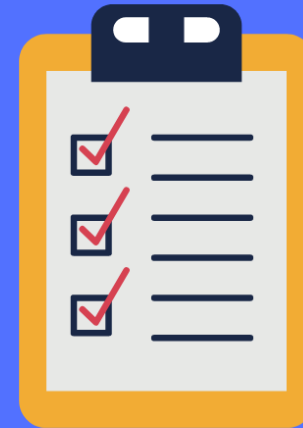


Fundamentals for Effective Environmental Commissions 2024



EC Powers and Responsibilities

Overview of Environmental Commission Laws , Powers & Responsibilities



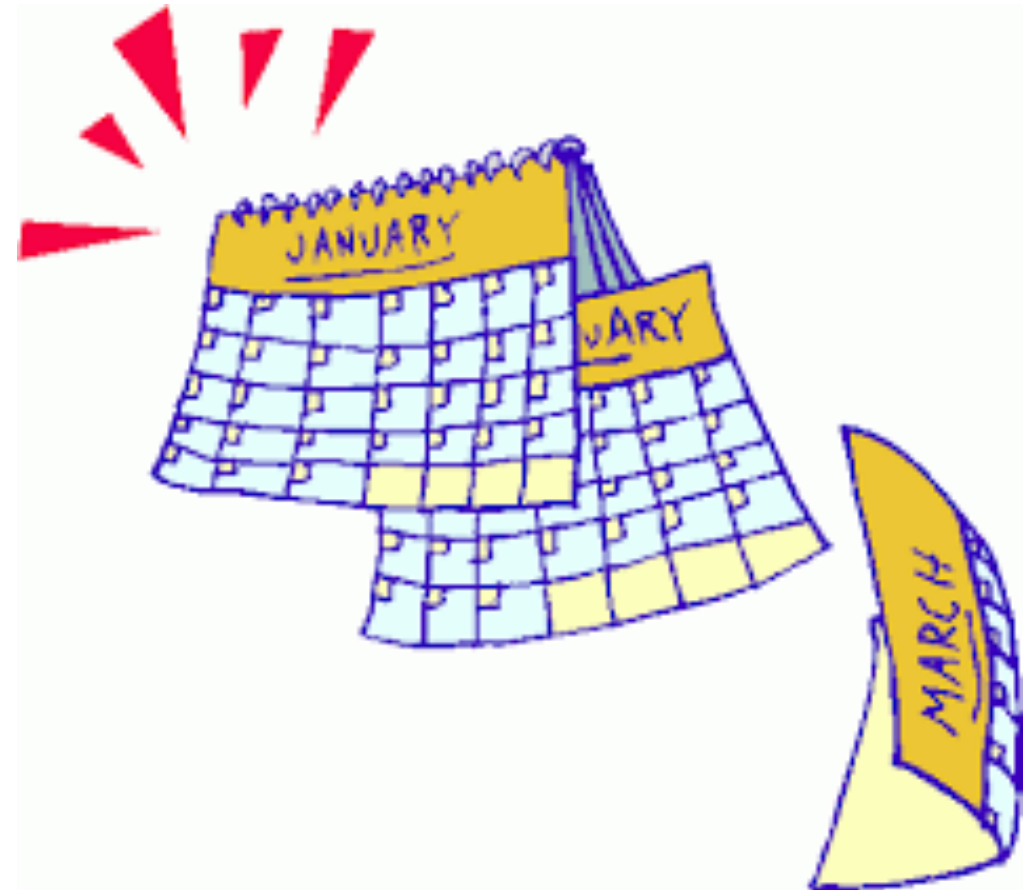
Powers and Responsibilities



Poll Question 1

How long have you served on your EC or EAC?

- Never/I'm not on an EC
- 0-1 years
- 1-3 years
- 3-6 years
- more than 6 years





What the law requires

EC serves in an advisory role

What the law requires

Enabling Legislation

NJSA 40:56A:

Five to seven members and two alternates appointed by mayor,

one of whom shall be a member of the Planning Board



Chapter 40:56A - COMMISSION; APPOINTMENT; TERMS; VACANCIES

[Browse as List](#)

- [Section 40:56A-1 - Commission; appointment; terms; vacancies](#)
- [Section 40:56A-2 - Powers of commission](#)
- [Section 40:56A-3 - Acquisitions by commission](#)
- [Section 40:56A-4 - Records and annual report](#)
- [Section 40:56A-4.1 - Definitions relative to authorities, boards, commissions](#)
- [Section 40:56A-5 - Appropriation](#)
- [Section 40:56A-6 - Studies and recommendations](#)
- [Section 40:56A-7 - Conservation commission as environmental commission](#)
- [Section 40:56A-8 - Joint environmental commission; creation by ordinance; members; compensation](#)
- [Section 40:56A-9 - Chairman; qualifications; term of office](#)
- [Section 40:56A-10 - Expenses; apportionment; appropriation](#)
- [Section 40:56A-11 - Functions, duties and powers](#)
- [Section 40:56A-12 - Succession of established commission by joint commission; transfers](#)



[Visit the My Green Cranford website for more information.](#)

Board Members

Name	Title
Jay Stevens	Chairman
Dave Coughlin	
Steve Jandoli	
Kathleen Murray	
Carol Berns	
Zach McCue	
Kate Rappa	Rep. to the Planning Board
Daniel J. Aschenbach	
Michael Bond	
Ann Darby	
Nelson Dittmar	
Dana Friedman	
Jane Glass	
Kevin Harrison	
Marya (Tina) Helmstetter	
Donald Jones	
Lauren King	
Barbara Krause	
Ronald Margulis	
Kevin O'Brien	
Ana Pinto	
Jeffrey Pistol	
Mary Sudiak	
Michael Venditti	
Patricia Vogler	
Christian Wurzberger	
Patricia Pavlak	Alternate #2
Ben Cohen	Alternate #1
Terrence Curran	Commissioner, Liaison
Matthew Lubin	Fire Prevention Official
Monika Koscova-Jencik	Health Officer/Sanitarian

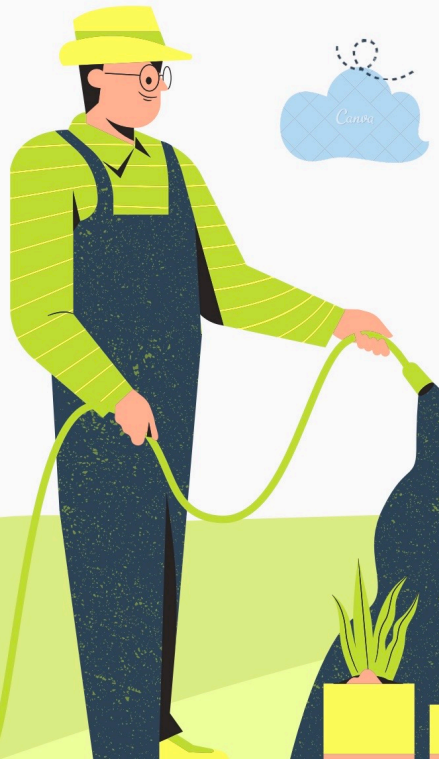
Different Formats –
Cranford EC
Associate Members

Different Formats – Wyckoff EC Junior Commissioners



The Hidden Treasure

Junior Commissioner Project by Alexander Campo, Gabby Buchmann, and Allie Park



WEC Digital Library

By Eve Nevelos

Wyckoff Environmental Committee
2023 Junior Commissioner



Anti-Idling Junior Environmental Commission Project

By Gregory and Stephen Cannizzo

What's the Difference?

Environmental **Commission** OR
Environmental **Committee**



Environmental Commission

Environmental **Commission** OR/AND
Green Team



Environmental Commission

Advisory Commission on Green Initiatives - Green Team

Environmental Advisory **Committee**



Environmental Advisory Committee

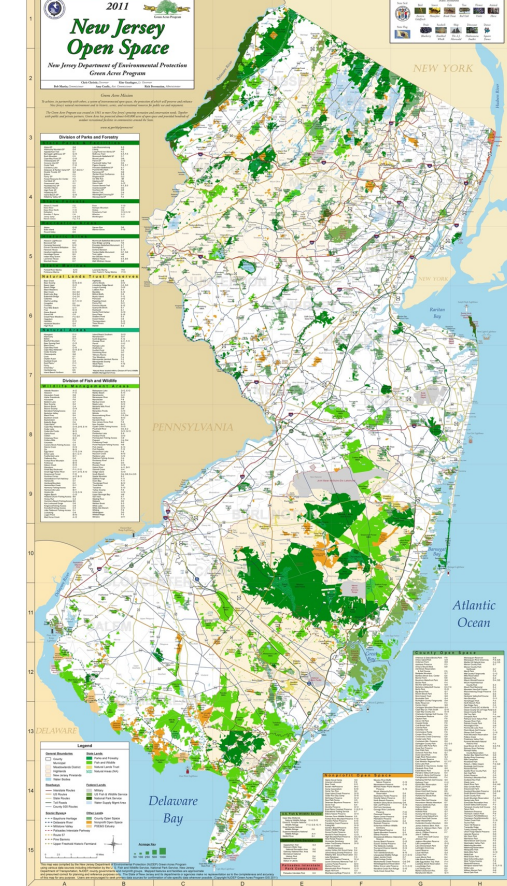
What the law requires

- Rolling three-year terms
- Open public meetings (Sunshine Law)
- Annual report
- Index of open lands



Commission Powers

- Study and make recommendations on water, air, waste, noise, landscape protection, environmental appearance, flora and fauna
- Create an Open Space Index and Recommendations



YEAR OF OPEN SPACE: REIMAGINING OUR PARKS AND PUBLIC SPACES

2022
YEAR OF
OPEN SPACE
C JERSEY TY

Commission Powers

Develop the Municipal Environmental Resource Inventory (ERI)



MAY 11, 2021

NEWARK ENVIRONMENTAL COMMISSION APPROVES INAUGURAL ENVIRONMENTAL RESOURCE INVENTORY WITH FOCUS ON ENVIRONMENTAL JUSTICE

[← Back to News overview](#)



Commission Powers

Assist in stormwater education/outreach for MS4 permit

Category 5: Community Involvement Activities		
Activity	Description	Points
Volunteer Stormwater Assessment or Stream Monitoring	Establish a volunteer stormwater facility assessment (inspection, inventory and/or mapping) or stream monitoring program for a waterbody within the municipality to gauge the health of the waterway through chemical, biological or visual monitoring protocols. Contact NJDEP's AmeriCorps NJ Watershed Ambassador Program or review USEPA National Directory of Volunteer Monitoring Programs.	3
Rain Barrel Workshop	Organize or participate in a rain barrel workshop. This could be a partnership exercise with a local watershed organization, university, school, youth/faith-based group, and/or another nonprofit.	3
Rain Garden Workshop	Organize or participate in a rain garden training or installation workshop. This could be a partnership exercise with a local watershed organization, university, school, youth/faith-based group, and/or another nonprofit.	3
Community Event	Organize or participate in the organization of a community event to carry out stormwater activities such as stormwater measure maintenance or a stream buffer restoration. The municipality may identify and enter into a partnership agreement with a local group such as a watershed organization, university, utility, school, youth/faith-based group, and/or other nonprofit to carry out these activities.	3
Community Involvement	Organize a project with a local organization to create and post signs at either green and/or gray stormwater infrastructure sites or facilities that describe the function and importance of the facility, contact phone number, municipal identification number, and/or website for more information.	5*
*Signs receive 0.5 points per sign. A maximum of 5 points is allowed.		

Poll Question 2: Which **requires** an ordinance to be established?

- Environmental Commission
- Environmental Committee
- Green Team
- Environmental Commission **and** Environmental Committee
- All of them -- Environmental Commissions, Environmental Committees, and Green Teams



Getting organized

Mission statement

Bylaws

Annual goals

Annual report

Budget



Mission Statement

- Why does the EC exist?

Mission Statement

The Paramus Environmental Commission seeks to **protect and improve** the quality of our land, water, and air by **advising** the Borough of Paramus on actions and policies of sustainability. Through **education and outreach**, the Commission seeks to **inspire** our community, both residential and commercial, to incorporate environmentally responsible practices in their daily lives.

Responsibilities of the Commission

Educate and inspire the community the public through various channels:

- Host speakers at public events
- Organize Paramus's annual Earth Day celebration
- Support Paramus DPW messages about recycling to local businesses and residents
- Participate in town events, such as National Night Out

Practice sustainability and improve the quality of Paramus life in ways including:

- **Support** the Paramus Farmers Market
- **Promote** and **organize** clean up events
- **Field residential concerns** about the environment
- **Advise** the town on environmental best practices



Mission Statement



The Bloomfield Environmental Commission provides assistance and vision to the Planning and Zoning Boards, Township Council, and Township agencies by **advising** on action and policies of sustainability. In addition, the Commission will **collaborate with businesses, residents, and neighboring communities** on environmental issues of regional importance. The Commission strives in every measure to foster a sustainable community, which meets the needs of the present without compromising the needs of the future **through the effective and efficient use of natural ecosystems, social systems, and financial resources**



Mission Statement

Objectives

The Environmental Commission studies and makes recommendations to the Township Council, boards and agencies on issues that affect the natural and built environment, including: *open space preservation, smart growth, wetlands and water resource protection, green infrastructure, recycling and litter, environmental cleanups, wildlife habitat, energy efficiency, conservations, and transportation.* The Commission will actively:

- Review and comment on development proposals, Township ordinances, and State mandates.
- Identify important environmental goals for the Township.
- Support education of the public and the local government regarding environmental issues and pertinent regulations.
- Encourage development to include maintenance and conservation of green space, open space and wetlands throughout the township.

Mission Statement



SUMMIT
NEW JERSEY

- The mission of the **Summit Environmental Commission** (EC) is to provide **leadership** and **vision** in advising the City of Summit on actions and policies of **sustainability** including preservation and enhancement of the quality of Summit's environment and natural resources, as well as the health, well - being and quality of life of its residents and businesses.

Mission Statement

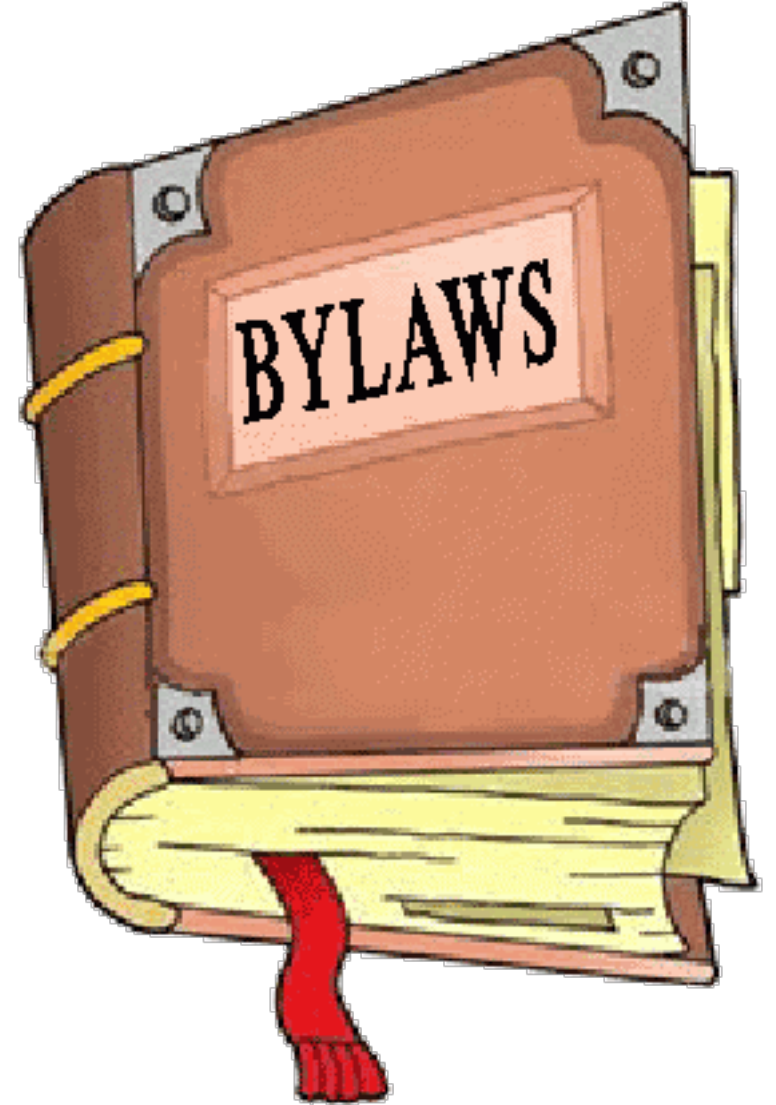
“The **Mantoloking Environmental Commission** seeks to improve the environmental quality of our **land, bay, and ocean**. Through education and outreach, the Commission encourages citizens to incorporate environmentally responsible practices into homes, gardens, and daily life. The Commission’s goal is to improve the health of the land and the **surrounding waters** while reducing the potential to harm the environment.”



EC Bylaws

How does an EC operate?

- Attendance requirements
- Meeting requirements and cancellation policy
- Subcommittee and advisory member appointments
- Preparation and distribution of meeting minutes
- Other record keeping



Sample Bylaws

Excerpt from Jersey City Environmental Commission Bylaws

1.7 - Meetings

1.7-1 Regular meetings of the Environmental Commission shall be held in the place and at the time and day designated at the annual reorganization meeting. The Commission will hold an annual reorganization meeting at the regularly scheduled May meeting of the Commission.

1.7-3 Public participation shall be **limited to five minutes per person** unless otherwise stated by the Chairman.

Sample Bylaws

Excerpt from Hamilton Twp. Environmental Commission bylaws (Mercer)

- ❑ Associate Members - The mayor may appoint four associate members for a term of one year. Each year each associate member term appointed shall expire. The **associate members** shall not be entitled to vote with the commission.

- ❑ Attendance Requirements
The **unexcused absence** of a member from two (2) consecutive meetings or four (4) total meetings within a calendar year shall constitute recommendation for removal of such member from the Commission with just cause.

EC Goals

What do we plan to accomplish this year?



EC Goals

What do we plan to accomplish this year?



TO-DO LIST			
January			
Committee reorganization			
Set meeting dates for the year, give info to township administrator to post on website			
Set annual goals - coordinate with local ECs, watershed organizations?			
Go before governing body and present your annual report on the EC's past year's activities (read it into the minutes)			https://anjec.org/wp-content/uploads/2019/07/EnvCommissionersHandbook-2017.pdf (page 8)
Begin spring cleanup planning			https://njclean.org/volunteer-cleanups
Send updated commissioners list (with contact info) to ANJEC (info@anjec.org)			https://anjec.org/wp-content/uploads/2023/11/2024-MembershipContactListBlank.pdf ANJEC accepts member contact information in alternate format, please email member lists or updates to info@anjec.org
February			

ACTIVITY	PLANNED	ACCOMPLISHED	NOTES/RESOURCES
ITEMS TO REVIEW ANNUALLY			
Review and/or make recommendations on the stormwater ordinance			https://thewatershed.org/the-watershed-institute-releases-enhanced-stormwater-management-model-ordinance/
Review and/or make recommendations on the tree ordinance			https://www.njlm.org/CivicAlerts.aspx?AID=2779
Review other Environmental ordinances, make recommendations			https://cwp.org/updated-code-ordinance-worksheet-improving-local-development-regulations/
Review and make recommendations on the MS4 Permit Public Engagement			https://www.njfuture.org/wp-content/uploads/2023/09/NJF_MS4PermitPrimer.pdf
Update ERI (Environmental Resource Inventory)			https://anjec.org/wp-content/uploads/2019/07/ERI-2013.pdf
Review site plans (is everyone trained?)			https://anjec.org/wp-content/uploads/2022/09/ANJEC-Site-Plan-Review-updated-6-2022.pdf
Review zoning			https://anjec.org/wp-content/uploads/2022/09/ANJEC-Site-Plan-Review-updated-6-2022.pdf https://www.njlm.org/Archive/ViewFile/Item/1566

How to become an influential EC

- Give electeds easy wins
 - Small grant project, movie night, etc.
- Attend council/committee meetings
- Be willing to listen and learn
- “Thanks & spanks”
- Don’t take it personally



Berkeley Heights Mayor Devanney and Councilman Yellin help cut the ribbon on their new community garden, led by the EC Chair Rich Leister

Relationships build success



Town Council,
administration,
departments, boards,
commissions

General public

Schools, businesses, clubs,
organizations, watershed
organizations/ambassadors



Help Keep Our Town Clean!



Creating trust



- Seek alliances
- Find common ground, shared needs
- Be open to new ideas
- Pool resources
- Share credit liberally
- Demonstrate value

Dealing with a Challenging Administration

Don't take it personally

Offer Solutions For example, if funding is an issue – offer other funding options such as grants when proposing projects

Build base of support – involve the community in commission activities; use publicity

Work on projects that are of interest to the governing body (e.g., park cleanups, tree planting)

Poll Question 3

Who should an EC reach out to for building relationships and trust?

- General public
- Town council
- Schools
- Businesses
- Clubs, organizations
- All of the above

Annual Report

What should it include?

- Roster of members
- Meeting dates for the year
- List of activities and accomplishments
- Consider including goals for the coming year

Annual Report

SOMERVILLE
ENVIRONMENTAL
COMMISSION

Annual Report 2023

SOMERVILLE, NJ
ENVIRONMENTAL COMMISSION



Contents

- Mission Statement
- Membership
- Relationships & Partners
- Communication & Social Media Strategy
- Programs & Events
- Certifications
- Grants & Funding
- Self-Assessment & Total Volunteer Hours



Annual Report



Ringwood Environmental Commission 2023 Annual Report

Prepared for the Ringwood Mayor and Borough Council



Environmental Resource Inventory

Borough of Ringwood

Passaic County, New Jersey

March 14, 2023



EC Budget

- ANJEC dues
- Courses and conferences
- Supplies for educational programs & events
- Professional fees, i.e. environmental consultant
- Outreach expense, i.e. website, FB advertising, printing, postage, signs
- Development of ERI, plans, studies or inventories
- Software or hardware needs
- Other

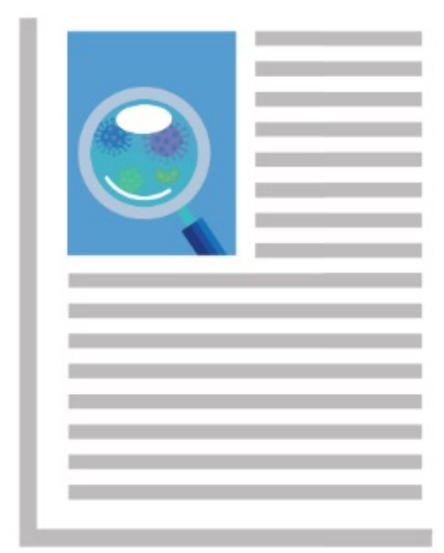
ANJEC Resource Center



Displays



Games



**Resource
Papers**

DVDs



Displays and Games



DISPLAYS & GAMES FOR YOUR COMMUNITY EVENTS



ANJEC offers 7 different displays/games available on loan for use at your local event: *EQ Energy Challenge; Habitat Protection; Green Infrastructure; Plink the Plastic ; Passaic River ; Stormwater; Climate Change Pin Ball and Wheel of Knowledge*

Each displays comes with one or more handouts available for photocopying. Be sure to contact us early to reserve a display for your event.

If our display panels are in use, you may still borrow the laminated graphics and use them on your own display panel.

ANJEC Resource Center Handouts

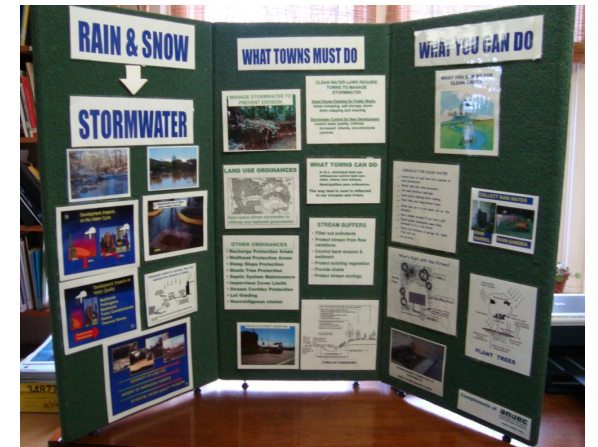
- Anti -Idling Pledge*
- Balloons Blow*
- Clean Water for Our Town*
- Environmentally Friendly Lawn Care Guide*
- Fertilizer Brochure*
- EQ Challenge Brochure*
- Easy Energy Action Plan*
- Green Infrastructure Guidance*
- Habitat Protection*
- Landscaping for Wildlife*
- Pet Waste*
- Walk & Bike to School Events Checklist*

ANJEC Resource Center Documentaries :

- A Plastic Ocean* – 20 minute educational version
- Bag It – Is your life too plastic?*
- Poisoned Waters* Examines the kinds of pollution contaminating America’s waterways.
- Groundswell Rising - Protecting our children’s air & water.*
- Flow- How Did a Handful of Corporations Steal Our Water?*
- Kilowatt Ours- A Plan to Re-Energize America*
(Contact us for full list of documentaries)

Stormwater Display Clean Water for Your Town

Explains the environmental effects of rain and stormwater, what the State requires your town to do and what you can do. Your town can prevent pollution run-off by encouraging environmentally friendly lawn care procedures, enacting water protection ordinances like requiring pet waste pick-up and proper septic system maintenance. Also, display shows how stream buffers help water quality and why you need stormwater control for new development.



Stormwater Display

Passaic River Display Ours to Protect , Ours to Enjoy

Display focuses on the Passaic River and its watershed, with information about stormwater impacts and what residents can do to protect and enjoy the river..



Displays and Games

Wheel of Knowledge Game

Choice of two sets of questions: **Cut Your Carbon Footprint OR Cut Your Water Footprint.** Game comes with list of questions/answers for 12 categories such as eco driving, tips or water cycle.



Plink the Plastic Game

Classic Plinko game with 4 topics on single use plastic pollution; Bags, Bottles, Balloons and Body
Question example: How many plastic bags does average U.S. Consumer use every year?



Energy Game

Includes large poster that serves as game board for EQ-Challenge energy game. Also offers energy savings tips and resources and information about renewable energy, including passive heating and cooling, and how to receive rebates for replacing appliances with energy-saving models.



Habitat Protection Game

This fun card game tests your habitat protection savvy. Roll the dice to get a question in one of 6 categories. Includes info about benefits of habitat, causes and effects of habitat loss and how to protect habitat in your town.



Green Infrastructure

Three panel display with information about reducing stormwater pollution and flooding threats by using techniques such as placing rain barrels, disconnecting downspouts, constructing pervious paving systems, and creating rain gardens.



Climate Change Pin Ball

Test your knowledge with six climate change topics. Questions range from human behavior, energy, causes and effects and more.



For more information, email info@ANJEC.org or call 973-539-7547.

Displays and Games

Available to borrow:

- EQ Energy Challenge
- Habitat Protection
- Green Infrastructure
- Plink the Plastic
- Passaic River
- Stormwater
- Climate Change Pinball
- Wheel of Knowledge (stormwater or carbon footprint)



Displays and Games



Resource Papers

- ANJEC Resource Papers

- [Acting Locally: Municipal Tools for Environmental Protection](#) – 2002
- [Environmental Commissioners' Handbook](#) - 2017
- [Environmental Manual for Municipal Officials](#) - 1998
- Freshwater Wetlands Protection - 2001
- [Handbook for Public Financing of Open Space in New Jersey](#) - 2001
- Major State Programs Affecting Land Use (This is not really current, but is still ordered by universities)
- [Municipal Environmental Commissions in New Jersey](#) - 2001
- [Municipal Options for Stormwater Management](#) - 2011
- [Municipal Techniques: Long term control plans, stream daylighting and combined sewer overflow programs](#) – 2020
- [Open Space is a Good Investment](#) - 2014
- [Open Space Plan, Charting a Course for Your Town's Green Assets](#) – 2021
- [Pathways for the Garden State](#) - 2004
- [Protecting Our Streams](#) - 2005
- [Remediating and Redeveloping Brownfields](#) - 2021
- [Sample Ordinances for Protecting Coastal Habitats](#) - 2007
- [Septic System Management for Clean Water](#) - 2017
- [Site Plan Review](#) - 2022
- [Stormwater Management for Municipalities: Green Infrastructure designs and options](#) – 2020
- [The Environmental Resource Inventory](#) – 2013
- Soon to come –
- Electric Vehicles
- Land Use



An ANJEC Resource Paper

Municipal Techniques:
Long Term Control Plans,
Stream Daylighting and Combined
Sewer Overflow programs



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INSIDE

- 1 A Collapsing Stormwater Infrastructure
- 3 Choosing the Right Long Term Control Plan (LTCP)
- 4 Why Implement Green Infrastructure?
- 7 Taking Action: The Transition from Gray to Green Infrastructure
- 8 Stream Daylighting and Green Stormwater Infrastructure as a part of Combined Sewer System Long Term Control Plans
- 9 Stream Daylighting as a LTCP Component and in Separate Storm Sewer Areas
- 11 How to Find Buried Streams
- 13 Case Studies
- 14 Conclusion
- 15 Glossary of Terms
- 16 Resources

A Collapsing Stormwater Infrastructure

In 21 communities throughout New Jersey, stormwater infrastructure consists of a combined stormwater and sanitary sewer system that collects multiple sources of water into one pipe. As communities continue to develop, large areas become covered in impervious surfaces such as pavement and roofs, preventing rainwater from percolating into the ground. This is referred to as the "urban water cycle," where impervious or hard surfaces have decreased the amount of infiltration and transpiration that takes place throughout the natural water cycle (see Figure #1). Therefore, not only is the local groundwater system

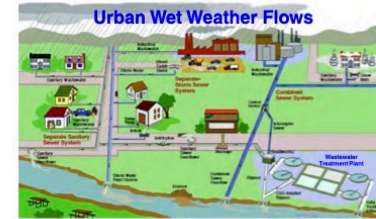


Figure 1: The "urban water cycle," where impervious or hard surfaces have decreased the amount of infiltration and transpiration that takes place throughout the natural water cycle. Source: EPA



The Environmental Resource Inventory: ERI

The Environmental Resource Inventory (ERI), or Index of Natural Resources, is a compilation of text, maps, and other visual information about the natural resource characteristics and environmentally significant features of an area. Traditionally called "Natural Resources Inventory," the title "Environmental Resources Inventory" is now commonly used, reflecting the addition of manmade features to the inventory, such as historic sites, brownfields and contaminated sites.

An ERI provides baseline documentation for measuring and evaluating resource protection issues. It is an objective index and description of features and their functions, rather than an interpretation or recommendation. Identifying significant environmental resources is the first step in their protection and preservation and in ensuring that future development or redevelopment protects public health, safety and welfare.

The ERI is an important tool for governing bodies, environmental commissions, open space committees, planning boards and zoning boards of adjustment. They planning board should adopt the ERI as part of the municipal master plan, plan conservation element, or as a part of a master plan document. As part of the master plan, the ERI can provide the foundation and documentation for master plan updates, ordinances, legal defense, open space or agricultural protection plans, protection of water resources, and many other municipal functions.

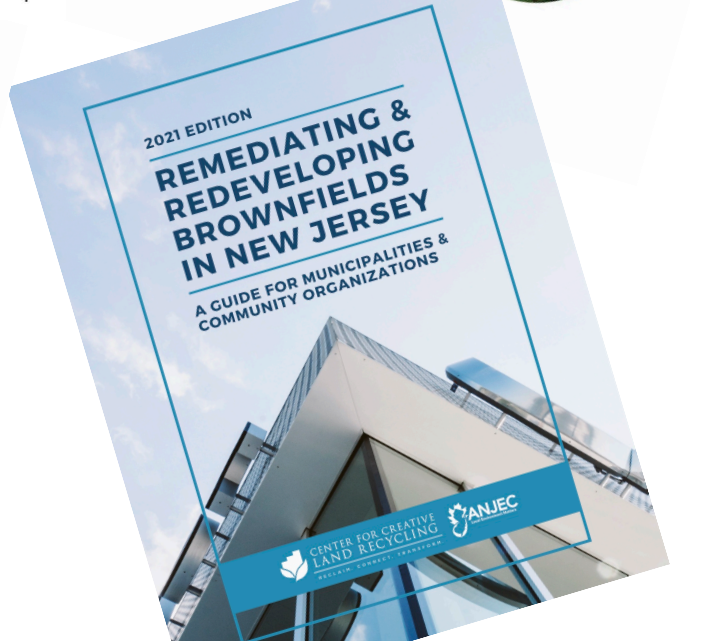
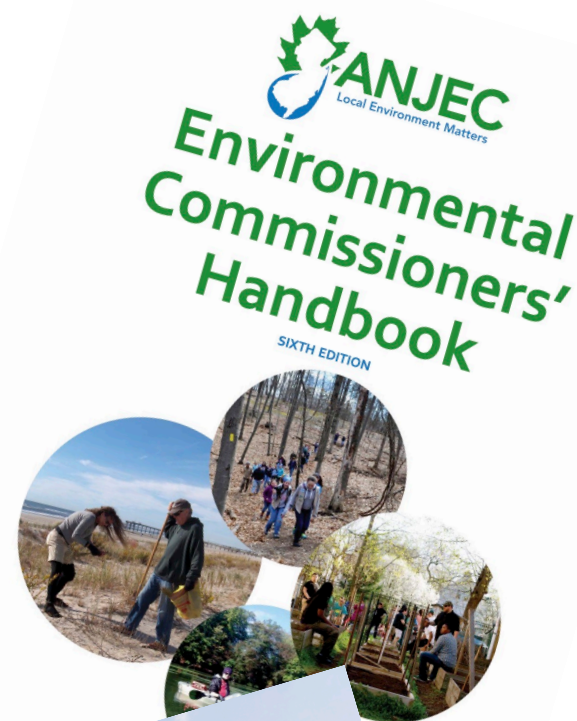
The Municipal Land Use Law (MLUL) (N.J.S.A. 40:55D-1 et seq.) requires municipalities to have a land use plan element in their master plan. Included, but not necessarily limited to, topography, soil areas, marshes, and woodlands... (N.J.S.A. 40:55D-28b(2)).

The ERI is a dynamic document, not cast in concrete. Like the municipal master plan, the ERI should be revised and re-evaluated periodically to reflect new data and changed conditions. To inform the process, the environmental commission can maintain a running list of conditions and information that have changed for consideration during the next ERI update.

Legal Authority for ERIs

While nothing in law requires a municipality to prepare an ERI, two New Jersey statutes give environmental commissions the authority and responsibility for conducting them.

The Environmental Commission Enabling Legislation (N.J.S.A. 40:56A) states that "A commission organized under this act shall have the power to conduct research into the use and possible use of the open land areas of the municipality... It shall keep an index of all open marshlands, swamps and other wetlands, in order to obtain information on the proper use of such areas, and may from time to time recommend to the planning board, or, if none, to the mayor and governing body of the municipal master plan and the development and use of such areas."



Resource Papers



Stormwater Management for Municipalities: Green Infrastructure designs and options

An ANJEC Resource Paper



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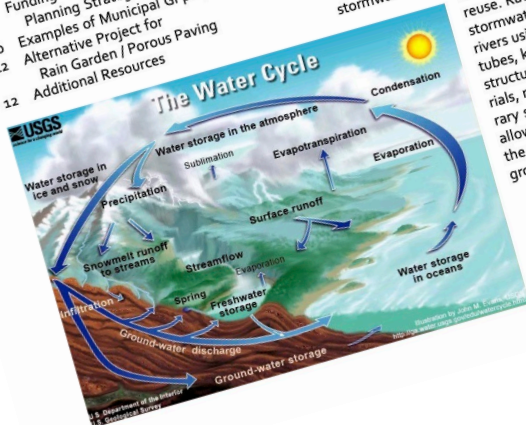
INSIDE

- 2 Why Use Green Infrastructure?
- 2 What Must Municipalities Do?
- 3 Common Types of Green Infrastructure Strategies
- 6 When Should GI Be Considered?
- 6 Who Should GI Be Used?
- 6 Where Should GI Be Used?
- 7 Comparison of Several Best Management Stormwater Practices
- 8 What Role Can ECs Play in Promoting GI in Your Township?
- 8 How Can It Be Done?
- 9 Funding Your GI Projects and Planning Strategies
- 10 Examples of Municipal GI projects
- 12 Alternative Project for Rain Garden / Porous Paving
- 12 Additional Resources

What is Green Infrastructure?

In simple terms, Green Infrastructure (GI) is an approach to manage stormwater either onsite, or close to a developed site that mimics natural processes by soaking up and storing water. GI techniques use low impact development (LID) land management approaches that restore or maintain pre-development hydrological conditions.

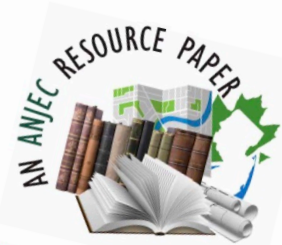
The New Jersey Department of Environmental Protection (NJDEP) defines GI as methods of stormwater management that reduce wet weather/stormwater volume or flow, or that change the characteristics of the flow into combined or separate sanitary or storm sewers or surface waters. It does this by allowing the stormwater to infiltrate, to be treated by vegetation or soils; or to be stored for reuse. Rather than "exporting" stormwater to streams and rivers using concrete pipes, GI uses porous materials, native plants, or temporary storage methods that allow stormwater to soak into the ground to recharge the groundwater and aquifers.



The Water Cycle Source: USGS, 2014



Land use planning in your community



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- 3 Master plan contents
- 3 Recent legislation affecting resiliency in the land use element
- 7 The importance of public participation
- 7 Climate change and the master plan
- 8 State Plan endorsement
- 9 Hazard mitigation planning
- 10 Planning for environmental justice
- 10 Why do we zone?
- 11 Zoning and the ERI
- 12 Examples of increased building impacts
- 12 Planning and zoning techniques to control land use intensity (LUI)
- 13 Types of ordinances to preserve open lands and protect the environment
- 15 Regional planning entities in NJ
- 16 Resources

If climate change has taught us anything, it's that every choice we make, every breath we take, systems of our world are so intrinsically interconnected that, as the poet Francis Thompson wrote, "... thou canst not stir a flower without troubling of a star."

The greenhouse gas emissions generated in the US contribute to heating the entire planet. Pollutants that wash into a river in one state foul the drinking water in states downstream. Clearcutting the trees and carving up the natural slopes on a single parcel of land can cause flooding in an entire neighborhood and foul local water bodies with stormwater pollution.

Federal, state and local land use laws and environmental regulations are written for precisely this reason. Government bodies have the responsibility and authority to decide how land is used within their boundaries to protect the common good.

The New Jersey State Constitution places responsibility for land use control in the hands of the Legislature, which has delegated much of this authority to municipalities through the *Municipal Land Use Law (MLUL)*. But decisions at all levels of government, even neighboring municipalities, ultimately play an important role in the actual patterns of development and preservation of land.

Through the master plan and zoning, the municipality can reduce habitat fragmentation and encourage use of indigenous plants in development.



HOW GREEN INFRASTRUCTURE CAN INCREASE CARBON SEQUESTRATION

The sequestration of carbon dioxide from the atmosphere is one of the central focuses of green infrastructure. Within urban and suburban areas, a stronger focus is needed to improve air quality impacted by vehicle emissions. There are unseen yet significant carbon sequestration efforts already occurring because of municipal GI in parks. Not only do the edges of temperate forests and its soil sequester more carbon dioxide resulting in 24.1–36.3% more growth, but they induce a 15% increase in productivity in metropolitan areas (Morreale et al., 2021). Even trees enhanced with biochar can sequester 520 kilograms of carbon dioxide per resident over a 50-year period with proper and equitable green planning in urban residential areas (Ariluoma et al., 2021). However, carbon sequestration doesn't have to stop at trees. Rain gardens sequester nearly all of the carbon footprint needed to install them and are the best sequestering tools; however, not to skim over the total findings, bioretention basins are the next best at sequestering carbon dioxide at 70% of their carbon footprint, followed by green roofs (68%), vegetated swales (45%), and stormwater ponds (8%) (Kavehei et al., 2018).



The urban heat island effect occurs when buildings, roads, and other structural infrastructure absorb and re-emit the sun's heat more than natural landscapes, such as forests and water bodies (USEPA, 2022). Emissions that are produced by tailpipes, air conditioning, and other polluting sources also contribute to warming urban areas. Due to factors including air pollution, anthropogenic heat, surface waterproofing, thermal properties of fabric, and surface geometry, ultraviolet (UV) radiation from the additional heat from these sources can get trapped causing a dome effect over a given urban area (Shahmohamadi et al., 2010; Knight et al., 2016). This trapped heat in urban settings then intensifies temperatures across the urban population, which can lead to many forms of heat-related illness and stress (Shahmohamadi et al., 2010). With GI and its beneficial carbon sequestration potential, the lack of heat-trapping emissions in the air would allow the heat to escape and cooling to set in (Shahmohamadi et al., 2010; Morreale et al., 2021; Pamukcu-Albers et al., 2021). However, there is another factor worth considering in carbon sequestration: turfgrass.



Turfgrass's relationship to green infrastructure is a very important factor in carbon sequestration. A 2018 study found that with a 41.2% decrease in carbon sequestration potential from a loss of green spaces in Seoul, a 120% increase in grasslands was able to somewhat remedy the loss (Han, Kang, and Song, 2018). Basically, a large amount of grassland is needed to counter the loss in green spaces that host native vegetation species and soil organisms which already sequester more carbon dioxide than turfgrasses. In fact, replacing native species with turfgrass in Australian peri-urban environments resulted in an increase in the soil's release of carbon dioxide emissions, due to nitrogen-based fertilizer and irrigation practices accelerated by a subtropical environment (Delden et al., 2016).



Resources from Jersey Water Works

HOW GREEN INFRASTRUCTURE CAN IMPROVE CLIMATE RESILIENCE

GREEN INFRASTRUCTURE'S IMPACT ON EQUITY

HOW GREEN INFRASTRUCTURE CAN BE USED TO IMPROVE HEALTH

HOW GREEN INFRASTRUCTURE CAN INCREASE CARBON SEQUESTRATION



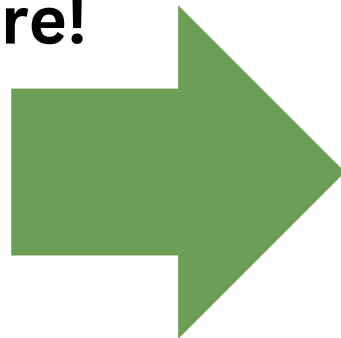
Resources from Jersey Water Works

New Jersey Water Risk and Equity Map

New Jersey faces a wide range of water-related risks, from flooding near rivers to sea level rise and the presence of lead and other contaminants in drinking water. These and other issues affect people differently in different parts of the state. The New Jersey Water Risk and Equity Map contains information to help residents, advocates, and policymakers understand water risks in their communities.

[Go To Map](#)

Get it here!



New from New Jersey Future

UNDERSTANDING THE NEW MS4 PERMIT

A PRIMER FOR NEW JERSEY MUNICIPALITIES



IN COLLABORATION WITH ONE WATER CONSULTING LLC

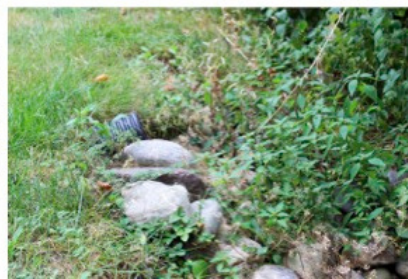
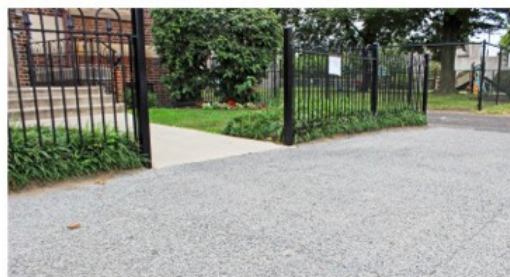


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Resources from New Jersey Future



Working for Smart Growth:
More Livable Places and Open Spaces

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Research Reports

New Jersey Future produces data-driven, fact-based research reports on issues of land use and development, transportation, housing, and demographics in the Garden State.

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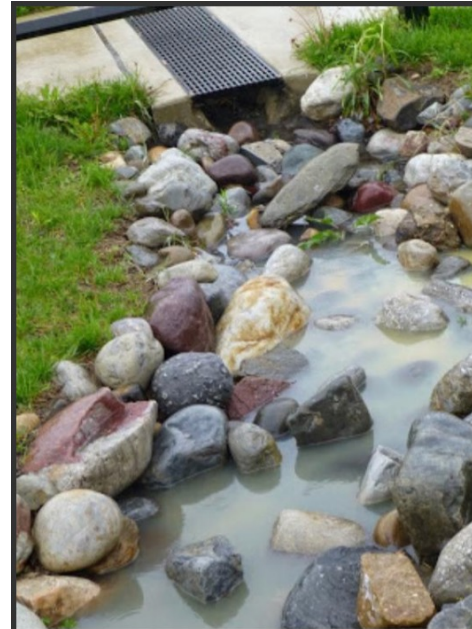
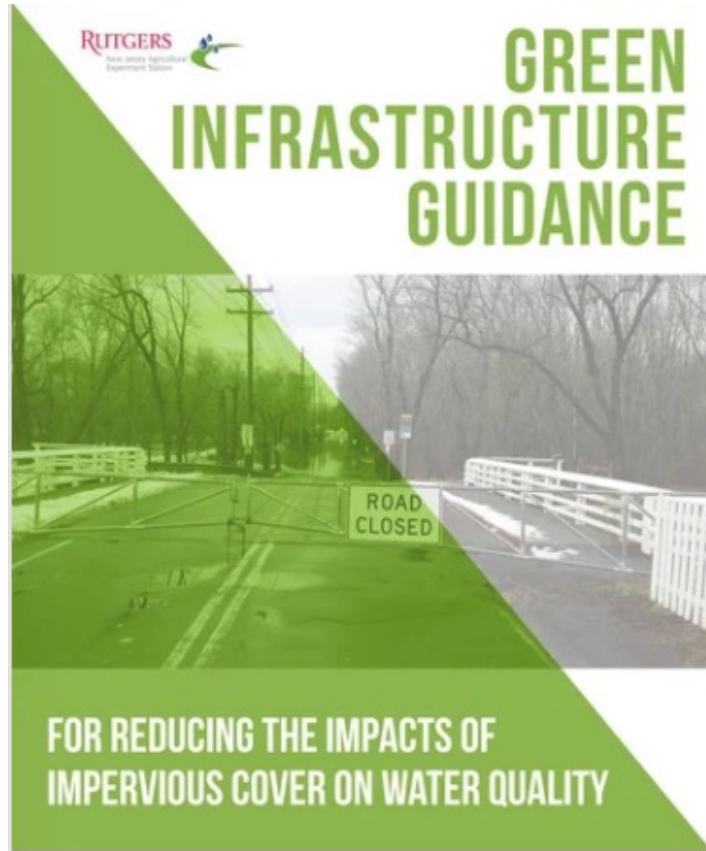
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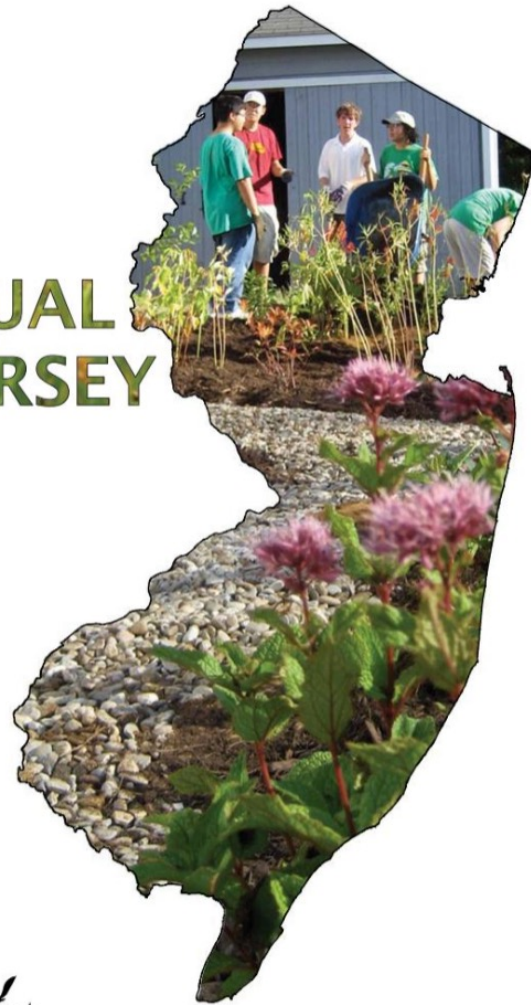
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FOR NEW JERSEY



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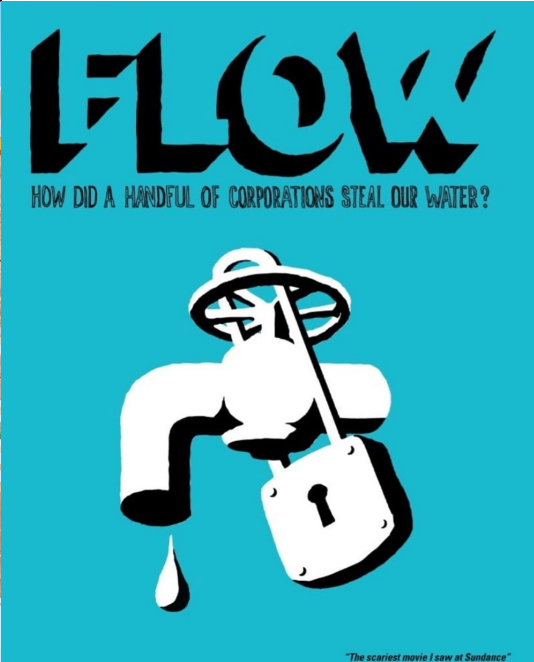
RAIN GARDEN MANUAL OF NEW JERSEY



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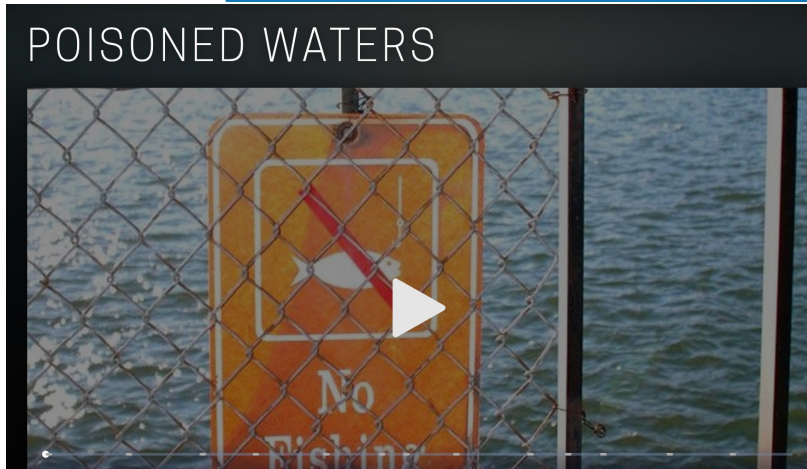
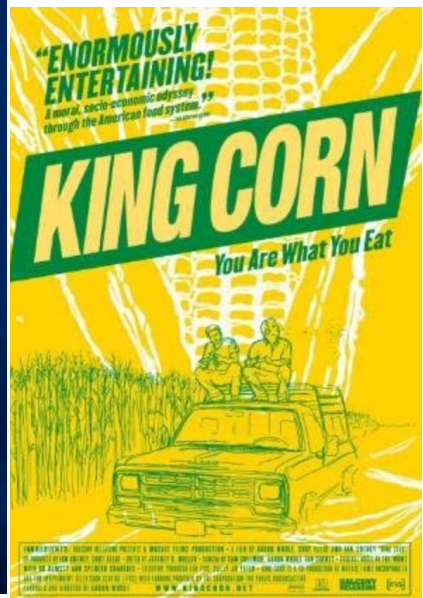
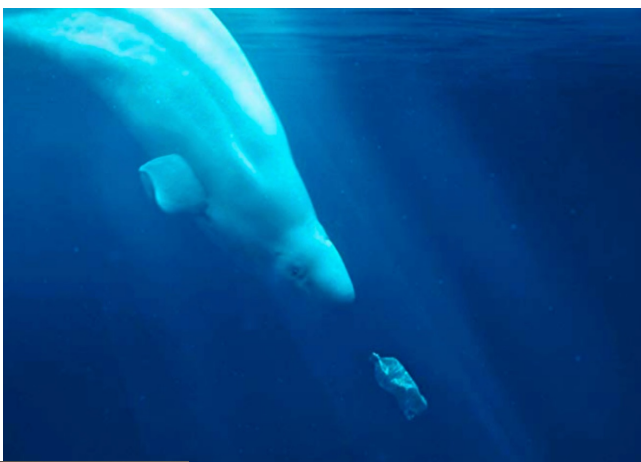


FOR THE USE OF STREET TREES AS STORMWATER MANAGEMENT TOOLS



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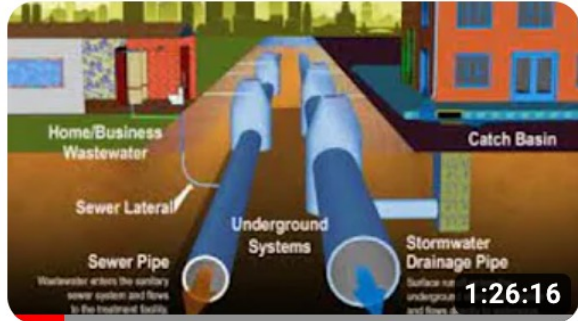
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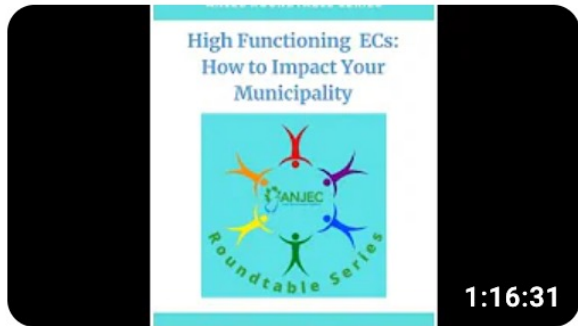
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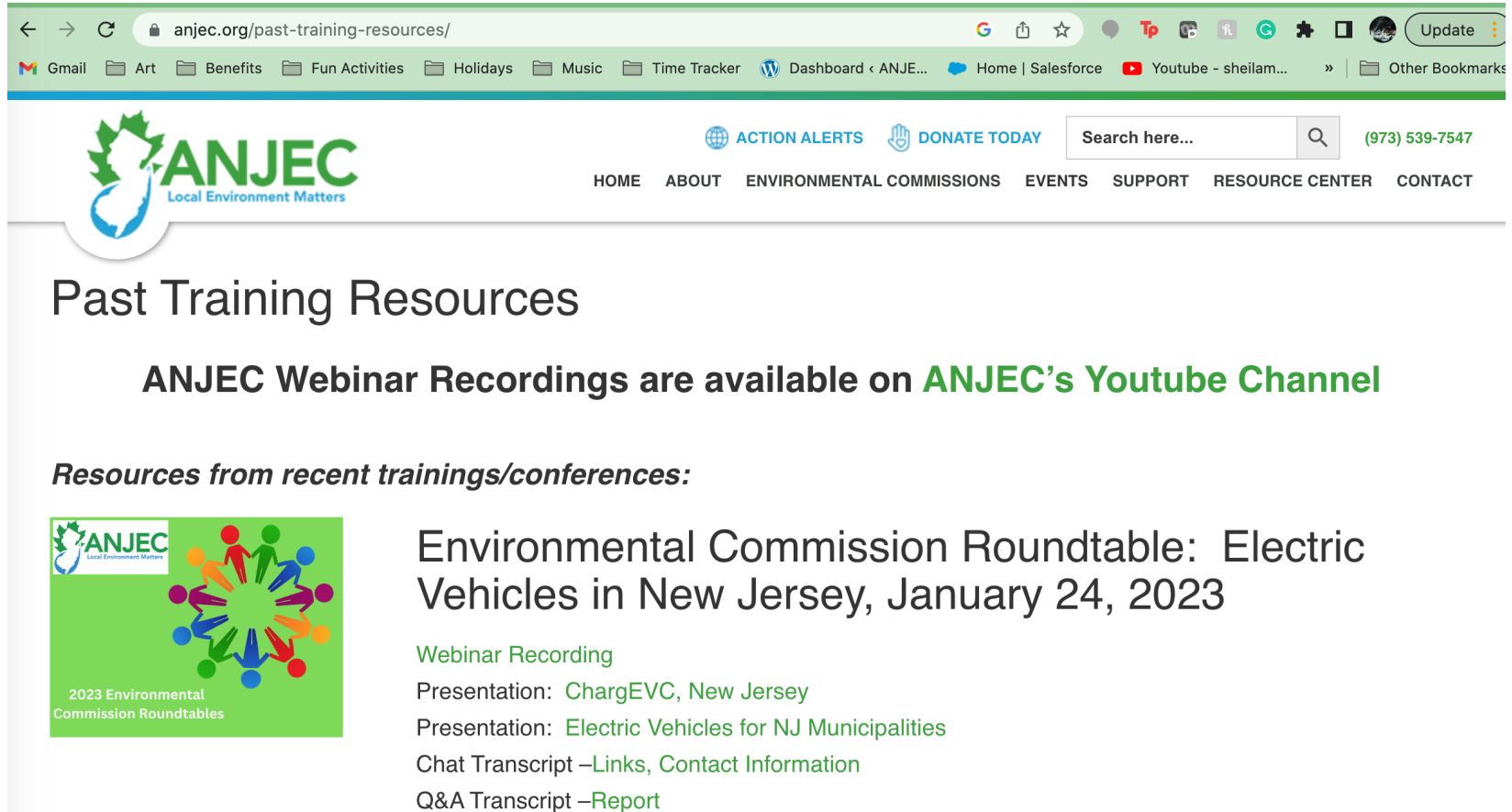
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









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Chat Transcript –[Links](#), [Contact Information](#)

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Open Space Stewardship Grants



ANJEC provided grant funding to help the Tinton Falls EC establish an Osprey Nest project.



West Orange EC created a pollinator garden with an apiary through an ANJEC grant.



An ANJEC grant funded a pollinator garden planting event at Bergen Hill Park in Jersey City



ANJEC's Open Space Stewardship grants help support creation of bird habitat in Allamuchy.

Open Space Grants



Application Blank

2024 ANJEC OPEN SPACE GRANTS FOR ENVIRONMENTAL COMMISSIONS APPLICATION

Municipality: _____ **County:** _____ **Phone:** _____
Mailing address of municipality: _____
Environmental Commission Contact Person (person responsible for application):
Name: _____ **e-mail:** _____
Home address: _____ **Day and cell phones:** _____
Environmental Commission Chairman
Name: _____
Day or cell phone: _____ **e-mail:** _____
Municipal Manager/Administrator
Name: _____ **e-mail:** _____ **phone:** _____
Year Environmental Commission was established by ordinance: _____

Is your Commission a member of ANJEC? Yes / No

Is this project site on/near remediated site: Yes/No

Title of Project:

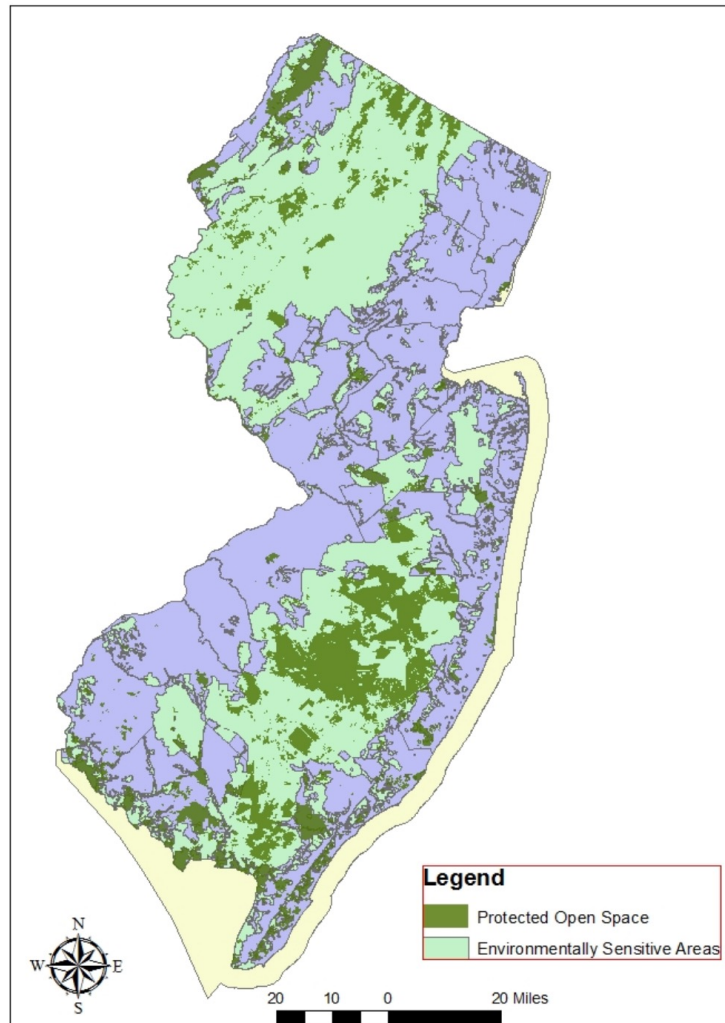
Amount being requested from ANJEC:

Project description (Limit 900 words): What will you do? Who? When? How? Objectives? – Address and number items #1 – 6 on “How applications will be evaluated.”

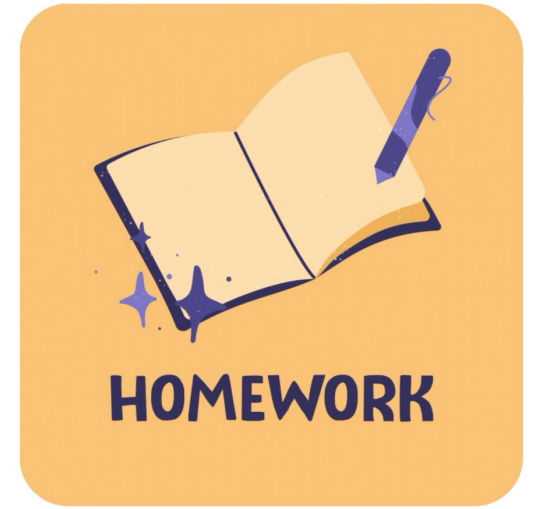
Project budget (Limit one page): See item #2 of “How applications will be evaluated.” Include an estimated breakout of the in-kind (volunteer and town staff) labor. If additional labor, cash or other contributions are being used, itemize them in the budget. See requirement for letter from municipal administrator/manager under “Applications due” above.

*****In addition to the application, applicants must submit a scanned, dated and signed letter from the municipal manager or administrator indicating endorsement of the application and assuring payment of any additional costs that are included in the budget.**

***Send the letter as a separate attachment to info@anjec.org by the application due date, Friday, April 26, 2024. ANJEC will confirm receipt of your application file and letter file.



Homework Assignments:



- Find your EC's establishing ordinance
- Look for your Open Space Plan and/or Open Space Index
- Find your Environmental Resource Inventory (ERI/NRI)
- Find your town's stormwater management page
- Find out who your town's stormwater manager is



Fundamentals for Effective Environmental Commissions:

- ✓ EC Powers (3/12/24 @ 7pm)
- ☐ Stormwater Plan Review (3/13/24 @ noon)
- ☐ ERI/Master Plan/Land Use (3/13/24 @7 pm)
- ☐ Marketing Your EC/Community Engagement (3/14/24 @ 7 pm)
- ☐ In-person session, Somerville Civic Center: Fundamentals for Effective Environmental Commissions (4/13 @ 9 am)



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