

APPENDIX 1

Sample Zoning Definitions for Green Infrastructure Practices

The following are examples of definitions of different green infrastructure practices. Providing an umbrella definition of “green infrastructure” or “vegetated stormwater management measures” is one way to enable green infrastructure in landscaped areas without the need to differentiate among such terms as “bioswale,” “bioretention area,” “rain garden” or “vegetated swale.”

Note that these definitions should be tailored to match the language structure of your local ordinance and to reflect local or state statutes, definitions and codes.

Green Infrastructure. Green infrastructure refers to those methods of stormwater treatment and control that use the natural capacities of soil and vegetation to prevent or reduce stormwater runoff and associated nonpoint source pollution. Green infrastructure methods often are combined with conventional or structural stormwater treatment systems, such as separators, ponds or underground systems, to create stormwater “treatment trains” that enhance stormwater treatment and water quality.

Amended soil areas. Amended soil areas are landscaped portions of a site where decomposed organic material has been incorporated into the soil to improve its performance for infiltration and growing

vegetation, enabling the area to function as a vegetated control measure.⁹

Best management practice, or BMP. Best management practice, or BMP, means structural or nonstructural measures, practices, techniques or devices employed to reduce peak flows and minimize sediment or pollutants carried in runoff.

Bioswale. Bioswale means a vegetated, mulched or xeriscaped channel that provides treatment and retention as it moves stormwater from one place to another.

Bioretention area or rain garden. A bioretention area or rain garden is an excavated area that is back-filled with a prepared or amended soil mixture, covered with a mulch layer and planted with a diversity of woody or herbaceous vegetation to which stormwater is directed to promote infiltration and evapotranspiration.¹⁰

Cistern. A roof runoff collection system that detains water in above-ground or underground storage tanks with a capacity of at least 100 gallons.¹¹

Connected imperviousness. Connected imperviousness means an impervious surface that is directly connected to a separate storm sewer or water of the state via an impervious flow path.

Critical time. Critical time means the period starting at the time of peak rainfall

intensity with a duration equal to the time of concentration of the watershed.

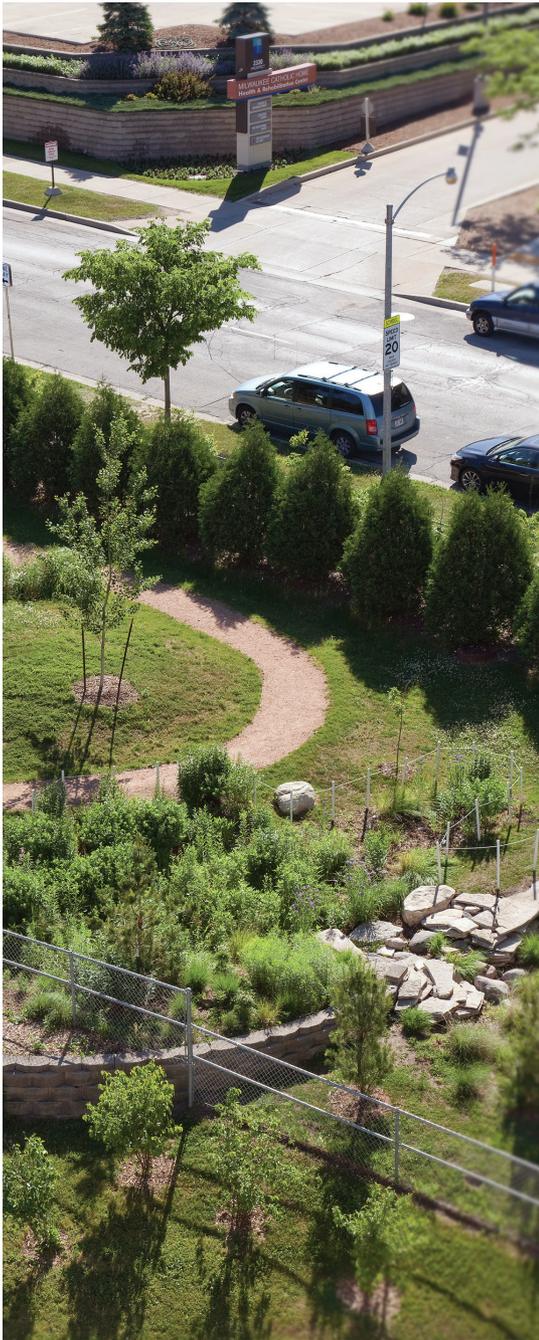
Downspout disconnection. Downspout disconnection means the rerouting of rooftop drainage pipes that are connected to storm sewers or that drain to impervious areas in order to drain rainwater to rain barrels, cisterns or permeable areas.

Green roof. An engineered roofing system that includes vegetation planted in a growing medium above an underlying waterproof membrane material designed to reduce the volume of stormwater runoff from building roofs.¹²

Green wall. The use of a supporting structure or wall panel that enables plants to grow vertically along the façade of a building or structure to provide air and water quality functions as well as aesthetic enhancement.

Impervious surface. Any pavement or structural element that prevents rain, surface water runoff or melting snow from infiltrating into the ground, including, but not limited to roofs and paved roads, driveways and parking lots.¹³

Permeable surfacing. A material or materials and accompanying subsurface treatments designed and installed specifically to allow stormwater to penetrate into it, reducing the volume of stormwater runoff



from the surfaced area. Permeable surfacing may include paver blocks, grassy pavers or similar structural support materials and permeable concrete or asphalt.

Planter box. Planter box means a structure with vertical walls and an open or closed bottom that may be attached to a building or structure and is planted with a soil medium and vegetation intended to collect, absorb and treat runoff from impervious surfaces.

Pocket wetlands. Pocket wetlands are small (typically under 1,000 square feet) constructed wetlands designed to reduce peak flows and runoff volumes, and remove pollutants via settling and bio-uptake.¹⁴

Rain barrels. Rain barrels are structures for the collection of roof runoff in containers, typically ranging from 50 to 100 gallons, with subsequent release to landscaped areas.¹⁵

Stormwater trees. Stormwater trees are trees selected and installed (either with or without an engineered box or structure) as integral components of a stormwater management plan, at points or sites where the tree(s) will have the effect of increasing the coverage of tree canopies to provide stormwater interception and evapotranspiration, stormwater uptake and increased infiltration.

Structural soil. A medium containing a mixture of crushed stone, soils and other materials that can be compacted sufficiently to support the installation of pavement or other surfacing, while permitting root growth for trees or other vegetation.

Vegetated control measures. The term “vegetated control measures” refers to vegetated swales, bioretention areas, rain gardens, amended soil landscape areas, pocket wetlands, stormwater trees or similar plantings that are designed and intended to provide stormwater treatment and control, and to promote evapotranspiration and infiltration of stormwater.

Vegetated swales. Vegetated swales are stormwater conveyance systems routing stormwater flows through vegetated areas in a natural elongated depression or a constructed channel. A vegetated infiltration swale differs from a conventional drainage channel or ditch because it is constructed specifically to promote infiltration.

Maryland Avenue Montessori School rain garden, Milwaukee