment Plant. While this technology is being implemented to address new Federal water quality regulations, the technology will improve the taste, odor and overall quality of CAP water.



The new Chaparral Water Treatment Plant is located on the southeast corner of Hayden Road and McDonald Drive.



The Water Conservation Office has an extended menu of conservation outreach programs designed to help citizens save water. Citizens may learn about water conservation while attending special events or by taking advantage of free workshops, residential exterior water audits, and publications. A variety of rebate programs are also available to qualifying residents to help reduce water usage. Information on drought, recharge, and a list of monthly tips on how to conserve water are also topics of interest. Our office can be reached at (480) 312-5650 or through our web page at [www.ScottsdaleAZ.gov/water](http://www.ScottsdaleAZ.gov/water).

## Community Outreach

Through the Water Conservation Program water education materials and activities are provided to all elementary schools located in Scottsdale. Low-water-use landscape presentations are given at special events and to specialty groups. Topics include both indoor and outdoor water management practices.

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## Workshops

The City sponsors low-water-use landscape workshops several times a year. The workshops are designed primarily for homeowners and cover topics such as landscape design, plant selection, planting techniques, landscape maintenance, and water efficient irrigation.

## Residential Water Audit

The Water Conservation Program offers a onetime free irrigation water audit to single-family residential homes. If questions like “How long should I water?”, “How much water does my yard need?” or “Does my irrigation system leak?” concern you then an irrigation audit is for you.

## Publications

A variety of free publications are also available that promote water efficient landscapes and other water saving techniques. Water Conservation promotes and distributes brochures on low-water-use landscaping to Scottsdale’s citizens. The brochure *Landscape Watering by the Numbers*, which helps citizens figure out how to water their yard in the most efficient manner, was co-authored by Water Conservation staff and received the prestigious Valley Forward Crescordia Award. Other popular brochures include *Landscape Plants for the Arizona Desert - Guide to Growing More Than 200 Low-Water-Use Plants*, and *Xeriscape Landscaping With Style In The Arizona Desert*.

## Websites and New Water Conservation Calculator

Residents can download rebate information and applications or review information under **Water Conservation Links** and under **What’s New**.

Under What’s New there is *A Guide for the Septic System Owner*, *Evaporative Cooler Checklist* and the *Water Conservation Calculator*.

The calculator is designed to give you a rough monthly estimate of your overall water use, averaged over a year. Using the calculator will give you a good idea of where you use the most water in your house and yard. If you experiment with different numbers, you can estimate how much water you can save by changing your landscape, your appliances or your habits. The calculator can help you judge which changes may best fit your lifestyle.

<http://www.ScottsdaleAZ.gov/water/Conservation/Calculator.asp>

## Water, Use It Wisely

Water Conservation is an active participant in the “Water, Use It Wisely” advertising campaign with other valley cities. The campaign promotes easy things citizens can do to save water. This campaign has achieved wide recognition in the valley. Water Conservation has worked to promote this campaign by sponsoring and/or distributing items such as television commercials, watering guide books, brochures (Spanish and English), garbage truck signs, bookmarkers, magnets, and by staffing special event booths promoting the campaign.

For more information on Water, Use It Wisely, go to [www.wateruseitwisely.com](http://www.wateruseitwisely.com)

## Rebate Programs

City rebate programs encourage installation of water efficient plumbing fixtures and/or low-water-use landscapes. Currently the City offers five water conservation rebate programs. To qualify for a rebate the applicant must comply with the procedure in the most current rebate application form available from the Water Conservation Office.

- **Plumbing Rebate.** Rebate incentives are offered for the installation of low-flow toilets (\$75.00) and showerheads (\$5.00). Free aerators are also available for water customers. Plumbing rebates are given for structures built prior to January 1, 1992.



- **NEW! Hot Water Recirculation System Rebate.**  
These devices are installed to move hot water from the water heater quickly to eliminate the need of running the hot water tap for extended periods of time to get hot water. This program offers a rebate of up to \$200 per household. The customer must also get a minimum plumbing permit.
- **UPDATED! Turf Removal for Residential Customers Rebate.**  
Single family residential customers can receive a rebate for converting an existing high-water-use landscape to a low-water-use landscape. The rebate amount is calculated based upon the amount of turf removed and landscape installed, and is up to \$1,500.
- **UPDATED! Turf Removal for Commercial & Residential Common Areas Rebate.**  
A rebate is offered for the removal of turf from the landscape and installation of city approved low-water-use landscaping. A plan must be approved by City of Scottsdale Planning and Development Services. The rebate is up to \$3,000.
- **UPDATED! Landscape Irrigation Controller Rebate.**  
A rebate is offered for the purchase of a new multiprogrammable irrigation controller. The rebate amount is up to \$250.00

### Groundwater Recharge

Scottsdale is a leader in the Phoenix area in the long term sustainability of our groundwater through artificial groundwater recharge. The city is replenishing our ground water supply by replacing or recharging groundwater at our Water Campus facility in North Scottsdale. In 2005, this groundwater recharge added over 2-1/4 billion gallons of water to our underground aquifers. Water stored in these aquifers is an important part of Scottsdale's overall water supply management strategy.

Scottsdale is also starting to implement groundwater recharge/recovery throughout the city by injecting treated CAP water directly into the aquifer through specially designed wells. These wells will be used to recharge during the winter low water use demand periods, and will supplement the water supply during the high demand summer months.

The groundwater aquifer crosses City boundaries. Scottsdale staff is working together with the City of Phoenix to plan for future sustainability of our shared resource. This "aquifer management plan" project will lead to a joint strategy to manage withdrawals and recharge in the area north of the CAP canal.

### Drought Planning

Dry conditions are continuing on both of Scottsdale's surface water supplies, the Salt and Colorado rivers. In July 2003, the Scottsdale City Council adopted a Drought Management Plan should more severe shortages occur.

There are four increasingly restrictive stages in the Drought Management Plan. Each stage contains more stringent water use reduction measures and outlines ways to achieve these measures. Declaration of drought at any stage will initiate an intensive public information program to advise customers impacted by the water shortage measures.

Scottsdale currently has enough water supplies available to meet customers' needs due to the wise water planning that has been done in Arizona. While the need to institute mandatory water use restrictions is not anticipated, Scottsdale continues to promote voluntary conservation year round. City staff continually monitor the situation to ensure that we are prepared.

For more information about rebates, workshops, publication, and other City water conservation programs, contact the City's water conservation office at 480-312-5650.

## JANUARY



- Pull weeds as they emerge so they don't steal water from your landscape. The best time to control weeds is before they grow too large.
- A 2-4 inch layer of mulch will help prevent the growth of weeds. Organic mulch will keep plant roots cooler in the hot temperatures of the summer. The organic mulch breaks down quickly during the summer season, so replenish organic mulch each year. Be sure to keep mulch 3 to 4 inches away from plant stems and tree trunks.
- Prune deciduous trees during their dormant period. Use proper pruning techniques and tools to reduce damage to tree bark and shrub branches.
- Prune frost sensitive plants after the danger of frost is past, which is about February 15th. You may want to wait until new growth begins later in the spring.

## FEBRUARY



- During the month of March, attend a FREE landscape workshop offered by the Water Conservation Office.
- Spring is a good time to fertilize non-native desert plants.
- While fertilizers promote plant growth, they also increase water consumption. Apply the minimum amount of fertilizer needed.
- Native plants do not need fertilizing because they have evolved in nutrient poor soils and are adapted to grow in our soil without supplemental fertilizer.
- Aphids may begin clustering on tender new growth. Refrain from spraying pesticides to allow beneficial insect populations to build up and control the aphids.

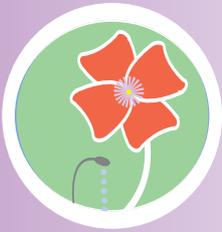
## MARCH



Evaporative coolers are an efficient way to cool your home. An annual maintenance checkup will maximize water efficiency.

- Remove all louvers from cooler and clean out any debris on the bottom in the pan.
- Check the tension of the motor fanbelt. It should move about an inch when pressed. Install new cooler pads.
- Reconnect the waterline and turn on the water supply and inspect pan for leaks.
- Inspect float assembly to make sure the water shuts off at the proper level and is not stuck open or closed.
- Reinstall louvers. Turn on recirculating pump and make necessary adjustments to assure even water distribution on pads. Turn on cooler.

## APRIL



Summer is here bringing with it the long, hot, dry conditions that can have an effect on your landscape plants.

- Turn on the drip irrigation system for 15-25 minutes before you begin the inspection. Begin checking from the valve to the end of the irrigation line for leaks and missing or clogged emitters.
- Look at emitter placement. As plants grow, you may need to move emitters out to the drip line. Keep extra spaghetti tubing and emitters on hand.
- Turn on the sprinkler system and begin checking from the valve to the spray head. Be sure the sprinkler heads are flush with the soil surface and straight. Adjust sprinkler heads so they don't spray walls, driveways or sidewalks.

## MAY



Proper watering year round will promote summer hardiness. To help you determine how much and how often to water your plants, get a free copy of Landscape Watering by the Numbers: A Guide for the Arizona Desert by calling the Water Conservation Office or visit [www.wateruseitwisely.com/waterguide](http://www.wateruseitwisely.com/waterguide).

- Water with sprinklers early in the morning before sunrise to minimize evaporation and prevent leaf disease.
- Adjust landscape watering to a summer schedule.
- Plants that are watered deeply and infrequently develop better root systems and are more drought enduring.
- As the weather heats up, avoid splashing water on leaves. Salts in the water can burn plants.
- Insulate the roots of container plants against the heat by using peat pot liners or a pot within a pot.

## JUNE

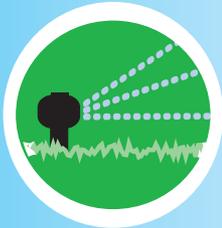


The depth of root zones varies with plant types. Typically, trees need watering to a depth of 24-36 inches; shrubs 18-24 inches; smaller groundcovers 8-12 inches; and grass 6-10 inches.

- Mowing Bermuda grass to the proper height of 1 1/2" to 2" inches reduces water lost through evaporation.
- Water dry spots by hand instead of running the entire sprinkler system longer.
- When watering with a hose, set a timer as a reminder to turn it off.
- To determine how deeply water is penetrating, use a soil probe or a long screwdriver an hour after watering. The probe will slide easily through wet soil.



## JULY



- Leaching salts below plants' root zones by deep watering (twice as long as usual) can be beneficial to many plants during the summer when salts in the soil may build up to harmful levels.
- Water thoughtfully; skip an irrigation if it rains 1/2" or more.
- Overwatering can affect iron absorption by keeping soils too wet. Iron deficiency is evident when leaves of plants turn yellow, but veins remain green.
- Summer rains bring blowing dust and often increase populations of spider mites. A strong blast of water from the hose may be all the control that's needed.

## AUGUST



- Save water and money by switching off the garbage disposal. Even with a 2.5 gallon per minute low-flow kitchen faucet, running the garbage disposal for 2 minutes equals 5 gallons of water down the drain. By not using the garbage disposal once a day for a year, you can save 1,825 gallons of water.
- When purchasing a new washing machine, choose a high-efficiency model. High efficiency washers use approximately 25 gallons per load versus 40 to 50 gallons per load.
- Keep a pitcher of water in the refrigerator for a cool drink of water.
- Hot dry weather can change to muggy and wet with the arrival of high humidity and summer storms. Plants lose less water to evaporation during times of high humidity and require less water. You may be able to extend the time between waterings.

## SEPTEMBER



- Whiteflies are on the move, abandoning agricultural fields to descend upon urban landscapes. Plants susceptible to infestations include lantana and hibiscus. A strong blast of water from a hose or a mixture of soapy water (1 tsp dish detergent – not concentrate or citrus based – per gallon of water) sprayed on the underside of leaves, often provides temporary relief.
- Fungus may become more active this month. Watering in the early morning allows time for things to dry out and discourages the dark moist environment in which fungi thrives.
- Attend a FREE landscape workshop during the month of October offered by the Water Conservation Office during the month of October.

## OCTOBER



- By selecting desert adapted plants, you will enjoy an attractive landscape while saving water, time and money. Fall planting allows time for plants to establish before the heat of next summer arrives.
- Plant wildflowers now for a colorful spring bloom.
  - Adjust landscape watering to the fall schedule. As temperatures cool, reduce the frequency of watering, not the length of time you water.
  - Contact the Water Conservation Office for a free copy of Landscape Plants for the Arizona Desert. The brochure features over 200 low-water-use plants.
  - Cover your pool and spa until next swimming season to reduce water evaporation.

## NOVEMBER



The sewer usage fee is calculated using the average water used during the months of December, January and February. Sewer usage fees are calculated based on 90% of the average water used. Save money all year by reducing water usage during these three months.

- Decrease watering of cactus and other plants to promote winter dormancy and reduce frost sensitivity.
- Pot up colorful annual flowers to liven up the patio or accent other hardscape areas.
- Check all indoor and outdoor faucets and pipes for leaks.

## DECEMBER



- Now is a great time to implement rainwater harvesting techniques to capture the gentle winter rains.
- Contact the Water Conservation Office for a free copy of Harvesting Rainwater for Landscape Use.
- Adjust landscape watering to the winter schedule. This is an opportunity to save on your water bill. Plants that are dormant need very little water. Watch the weather – if winter rains are sufficient, supplemental watering may not be necessary.
- Pine needles from the Christmas tree can be added to the compost pile or bagged and used for mulch around plants.

WHERE TO LEARN MORE ABOUT  
YOUR DRINKING WATER

CITY OF SCOTTSDALE WATER QUALITY STAFF  
480-312-8732  
480-312-0961 TDD

CITY OF SCOTTSDALE WATER OPERATIONS AND CONSERVATION  
(main breaks, etc.)  
480-312-5650

CITY OF SCOTTSDALE WATER QUALITY WEB SITE  
[www.scottsdaleaz.gov/water/quality](http://www.scottsdaleaz.gov/water/quality)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S  
SAFE DRINKING WATER HOTLINE  
800-426-4791  
[www.epa.gov/safewater](http://www.epa.gov/safewater)

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY  
602-771-2300  
[www.adeq.state.az.us/environ/water/index.html](http://www.adeq.state.az.us/environ/water/index.html)

MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT  
602-506-6666  
[www.maricopa.gov/envsvc/Wwmd.asp](http://www.maricopa.gov/envsvc/Wwmd.asp)



TAP INTO QUALITY  
[www.tapintoquality.com](http://www.tapintoquality.com)

Water-related topics may be discussed at City Council meetings or other public forums and we welcome your attendance. Meeting notices are posted in the "Pride" utility bill insert and are posted on the City's web site at [http://eservices.scottsdaleaz.gov/cc\\_planner\\_public](http://eservices.scottsdaleaz.gov/cc_planner_public)

For specific water quality questions call  
(480) 312-8748.

Este informe contiene informacion muy importante sobre su agua potable. Si desea una copia de este informe en espanol o tiene alguna pregunta sobre el, por favor llame a (480) 312-5592.

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