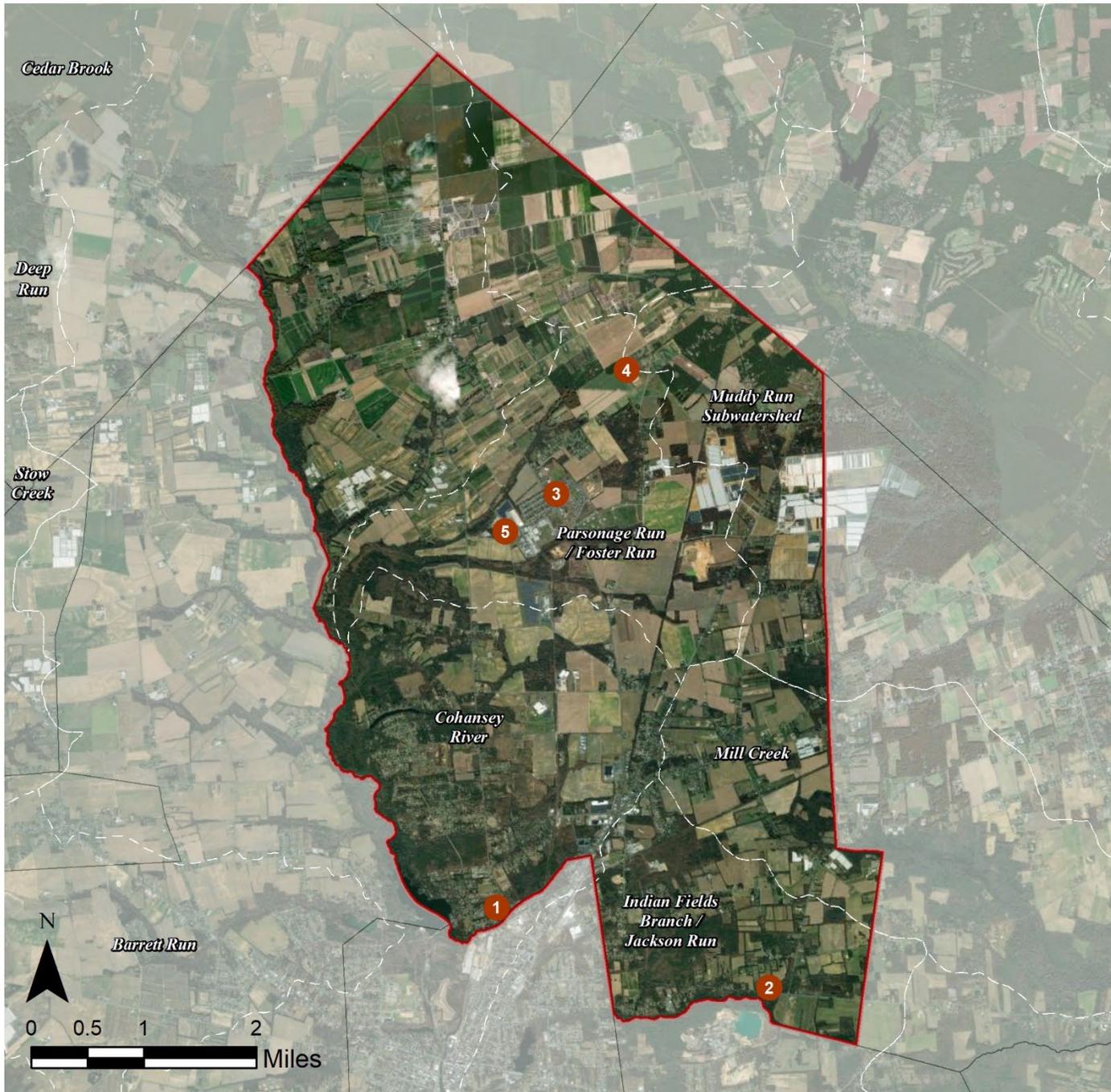


UPPER DEERFIELD TOWNSHIP: GREEN INFRASTRUCTURE SITES



SITES WITHIN THE COHANSEY RIVER SUBWATERSHED

1. Bridgeton First Seventh-day Adventist Church

SITES WITHIN THE INDIAN FIELDS BRANCH/JACKSON RUN SUBWATERSHED

2. Kingdom Hall of Jehovah's Witnesses

SITES WITHIN THE PARSONAGE RUN/FOSTER RUN SUBWATERSHED

3. Elizabeth F Moore Elementary School
4. Rutgers Agricultural Research & Extension Center
5. Seabrook Fire & Rescue

Bridgeton First Seventh-day Adventist Church



Subwatershed: Cohansey River

Site Area: 162,980 sq. ft.

Address: 36 Old Deerfield Pike
Bridgeton, NJ 08302

Block and Lot: Block 1808, Lot 36

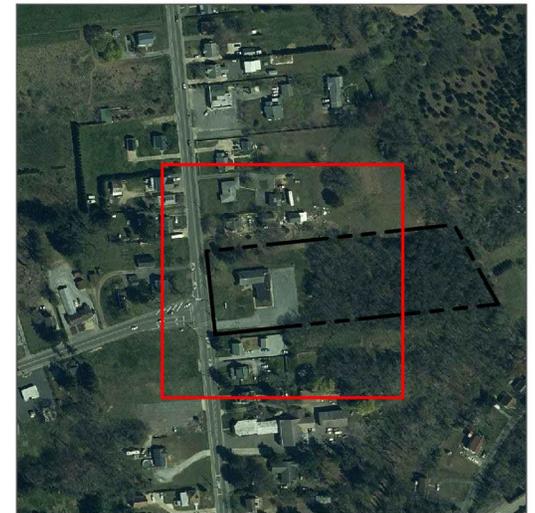


Rain gardens can be installed near the corners of the building to capture, treat, and infiltrate stormwater runoff from the roof. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
17	27,930	1.3	14.1	128.2	0.022	0.77

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention systems	0.050	8	3,640	0.14	480	\$2,400

GREEN INFRASTRUCTURE RECOMMENDATIONS



**Bridgeton First
Seventh-day Adventist
Church**

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



Kingdom Hall of Jehovah's Witnesses



Subwatershed: Indian Fields Branch/
Jackson Run

Site Area: 213,975 sq. ft.

Address: 691 Irving Avenue
Bridgeton, NJ 08302

Block and Lot: Block 2706, Lot 13.06



A rain garden can be created in the depressed turfgrass area next to the main entrance. This system can be installed by connecting to the culvert to provide aesthetic value and create wildlife habitat while managing stormwater runoff. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
20	42,210	2.0	21.3	193.8	0.033	1.16

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.294	49	21,350	0.80	2,820	\$14,100
Pervious pavement	0.150	25	10,880	0.41	1,145	\$28,625

GREEN INFRASTRUCTURE RECOMMENDATIONS



**Kingdom Hall of
Jehovah's Witnesses**

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



Elizabeth F. Moore Elementary School



Subwatershed: Parsonage Run/ Foster Run
Site Area: 388,570 sq. ft.
Address: 1361 NJ-77
 Bridgeton, NJ 08302
Block and Lot: Block 812, Lot 2



A rain garden can be installed in the turfgrass area southwest of the school building to capture, treat and infiltrate stormwater runoff. The handicap parking spaces north of the building can be replaced with pervious pavement to capture and infiltrate stormwater. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
44	171,455	8.3	86.6	787.2	0.134	4.70

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.034	6	2,450	0.09	325	\$1,625
Pervious pavement	0.090	15	6,520	0.24	990	\$24,750

GREEN INFRASTRUCTURE RECOMMENDATIONS



**Elizabeth F. Moore
Elementary School**

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



Rutgers Agricultural Research & Extension Center



Subwatershed: Parsonage Run/ Foster Run

Site Area: 1,927,395 sq. ft.

Address: 121 Northville Road
Bridgeton, NJ 08302

Block and Lot: Block 502, Lots 2, 2.01



A rain garden can be installed south of each of the two greenhouses to capture, treat, and infiltrate the roof runoff and to provide aesthetic value and wildlife habitat. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
11	218,565	10.5	110.4	1,003.5	0.170	5.99

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention systems	0.052	9	3,780	0.14	500	\$2,500

GREEN INFRASTRUCTURE RECOMMENDATIONS



Rutgers Agricultural Research & Extension Center

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



Seabrook Fire & Rescue



Subwatershed: Parsonage Run/ Foster Run

Site Area: 80,235 sq. ft.

Address: 90 Foster Road
Bridgeton, NJ 08302

Block and Lot: Block 902, Lot 7



Pervious pavement can be installed east of the building to capture and infiltrate the stormwater runoff from the parking lot area. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
67	54,115	2.6	27.3	248.5	0.042	1.48

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Pervious pavement	0.131	22	9,510	0.36	900	\$22,500

GREEN INFRASTRUCTURE RECOMMENDATIONS



Seabrook Fire & Rescue

-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



Summary of Existing Conditions

Subwatershed/Site Name/Total Site Info/GI Practice	Area (ac)	Area (SF)	Block	Lot	I.C. %	I.C. Area (ac)	I.C. Area (SF)	Existing Annual Loads (Commercial)			Runoff Volumes from I.C.		Runoff Volumes from I.C.	
								TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	Water Quality Storm (1.25" over 2-hours)	Annual	Water Quality Storm (1.25" over 2-hours)	Annual
											(cu.ft.)	(cu.ft.)	(Mgal)	(Mgal)
Cohansey River Sites	3.74	162,980				0.64	27,930	1.3	14.1	128.2	2,909	102,410	0.022	0.77
1 Bridgeton First Seventh-day Adventist Church Total Site Info	3.74	162,980	1808	36	17	0.64	27,930	1.3	14.1	128.2	2,909	102,410	0.022	0.77
Indian Fields Branch/Jackson Run Sites	4.91	213,975				0.97	42,210	2.0	21.3	193.8	4,397	154,770	0.033	1.16
2 Kingdom Hall of Jehovah's Witnesses Total Site Info	4.91	213,975	2706	13.06	20	0.97	42,210	2.0	21.3	193.8	4,397	154,770	0.033	1.16
Parsonage Run/Foster Run Sites	55.01	2,396,200				10.20	444,135	21.4	224.3	2,039.2	46,264	1,628,495	0.346	12.18
3 Elizabeth F. Moore Elementary School Total Site Info	8.92	388,570	812	2	44	3.94	171,455	8.3	86.6	787.2	17,860	628,668	0.134	4.70
4 Rutgers Agricultural Research & Extension Center Total Site Info	44.25	1,927,395	502	2, 2.01	11	5.02	218,565	10.5	110.4	1,003.5	22,767	801,405	0.170	5.99
5 Seabrook Fire & Rescue Total Site Info	1.84	80,235	902	7	67	1.24	54,115	2.6	27.3	248.5	5,637	198,422	0.042	1.48

Summary of Proposed Green Infrastructure Practices

Subwatershed/Site Name/Total Site Info/GI Practice	Potential Management Area		Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Max Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cfs)	Size of BMP	Unit Cost (\$/unit)	Unit	Total Cost (\$)	I.C. Treated %
	Area (SF)	Area (ac)									
Cohansey River Sites	1,920	0.04	0.050	8	3,640	0.14				\$2,400	7%
1 Bridgeton First Seventh-day Adventist Church											
Bioretention systems	1,920	0.04	0.050	8	3,640	0.14	480	\$5	SF	\$2,400	7%
Total Site Info	1,920	0.04	0.050	8	3,640	0.14				\$2,400	7%
Indian Fields Branch/Jackson Run Sites	17,020	0.39	0.443	74	32,230	1.21				\$42,725	40%
2 Kingdom Hall of Jehovah's Witnesses											
Bioretention system	11,275	0.26	0.294	49	21,350	0.80	2,820	\$5	SF	\$14,100	27%
Pervious pavement	5,745	0.13	0.150	25	10,880	0.41	1,145	\$25	SF	\$28,625	14%
Total Site Info	17,020	0.39	0.443	74	32,230	1.21				\$42,725	40%
Parsonage Run/Foster Run Sites	11,760	0.27	0.306	51	22,260	0.83				\$26,375	3%
3 Elizabeth F. Moore Elementary School											
Bioretention system	1,295	0.03	0.034	6	2,450	0.09	325	\$5	SF	\$1,625	1%
Pervious pavement	3,440	0.08	0.090	15	6,520	0.24	990	\$25	SF	\$24,750	2%
Total Site Info	4,735	0.11	0.123	21	8,970	0.33				\$26,375	3%
4 Rutgers Agricultural Research & Extension Center											
Bioretention systems	2,000	0.05	0.052	9	3,780	0.14	500	\$5	SF	\$2,500	1%
Total Site Info	2,000	0.05	0.052	9	3,780	0.14				\$2,500	1%
5 Seabrook Fire & Rescue											
Pervious pavement	5,025	0.12	0.131	22	9,510	0.36	900	\$25	SF	\$22,500	9%
Total Site Info	5,025	0.12	0.131	22	9,510	0.36				\$22,500	9%