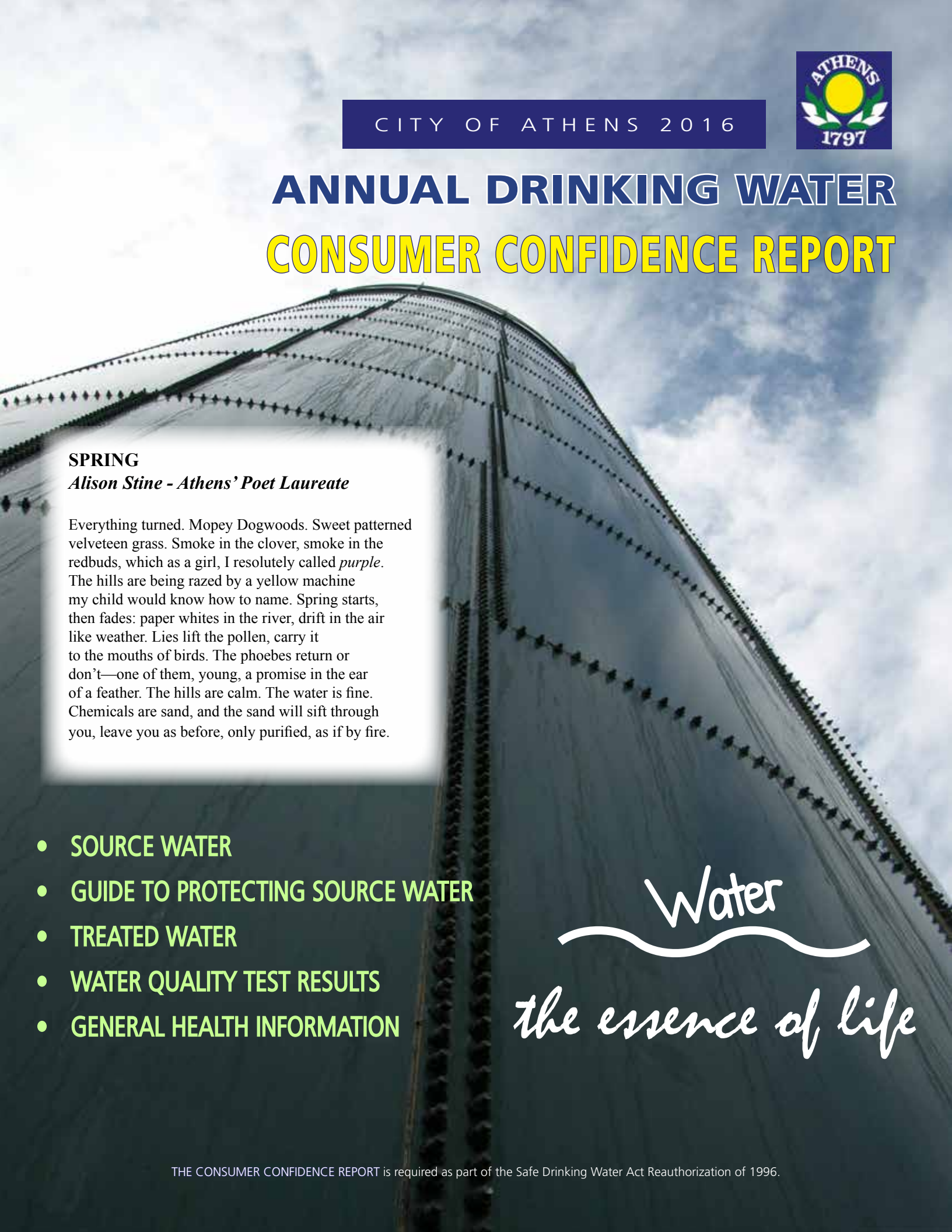
CITY OF ATHENS 2016

ANNUAL DRINKING WATER CONSUMER CONFIDENCE REPORT



SPRING
Alison Stine - Athens' Poet Laureate

Everything turned. Mopey Dogwoods. Sweet patterned
velveteen grass. Smoke in the clover, smoke in the
redbuds, which as a girl, I resolutely called *purple*.
The hills are being razed by a yellow machine
my child would know how to name. Spring starts,
then fades: paper whites in the river, drift in the air
like weather. Lies lift the pollen, carry it
to the mouths of birds. The phoebes return or
don't—one of them, young, a promise in the ear
of a feather. The hills are calm. The water is fine.
Chemicals are sand, and the sand will sift through
you, leave you as before, only purified, as if by fire.

- 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.

Information about Lead in the Water Supply

Recent news has brought lead in the public water systems of the U.S. into media prominence. Under the authority of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) established the action level for lead in drinking water at 15 micrograms/liter (ug/L), or parts per billion (ppb). The rule requires Public Water Systems (PWS) ensure that water from taps used for human consumption do not exceed this level in at least 90 percent of the sites sampled around the system (90th percentile value). The "action level" is the concentration of a contaminant which, if exceeded, triggers additional treatment or other requirements which a PWS must follow. Because lead may pose serious health risks, the EPA established a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is 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.

What Are The Sources of Lead?

Lead is a common, natural, toxic, and often useful metal that was used for years in products found around the home. It can be found throughout the environment in lead-based paint, air, soil, household dust, and certain types of pottery, porcelain, and pewter. Although most lead exposure, especially in children, occurs when paint chips are ingested, dust inhaled, or absorbed from contaminated soil, the U.S. EPA estimates that 10 to 20 percent of human exposure of lead may come from lead in drinking water.

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of corrosion or the wearing of materials containing lead in the plumbing. Buildings built prior to 1986 are more likely to have lead pipes, fixtures, and solder. New buildings can also be at risk, since even post-1986 'lead-free' plumbing could still legally contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass fixtures which can leach significant amounts of lead into water, especially hot water. In 2011 Congress passed the Reduction of Lead in Drinking Water Act (RLDWA). This revised the definition of lead free by lowering the maximum lead content of the wetted surfaces of plumbing products from 8% to a weighted average of 0.25% and established a statutory method for the calculation of lead content. Existing inventories were allowed to be sold but components manufactured after this must comply.

How Does a Public Water System Prevent lead Contamination?

Water providers regularly test both source water and finished water leaving the treatment plant for its corrosiveness and effects on plumbing. Athens Public Water System controls these levels very carefully to ensure water remains stable in order to limit its corrosive potential. Additionally, since 1992 the City under U.S. EPA mandate has tested many homes around the community on a tri-annual basis. In all cases the 90th percentile value of these tests has been 5 ppb or lower and has generally trended down over time. However, it is important to remember that water has a natural solvent capability, and water that sits in pipes unused for extended periods of time (months or more) still has the potential to leach lead from those pipes. Portions of household plumbing systems that go unused for a long time should be flushed before drinking water from that section of the building by running the water for a few minutes.

For More Information Please Contact: Athens City Laboratory at 593-3502, visit US EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Water First for Thirst *is a statewide campaign, originally developed by Columbus Public Health, that aims to encourage people to drink more water and less sugar sweetened beverages. The goal of the campaign is to help communities increase visibility and access to water through policy and environmental changes. This can be done by encouraging worksites, schools, parks, etc. to stock their vending machines with water and low calorie beverages, while limiting or removing sugar sweetened beverages and by making sure water is freely accessible throughout the day via water fountains, water bottle refill stations, or pitchers. Athens City-County Health Department is partnering with many local sites to increase access to water. Partner sites include the City of Athens, the Athens Community Center, ARTS/West, Athens Public Library, many worksites such as Rocky Brands, and several other libraries throughout the county. For more information on Water First for Thirst, contact Megan Buskirk at the Athens City-County Health Department at 740-592-4431 x246. Providing drinking water instead of sugary drinks is one of the easiest ways to manage your weight, stay focused, and have more energy throughout your day. Choose Water First for Thirst!*

conserve water

source water

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

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;

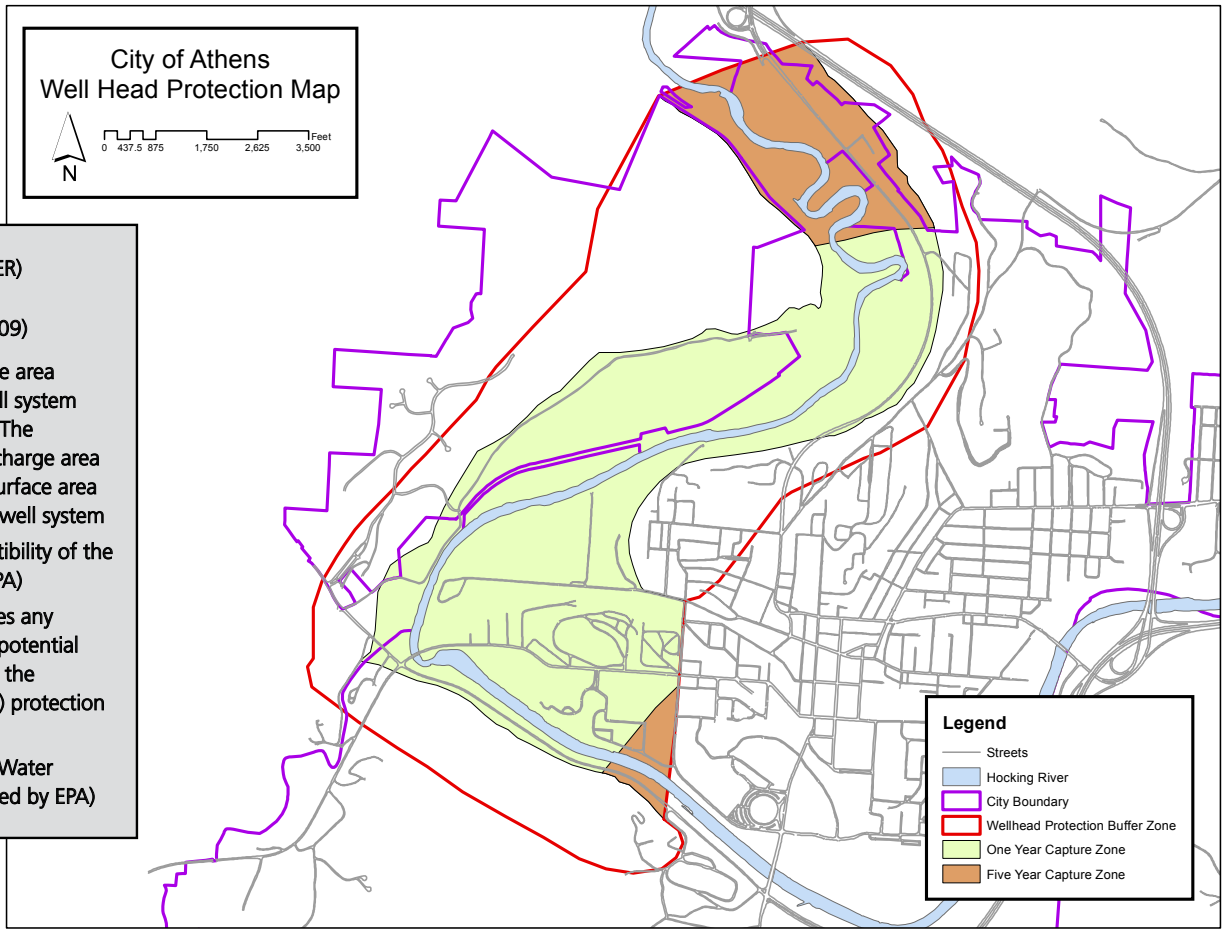
3. **PESTICIDES AND HERBICIDES,** which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses;

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.

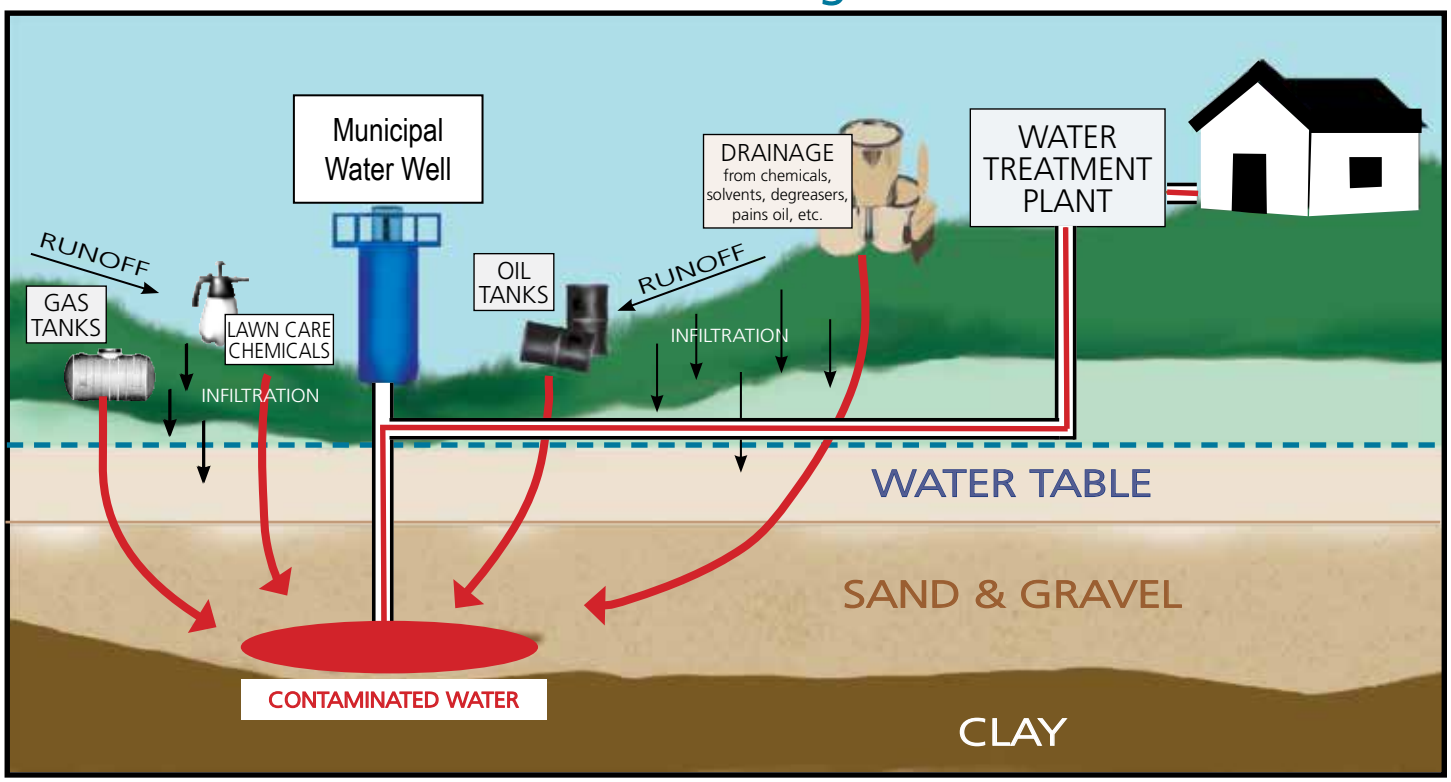
Wellhead Protection Area



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

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.

Ordinance 0-52-11:

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

Ordinance 0-52-12:

- Ordinance amending Athens City Code, Title 39, Wellhead Protection Plan.

In the fall of 2012 the city began contracting 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.

The City's Storm Water Pollution Prevention Team oversees the program, which includes:

- Mapping all the outfalls (pipes and drainage courses) on the Hocking River, Coates Run, Dairy Run, Cable Lane run, and several unnamed streams within the City limits.
- Mapping the rest of the storm sewer system.
- Sampling outfalls and manholes to look for illicit discharge to the storm sewers.
- A construction project storm water permit and plan review process with the Code Enforcement Office.
- A construction site storm water inspection program.

For the period of 2015-2016, the technician and the City performed:

- Review of 28 stormwater plans
- 156 construction site inspections
- Mapping 8 outfalls of the Hocking River and its tributaries
- Mapping 152 stormwater catch basins and manholes
- 16 sampling events for potential illicit discharges
- 60 storm sewer catch basins stenciled: "No Dumping, Drains to River".

CHANGING STORM WATER MANAGEMENT STRATEGIES By Cliff Hamilton, Ohio University, P.E.

In the past, the traditional approach to storm water management has been to route the water from parking lots, downspouts and other impervious areas onto storm sewers, through progressively larger pipes, until it reaches a stream, lake, or river. Then it becomes someone else's issue to deal with.

This approach was effective at keeping parking lots and streets dry, however it does have several key disadvantages. This traditional approach also promotes a surge of water and pollutants during rain events, and provides little or no treatment to remove pollutants from the storm water before it reaches the stream, lake, or river. These pollutants include salt used to melt ice, oil or other fluids dripping from vehicles, soot from tires, and soil from erosion or construction activities.

As this infrastructure of pipe ages, maintenance or replacement costs are also a substantial obstacle to maintenance of the traditional storm water system.

To address the concerns with treatment, surge flow during rain events, infrastructure costs and maintenance, and aesthetics, several strategies have evolved to manage storm water quality and quantity differently.

These strategies are collectively known as Best Management Practices or BMPs.

These practices are developed or selected and designed for a specific location based upon site specific needs and conditions. These practices can include rain gardens (such as the ones recently installed on W. Union Street in front of the old train station), filter strips, bio-swales, bio-retention basins, and permeable pavement.

The major advantage of these BMPs is the filtration of sediment and pollutants from the storm runoff prior to water entering the receiving stream or river. Most of the BMPs also provide a source of recharge to the groundwater at the point where the water falls to the earth, thus also slowing the rush of water into the receiving stream and reducing the danger of flooding downstream.


Armitage Road Wetland Restoration

We need to fundamentally change the way we look at storm water. For regulatory, natural resource, and ethical reasons, we need to treat storm water as resource to utilize and manage, instead of a waste product to be passed on to someone else downstream.

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.

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

After treatment and distribution, 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"

Typically the Water Distribution Maintenance Supervisor 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. They are required to be tested annually.

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 household 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 (740)-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"

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

No. 3 - Wellhead Protection Program 2015 - present

Projects
- Abandoned fuel tank remediation and disposal, Columbus Road
- Title 39 ordinance review/ revisions concerning agricultural operations in the WHPA
- Ongoing facility updates and inspections
- Update of the Norfolk and Southern emergency response plan

Enforcement
- Open dump site, Armitage Road with Athens County Sheriff's Office
- Material dumping along Norfolk Southern rail line
- Regular patrols of the WHPA

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

Wellhead Protection 2015 Accomplishments

- As part of the education and outreach component of the program:
  - Participated in Water fest (an elementary school educational event)
  - Educational presentation at Discovery Kids Camp in The Plains
  - Provided a display of educational materials at the Athens County Fair
  - Educational tour of the Water Plant with Hocking College Geo - Environmental class

City of Athens 2015 Water System Maintenance Improvements

Here is an approximate breakdown of water distribution jobs completed in 2015
- Repaired 207 water main breaks and service leaks
- Responded to and completed 185 customer service calls
- 24 Fire hydrants and main line gate valves were installed, repaired or replaced; this does not include all work done in capital waterline construction projects
- 59 water meters were installed or replaced
- 57 sewer line repairs were also completed to assist Sewer Maintenance. We also assisted the Water and wastewater plants with 30 repairs
- 44 requests for leak detection and water investigations for our customers
- 207 roadway repairs, sidewalk repairs or landscaping to repair water main break holes

Major 2015 Water Distribution System Accomplishments: New water mains were installed on Richland Avenue, Athens Mall West Side Loop / East State Street, Elizabeth and Campbell Streets.

We strive to maintain a high level of customer service to the residents of the City of Athens. To ensure that the City of Athens has safe drinking water, we fully comply with all regulations to operate and govern the safe operation of our water distribution system.

2015 Water Treatment Plant Major Accomplishments:

- Wells #7, 9, 17 & 18 had repairs and were cleaned
- Well #3 was disassembled to determine the cause of its vibration problems. A new screen and gravel pack were installed inside the existing screen to prevent fine gravel infiltration
- Performed complete rebuild of Kimes altitude valve with machine shop repairs. Rebuilt Curtis Street altitude valve
- Original backwash pump in P2 was rewound and reinstalled
- Needs Assessment was completed for the WTP instrumentation upgrade
- Completed installation of (6) new roof hatches for (3) reservoirs as man dated by EPA sanitary survey
- Water crew performed a hot tap and installed an air release at Kimes pump station
- New vault was poured for Peach Ridge Tank pressure transmitter
- Performed more powerline clearing(tree trimming) in Armitage wellfield
- Rebuilt several check valves at Blackburn Tank, Stroud's Run, Curtis St, Columbus Road, Carriage Hill and the High Service room
- Installed coated impellers at The Summit and University Courtyard
- Automatic gate performance was fine-tuned at the WTP. Ground gate welds flush and increased chain tension

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	0.86 -1.18	0	2014	Water additive; erosion of natural deposits; discharge from fertilizer/ aluminum factories
Total Chlorine residual (ppm) system	4MRDLG	4MRDL	1.14	1.13 -1.16	0	2014	Water additive for disinfection
Copper (ppb) system	0	AL=1300	380	18-1500	0	2015	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) system	0	AL=15	2.5	<2.0 -3.0	0	2015	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate/Nitrate-N (ppm) plant tap	10	10	0.38	NA	0	2015	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppb) plant tap	2000	2000	28.8	NA	0	2014	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			1.00	.90 - 1.18		2015	
Asbestos (millions fibers/liter) system			0.2	NA	0	2011	
Disinfection By Products (system)							
Total Trihalomethane (ppb)	-	80	60.18	26.4 -79.7	0	2015	By product of drinking water disinfection
Total Haloacetic Acids (ppb)	-	60	8.775	<6.0-11.9	0	2015	By product of drinking water disinfection
Volatile Organic Compounds plant tap							
Bromodichloromethane (ppb)	0	-	13.33	NA	0	2014	By product of drinking water disinfection
Chloroform (ppb)	-	-	6.48	NA	0	2014	By product of drinking water disinfection
Dibromochloromethane (ppb)	60		18.48	NA	0	2014	By product of drinking water disinfection

Undetected Contaminants	MCLG	MCL	Level Found	Range of Detection	Violation	Sample Year	
Microbiological contaminants (system)							
Total Coliform Bacteria	0	0	0	NA	0	2015	naturally present in the environment
(MCL: presence of bacteria in >5% of monthly samples)							
Fecal Coliform bacteria	0	0	0	NA	0	2015	human and animal fecal waste
Radioactive plant tap							
Gross Alpha emitters (pCi/L)	0	15	3.0	NA	0	2014	erosion of natural deposits of certain minerals that are radioactive
Radium-228 (pCi/L)	0	5	0.90	NA	0	2014	erosion of natural deposits
Inorganic Contaminants plant tap							
Arsenic (ppb)	0	10	<3.00	NA	0	2014	erosion of natural deposits; runoff from orchards, glass & electronics production waster
Beryllium (ppb)	4	4	<0.500	NA	0	2014	discharge from metal refineries, coal-burning factories, electrical, aerospace, and defense industry
Cadmium (ppb)	5	5	<0.500	NA	0	2014	corrosion of galvanized pipes; erosion of natural deposits; metal/refineries discharge, battery/paint waste runoff
Chromium (ppb)	100	100	<10.0	NA	0	2014	discharge from steel and pulp mills; erosion of natural deposits
Cyanide (ppb)	200	200	<0.005	NA	0	2014	discharge from steel/metal factories; discharge from plastic and fertilizer factories
Mercury (ppb)	2	2	<0.2	NA	0	2014	erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nickel (ppb)	100	100	<10.0	NA	0	2014	erosion of natural deposits; electroplating/stainless steel/alloy products discharge; mining/refining operations
Selenium (ppb)	50	50	<3.00	NA	0	2014	discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (ppb)	0.5	2	<1.00	NA	0	2014	leaching from ore-processing sites; discharge from electronics glass, and drug factories

Undetected Contaminants		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	2014	discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	0	5	<0.50	NA	0	2014	discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	100	100	<0.50	NA	0	2014	discharge from chemical and agricultural chemical factories
1,2-Dichlorobenzene (ppb)	-	-	<0.50	NA	0	2014	
1,4-Dichlorobenzene (ppb)	-	-	<0.50	NA	0	2014	
1,1-Dichloroethene (ppb)	-	-	<0.50	NA	0	2014	
1,2-Dichloroethane (ppb)	0	5	<0.50	NA	0	2014	discharge from industrial chemical factories
cis-1,2-Dichloroethene (ppb)	70	70	<0.50	NA	0	2014	discharge from industrial chemical factories
trans-1,2-Dichloroethene (ppb)	100	100	<0.50	NA	0	2014	discharge from industrial chemical factories
1,2-Dichloropropane (ppb)	0	5	<0.50	NA	0	2014	discharge from industrial chemical factories
Ethylbenzene (ppb)	700	700	<0.5	NA	0	2014	discharge from petroleum refineries
Methylene chloride (ppb)	-	-	<0.5	NA	0	2014	
Styrene (ppb)	100	100	<0.5	NA	0	2014	discharge from rubber and plastic factories, leaching landfills
Tetrachloroethylene (ppb)	0	5	<0.5	NA	0	2014	discharge from factories and dry cleaners

LABORATORY TEST RESULTS *(after treatment)*

Toluene (ppb)	1000	1000	<0.5	NA	0	2014	discharge from petroleum factories
1,2,4-Trichlorobenzene (ppb)	70	70	<0.5	NA	0	2014	discharge from textile finishing factories
1,1,1-Trichloroethane (ppb)	200	200	<0.5	NA	0	2014	discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	3	5	<0.5	NA	0	2014	discharge from industrial chemical factories
Trichloroethylene (ppb)	0	5	<0.5	NA	0	2014	discharge from metal degreasing factories and other factories
O-Xylene (ppb)	-	-	<0.50	NA	0	2014	
Vinyl Chloride (ppb)	0	2	<0.5	NA	0	2014	leaching from plastic pipes; discharge from plastic factories
Xylene (ppb)	10000	10000	<1.5	NA	0	2014	discharge from petroleum factories and chemical factories
M&P Xylene (ppb)	-	-	<1.0	NA	0	2014	
Synthetic Organic Compounds (plant tap)							
Alachlor (ppb)	0	2	<0.10	NA	0	2014	Runoff from herbicide used on row crops
Atrazine (ppb)	3	3	<0.072	NA	0	2014	Runoff from herbicide used on row crops
Simazine (ppb)	4	4	<0.052	NA	0	2014	Runoff from herbicide used on row crops
Additional Plant tap Water Quality Parameters - Annual Averages							
Chlorine, Free (ppm)			1.24			2015	
Hardness, (ppm)			143			2015	
Alkalinity, (ppm)			177			2015	
Chloride, (ppm)			67			2015	
Iron, (ppm)			<0.04			2015	
Manganese, (ppm)			<0.01			2015	
Sodium, (ppm)			95			2015	

2015 Unregulated Contaminant Monitoring Rule (UCMR) 3

Analyte	Level Found	Units	MRL	Sample Year
Plant tap				
UCMR 3 Metals				
Chromium	ND	ug/L	0.2	2015
Cobalt	ND	ug/L	1	2015
Molybdenum	ND	ug/L	1	2015
Strontium	ND	ug/L	0.3	2015
Vanadium	ND	ug/L	0.2	2015
Indium	108	%		2015
Scandium	116	%		2015
EPA Method 539				
17 alpha-ethynylestradiol	ND	ug/L	0.0009	2015
17-beta-Estraddiol	ND	ug/L	0.0004	2015
4-androstene-3,17-dione	ND	ug/L	0.0003	2015
Equillin	ND	ug/L	0.004	2015
Estriol	ND	ug/L	0.0008	2015
Estrone	ND	ug/L	0.002	2015
Testosterone	ND	ug/L	0.0001	2015
13C2-Ethynylestradiol (QC)	89	%		2015
13C6-Estradiol (QC)	87	%		2015
Estriol-d2 (QC)	81	%		2015
Ethynylestradiol-d4 (QC)	83	%		2015
Testosterone-d3 (QC)	68	%		2015
EPA Method 537				
Perfluoro octanesulfonic acid - PFOS	ND	ug/L	0.04	2015
Perfluoro - 1-butanesulfonic acid - PFBS	ND	ug/L	0.09	2015
Perfluoro-1-hexanesulfonic acid - PFHxS	ND	ug/L	0.03	2015
Perfluorooheptanoic acid - PFHpA	ND	ug/L	0.01	2015
Perfluoro-n-nonanoic acid - PFNA	ND	ug/L	0.02	2015
perfluorooctanoic acid - PFOA "C8"	ND	ug/L	0.02	2015
13C-PFDA - Surr#2 (QC)	89	%		2015
13C-PFHxA - Surr#1 (QC)	97	%		2015
13C-PFOA- IS#1 (QC)	123	%		2015
13C-PFOS-IS#2 (QC)	129	%		2015
UCMR3 524.3				
1,1-Dichloroethane	ND	ug/L	30	2015
1,2,3-Trichloropropane	ND	ug/L	30	2015
1,3-butadiene	ND	ug/L	100	2015
Bromochloromethane	ND	ug/L	60	2015
Bromomethane (Methyl Bromide)	ND	ug/L	200	2015
Chlorodifluoromethane	ND	ug/L	80	2015
Chloromethane (Methyl Chloride)	ND	ug/L	200	2015
1,2-Dichlorobenzene-d4 (QC)	104	%		2015
1,4-Dichlorobenzene-d4 (QC)	79	%		2015
1,4 Difluorobenzene (QC)	84	%		2015
4-Bromofluorobenzene (QC)	101	%		2015
Chlorobenzene-d5 (QC)	85	%		2015
methyl-t-butyl ether-d3 (QC)	107	%		2015
Chlorate	<20.0	ug/L	20	2015
Chromium, Hexavalent	<0.030	ug/L	0.03	2015
1, 4-Dioxane	<0.070	ug/L	0.07	2015
Distribution System at Athens City Lab				
UCMR 3 Metals				
Chromium	ND	ug/L	0.2	2015
Cobalt	ND	ug/L	1	2015
Molybdenum	2.2	ug/L	1	2015
Strontium	150	ug/L	0.3	2015
Vanadium	ND	ug/L	0.2	2015
Indium	87	%		2015
Scandium	98	%		2015
Chlorate	<20.0	ug/L	20	2015
Chromium, Hexavalent	<0.030	ug/L	0.03	2015

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

(MRL) Minimum Reporting 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

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 Results can be found on pages 10 and 11.

ATHENS WATER TREATMENT PLANT

395 West State St., Athens, OH 45701

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OCCUPANT

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

City of Athens online:
www.ci.athens.oh.us
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Find us on Facebook

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.