CITY OF ATHENS 2014

ANNUAL DRINKING WATER CONSUMER CONFIDENCE REPORT

- SOURCE WATER
- GUIDE TO PROTECTING SOURCE WATER
- TREATED WATER
- WATER QUALITY TEST RESULTS
- GENERAL HEALTH INFORMATION

Water
the essence of life

THE CONSUMER CONFIDENCE REPORT is required as part of the Safe Drinking Water Act Reauthorization of 1996.

source water

HISTORY OF THE **CITY OF ATHENS** SOURCE WATER

City of Athens water wells

Since 1894, the City of Athens has depended on ground water for a drinking water source. Ground water is stored beneath the earth's surface in geological formations called aquifers. Water is pumped out of the aquifer by wells.

The first well was located about 4400 feet west of the Court House and about 2000 feet north of the Hocking River, in the vicinity of the present West State St. well field.

By 1954, the well system had expanded to supply a daily water usage of about 1.3 million gallons.

The current well water system supplies enough water to meet the daily water usage of about 3.8 million gallons. Drinking water is supplied to the City of Athens, The Plains and some surrounding rural customers.

In 2003, the Ohio EPA and the City of Athens ground water consultant conducted a ground water investigation and study for the following purposes:

1. To evaluate the sporadic detection of volatile organic compounds (VOC's) in the well water and to determine their origin. (In the mid 1990's eleven separate VOC's were detected at levels of concern
2. To identify potential contaminant sources
3. To provide guidance on protecting the drinking water source

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's

SAFE DRINKING WATER HOTLINE:

800-426-4791

According to this study, the aquifer that supplies water to the City of Athens has a high susceptibility to contamination. This determination is based on:

1. Lack of a protective layer of clay overlying the aquifer
2. Shallow depth of the aquifer (less than 20 feet below ground surface)
3. Presence of significant potential contaminant sources in the wellhead protection area
4. Presence of manmade contaminants in the well water

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 and in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

1. MICROBIAL CONTAMINANTS, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife;

2. 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;

3. PESTICIDES AND HERBICIDES, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses;

4. ORGANIC CHEMICAL CONTAMINANTS, which may include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems;

5. RADIOACTIVE CONTAMINANTS which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottle water which must provide the same protection for public 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.

HOW DOES THE **CITY OF ATHENS** PROTECT OUR SOURCE WATER?

PROTECTIVE STRATEGY COMPONENTS

No. 1 — Emergency preparedness and response
- Contingency plans to address threats to our drinking water source

No. 2 — Ground water monitoring
- Annual ground water monitoring was conducted
- Location for new production well was determined

No. 3 — 2013 Wellhead protection enforcement

Projects
- O'Bleness fuel tank replacement
- Appalachian Behavioral Healthcare remodel
- ODOT garage construction
- WHPA Inventory database update

Enforcement
- Columbus Road fill site

Events
- Waterfest at Athens High School
- Ohio Rural Water Association Conference
- Good Works Discovery Kids Camp
- Athens County Fair

No. 4 — Education and Outreach
- Preventing contamination through education and cooperation

1907 Flood mark at the Water Treatment Plant

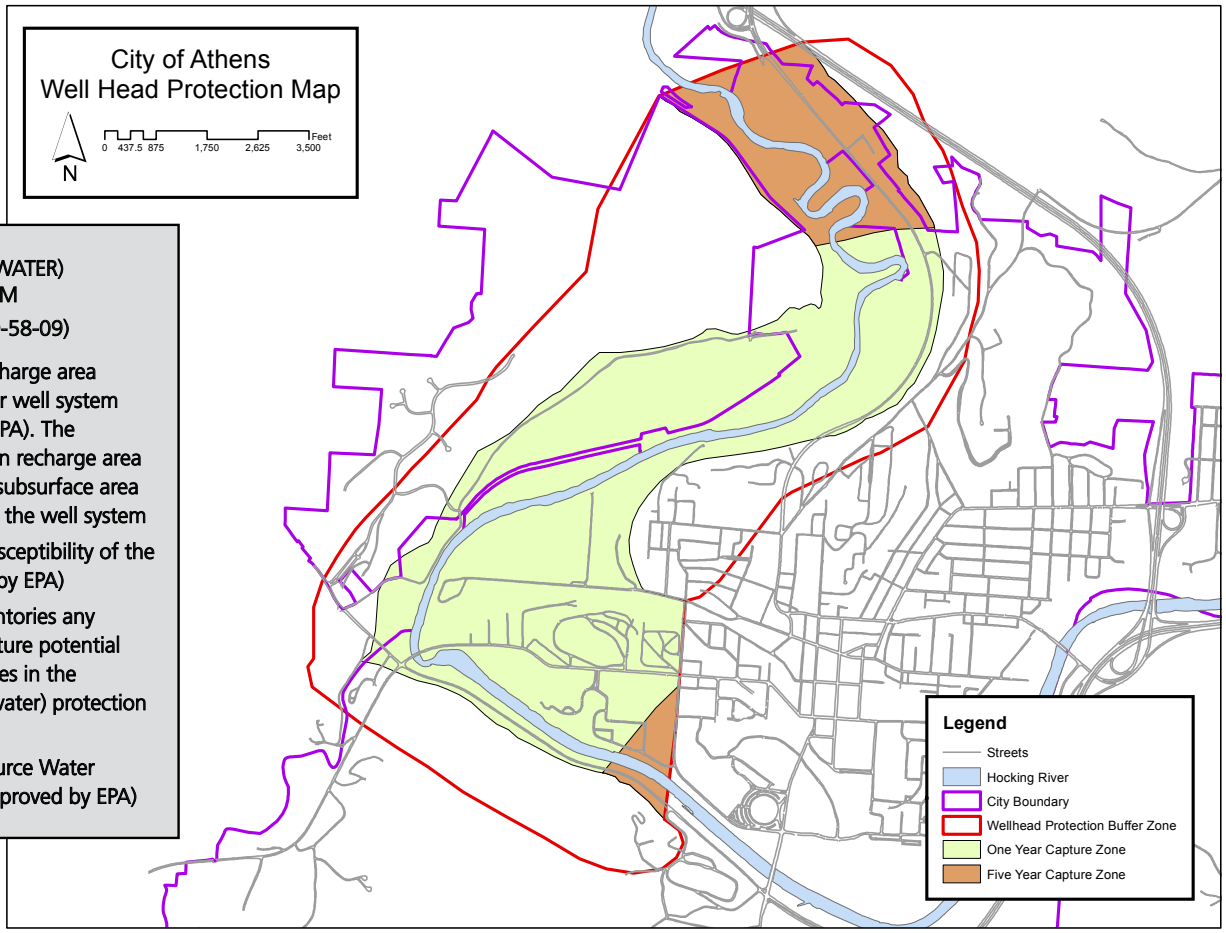
EDUCATIONAL OUTREACH EVENTS OF 2013

- Athens County Fair Educational display
- Waterfest – Athens City Elementary School Event
- Discovery Kids Camp in The Plains
- Hocking College Geo-Environmental educational tours

Hocking College geo-environmental science students take a tour of the Water Treatment Plant

Hocking College geo-environmental science students assist with educational presentation

source water Wellhead Protection Area

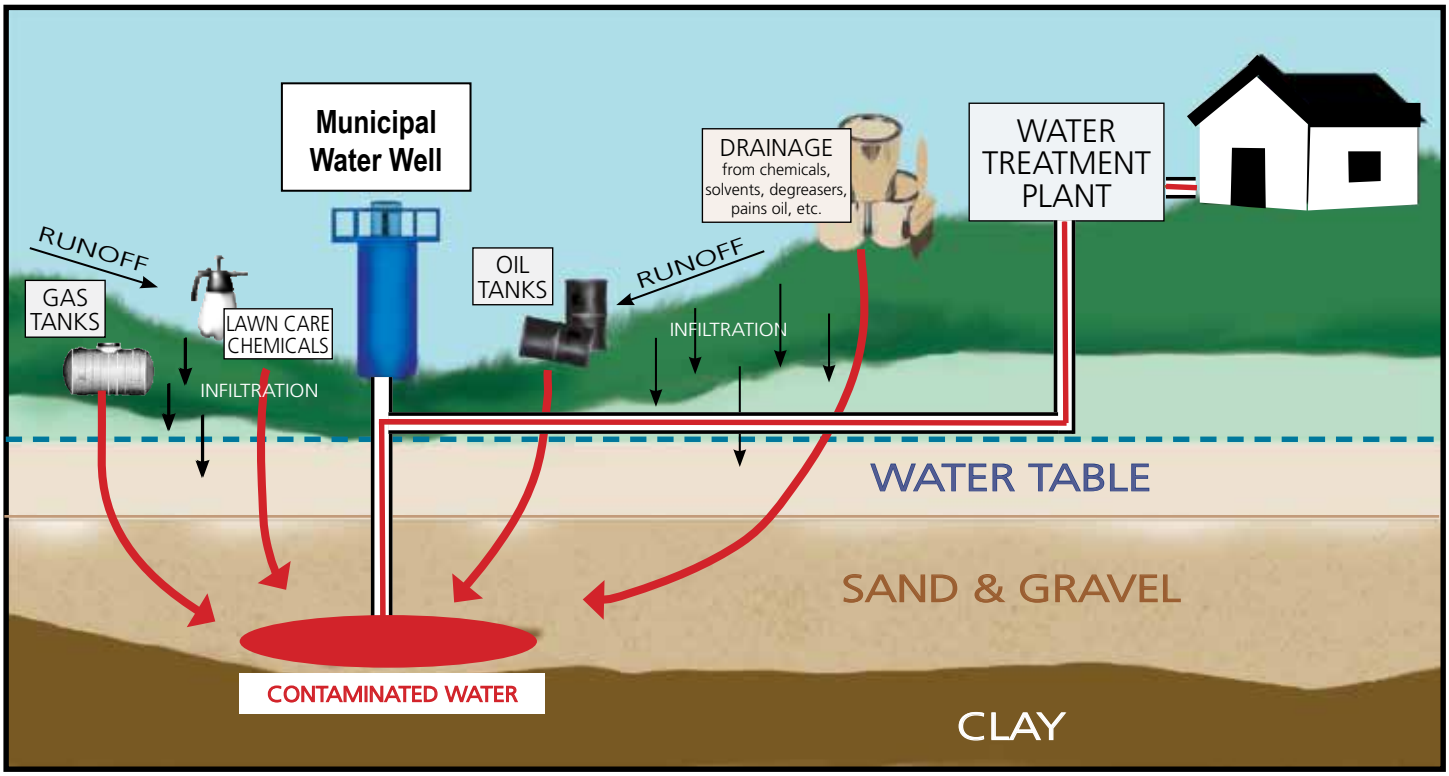


WELLHEAD (SOURCE WATER) PROTECTION PROGRAM

(Ordinance 0-76-02, 0-58-09)

1. Established the recharge area of the source water well system (approved by the EPA). The wellhead protection recharge area is the surface and subsurface area supplying water to the well system
2. Determined the susceptibility of the aquifer (approved by EPA)
3. Identifies and inventories any past, present or future potential contaminant sources in the wellhead (source water) protection recharge area
4. Established the Source Water Protection Plan (approved by EPA)

How contaminants can infiltrate the ground water



Some contaminants cannot be removed by the Water Treatment Plant. For example, high concentrations of chlorides (salt) cannot be removed unless an additional treatment process is added to the current processes.

source water

STORM WATER POLLUTION PREVENTION

Keep Storm Water Clean

STORM WATER POLLUTION PREVENTION PROGRAM

(Ordinance 0-52-11)

1. Establishes rules to govern runoff into river, streams, and the storm drainage system
2. Keeps the storm drain system free from harmful pollutants
3. Keeps the well system recharge area free from harmful pollutants

Pollution

In 2011, Athens City Council passed Ordinance 0-52-11 creating Title 5.07-Storm Water Regulations, in response to a growing national concern over urban storm water pollution. Urban storm water carries sediment, oil, grease, gasoline, lawn care chemicals, dust from tires and brakes, and bacteria from animal waste all of which are pollutants that impair the streams and the Hocking River in the Athens area. This section contains regulations to:

- Require construction projects that disturb soil to get a storm water permit from the City and to have a storm water management plan using best management practices to prevent sediment from leaving the site
- Require any activity that generates storm water pollution to utilize best management practices to prevent pollution from leaving the site
- Prevent illegal connections and discharges to the storm sewers

In the fall of 2012 the City contracted with the Athens Soil and Water Conservation District for the services of an Urban Conservation Technician to help develop and implement a Storm Water Management Program. Since then, the City has formed a Storm Water Pollution Prevention Team and has:

- Started mapping all outfalls (pipes and drainage courses) on the Hocking River, Coates Run, Dairy Run, Cable Lane Run, and several unnamed streams within the City limits
- Begun sampling outfalls that discharge during non-storm events to look for illicit discharges to the storm sewers
- Started mapping the rest of the storm sewer system
- Created a construction storm water permit and plan review process with the Code Enforcement Office
- Created a construction site storm water inspection program

For the period of 2013-2014, the technician and the City performed:

- Review of 21 storm water plans
- 56 construction site inspections
- Mapping of 317 outfalls on the Hocking River and its tributaries
- Sampling of 33 discharging outfalls

Outfalls

Sampling

What can be done to prevent storm water pollution?

One of the most important things you can do to protect our local water resources is don't allow anything to flow down a storm drain that you wouldn't swim or fish in. Stopping the pollution at the source ensures our precious local resources are preserved for generations to come.

PROTECTING OUR SOURCE WATER

Guide to Waste Management

for businesses and households

WASTE MANAGEMENT GUIDELINES

ACIDS/ALKALINES Acids (hydrochloric, muriatic, sulfuric) and alkalines or caustics (ammonia, lye) are typically the main ingredients in cleaning compounds and drain openers. Use these materials up according to label directions whenever possible. These products are usually usable even when a few years old. However, be sure not to mix products together or dangerous fumes could result.

AEROSOLS Be sure to empty aerosol containers completely before disposing with other trash to prevent an explosion hazard. If the can still has some product in it, remove the propellant by turning the can upside down and pushing the nozzle. Check to see if your local recycling program accepts aerosol cans. Purchase products in non-aerosol forms (pump-spray, roll-on or liquid).

ANTIFREEZE Used antifreeze can be diluted thoroughly with water and poured down the sanitary sewer drain. Do not pour antifreeze into an outdoor storm sewer, where it may go directly to a waterway without treatment. Animals and children are attracted to the sweet taste of antifreeze, so store or dispose of it where they won't be tempted to drink it.

BLEACH Even old bleach can be used according to label directions as a cleaning agent and disinfectant. If you can't use it, see if a neighbor can. NEVER mix bleach with ammonia or with acidic products such as some drain, toilet bowl and metal cleaners. Toxic fumes (strong enough to be fatal) will result.

CAR BATTERIES Take old car batteries to a retailer. Check your yellow pages under "Batteries" for stores that sell new batteries and take used batteries to be recycled.

should be donated to a neighbor, school, theater group, or community organization in your area.

PESTICIDES/HERBICIDES Use pesticides and herbicides according to label directions. Avoid disposal whenever possible. If you can't use the material, see if a neighbor or local garden club can. Also, never reuse the containers. Empty containers should be rinsed three times in water. Then spray the rinse water on your lawn or garden. Contact your Ohio State University Extension Office or the Ohio Department of Agriculture for information on handling large amounts of pesticides that can't be used.

SOLVENTS You can clean used solvents (paint thinner, turpentine, varnish, stripper) by allowing the paint or dirt particles to settle out in a glass container. Gently pour the cleared solvent into another container to use again and discard the sludge in the trash. Do not dump onto soil, or down sewers, drains, or the toilet. Large amounts of solvents (more than 10 gallons) should be taken to a recycler. Contact your local solid waste management district for ideas on finding outlets for your solvents.

USED MOTOR OIL Motor oil is easily recycled. Contact your local solid waste management district office to obtain information about the recycling outlet nearest you, or call local service stations and ask if they will accept your used oil. A convenient way to hold oil for recycling is to funnel it into a cleaned, old plastic milk jug or gallon container.

SAFETY MEASURES AND BEST MANAGEMENT PRACTICES

If saving material for a collection event, keep in the original container. If necessary, store the original container in a second leak-proof container that is labeled and dated. Keep out of reach of children and pets and away from open flames and sources of heat.

PRODUCTS

DRAIN CLEANERS
Pour boiling water down the drain. Use a plunger or a plumber's "snake".

CHLORINE BLEACH
Baking soda and water, Borax, or natural sunlight (you must use bleach as a disinfectant).

PAINTS AND SOLVENTS
Use water-based (latex, acrylic) paint if possible.

PAINT REMOVER/STRIPPER
Heat guns may be used for removing many paints, but only in well-ventilated areas. Avoid using them for lead-based paints.

PESTICIDES
Learn which insects are beneficial in managing "pests." Keep your lawn and garden weed-free. Remove and destroy infected plants. Refer to an organic gardening book.

HOUSEPLANT INSECTICIDE
Spray soapy water on leaves, then rinse, or rub infested leaves with cotton ball soaked with rubbing alcohol. Hand pull weeds or mulch generously.

HERBICIDES Cover garden with plastic in the fall to prevent weed germination. Also, use biological controls such as lady bugs or praying mantises. Use baking soda for scouring.

OVEN CLEANERS
For baked on grease, heat oven to 200 degrees, turn off, and leave 1/4 cup ammonia in a dish in the oven for several hours to loosen. Then scrub with baking soda. Save the ammonia to be used again.

CLEANERS AND POLISHES Cleaners and polishes (rug, door and oven cleaners; furniture polish) should be used up whenever possible. Seal empty containers and dispose of them with the rest of your garbage.

DISINFECTANTS Disinfectants contain strong chemicals, so use them up according to label instructions and with caution.

GAS CYLINDERS Butane, propane, or other pressurized gas cylinders should not be disposed of with other refuse because of the serious explosion hazard. Contact a retailer (under "Gas" in the yellow pages) to have the cylinder refilled or disposed of properly. If you are sure a cylinder is completely empty, is no longer under pressure and can't be reused, then it can be disposed of in the trash.

GASOLINE Avoid buying more than you can use in six months and store in a cool dry place. Gas less than one year old can be safely used as fuel in your car, lawnmower or snowblower, etc., when first strained through a paint filter and then mixed with at least an equal amount of fresh gasoline. For older gasoline or gas/oil mixes, look under "Oils-Waste" in the yellow pages for a company that will take residential material.

KEROSENE Avoid buying more than you can use within a year, and store in a cool dry place.

MERCURY Mercury is highly toxic and can be absorbed through the skin. Remember three important things: DON'T TOUCH MERCURY. DON'T THROW MERCURY IN THE GARBAGE. DON'T CLEAN UP MERCURY WITH A VACUUM CLEANER. If you have spilled mercury by breaking a thermometer, wear gloves and collect the small drops with a wet paper towel, a cotton ball or an eye dropper. Place the debris in a zip-lock bag, and dispose in the trash. (There is currently no better disposal option for broken thermometers) For larger amounts of mercury, your local high school or university laboratory, or local dentist may be interested in taking it. Otherwise you can send mercury to a recycler. Ohio EPA maintains a list of mercury recyclers; however, all of these are located out of state. Contact your local solid waste management district office for additional ideas on locating mercury recyclers.

PAINT Small amounts of paint can be hardened by taking the lid off the can and adding sand or cat litter or a commercially available paint hardener. Once the paint is solid, you can put it in the trash. Paint that is still usable

DO:

- Buy and use less hazardous substitutes whenever possible.
- Buy only what you need.
- Wear gloves and protective clothing to prevent skin contact.
- Handle the substance gently, especially if you don't know what it is.
- Follow directions carefully when using any hazardous products.
- Keep hazardous substances out of the reach of children and pets and away from heat sources or open flame.
- Always read labels before you buy a product to be sure it will meet your needs.
- Keep labels on all your containers.
- Try to find someone else to use your unwanted material, but be sure you know what you have and inform them fully.
- Use non-aerosol products in reusable containers.

DON'T:

- Mix materials or wastes together.
- Dispose of large quantities of any toxic materials in a septic system.
- Bury or burn containers of leftover materials.
- Dispose of materials into the storm sewer.
- Breathe fumes from toxic materials.
- Buy aerosols; use pump sprays instead.

(From a Publication of Ohio EPA Public Interest Center P.O. Box 1049 Columbus, Ohio 43216-1049 (614) 644-2160.

FURNITURE POLISH

Make a non-toxic polish by melting 1 tbsp. Carnauba Wax into 2 cups mineral oil. For lemon oil polish: dissolve 1 tsp. lemon oil into 1 pint mineral oil.

SPOT REMOVER

Immediately soak in water, lemon juice, club soda, or corn meal and water.

SILVER CLEANER

Soak silver in 1 quart warm water with 1 tsp. baking soda, 1 tsp. salt, and a small piece of aluminum foil.

WINDOW CLEANER

Use a pump spray container filled with 2 tbsp. vinegar in 1 quart water (label and date container), or rub newspaper on the glass.

TOILET BOWL CLEANER

Use toilet brush and baking soda, mild detergent or 1/2 cup bleach.

MOTHBALLS

Use cedar chests or place cedar chips around clothes.

ROACH REPELLENT

Cut hedge apples (Osage oranges) in half and place in the basement, in the cabinets, or under the house to repel roaches. Mix equal parts baking soda and powdered sugar and sprinkle in the infested area.

2015 Household Hazardous Waste drop off day in April 2015. Watch www.ci.athens.oh.us for details!

Ohio Contact Information

City of Athens Engineering and Public Works (740) 593-7636

Ohio EPA Division of Solid and Infectious Waste Management — (614) 644-2621.

For general information about solid waste management. http://www.epa.state.oh.us/dsiwm/

Ohio Department of Agriculture Pesticide Regulation Section 1-800-282-1955 (In Ohio) ext. 31

For information about banned or restricted pesticides, or for information about the agricultural pesticide collection program. http://www.ohioagriculture.gov/pesticides/

Ohio Department of Natural Resources Division of Recycling and Litter Prevention (614) 265-6333.

For information on recycling of aluminum cans, newspapers, and other solid wastes. http://www.dnr.state.oh.us/recycling/

Poison Information Center. Check the front of your local telephone book. Ohio State University Extension Office Check the blue pages of your local phone book under "County Government Offices."

Another Way To Help Contact your county commissioners to find out what your local solid waste management district is doing. Encourage local government agencies — such as your county or city health department, extension office, fire department and local chamber of commerce — to organize and help sponsor a household hazardous waste education and exchange program for your community.

drinking water

How does the City of Athens protect against contaminants that would pollute our drinking water?

Boil Order Hotline
740-594-5078

When a BOIL ORDER is issued:

- Boil all water used for human consumption
- Boil water for 2-3 minutes at a rolling boil
- Cool water before consumption
- Discard icemaker ice

The Ohio EPA recommends public water suppliers to issue a boil order any time the pressure in the water distribution system falls below 20 psi (pressure per square inch). Water main breaks, hydrant flushing, structure fires and normal operational maintenance in the distribution system can cause low-pressure or no pressure events. Boil orders are issued for these areas of the water distribution system where these events have taken place. Because extreme care is taken not to introduce any contaminates into our water distribution system during repairs, most boil orders last only 24 hours.

What is a "Boil Order"?

A precautionary measure taken when the distribution system pressure drops below 20 psi. to allow a 24 hour water test to confirm the water quality is still safe and was not affected by the depressurization event.

WHO ISSUES A "BOIL ORDER"

The Water Distribution Maintenance dept issues boil orders through the water treatment plant.

Cross Connection Control Program

[Ordinance 0-46-86]

With the use of a Backflow Preventer valve, this program protects against a potential backflow or backsiphon of contaminates from the customer's property into the City's treated drinking water supply.

WHAT IS A "CROSS CONNECTION?"
A permanent or temporary piping arrangement which can allow your drinking water to be contaminated if a backflow condition occurs.

WHAT IS "BACKFLOW"?
Water flowing in the opposite direction from its normal flow, with the direction of flow reversed, due to a change in pressures, backflow can allow contaminants to enter our drinking water system through cross connections.
Backflow Preventers are specially designed valves used to protect our potable (drinking) water supply from contaminants due to backflow from cross connections.

Who needs to take Special Precautions

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-comprised 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 people and infants can be particularly at risk from infection. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at: 800-426-4791.

Aqua
Natural & Fresh

Less than 1% of the world's fresh water supplies are available for human consumpton

COMPARISON CHART FOR WATER USAGE AND SAVINGS

	Normal Water Usage		Conservation Usage		
	Gals. Used	Method	Gals. Used	Method	Savings
Shower (10 min)	50	Shower head running continuously	25 25 12.5	Shorter showers (5 min) Low flow shower head (10 min) Low flow shower head (5 min)	50% 50% 75%
Tub Bath	36	Standard tub, full	18	Standard tub half full	50%
Toilet Flushing	5-7	Depends on tank size	4.6 1.6	Use a displacement bag, or milk jug in tank reservoir Replace with low flow toilet	20% 73%
Washing Hands	5	With tap running continuously	1	Fill a standard basin	80%
Brushing Teeth	10	With tap running continuously	1	Wet brush with brief rinses	90%
Shaving	20	With tap running continuously	1	Fill a standard basin	95%
Washing Dishes	30	With tap running continuously	10	Wash & rinse with a half filled standard sink	66%
Dishwasher	16	Full Cycle	7	Short Cycle	56%
Washing Machine	60	Full cycle, Highest water level	27	Short Cycle	55%
Outdoor Watering	10	Per minute; Average garden hose	varies	Eliminate, night watering, etc.	varies

Lead in drinking water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. City of Athens Public Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Call the City Lab at 593-3502. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at: www.epa.gov/safewater/lead

"The City of Athens is in compliance with the new 2014 EPA Lead Rules"

How you can protect against contaminants that would pollute our drinking water?

How can cross connection contamination happen?

EXAMPLE: A potential hazardous cross connection occurs every time someone uses a garden hose sprayer to apply a chemical to their lawn. A sudden drop in pressure such as a water main break, could create back siphonage of the chemical into house plumbing.

For more information on cross connection control and backflow prevention for your home or business,

Please contact the Water Distribution Maintenance Supervisor at 740-593-7636

YOU CAN PROTECT YOUR DRINKING WATER FROM CROSS CONTAMINATION BY:

- Installing backflow prevention valves between your non-potable water and your potable (drinking) water supply
- OAC 3745-95-04 specifies where backflow prevention devices are required
- Test backflow device every 12 months and mail your test results to EPW, 30 Curran Dr., Attention: Backflow Prevention. Contact 740-593-7636 for information about qualified backflow prevention inspectors.

City of Athens 2013 Water System Maintenance Improvements

Installed 1600 feet of 6 inch ductile iron pipe, 5 new fire hydrants, and 11 new main line valves on Patton Street. Marietta Avenue and Arden Place. Also installed 600 feet of new ¾ inch water service line and replaced several water meter setups on this job.

Installed 1800 feet of new water line and appurtenances on the Columbus Road/Lancaster Street Infrastructure Improvement Project. This included new water main lines, service lines to houses and fire hydrants.

In addition to work performed above, here is an approximate breakdown of other jobs completed in 2013.

- Repaired or replaced 133 water meters
- Responded to and repaired 150 Main line breaks and service leaks
- Repaired or replaced 30 fire hydrants
- Installed 43 new water meter setups, pits and lids
- Installed 19 new water taps
- Repaired 12 water meter pits and lids
- Installed 18 new water line valves on water mains and water service lines

Administrated and enforced the back flow prevention / cross connection control program where we monitor and track test reports on 839 back flow prevention devices. This program is used to ensure that all high hazard / severe health hazard water use customers in our water distribution system do not contaminate our water system with the chemicals that may be used within their premise that have a direct water connection to our system.

Water Plant Maintenance Activities

- Wells 1A, 2A & 3 had major repairs
- Thoroughly rebuilt check valves for High Service Pumps 2+3
- Made improvements to Carriage Hill P2 (impeller repaired / trimmed, ceramic bearings installed on motor, higher quality impeller ordered for other pump)
- Removed tree from WTP incoming power lines / trimmed well field power lines
- Inline fuse cutouts installed for West State Street electric feed (Service Garage, WTP, Bus Garage & well field) as mandated by utility
- (3) new heaters installed at WTP
- New Final Clear well level measuring equipment
- Canterbury PRV is now monitored by telemetry

LABORATORY TEST RESULTS (after treatment)

Detected Contaminants	MCLG	MCL	Level Found	Range of Detection	Violation	Sample Year	Typical source of contamination found
Inorganic Contaminants							
Fluoride (ppm) system	4	4	1.01	0.84 -1.11	0	2013	Water additive; erosion of natural deposits; discharge from fertilizer/ aluminum factories
Total Chlorine residual (ppm) system	4MRDLG	4MRDL	1.22	1.15 -1.27	0	2013	Water additive for disinfection
Copper (ppb) system	0	AL=1300	800	11-1200	0	2012	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) system	0	AL=15	4	<2.0 -15	0	2012	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate/Nitrate-N (ppm) plant tap	10	10	0.21	NA	0	2013	Runoff from fertilizer us; leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppb) plant tap	2000	2000	27.4	NA	0	2011	discharge of drilling waste; discharge from metal refineries; erosions of natural deposits
Bromoform (ppb) plant tap	0	-	3.9	NA	0	2011	
Fluoride (ppm) plant tap			1.03	1.02 - 1.05		2013	
Asbestos (millions fibers/liter) system			0.2	NA	0	2011	
Disinfection By Products (system)							
Total Trihalomethane (ppb)	-	80	50.48	22.2-57.3	0	2013	By product of drinking water disinfection
Total Haloacetic Acids (ppb)	-	60	6.5	<6.0-11.5	0	2013	By product of drinking water disinfection
Volatile Organic Compounds plant tap							
Bromodichloromethane (ppb)	0	-	3.4	NA	0	2011	By product of drinking water disinfection
Chloroform (ppb)	-	-	0.64	NA	0	2011	By product of drinking water disinfection
Dibromochloromethane (ppb)	60	-	6.9	NA	0	2011	By product of drinking water disinfection
detected Contaminants	MCLG	MCL	Level Found	Range of Detection	Violation	Sample Year	
Microbiological contaminants (system)							
Total Coliform Bacteria	0	0	0	NA	0	2013	naturally present in the environment
(MCL: presence of bacteria in >5% of monthly samples)							
Fecal Coliform bacteria	0	0	0	NA	0	2013	human and animal fecal waste
Radioactive plant tap							
Gross Alpha emitters (pCi/L)	0	15	<3	NA	0	2008	erosion of natural deposits of certain minerals that are radioactive
Radium-228 (pCi/L)	0	5	<1	NA	0	2008	erosion of natural deposits
Inorganic Contaminants plant tap							
Antimony (ppb)	6	6	<3.00	NA	0	2011	discharge from petroleum refineries; fire retardants ;ceramics; electronics; solder
Arsenic (ppb)	0	10	<3.00	NA	0	2011	erosion of natural deposits; runoff from orchards, glass & electronics production waster
Beryllium (ppb)	4	4	<0.500	NA	0	2011	discharge from metal refineries, coal-burning factories, electrical, aerospace, and defense industry
Nitrite – N (ppm) plant tap			<0.10	NA	0	2011	
Cadmium (ppb)	5	5	<0.500	NA	0	2011	corrosion of galvanized pipes; erosion of natural deposits; metal/refineries discharge, battery/ paint waste runoff
Chromium (ppb)	100	100	<10.0	NA	0	2011	discharge from steel and pulp mills; erosion of natural deposits
Cyanide (ppb)	200	200	<0.005	NA	0	2011	discharge from steel/metal factories; discharge from plastic and fertilizer factories
Mercury (ppb)	2	2	<0.2	NA	0	2011	erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nickel (ppb)	100	100	<10.0	NA	0	2011	erosion of natural deposits; electroplating/stainless steel/alloy products discharge; mining/ refining operations
Selenium (ppb)	50	50	<3.00	NA	0	2011	discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (ppb)	0.5	2	<1.00	NA	0	2011	leaching from ore-processing sites; discharge from electronics glass, and drug factories

EPA SAMPLING REQUIREMENT

The EPA requires regular sampling to ensure drinking water safety. The City of Athens Water Treatment Plant conducted sampling for bacteria, inorganic, radiological, synthetic organic, volatile organic from 2008-2013. The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old. The City of Athens Laboratory Test Tesults can be found on on pages 10 and 11.

LABORATORY TEST RESULTS *(after treatment)*

unDetected Contaminants	MCLG	MCL	Level Found	Range of Detection	Violation	Sample	Typical source of contamination found
Volatile Organic Compounds (plant tap)							
Benzene (ppb)	0	5	<0.50	NA	0	2011	discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	0	5	<0.50	NA	0	2011	discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	100	100	<0.50	NA	0	2011	discharge from chemical and agricultural chemical factories
1,2-Dichlorobenzene (ppb)	-	-	<0.50	NA	0	2011	
1,4-Dichlorobenzene (ppb)	-	-	<0.50	NA	0	2011	
1,1-Dichloroethene (ppb)	-	-	<0.50	NA	0	2011	
1,2-Dichloroethane (ppb)	0	5	<0.50	NA	0	2011	discharge from industrial chemical factories
cis-1,2-Dichloroethene (ppb)	70	70	<0.50	NA	0	2011	discharge from industrial chemical factories
trans-1,2-Dichloroethene (ppb)	100	100	<0.50	NA	0	2011	discharge from industrial chemical factories
1,2-Dichloropropane (ppb)	0	5	<0.50	NA	0	2011	discharge from industrial chemical factories
Ethylbenzene (ppb)	700	700	<0.5	NA	0	2011	discharge from petroleum refineries
Methylene chloride (ppb)	-	-	<0.5	NA	0	2011	
Styrene (ppb)	100	100	<0.5	NA	0	2011	discharge from rubber and plastic factories, leaching landfills
Tetrachloroethylene (ppb)	0	5	<0.5	NA	0	2011	discharge from factories and dry cleaners
Toluene (ppb)	1000	1000	<0.5	NA	0	2011	discharge from petroleum factories
1,2,4-Trichlorobenzene (ppb)	70	70	<0.5	NA	0	2011	discharge from textile finishing factories
1,1,1-Trichloroethane (ppb)	200	200	<0.5	NA	0	2011	discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	3	5	<0.5	NA	0	2011	discharge from industrial chemical factories
Trichloroethylene (ppb)	0	5	<0.5	NA	0	2011	discharge from metal degreasing factories and other factories
O-Xylene (ppb)	-	-	<0.20	NA	0	2011	
Vinyl Chloride (ppb)	0	2	<0.5	NA	0	2011	leaching from plastic pipes; discharge from plastic factories
Xylene (ppb)	10000	10000	<1.5	NA	0	2011	discharge from petroleum factories and chemical factories
M&P Xylene (ppb)	-	-	<0.30	NA	0	2011	
Synthetic Organic Compounds (plant tap)							
Alachlor (ppb)	0	2	<0.10	NA	0	2011	Runoff from herbicide used on row crops
Atrazine (ppb)	3	3	<0.071	NA	0	2011	Runoff from herbicide used on row crops
Simazine (ppb)	4	4	<0.051	NA	0	2011	Runoff from herbicide used on row crops
Additional Plant tap Water Quality Parameters - Annual Averages							
Chlorine, Free (ppm)			1.26			2013	
Hardness, (ppm)			142.6			2013	
Alkalinity, (ppm)			184			2013	
Chloride, (ppm)			76			2013	
Iron, (ppm)			0.04			2013	
Manganese, (ppm)			0.01			2013	
Sodium, (ppm)			104			2013	

DEFINITION OF TERMS

(MCLG) Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCGLs allow for a margin of safety.

(MCL) Maximum Contaminant Level: The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology

(MRDLG) Maximum Residual Disinfection Level Goal

(MRDL) Maximum Residual Disinfection Level

Parts per billion (ppb): Units of measure for concentration of a contaminant. A ppb corresponds to one second in 31.7 years.

(AL) Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Parts per million (ppm): Units of measure for concentration of a contaminant. A ppm corresponds to one second in approximately 11.5 days.

The < symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

Picocuries per liter (pCi/L): A measure of radioactivity in water

Range of Detection: The lowest test result to the highest test result

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THE CITY OF ATHENS
WATER DEPARTMENT

License to Operate status: We have a current unconditional license to operate our water system.

Utilities Billing Office
740-592-3347 8am-4pm M-F

Engineering Public Works Dept.
740-593-7636 7:30-4pm M-F

Water Treatment Plant
740-592-3344
24 hrs 7 days

Water Distribution Maintenance
740-593-7636
7:30-4pm

Laboratory
740-593-3502, 7:30-4pm

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Boil Order Hotline
740-594-5078

FREQUENTLY ASKED QUESTIONS

Q. Why is the fire hydrant running?
A. The running of the hydrant releases the air in the water line.

Q. I reported a break an hour ago and there is no one digging yet, why not?
A. We have to have responses from member utilities for the Ohio Utilities Protection Service (OUPS) underground utilities locators before we dig. Sometimes this can take an hour or two. Locators commonly come from Columbus, Chillicothe, etc. When the gas, electric, and communications lines have been located, then we can safely begin digging.

Q. What is the hardness of the water in grains per gallon?
A. The average hardness of the water is around 150 mg/l which equals 8.76 grains per gallon (1 grain per gallon equals 17.12 mg/l).

Signs placed during routine flushing.