Anacostia River Watershed Restoration Plan

Watts Branch Subwatershed
Provisional Restoration Project Inventory

June 2009

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I. Background

The 3.8-square-mile Watts Branch subwatershed is in the Anacostia River watershed (HUC# 02070008). As seen in Figure 1, the Watts Branch subwatershed is located in Prince George's County and the northeast portion of the District of Columbia. Seventy percent of this highly urbanized subwatershed supports residential land use with only 22 percent in forest cover and 8 percent in parkland. While most of the Watts Branch is a free-flowing tributary, the lower reaches are tidally influenced down through its confluence with the main channel of the tidal Anacostia River. Dominant water quality problems include elevated levels of ortho-phosphorus, fecal coliform, and ammonia nitrogen.

Recognizing both the severity and extent of environmental and ecological problems affecting the Anacostia River watershed and the need to better coordinate restoration efforts and resources, the three jurisdictions and the Metropolitan Washington Council of Governments entered into a Federal cost-sharing agreement with the U.S. Army Corps of Engineers to prepare a 10-year watershed restoration plan. The Anacostia River Watershed Restoration Plan will identify opportunities and approaches for restoring and protecting the 14 major subwatersheds and the tidal river reach within the Anacostia River basin.

Figure 1- Watts Branch Subwatershed

Figure 2- Watts Branch Subwatershed Unit

II. Restoration Inventory

The following sections include stormwater retrofit, stream restoration, wetland restoration, fish blockage removal, riparian restoration, invasive plant management, and wildlife habitat improvement projects, land acquisition and other-related projects and actions for further evaluation by others. As previously noted, the restoration projects presented herein are conceptual or planning level, only. It is recognized that more detailed drainage and site analyses are required, and that facility size and costs shown represent approximations.

To facilitate reader understanding of the *Watts Branch Subwatershed: Provisional Restoration Project Inventory*, information has been organized into the following six sections:

- Section A - Impervious Features Summary
- Section B - Existing Stormwater Management Facilities Summary
- Section C - Candidate Restoration Project Summary
- Section D - Upper Watts Branch Candidate Restoration Projects
- Section E - Middle Watts Branch Candidate Restoration Projects
- Section F - Lower Watts Branch Candidate Restoration Projects

A. Impervious Features Summary

Figure 3 - Summary: Watts Branch Impervious Features

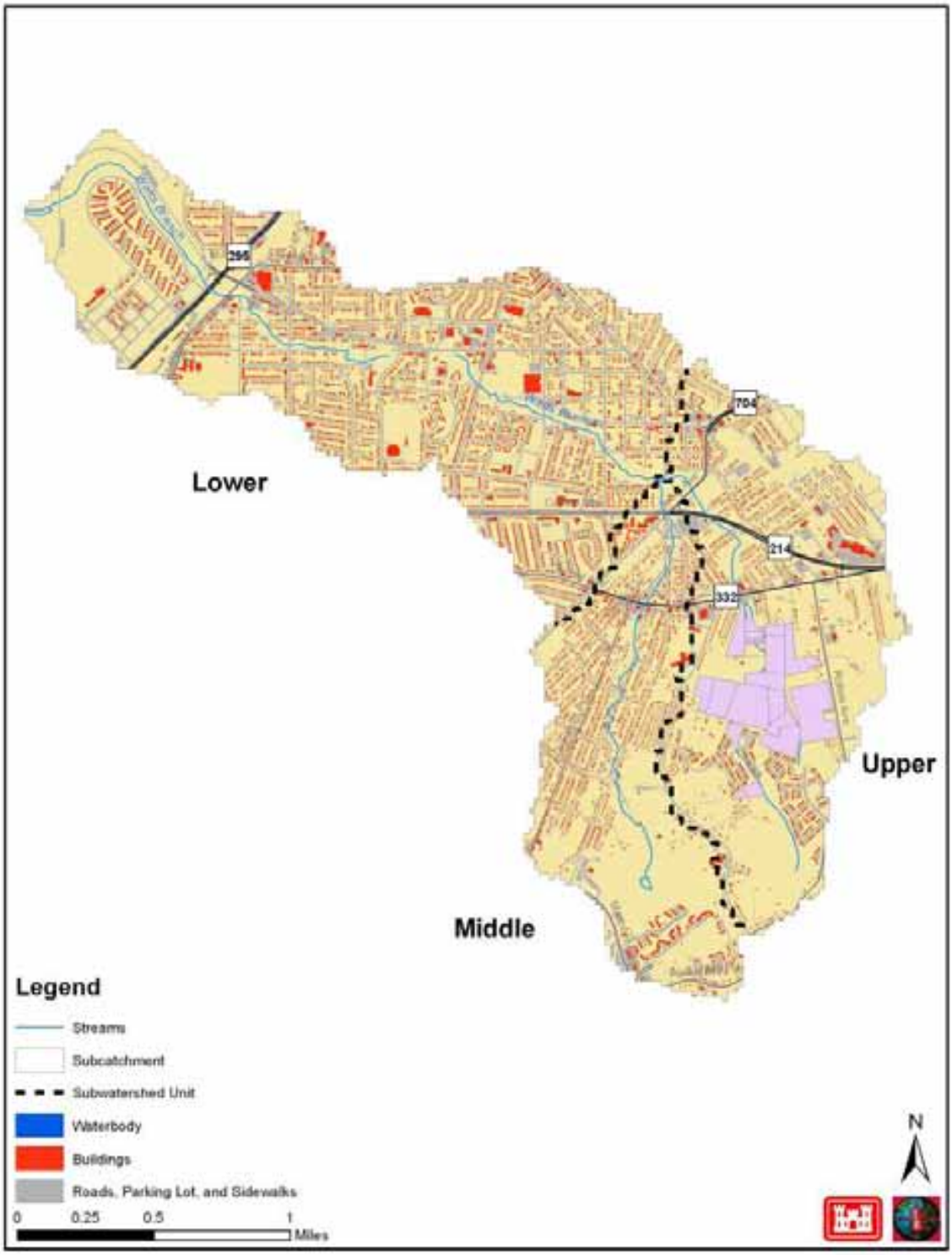

Table 1. Watts Branch: Summary - Impervious Surfaces

Category	Acres	Miles
1. Roads	**299.3**	**74.1**
a. State/Federal	22.8	2.9
b. Local	276.5	71.2
2. Parking Lots	**120.9**	
a. Public/Institutional	14.6	
b. Private	106.3	
3.Roofs	**229.4**	
a. Public/Institutional	13.0	
b Private	88.5	
c. Single Family	127.9	
3. Other	**113.4**	
a. Sidewalks *	34.5	
b. Single Family Driveways ^	78.9	
Total	**763**	**74.1**
Average Percent Imperviousness	31%	
# of Single Family Homes	5,638	
Total Drainage Area	**2,464**	
^ Driveways assumptions	Average Driveway=0.014 acres	
* Sidewalks assumptions	Width equal to 4 feet with a sidewalk running the length of one side of the road.	
Note: Drainage Area and Tributary Area calculated using the USGS 30-meter digital elevation model (DEM).		

B. Existing Stormwater Management Facilities Summary

Figure 4 - Summary: Watts Branch Existing Stormwater Management BMP Sites

Table 2. Watts Branch: Summary – Watts Branch Existing Stormwater Management BMPs

Type	Number of Facilities	Percent of Total	D.A. Controlled (acres)
Extended Detention Structure-Dry	3	15.8%	163.5
Retention Pond (Wet Pond)	2	10.5%	27.7
Baysaver	1	5.3%	1.3
Infiltration Basin	1	5.3%	0.5
Infiltration Trench	3	15.8%	0.7
Infiltration and Exfiltration	1	5.3%	0.6
Manhole Sand filter	2	10.5%	0.8
Modified Catchment Manhole	1	5.3%	0.2
Underground Sand filter	5	26.3%	6.1
Total	**19**	**100.0%**	**201.4**

D.A. = Drainage Area

C. Candidate Restoration Project Summary

Table 3. Summary: Restoration Candidate Projects

	Candidate Project Type	Number of Projects	Estimated Cost ($)	Impervious Acreage Controlled (acres)	Length (feet)	Acreage (acres)
1	Stormwater Retrofit	99	79,364,000	282.2	-	-
2	Stream Restoration	13	2,146,000	-	7,130.0	-
3	Wetland Creation/Restoration	6	62,400	-	-	1.4
4	Fish Blockage Removal/Modification	3	1,352,000	-	12,300	-
5	Riparian Reforestation, Meadow Creation, Street Tree and Invasive Management	15	246,600	-	-	31.9
6	Trash Reduction	31	81,700	-	22,280	-
7	Toxic Remediation	-	-	-	-	-
8	Parkland Acquisition					
	Total	167	83,252,700	282.2	41,710	33.3

Table 4. Watts Branch Subwatershed: Provisional Restoration Project Inventory Unit Costs*

No.	Practice	Approximate Unit Cost ($)
	Stormwater Retrofit	
1	Existing Stormwater Management Pond/Wetland Retrofitting	~ $1,000-3,000/acre of drainage
2	New Stormwater Management Pond/Wetland Construction	~$3,000-5,000/acre of drainage
3	LID Bioretention (w/Underdrain System)	~ $100,000/ impervious acre
4	LID Curbside/Street Planter	~ $100,000/ impervious acre
5	LID Tree Box Filter	~ $54,450-65,340/impervious acre
6	LID Green Roof	~ $42/square foot
7	LID Single Family Home Rain Garden	~ $5,000 per individual garden
8	LID Single Family Home Rain Barrel	~ $200/barrel (Typically, two per house)
9	Sand Filter	~$20,000 to $25,000 per impervious acre**
10	Underground Pipe Storage	~15,000 per impervious acre***
11	Permeable Pavement	~ $4.0 per square foot
12	Regenerative Stormwater Conveyance System	~ $370/ft
	Stream Restoration/Fish Passage/Wetland Creation	
13	Stream Restoration	~ $300/linear foot (LF)
14	Concrete Stream Channel Removal	~ $1,000/LF
15	Stream 'Day Lighting'	~ $2,000/LF
16	Fish Passage/Riffle Grade Control Structure	~ $150,000 per one foot barrier height
17	Wetland Creation	~50,000/acre
	Riparian Reforestation/Meadow Creation/Invasive Plant Management	
18	Riparian Reforestation	~9000/acre
19	Wildflower Meadow Creation	~5000/acre
20	Invasive Plant Management	~5000/acre
	Trash Reduction/Water Quality	
21	Manual Trash Pickup	~ $300/100LF
22	Fresh Creek Trash Netting System	~ $1,000/acre of drainage
23	Signage	~ $1600
24	"Storm Flo" End-of-Pipe Trash Catching System	~ $ 4,000/ acre of drainage
25	"Regenerative Air" Street Sweeping****	~$50/curb mile/year
26	Storm Drain "InletGuard" Trash Grate	~$500/inlet

*includes (where appropriate) design and construction/installation costs
** escalated to 2009 dollars from "*Schueler, T.R. 1994. Developments in Sand Filter Technology to Improve Stormwater Runoff Quality, Watershed Protection Techniques 1(2):47-54"*
*** *USEPA 20001 Storm Water Technology Fact Sheet On-Site Underground Retention/Detention EPA 832-F-01-005*
**** USEPA-certified as water quality BMP

*includes (where appropriate) design and construction/installation costs
** escalated to 2009 dollars from "*Schueler, T.R. 1994. Developments in Sand Filter Technology to Improve Stormwater Runoff Quality, Watershed Protection Techniques 1(2):47-54"*
*** *USEPA 20001 Storm Water Technology Fact Sheet On-Site Underground Retention/Detention EPA 832-F-01-005*
**** USEPA-certified as water quality BMP

D. Upper Watts Branch Candidate Restoration Projects

Table 5. Upper Watts Branch – Impervious Surfaces

Category	Upper	
	Acres	**Miles**
1. Roads	**69.1**	**18.6**
a. State/Federal	5.6	1.0
b. Local	63.5	17.6
2. Parking Lots	**36.2**	
a. Public/Institutional	2.6	
b. Private	33.6	
3.Roofs	**47.6**	
a. Public/Institutional	0.7	
b. Private	22.9	
c. Single Family	24.0	
4. Other	**21.2**	
a. Sidewalks *	8.5	
b. Single Family Driveways ^	12.7	
Total	**174.1**	**18.6**
Avg. % Imperviousness	22.9%	
# of Single Family Homes	907.0	
Total Drainage Area	**761.0**	

^ Driveways are assumptions Average Driveway =0.014 acres

*** Sidewalks are assumptions** Width equal to 4 feet with the sidewalk running the length of one side of the road

Note: Drainage Area and Tributary Area calculated using the USGS 30-meter DEM.

Figure 5 – Upper Watts Branch Candidate Stormwater Retrofit Sites

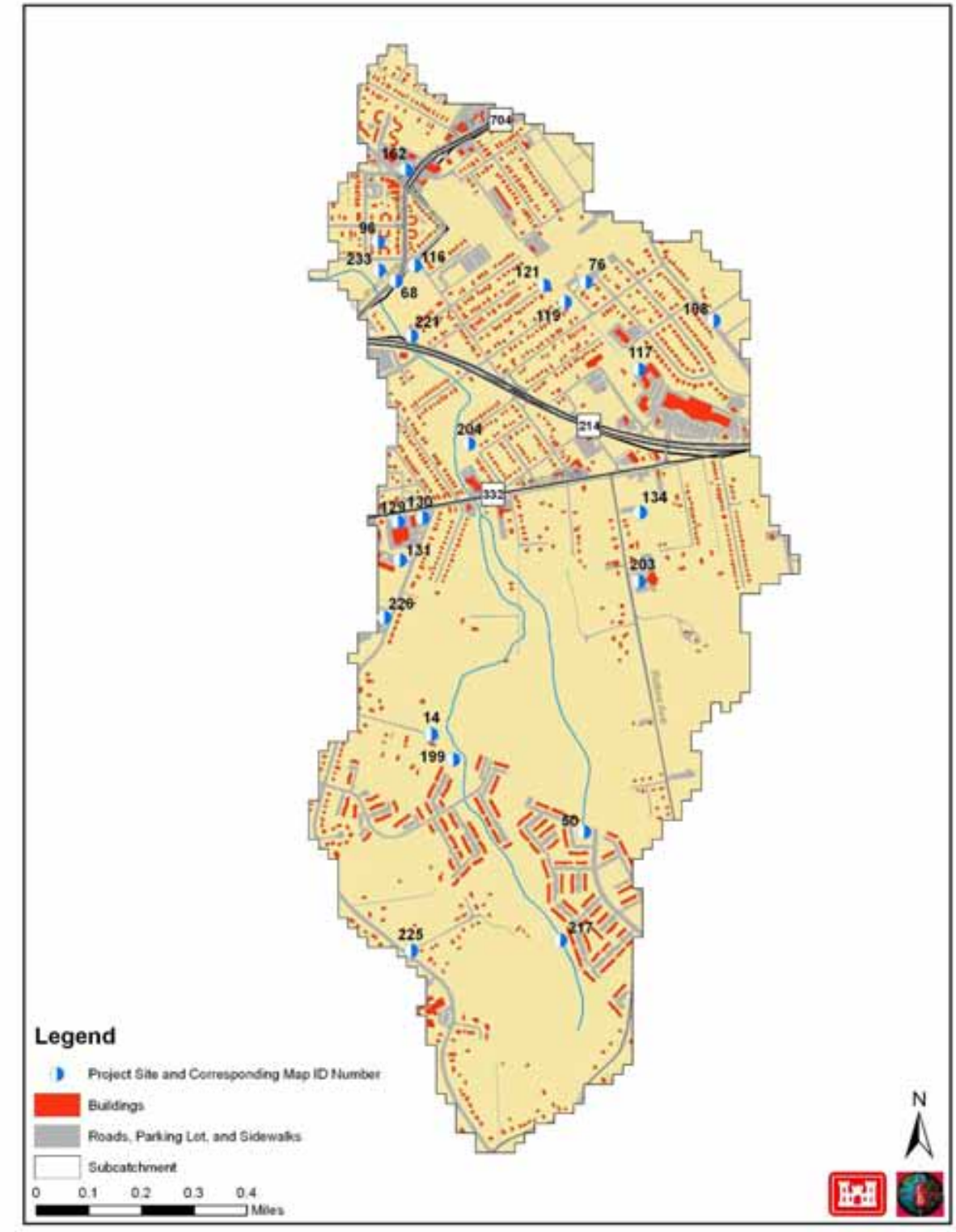

Figure 6 – Upper Watts Branch Candidate Stormwater Retrofit Drainage Areas

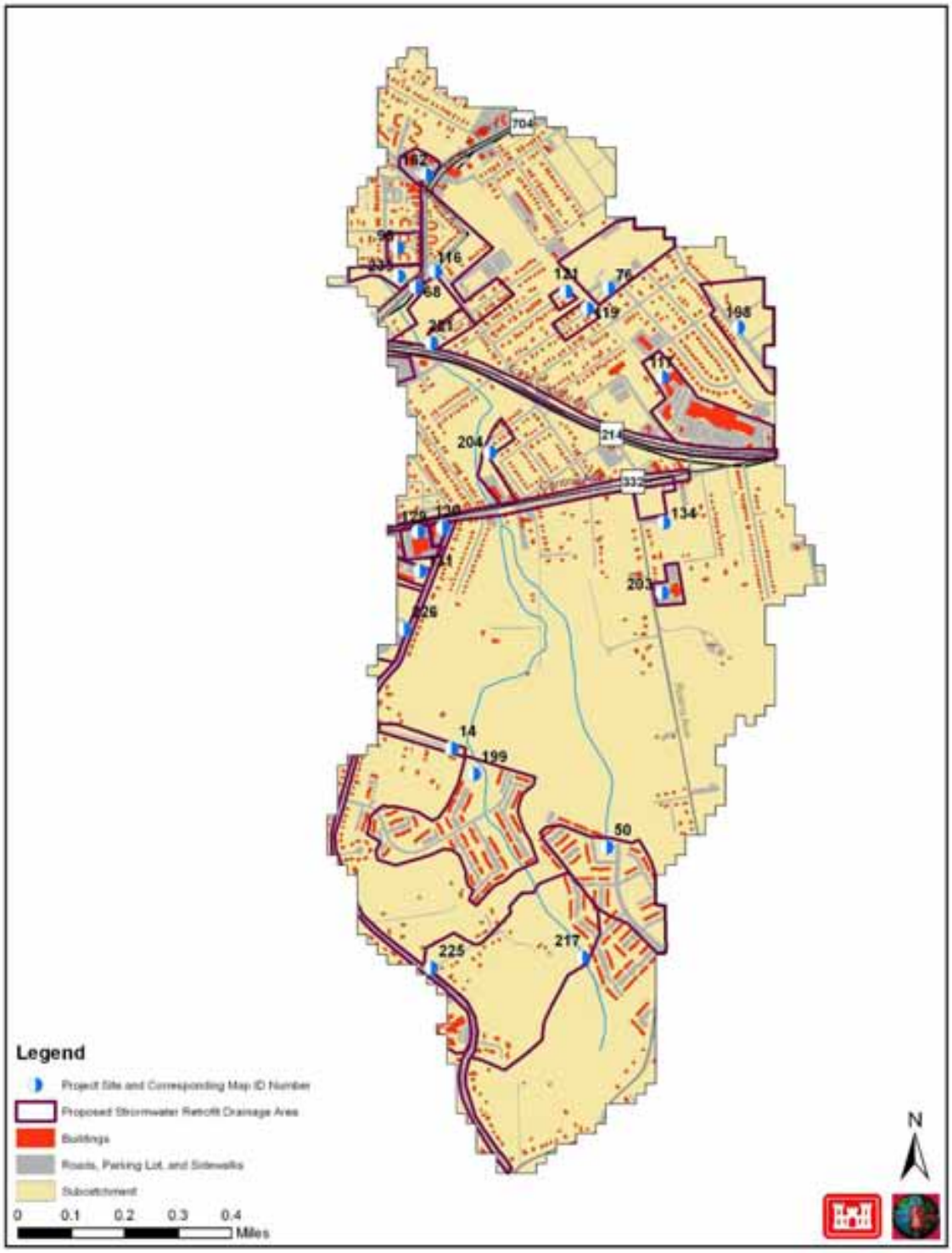

Figure 7 – Upper Watts Branch Candidate Stormwater Retrofit and Existing Stormwater Retrofit Drainage Areas

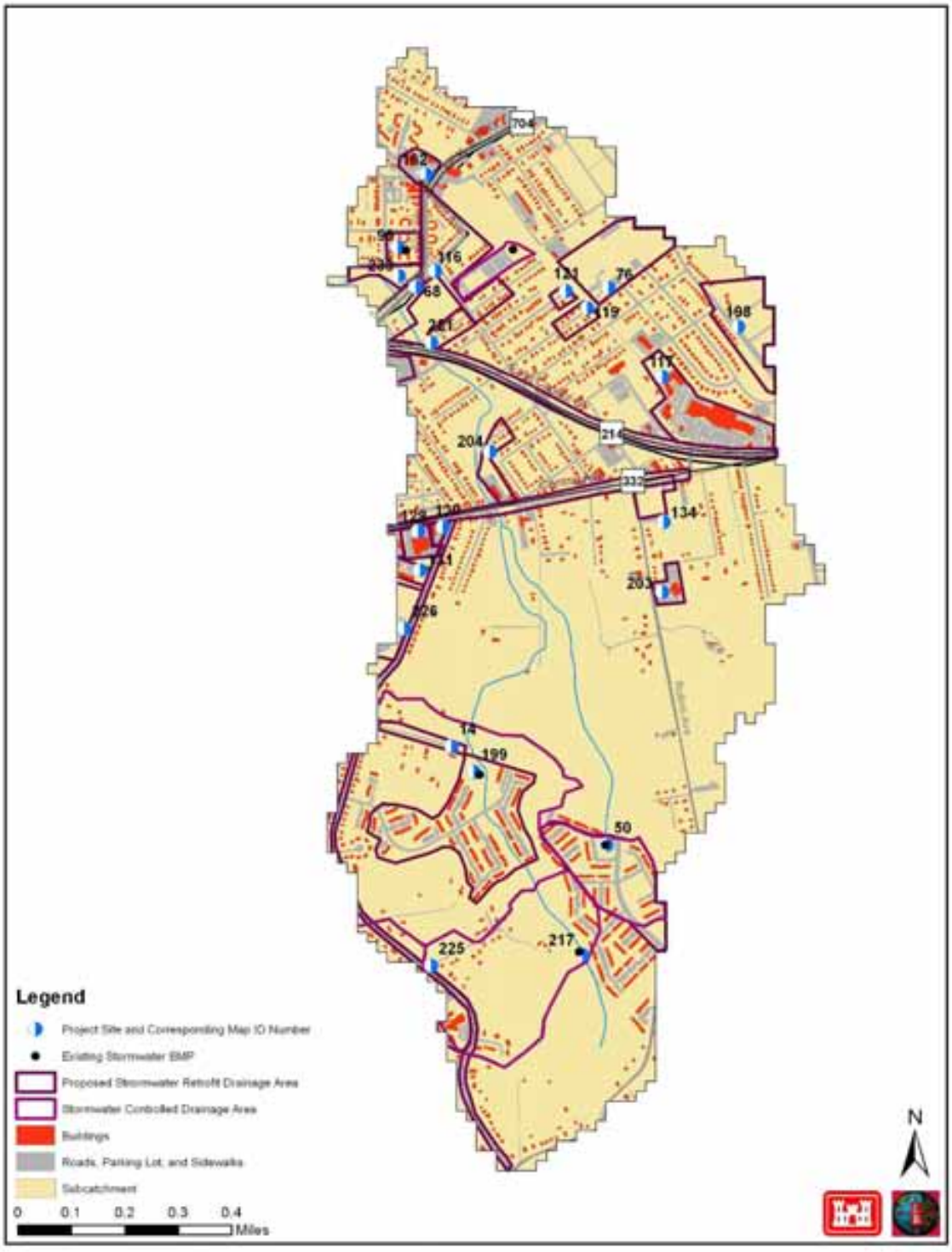

Table 6. Upper Watts Branch – Stormwater Retrofit Projects

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-U-01-S-1	14	PG	East end of Highmount Lane, Capitol Heights, MD	18 H 5, 18 J 5	1c	Public	2.1	32	0.7	LID Bioretention	67,000		
WB-U-01-S-2	50	PG	BMP 0153 located on Gladstone Way, Capitol Heights, MD	18 J 5	1b	Public	17.2	56	9.6	Stormwater Wetland; Remove Trash, and Install Trash Grates.	860,000		
WB-U-01-S-3	68	DC	63rd Street, 220 feet south of intersection of 63rd Street NE and Banks Street NE, Washington, DC	18 H 2	1c	Public	4.6	48	2.2	Inlet Repair, LID Curbside Planter LID Permeable Pavement	260,000		
WB-U-01-S-4	233	DC	Watts Branch Recreation Center and Playground, 6201 Banks Place NE, Washington, DC	18 H 2	1b	Public	2.2	52	1.1	LID Rain Garden, LID Permeable Pavement	16,000		
WB-U-01-S-5	76	PG	311 68th Place at John Feggans Center/Seat Pleasant Police Department/Public Park Seat Pleasant, MD	18 J 2	1c	Public	11.5	28	3.2	LID bioretention, LID permeable pavement, LID green roof	1,430,400		
WB-U-01-S-6	96	DC	Neighborhood between Clay Street and Banks Place and 62nd Street NE and 63rd Street NE, Washington, DC	18 H 2	1b	Mixed	2.4	42	1.0	LID Rainscapes	100,000		
WB-U-01-S-7	116	PG	Southeast corner of the Maryland Park Street and Southern Avenue intersection, Capitol Heights, MD	18 H 2	1c	Public	11.8	53	6.2	LID Bioretention	620,000		
WB-U-01-S-8	117	PG	Extended detention wet pond for Addison Plaza, located along the Chesapeake Beach railway trail, Capitol Heights, MD	18 K 2	1b	Public	12.8	89	11.4	Existing Stormwater Management Facility Retrofit	25,000		
WB-U-01-S-9	119	PG	The northern dead end of Coolidge Street overlooking the Chesapeake Beach railway trail, Capitol Heights, MD	18 J 2	1c	Public	1.9	42	0.8	Asphalt Removal LID Bioretention	80,000		
WB-U-01-S-10	121	PG	The northern dead end of Dade Street near 5819 Dade Street, overlooking the Chesapeake Beach railway trail, Capitol Heights, MD	18 J 2	1c	Public	0.8	42	0.3	Asphalt Removal LID Bioretention	33,000		
WB-U-01-S-11	221	PG	The southern dead end of Eagle Street near Capitol Avenue, Capitol Heights, MD	18 H 3	1c	Public	2.0	44	0.9	Asphalt Removal LID Bioretention	90,000		
WB-U-01-S-12	129	PG	Capitol Heights Post Office on Central Avenue	18 H 4	1c	Public	2.1	92	1.9	LID Bioretention	190,000		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-U-01-S-13	130	PG	Action Supply Company and adjacent paved lot at the corner of Central Avenue and Suffolk Avenue, Capitol Heights, MD	18 H 4	1c	Mixed	0.7	97	0.7	LID Bioretention	70,000		
WB-U-01-S-14	131	PG	Gateway Village Senior Residence, 505 Suffolk Avenue, Capitol Heights, MD	18 H 4	1c	Private	1.6	69	1.1	LID Bioretention	110,000		
WB-U-01-S-15	134	PG	Lyndon Hill Elementary School, Capitol Heights, MD	18 J 3, 18 K 3	1c	Public	2.8	68	1.9	LID Bioretention	190,000		
WB-U-01-S-16	162	DC	DDOE Site SW17, northeast corner of Eastern Avenue and Dix Street NE, Washington, DC	18 H 2	1c	Public	2.0	82	1.6	LID Bioretention LID Tree Box Filter	160,000		
WB-U-01-S-17	204	PG	Unnamed community park at the southwestern dead end of Bugler Street, Capitol Heights, MD	18 J 3	1c	Public	3.2	42	1.3	LID Bioretention	130,000		
WB-U-01-S-18	198	PG	Addison Road between Crown Street and Avon Street, Capitol Heights, MD	18 K 2, 18 K 3	1b	Public	10.0	43	4.3	Greenstreet Rainscape	430,000		
WB-U-01-S-19	203	PG	Kingdom Hall of Jehovah's Witnesses on 410 Rollins Avenue, Capitol Heights, MD	18 K 4	1b	Private	2.0	22	0.4	Existing Stormwater Management Facility Retrofit	2,000		
WB-U-01-S-20	199	PG	Townhouse community located on Highview Place, Capitol Heights, MD	18 J 5	1b	Public	27.3	37	10.1	Existing Stormwater Management Facility Retrofit	21,000		
WB-U-01-S-21	217	PG	BMP 0150 - dry detention pond located approximately 150 feet southwest of the intersection of Applegarth Place and Dutton Way, Capitol Heights, MD	18 J 5	1b	Public	39.4	52	20.5	Existing Stormwater Management Facility Retrofit	40,000		
WB-U-01-S-22	226	PG	Capitol Heights Elementary School, Capitol Heights, MD	18 H 4	1c	Public	8.9	38	3.4	LID Rain Garden LID Bioretention	350,000		
WB-U-01-S-23	225	PG	Suffolk Avenue/Brooke Road, Capitol Heights, MD	18 H 3, 18 J 3, 18 H 4, 18 H 5 18 H 6, 18 J 6, 18 J 7	1b	Public	9.1	77	7.0	LID Greenstreet	700,000		

DC = District of Columbia, PG = Prince George's County, D.A. = Drainage Area - [1] 1a= Water quantity, 1b= Water quantity and quality, 1c= Water quality

Figure 8c – Candidate Stormwater Retrofit Project		
Site Location:	63rd Street, 220 feet south of intersection of 63rd Street NE and Banks Street NE, Washington, DC	
Project No.:	WB-U-01-S-3	
ADC Map Book Location:	18 H 2	Map ID: 68
Approximate Associated Drainage Area (acres):	4.6	
Approximate Imperviousness:	48%	2.2 ac
Description of Existing Conditions:	A defective stormwater inlet on east side of 63rd Street is flooding the roadway. No sidewalk exists, but a path has been worn into the 250-foot-long and 20-foot-wide grass right-of-way on the road shoulder.	
Project Description:	**Inlet Repair, LID Curbside Planter, LID Permeable Pavement** - Clean out inlet. Install a curbside planter system along the right-of-way. Construct a new sidewalk of porous/permeable pavement.	

Figure 8d – Candidate Stormwater Retrofit Project		
Site Location:	Watts Branch Recreation Center and Playground, 6201 Banks Place NE, Washington, DC	
Project No.:	WB-U-01-S-4	
ADC Map Book Location:	18 H 2	Map ID: 233
Approximate Associated Drainage Area (acres):	2.2	
Approximate Imperviousness:	52%	1.1 ac
Description of Existing Conditions:	Playground with grassy areas and basketball courts and small recreation center with downspouts that are connected to impervious surfaces.	
Project Description:	**LID Rain Garden, LID Permeable Pavement** - Disconnect downspouts from stormwater system and redirect the runoff to rain gardens. At next scheduled renovation, install porous/permeable pavement on courts and on walkways within the park area.	

Figure 8f – Candidate Stormwater Retrofit Project		
Site Location:	Neighborhood between Clay Street and Banks Place and 62nd Street NE and 63rd Street NE, Washington, DC	
Project No.:	WB-U-01-S-6	
ADC Map Book Location:	18 H 2	Map ID: 96
Approximate Associated Drainage Area (acres):	2.4	
Approximate Imperviousness:	42%	1.0 ac
Description of Existing Conditions:	Neighborhood with alley between homes. Most downspouts connected to stormwater system. Small existing grass areas present.	
Project Description:	**LID Rainscapes** – Disconnect downspouts and install LID rain barrels. Construct LID curb extension bioretention systems at various locations in the street rights-of-way.	

Figure 8p – Candidate Stormwater Retrofit Project		
Site Location:	District of Columbia Department of Environment (DDOE) Site SW17, northeast corner of Eastern Avenue and Dix Street NE, Washington, DC	
Project No.:	WB-U-01-S-16	
ADC Map Book Location:	18 H 2	Map ID: 162
Approximate Associated Drainage Area (acres):	2.0	
Approximate Imperviousness:	82%	1.6 ac
Description of Existing Conditions:	Right-of-way area on corner with hardscaping and small existing vegetated island. Drainage from Dix Street and Eastern Avenue. Inlets present.	
Project Description:	**LID Bioretention** - Install bioretention systems and curb cuts in the existing grass islands and remove some of the existing hardscaping.	

Figure 15 – Upper Watts Branch Candidate Riparian Management Sites

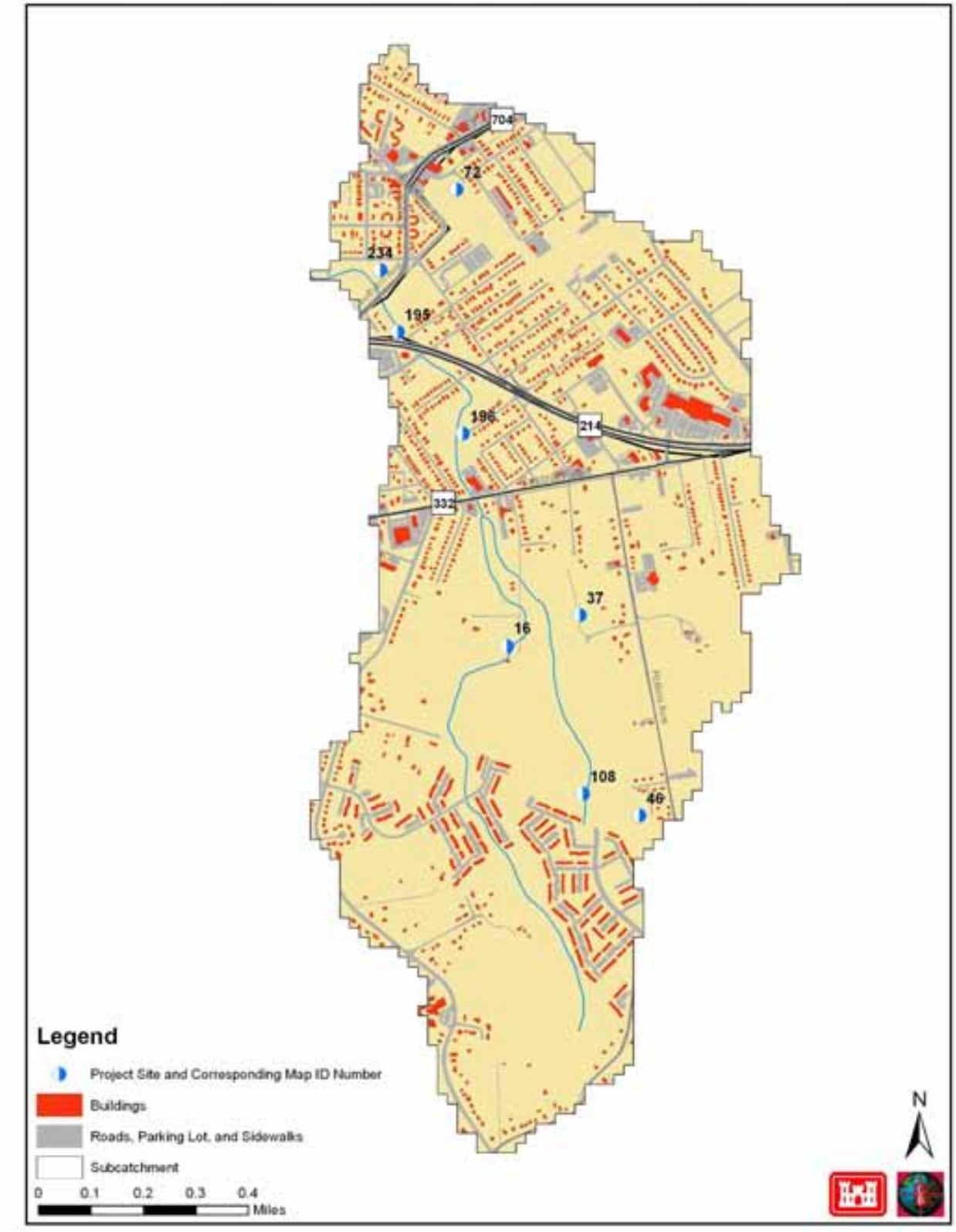

Table 10. Upper Watts Branch – Riparian Restoration Projects

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx Acreage	General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
WB-U-05-R-1	46	PG	Immediately west of Old Walnut Street, Capitol Heights, MD	18 K 5	1d	Public	0.2	Invasive Species and Trash Removal	1,500		
WB-U-05-R-2	108	PG	Tributary north of Gladstone Way, Capitol Heights, MD 20743	18 J 5	1d	Public	0.4	Invasive species and Trash Removal	2,000		
WB-U-05-R-3	234	DC	Watts Branch Recreation Center and Playground, 6201 Banks Place NE, Washington, DC	18 H 2	1b	Public	0.1	Riparian Reforestation	1,200		
WB-U-05-R-4	16	PG	West of the residence on the south end of Ventura Avenue, Capitol Heights, MD	18 J 4	1b	Public	0.2	Riparian Reforestation	1,800		
WB-U-05-R-5	72	PG	Southwest end of James Farmer Way, Seat Pleasant, Capitol Heights, MD	18 J 2	1d	Public	1.8	Invasive Species Removal Riparian Reforestation	17,700		
WB-U-05-R-6	196	PG	Perennial tributary between Central Avenue and Capitol Avenue, east of Tunic Avenue, Capitol Heights, MD	18 H 3, 18 J 3	1d	Public	4.0	Invasive Species Removal	19,800		
WB-U-05-R-7	195	PG	Watts Branch tributary between Eagle Street and Southern Avenue, Capitol Heights, MD	18 H 2, 18 H 3	1b,1d	Public	1.8	Invasive Species Removal, Riparian Reforestation	25,500		

Dc = District of Columbia
PG = Prince George's County
[1] 1a= Upland Reforestation, 1b= Riparian Reforestation, 1c= Meadow Creation, 1d= Invasive Plant Management

Figure 16c – Candidate Riparian Restoration Project		
Site Location:	District of Columbia Department of Environment (DDOE) Site TP1, Watts Branch Recreation Center and Playground, 6201 Banks Place NE, Washington, DC	
Project No.:	WB-U-05-R-3	
ADC Map Book Location:	18 H 2	Map ID:234
Approximate Acreage (acres):	0.1	
Description of Existing Conditions:	Playground with grassy areas and basketball courts and small recreation center with downspouts that are connected to impervious surfaces. Poor riparian buffer.	
Project Description:	**Riparian Reforestation** - Plant endemic trees in park and curb areas.	

E. Middle Watts Branch Candidate Restoration Projects

Table 12. Middle Watts Branch – Impervious Surfaces

Category	Upper	
	Acres	**Miles**
1. Roads	**47.2**	**16.1**
a. State/Federal	1.4	0.5
b. Local	45.8	15.6
2. Parking Lots	**22.9**	
a. Public/Institutional	3.5	
b. Private	19.4	
3.Roofs	**47.7**	
a. Public/Institutional	1.8	
b. Private	14.9	
c. Single Family	31.0	
4. Other	**24.5**	
a. Sidewalks *	7.5	
b. Single Family Driveways ^	16.9	
Total	**142.3**	**16.1**
Avg. % Imperviousness	27%	
# of Single Family Homes	1208.0	
Total Drainage Area	**534.0**	

^ Driveways are assumptions — Average Driveway =0.014 acres

* Sidewalks are assumptions — Width equal to 4 feet with the sidewalk running the length of one side of the road

Note: Drainage Area and Tributary Area calculated using the USGS 30-meter DEM.

Figure 19 – Middle Watts Branch Candidate Stormwater Retrofit Sites

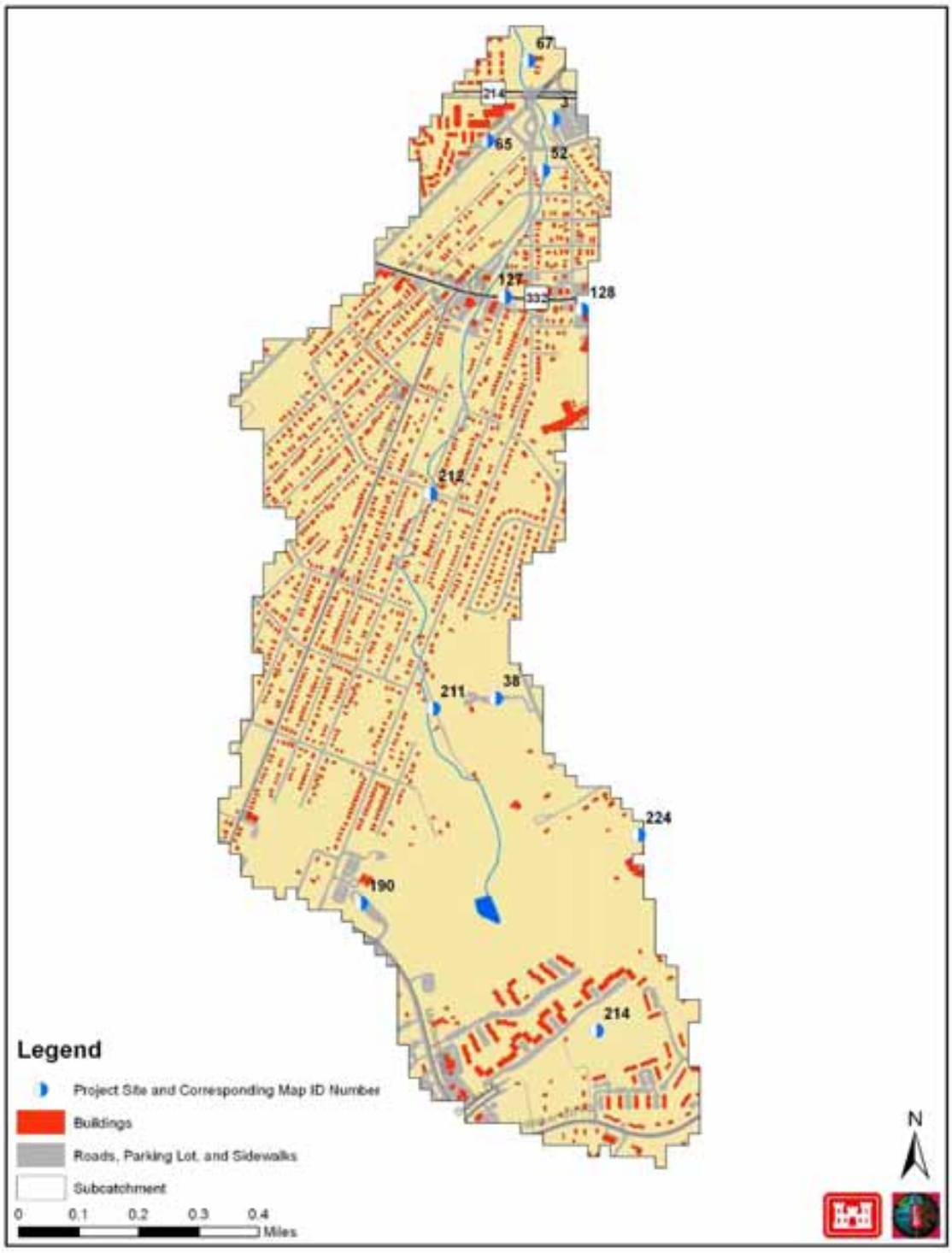

Figure 20 – Middle Watts Branch Candidate Stormwater Retrofit Drainage Areas

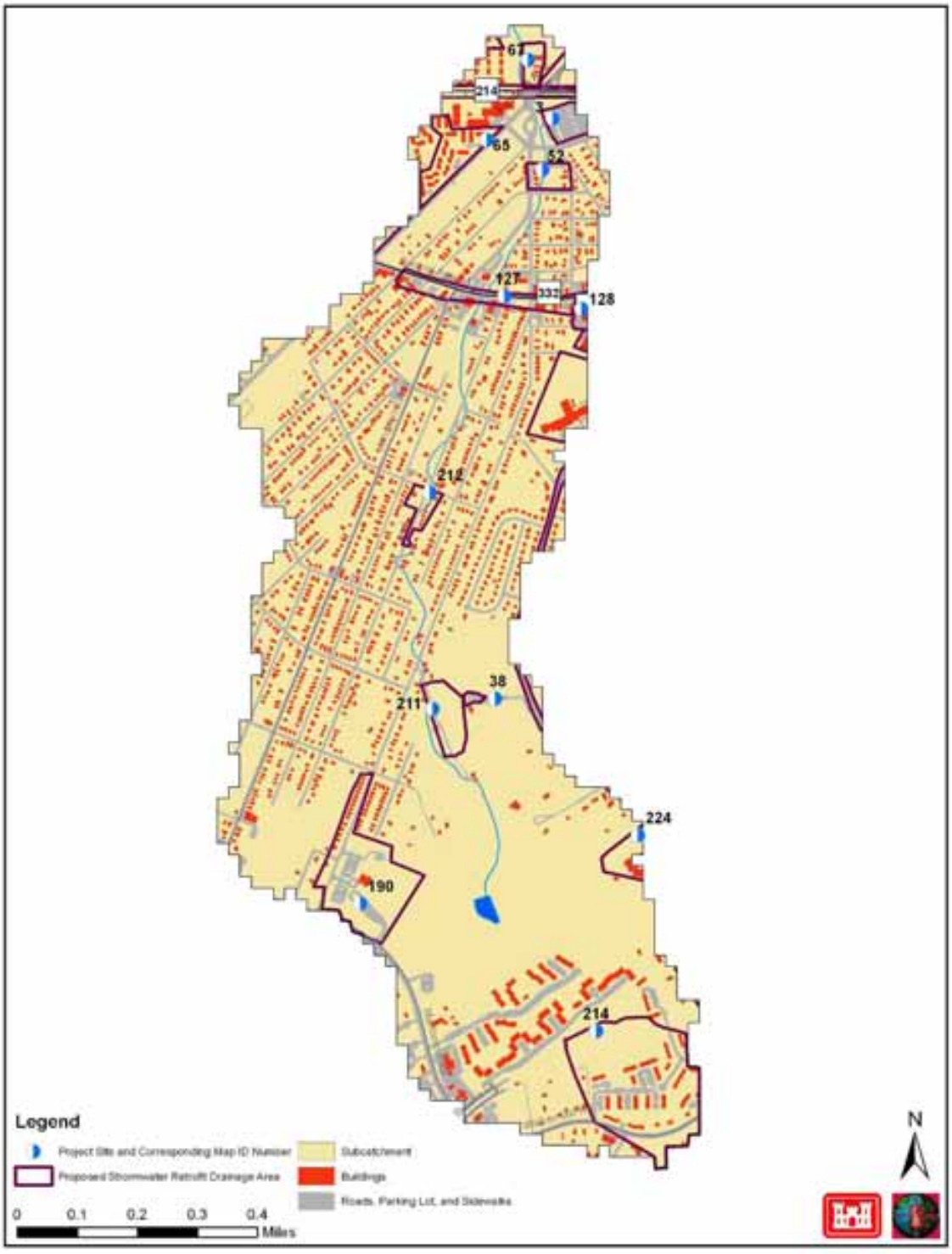

Figure 21 – Middle Watts Branch Candidate Stormwater Retrofit and Existing Stormwater Retrofit Drainage Areas

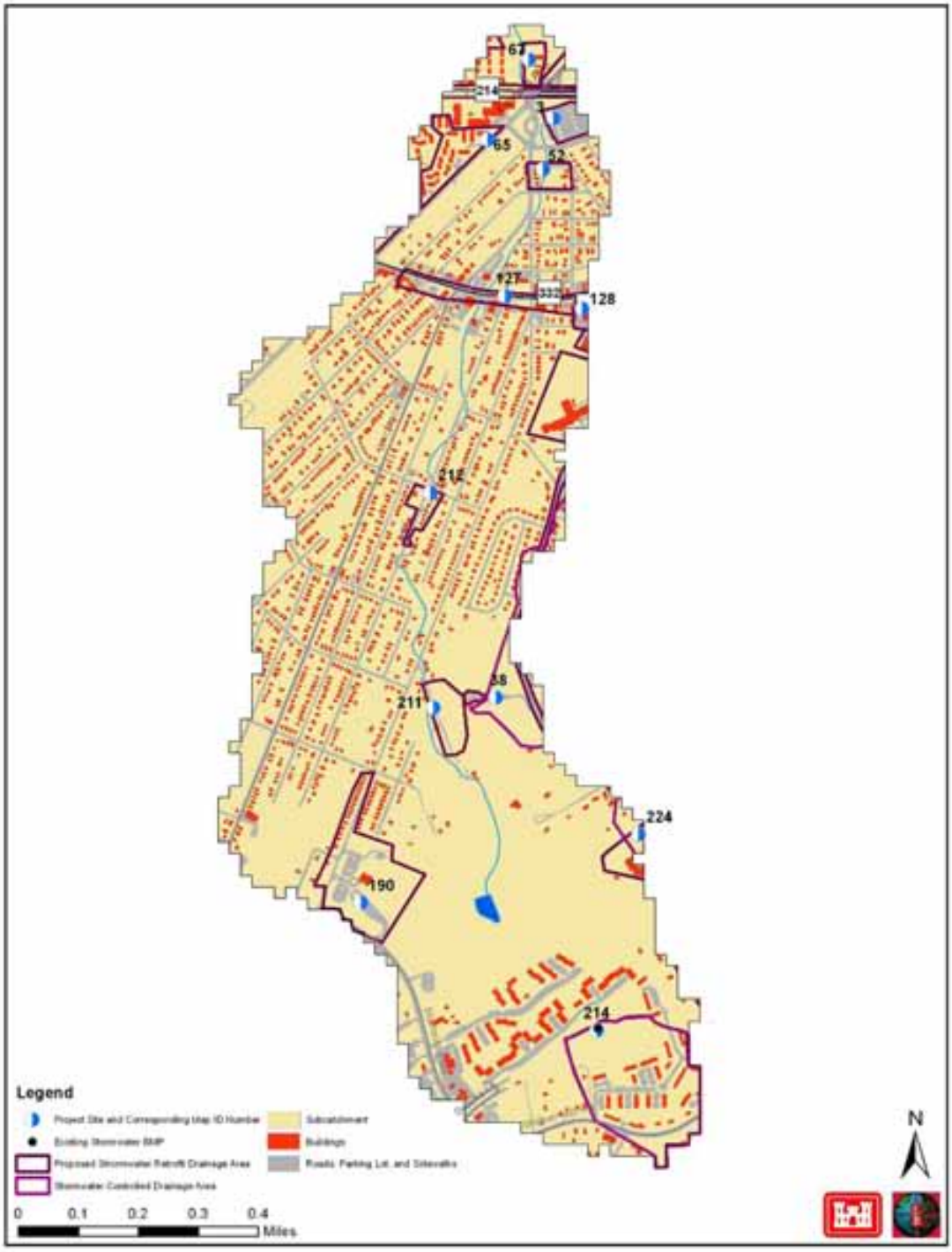

Table 13. Middle Watts Branch – Stormwater Retrofit Projects

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-M-01-S-1	38	PG	Brooke Road Park, west of Brooke Road, Capitol Heights, MD	18 H 5	1b	Public	0.34	22	0.1	LID Bioretention	7,000		
WB-M-01-S-2	52	PG	Faye Street, 115 feet east of Capitol Heights Boulevard, Capitol Heights, MD	18 H 3	1b	Public	2.02	71	1.4	LID Bioretention, Underground Pipe	200,000		
WB-M-01-S-3	65	DC	Southern Homes and Gardens, 5878 Southern Avenue SE, Washington, DC	18 H 3	1b	Private	5.00	76	3.8	LID Bioretention, LID Rain Garden, LID Downspout Disconnect	385,000		
WB-M-01-S-4	67	DC	61st Street NE, 235 feet north of East Capitol Street, Washington, DC	18 H 2	1b	Public	1.57	49	0.8	LID Bioretention	77,000		
WB-M-01-S-5	211	PG	1017 Ute Way, Capitol Heights, MD	18 G 5	1b	Public	3.81	21	0.8	LID Bioretention	80,000		
WB-M-01-S-6	212	PG	5212 Doppler Street, Capitol Heights, MD	18 G 4	1b	Public	1.80	53	1.0	LID Bioretention	95,000		
WB-M-01-S-7	190	PG	William W. Hall Elementary School at 5200 Marlboro Pike and Oakcrest Community Center at 1300 Capitol Heights Boulevard, Capitol Heights, MD	18 G 6	1b	Public	14.22	76	10.8	Existing Stormwater Management Facility Retrofits, LID Bioretention Planters, LID Bioswale	1,081,000		
WB-M-01-S-8	214	PG	Brook Square townhouses, at inlet between townhouses on Larson Court and Brooksquare Drive, Capitol Heights, MD	18 H 7	1b	Private	24.17	35	8.5	LID Bioretention, LID Tree Box Filters	676,800		
WB-M-01-S-9	127	PG	Central Avenue - east of Southern Avenue, Capitol Heights, MD	18 G3, 18 H 3, 18 K 3, 18 J 3	1c	Public	11.49	84	9.7	LID Tree Box Filters, Street Sweeping	579,260		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-M-01-S-10	128	PG	Capitol Heights Fire Station - on Central Avenue south of the intersection with Quire Avenue, Capitol Heights, MD	18 H 3, 18 H 4	1b	Private	1.00	87	0.9	LID Bioretention	87,000		
WB-M-01-S-11	224	PG	Doswell E Brooks Elementary School, Capitol Heights, MD	18 H 6, 18 J 6	1b	Public	5.08	52	2.6	LID Green Roof, LID Downspout Disconnection, LID Bioretention	1,633,368		
WB-M-01-S-12	3	PG	Capitol Heights Metro Station, 133 Central Avenue, Capitol Heights, MD	18 H 3	1b	Public	3.22	96	3.1	LID Bioretention, LID Tree Box Filter	247,200		

DC = District of Columbia
PG = Prince George's County
D.A. = Drainage Area

[1] 1a= Water quantity, 1b= Water quantity and quality, 1c= Water quality

Figure 22c – Candidate Stormwater Retrofit Project		
Site Location:	Southern Homes and Gardens, 5878 Southern Avenue SE, Washington, DC	
Project No.:	WB-M-01-S-3	
ADC Map Book Location:	18 H 3	Map ID: 65
Approximate Associated Drainage Area (acres):	5.00	
Approximate Imperviousness:	76%	3.8 acres
Description of Existing Conditions:	Small complex of apartments with some downspouts draining to small grass lawns and some draining directly to impervious areas. Throughout the complex there are existing green areas, either lawns or courtyards.	
Project Description:	**LID Bioretention, LID Rain Garden, LID Downspout Disconnect -** Install LID bioretention systems in the parking lots. Disconnect downspouts and divert runoff to rain gardens installed in existing grass spaces or concrete open spaces.	

Figure 22d – Candidate Stormwater Retrofit Project		
Site Location:	61st Street NE, 235 feet north of East Capitol Street, Washington, DC	
Project No.:	WB-M-01-S-4	
ADC Map Book Location:	18 H 2	Map ID: 67
Approximate Associated Drainage Area (acres):	1.57	
Approximate Imperviousness:	49%	0.8 acres
Description of Existing Conditions:	Stormwater inlet on west side of street closest to stream drains parts of 61st Street. Inlet drains directly to stream.	
Project Description:	**LID Bioretention** - Install LID curb extension bioretention systems around inlet in surrounding grassy area.	

F. Lower Watts Branch Candidate Restoration Projects

Table 19. Lower Watts Branch – Impervious Surfaces

Category	Upper	
	Acres	**Miles**
1. Roads	**183.0**	**39.4**
a. State/Federal	15.8	1.40
b. Local	167.2	38.0
2. Parking Lots	**61.8**	
a. Public/Institutional	8.5	
b. Private	53.3	
3.Roofs	**134.1**	
a. Public/Institutional	10.5	
b. Private	50.7	
c. Single Family	72.9	
4. Other	**67.7**	
a. Sidewalks *	18.4	
b. Single Family Driveways ^	49.3	
Total	**446.6**	**39.4**
Avg. % Imperviousness	38%	
# of Single Family Homes	3,523	
Total Drainage Area	**1,169**	

^ Driveways are assumptions — Average Driveway =0.014 acres

* Sidewalks are assumptions — Width equal to 4 feet with the sidewalk running the length of one side of the road

Note: Drainage Area and Tributary Area calculated using the USGS 30-meter DEM.

Figure 33 – Lower Watts Branch Candidate Stormwater Retrofit Sites

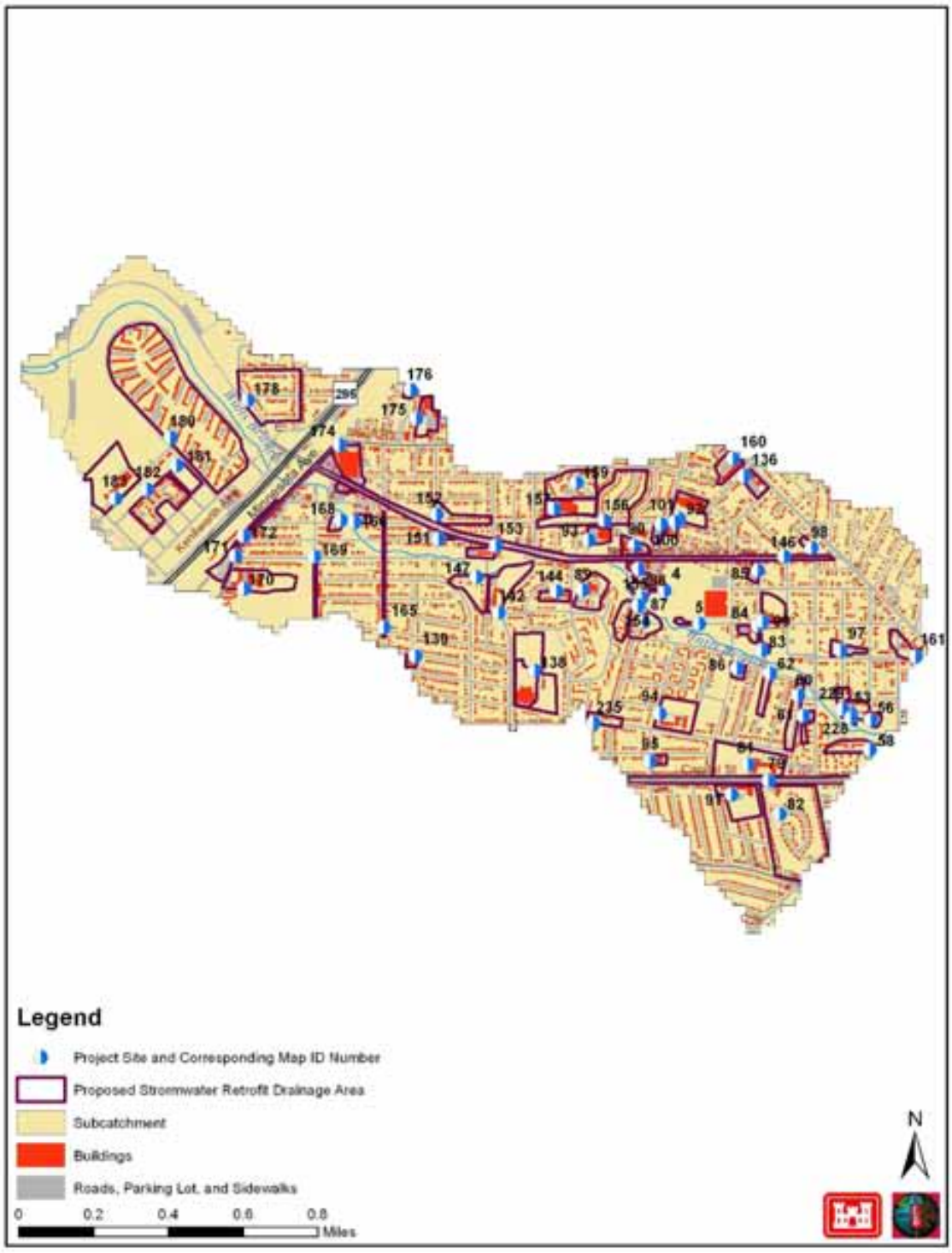

Figure 34 – Lower Watts Branch Candidate Stormwater Retrofit Drainage Areas

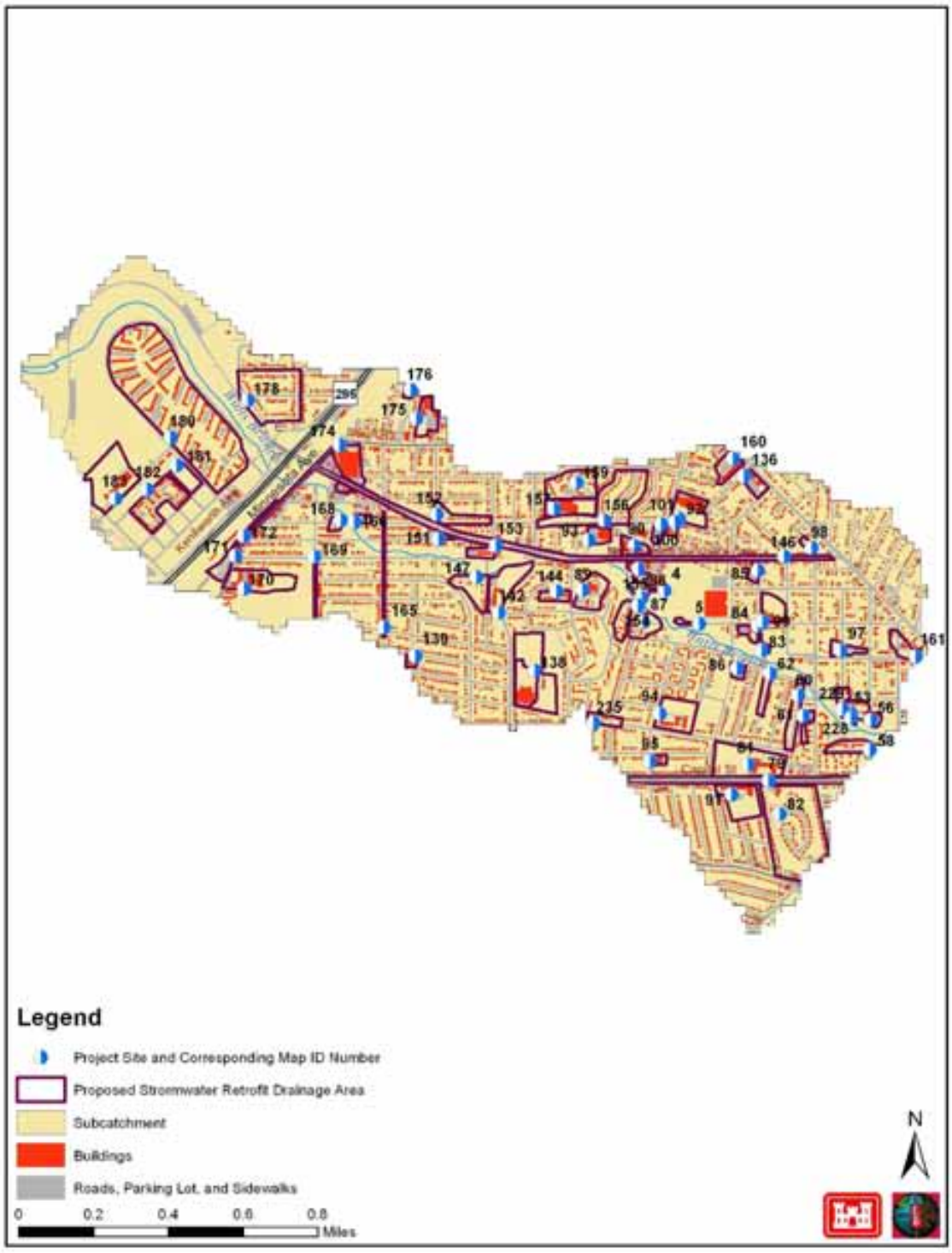

Table 20. Lower Watts Branch – Stormwater Retrofit Projects

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-L-01-S-1	53	DC	5905 Clay Street NE and areas south, Washington, DC	18 H 2	1b	Private	1.7	22	0.4	LID Bioswale; LID Bioretention	37,000		
WB-L-01-S-2	228	DC	South end of 59th Street NE (north of stream), Washington, DC	18 H 2	1b	Public	1.3	38	0.5	LID Bioretention	49,000		
WB-L-01-S-3	56	DC	South end of 60th Street NE (north of stream), Washington, DC	18 H 2	1b	Mixed	0.8	12	0.1	LID Bioretention	10,000		
WB-L-01-S-4	58	DC	North side of Blaine Street NE between 58th Place and 60th Street Washington, DC	18 H 2	1c	Mixed	2.6	8	0.2	LID Bioretention, LID Bioswale	21,000		
WB-L-01-S-5	60	DC	57th Place NE (Blaine Street NE to Clay Street NE), Washington, DC	18 G 2	1a	Public	3.1	26	0.8	LID Bioretention	81,000		
WB-L-01-S-6	61	DC	Northwest corner of 58th Street NE and Blaine Street NE, Washington, DC	18 G 2	1b	Private	1.1	40	0.4	LID Bioretention, Sand Filter, LID Porous/Permeable Pavement	26,950		
WB-L-01-S-7	62	DC	Southwest corner of 55th Place NE and Clay Place NE, Washington, DC	18 G 2	1b	Private	1.5	33	0.5	LID Bioretention	49,000		
WB-L-01-S-8	82	DC	South of East Capitol Street SE between 56th Place and 58th Place, Washington, DC	18 G 3	1b	Private	22.2	68	15.0	LID Rainscapes	9,335,300		
WB-L-01-S-9	91	DC	District of Columbia Department of Environment (DDOE) Site S7, Sousa Middle School, 5601 East Capitol Street Southeast, Washington, DC	18 G 3	1b	Public	5.2	36	1.9	LID Bioretention, LID Bioswale, Sand Filter, LID Rain Garden, LID Downspout Disconnect, LID Green Roof	2,616,300		
WB-L-01-S-10	81	DC	DDOE Site S3, Maya Angelou Public Charter School (W. Bruce Evans), 5600 East Capitol Street NE, Washington, DC	18 G 2, 18 G 3	1b	Public	9.1	32	3.0	LID Bioretention, LID Bioswale, LID Porous/Permeable Pavement, LID Green Roof	2,345,000		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-L-01-S-11	79	DC	East Capitol Street (53rd Street NE to Addison Road), Washington, DC and Capitol Heights, MD	18 F 3, 18 G 3, 18 H 3, 18 I 3, 18 K 3	1b	Mixed	17.8	95	16.9	LID Greenstreet	1,691,000		
WB-L-01-S-12	94	DC	DDOE Site S8, The Arts and Technology Academy Public Charter School, 5300 Blaine Street NE, Washington, DC	18 F2	1b	Public	5.2	38	2.0	LID Bioretention, Porous/Permeable Pavement, LID Green Roof	1,239,000		
WB-L-01-S-13	95	DC	Hughes Memorial United Methodist Church, 25 53rd Street NE, Washington, DC	18 F 2	1c	Private	0.7	74	0.5	LID Rain Garden, LID Downspout Disconnection	5,000		
WB-L-01-S-14	97	DC	DDOE Site SW7, Cornerstone Beulah Baptist Church and Christian Academy, 5820 Dix Street NE, Washington, DC	18 G 2	1b	Private	1.3	79	1.0	LID Bioretention, LID Rain Garden	108,000		
WB-L-01-S-15	98	DC	New Mount Olive Baptist Church and Academy, 710 58th Street NE, Washington, DC	18 G 1	1b	Private	0.5	85	0.4	LID Bioretention, LID Tree Box Filters	33,600		
WB-L-01-S-16	99	DC	DDOE Site S5, Charles R. Drew Elementary School, 5600 Eads Street NE, Washington, DC	18 G 1	1b	Public	2.7	59	1.6	LID Bioretention, LID Rain Garden, LID Porous/Permeable Pavement, LID Green Roof	1,566,500		
WB-L-01-S-17	83	DC	South end of 56th Street NE (just north of stream), Washington, DC	18 G 2	1b	Mixed	0.6	52	0.3	LID Bioretention	31,000		
WB-L-01-S-18	84	DC	Refuge Temple Church, 420 56th Street NE, Washington, DC	18 G 1, 18 G 2	1b	Private	1.1	98	1.1	LID Bioretention, LID Porous/Permeable Pavement, LID Green Roof	749,962		
WB-L-01-S-19	85	DC	Righteous Church of God, 616 56th Street NE, Washington, DC	18 G 1	1c	Private	0.8	68	0.5	LID Bioretention	54,000		
WB-L-01-S-20	86	DC	Evergreen Baptist Church, 325 55th Street NE, Washington, DC	18 G 2	1b	Private	0.9	92	0.8	LID Bioretention	83,000		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-L-01-S-21	87	DC	DDOE Site SW13, northeast corner of Division Avenue NE and Eads Street NE, Washington, DC	18 F 1	1b	Public	2.8	14	0.4	LID Bioretention	39,000		
WB-L-01-S-22	88	DC	Southwest corner of Division Avenue NE and Foote Street NE, Washington, DC	18 F 1	1b	Mixed	1.1	29	0.3	LID Bioretention	32,000		
WB-L-01-S-23	89	DC	DDOE Site S19, Nannie Helen Burroughs Elementary School, Progressive National Baptist Convention, Inc. Headquarters, and National Memorial Chapel, 601 50th Street NE, Washington, DC	18 F 1	1b	Public	4.0	45	1.8	LID Bioretention, LID Rain Garden	5,000		
WB-L-01-S-24	90	DC	The Holy Christian Missionary Baptist Church For All People, 5110 Nannie Helen Burroughs Avenue NE, Washington, DC	18 F 1	1c	Private	1.8	98	1.8	LID Bioretention, LID Bioswale	176,000		
WB-L-01-S-25	100	DC	DDOE Site SW23, Tabernacle Baptist Church parking lot at corner of Hayes Street NE and Division Avenue NE, Washington, DC	18 F 1	1c	Private	0.9	98	0.9	LID Bioretention	88,000		
WB-L-01-S-26	101	DC	Tabernacle Baptist Church, 719 Division Avenue NE, Washington, DC	18 F 1	1c	Private	0.7	46	0.3	LID Bioretention	32,000		
WB-L-01-S-27	92	DC	DDOE Site S14, Burrville Elementary School, 801 Division Avenue NE, Washington, DC	18 F 1	1b	Public	4.2	73	3.1	LID Bioretention, LID Rain Garden, Sand Filters, LID Green Roof, LID Porous/Permeable Pavement, LID Curbside Planters	4,288,000		
WB-L-01-S-28	93	DC	Grant Park Care Center, 5000 Nannie Helen Burroughs Avenue NE, Washington, DC	18 F 1	1c	Private	1.7	89	1.5	LID Bioretention	151,000		
WB-L-01-S-29	146	DC	DDOE Site SW9, Nannie Helen Burroughs Avenue NE (Minnesota Avenue NE to Eastern Avenue), Washington, DC	12 D 13, 18 D 1, 18 E 1, 18 F 1, 18 G 1	1b	Mixed	12.7	94	11.9	LID Greenstreet	1,194,000		
WB-L-01-S-30	154	DC	DDOE Site SW12, southwest corner of Division Avenue and Fitch Place NE, Washington, DC	18 F 1	1b	Private	2.4	37	0.9	LID Bioretention	89,000		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-L-01-S-31	155	DC	Sargent Memorial Presbyterian Church, 5109 Nannie Helen Burroughs Avenue NE, Washington, DC	18 F 1	1c	Private	1.2	72	0.9	LID Bioretention	86,000		
WB-L-01-S-32	156	DC	DDOE Site SW24, 4900 block to 5100 block of Hayes Street NE, Washington, DC	18 E 1, 18 F 1	1b	Private	11.5	31	3.6	LID Bioretention	356,000		
WB-L-01-S-33	157	DC	DDOE Site S13, Merritt Middle School, 5002 Hayes Street NE, Washington, DC	18 E 1, 18 F 1	1b	Public	3.6	51	1.8	LID Bioretention, LID Curbside Extension, Porous/Permeable Pavement, LID Green Roof	2,597,000		
WB-L-01-S-34	159	DC	Huntwood Courts, 5000 Hunt Place NE, Washington, DC	12 E 13, 18 E 1, 12 F 13, 18 F 1	1c	Mixed	5.9	41	2.4	LID Bioretention	242,000		
WB-L-01-S-35	160	DC	Hilltop Apartments, 908 Eastern Ave, Washington, DC	18 G 13	1c	Private	2.3	84	1.9	LID Bioretention, Sand Filter	118,000		
WB-L-01-S-36	136	DC	Church of the Incarnation, 800 Eastern Avenue, Washington, DC	18 G 13, 18 G 1	1c	Private	1.6	76	1.2	LID Bioretention	122,000		
WB-L-01-S-37	235	DC	Right-of-way bordered by Brooks Street NE, Blaine Street NE, 51st Street NE and Division Avenue NE, Washington, DC	18 F 2	1c	Mixed	1.6	43	0.7	LID Greenstreet	69,000		
WB-L-01-S-38	138	DC	DDOE Site S6, Kelly Miller Middle School, 301 49th Street NE, Washington, DC	18 E 2	1b	Public	11.9	40	4.8	LID Bioretention, LID Curbside Extension, Porous/Permeable Pavement, LID Green Roof	4,674,600		
WB-L-01-S-39	139	DC	Grace Apostolic Church, 4501 Dix Street NE, Washington, DC	18 D 2	1c	Private	0.5	97	0.5	LID Bioretention, LID Downspout Disconnect	48,000		
WB-L-01-S-40	142	DC	DDOE Sites S4 and SW22a, Maude Aiton Elementary School, 533 48th Place, Washington, DC	18 E 1	1b	Public	5.1	38	1.9	LID Bioretention, LID Rain Garden, Porous/Permeable Pavement, LID Green Roof	1,429,000		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-L-01-S-41	147	DC	DDOE Site SW16, 4700 block of Foote Street NE, Washington, DC	18 E 1	1b	Public	3.8	25	0.9	LID Bioswale, LID Bioretention	95,000		
WB-L-01-S-42	144	DC	Foote Street NE (49th Place to 50th Street NE), Washington, DC	18 E 1	1b	Private	1.3	73	1.2	LID Bioretention	123,000		
WB-L-01-S-43	151	DC	St. James Church of Deliverance, 4611 Nannie Helen Burroughs Avenue NE, Washington, DC	18 D 1	1c	Private	0.4	75	0.3	LID Bioretention	30,000		
WB-L-01-S-44	152	DC	46th Street NE and Hayes Street NE, Washington, DC	18 D 1, 18 E 1	1b	Private	3.0	30	0.9	LID Bioretention, LID Bioswale	90,000		
WB-L-01-S-45	153	DC	Glendale Gardens Apartments, 4651 Nannie Helen Burroughs Avenue NE, Washington, DC	18 E 1	1c	Private	1.2	81	0.9	LID Bioretention, Outreach	97,000		
WB-L-01-S-46	161	DC	DDOE Site SW20, 6100 Block of Dix Street NE, Washington, DC	18 H 2	1c	Public	2.2	31	0.7	LID Bioretention	68,000		
WB-L-01-S-47	165	DC	44th Street (Nannie Helen Burroughs Avenue NE to Dix Street NE), Washington, DC	18 D 1, 18 D 2	1c	Mixed	1.3	97	1.3	LID Greenstreet	126,000		
WB-L-01-S-48	166	DC	DDOE Site SW1, Hayes Street NE cul-de-sac east side of stream, Washington, DC	18 D 1	1c	Public	0.7	65	0.5	LID Bioretention	46,000		
WB-L-01-S-49	168	DC	DDOE Site SW1, Hayes Street NE cul-de-sac west side of stream, Washington, DC	18 D 1	1c	Public	0.8	57	0.5	LID Bioretention, LID Bioswale	46,000		
WB-L-01-S-50	169	DC	DDOE Site SW15, 42nd Street (Grant Street to Eads Street NE), Washington, DC	18 D 1	1c	Public	0.7	97	0.7	LID Greenstreet	68,000		
WB-L-01-S-51	170	DC	DDOE Site S9, Friendship Public Charter School - Collegiate Academy, 4095 Minnesota Avenue NE, Washington, DC	18 C 1	1b	Public	6.0	50	3.0	LID Bioretention, LID Bioswale, LID Rain Garden, LID Green Roof, LID Porous/Permeable Pavement	2,985,000		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-L-01-S-52	171	DC	Minnesota Avenue (Grant Street to Sheriff Road NE), Washington, DC	12 C 13, 12 D 13, 18 C 1	1c	Public	1.9	96	1.8	LID Greenstreet	182,000		
WB-L-01-S-53	172	DC	DDOE Site SW21, Minnesota Avenue Metro Station, 4000 Minnesota Avenue NE, Washington, DC	18 C 1	1c	Public	2.6	93	2.4	LID Infiltration, LID Bioretention	242,000		
WB-L-01-S-54	174	DC	DDOE Site SW3, Republic National Distributing Company, 4235 Sheriff Road NE, Washington, DC	12 D 13	1c	Public	4.0	96	3.8	LID Bioretention	380,000		
WB-L-01-S-55	175	DC	DDOE Site S11, Idea Public Charter School, 1027 45th Street NE, Washington, DC	12 D 13	1c	Private	2.9	67	1.9	LID Bioretention, LID Downspout Disconnect, LID Rain Garden, LID Green Roof, LID Porous/Permeable Pavement	1,842,700		
WB-L-01-S-56	176	DC	Second Refreshing Spring Church, 4407 Lee Street NE, Washington, DC	12 D 13	1c	Private	0.3	98	0.3	LID Bioretention, LID Downspout Disconnect	29,000		
WB-L-01-S-57	178	DC	DDOE Site SW5, Lee Street NE to Meade Street NE, Washington, DC	12 C 13	1b	Public	13.6	35	4.8	LID Bioretention	480,000		
WB-L-01-S-58	181	DC	DDOE Site S18, Caesar Chavez Public Charter School for Public Policy, 3701 Hayes Street NE, Washington, DC	12 B 13, 12 C 13, 18 C 1	1c	Private	2.2	98	2.3	LID Bioretention, LID Rain Garden, LID Downspout Disconnect, LID Green Roof	2,272,700		
WB-L-01-S-59	183	DC	DDOE Site S17, Neval H. Thomas Public School, 650 Anacostia Avenue NE, Washington, DC	12 B 13, 18 B 1	1b	Public	9.2	26	2.4	LID Bioretention, LID Rain Garden, LID Downspout Disconnect, LID Green Roof, LID Porous/Permeable Pavement	3,012,900		
WB-L-01-S-60	180	DC	Mayfair Mansions Apartments, 3819 Jay Street NE, Washington, DC	12 B 13, 12 C 13	1c	Private	46.7	42	19.6	LID Rainscapes	16,770,000		

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx D.A. (acres)	Approx. Impervious		General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
								%	(acres)				
WB-L-01-S-61	182	DC	Grant Place and Barnes Street NE, Washington, DC	12 B 13, 18 B 1, 18 C 1	1c	Private	6.7	59	3.9	LID Rainscapes	3,186,300		
WB-L-01-S-62	229	DC	Marvin Gaye Park Trail, Washington, DC	12 C 13, 18 D 1, 18 E 1, 18 F 1, 18 F 2, 18 G 2, 18 H 2	1c	Public	0.2	98	1.9	LID Porous/Permeable Pavement	33,500		
WB-L-01-S-63	4	DC	Foote Street NE cul-de-sac, east of Division Avenue NE, Washington, DC	18 F 1	1c	Public	0.3	93	0.3	LID Bioretention	28,000		
WB-L-01-S-64	5	DC	Eads Street NE dead end, west of 55th Street NE, Washington, DC	18 F 1, 18 G 1	1c	Public	0.4	97	0.4	LID Bioretention	39,000		

PG = Prince George's County
D.A. = Drainage Area

[1] 1a= Water quantity, 1b= Water quantity and quality, 1c= Water quality

Figure 35a – Candidate Stormwater Retrofit Project		
Site Location:	5905 Clay Street NE and areas south, Washington, DC	
Project No.:	WB-L-01-S-1	
ADC Map Book Location:	18 H 2	Map ID: 53
Approximate Associated Drainage Area (acres):	1.7	
Approximate Imperviousness:	22%	0.37 ac
Description of Existing Conditions:	Buildings off of Clay Street drain into a grassy swale that leads under the paved bike/pedestrian path, through a grassy riparian area to the stream. Downspouts drain to pavement and are connected to the stormwater system.	
Project Description:	**LID Bioswale, LID Bioretention** - Create a bioswale in the existing grassy drainage way and enhance the bioretention of the grass areas between the parking spaces and the brick buildings. Install a bioretention system in the open grass depression to the west of the existing swale.	

Figure 35b – Candidate Stormwater Retrofit Project		
Site Location:	South end of 59th Street NE (north of stream), Washington, DC	
Project No.:	WB-L-01-S-2	
ADC Map Book Location:	18 H 2	Map ID: 228
Approximate Associated Drainage Area (acres):	1.3	
Approximate Imperviousness:	38%	0.49 ac
Description of Existing Conditions:	Residential street ends at park property. Grassy area present to right of dead end and areas south of the pedestrian/bike path. There are stormwater inlets at the corners of the intersection of 59th Street and Clay Street approximately 125 feet north.	
Project Description:	**LID Bioretention** - Install bioretention systems in the open grassy area and connect the runoff collecting in the street inlets to the bioretention area through use of underground pipes.	

Figure 35c – Candidate Stormwater Retrofit Project		
Site Location:	South end of 60th Street NE (north of stream), Washington, DC	
Project No.:	WB-L-01-S-3	
ADC Map Book Location:	18 H 2	Map ID: 56
Approximate Associated Drainage Area (acres):	0.8	
Approximate Imperviousness:	12%	0.1 ac
Description of Existing Conditions:	Residential street ends at park property. Plantings and grass are present on sides of small asphalt path leading to main paved pedestrian/bike path. Grassy open space surrounds the dead-end.	
Project Description:	**LID Bioretention** - Install bioretention systems on either side of small connecting path leading to main path and cut curb leading to the bioretention areas.	

Figure 35d – Candidate Stormwater Retrofit Project		
Site Location:	North side of Blaine Street NE between 58th Place and 60th Street, Washington, DC	
Project No.:	WB-L-01-S-4	
ADC Map Book Location:	18 G 2, 18 H 2	Map ID: 58
Approximate Associated Drainage Area (acres):	2.6	
Approximate Imperviousness:	8%	0.21 ac
Description of Existing Conditions:	Large vacant meadow north of Blaine Street within the riparian area of the stream. This area includes a grass/riprap and concrete swale with check dams leading to stream from Blaine Street. Erosion present after the last check dam and at the outfall of the swale into the stream. Runoff from Blaine Street leads to this area.	
Project Description:	**LID Bioretention, LID Bioswale** - Install bioretention cells in the vacant area and make curb cuts on Blaine Street to direct runoff from the street to the bioretention area. Retrofit the existing swale to a more efficient bioswale.	

Figure 35e – Candidate Stormwater Retrofit Project		
Site Location:	57th Place NE (Blaine Street NE to Clay Street NE), Washington, DC	
Project No.:	WB-L-01-S-5	
ADC Map Book Location:	18 G 2	Map ID: 60
Approximate Associated Drainage Area (acres):	3.1	
Approximate Imperviousness:	26%	0.81 ac
Description of Existing Conditions:	Sloping street that has three speed humps, small grass medians between the street and the sidewalks, and numerous inlets. There is a vacant grass depression area to the west of the street, adjacent to a speed hump.	
Project Description:	**LID Bioretention** - Retrofit the existing speed humps into curb extension bioretention systems. Regrade street and direct runoff from street to a bioretention area created in the depression to the west of the street.	

Figure 35f – Candidate Stormwater Retrofit Project		
Site Location:	Northwest corner of 58th Street NE and Blaine Street NE, Washington, DC	
Project No.:	WB-L-01-S-6	
ADC Map Book Location:	18 G 2	Map ID: 61
Approximate Associated Drainage Area (acres):	1.1	
Approximate Imperviousness:	40%	0.44 ac
Description of Existing Conditions:	New subdivision of townhouses with some downspouts connected to stormwater system and some disconnected. A large paved driveway behind the townhouses slopes to an inlet drain at 58th Street. Grassy areas exist on either side of the driveway.	
Project Description:	**LID Bioretention, Sand Filter, LID Porous/Permeable Pavement** - Install bioretention system in grassy area towards end of the driveway. Install a sand filter around the inlet at the bottom of the driveway. At next scheduled driveway renovation, replace with porous/permeable pavement.	

Figure 35g – Candidate Stormwater Retrofit Project		
Site Location:	Southwest corner of 55th Place NE and Clay Place NE, Washington, DC	
Project No.:	WB-L-01-S-7	
ADC Map Book Location:	18 G 2	Map ID: 62
Approximate Associated Drainage Area (acres):	1.5	
Approximate Imperviousness:	33%	0.49 ac
Description of Existing Conditions:	Grassy lot on the southwest corner of 55th Place. Inlets present. An approximately 30-foot by 40-foot area of the vacant lot has little to no slope.	
Project Description:	**LID Bioretention** - Regrade vacant lot and install a bioretention system. Cut curbs and redirect street runoff to the bioretention area.	

Figure 35h – Candidate Stormwater Retrofit Project		
Site Location:	South of East Capitol Street SE between 56th Place and 58th Place, Washington, DC	
Project No.:	WB-L-01-S-8	
ADC Map Book Location:	18 G 3	Map ID: 82
Approximate Associated Drainage Area (acres):	22.2	
Approximate Imperviousness:	68%	15.1 ac
Description of Existing Conditions:	New subdivision with all downspouts disconnected from the stormwater system, draining to lawns. Wide streets with moderate parking and numerous inlets present.	
Project Description:	**LID Rainscapes** - Install LID tree box filters upstream of inlets and LID curb extension bioretention systems at various locations in the street rights-of-way.	

Figure 35i – Candidate Stormwater Retrofit Project		
Site Location:	District of Columbia Department of Environment (DDOE) Site S7, Sousa Middle School, 5601 East Capitol Street SE, Washington, DC	
Project No.:	WB-L-01-S-9	
ADC Map Book Location:	18 G 3	Map ID: 91
Approximate Associated Drainage Area (acres):	5.2	
Approximate Imperviousness:	36%	1.87 ac
Description of Existing Conditions:	School with fields and parking lots in back. No visible downspouts. At the west end of the parking lot is an inlet and a small grass area. Two concrete drainage ways lead to the inlet.	
Project Description:	**LID Bioretention, LID Bioswale, Sand Filter, LID Rain Garden, LID Downspout Disconnect, LID Green Roof** - Install bioretention systems on south side of parking lot and at the small existing grass area on the west side. Retrofit the existing concrete swales into bioswales. Install a sand filter around the inlet. Disconnect downspouts and direct runoff to rain gardens installed in grassy spots in front of the school. At next scheduled school renovation, install a green roof.	

Figure 35j – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S3, Maya Angelou Public Charter School (W. Bruce Evans), 5600 East Capitol Street NE, Washington, DC	
Project No.:	WB-L-01-S-10	
ADC Map Book Location:	18 G 2, 18 G 3	Map ID: 81
Approximate Associated Drainage Area (acres):	9.1	
Approximate Imperviousness:	32%	2.91 ac
Description of Existing Conditions:	School with fields, parking lot, tennis and basketball courts, and a paved play surface. No visible downspouts. Inlets present on grass area next to courts and on the driveway at the back of the building.	
Project Description:	**LID Bioretention, LID Bioswale, LID Porous/Permeable Pavement, LID Green Roof** - Install bioretention systems behind and in front of the school in existing green spaces. Retrofit the existing concrete swale into a bioswale and direct runoff to bioretention area. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways and courts.	

Figure 35k – Candidate Stormwater Retrofit Project		
Site Location:	East Capitol Street (53rd Street NE to Addison Road), Washington, DC, and Capitol Heights, MD	
Project No.:	WB-L-01-S-11	
ADC Map Book Location:	18 F 3, 18 G 3, 18 H 3, 18 I 3, 18 K 3	Map ID: 79
Approximate Associated Drainage Area (acres):	17.8	
Approximate Imperviousness:	95%	16.91 ac
Description of Existing Conditions:	Large divided street has a median with average width of approximately eight feet. Portions of the median are covered with grass and portions are covered by concrete. Inlets visible on street.	
Project Description:	**LID Greenstreet** - Establish a series of LID bioretention systems and LID curbside planters in the median and on curbs, and install LID tree box filters at inlets.	

Figure 35l – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S8, The Arts and Technology Academy Public Charter School, 5300 Blaine Street NE, Washington, DC	
Project No.:	WB-L-01-S-12	
ADC Map Book Location:	18 F 2	Map ID: 94
Approximate Associated Drainage Area (acres):	5.2	
Approximate Imperviousness:	38%	1.98 ac
Description of Existing Conditions:	School with fields, parking lot, walkways, old unused paved lot, and a paved play surface. No visible downspouts. Riprapped drainageway present in front of school and concrete drainage channel present on the east side of the property, both leading to inlets.	
Project Description:	**LID Bioretention, Porous/Permeable Pavement, LID Green Roof** - Remove old unused asphalt lot and install bioretention systems. Redirect parking lot runoff to the bioretention area. At next scheduled school renovation, install porous/permeable pavement on walkways and a green roof. Install a bioretention system around the existing drains in the front of the school.	

Figure 35m – Candidate Stormwater Retrofit Project		
Site Location:	Hughes Memorial United Methodist Church, 25 53rd Street NE, Washington, DC	
Project No.:	WB-L-01-S-13	
ADC Map Book Location:	18 F 2	Map ID: 95
Approximate Associated Drainage Area (acres):	0.7	
Approximate Imperviousness:	74%	0.52 ac
Description of Existing Conditions:	Church with some downspouts connected to the stormwater system and others draining to grass. A grassy area currently unused is located to the east of the church.	
Project Description:	**LID Rain Garden, LID Downspout Disconnection -** Disconnect downspouts that are piped directly to the stormwater system and redirect runoff to a rain garden in the existing grass area east of the church.	

Figure 35n – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW7, Cornerstone Beulah Baptist Church and Christian Academy, 5820 Dix Street NE, Washington, DC	
Project No.:	WB-L-01-S-14	
ADC Map Book Location:	18 G 2	Map ID: 97
Approximate Associated Drainage Area (acres):	1.3	
Approximate Imperviousness:	79%	1.03 ac
Description of Existing Conditions:	Church with most downspouts connected to the stormwater system, one draining to grass. Small existing grass areas on sides of church. Parking lot across street has four existing grassy islands and a large grass area adjacent to the lot.	
Project Description:	**LID Bioretention, LID Rain Garden** - Retrofit existing grass islands in the parking lot into bioretention systems and install perimeter bioretention around the edges of the parking lot. Install a rain garden at the existing grass areas on the sides of the church and redirect roof runoff to this area.	

Figure 35o – Candidate Stormwater Retrofit Project		
Site Location:	New Mount Olive Baptist Church and Academy, 710 58th Street NE, Washington, DC	
Project No.:	WB-L-01-S-15	
ADC Map Book Location:	18 G 1	Map ID: 98
Approximate Associated Drainage Area (acres):	0.5	
Approximate Imperviousness:	85%	0.42 ac
Description of Existing Conditions:	Church with few existing vegetated areas. Downspouts are connected to the stormwater system internally. The parking lot slopes toward the back of the church.	
Project Description:	**LID Bioretention, LID Tree Box Filters -** Install several small bioretention islands throughout the lot and on parts of the perimeter. Install tree box filters on parts of the walkways on the side and back of church.	

Figure 35p – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S5, Charles R. Drew Elementary School, 5600 Eads Street NE, Washington, DC	
Project No.:	WB-L-01-S-16	
ADC Map Book Location:	18 G 1	Map ID: 99
Approximate Associated Drainage Area (acres):	2.7	
Approximate Imperviousness:	59%	1.59 ac
Description of Existing Conditions:	School with fields, parking lot, and paved play area. Large amounts of concrete areas surround the school. Downspouts are internal. Inlets present on the street in front of the school.	
Project Description:	**LID Bioretention, LID Rain Garden, LID Porous/Permeable Pavement, LID Green Roof** - Install bioretention islands throughout the parking lot and curb extension bioretention systems on streets surrounding the school. Create a rain garden in back of school on existing green space and use as an outreach/educational tool. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways and paved play areas.	

Figure 35q – Candidate Stormwater Retrofit Project		
Site Location:	South end of 56th Street NE (just north of stream), Washington, DC	
Project No.:	WB-L-01-S-17	
ADC Map Book Location:	18 G 2	Map ID: 83
Approximate Associated Drainage Area (acres):	0.6	
Approximate Imperviousness:	52%	0.31 ac
Description of Existing Conditions:	Street ends north of stream and is adjacent to a grass area and a paved bike/pedestrian trail. Street runoff drains to a culvert under the bike/pedestrian trail before confluencing with the stream.	
Project Description:	**LID Bioretention** - Create a small bioretention system in the paved/grass area immediately south of the barrier poles. Redirect street and driveway runoff to this area.	

Figure 35r – Candidate Stormwater Retrofit Project		
Site Location:	Refuge Temple Church, 420 56th Street NE, Washington, DC	
Project No.:	WB-L-01-S-18	
ADC Map Book Location:	18 G 1, 18 G 2	Map ID: 84
Approximate Associated Drainage Area (acres):	1.1	
Approximate Imperviousness:	98%	1.08 ac
Description of Existing Conditions:	Large building with no visible downspouts. Large paved/gravel parking lot in back with grass border surrounding lot and large parking lot on west side of building.	
Project Description:	**LID Bioretention, LID Porous/Permeable Pavement, LID Green Roof** - Install bioretention islands throughout the parking lots. At next scheduled building renovation, install a green roof and porous/permeable pavement in parking lots.	

Figure 35s – Candidate Stormwater Retrofit Project		
Site Location:	Righteous Church of God, 616 56th Street NE, Washington, DC	
Project No.:	WB-L-01-S-19	
ADC Map Book Location:	18 G 1	Map ID: 85
Approximate Associated Drainage Area (acres):	0.8	
Approximate Imperviousness:	68%	0.54 ac
Description of Existing Conditions:	Church with several existing grass areas and downspouts that are connected to the stormwater system. There are paved or gravel parking lots to the right and left of the church.	
Project Description:	**LID Bioretention** - Install bioretention systems in the parking lots.	

Figure 35t – Candidate Stormwater Retrofit Project		
Site Location:	Evergreen Baptist Church, 325 55th Street NE, Washington, DC	
Project No.:	WB-L-01-S-20	
ADC Map Book Location:	18 G 2	Map ID: 86
Approximate Associated Drainage Area (acres):	0.9	
Approximate Imperviousness:	92%	0.83 ac
Description of Existing Conditions:	Church with small grass area in front and parking lots on right and left of building. Most downspouts are connected to the stormwater system.	
Project Description:	**LID Bioretention** - Install island bioretention systems in the parking lots. Install bioretention in the grass area north of the parking lot and redirect piped runoff currently draining to the street.	

Figure 35u – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW13, northeast corner of Division Avenue NE and Eads Street NE, Washington, DC	
Project No.:	WB-L-01-S-21	
ADC Map Book Location:	18 F 1	Map ID: 87
Approximate Associated Drainage Area (acres):	2.8	
Approximate Imperviousness:	14%	0.39 ac
Description of Existing Conditions:	Large open grass area at downhill end of Eads Street. No inlets observed on Eads Street or Division Avenue near the grass lot.	
Project Description:	**LID Bioretention** - Install bioretention system in the existing grass area. Install curb cuts to redirect runoff to the bioretention area.	

Figure 35v – Candidate Stormwater Retrofit Project		
Site Location:	Southwest corner of Division Avenue NE and Foote Street NE, Washington, DC	
Project No.:	WB-L-01-S-22	
ADC Map Book Location:	18 F 1	Map ID: 88
Approximate Associated Drainage Area (acres):	1.1	
Approximate Imperviousness:	29%	0.32 ac
Description of Existing Conditions:	Open grass area just north of the stream. Inlets present at corners of Division Avenue and Foote Street.	
Project Description:	**LID Bioretention** - Install bioretention system in the existing grass area. Install curb cuts to redirect runoff to the bioretention area.	

Figure 35w – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S19, Nannie Helen Burroughs Elementary School, Progressive National Baptist Convention, Inc. Headquarters, and National Memorial Chapel, 601 50th Street NE, Washington, DC	
Project No.:	WB-L-01-S-23	
ADC Map Book Location:	18 F 1	Map ID: 89
Approximate Associated Drainage Area (acres):	4.0	
Approximate Imperviousness:	45%	1.8 ac
Description of Existing Conditions:	Complex of buildings and parking lots surrounded by grass slopes. Downspouts are internal.	
Project Description:	**LID Bioretention, LID Rain Garden** - Install island bioretention systems in the parking lots and at the existing grass island in front of the school. Install rain gardens in the grass areas surrounding the buildings.	

Figure 35x – Candidate Stormwater Retrofit Project		
Site Location:	The Holy Christian Missionary Baptist Church For All People, 5110 Nannie Helen Burroughs Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-24	
ADC Map Book Location:	18 F 1	Map ID: 90
Approximate Associated Drainage Area (acres):	1.8	
Approximate Imperviousness:	98%	1.76 ac
Description of Existing Conditions:	Church with large parking lot draining to one inlet drain near the church entrance. Roof runoff is diverted through a pipe to the street.	
Project Description:	**LID Bioretention** - Install island and perimeter bioretention systems in the parking lot. Disconnect gutter pipe and redirect roof runoff to parking lot bioretention area.	

Figure 35y – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW23, Tabernacle Baptist Church parking lot at corner of Hayes Street NE and Division Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-25	
ADC Map Book Location:	18 F 1	Map ID: 100
Approximate Associated Drainage Area (acres):	0.9	
Approximate Imperviousness:	98%	0.88 ac
Description of Existing Conditions:	Large parking lot for Tabernacle Baptist Church is located across Division Avenue NE. The lot drains south and has several lighting structures present.	
Project Description:	**LID Bioretention** - Install island and perimeter bioretention systems in the parking lot at the next scheduled renovation.	

Figure 35z – Candidate Stormwater Retrofit Project		
Site Location:	Tabernacle Baptist Church, 719 Division Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-26	
ADC Map Book Location:	18 F 1	Map ID: 101
Approximate Associated Drainage Area (acres):	0.7	
Approximate Imperviousness:	46%	0.32 ac
Description of Existing Conditions:	Church with downspouts that are connected to the stormwater system. Small grassy play area present in back. Open grass lot just south of church across Gay Street.	
Project Description:	**LID Bioretention** - Install bioretention systems in the right-of-way along Division Street. Install a bioretention system in open grass area on corner. Add cut curbs to direct drainage from Gay Street to bioretention area.	

Figure 35aa – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S14, Burrville Elementary School, 801 Division Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-27	
ADC Map Book Location:	18 F 1	Map ID: 92
Approximate Associated Drainage Area (acres):	4.2	
Approximate Imperviousness:	73%	3.07 ac
Description of Existing Conditions:	School that has fields, parking lots, paved play areas, and internal downspouts. Parking lots and driveways have at least one inlet drain. Many slopes on the school property have been cemented and set with stones. Entrance at corner of James Place and Hunt Place looks unused.	
Project Description:	**LID Bioretention, LID Rain Garden, Sand Filters, LID Green Roof, LID Porous/Permeable Pavement, LID Curbside Planters** - Install bioretention systems around the perimeter of the parking lots. Regrade area and create a rain garden at unused entrance and redirect runoff to this area. Construct sand filters at inlets. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways and paved play areas. Establish two curbside planters along James Place.	

Figure 35ab – Candidate Stormwater Retrofit Project		
Site Location:	Grant Park Care Center, 5000 Nannie Helen Burroughs Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-28	
ADC Map Book Location:	18 F 1	Map ID: 93
Approximate Associated Drainage Area (acres):	1.7	
Approximate Imperviousness:	89%	1.51 ac
Description of Existing Conditions:	Large building adjacent to small parking lot with three existing vegetated islands.	
Project Description:	**LID Bioretention** - Install bioretention systems in the existing green islands. Install curb cuts to redirect runoff to the bioretention area.	

Figure 35ac – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW9, Nannie Helen Burroughs Avenue NE (Minnesota Avenue NE to Eastern Avenue), Washington, DC	
Project No.:	WB-L-01-S-29	
ADC Map Book Location:	12 D 13, 18 D 1, 18 E 1, 18 F 1, 18 G 1	Map ID: 146
Approximate Associated Drainage Area (acres):	12.7	
Approximate Imperviousness:	94%	11.94 ac
Description of Existing Conditions:	Two-lane street with parking on both sides. Grass right-of-way areas on both sides with grass medians at the western end of the street. Little sediment, debris, or trash present in street gutters.	
Project Description:	**LID Greenstreet** – Install LID curbside planters, LID bioretention, and LID bioswale in the rights-of-way and sand filters in stormwater inlets.	

Figure 35ad – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW12, southwest corner of Division Avenue NE and Fitch Place NE, Washington, DC	
Project No.:	WB-L-01-S-30	
ADC Map Book Location:	18 F 1	Map ID: 154
Approximate Associated Drainage Area (acres):	2.4	
Approximate Imperviousness:	37%	0.89 ac
Description of Existing Conditions:	Grass right-of-way present on north side of road. This area drains Fitch Street and nearby alley and pooling water has been observed in the past.	
Project Description:	**LID Bioretention** - Install a large bioretention system in the north and south rights-of-way of the road.	

Figure 35ae – Candidate Stormwater Retrofit Project		
Site Location:	Sargent Memorial Presbyterian Church, 5109 Nannie Helen Burroughs Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-31	
ADC Map Book Location:	18 F 1	Map ID: 155
Approximate Associated Drainage Area (acres):	1.2	
Approximate Imperviousness:	72%	0.86 ac
Description of Existing Conditions:	Church and parking lot with one inlet drain in area just north of Watts Branch. Downspouts are internal and there is a concrete drainage channel directing runoff to the inlet drain. Existing areas of grass are present west and south of the church.	
Project Description:	**LID Bioretention** - Install bioretention islands in existing areas designated as no-parking, and install perimeter bioretention along east edge of north parking lot and east wall of church. Use three or four parking spots to install bioretention islands perpendicular to the slope of south parking lot.	

Figure 35af – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW24, 4900 block to 5100 block of Hayes Street NE, Washington, DC	
Project No.:	WB-L-01-S-32	
ADC Map Book Location:	18 E 1, 18 F 1	Map ID: 156
Approximate Associated Drainage Area (acres):	11.5	
Approximate Imperviousness:	31%	3.56 ac
Description of Existing Conditions:	Large grass median is presented between Hayes Street (NE) and Hunt Street (NE). Runoff from the east and north is directed to one inlet drain located on the eastern side of the median.	
Project Description:	**LID Bioretention** - Install large bioretention system in the existing grass median and cut curbs to redirect runoff from the north and east.	

Figure 35ag – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S13, Merritt Middle School, 5002 Hayes Street NE, Washington, DC	
Project No.:	WB-L-01-S-33	
ADC Map Book Location:	18 E 1, 18 F 1	Map ID: 157
Approximate Associated Drainage Area (acres):	3.6	
Approximate Imperviousness:	51%	1.84 ac
Description of Existing Conditions:	School with paved play areas, parking lots, and a large amount of hardscaping. Few existing vegetated spaces are present. Several inlets present in parking lots and in hardscaped areas.	
Project Description:	**LID Bioretention, LID Curbside Extension, Porous/Permeable Pavement, LID Green Roof** - Install bioretention systems at entrance/exit to small parking lot. Install a bioretention curbside extension at the entrance to the school. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways and paved play areas.	

Figure 35ah – Candidate Stormwater Retrofit Project		
Site Location:	Huntwood Courts, 5000 Hunt Place NE, Washington, DC	
Project No.:	WB-L-01-S-34	
ADC Map Book Location:	12 E 13, 18 E 1, 12 F 13, 18 F 1	Map ID: 159
Approximate Associated Drainage Area (acres):	5.9	
Approximate Imperviousness:	41%	2.42 ac
Description of Existing Conditions:	Apartment complex with several small parking lots, cul-de-sacs, and surrounding grass areas. Downspouts are connected to the stormwater system.	
Project Description:	**LID Bioretention** - Install bioretention systems in the existing vegetated cul-de-sac and the existing grass islands south of the two parking lots.	

Figure 35ai – Candidate Stormwater Retrofit Project		
Site Location:	Hilltop Apartments, 908 Eastern Avenue, Washington, DC	
Project No.:	WB-L-01-S-35	
ADC Map Book Location:	18 G 13	Map ID: 160
Approximate Associated Drainage Area (acres):	2.3	
Approximate Imperviousness:	84%	1.93 ac
Description of Existing Conditions:	Apartment complex with large parking lot and small amount of surrounding grass areas. Most runoff drains to grass area at bottom of parking lot on Jay Street. Downspouts either drain to parking lot or to grass behind buildings.	
Project Description:	**LID Bioretention, Sand Filter** - Install linear bioretention systems in the parking lot without removing existing parking spaces. Remove four parking spaces at the bottom of the parking lot and install a larger bioretention system. Install sand filters downstream of dumpsters.	

Figure 35aj – Candidate Stormwater Retrofit Project		
Site Location:	Church of the Incarnation, 800 Eastern Avenue, Washington, DC	
Project No.:	WB-L-01-S-36	
ADC Map Book Location:	18 G 13, 18 G 1	Map ID: 136
Approximate Associated Drainage Area (acres):	1.6	
Approximate Imperviousness:	76%	1.22 ac
Description of Existing Conditions:	Church and parking lot with one inlet drain and surrounding grass areas. Runoff bypasses the inlet drain and ponds at the southwest corner of the parking lot. Downspouts are connected to the stormwater system.	
Project Description:	**LID Bioretention** - Install bioretention systems in the parking lot especially at the southwest corner where ponding occurs.	

Figure 35ak – Candidate Stormwater Retrofit Project		
Site Location:	Right-of-way bordered by Brooks Street NE, Blaine Street NE, 51st Street NE and Division Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-37	
ADC Map Book Location:	18 F 2	Map ID: 235
Approximate Associated Drainage Area (acres):	1.6	
Approximate Imperviousness:	43%	0.69 ac
Description of Existing Conditions:	Grass right-of-way median with small paved section that receives runoff from the east.	
Project Description:	**LID Greenstreet** - Install bioretention system on the existing grass/paved median.	

Figure 35al – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S6, Kelly Miller Middle School, 301 49th Street NE, Washington, DC	
Project No.:	WB-L-01-S-38	
ADC Map Book Location:	18 E 2	Map ID: 138
Approximate Associated Drainage Area (acres):	11.9	
Approximate Imperviousness:	40%	4.76 ac
Description of Existing Conditions:	School surrounded by fields, parking lots, basketball and tennis courts, walkways, and an outdoor pool. School has many existing vegetated islands in the parking lots and is surrounded by grass fields.	
Project Description:	**LID Bioretention, LID Curbside Extension, Porous/Permeable Pavement, LID Green Roof** - Install bioretention systems and curb cuts in the existing vegetated islands and designated no-parking sections in the parking lots and at the entrance/drop-off area to the school. Install a bioretention curbside extension at the marked crosswalks on 49th Street. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways and athletic courts.	

Figure 35am – Candidate Stormwater Retrofit Project		
Site Location:	Grace Apostolic Church, 4501 Dix Street NE, Washington, DC	
Project No.:	WB-L-01-S-39	
ADC Map Book Location:	18 D 2	Map ID: 139
Approximate Associated Drainage Area (acres):	0.5	
Approximate Imperviousness:	97%	0.48 ac
Description of Existing Conditions:	Church with small parking lot in back. Downspouts are connected to the stormwater system.	
Project Description:	**LID Bioretention, LID Downspout Disconnect** - Install perimeter bioretention around the parking lot. Disconnect downspouts and direct them to existing garden and grassy areas.	

Figure 35an – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Sites S4 and SW22a, Maude Aiton Elementary School, 533 48th Place, Washington, DC	
Project No.:	WB-L-01-S-40	
ADC Map Book Location:	18 E 1	Map ID: 142
Approximate Associated Drainage Area (acres):	5.1	
Approximate Imperviousness:	38%	1.94 ac
Description of Existing Conditions:	School surrounded by small fields, paved play areas, and parking lot. Several inlet drains exist within the parking lots and play areas. Downspouts are internal.	
Project Description:	**LID Bioretention, LID Rain Garden, Porous/Permeable Pavement, LID Green Roof** - Install bioretention systems (perimeter and islands through middle) in parking lot and in existing green island at the entrance/exit to the lot. Create a rain garden in the green space at the corner of 48th Street and Fitch Place and disconnect some downspouts and direct to this area. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways and paved play areas.	

Figure 35ao – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW16, 4700 block of Foote Street NE, Washington, DC	
Project No.:	WB-L-01-S-41	
ADC Map Book Location:	18 E 1	Map ID: 147
Approximate Associated Drainage Area (acres):	3.8	
Approximate Imperviousness:	25%	0.95 ac
Description of Existing Conditions:	Narrow road adjacent to the stream that is in poor condition and has experienced traffic problems in the past. Intersection of Foote Street and 48th Place is just south of the stream. Small grass and concrete areas. The area receives drainage from the two streets.	
Project Description:	**LID Bioswale, LID Bioretention** - Establish a bioswale along the side of Foote Street. Install a bioretention system and curb cuts in the grass/concrete area surrounding the barrier poles where the streets end at the stream.	

Figure 35ap – Candidate Stormwater Retrofit Project		
Site Location:	Foote Street NE (49th Place to 50th Street NE), Washington, DC	
Project No.:	WB-L-01-S-42	
ADC Map Book Location:	18 E 1	Map ID: 144
Approximate Associated Drainage Area (acres):	1.3	
Approximate Imperviousness:	73%	1.23 ac
Description of Existing Conditions:	Wide sloping street with no stormwater control; ponding present on sides of street.	
Project Description:	**LID Bioretention** - Install a curb extension bioretention system at small open grass space where ponding occurs.	

Figure 35aq – Candidate Stormwater Retrofit Project		
Site Location:	St. James Church of Deliverance, 4611 Nannie Helen Burroughs Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-43	
ADC Map Book Location:	18 D 1	Map ID: 151
Approximate Associated Drainage Area (acres):	0.4	
Approximate Imperviousness:	75%	0.3 ac
Description of Existing Conditions:	Church building and parking lot with no stormwater control. Downspouts are disconnected from the stormwater system.	
Project Description:	**LID Bioretention** - Install perimeter bioretention around the parking lot in existing green areas.	

Figure 35ar – Candidate Stormwater Retrofit Project		
Site Location:	46th Street NE and Hayes Street NE, Washington, DC	
Project No.:	WB-L-01-S-44	
ADC Map Book Location:	18 D 1, 18 E 1	Map ID: 152
Approximate Associated Drainage Area (acres):	3.0	
Approximate Imperviousness:	30%	0.9 ac
Description of Existing Conditions:	Large grass right-of-way at corner that receives runoff from two streets. Inlet drain present at corner.	
Project Description:	**LID Bioretention, LID Bioswale** - Install a bioretention system in the existing grass area and install curb cuts. Install a bioswale along south side of Hayes Street leading to bioretention area.	

Figure 35as – Candidate Stormwater Retrofit Project		
Site Location:	Glendale Gardens Apartments, 4651 Nannie Helen Burroughs Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-45	
ADC Map Book Location:	18 E 1	Map ID: 153
Approximate Associated Drainage Area (acres):	1.2	
Approximate Imperviousness:	81%	0.97 ac
Description of Existing Conditions:	Apartment building and parking lot with inlet drains present. Downspouts are internal. Adjacent to forested park area and bike/pedestrian trail north of stream.	
Project Description:	**LID Bioretention** - Install a bioretention system just south of the parking lot in the existing park land to receive runoff from parking lot. Remove inlet drain from lot.	

Figure 35at – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW20, 6100 Block of Dix Street NE, Washington, DC	
Project No.:	WB-L-01-S-46	
ADC Map Book Location:	18 H 2	Map ID: 161
Approximate Associated Drainage Area (acres):	2.2	
Approximate Imperviousness:	31%	0.68 ac
Description of Existing Conditions:	Grass space on right-of-way on north side of Dix Street with curbs present. Receives drainage from 61st Street and commercial area to the north. Area inundated after rain event.	
Project Description:	**LID Bioretention** - Create curb cuts and install a bioretention system in the open grass area.	

Figure 35au – Candidate Stormwater Retrofit Project		
Site Location:	44th Street (Nannie Helen Burroughs Avenue NE to Dix Street NE), Washington, DC	
Project No.:	WB-L-01-S-47	
ADC Map Book Location:	18 D 1, 18 D 2	Map ID: 165
Approximate Associated Drainage Area (acres):	1.3	
Approximate Imperviousness:	97%	1.26 ac
Description of Existing Conditions:	Two-lane street with parking on both sides. Green right-of-way with trees on both sides. The street slopes down to the north.	
Project Description:	**LID Greenstreet** - Install LID curbside planters along with curb cuts in the rights-of-way. At non-sloped portions of the street, install LID tree box filters upstream of inlet drains.	

Figure 35av – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW1, Hayes Street NE cul-de-sac east side of stream, Washington, DC	
Project No.:	WB-L-01-S-48	
ADC Map Book Location:	18 D 1	Map ID: 166
Approximate Associated Drainage Area (acres):	0.7	
Approximate Imperviousness:	65%	0.46 ac
Description of Existing Conditions:	Large cul-de-sac that is just east of the stream with one inlet drain. There is grass space surrounding the cul-de-sac beyond which are the park and the bike/pedestrian path.	
Project Description:	**LID Bioretention** - Create curb extension bioretention systems before the inlet drain and a bioretention island in the middle of the cul-de-sac along with curb cuts.	

Figure 35aw – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW1, Hayes Street NE cul-de-sac west side of stream, Washington, DC	
Project No.:	WB-L-01-S-49	
ADC Map Book Location:	18 D 1	Map ID: 168
Approximate Associated Drainage Area (acres):	0.8	
Approximate Imperviousness:	57%	0.46 ac
Description of Existing Conditions:	Large cul-de-sac that is just west of the stream with one inlet drain. There is grass space surrounding the cul-de-sac that slopes down to the park and a bike/pedestrian path.	
Project Description:	**LID Bioretention, LID Bioswale** - Create curb extension bioretention systems before the inlet drain and a bioretention island in the middle of the cul-de-sac along with curb cuts. Retrofit the existing swale to a bioswale with a longer length.	

Figure 35ax – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW15, 42nd Street NE(Grant Street to Eads Street NE), Washington, DC	
Project No.:	WB-L-01-S-50	
ADC Map Book Location:	18 D 1	Map ID: 169
Approximate Associated Drainage Area (acres):	0.7	
Approximate Imperviousness:	97%	0.68 ac
Description of Existing Conditions:	Sloping residential street that is adjacent to Fort Circle Park on the west side. Parking is sporadic and street fairly wide.	
Project Description:	**LID Greenstreet -** Install LID bioswales and LID curb extension bioretention systems/traffic calming measures along with curb cuts on the west side of the street adjacent to park property.	

Figure 35ay – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S9, Friendship Public Charter School - Collegiate Academy, 4095 Minnesota Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-51	
ADC Map Book Location:	18 C 1	Map ID: 170
Approximate Associated Drainage Area (acres):	6.0	
Approximate Imperviousness:	50%	3.0 ac
Description of Existing Conditions:	School property that has a small parking lot, fields, surrounding grass areas and basketball courts and paved play areas that are in need of repair. There is a concrete swale on the south end of the property. Downspouts are internal.	
Project Description:	**LID Bioretention, LID Bioswale, LID Rain Garden, LID Green Roof, LID Porous/Permeable Pavement** - Install bioretention systems in the existing grass spaces especially on the south side of the building where there is an existing inlet drain. Retrofit existing concrete drainage channel to a bioswale and install a rain garden at the end of the swale at Minnesota Avenue. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways, basketball courts, and paved play areas.	

Figure 35az – Candidate Stormwater Retrofit Project		
Site Location:	Minnesota Avenue NE (Grant Street to Sheriff Road NE), Washington, DC	
Project No.:	WB-L-01-S-52	
ADC Map Book Location:	12 C 13, 12 D 13, 18 C 1	Map ID: 171
Approximate Associated Drainage Area (acres):	1.9	
Approximate Imperviousness:	96%	1.82 ac
Description of Existing Conditions:	Heavily traveled two-lane street with several existing medians and rights-of-way consisting of grass or concrete.	
Project Description:	**LID Greenstreet** - Install LID bioretention islands along with curb cuts in existing medians. Install LID tree box filters upstream of inlets.	

Figure 35ba – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW21, Minnesota Avenue Metro Station, 4000 Minnesota Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-53	
ADC Map Book Location:	18 C 1	Map ID: 172
Approximate Associated Drainage Area (acres):	2.6	
Approximate Imperviousness:	93%	2.42 ac
Description of Existing Conditions:	Metro station with large paved area for bus service and small parking lot along Minnesota Avenue. There are a few existing grass islands or medians and areas designated by diagonal lines as no parking areas.	
Project Description:	**LID Infiltration, LID Bioretention** - Establish infiltration strips in existing curb rights-of-way and install bioretention systems in the existing grass islands and medians and in the designated no-parking spaces of the bus depot.	

Figure 35bb – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW3, Republic National Distributing Company, 4235 Sheriff Road NE, Washington, DC	
Project No.:	WB-L-01-S-54	
ADC Map Book Location:	12 D 13	Map ID: 174
Approximate Associated Drainage Area (acres):	4.0	
Approximate Imperviousness:	96%	3.8 ac
Description of Existing Conditions:	Private property that contains a large building with a parking lot and a loading dock. Some grass areas surround the property and within parking lot islands. Property is fenced and has internal downspouts.	
Project Description:	**LID Bioretention** - Install parking lot bioretention systems and curb cuts within existing islands and create new bioretention system at end of parking lot in existing grass space on Minnesota Avenue.	

Figure 35bc – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S11, Idea Public Charter School, 1027 45th Street NE, Washington, DC	
Project No.:	WB-L-01-S-55	
ADC Map Book Location:	12 D 13	Map ID: 175
Approximate Associated Drainage Area (acres):	2.9	
Approximate Imperviousness:	67%	1.9 ac
Description of Existing Conditions:	School with paved play areas, fields, and downspouts that are connected to the stormwater system. There are several existing grass areas.	
Project Description:	**LID Bioretention, LID Downspout Disconnect, LID Rain Garden, LID Green Roof, LID Porous/Permeable Pavement** - Install bioretention systems (islands and linear perimeter cells) and curb cuts in the parking lots and surrounding the inlet at the southeast corner of the property. Disconnect downspouts and install a rain garden within the existing grass areas at the school entrance. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways, basketball courts, and paved play areas.	

Figure 35bd – Candidate Stormwater Retrofit Project		
Site Location:	Second Refreshing Spring Church, 4407 Lee Street NE, Washington, DC	
Project No.:	WB-L-01-S-56	
ADC Map Book Location:	12 D 13	Map ID: 176
Approximate Associated Drainage Area (acres):	0.3	
Approximate Imperviousness:	98%	0.29 ac
Description of Existing Conditions:	Small church building with downspouts that are connected to the stormwater system. Parking lot with no stormwater control and few grass areas.	
Project Description:	**LID Bioretention , LID Downspout Disconnect** Install bioretention systems and curb cuts within the parking lot, especially on either side of the entrance/exit to the parking lot. Disconnect downspout and direct to existing grassy areas.	

Figure 35be – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site SW5, Lee Street NE to Meade Street NE, Washington, DC	
Project No.:	WB-L-01-S-57	
ADC Map Book Location:	12 C 13	Map ID: 178
Approximate Associated Drainage Area (acres):	13.6	
Approximate Imperviousness:	35%	4.8 ac
Description of Existing Conditions:	Wide grass right-of-way that is part of Kenilworth Park and Aquatic Gardens. The area has several existing trees and a depression running through the middle. This area drains several streets to the east.	
Project Description:	**LID Bioretention** - Install a large bioretention system in the grass median. Install curb cuts to redirect runoff from the adjacent streets to the east into the bioretention area.	

Figure 35bf – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S18, Caesar Chavez Public Charter School for Public Policy, 3701 Hayes Street NE, Washington, DC	
Project No.:	WB-L-01-S-58	
ADC Map Book Location:	12 B 13, 12 C 13, 18 C 1	Map ID: 181
Approximate Associated Drainage Area (acres):	2.2	
Approximate Imperviousness:	98%	2.16 ac
Description of Existing Conditions:	School with parking lots with existing vegetated islands and green areas surrounding the property. Downspouts are internal.	
Project Description:	**LID Bioretention, LID Rain Garden, LID Downspout Disconnect, LID Green Roof** - Install bioretention systems and curb cuts in the existing vegetated parking lot islands. Disconnect downspouts and direct runoff to rain gardens installed in grass areas surrounding the school building. At next scheduled school renovation, install a green roof.	

Figure 35bg – Candidate Stormwater Retrofit Project		
Site Location:	DDOE Site S17, Neval H. Thomas Public School, 650 Anacostia Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-59	
ADC Map Book Location:	12 B 13, 18 B 1	Map ID: 183
Approximate Associated Drainage Area (acres):	9.2	
Approximate Imperviousness:	26%	2.39 ac
Description of Existing Conditions:	School that has a playground, paved play areas, fields, and parking lots. Parking lot has several existing vegetated islands, and grass areas surround the school. Downspouts are connected to the stormwater system.	
Project Description:	**LID Bioretention, LID Rain Garden, LID Downspout Disconnect, LID Green Roof, LID Porous/Permeable Pavement** - Install bioretention systems and curb cuts in the existing vegetated parking lot islands. Install a curbside extension bioretention system in front of the school. Disconnect downspouts and direct runoff to rain gardens installed in grassy areas surrounding the school building. At next scheduled school renovation, install a green roof and porous/permeable pavement on walkways and paved play areas.	

Figure 35bh – Candidate Stormwater Retrofit Project		
Site Location:	Mayfair Mansions Apartments, 3819 Jay Street NE, Washington, DC	
Project No.:	WB-L-01-S-60	
ADC Map Book Location:	12 B 13, 12 C 13	Map ID: 180
Approximate Associated Drainage Area (acres):	46.7	
Approximate Imperviousness:	42%	19.6 ac
Description of Existing Conditions:	Very large apartment complex consisting of two-story buildings and adjacent parking lots with surrounding grass areas. Downspouts are internal and utilities are present throughout the grass areas. Many areas of the complex are under renovation.	
Project Description:	**LID Rainscapes** – Install LID bioretention systems in the parking lots by cutting curbs and redirecting runoff to drain to existing grass areas. Install LID curb extension bioretention systems in various locations on the street surrounding the entire complex.	

Figure 35bi – Candidate Stormwater Retrofit Project		
Site Location:	Grant Place and Barnes Street NE, Washington, DC	
Project No.:	WB-L-01-S-61	
ADC Map Book Location:	12 B 13, 18 B 1, 18 C 1	Map ID: 182
Approximate Associated Drainage Area (acres):	6.7	
Approximate Imperviousness:	59%	3.95 ac
Description of Existing Conditions:	Small residential neighborhood just south of Grant Place and Barnes Street, with narrow streets and street parking. Downspouts are varied, with some connected to the stormwater system, and some disconnected. Open grass spaces north of neighborhood on right and left of street.	
Project Description:	**LID Rainscapes** – Disconnect connected downspouts and install LID rain gardens. Install small bioretention systems across Barnes Street in open grass areas to collect street runoff.	

Figure 35bj – Candidate Stormwater Retrofit Project		
Site Location:	Marvin Gaye Park Trail, Washington, DC	
Project No.:	WB-L-01-S-62	
ADC Map Book Location:	12 C 13, 18 D 1, 18 E 1, 18 F 1, 18 F 2, 18 G 2, 18 H 2	Map ID: 229
Approximate Associated Drainage Area (acres):	0.2	
Approximate Imperviousness:	98%	1.96 ac
Description of Existing Conditions:	Paved pedestrian/bike trail running through riparian area of stream.	
Project Description:	**LID Porous/Permeable Pavement -** At the next renovation of the pedestrian/bike trail, convert the trail to porous/permeable pavement.	

Figure 35bk – Candidate Stormwater Retrofit Project		
Site Location:	Foote Street NE cul-de-sac, east of Division Avenue NE, Washington, DC	
Project No.:	WB-L-01-S-63	
ADC Map Book Location:	18 F 1	Map ID: 4
Approximate Associated Drainage Area (acres):	0.3	
Approximate Imperviousness:	93%	0.28
Description of Existing Conditions:	Road ends in cul-de-sac approximately 400 feet north of the stream. Commercial area just north of the street and other sections surrounded by grass.	
Project Description:	**LID Bioretention** – Install curb cuts and a bioretention island in the middle of the cul-de-sac.	

Figure 35bl – Candidate Stormwater Retrofit Project		
Site Location:	Eads Street NE dead end, west of 55th Street NE, Washington, DC	
Project No.:	WB-L-01-S-64	
ADC Map Book Location:	18 F 1, 18 G 1	Map ID: 5
Approximate Associated Drainage Area (acres):	0.4	
Approximate Imperviousness:	97%	0.39 ac
Description of Existing Conditions:	The road ends just north of the stream. Dead end surrounded by grassy areas. Bike/pedestrian path runs to the south of the street.	
Project Description:	**LID Bioretention** – Remove asphalt and install curb cuts and bioretention systems at the end of the street.	

Figure 36 – Lower Watts Branch Candidate Stream Restoration Sites

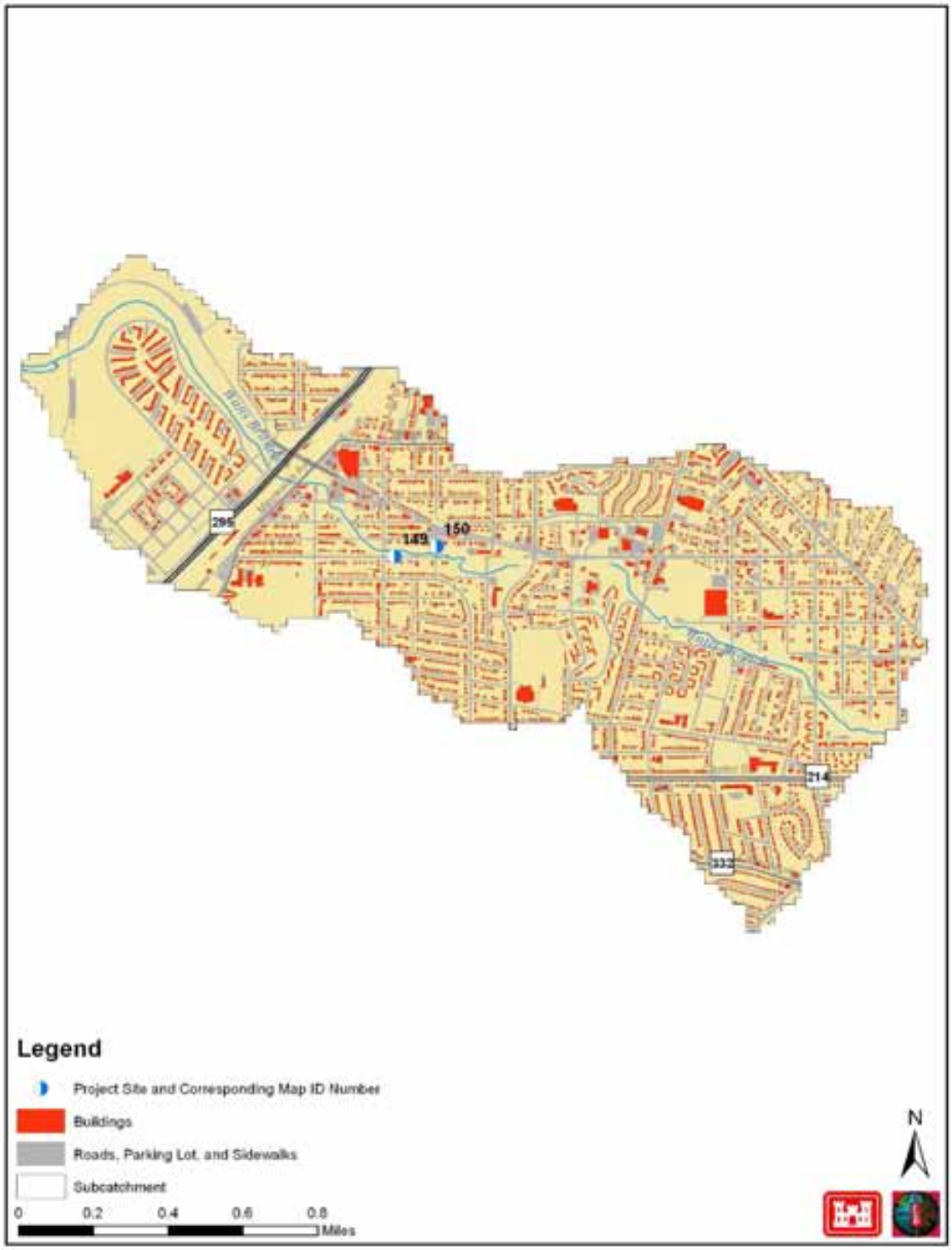

Table 21. Lower Watts Branch – Stream Restoration Projects

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx Length (feet)	General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
WB-L-02-SR-1	149	DC	Grant Street NE (outfall between 44th Street NE and 45th Street NE), Washington, DC	18 D 1	1b	Public	60	Stream Channel Morphology Restoration	18,000		
WB-L-02-SR-2	150	DC	Outfall 100 feet south of Gault Place NE and 46th Street NE, Washington, DC	18 D 1	1b	Mixed	105	Stream Channel Morphology Restoration, Signage	31,500		

PG = Prince George's County

[1] 1a= Channel Morphology, 1b= In-Stream Habitat/Bank Stabilization, 1c= Fish Blockage, 1d= Vernal Pool Creation Enhancement

Figure 37a – Candidate Stream Restoration Project		
Site Location:	Grant Street NE (outfall between 44th Street NE and 45th Street NE), Washington, DC	
Project No.:	WB-L-02-SR-1	
ADC Map Book Location:	18 D 1	Map ID: 149
Approximate Length (feet):	60	
Description of Existing Conditions:	Large outfall pipe (two-foot diameter) with broken grate draining to stream. Incised channel (five-foot banks) creating small scour pool as it enters main channel.	
Project Description:	**Stream Channel Morphology Restoration** - Regrade and riprap banks.	

Figure 37b – Candidate Stream Restoration Project		
Site Location:	Outfall 100 feet south of Gault Place NE and 46th Street NE, Washington, DC	
Project No.:	WB-L-02-SR-2	
ADC Map Book Location:	18 D 1	Map ID: 150
Approximate Length (feet):	105	
Description of Existing Conditions:	Outfall (three-foot diameter) on north side of stream draining 46th Street with incised banks (four feet). Outfall is blocked by undercut bank. The outfall is a dump site for yard waste.	
Project Description:	**Stream Channel Morphology Restoration, Signage** - Remove blockage from in front of outfall and perform intensive stabilization of banks (brush mattressing, riprap, or appropriate armoring technique). Install signage on the trail close to the outfall.	

Figure 38 – Lower Watts Branch Candidate Riparian Management Sites

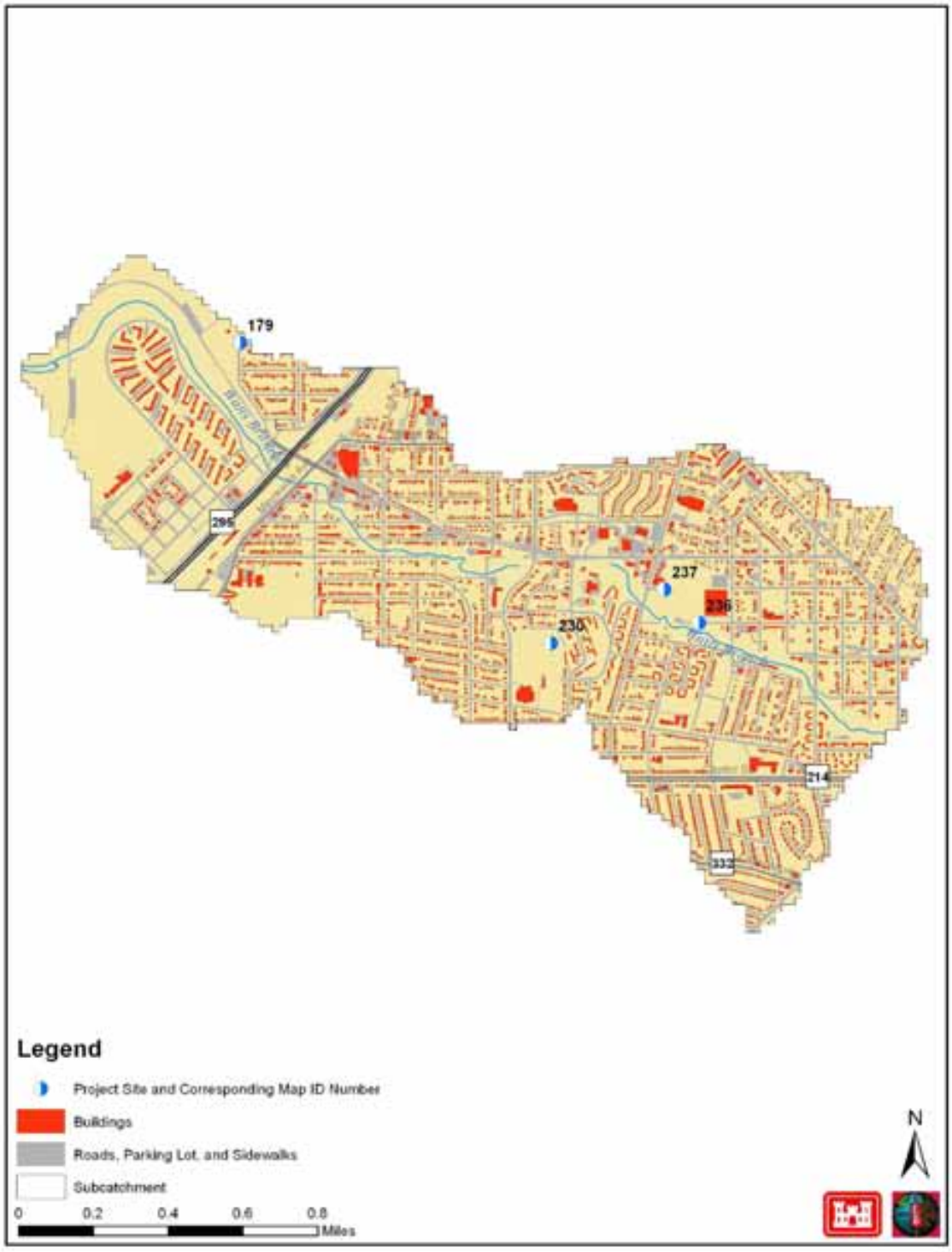

Table 22. Lower Watts Branch – Riparian Restoration Projects

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx Acreage	General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
WB-L-05-R-1	230	DC	DDOE Site TP6, Parkland south of 49th Place and Eads Place NE (behind Kelly Miller Middle School), Washington, DC	8 E 2	1b	Public	1.62	Riparian Reforestation	14,580		
WB-L-05-R-2	179	DC	Park land north and south of Deane Avenue NE, Washington, DC	12 A 12, 12 A 13, 12 B 12, 12 C 12	1c	Public	7.0	Meadow Creation	35,000		
WB-L-05-R-3	236	DC	Eads Street NE dead end, west of 55th Street NE, Washington, DC	18 F 1, 18 G 1	1b	Public	0.38	Riparian Reforestation	3,420		
WB-L-05-R-4	237	DC	Foote Street NE cul-de-sac, east of Division Avenue NE, Washington, DC	18 F 1	1b	Public	0.33	Riparian Reforestation	2,970		

DC = District of Columbia
PG = Prince George's County
[1] 1a= Upland Reforestation, 1b= Riparian Reforestation, 1c= Meadow Creation, 1d= Invasive Plant Management

Figure 38a – Candidate Riparian Restoration Project		
Site Location:	DDOE Site TP6, Parkland south of 49th Place and Eads Place NE (behind Kelly Miller Middle School), Washington, DC	
Project No.:	WB-L-05-R-1	
ADC Map Book Location:	18 E 2	Map ID: 230
Approximate Acreage (acres):	1.62	
Description of Existing Conditions:	Large grassy area part of the District of Columbia Department of Parks and Recreation located behind the school. Area receives runoff and was wet at time of visit.	
Project Description:	**Riparian Reforestation** - Plant endemic trees in open grass area that can tolerate inundation following large rain events.	

Figure 38b – Candidate Riparian Restoration Project		
Site Location:	Park land north and south of Deane Avenue NE, Washington, DC	
Project No.:	WB-L-05-R-2	
ADC Map Book Location:	12 A 12, 12 A 13, 12 B 12, 12 C 12	Map ID: 179
Approximate Acreage (acres):	7.0	
Description of Existing Conditions:	Large open grass areas with few trees that are part of the eastern section of Kenilworth Park and Aquatic Gardens. Bordered to the north by the Anacostia River and to the south by Watts Branch.	
Project Description:	**Meadow Creation, Outreach** - Plant endemic riparian grasses and shrubs using volunteer assistance. Install signage to educate the public about the vegetation and its importance to the watershed.	

Figure 38c – Candidate Riparian Restoration Project		
Site Location:	Eads Street NE dead end, west of 55th Street NE, Washington, DC	
Project No.:	WB-L-05-R-3	
ADC Map Book Location:	18 F 1, 18 G 1	Map ID: 236
Approximate Acreage (acres):	0.38	
Description of Existing Conditions:	The road ends just north of the stream. Dead end surrounded by grassy areas. Bike/pedestrian path runs to the south of the street. No riparian buffer.	
Project Description:	**Riparian Reforestation** – Establish endemic trees in the grassy area between the road and the stream.	

Figure 38d – Candidate Riparian Restoration Project		
Site Location:	Foote Street NE cul-de-sac, east of Division Avenue NE, Washington, DC	
Project No.:	WB-L-05-R-4	
ADC Map Book Location:	18 F 1	Map ID: 237
Approximate Acreage (acres):	0.33	
Description of Existing Conditions:	Road ends in cul-de-sac approximately 400 feet north of the stream. Commercial area just north of the street and other sections surrounded by grass.	
Project Description:	**Riparian Reforestation** – Establish endemic trees in the grassy areas east and south of the road for aesthetics.	

Figure 39 – Lower Watts Branch Candidate Trash Reduction Sites

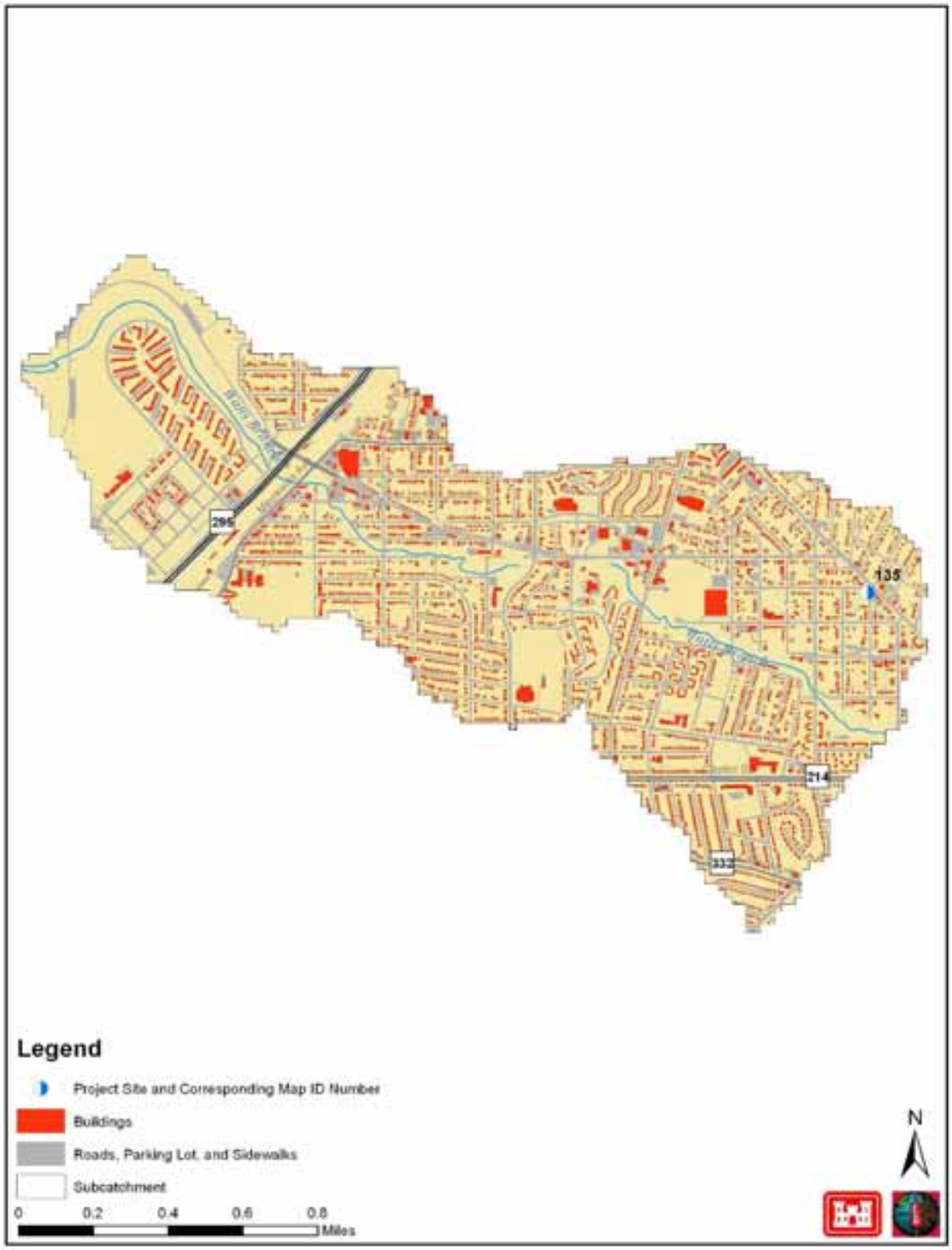

Table 23. Lower Watts Branch – Trash Reduction Projects

Project ID	MAP ID	Jurisdiction	Site Location Name	ADC Map Book Location	Project Type[1]	Ownership	Approx Length (feet)	General Description of Proposed Actions	Estimated Cost ($)	Project Score (pts)	Project Ranking
WB-L-06-T-1	135	DC	Eastern Avenue (56th Street NE to Southern Avenue), Washington, DC	12 G 13, 18 G 1, 18 H 1, 18 H 2, 18 J 2	1a	Public	5,280	Street Sweeping	600		

DC = District of Columbia
PG= Prince George's County
[1] 1a = Street Sweeping, 1b = Manual/Mechanical Removal, 1c= Structural, 1d=Outreach/Education

Figure 40a – Candidate Trash Reduction Project		
Site Location:	Eastern Avenue (56th Street NE to Southern Avenue), Washington, DC	
Project No.:	WB-L-06-T-1	
ADC Map Book Location:	12 G 13, 18 G 1, 18 H 1, 18 H 2, 18 J 2	Map ID: 135
Approximate Length (feet):	5,280	
Description of Existing Conditions:	Two-lane street with parking on both sides. Some portions have grass right-of-way areas on sides, but few medians exist. Street has variable slope throughout. Sediment and debris present in street gutters.	
Project Description:	**Street Sweeping** - Establish street sweeping (monthly) to remove debris and sediment.