

Green Infrastructure in the Watershed

What is Green Infrastructure & how does it affect the Clinton River Watershed?



What is Stormwater?

When it rains or snows the runoff that flows across parking lots, streets and other solid surfaces picks up pollutants like salt, oil, grease, fertilizer and pet waste. This runoff flows into storm drains which lead directly to our local rivers and streams.

What is Green Infrastructure?

Green Infrastructure (GI), according to the EPA, refers to a range of stormwater management systems that use vegetation, soils, or other permeable surfaces or substrate to store, infiltrate or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.

Types of Green Infrastructure

- Downspout disconnection
- Rainwater harvesting
- Rain gardens
- Planter boxes
- Bioswales
- Permeable pavements
- Green spaces
- Green roofs
- Urban tree canopy
- Land conservation



Rain Garden at CRWC Office

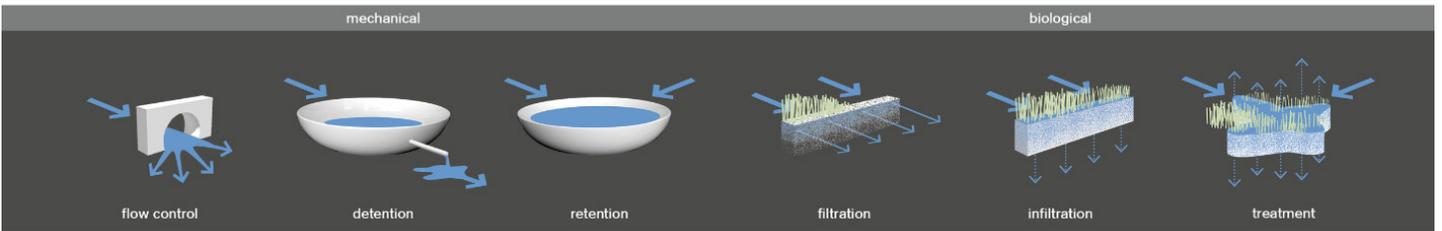


Bioswale installation at Clinton Township Civic Center



NYC Highline

GI mimics natural systems to capture, soak up, filter and store water. GI aims to reduce stormwater surges and the amount of pollutants entering local waterways.



slow

→ spread

→

flow control: The regulation of stormwater runoff flow rates.

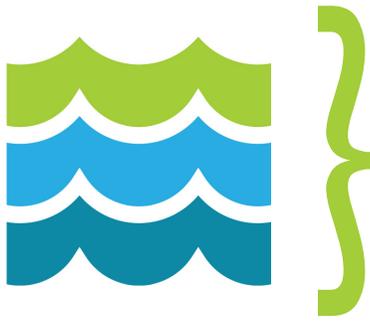
detention: The temporary storage of stormwater runoff in underground vaults, ponds, or depressed areas to allow for metered discharge that reduce peak flow rates.

retention: The storage of stormwater runoff on site to allow for sedimentation of suspended solids.

filtration: The sequestration of sediment from stormwater runoff through a porous media such as sand, a fibrous root system, or a man-made filter.

infiltration: The vertical movement of stormwater runoff through soil, recharging groundwater.

treatment: Processes that utilize phytoremediation or bacterial colonies to metabolize contaminants in stormwater runoff.



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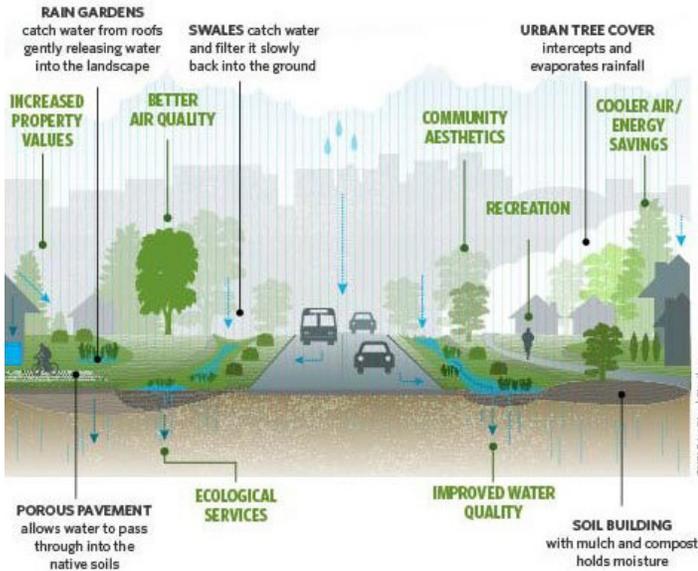


Image: natureworkseverywhere.org

Benefits of Green Infrastructure

- Stormwater capture & retention
- Filtration
- Reduced flooding & erosion
- Improved air and water quality
- Habitat creation for pollinators and other wildlife
- Evapotranspiration
- Community development
- Beautification
- Increased property values
- Economic benefits
- Human health benefits

Communities that have Implemented GI projects:

- Clinton Township
- City of the Village of Clarkston
- Royal Oak
- Rochester Hills
- Sterling Heights
- Huntington Woods

Sterling Heights Proposal

Senior Center



Proposed Location Before



Proposed Design

Rochester Hills Rain Garden

CRWC Office



Rain Garden Before



Rain Garden After

Green Infrastructure is a major component of CRWC's [WaterTowns[®] program](#), which is a community-based placemaking initiative that works to help improve water quality and adapt to climate change impacts for cities, towns and villages in the watershed.

The CRWC's [RiverSafe LakeSafe program](#) also promotes GI systems and helps communities understand the benefits provided to homeowners and residents within the Clinton River watershed.

For more information about GI and watershed-friendly practices visit [CRWC.org](https://www.crowc.org)