Protecting our Water Resources: Stormwater Impacts in Adams

Stormwater runoff

Collected by drains

Discharges to Hoosic River

During storm events, sediments are washed into waterways, transporting attached plloutants and clogging aquatic habitat.

What is stormwater and what does it do?

Stormwater is rainfall that "runs off" hardened or impervious (non-permeable) surfaces such as streets, parking lots, and buildings and, to a lesser extent, permeable surfaces such as lawns and parks. Impervious surfaces increase the volume of runoff and cause water to rapidly flow off surfaces, picking up pollutants such as vehicle leaks and spills, trash and debris, pet waste, pesticides, fertilizers and soil as it travels to the nearest surface water. In urban areas, stormwater typically enters streams, rivers, ponds and lakes through man-made structures such as catch basins, pipes, and ditches.

Why the concern?

In developed areas, stormwater quickly carries pollutants into surface waters. Stormwater pollutants can cause fish kills, the destruction of aquatic habitat, and aesthetic problems making areas unsuitable for recreational purposes. Impervious areas also increase runoff volumes which can cause flooding of streams during rain events, and reduce the amount of rainfall that infiltrates to recharge groundwater. Groundwater is needed to sustain stream flows during the dry summer months when there is less precipitation.

The Hoosic River is an example of a water body that has been impacted by development and stormwater runoff. Flood control chutes have been built to control the more frequent floods associated with increased runoff from development. The water quality of the Hoosic River has also been impacted by stormwater and other improper discharges, with elevated levels of pathogens (bacteria). To address stormwater pollution, the Environmental Protection Agency (EPA) developed the Phase II Stormwater Management Program, requiring certain cities and towns to develop Stormwater Management Plans.

What is the Town doing about it?

The Town of Adams has a municipal separate storm sewer system (MS4) that collects stormwater runoff, as rainwater or snow melt, from streets, parking lots, sidewalks, buildings and other surfaces. The Town's stormwater sewer system is regulated under the MA Small Municipal Storm Sewer System (MS4) Permit and the Stormwater that enters it is regulated under the Clean Water Act, specifically the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II MS4 Grant Permit. The Town is implementing a Stormwater Management Plan (SWMP) to meet MS4 Permit requirements. The SWMP includes the following:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination (IDDE) Program
- Construction Site Stormwater Runoff Control
- Post Construction Stormwater Management in New Development and Redevelopment
- Good Housekeeping and Pollution Prevention for Permittee Owned Operation

Key study findings included:

- Improper discharges to the storm drain system and Hoosic River are a problem;
- Sampling data indicates sanitary sewer cross-connections are a leading cause of bacteria pollution to the Hoosic River;
- Stormwater treatment is difficult in existing developed areas due to limited space;
- Redevelopment projects provide an opportunity to reduce pollutants from existing development; and
- Regulatory changes will help protect waterways from future development and stormwater problems.

Adams DPW staff collecting water quality samples along Hoxie Brook

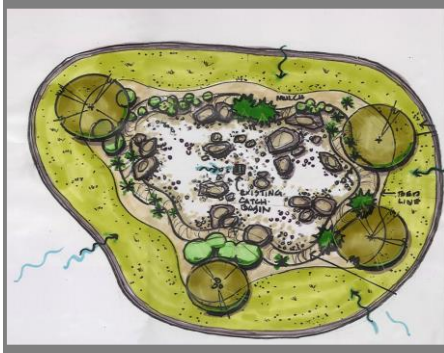
What can residents do?

- Do not wash vehicles to catch basins or waterways;
- Pick up pet waste and dispose of it properly;
- Don't pour or dump anything in or near catch basins and waterways that could contaminate waterways;
- Sparingly use pesticides and fertilizers on home landscapes or use safer alternatives;
- Bring household hazardous waste for disposal on Town sponsored collection days;
- Have septic systems checked every 3 years and pump out the tank if needed

Vehicle wash water contains harmful detergents and other chemicals such as grease and oil that are toxic to aquatic life, decrease water quality, and recreation value.

What can businesses do?

- Routinely sweep and clean outside work, parking, and dumpster areas;
- Do not wash vehicles near catch basins or waterways;
- Annually inspect and clean out sediment and debris trapped in catch basins;
- Verify that floor drains do not discharge into the stormwater system;
- Reduce impervious land cover with attractive trees, shrub, and flower "islands";
- Install an attractive stormwater demonstration project that benefits the community



Bio-islands are landscaped drainage systems that filter and clean stormwater before it leaves the property. These designs can be incorporated into existing sites and make great projects for businesses and residents to demonstrate their dedication to water quality improvement.

For more information:

https://www.town.adams.ma.us/stormwater-management-program

https://www.mass.gov/orgs/massachusetts-department-of-environmental-protection

https://www.epa.gov/npdes

https://www.stormwatercenter.net/

https://www.thinkbluemassachusetts.org/