# Respect Our Waters
# Green Infrastructure + Low Impact Design Fact Sheet

*Green infrastructure uses "plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters."*[1]

## Fact 1: Green infrastructure is a nationally recognized, impactful strategy for managing stormwater & is required in some new or re-development projects in some areas of Wisconsin.

Within the Milwaukee Metropolitan Sewerage District Service Area, new or re-developments that meet a certain set of criteria must follow rules set by the District for developing and implementing GI plans.[2] In larger developments such as new subdivisions or business parks, **Low Impact Development (LID) takes green infrastructure strategies and merges them with other techniques to also achieve improved stormwater management.** LID may go hand-in-hand with community open space or green space ordinances.

## Fact 2: GI and LID can save developers and site owners money and increase their property values while also providing benefits to surrounding residents that improve quality of life.

Benefits can include[3]:

**Reducing the amount of salt** needed for snow & ice control + **Improving** localized **air & water** quality
**Improving** community **aesthetics & cohesion** + **Reducing urban heat island** effect & **noise** pollution
**Increasing** urban **habitat & agriculture** opportunities + **Reducing energy usage** for heating & cooling

## Fact 3: The key to unlocking these benefits is choosing the right GI or LID strategies that are also appropriate for the site.

GI strategies that may be appropriate for new developments or re-developments include:

**Rainwater Harvesting Structures:** These structures capture water for future use. Rain barrels are often used on smaller properties while above or below-ground cisterns can be used on larger properties.

**Rain Gardens:** Rain gardens are designed to capture rainwater and divert it from becoming runoff. This is done by placing the garden in a location where water will run towards it, modifying the soil so that water can filter into the ground, and using plants that can tolerate moisture and also help water soak into the ground.

**Bioswales:** Bioswales are similar to rain gardens but they also function as channels to move water away from infrastructure while also allowing for infiltration. They are generally built on larger private or public properties, or in right-of-ways. They may have native plants or grasses planted within them.

**Pervious/Permeable Pavements:** Pervious pavements & pavers reduce runoff from parking lots, roads, or other paved areas. Gaps between pavers or within the aggregate allows water to filter into the soil beneath.

**Blue/Green Roofs:** Green roofs use water to nourish plants that are planted on the roof or in trays that are placed in grids on the roof. Blue/green roofs also store extra water for later use in cisterns or other devices.

**Tree Canopy:** Trees are green infrastructure too! Their leaves catch water before it hits the ground, allowing some to evaporate and some to run down into the earth more slowly. Their roots help absorb water and direct some of it down into the soil. The roots also hold soil in place so it isn't washed away.

**For more information about GI and LID, examples in southeastern Wisconsin, and other resources, visit www.respectourwaters.org/environmentally-sensitive-design.**

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[1] Water Infrastructure Improvement Act of 2019, H.R. 7279, 115th Cong. §5(a)(27) (2019).
[2] Milwaukee Metropolitan Sewerage District. (2020, July 27). Chapter 13: Surface Water and Storm Water. https://www.mmsd.com/application/files/9515/9621/1174/Chapter_13_July_2020.pdf
[3]Center for Neighborhood Technology and American Rivers. (2010) *The Value of Green Infrastructure: A Guide to Recognizing Its Economic, Environmental and Social Benefits.* https://cnt.org/sites/default/files/publications/CNT_Value-of-Green-Infrastructure.pdf

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