

Green Streets **FACTSHEET:** Franklin Knolls and Clifton Park Village Neighborhoods

Northwest Branch Subwatershed Facts:

The project area is within the Lower Mainstem of Northwest Branch, a subwatershed of the Anacostia River. The Northwest Branch subwatershed is approximately 19,605 acres (30.6 square miles) in size and the surface is 24% impervious.

Property Ownership:

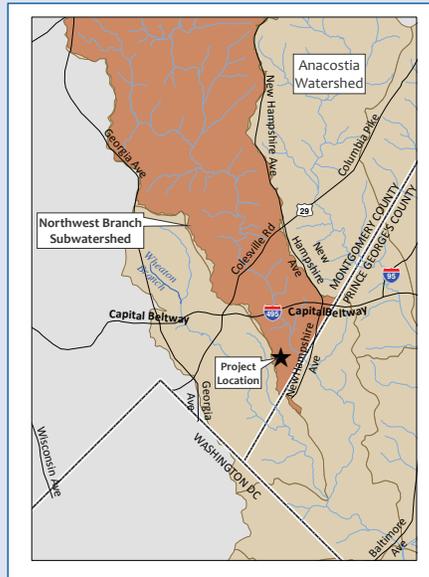
Montgomery County

Green Street Goals:

Maximize stormwater management to improve conditions in the Northwest Branch, improve water quality treatment, encourage infiltration of runoff from parking lots, roadways and other impervious surfaces, and to fulfill the requirements in the County's Municipal Separate Storm Sewer System (MS4) permit.

Potential Impervious Area Treated:

20.26 acres



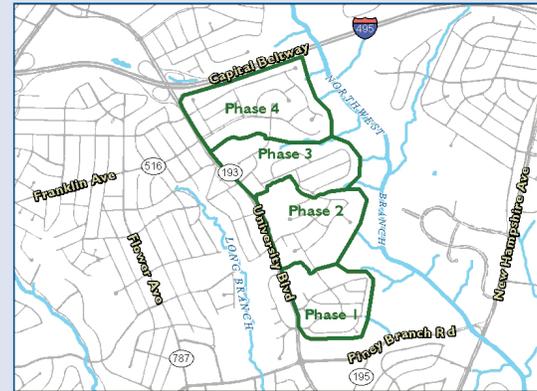
Northwest Branch of the Anacostia River.

Project Facts:

Total Green Streets practices proposed: 176 (subject to change)

- Bioretention Gardens
- Rain Gardens
- Tree Box Filters

Permeable Pavement may also be incorporated into the design.



Franklin Knolls & Clifton Park Project Limits & Proposed Phases



Existing Conditions along Linton Street.

Project Status as of July 2012:

Design Stage

Estimated Start of Construction:

Fall 2012 (Phase I)

Project Selection

Green Streets are roadway Low Impact Development (LID) designs that reduce and filter stormwater runoff. A study was conducted to develop an inventory and prioritize LID Green Streets opportunities within the Franklin Knolls and Clifton Park Village neighborhoods. The study identified and prioritized 176 potential Green Streets Practices to provide treatment of runoff from impervious surfaces

such as roadways, sidewalks and driveways. Criteria evaluated for each site included existing drainage patterns, site access, potential utility and tree impacts, soil types relative to infiltration rates and site visibility. The County plans to install proposed Green Streets features concurrently with Montgomery County Department of Transportation's (MCDOT) roadway maintenance and/or rehabilitation work.

Pre-Retrofit Conditions

Much of the Anacostia Watershed, including the Northwest Branch subwatershed, has been developed prior to regulations for stormwater management. The project area contains a high level of impervious surfaces (i.e. roads, rooftops, etc.) that forces rain water to run off untreated and uncontrolled directly into storm drain systems and to the local

stream. Untreated runoff carries pollutants such as automobile oils, fertilizers, sediment, and trash into downstream waterways, degrading the water quality and natural habitat. Impervious surfaces also prevent rain water from infiltrating into the ground, depleting groundwater and reducing baseflows to streams.

Proposed Retrofit Actions

In an effort to reduce impacts from uncontrolled and untreated runoff, the County is currently proposing 176 new Green Streets practices: bioretention gardens, rain gardens, and tree box filters. In addition, pavement removal and permeable pavement are being considered throughout the neighborhoods. Due to the size of the neighborhoods, the project has been divided into four phases.

Bioretention gardens and/or tree box filters are proposed in areas where an existing storm drain inlet or pipe is in close proximity. Both types of practices capture and filter runoff through layers of planting soil, sand, and gravel prior to entering an underdrain system and ultimately into the adjacent stream channel. Tree box filters may be utilized where available space is limited, due to existing utilities, vegetation, or other site constraints. The tree box filters incorporate a decorative grate and tree or shrub to increase nutrient uptake and improve aesthetics.

Rain gardens are similar to bioretention gardens; however, they do not have an underdrain system. The filtered runoff infiltrates and recharges the groundwater supply. These facilities are proposed in areas where storm drains are not present. Infiltration tests will be completed in areas where rain gardens are proposed to

ensure adequate infiltration rates.

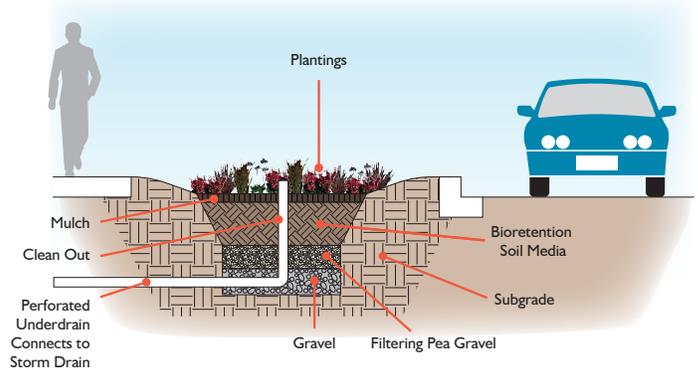
Removal or replacement of existing pavement surfaces with permeable pavement is also being considered at various locations. Permeable pavement will be considered mainly at parking areas along streets and at intersections. Permeable pavement intercepts runoff and temporarily stores a portion of the runoff in the pavement sub-base, where it slowly infiltrates to recharge the groundwater supply. Installation of permeable pavement will be coordinated with Montgomery County DOT's scheduled improvements.

The proposed Green Streets features will provide environmental benefits, improve the aesthetics of the properties where reasonably possible, and provide opportunities for community education.

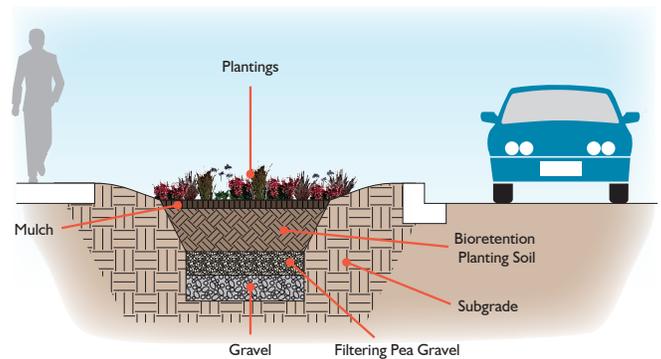
RainScapes Program

As part of the RainScapes Rewards program, residents have the option to qualify for a rebate of a portion of the cost to install rain gardens, rain barrels, and other attractive stormwater control features on their property. RainScapes techniques are a variety of landscaping features that help the soil to capture and soak in rainfall, while providing attractive landscaping with multiple benefits, including reducing the amount of stormwater pollutants from residential property. Applications are available online at www.rainscapes.org.

Bioretention

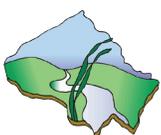


Rain Garden



An Example of a Rain Garden

For more information, contact:



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Project webpage: www.montgomerycountymd.gov/restorationprojects,
 Click **Northwest Branch**, then **Franklin Knolls & Clifton Park Green Streets**.