

Annual

WATER QUALITY REPORT

Reporting Year 2023



Provided to you by the
Town of Agawam

PWS ID# 10050000

The mission of the Department of Public Works is to supply safe, reliable, quality drinking water to the residents of Agawam at a reasonable cost while providing the fire flows and hydrants necessary for fire protection and affordable insurance. Subsequently, our mission includes the removal and treatment of wastewater from all building in a manner that protects the public health and safeguards of the environment.

Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. People whose immune systems may be compromised because of chemotherapy, organ transplants, or HIV/Aids or other immune disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791)

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. The Agawam Department of Public Works 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 water for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.

Water Quality

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 human activity. Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or can result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Agawam is required to collect a minimum of 30 water samples each month from locations throughout Town and tests these samples for coliform bacteria.

About Your Water

The drinking water produced by the Springfield Water and Sewer Commission originates from a surface water supply located in Blandford and Granville, Massachusetts. Two water bodies make up the water supply: Cobble Mountain Reservoir (Source Water ID #1281000-02S), and Borden Brook Reservoir (Source Water ID #1281000-04S). A source water assessment has been completed by the Massachusetts Department of Environmental Protection and is available at: <https://www.mass.gov/dod/western-region-source-water-assessment-protection-swap-program-reports/download>

Does my Drinking Water Meet the Current Health Standards?

We are committed to providing you with the best water quality available. However some contaminants that were tested last year did not meet all applicable health standards regulated by the state and federal government. In 2023 the Agawam Water Department reported one quarterly exceedances of the MCL for Haloacetic acids (HAA5), which are disinfection byproducts (dbps). This was not an emergency. If it had been an emergency, you would have been notified within 24 hours. Our water system and MassDEP monitor and record the effectiveness of actions taken in response to contaminant violations. The health effect statement for this contaminant is listed below.

"HAA5 is a group of five haloacetic acid compounds which form when disinfectants react with natural organic matter in the water. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer." It is important to note that, as the water travels through the water distribution system, the HAA5s dissipate and the concentrations decrease significantly with time.

We continue to work with the Springfield Water and Sewer Commission (SWSC), they have implanted the following short-term solutions: Evaluating the amount of chlorine needed through intensive data analysis; Optimizing filtration techniques to remove more naturally dissolved organic matter (NOM); Reducing water storage time and adding mixers to storage tanks; Conducting water main flushing in warmer months. Long-term solutions: SWSC is designing treatment plant improvements that will address the disinfection byproduct issues. Construction is estimated to start in FY24 at an estimated cost of \$168 million.

Analysis of Agawam's Water

In order to ensure that tap water is safe to drink, EPA and MassDEP prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. FDA and Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health).

Water samples are analyzed daily by state-certified laboratories to ensure that the water supplied is potable and meets all government standards. The water is monitored at the reservoir, the filter plant, the storage tanks and throughout the distribution system. The data in the table on this page represents finished water in the distribution system during calendar year 2023.

Contaminant Inorganics	Major Sources in Drinking Water	Violation	Ideal Goal (MCLG)	Maximum Contaminant Level (MCL)	90th Percentile	Sampling Sites Exceeding the Action Level
Copper (ppm)	Corrosion of household plumbing	No	1.3	AL = 1.3	0.094	0 out of 30
Lead (ppb)	Corrosion of household plumbing	No	0	AL = 15.0	0.002	0 out of 30
Nitrate (ppm)	Natural Deposits, Stormwater,	No	0	10	0.0738(HDL)	N/A
Barium (ppm)	Common, natural mineral	No	0	2	0.0078(HDL)	N/A
Asbestos (MFL)	Decay of asbestos cement water	No	0	7	None Detected (HDL)	N/A
Contaminant Microbiological	Possible Source of Contamination	Violation	MCLG	MCL	Highest % Positive in a Month	Range Detected at Individual Sampling Sites
E.coli	Human and animal fecal waste	No	0	See Key**	0%	0
Disinfectants	Major Sources in Drinking Water	Violation	MRDLG	MRDL	Annual Average	Range Detected at Individual Sampling Sites
Residual Chlorine (PPM)	Water additive used to control	No	4	4	0.44	0.08—0.90
Contaminant	Major Sources in Drinking Water	Violation	MCLG	TT	Highest Single Measure	Lowest Monthly Percent
Turbidity (NTU)	Soil run-off	No	N/A	1	0.081	N/A
Rapid Sand Filtration***						
Daily Compliance						
Turbidity (NTU)	Soil run-off	No	N/A	TT, at least 95% of samples per month below 0.3	N/A	100%
Rapid Sand Filtration***						
Monthly Compliance						
Turbidity (NTU)	Soil run-off	No	N/A	5	0.72	N/A
Slow Sand Filtration****						
Daily Compliance						
Turbidity (NTU)	Soil run-off	No	N/A	TT, at least 95% of samples per month below 0.3	N/A	1000%
Slow Sand Filtration****						
Monthly Compliance						
Contaminant Organics	Major Sources in Drinking Water	Violation	Ideal Goal (MCLG)	Maximum Contaminant Level (MCL)	Highest Local Annual Running Average (LRAA)	Range Detected at Individual Sampling Sites
TTHMs (ppb)	Byproduct of drinking water chlorination	No	N/A	80	69.1	31.2-85.6
(Total Trihalomethanes)				(LRAA)		
HAA5s (ppb)	Byproduct of drinking water chlorination	No	N/A	60	55.2	0-77.6
(Total Haloacetic Acids)				(LRAA)		
HAA5 Site #10005 (1057 N. Westfield St) sampled: 12/6/23	Byproduct of drinking water chlorination	Yes	N/A	60	62.1	35 – 62.1
				(LRAA)		
HAA5 Site #001 (36 Main St) sampled: 12/6/2023	Byproduct of drinking water chlorination	Yes	N/A	60	77.6	41.0 – 77.6
				(LRAA)		
HAA5 Site #IDSE04 (1200 Springfield St) sampled: 12/6/23	Byproduct of drinking water chlorination	Yes	N/A	60	73.1	43.1 – 73.1
				(LRAA)		
TTHM Site IDSE05 1615 Suffield St. sampled:12/6/23	Byproduct of drinking water chlorination	Yes	N/A	80	85.6	47.1 – 85.6
				(LRAA)		
Unregulated Substance****	Major Sources in Drinking Water	Violation	ORSG/SMCL	MCL	Highest Single Measurement	Range Detected at Individual Sampling Sites
Sodium (ppm)	Natural deposits; runoff from use as	No	20 (ORSG)	None	15	N/A
Manganese (ppb)	Erosion of natural deposits	No	50 (SMCL)	None	17	N/A
Chloroform (ppb)	Byproduct of drinking water	No	70 (ORSG)	None	5.6	N/A
Bromodichloromethane(ppb)	Byproduct of drinking water	No	None Established	None	0.69	N/A

KEY TO TABLE

Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

*Compliance with fecal coliform/E.coli MCL is determined upon additional repeat testing.

**Routine and repeat samples are total coliform-positive and either is E. coli-positive or system fails to take repeat samples following E. coli-positive routine sample or system fails to analyze total coliform-positive repeat sample for E. coli. Although we detected E. coli in 2016 in a single sample, repeat sampling did not have any additional detects; therefore the E. coli MCL was not violated.

***Rapid Sand Filtration: The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed a maximum of 1.0 NTU in any single measurement.

****Slow Sand Filtration: The turbidity level of the filtered water shall be less than or equal to 1.0 NTU in 95% of the measurements taken each month and shall not exceed a maximum of 5.0 NTU in any single measurement.

AL: Action Level. The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow. **AWD:** Agawam Water Department
HDL: Highest Detected Level. **IDSE:** Initial Distribution System Evaluation. **LRAA:** Locational Running Annual Average **MCL:** Maximum Contaminant Level. The highest level of a contaminant in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology. **MCLG:** Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. **MFL:** Million Fibers per Liter. **MRDL:** Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants (ex. Chlorine, chloramines, chlorine dioxide). **MRDLG:** Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant below which there is no known expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants. **NIA:** Not Applicable **NTU:** Nephelometric Turbidity Units. A numerical value indicating the cloudiness of water. **ORSG:** Mass. Office of Research and Standards Guideline. The concentration of a chemical in drinking water at or below which adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded it serves as an indicator of the potential need for further action. **pCi/L:** picocuries per liter: a measure of radioactivity. **ppb:** parts per billion **ppm:** parts per million **TT:** Treatment Technique. A treatment technique is a required process intended to reduce the level of a contaminant in drinking water. **SMCL:** Secondary Maximum Contaminant Level. **SWSC:** Springfield Water & Sewer Commission **90th Percentile:** Out of every 10 homes, 9 were at or below this level.



Water Consumption and Rates

Agawam purchases its water from the Springfield Water and Sewer Commission (from its 42 million-gallon Provin Mountain finish water reservoir) but operates our own system for the distribution of water within the community. This system, comprised of one pump station and approximately 151.6 miles of pipe ranging in diameter from 4" to 24", and 10,152 service accounts. Residential water use accounts for 68% of Total Usage. Total Water usage for 2023 was 1,058,811,000 gallons of water. The Mass Dept. of Environmental Protection is requiring that all water systems take steps to reach 65 residential gallons per capita per day standard (GPCPD). The 2023 residential usage also includes water used for lawn irrigation in Agawam, the Average residence has 2.5 people and used 64 residential gallons per capita per day standard (GPCPD).

Residential Rates: (0-2000 Cubic feet)	\$2.95/HCF
(2001 > Cubic Feet)	\$3.69/HCF
Irrigation Rates: (0 > Cubic Feet)	\$3.69/HCF

Cross-Connection Control

What is a cross-connection?

A cross-connection is a connection between the potable water supply and a contaminant source. Some examples include: a garden hose with one end submerged in a solution, (soapy water, fertilizer, or a pool) a supply line, a toilet, or a lawn irrigation system.

Why should I be concerned?

Cross-connections can allow the backflow* of an undesirable toxic substance or contaminant into the drinking water supply. This can occur when water pressure is lower than normal as the result of maintenance or repairs. Backsiphonage** can also occur which is caused by negative pressure.

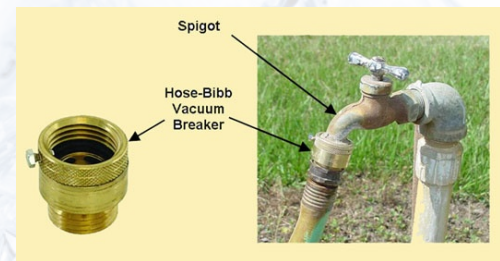
***Backflow**: the flow of water or other liquids, mixtures, or substance into the distributing pipes of a potable supply of water from any source or sources other than its intended source. Backsiphonage is one type of back flow.

****Backsiphonage**: resulting from negative pressures in the distributing pipes of a potable water supply.

Preventing Cross Contamination - What you can do.

Without the proper protection, something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. In fact, over half of the country's cross-connection incidents involve unprotected garden hoses. There are very simple steps that you as a drinking water user can take to prevent such hazards, they are:

- Never submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains or chemicals.
- Never attached a hose to a garden sprayer without the proper backflow preventer.
- Install hose bib vacuum breakers on all exterior spigots. These are available at hardware stores and plumbing supply houses.
- Identify and be aware of potential cross-connections to your water line.
- Buy appliances and equipment with a backflow preventer
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.
- Toilets need to be equipped with a ballcock with an integral anti-siphon valve. **
- Boilers need to be equipped with approved backflow preventers and expansion tank(s) to prevent backflow of boiler water (which may be treated with chemicals).**
- Install and maintain an approved (by Agawam Water Dept.) backflow device on your irrigation system. Please register the device with the Agawam Water Dept.. **
- All sinks, tubs and tanks need to have a proper air gap to prevent backsiphonage. Typically 1-inch or more (as required by plumbing code) between bottom of the faucet/spout and rim or edge. **



**Work may require a Plumbing Permit and to be completed by a MA Licensed Plumber, contact the Plumbing Inspector at (413) 821-0600 x8636 for more information.

The Agawam Water Department is required by Massachusetts Regulations (310 CMR 22.22) to have a cross-connection control program to prevent backflow. As part of this program, members of the Department survey properties (largely non-residential) to look for potential cross-connections and require proper backflow prevention devices when a need is determined. Backflow prevention devices (BPD) are tested by the Department at a minimum of an annual basis or greater depending on the BPD and hazard to which the BPD protects.

The Agawam Water Department requires notification of the installation, repair, replacement, relocation, and removal of backflow prevention devices and approval needs to be granted before work can proceed. Please contact the Deputy Superintendent Water/Sewer, James Deni at (413) 821-0627 or the Plumbing Inspector, Michael Day at (413) 821-0600 x8636. Work on backflow prevention devices may require a plumbing permit, please contact the Plumbing Inspector to verify the need.

Questions?

Please contact:

James Deni
Deputy Superintendent Water
(413) 821-0627
jdeni@agawam.ma.us

Public Works Municipal Annex
1000 Suffield Street
Agawam, MA 01001

<https://Agawam.ma.us/303/Water>

Information about Agawam's Drinking Water Service Line Inventory Efforts

The mission of the Department of Public Works is to supply safe, reliable, quality drinking water to the residents of Agawam at a reasonable cost while providing the fire flows and hydrants necessary for fire protection and affordable insurance. Our dedicated staff work every day to ensure our residents have water that meets all state and federal standards.

Historically water utilities across the United States sometimes installed lead service lines for water delivery. In 1986, a law was passed banning the use of lead in water delivery systems. Today, water agencies nationwide are conducting inventories to check for lead in their systems. These inventories comply with the Environmental Protection Agency's Lead and Copper Rule Revisions.

To that end, we are initiating a program to ensure the Town's water system is free of lead materials. The Department of Public Works has successfully secured a State Revolving Fund grant to cover the cost of the inventory. Securing the grant funding means there will be no expense to residents for this effort.

Where Can You Find More Information?

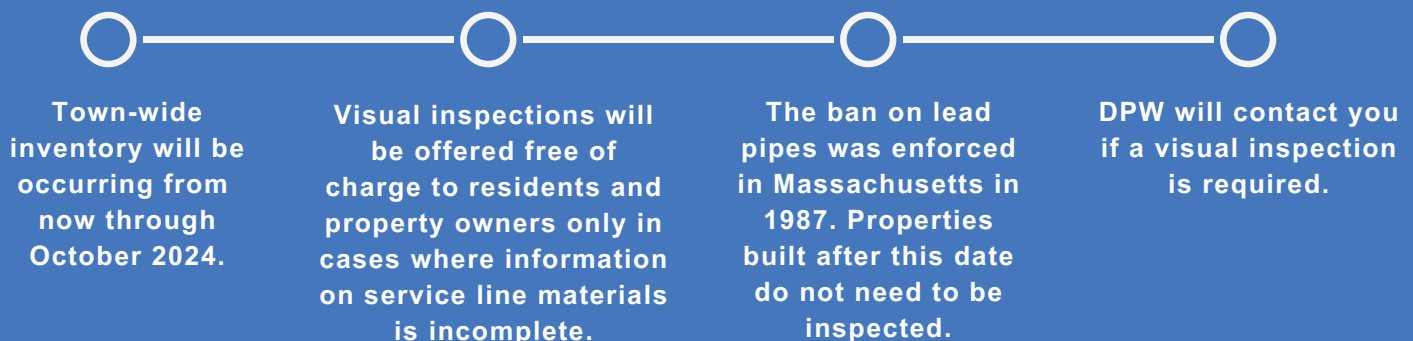


1 <https://www.mass.gov/lead-in-drinking-water>

2 <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>

3 <https://www.epa.gov/ground-water-and-drinking-water/revised-lead-and-copper-rule>

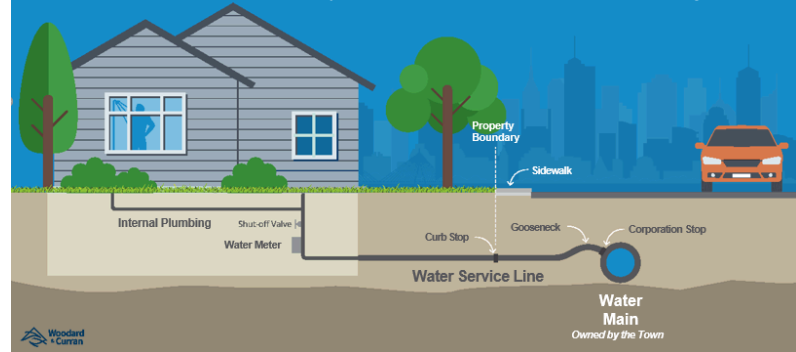
What's Next?



For more information please visit <https://www.agawam.ma.us/lsli> or call the DPW at 413-821-0600

What is a Water Service Line?

Water is delivered to your residence or business from a water main in the street. The DPW is compiling an inventory of service line materials between the water main and water meter in your building to ensure that the service line materials do not contain lead. Read on for important information about the Town's inventory.



Interested in Your Service Line?

The Town of Agawam Lead Service Line Inventory website has additional information and FAQs to answer questions about service lines and the Town inventory effort. Please visit www.agawam.ma.us/lsli or scan the QR code at right.



Stormwater

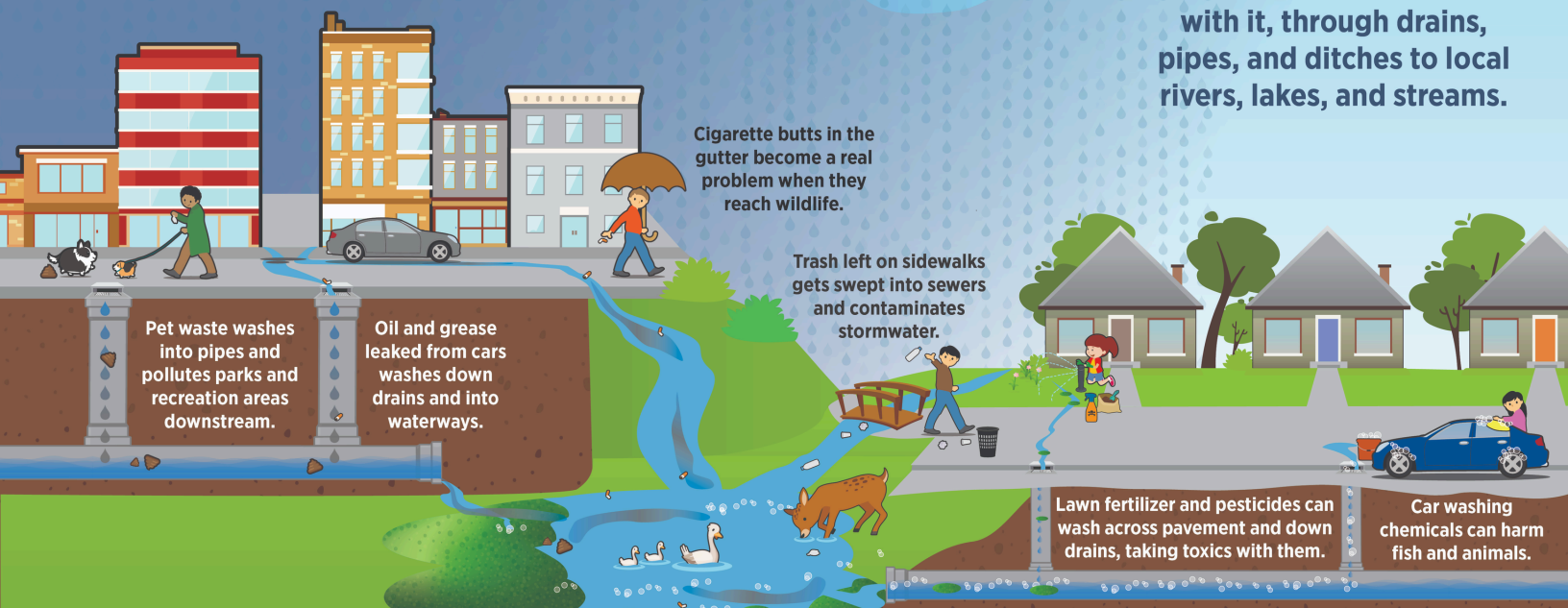
Stormwater is a leading cause of poor water quality. Rain or melted snow runs down driveways, sidewalks and streets carrying oil, dirt and other pollutants into nearby waterways. Polluted runoff, which can cause erosion and flooding, runs into waterways and degrades plants, fish, shellfish and other wildlife. In water used for recreation, the runoff can lead to illness, and people who eat contaminated fish can also become sick. Untreated stormwater can also contaminate drinking water sources.

Healthy Habits to Help Reduce your Impact on Stormwater and the Environment

- Avoid overwatering your lawn.
 - Use fertilizers and pesticides sparingly.
 - Vegetate bare spots in your yard, plant a rain garden with native plants that can naturally offset the effects of stormwater runoff.
 - Compost your yard waste.
 - Direct downspouts away from paved surfaces.
 - Consider using a Rain Barrel to collect rainwater from rooftops for later use in gardens.
 - Reduce the amount of pavement where you live. The amount of non-porous surfaces is directly related to the health of rivers and lakes.
- Take your car to the car wash instead of washing it in the driveway.
 - If washing car at home, wash on grassed area and avoid using excess detergents or chemicals.
 - Check car for leaks. Recycle motor oil.
 - Dispose of Household Hazardous Waste at the towns annual collection event.
 - Pick up after your pet.
 - Have your septic tank pumped and system inspected regularly.
 - Never dump anything down storm drains.
 - Support local efforts to repair or improve infrastructure.

Stormwater: Where It Flows, Everything Goes

When it rains, snows, or sleet, water hits hard surfaces and takes anything on that surface with it, through drains, pipes, and ditches to local rivers, lakes, and streams.



Where Stormwater Flows, Everything Goes