

Roots for Rivers



An Introduction to Floodplain Restoration & Steps For
Implementing A Reforestation Project



Presenters



Samantha McGraw
*Program Manager,
Sustainable Jersey*
609-771-2938
mcgraws@tcnj.edu



Michelle DiBlasio
Watershed Restoration Coordinator
The Nature Conservancy
908-955-0342
michelle.diblasio@tnc.org



Kaitlyn Vollmer
*Grants Program Coordinator,
Sustainable Jersey*
609-771-3189
grants@sustainablejersey.com

Improving our Freshwater Resources in New Jersey

- ❖ Dense development in New Jersey directly affects our water supply.
- ❖ More than 85% of our rivers and streams are impaired due to factors like erosion and polluted stormwater runoff.
- ❖ One important way to help ensure we can continue to rely upon our precious natural water resources is to restore New Jersey's floodplains—the critical land near our rivers' banks.
- ❖ Throughout much of the state, our floodplains have been deforested and left without trees to help filter water, absorb flooding, or cool the river for fish.

Roots for Rivers Reforestation Grant and Technical Assistance Program



- ❖ The Nature Conservancy (TNC) is eager to share lessons learned and to help catalyze restoration efforts across the state to achieve a goal of planting 100,000 trees in floodplains by 2020.
- ❖ This spring, Sustainable Jersey and TNC will be piloting a floodplain reforestation incentive program called “Roots for Rivers” throughout New Jersey’s watersheds.
- ❖ In February and March, municipalities can apply to receive support in the form of technical assistance to design restoration projects and funding to cover the material costs of floodplain reforestation.
- ❖ Selected applicants will be expected to both implement and maintain tree planting sites to ensure projects will be successful over time.

What You Will Learn Today

- Benefits of Floodplain Restoration
- How to Identify Restoration Project Sites in your Municipality
- How to Develop and Implement a Reforestation Project Plan
- Available Resources for Technical and Financial Assistance
- How to Apply and Get Involved



What is Floodplain Restoration?

- ❖ **FLOODPLAINS** are low-lying areas next to rivers that can experience flooding during significant periods of rain. Forested floodplains naturally help slow and absorb floodwaters and are home to a diversity of native animals.
- ❖ **RESTORATION** refers to the action of returning something back to its historical or former conditions.

Floodplain Restoration by Reforestation is designed to restore degraded streamside (riparian) habitat, reduce stormwater runoff and improve water quality by reestablishing native tree and shrub species in the floodplain.



Benefits of Streamside Tree Plantings



Planting native tree and shrub species along previously deforested stream banks and adjacent land (riparian area) that drains to the stream will act as a forested buffer, helping to protect and enhance water resources from land-use impacts in the watershed.

Forested Streamside Buffers will...

- ❖ Provide canopy cover to cool the water and regulate in-stream temperatures for aquatic macroinvertebrate and fish species.
- ❖ Provide a root system to stabilize stream banks and filter out excess nutrients and pollutants from stormwater runoff.
- ❖ Provide extra storage for flood waters.
- ❖ Supply food and habitat for a variety of in-stream and riparian wildlife.

How to Identify Priority Sites for Restoration

- ❖ The first step toward achieving a successful floodplain restoration project is selecting an appropriate site and identifying who owns the land.
- ❖ If the property is on state or private land, you will need to obtain written permission from the landowner before you can begin your project.

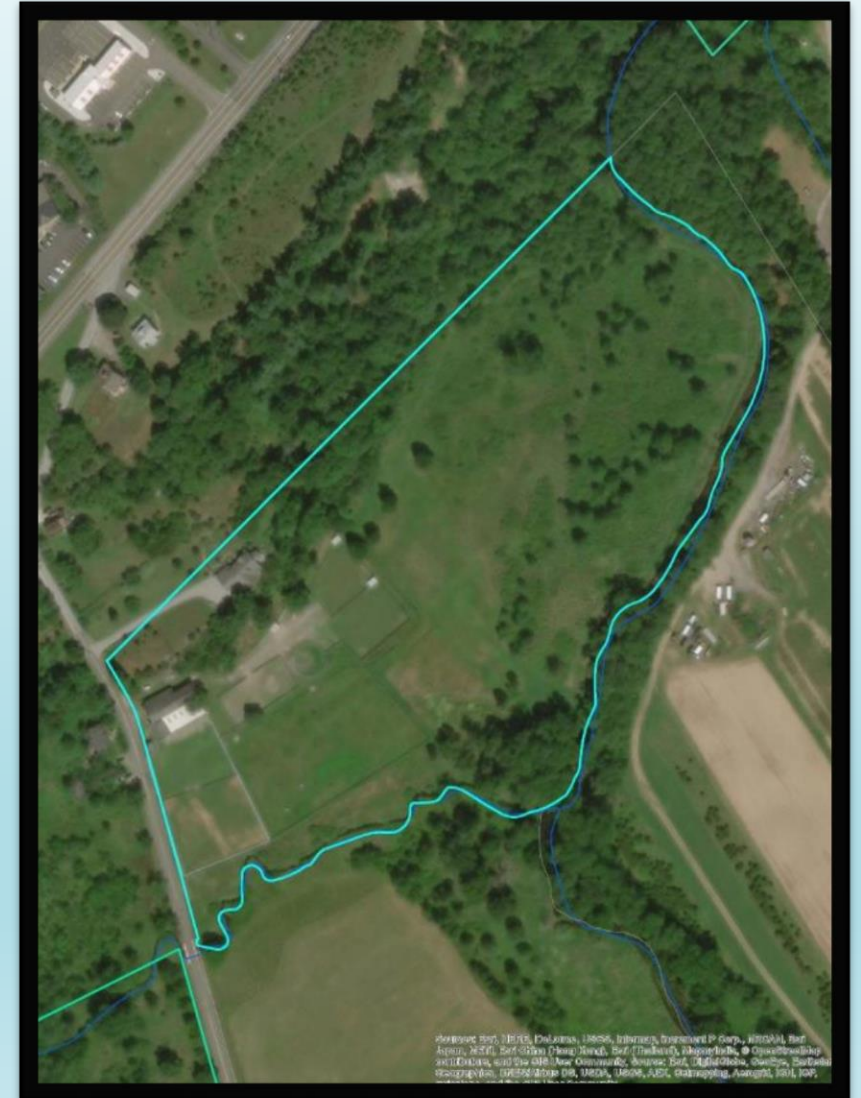
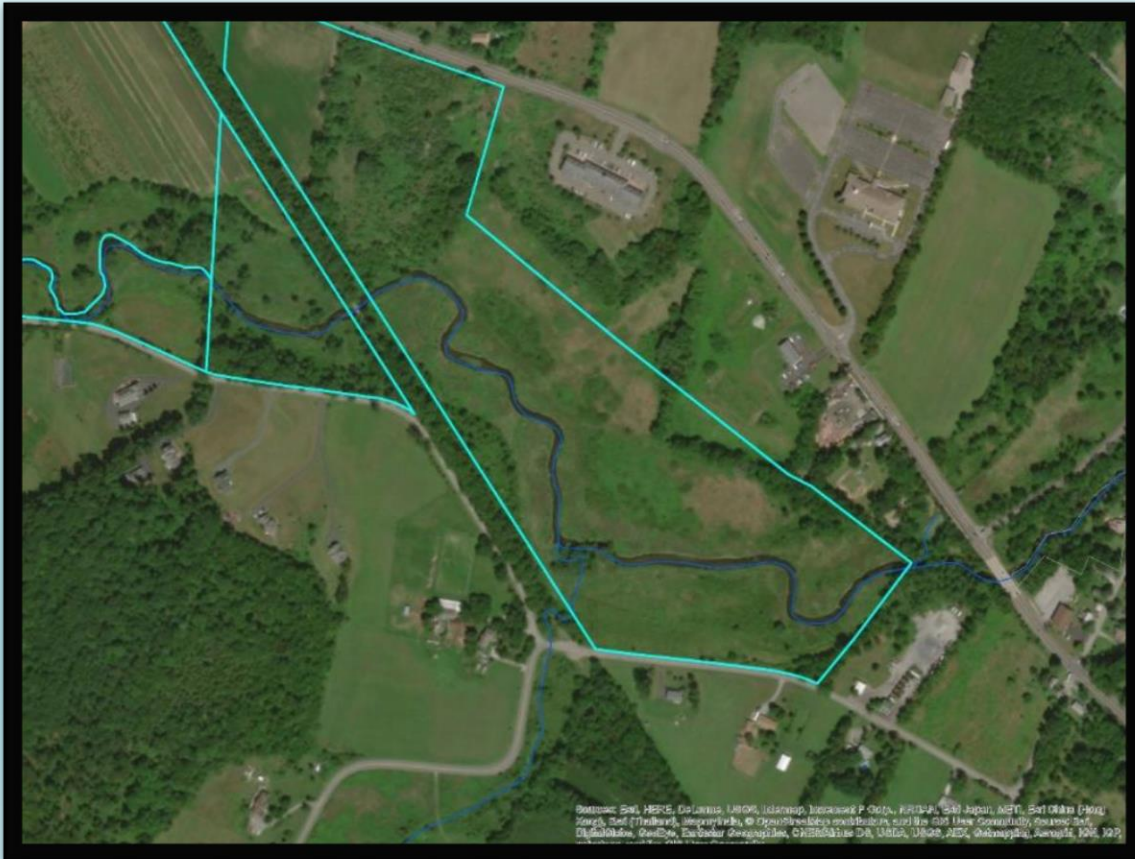
Criteria for Site Selection

- ✓ No woody vegetation or sparsely planted woody vegetation
- ✓ Mowed lawns or impermeable pavement
- ✓ Invasive or non-native grasses (reed canary grass, loosestrife, etc.)
- ✓ Signs of erosion
- ✓ Close proximity to paved roads



Tools for Identifying Project Sites

- ❖ Google maps and the use of the satellite imagery can be helpful in located these types of sites.

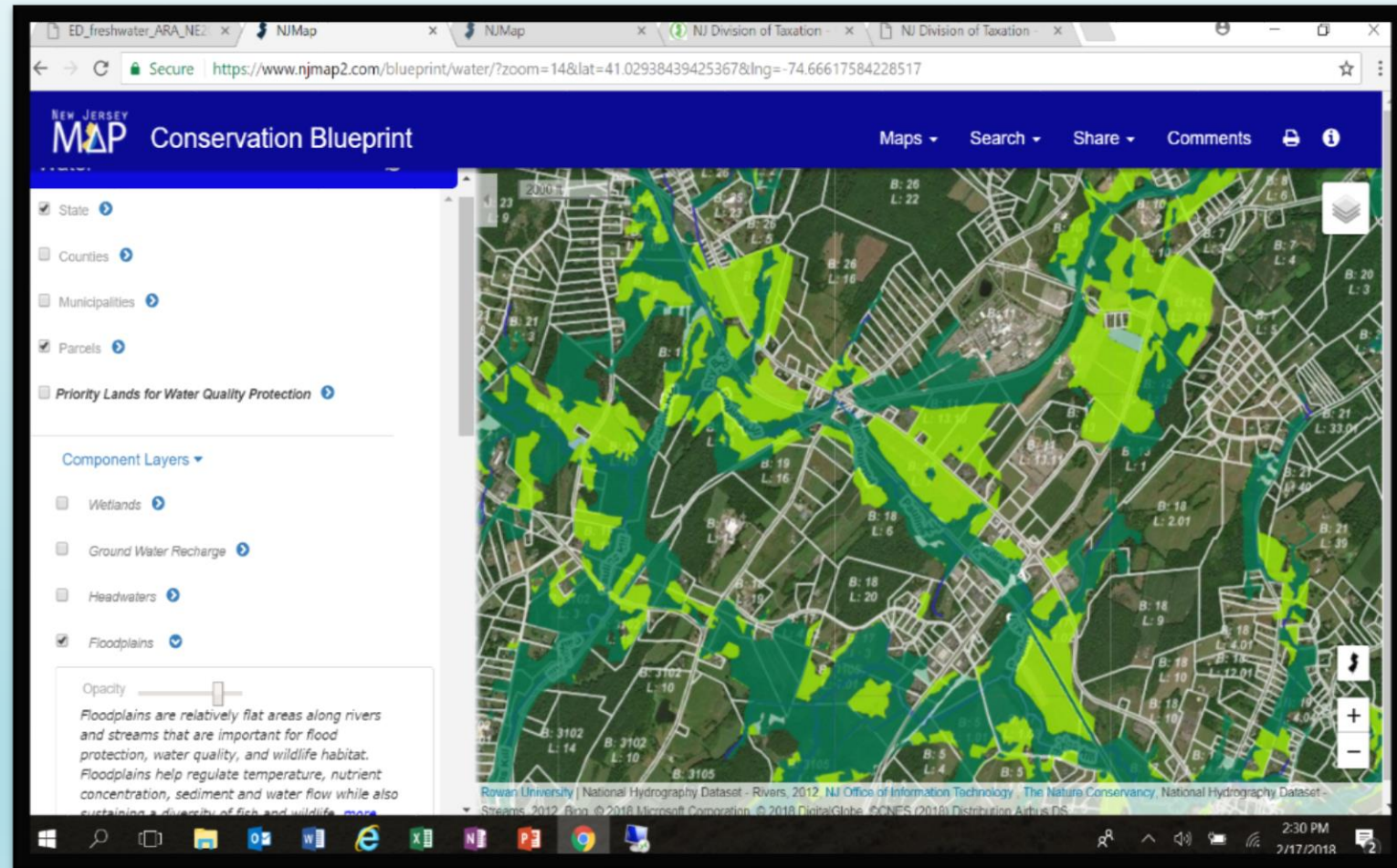


Tools for Identifying Project Sites

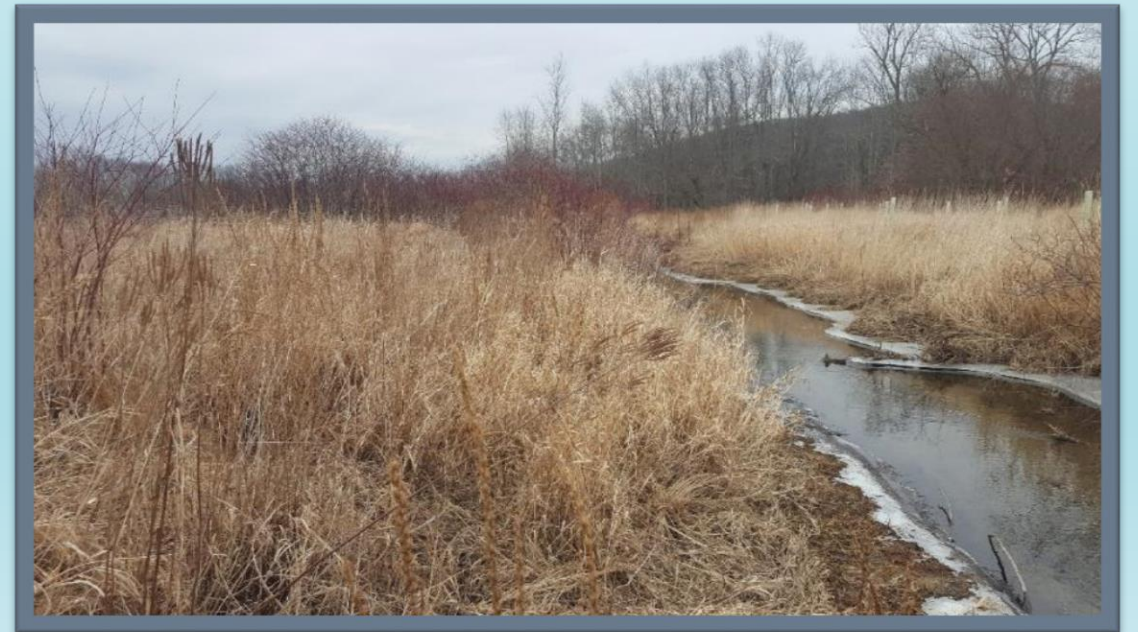
❖ Online mapping tool
<https://www.njmap2.com/>

Applicable Layers

- ❖ Rivers/Streams
- ❖ Priority Areas for Water Quality Protection
- ❖ Parcel & Municipal Boundaries
- ❖ Active River Area (ARA)



Field Verification



Develop a Plan for Planting & Implementing Reforestation Projects

- ❖ Developing a project plan is key to ensuring your project is successful over time.
- ❖ There are a number of questions you should ask yourself when beginning to develop your project plan.

Questions to Consider

- Who will plant?
- What will you plant?
- Where will you plant?
- When will you plant?
- How will you protect and maintain plantings?



How to Develop a Project Plan

Step 1 – Define your Planting Area



- ❖ Refer to the Active River Area (ARA) maps to estimate where you should install your streamside buffer.
<https://www.njmap2.com/blueprint/water/>
- ❖ Maximize the benefits your project can achieve by planting the entire ARA zone, if possible.
- ❖ Plantings installed ≥ 10 feet from the stream bank and into the adjacent floodplain.
- ❖ Buffer widths can range from 10 to 500 feet or to the full extent of the floodplain.
- ❖ Site conditions, landowner preferences and/or staff capacities may limit availability of planting area.
- ❖ As a rule of thumb: The wider the buffer, the better!

How to Develop a Project Plan

Step 2 – Site Assessment

- ❖ Determine your planting conditions by conducting a simple and quick site assessment.
- ❖ Use site characteristics to identify planting conditions and appropriate species for your site.

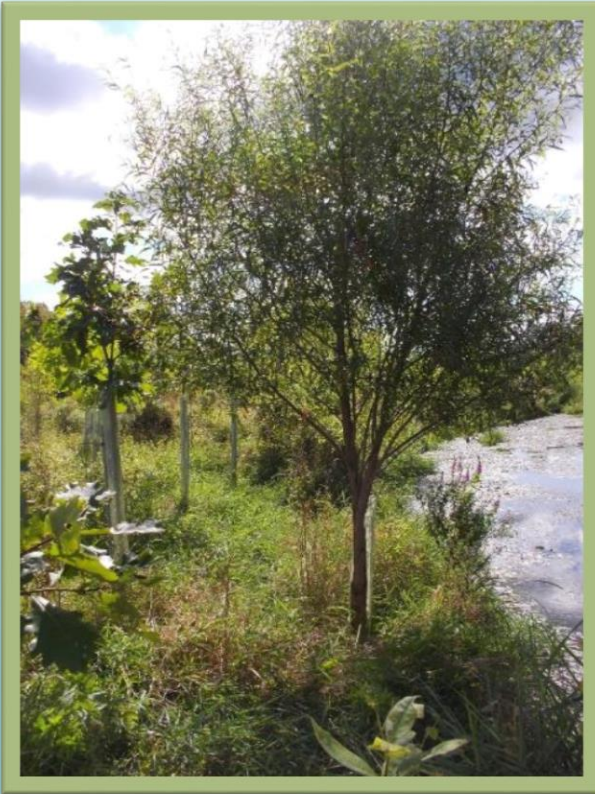
Key Characteristics to Identify

- ✓ Soil Moisture/Soil Texture
- ✓ Depth to Water Table
- ✓ Known Areas Prone to Flooding
- ✓ Dominant Vegetation Type (tree, shrub, grass?)
- ✓ Species Diversity (Native or Non-Native?)



How to Develop a Project Plan

Step 3 - Developing a Planting Design



❖ Species selection

- Wetland Indicator Status (USDA-NRCS)
- Existing native species present
- Reference conditions

❖ Material Size & Spacing

- Containerized, whip, bare root? (*If containerized, no bigger than 2-gallon)
- 5-ft to 10-ft depending on size of the root ball.

❖ Planting density

- Average between 220-320 stems/acre
- For smaller sites < 1-acre estimate stems/acre by using # of rows plantable and estimated linear feet.
 - Assuming a 10-foot spacing- Calculate Density using the equation below
of linear feet/10 x # of rows.

How to Develop a Project Plan

Step 4 – Site Prep, Protection & Maintenance



How to Develop a Project Plan

Step 5 – Implementation & Volunteers

- ❖ Find a local school, scouts, company to participate in the floodplain restoration project by helping to plant the trees in your project area.
- ❖ Connecting with local school and volunteer groups about future maintenance of project sites will ensure maximum survivability of species and allow you to achieve project success!



Completed Projects



Technical Assistance, Resources and Suppliers

❖ **Field Training** - TNC field training first week of April

❖ **Online Resources**

Species ID and characteristics

<https://plants.usda.gov/wetinfo.html>

Mapping Tool

<https://www.njmap2.com/blueprint/water/>

Nurseries – Pinelands, State Tree Nursery & Other Local Nurseries that carry native seed.



How to Get Involved

- ❖ Applications to be submitted through Sustainable Jersey's web portal on Friday, March 16th
- ❖ ALL materials must be planted no later than July 1st, 2018

Contact Information:

Michelle DiBlasio

Watershed Restoration Coordinator

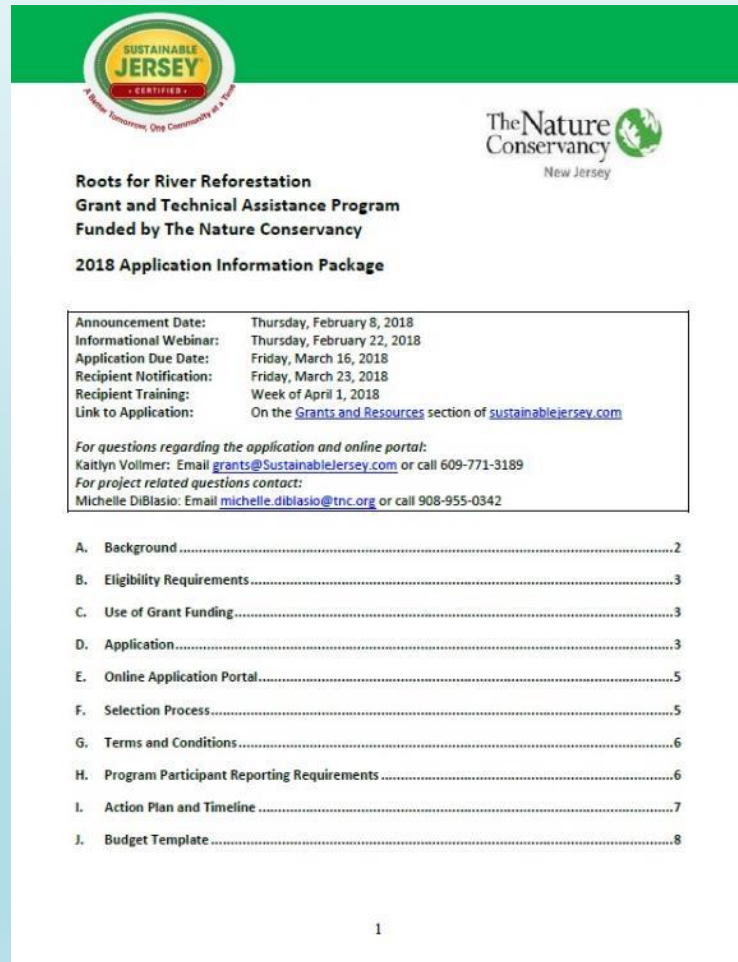
The Nature Conservancy

(908) 955-0342

michelle.diblasio@tnc.org



Application Information Packet



The [application information packet](#) can be downloaded from the [Resource Opportunities](#) Page of the Sustainable Jersey or Sustainable Jersey for Schools website

Can apply for this opportunity even if you have an open Sustainable Jersey grant

Questions:

Kaitlyn Vollmer


609-771-3189

grants@sustainablejersey.com

Online Application


The online application is available here:

<https://app.wizehive.com/appform/login/2018TNCApp>



**Sustainable Jersey &
Sustainable Jersey for Schools**

**Roots for River Reforestation Grant
and Technical Assistance Program**

Funded by:
The Nature Conservancy 
New Jersey

LOGIN

Email

Password

[Forgot Password?](#)

SIGNUP

Email

Password

Confirm Password

POWERED BY
wizehive

Application Sections

Basic Municipal or School/District Background Information & Contacts	
Eligibility Screening	
1. Sustainable Jersey/Sustainable Jersey for Schools Registration	
2. Green Team Requirements	
Proposed Project	
1. Grant Funding Requested	4. Project Team Members and Duties
2. Project Title & Description	5. Action Plan & Timeline
3. Project Location	
Attachments	
1. Green Team Documentation*	3. Project Budget
2. Grant Authorization	4. Optional Information

****Applicants that have achieved Sustainable Jersey certification **do not** have to provide this information***

Required Attachments

- List of green team members and summary of activities
*Applicants that have achieved Sustainable Jersey certification **do not** have to provide this information*
- Documentation that the municipality or district/school is authorized to apply for the grant.
 - Examples: Municipal/School Board resolution, letter from mayor, superintendent, B.A., or other designated authority
- Project budget



Budget Details

A sample budget template is available for download on our website(s) and within the online grant application.



Eligible Expenses

- Materials (trees and protection) associated with planting.



Ineligible Expenses

- The labor associated with planting the trees.

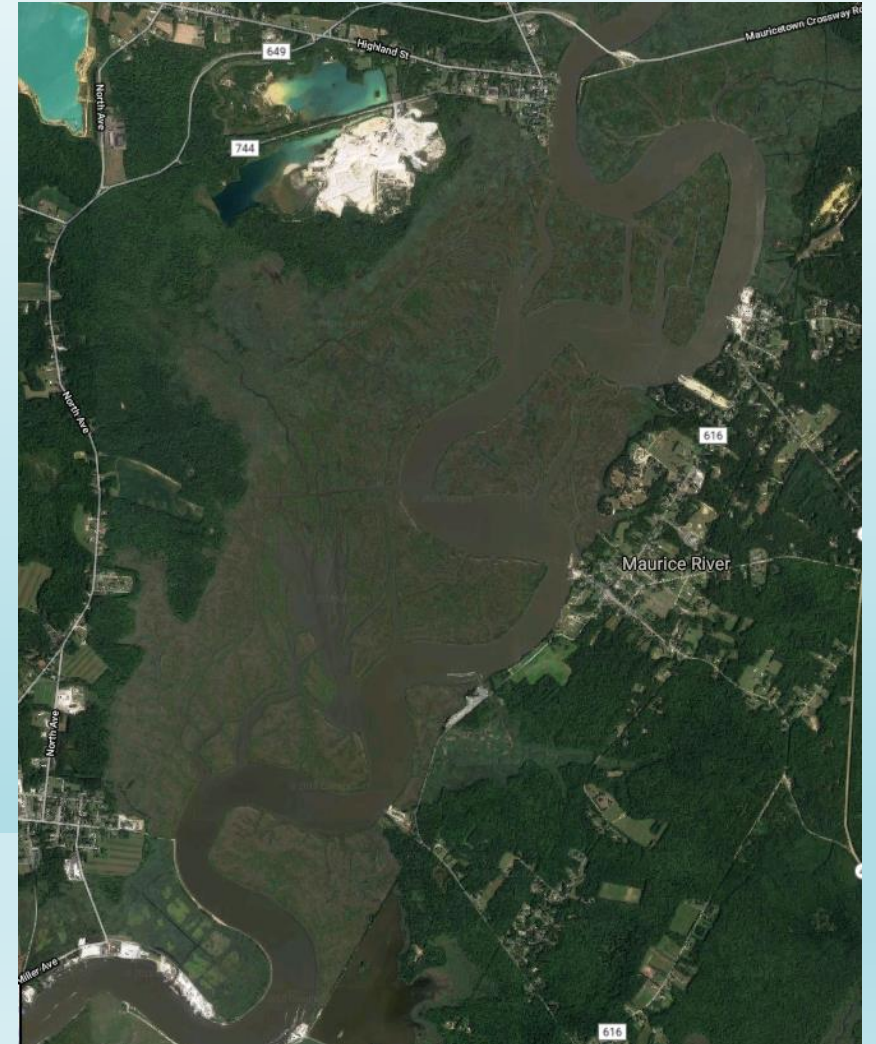


Evaluation Criteria

Proposals are evaluated based on...


- Strength of the action plan
- Likelihood of success demonstrated by accessibility to resources that will assist with site preparation, planting, and maintenance

Floodplains of the Maurice River, a tributary of the Delaware Bay in Salem County and Cumberland County, New Jersey



Timeline

- Applications due **March 16**
- Program participants will be announced **March 23**
- A meeting will be held the week of April 1, 2018 to assist program participants in developing their planning efforts
- Awards \leq \$2,000 will be disbursed in full at the start of the project
- Awards $>$ \$2,000, 50% of the grant funds will be disbursed at the start of the project. The remainder will be paid upon satisfactory completion of the project and approval of the final fiscal and project report
- Plantings must be completed by **July 1**
- Final Reports due by **July 31**



Good
Luck!

Application Deadline:

Friday, March 16 at 11:59pm

Questions?

Project Related
Michelle DiBlasio

*Freshwater Conservation Coordinator,
The Nature Conservancy*

908-955-0342
michelle.diblasio@tnc.org

Application Related
Kaitlyn Vollmer

*Grants Program Coordinator,
Sustainable Jersey*

609-771-3189
grants@sustainablejersey.com

Upcoming Sustainable Jersey Training

- Municipal Energy Efficiency Webinar – March 7 @ 1:00pm
- Green Design for Schools Webinar – March 21 @ 1:00pm
- 2018 New Jersey Sustainability Summit – June 21 @ TCNJ

