



Great Seneca Creek Profile

Great Seneca Creek (72 square miles) is one of three subwatersheds within the Seneca Creek Watershed. The Seneca Creek watershed is one of the largest in Montgomery County with a drainage area of approximately 130 square miles. The other two subwatersheds, Dry Seneca (19 square miles) and Little Seneca Creek (38 square miles), will be assessed separately from Great Seneca.

Great Seneca is primarily an urban subwatershed and flows through various commercial, residential, and agricultural areas. The Great Seneca headwaters begin as a series of small tributaries south and east of Damascus near Hawkins Creamery Road, that flow through low density residential and agricultural areas, and through the City of Gaithersburg. The Great Seneca rapidly increases in size as other tributaries join it, flowing approximately 25 miles before it enters into the Potomac River. A portion of the Clarksburg Special Protection Area (SPA) is included within the subwatershed.

Distinct differences exist in the conditions found among the various tributaries. The headwaters of Magruder Branch start in the commercial area of Damascus and are in poor to fair condition. The nearby Wildcat Branch is a high quality, naturally reproducing trout stream. Major tributaries in the middle Great Seneca area all originate in high density residential areas and each has instream impoundments (Lake Whetstone, Gunners Lake, and Clopper Lake). Seneca Creek has been listed as impaired for phosphorous (TP), sediment (TSS), and biological impacts, though MDE is proposing to delist for nutrient impairment. In 2002, Total Maximum Daily Loads (TMDLs) were established for Clopper Lake to meet phosphorus and sediment reduction targets. Most of the Clopper Lake drainage is in the City of Gaithersburg.

There is currently no watershed plan for Great Seneca; however, the following tributaries have been listed as priority tributaries in the Countywide Stream Protection Strategy because channel instability could cause further degradation to stream habitat and supportable biological resources: Magruder Branch, Wildcat Branch, Goshen Branch, Lower Long Draught- Hooker Branch and the Quince Orchard. The US Army Corps of Engineers is currently working with the County on developing a watershed plan specifically to identify priority stream restoration sites (over 16 miles have been identified) and upstream stormwater retrofits associated with those stream locations. Additional watershed restoration goals include meeting TMDL reduction targets and enhancing recreational uses for Clopper Lake. To this end, the County has already identified a number of stormwater retrofits to manage runoff from almost 1500 impervious acres.

The County is developing an implementation plan for the Great Seneca subwatershed to meet stormwater permit requirements and watershed restoration goals. The State will begin developing loading limits for sediment entering Seneca Creek in 2010. This overview profile contains a series of maps and tables that provide basic watershed information to support a general understanding of existing watershed features, conditions, and restoration opportunities.



Table 1: Watershed Profile

	Acres	Percent of Watershed
Watershed Drainage Area	46,564	100%
Impervious Cover	5,494	12%
Stream miles	263	
Watershed Area Subject to County Permit¹	18,861	41%
Impervious Cover Subject to County Permit¹	3,452	18%
Forest Cover¹	3,026	16%
Pervious Cover (e.g., turf, meadow, farm fields)¹	12,383	66%

¹ Excluded areas include municipalities such as Gaithersburg, rural zoning, all MNCPPC lands, Federal and State property, and Federal and State roads

Description of Map 1: Great Seneca Watershed Existing Conditions

This map includes the following information based on the County Geographic Information System database:

- Pervious cover- Forest, turf, meadow, and farm field
- Impervious cover
- Rivers and streams
- Existing Best Management Practices (BMPs) providing water quality treatment to the maximum extent practicable (MEP) and completed stream restoration sites
- Table of impervious surface and the existing level of control for the County’s stormwater permit

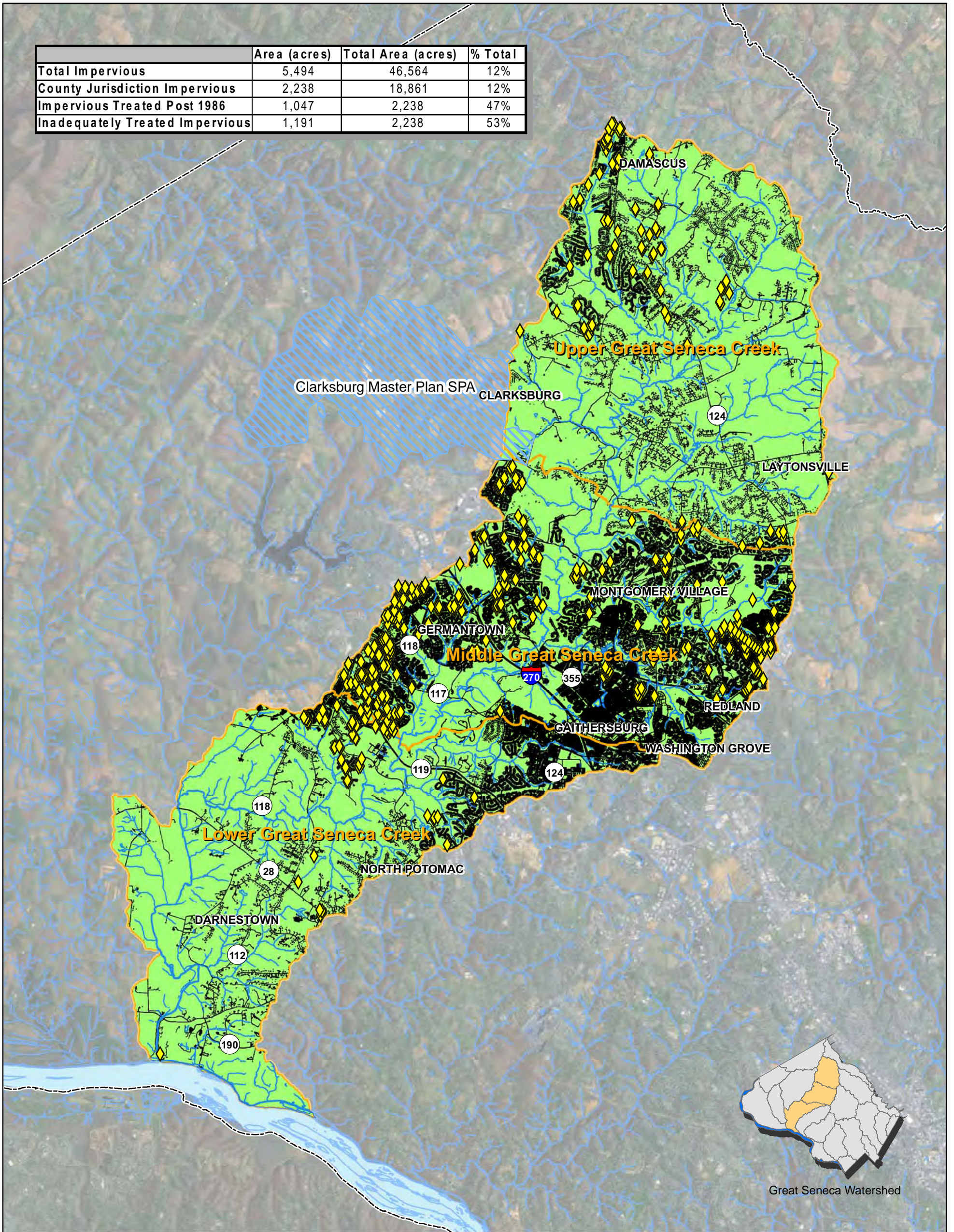
Description of Map 2: Great Seneca Watershed Potential Restoration Opportunities

This map includes the location of the following potential restoration opportunities, compiled from previous watershed restoration studies, reviewed for inclusion in the County’s Capital Improvement Program fiscal years 2011-2016, and potential future projects:

- Retrofits of existing stormwater management practices
- New proposed stormwater ponds or wetlands
- Potential Low Impact Development (LID) opportunities
- Stream restoration candidate sites
- Summary table of the total number of potential sites

MAP 1. GREAT SENECA WATERSHED EXISTING CONDITIONS

	Area (acres)	Total Area (acres)	% Total
Total Impervious	5,494	46,564	12%
County Jurisdiction Impervious	2,238	18,861	12%
Impervious Treated Post 1986	1,047	2,238	47%
Inadequately Treated Impervious	1,191	2,238	53%

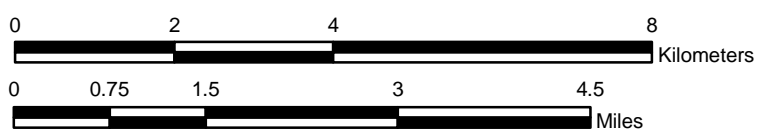
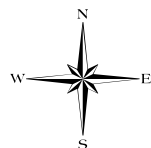


Legend

- Existing Well Performing Best Management Practices (503 sites)*
- Completed Stream Restoration Sites (0 sites)*
- Special Protection Areas
- Streams
- Great Seneca Watershed Boundary
- Pervious Cover (forest, turf, meadow, farm fields)
- Impervious Cover
- Montgomery County Boundary

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FEBRUARY 2010



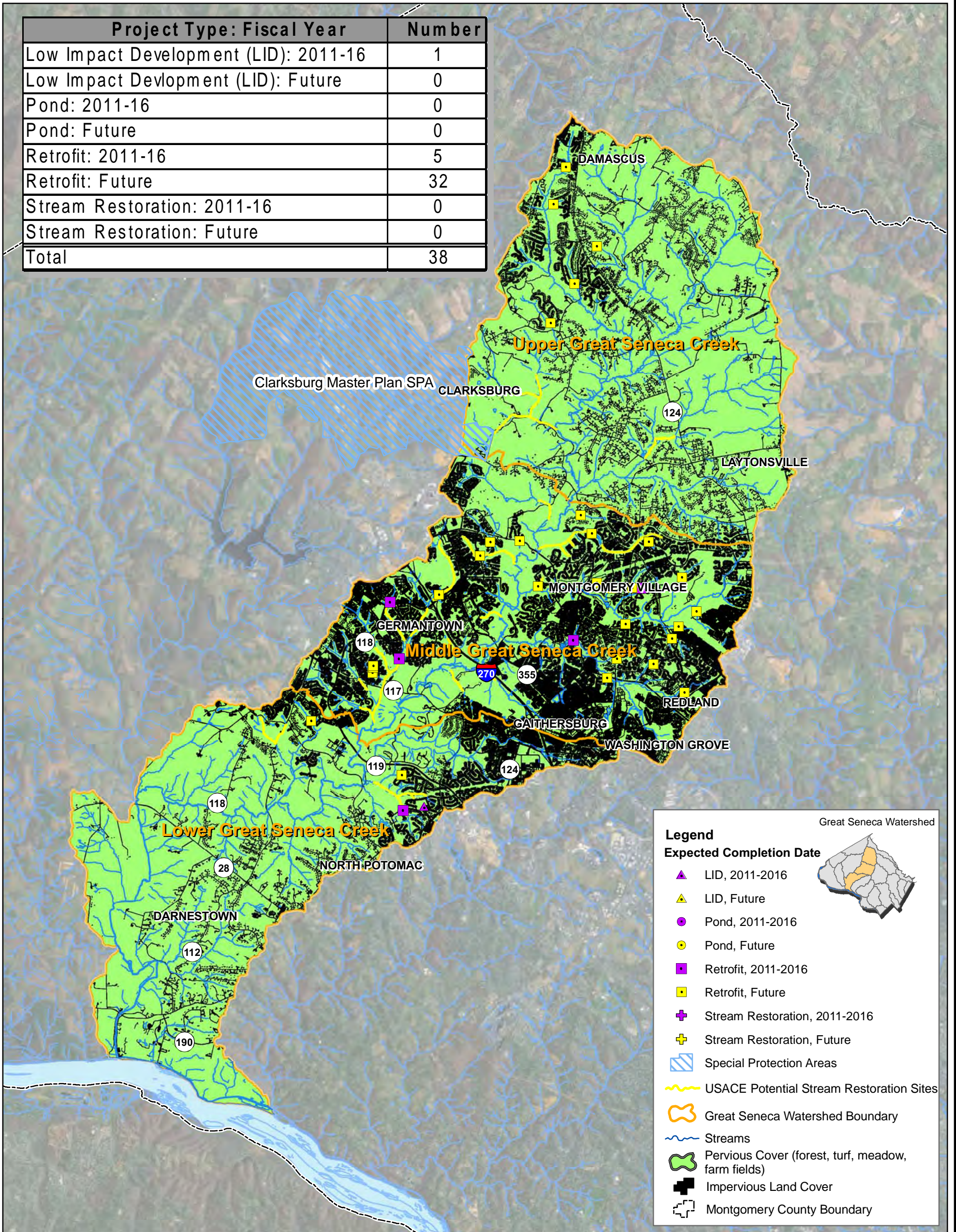
Location



*Excludes other municipalities, all MNCPPC lands, rural areas, Federal and State property, and Federal and State Roads

MAP 2. GREAT SENECA WATERSHED RESTORATION OPPORTUNITIES *

Project Type: Fiscal Year	Number
Low Impact Development (LID): 2011-16	1
Low Impact Development (LID): Future	0
Pond: 2011-16	0
Pond: Future	0
Retrofit: 2011-16	5
Retrofit: Future	32
Stream Restoration: 2011-16	0
Stream Restoration: Future	0
Total	38



Legend

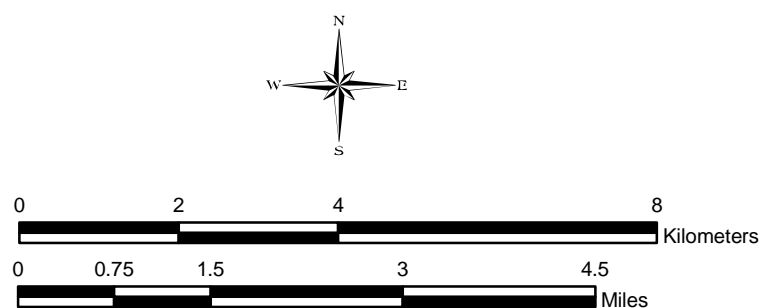
Expected Completion Date

- ▲ LID, 2011-2016
- ▲ LID, Future
- Pond, 2011-2016
- Pond, Future
- Retrofit, 2011-2016
- Retrofit, Future
- ✚ Stream Restoration, 2011-2016
- ✚ Stream Restoration, Future
- ▨ Special Protection Areas
- ~ USACE Potential Stream Restoration Sites
- Great Seneca Watershed Boundary
- ~ Streams
- Pervious Cover (forest, turf, meadow, farm fields)
- Impervious Land Cover
- Montgomery County Boundary

Great Seneca Watershed

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Location



*Excludes other municipalities, all MNCPPC lands, rural areas, Federal and State property, and Federal and State Roads