

STORMWATER 101

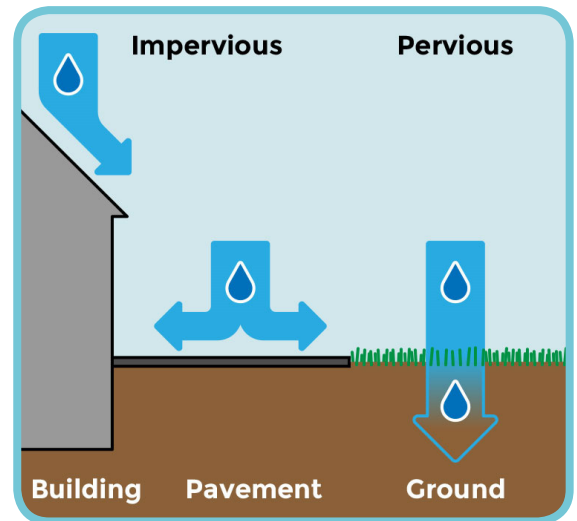
WHAT IS STORMWATER?

Stormwater is precipitation in any form - rain, sleet, snow, etc. It becomes a problem when it falls on developed land. Each drop of rainwater that falls in an urban environment is considered stormwater, because it has to be managed.

WHAT IS AN IMPERVIOUS VS. AN PERVIOUS SURFACE?

Impervious surfaces do not allow water to penetrate. Examples include rooftops, concrete and asphalt, and compacted gravel. When rain falls on these hard surfaces and can't infiltrate into the ground, it flows into the storm drains.

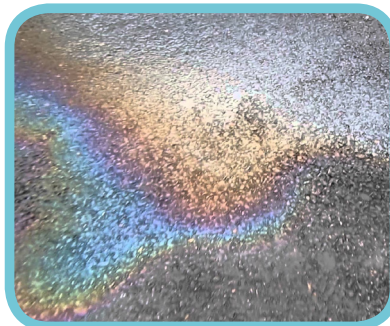
Pervious surfaces allow water to drain, or infiltrate into the landscape. They are also sometimes called permeable surfaces. Examples include planted lawn and garden areas, mulched areas, forested areas, and loose gravel walkways.



Urban environments have a large percentage of impervious land cover, such as buildings, houses, roads and parking lots. 42% of Detroit's land cover is impervious, so our city has a lot of stormwater runoff to manage.

WHY IS STORMWATER AN ISSUE?

Stormwater isn't pure rain water. When it falls on hard surfaces in an urban environment, it picks up motor oil, transmission fluid, road salt, fertilizers, insecticides, and other contaminants before it enters the stormdrains. When stormwater isn't managed, it also causes urban flooding and overflows. Stormwater is a leading source of water pollution in urban rivers.



WHAT IS A COMBINED SEWER SYSTEM?

Detroit has a combined sewer system, where wastewater from homes and businesses and stormwater runoff from our streets and rooftops is combined into the same sewer pipe and connected to the wastewater treatment plant. Wastewater includes everything that goes down a drain inside a building (from sinks, toilets, washing machines, etc.), as well as industrial wastewater.

WHAT IS A COMBINED SEWER OVERFLOW (CSO)?

During wet weather events with large rainfall or snowmelt, the combined pipes of stormwater and other wastewater can exceed their capacity and raw or partially treated wastewater is discharged into the Rouge and Detroit Rivers. When this event happens, it is referred to as a combined sewer overflow (CSO). This wastewater includes sewage, household and industrial contaminants and the other pollutants found in stormwater.

HOW DO CSOS IMPACT OUR LOCAL WATERWAYS AND COMMUNITIES?

Combined Sewer Overflow events are harmful to human and ecological health and result in:

- High levels of harmful bacteria in the water
- Degraded water quality and habitat
- Loss of recreational opportunities
- Reduced or harmed fish and wildlife populations

STORMWATER 101 KEY POINTS

- Stormwater is the leading cause of water pollution in urban areas because of the large percentage of impervious land.
- Detroit has a combined-sewer system which often exceeds capacity, causing sewage to discharge into our local rivers.
- You can help reduce stormwater pollution by becoming a more informed water steward, and through installing a rain barrel in your home, or redirecting stormwater onto your lawn.

