

LAND + WATER WORKS GLOSSARY

COMMON VOCABULARY FOR GREEN STORMWATER INFRASTRUCTURE

Bioretention: Any method of capturing and temporarily storing stormwater, using soil and plants to slowly infiltrate water back into the ground. Examples: rain garden, bioswale, etc.

Bioswale: A type of bioretention that collects runoff from large surface areas, including streets and parking lots. They are often designed for narrow spaces to help slow down and infiltrate runoff.

Catch basin: The underground structure that "catches" stormwater off city streets and nearby properties into the combined sewer system. They can get clogged with debris without periodic cleaning.

Typical Storm Drain Manhole / Catch Basin With Sump

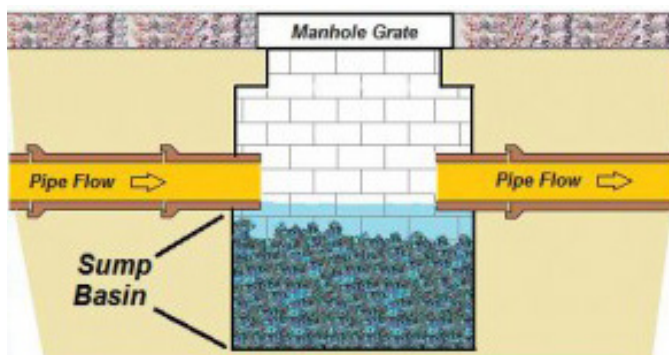


Diagram of a Catch basin

Cistern: A tank used to collect or store rainwater, either above or below ground. Includes rain barrels.

Combined Sewer (CS): A sewer system where stormwater runoff from streets and wastewater from buildings are managed within the same system. Over 700 cities in the United States are affected.

Combined Sewer Overflow (CSO): A discharge of sewage and runoff directly into the river when the amount is too much for the treatment plant and retention facilities to handle.

Curb Cut: In a parking lot or street, a wide cut into a curb that allows stormwater runoff to flow into green stormwater infrastructure.

Downspout Disconnect : The disconnection of roof downspouts from buildings leading to city sewers.

DEI Combined Sewer Overflow: Wet Weather

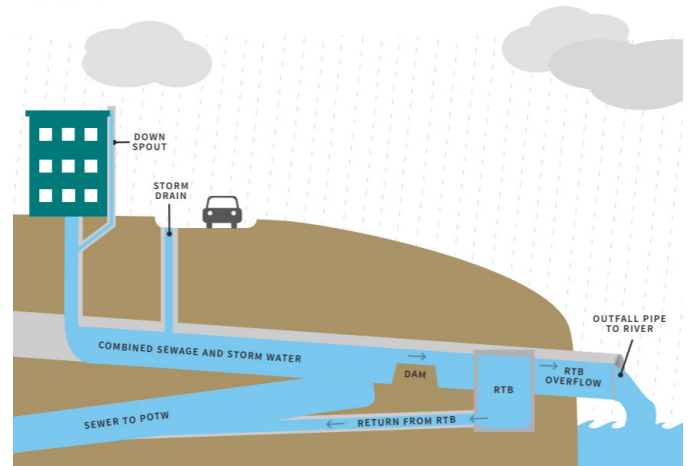
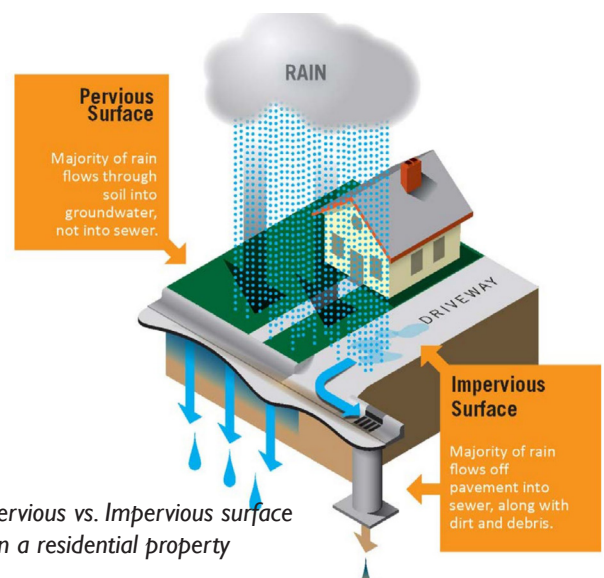


Diagram of a Combined Sewer (CS) and an Overflow (CSO)

Green Alley: An alley that can have multiple beneficial characteristics, including stormwater management. Planting and permeable pavements (asphalt, concrete or pavers) are often in the design.

Green Stormwater Infrastructure (GSI): Construction techniques that help manage stormwater by capturing and infiltrating stormwater runoff before it enters the sewer system or rivers. These techniques mimic the landscape's natural processes, before cities and neighborhoods were built. Examples: rain gardens, permeable pavement, and bioswales.

Impervious: Unable to be penetrated. In cities, much of the land is covered by impervious surfaces, like rooftops and pavement. Also called impermeable.



Pervious vs. Impervious surface on a residential property

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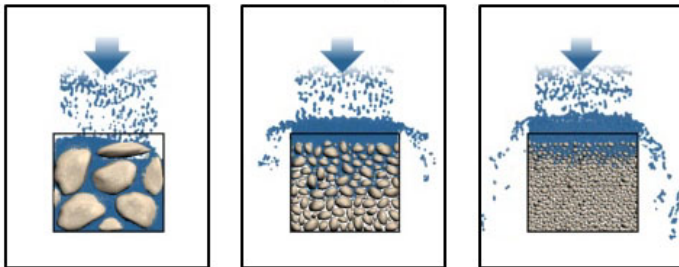
A curb cut for a bioswale vs. a common inlet

Impervious acreage: The area covered by surfaces that rain is unable to pass through. One acre = 43,560 square feet.

Inlet: The structure where stormwater enters into the sewer or green infrastructure.

Infiltration: The process by which water on the ground surface enters the soil. The rate of infiltration depends on the soil type and amount of rain fall.

Infiltration Variations by Soil Texture



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Infiltration occurs faster in different soil types because of particle size. For example, sand has bigger particles with more space for water to flow through.

Inundation Tolerance: The ability of any particular plant to survive saturated soils, also known as flooding. How many inches of flooding and for how many days is often considered.

Invasive Plants: In Detroit, these are plants that are not native to the Great Lakes region and do not have natural predators to keep them in check. They out compete native plants and can be a nuisance.

Maintenance: Regular tasks needed after green infrastructure installation. Includes: watering new plants, weeding, and trash and sediment removal. *Good maintenance can make up for less than great design, but bad maintenance will always negate good design.*



Native plants are great for landscaping, especially rain gardens.

Native Plants: In Detroit, these are plants that are local to the Great Lakes region. They have evolved to local soils, hydrology, and climate. Once established, they can be low maintenance and provide habitat for native bees, butterflies, and wildlife.

Outfall: An outfall is the discharge point of a waste stream, or a sewer, into a river, lake, or ocean.

Pervious: Able to be penetrated. Pervious surfaces let water infiltrate into the soil below. Ex. forests, meadows, and gardens. Also known as permeable.

Soil: The upper layer of the earth made of minerals, rocks, water, air, organic matter, and countless organisms. Not just dirt!

Soil Amendment: In stormwater management, the addition of compost, mulch, or sand to improve existing soil, often to increase drainage capacity or improve conditions for planting.

Stormwater Runoff: Any water (rain or melting snow) that drains into the sewer system or local water body. Reducing impervious surface, or redirecting runoff to a pervious surface or rain garden, can help cities like Detroit manage stormwater runoff.

Wastewater Treatment Plant: Wastewater treatment plants remove most pollutants from wastewater coming from toilets and building drains before being released to local waterways. Also known as sewage treatment plants or water pollution control plants.

