

# Green Infrastructure Site Assessment Instructions

## GENERAL OVERVIEW

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- 1) Prior to going into the field, map potential sites in the target neighborhood that will be assessed for green infrastructure concepts. Include sites such as schools, libraries, parks, community centers, community gardens, and other public areas.
- 2) Compile the selected sites into a document, with addresses and aerial images. If possible, include lot and block and contour lines on the image.
- 3) Conduct field visits to assess the sites. Bring copies of the images for all participants as well as copies of the Green Infrastructure Site Assessment Checklist.
- 4) Follow the Green Infrastructure Site Assessment Checklist while looking at each site. Be sure to make notes on the printed maps/aerial photos and take digital photographs of each site. There should be general site photographs as well as more detailed photographs of potential stormwater BMP locations.
- 5) After initial assessments, narrow down the list of potential sites and prioritize the most likely and most cost effective sites to recommend for green infrastructure concepts.

## OBSERVATIONS

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### General Observations:

- 1) The sources of stormwater and flow direction are important to the assessment as they inform initial decisions for selecting and locating green infrastructure practices. Green infrastructure practices must be located to intercept stormwater but should not be at the lowest point of the site where water is currently ponding. The location of existing storm drains need to be identified and sources of sediment are significant as it could impact the function of green infrastructure practices.
- 2) The slope of the site helps to understand the flow direction as well as selecting suitable green infrastructure practices, some green infrastructure practices are not suitable for steep areas while others require a minimum slope to drain properly.

*For reference on green infrastructure practices, please visit [www.water.rutgers.edu](http://www.water.rutgers.edu) to view our free Green Infrastructure Guidance Manual for New Jersey.*

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- 3) The amount of impervious cover on the site allows for the determination of the size of green infrastructure practices as well as how much stormwater runoff it will treat. If evaluating a streetscape, determine the area available for potential green infrastructure practices by measuring building setback distances from the street and curb as well as the width of existing sidewalks.
- 4) If the impervious cover is in disrepair than there is a higher potential that it can be cost effectively removed or replaced with a green infrastructure practice.
- 5) If impervious areas are directly connected it could allow for an opportunity to redirect stormwater into a green infrastructure practice, these are prime opportunities for green infrastructure.
- 6) If there are opportunities for disconnection, such as downspouts or intercepting runoff, the installation of a green infrastructure practice could be easier and potentially more cost effective. Identifying opportunities where this can be done at the surface as opposed to subsurface installations provides the greatest potential for cost effective management.
- 7) Locate all stormwater catch basin inlets in and around the site and/or streetscape. This is important to determining where green infrastructure practices can most effectively be located. The depth and condition of these catch basins can also provide important information for designers.
- 8) If water is ponding on the site or flooding the street or intersection there could be too much stormwater runoff or poorly maintained infrastructure. In these cases, green infrastructure practices can help address the problem. If ponding is due to a high water table and the area is continually wet, then green infrastructure may be less suitable.
- 9) Existing trees or landscaping may be providing stormwater benefits. It should be evaluated and if possible integrated into the green infrastructure design. Determining the type of plants appropriate to the site will help ensure that any green infrastructure practices including plantings (such as a rain garden, tree trench, or a stormwater planter) will be successful in that environment.
- 10) Determining the location of existing utilities is important for green infrastructure practice installation, if there are any underground utilities placement considerations must be evaluated to avoid conflicts or other impacts with utilities. Moving utility poles can also be cost prohibitive.
- 11) Green infrastructure can often be used as part of traffic calming or pedestrian safety improvement projects. If an intersection or streetscape is heavily used by pedestrians, shortening crosswalks using curb extensions or other landscape strategies can make it safer. Keep in mind these changes will also impact available parking and bus access and circulation.

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## Rain Gardens

- 1) Access to an exterior downspout (rather than interior) allows for easier installation of a rain garden.
- 2) Unpaved areas are easier and more cost effective locations to implement a rain garden than areas that require depaving.
- 3) If the area is above ponding or flooding than it is an opportune location to capture, filter, and infiltrate stormwater runoff.

## Rain water Harvesting

- 1) A nearby building is necessary to connect a rainwater harvesting system to; if downspouts are visible than they will be easier to divert to a rainwater harvesting system.
- 2) If a community garden is in the vicinity, there is a readily available use for the harvested water.

## Tree Pits, Trenches, and Streetscape Strategies

- 1) If there is runoff flowing across existing sidewalks or along the curb it may be redirected into one of these practices disconnecting it from the storm sewer.
- 2) Existing trees, landscaping, and areas of grass or turf can provide ideal locations to install a green infrastructure practice.
- 3) If water is flowing along the curb, it is most cost effective if it can be redirected into a surface planter or tree pit. Make note if areas adjacent to the street are significantly higher and would prevent water from flowing into a surface landscaped practice.

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## Porous Pavement

- 1) If the existing use of the site requires impervious/paved areas alternative pervious pavements may be an appropriate replacement option. If areas are lightly used but paving of some sort is still required, pervious pavement may be an appropriate option.
- 2) If the current impervious surface is in disrepair and replacement is likely in the near future, it may be more cost effective to replace with porous pavement.

## Curb Extensions and Stormwater Planters

- 1) These practices work well in areas where pedestrian crosswalks need to be shortened. They can be integrated into traffic calming or pedestrian safety projects cost effectively.
- 2) The intersection or streetscape needs to be located such that stormwater is flowing into the area and can be intercepted prior to entering the existing storm sewer. Ideal locations will not be at the “top of the hill” but also not at the “bottom of the hill” that is frequently flooded.