

Town of Ayer Stormwater Utility Advisory Workgroup

Stormwater Utility Frequently Asked Questions

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What is Stormwater?

Stormwater is water from rain or snowmelt events.

Where Does Ayer's Stormwater Go?

The vast majority of stormwater in Ayer seeps into the ground (infiltration) or flows over the ground (runoff).

Stormwater can infiltrate into natural landscapes, such as forests, due to the permeability of uncompacted soils.

Stormwater runs off hard (impervious) surfaces, such as buildings, driveways, and roadways. Stormwater then flows through drain pipelines and structures (stormwater infrastructure) before discharging into low-lying areas, typically a waterway (such as Sandy Pond or Grove Pond).

Stormwater in Ayer ultimately flows into the Nashua River or Merrimack River.

For a visual, see Ayer's MS4 Stormwater Map here: <http://bit.ly/AyerMS4Map>

What is Stormwater Infrastructure?

Stormwater infrastructure collects stormwater from impervious surfaces and conveys it toward low-lying areas. This infrastructure consists of inlets (catch basins), pipelines, structures (manholes, outfalls, culverts), and treatment units (oil/water separators, infiltration structures, etc.). Below are some visual examples of actual images from Ayer's system:



Culvert: Groton School Road at James Brook



Figure 3-5 Example of a Precast Drain Manhole (Left) and Brick/Block Catch Basin (Right)



Figure 3-7 Example of a RCP in Excellent Condition (Left) and CMP in Poor Condition (Right)

Who Manages Stormwater in Ayer?

The Ayer Department of Public Works (DPW) is responsible for the maintenance and replacement of stormwater infrastructure within public ways.

Ayer DPW maintains approximately 1,080 catch basins, 22 miles of drainage pipe, 85 culverts, 375 drainage manholes, 140 drainage outfalls, and 20 stormwater treatment units within the town limits. The total estimated replacement value of this infrastructure is over \$90 million.

Ayer DPW is also responsible for complying with Federal stormwater regulations.

The Town recently completed a Stormwater Asset Management Plan. The Plan provides information about the existing infrastructure and recommendations to adequately maintain the system. The DPW is using the Plan as a guide for managing the stormwater infrastructure. A copy of the plan can be found at the following link: <https://bit.ly/AyerStormwaterPlan>

How Is Stormwater Regulated?

Since 2003, Ayer's stormwater has been regulated under a permit with the EPA (Environmental Protection Agency) under the provisions of the Clean Water Act.

Ayer submits reports to the EPA documenting compliance. Some permit requirements include:

- Cleaning and inspection of stormwater infrastructure
- Review, inspection, and enforcement of construction activities
- Detection and removal of illicit discharges (sewage) from stormwater infrastructure
- Public outreach and education

The stormwater regulations have become significantly more stringent and costly to comply with over time. This trend will likely continue into the near and distant future.

In 2016, EPA performed a MS4 Stormwater Program Cost Evaluation for Massachusetts (Technical Memorandum titled *Stormwater Program Cost Evaluation for Massachusetts*, dated January 18, 2016, by Comprehensive Environmental). Below is a table from the report which showed the approximate costs for a community to comply with the 2003 and 2016 MS4 Permit (using 2014 dollars). The 2016 MS4 Permit became effective in 2018 and is a 5-Year Permit. A new MS4 Permit is anticipated in the near future with additional requirements.

Suburban		2003				2014			
Minimum Control Measure		Cost		Hours		Cost		Hours	
		Low	High	Low	High	Low	High	Low	High
Public Education		\$3,000	\$40,500	30	400	\$11,200	\$73,800	112	730
Public Participation		\$7,000	\$14,000	60	120	\$9,000	\$17,000	80	150
Good Housekeeping	rented trucks	\$26,000	\$383,000	72	84	\$278,000	\$557,000	602	1190
	purchased trucks	\$307,000	\$678,000	72	84	\$390,000	\$852,000	602	1190
NOI		\$3,600	\$9,600	36	96	\$5,000	\$11,200	50	112
SWMP		\$20,000	\$30,000	200	300	\$12,800	\$20,400	128	204
IDDE		\$37,500	\$65,100	370	619	\$86,900	\$267,000	806	2510
Construction Site Control		\$10,800	\$35,200	88	312	\$4,200	\$21,600	32	96
Post Construction Site Control		\$6,000	\$12,000	40	80	\$21,200	\$38,400	182	324
Annual Report		\$10,000	\$12,500	100	125	\$25,300	\$51,600	213	436
Total	rented trucks	\$124,000	\$602,000	996	2140	\$454,000	\$1,060,000	2210	5750
	purchased trucks	\$405,000	\$897,000	996	2140	\$566,000	\$1,350,000	2210	5750

Why Is Stormwater Management Important?

Both the public and the environment are impacted when stormwater isn't managed properly.

Flooding can occur when stormwater infrastructure is overwhelmed, meaning that the rate of stormwater runoff exceeds the drainage capacity of stormwater infrastructure. Flooding can also occur when stormwater infrastructure isn't adequately maintained. For example, a clogged or collapsed drain pipeline can back up stormwater, leading it to flow onto private property. Hazards associated with flooding include damage to homes and buildings, damage to roadways, closure of main transportation routes, and disruption of utilities including electric power, natural gas, and water supply.

Stormwater runoff can "pick up" pollutants such as oils, fertilizers, sand, and trash. Polluted stormwater impacts the health of wildlife and waterways. Ayer's stormwater permit requires certain levels of treatment to its stormwater before it is discharged to waterways. If not in compliance with the permit requirements, Ayer could be subject to costly fines or corrective orders by the EPA.

How is Ayer's Stormwater Funded?

Ayer currently pays for stormwater related expenses using the general fund (tax revenue). Stormwater funds compete with the funding of other priorities each year.

What is a Stormwater Utility? Why is Ayer Considering One?

Similar to a water or sewer utility, a stormwater utility is an enterprise fund, which means a that a service (stormwater) is provided for a fee.

Stormwater utilities are not a new concept and have become increasingly popular in recent years. There are over 2,000 total stormwater utilities in the United States. Communities near Ayer with a stormwater utility include Chelmsford, Dracut, Groton, Pepperell, Tewksbury, and Westford.

A stormwater utility is an equitable method for funding stormwater. Under a stormwater utility, properties generating significant stormwater runoff (such as commercial properties) pay a higher fee than those properties generating less stormwater runoff (such as a single-family home).

A stormwater utility is stable as funds are consistently provided each year through fees. Consistent stormwater funding is needed for Ayer to remain compliant with its stormwater permit and replace aging stormwater infrastructure before failure.

Currently, the Town funds its stormwater through its General Fund (i.e., tax base). A financial analysis showing the cost-share to various property owners by paying through the general fund versus the proposed enterprise fund (i.e., utility) was performed by Tighe and Bond based on the current rate structure being developed.

<u>Approximate Annual Cost for Typical Single-Family Residential</u>	
Stormwater funded by General Fund (i.e., taxes)	\$208
Stormwater funded by Enterprise Fund (i.e., the utility)	\$127

In brief, the cost is lower for a Single-Family Residential (SFR) property primarily due to the proposed Utility creating equity based on impervious area. Properties with larger impervious areas pay more through the proposed Utility Fund thus reducing the cost for properties with less impervious area.

What Would the Stormwater Utility Pay For?

The Town has projected its yearly stormwater related expenditures through 2028. Approximately 75% of the projected expenses are for the replacement of drainage infrastructure. This includes replacement of large drainage culverts near the end of their useful life.

The remaining portion of these expenses are for a variety of tasks, including:

- Cleaning, inspection, and maintenance of stormwater infrastructure
- Compliance with Federal regulations
- Long-term planning

How are Stormwater Utility Fees Determined?

Each property's stormwater fee is based on its impervious area.

Stormwater billing units, called ERU's (Equivalent Residential Unit), are based on a property's impervious area. One ERU is equivalent to 3,200 square feet of impervious area on a property (3,200 square feet is the average impervious area of a single-family residential property in Ayer).

This total cost per ERU (\$/ERU) is calculated as follows:

Ayer's projected yearly stormwater costs divided by the total number of ERU's in Ayer.

Please note, all Single-Family Residential properties would be charged a flat fee equivalent to one (1) ERU. The process would not involve detailed measurements of each SFR.

Which Properties Would Be Charged the Stormwater Fee?

The stormwater fee would be charged to all developed parcel owners in the Town of Ayer, including residential and commercial properties, as well as non-profit and tax-exempt properties.

Could I Reduce My Fee?

Yes, a credit policy would be available for properties with approved stormwater controls.

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