

**GREEN
INFRASTRUCTURE
PLANNING**

Tier 1 Impervious Cover Assessment

Locate and quantify impervious surfaces, and the runoff volumes associated with these surfaces. **[5 points]**

Tier 2 Green Infrastructure Action Plan

Complete requirements of Tier 1, plus identify immediate and short-term (i.e., < 5 years) green infrastructure projects to manage stormwater runoff from impervious surfaces. **[5 points]**

Tier 3 Green Infrastructure Strategic Plan

Complete requirements of Tiers 1 and 2, plus identify long-term (i.e., 5-20 years) green infrastructure projects and policy recommendations for community-wide green infrastructure implementation. **[10 points]**

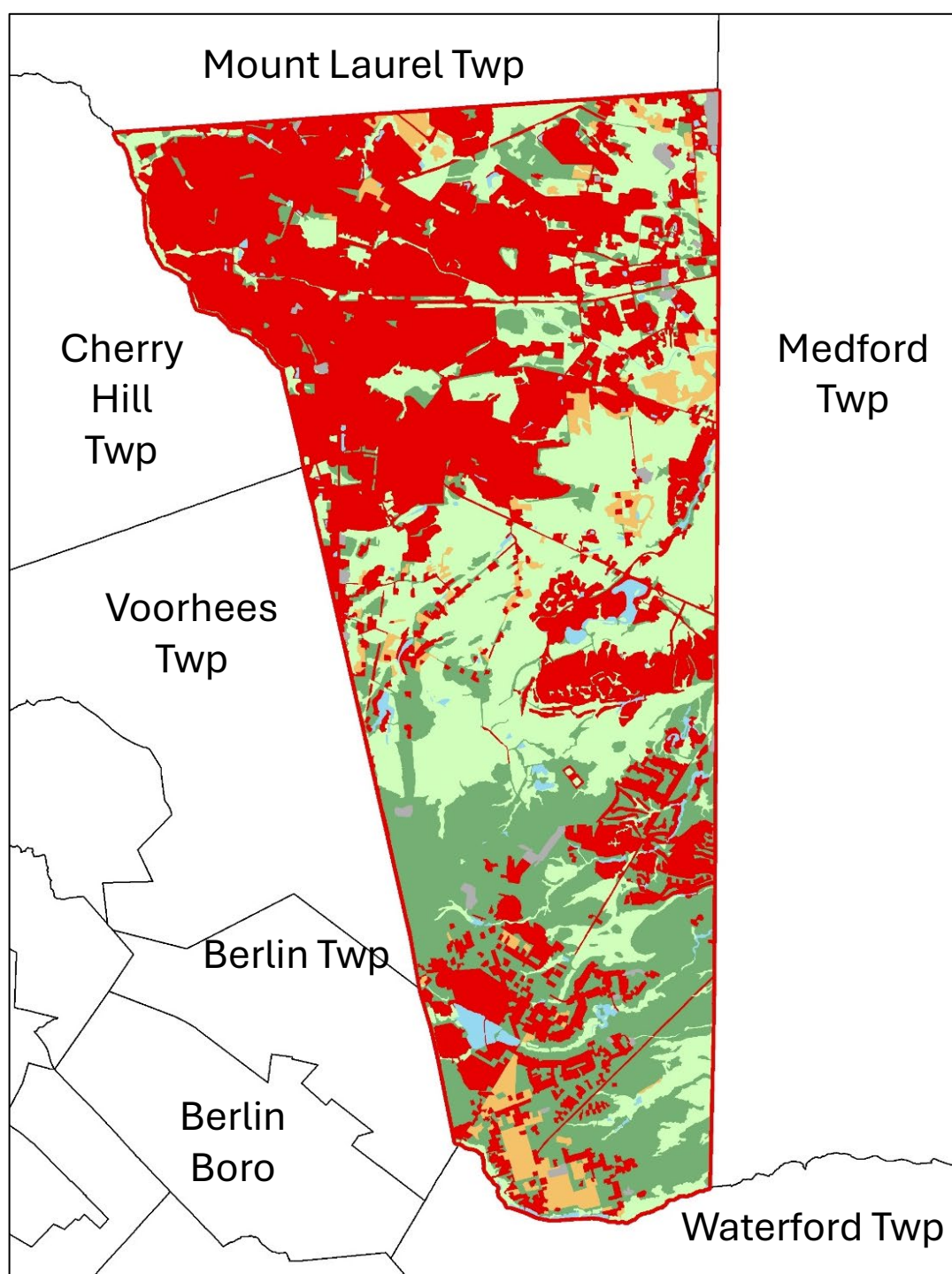
IMPERVIOUS COVER ASSESSMENT (ICA)



Impervious Cover Assessment

- Analysis completed by watershed and by municipality
- Use 2015 Impervious Surface Layer
- Calculate runoff volumes for water quality, 2-, 10- and 100-year design storm and annual rainfall
- Contains three concept designs

Evesham Township Land Use Map



- AGRICULTURE
- BARREN LAND
- FOREST
- URBAN
- WATER
- WETLANDS



Evesham Township
Impervious Surface Map
(2015 GIS Layer)

18.4% Impervious Cover

Watershed	Total Area (ac)	Impervious Cover (ac)	%
Alquatka Branch	1,026.8	32.23	3.1%
Barton Run	5,669.5	634.13	11.2%
Cooper River	415.0	195.6	47.1%
Kettle Run	1,509.0	155.53	10.3%
Lake Pine	2,857.2	267.26	9.4%
Mullica River	383.2	29.3	7.6%
Pennsauken Creek	2,951.5	1148.54	38.9%
Rancocas Creek	4,116.9	1020.69	24.8%
Total	18,929.1	3,483.3	18.4%

Subwatershed	NJ Water Quality Storm (MGal)	2-Year Design Storm (3.36") (MGal)	10-Year Design Storm (5.18") (MGal)	100-Year Design Storm (8.81") (MGal)	Annual Rainfall of 46.3" (MGal)
Alquatka Branch	1.09	2.94	4.53	7.71	40.52
Barton Run	21.52	57.85	89.19	151.69	797.20
Cooper River	6.64	17.84	27.51	46.79	245.90
Kettle Run	5.28	14.19	21.88	37.20	195.53
Lake Pine	9.07	24.38	37.59	63.93	335.99
Mullica River	0.99	2.67	4.12	7.01	36.83
Pennsauken Creek	38.98	104.78	161.54	274.75	1,443.89
Rancocas Creek	34.64	93.12	143.56	244.16	1,283.17
Total	118.22	317.79	489.92	833.25	4,379.05

GREEN INFRASTRUCTURE ACTION

CURRENT CONDITION



CONCEPT DESIGN



CURRENT CONDITION



THE
PITTSGROVE BAPTIST CHURCH
OF DARETOWN, N.C.
Morning Worship 10:00am Evening Service 6:00pm
Sunday School 11:45 am Youth Group

CONCEPT DESIGN



Green Infrastructure Action Plan

ICA (Tier1) + the following:

1. Community engagement
2. Potential green infrastructure sites
3. Site level analysis including concept plans, information sheets, and project costs
4. Investment/funding strategy for green infrastructure projects
5. Short-term 5-year goal

1. Community Engagement





2. Identifying Watershed Improvement Projects

We Look Here First

- ✓ Schools
- ✓ Places of Worship
- ✓ Libraries
- ✓ Municipal Building
- ✓ Public Works
- ✓ Firehouses
- ✓ Post Offices
- ✓ Elks or Moose Lodge
- ✓ Parks/ Recreational Fields



Or you can identify tax exempt parcels:

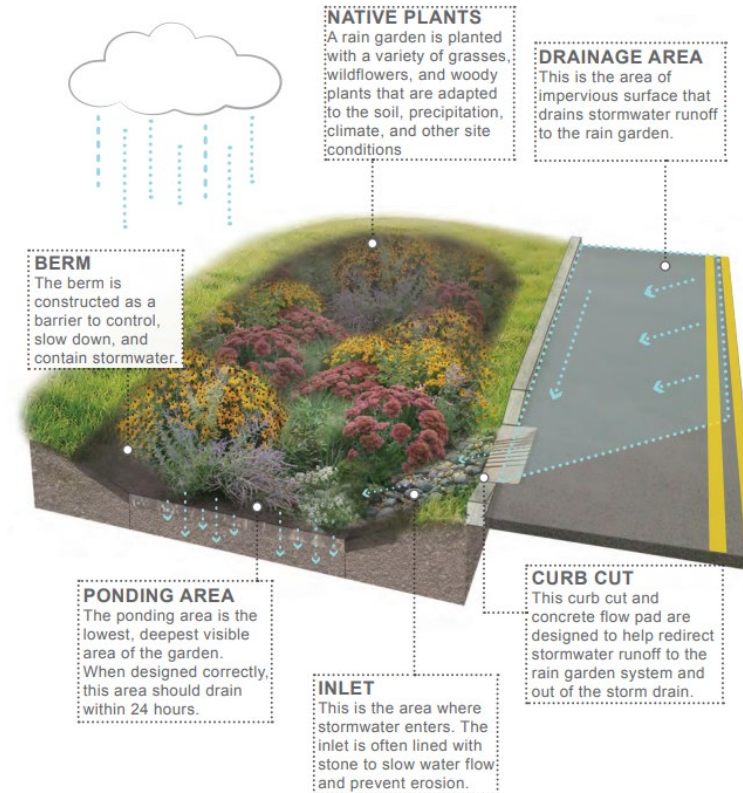
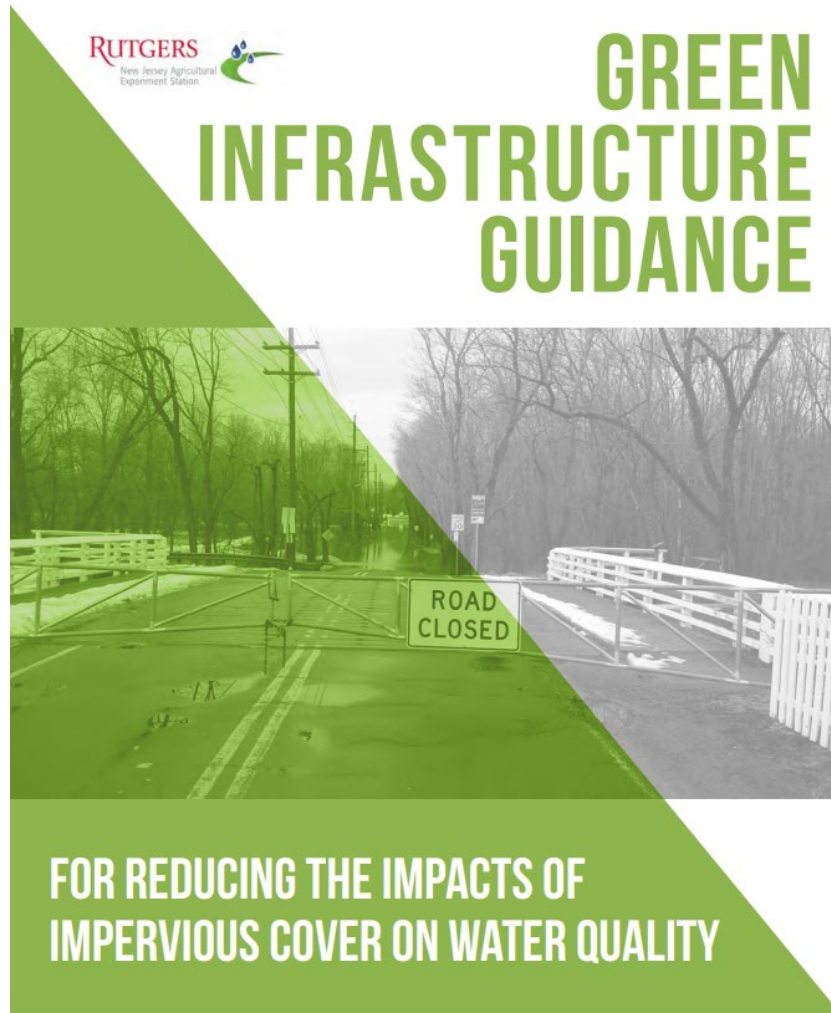
Tax Exempt Property Class Codes for NJ:

- 15A Public School Property
- 15B Other School Property
- 15C Public Property
- 15D Church & Charitable Property
- ~~15E Cemeteries & Graveyards~~
- 15F Other Exempt

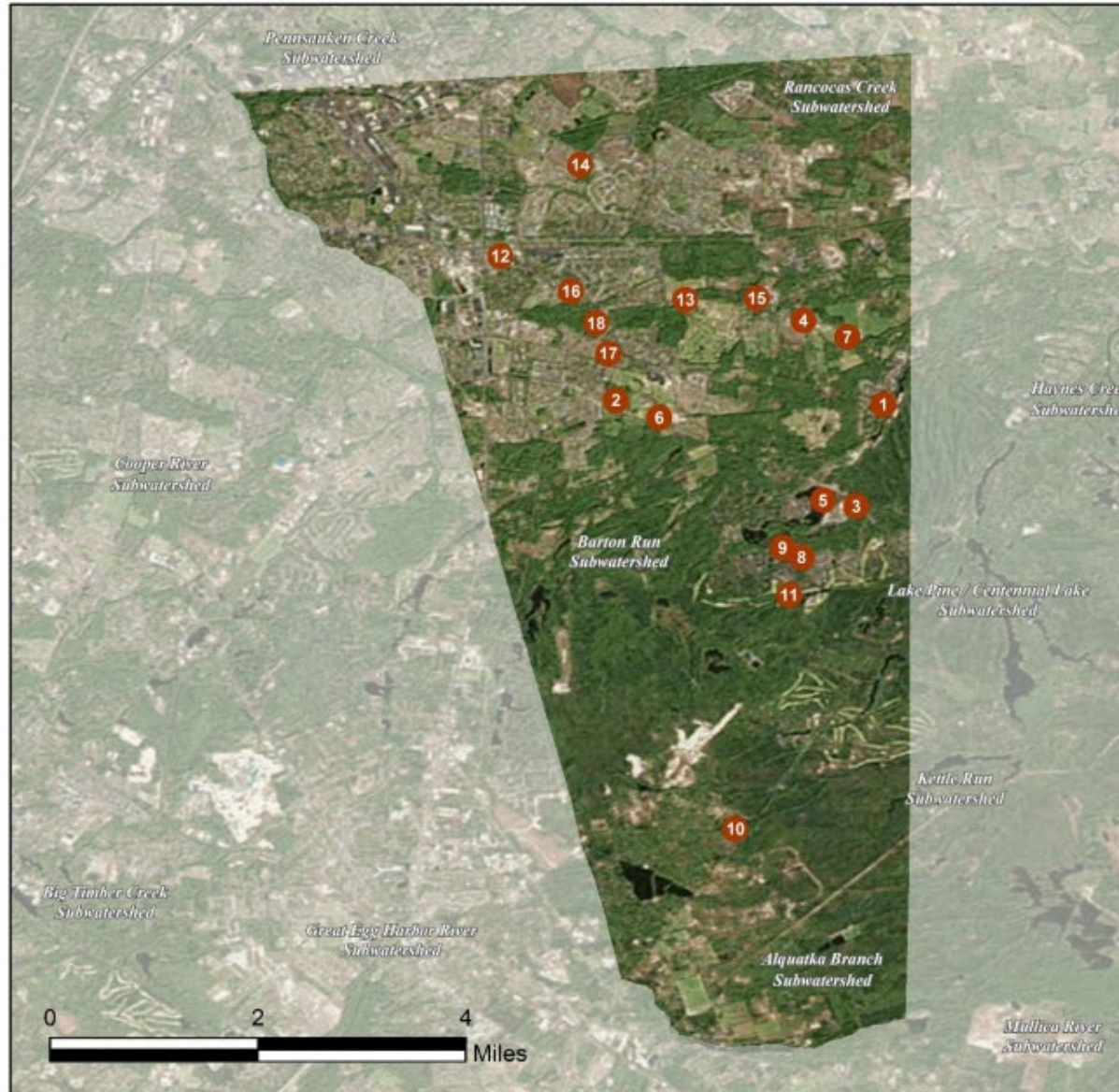


Green Infrastructure Brochure:

[http://water.rutgers.edu/Green Infrastructure Guidance Manual/GI-Brochure PRINT-FRIENDLY.pdf](http://water.rutgers.edu/Green_Infrastructure_Guidance_Manual/GI-Brochure_PRINT-FRIENDLY.pdf)



EVESHAM TOWNSHIP: GREEN INFRASTRUCTURE SITES



SITES WITHIN THE BARTON RUN SUBWATERSHED:

1. Barton Run Swim Club
2. Cherokee High School
3. Evesham Fire/Rescue 223/227
4. Evesham Township Municipal Court
5. King's Grant Community Room
6. Marlton Elementary School
7. Memorial Park
8. Richard L. Rice Elementary School
9. Villa Royal Association

SITES WITHIN THE LAKE PINE SUBWATERSHED:

10. Kettle Run Fire/Rescue 225/228
11. Links Golf Course

SITES WITHIN THE PENNSAUKEN CREEK SUBWATERSHED:

12. Evesham Fire/Rescue 221/229

SITES WITHIN THE RANCOCAS CREEK SUBWATERSHED:

13. Christ Presbyterian Church
14. Frances S. DeMasi Elementary School
15. Marlton Assembly of God
16. Marlton Post Office
17. Robert B. Jaggard Elementary School
18. St. Joan of Arc Parish and School

Short term (5 years) goal

Existing Municipal Impervious Cover	Recommended Short Term (less than 5 years) Impervious Cover Management Goal (%)	Recommended Short Term Impervious Cover Management Goal (acres)
0% to 10%	1%	10 acres
10.1% to 25% 18.4%	2%	15 acres
>25%	5%	20 acres

For Evesham, 2% of IC is 69.7 acres.

GREEN INFRASTRUCTURE STRATEGIC PLAN

CURRENT CONDITION



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BARTON RUN SWIM CLUB

100 Lakeside Drive
Marlton, NJ 08053

CONCEPT DESIGN



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BARTON RUN SWIM CLUB

100 Lakeside Drive
Marlton, NJ 08053

Green Infrastructure Strategic Plan

ICA (Tier 1) and Green Infrastructure Action Plan (Tier 2) + the following:

- Additional green infrastructure sites
- Policy recommendations
- Water quality and quantify benefits
- Implementation agenda
- Long-term 5-20 year goals

GREEN INFRASTRUCTURE FEASIBILITY STUDY

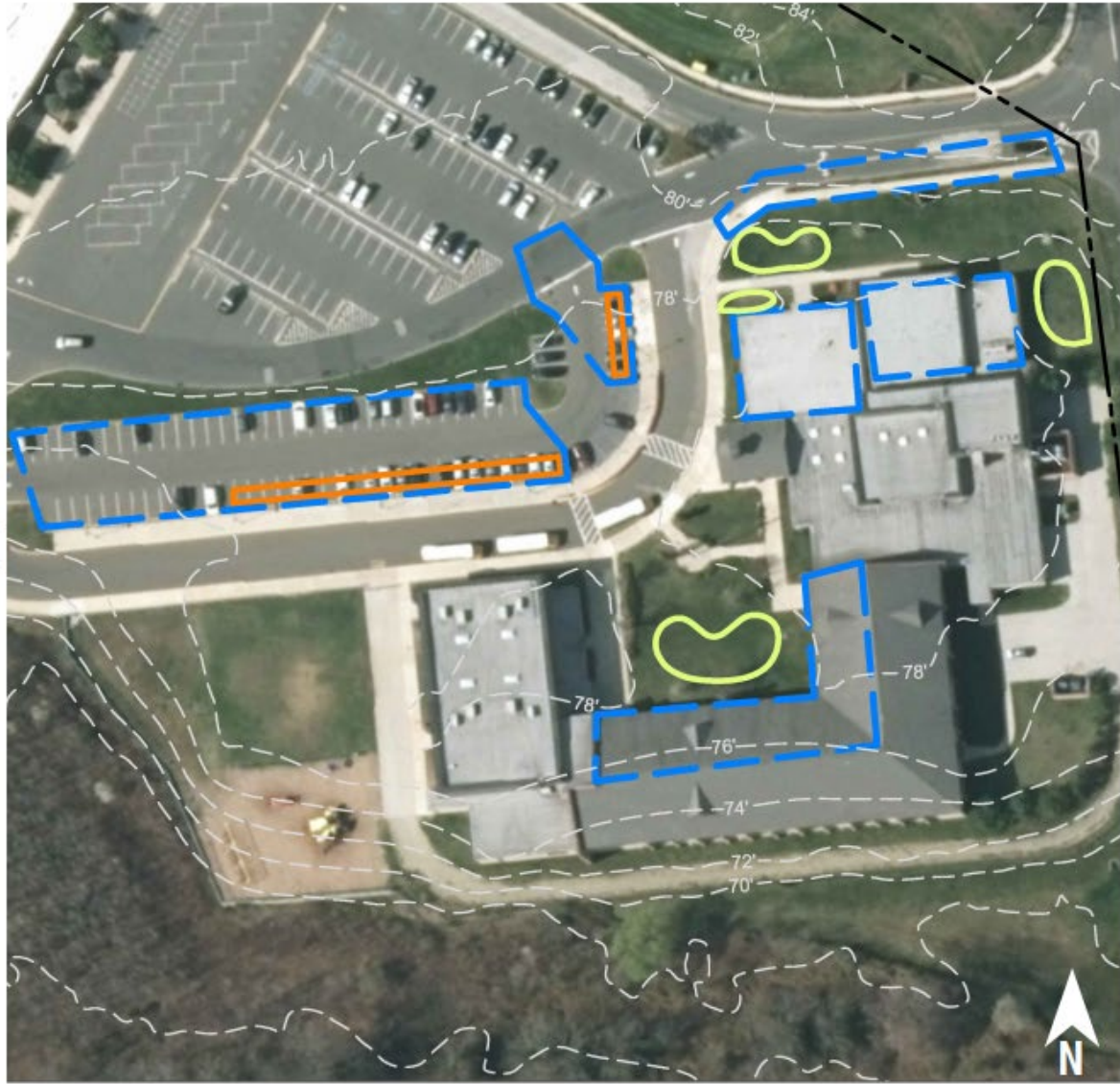
EVEESHAM
TOWNSHIP






WILLIAM PENN
FOUNDATION

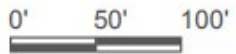
RUTGERS

New Jersey Agricultural
Experiment Station





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



Long term (5 to 20 years) goal

Existing Municipal Impervious Cover	Recommended Long Term (5 to 20 years) Impervious Cover Management Goal (%)	Recommended Long Term Impervious Cover Management Goal (acres)
0% to 10%	2%	25 acres
10.1% to 25%	5%	50 acres
>25%	10%	80 acres

For Evesham, 5% of IC is 174.2 acres.

**GREEN
INFRASTRUCTURE
IMPLEMENTATION**

Tier 1 Implement Green Infrastructure Demonstration Projects. Complete two green infrastructure demonstration projects and/or implement one green infrastructure policy. Green infrastructure projects include one or more of the green infrastructure practices shown in the [Green Infrastructure Guidance Manual for New Jersey](#): Rain Gardens, Bioswales, Downspout Planters, Stormwater Planters, Cisterns, Permeable Pavements, Tree Filter Boxes, and Green Roofs. Tier 1 replaces both the previous Green Roofs and Rain Gardens Actions in the Innovation & Demonstration Projects category. **[10 points]**

Tier 2 Implement Green Infrastructure Action Plan. Complete as many green infrastructure projects as is necessary to achieve 50% of the short-term impervious cover management goal identified in the community's Green Infrastructure Action Plan (see the Green Infrastructure Planning Action). **[15 points]**

Tier 3 Implement Green Infrastructure Strategic Plan. Complete as many green infrastructure projects and policy changes as is necessary to achieve 50% of the long-term impervious cover management goal identified in municipality's Green Infrastructure Strategic Plan (see the Green Infrastructure Planning Action). **[20 points]**



