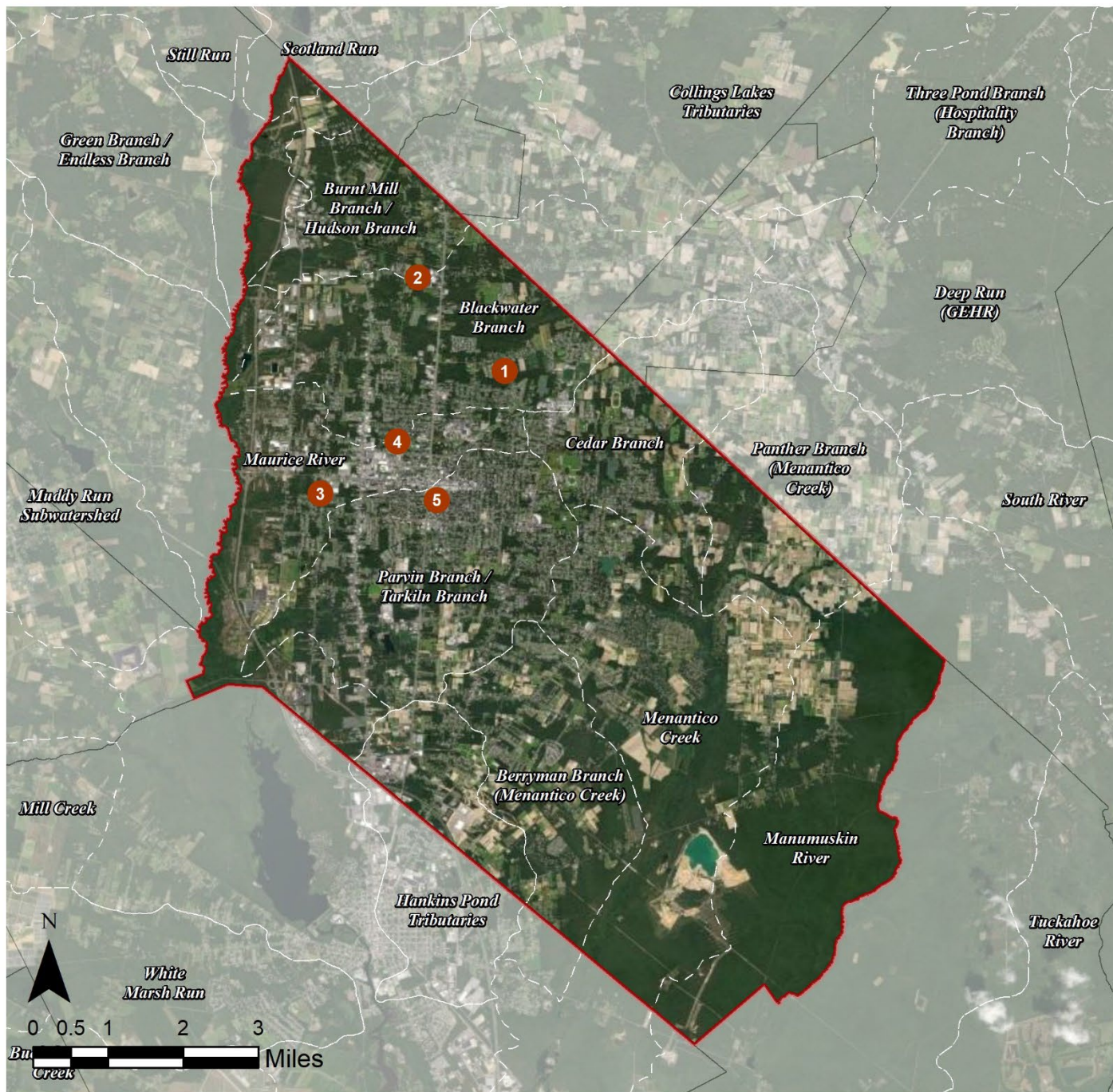


VINELAND CITY: GREEN INFRASTRUCTURE SITES



SITES WITHIN THE BLACKWATER BRANCH SUBWATERSHED

1. D'Ippolito Elementary School

SITES WITHIN THE BURNT MILL BRANCH/HUDSON BRANCH SUBWATERSHED

2. Marie Durand Elementary School

SITES WITHIN THE MAURICE RIVER SUBWATERSHED

3. Dane Barse Elementary School

4. Max Leuchter Elementary School

SITES WITHIN THE PARVIN BRANCH/TARKILN BRANCH SUBWATERSHED

5. Gloria M. Sabater Elementary School

D'IPPOLITO ELEMENTARY SCHOOL

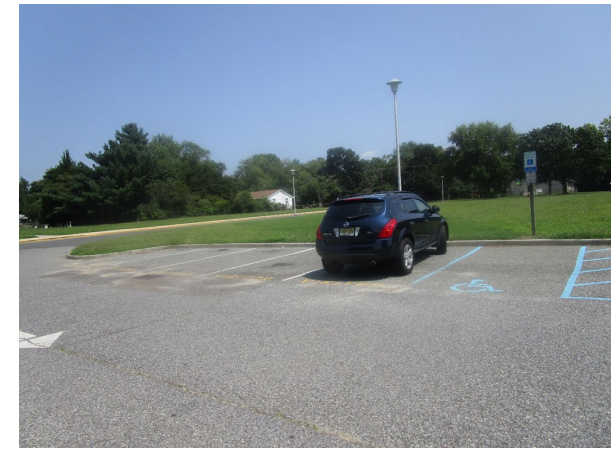


Subwatershed: Blackwater Branch

Site Area: 766,565 sq. ft.

Address: 1578 North Valley Avenue
Vineland, NJ 08360

Block and Lot: Block 1702, Lot 63

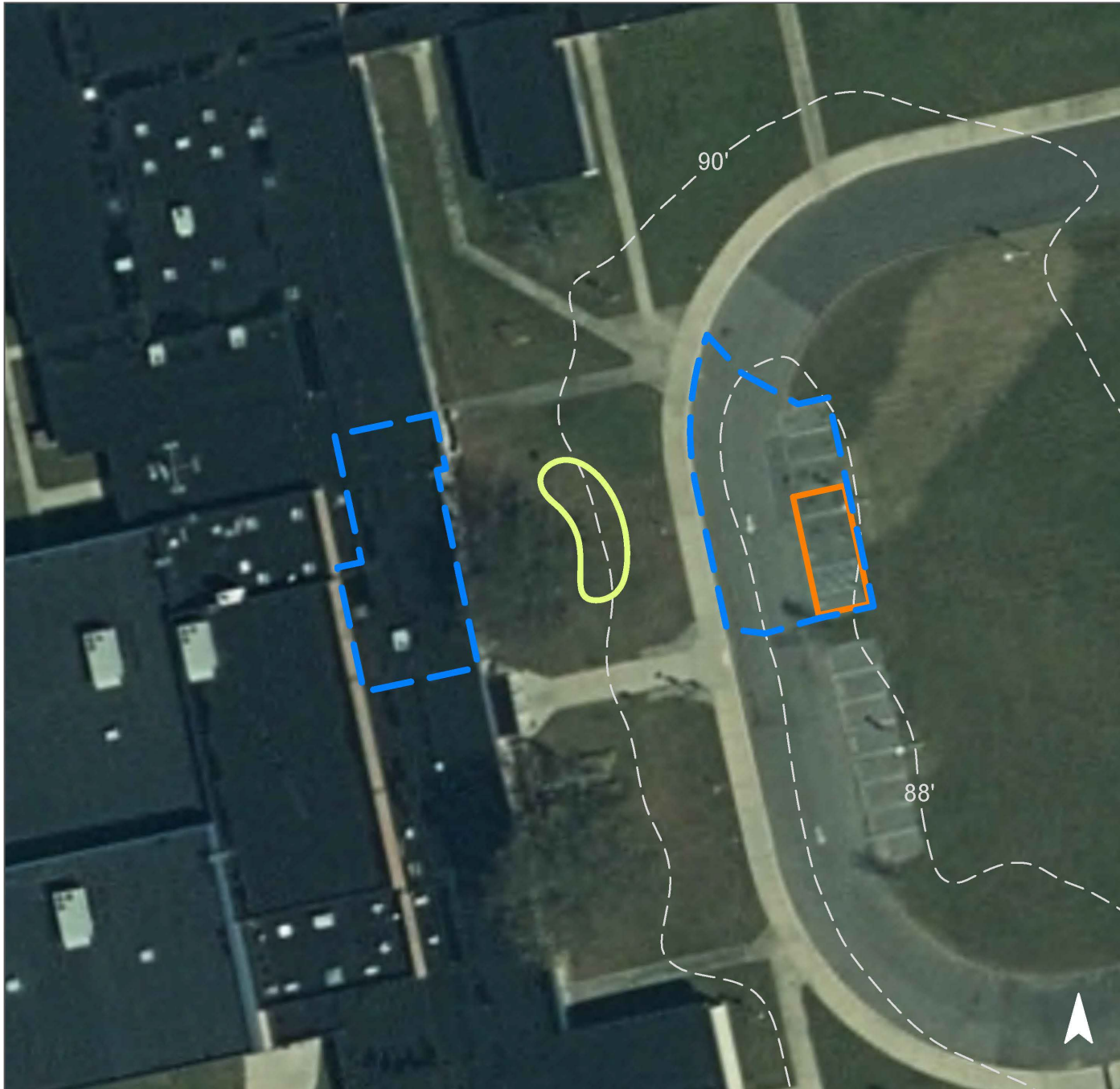


Parking spaces in the parking lot to the east of the building can be converted to pervious pavement to capture and infiltrate stormwater runoff from the parking lot before it reaches a nearby catch basin. A rain garden can be installed east of the building to capture, treat, and infiltrate stormwater 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"
39	300,520	14.5	151.8	1,379.8	0.234	8.24

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	0.086	14	6,220	0.23	720	\$3,600
Pervious pavement	0.098	16	7,140	0.27	720	\$18,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



D'Ippolito Elementary School

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



MARIE DURAND ELEMENTARY SCHOOL



Subwatershed: Burnt Mill Branch/Hudson Branch

Site Area: 942,690 sq. ft.

Address: 371 West Forest Grove Road
Vineland, NJ 08360

Block and Lot: Block 803, Lot 2



A rain garden can be installed on the north side of the building next to the outlet pipe to capture, treat, and infiltrate the stormwater runoff from the parking lot. 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"
23	215,480	10.4	108.8	989.3	0.168	5.91

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	0.200	33	14,530	0.55	1,920	\$9,600

GREEN INFRASTRUCTURE RECOMMENDATIONS



Marie Durand Elementary School

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



DANE BARSE ELEMENTARY SCHOOL



Subwatershed: Maurice River

Site Area: 184,505 sq. ft.

Address: 240 South Orchard Road
Vineland, NJ 08360

Block and Lot: Block 3502, Lot 9

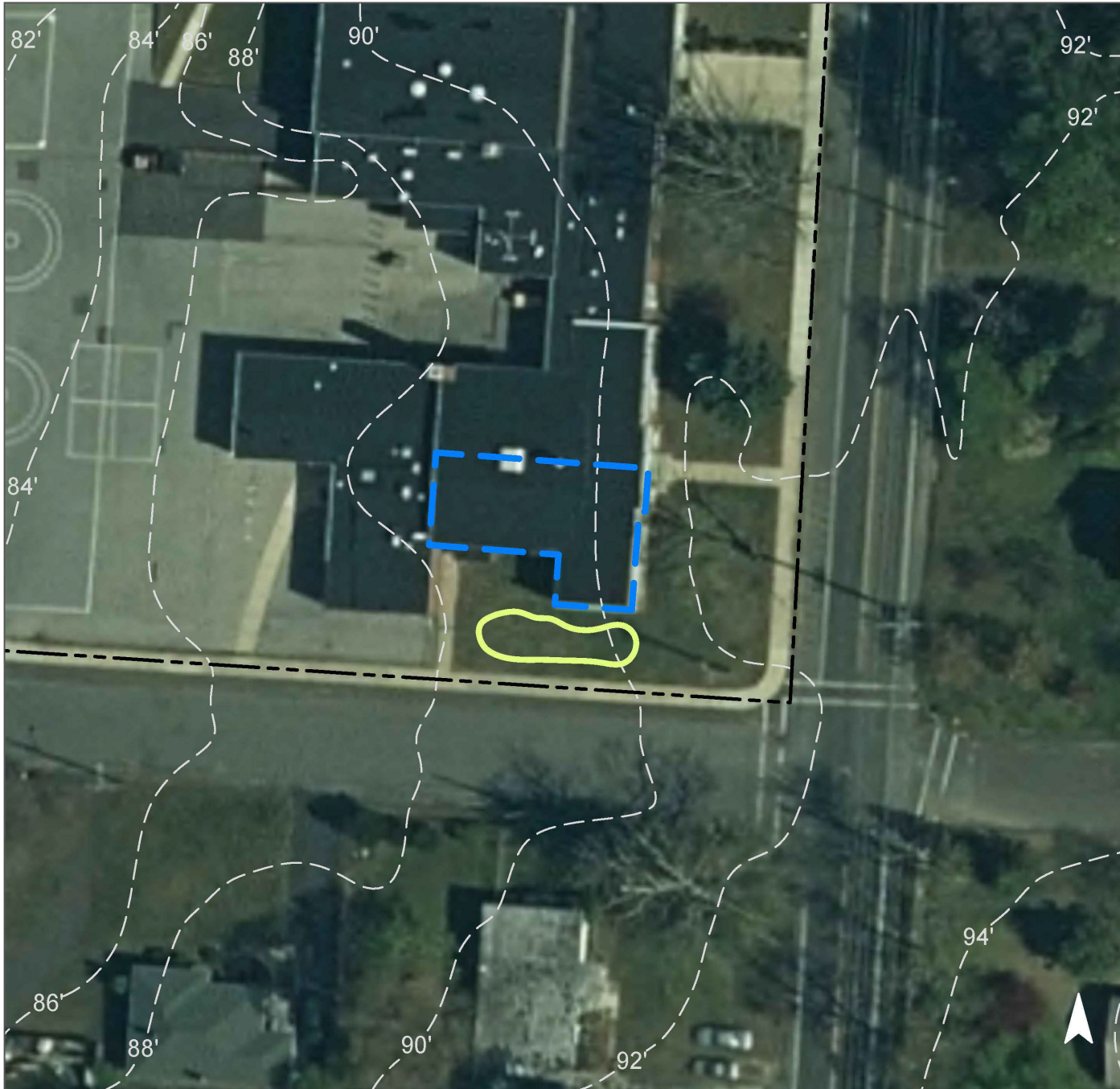


A rain garden can be installed south of the building to capture, treat, and infiltrate stormwater runoff from the roof. Two downspouts can be disconnected and led to the rain garden. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.





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"
76	140,490	6.8	71.0	645.0	0.109	3.85

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	0.064	11	4,620	0.17	610	\$3,050

GREEN INFRASTRUCTURE RECOMMENDATIONS



Dane Barse Elementary School

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



MAX LEUCHTER ELEMENTARY SCHOOL



Subwatershed: Maurice River

Site Area: 132,550 sq. ft.

Address: 519 Northwest Avenue
Vineland, NJ 08360

Block and Lot: Block 2233, Lot 31

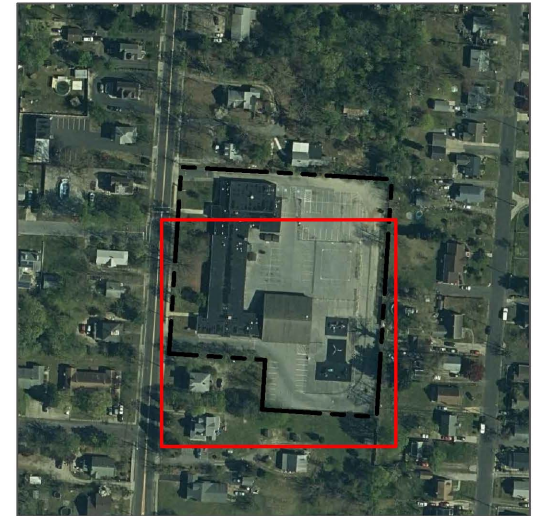


A strip of parking spaces on the south side of the building can be replaced with pervious pavement to capture and infiltrate stormwater from the rooftop and parking lot. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.





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"
86	114,555	5.5	57.9	526.0	0.089	3.14

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	0.204	34	14,860	0.56	1,400	\$35,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



Max Leuchter Elementary School

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



GLORIA M. SABATER ELEMENTARY SCHOOL



Subwatershed: Parvin Branch/ Tarkiln Branch
Site Area: 412,320 sq. ft.
Address: 301 Southeast Boulevard
 Vineland, NJ 08360
Block and Lot: Block 4009,
 Lots 6, 6.01, 6.02



A rain garden can be installed in the depression at the southwest corner of the building to capture, treat, and infiltrate rooftop runoff. The connected downspouts nearby can be disconnected and led into the garden. 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"
86	353,125	17.0	178.3	1,621.3	0.275	9.69

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	0.077	13	5,590	0.21	740	\$3,700

GREEN INFRASTRUCTURE RECOMMENDATIONS



Gloria M. Sabater Elementary School

-  bioretention system
-  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 (cu.ft.)	Water Quality Storm (1.25" over 2-hours)	Annual (Mgal)
											(cu.ft.)	(cu.ft.)	(Mgal)	(Mgal)
Blackwater Branch Sites	17.60	766,565				6.90	300,520	14.5	151.8	1379.8	31,304	1,101,907	0.234	8.24
1 D'Ippolito Elementary School Total Site Info	17.60	766,565	1702	63	39.2035	6.90	300,520	14.5	151.8	1379.8	31,304	1,101,907	0.234	8.24
Burnt Mill Branch/Hudson Branch Sites	21.64	942,690				4.95	215,480	10.4	108.8	989.3	22,446	790,093	0.168	5.91
2 Marie Durand Elementary School Total Site Info	21.64	942,690	803	2	22.858	4.95	215,480	10.4	108.8	989.3	22,446	790,093	0.168	5.91
Maurice River Sites	7.28	317,055				5.86	255,045	12.3	128.8	1171.0	26,567	935,165	0.199	7.00
3 Dane Barse Elementary School Total Site Info	4.24	184,505	3502	9	76.1443	3.23	140,490	6.8	71.0	645.0	14,634	515,130	0.109	3.85
4 Max Leuchter Elementary School Total Site Info	3.04	132,550	2233	31	86.424	2.63	114,555	5.5	57.9	526.0	11,933	420,035	0.089	3.14
Parvin Branch/Tarkiln Branch Sites	9.47	412,320				8.11	353,125	17.0	178.3	1621.3	36,784	1,294,792	0.275	9.69
5 Gloria M. Sabater Elementary School Total Site Info	9.47	412,320	4009	6, 6.01, 6.02	85.6434	8.11	353,125	17.0	178.3	1621.3	36,784	1,294,792	0.275	9.69

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)									
Blackwater Branch Sites	7,055	0.16	0.184	31	13,360	0.50				\$21,600	2%
1 D'Ippolito Elementary School											
Bioretention system	3,285	0.08	0.086	14	6,220	0.23	720	\$5	SF	\$3,600	1%
Pervious pavement	3,770	0.09	0.098	16	7,140	0.27	720	\$25	SF	\$18,000	1%
Total Site Info	7,055	0.16	0.184	31	13,360	0.50				\$21,600	2%
Burnt Mill Branch/Hudson Branch Sites	7,675	0.18	0.200	33	14,530	0.55				\$9,600	4%
2 Marie Durand Elementary School											
Bioretention system	7,675	0.18	0.200	33	14,530	0.55	1,920	\$5	SF	\$9,600	4%
Total Site Info	7,675	0.18	0.200	33	14,530	0.55				\$9,600	4%
Maurice River Sites	10,285	0.24	0.268	45	19,480	0.73				\$38,050	4%
3 Dane Barse Elementary School											
Bioretention system	2,440	0.06	0.064	11	4,620	0.17	610	\$5	SF	\$3,050	2%
Total Site Info	2,440	0.06	0.064	11	4,620	0.17				\$3,050	2%
4 Max Leuchter Elementary School											
Pervious pavement	7,845	0.18	0.204	34	14,860	0.56	1,400	\$25	SF	\$35,000	7%
Total Site Info	7,845	0.18	0.204	34	14,860	0.56				\$35,000	7%
Parvin Branch/Tarkiln Branch Sites	2,950	0.07	0.077	13	5,590	0.21				\$3,700	1%
5 Gloria M. Sabater Elementary School											
Bioretention system	2,950	0.07	0.077	13	5,590	0.21	740	\$5	SF	\$3,700	1%
Total Site Info	2,950	0.07	0.077	13	5,590	0.21				\$3,700	1%