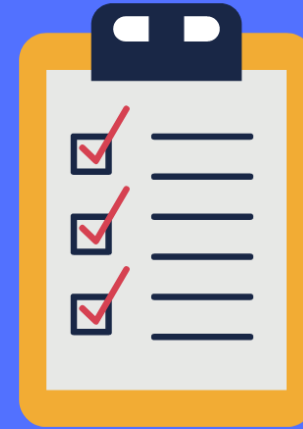


Fundamentals for Effective Environmental Commissions 2023



EC Powers

Overview of Environmental Commission Laws , Powers & Responsibilities



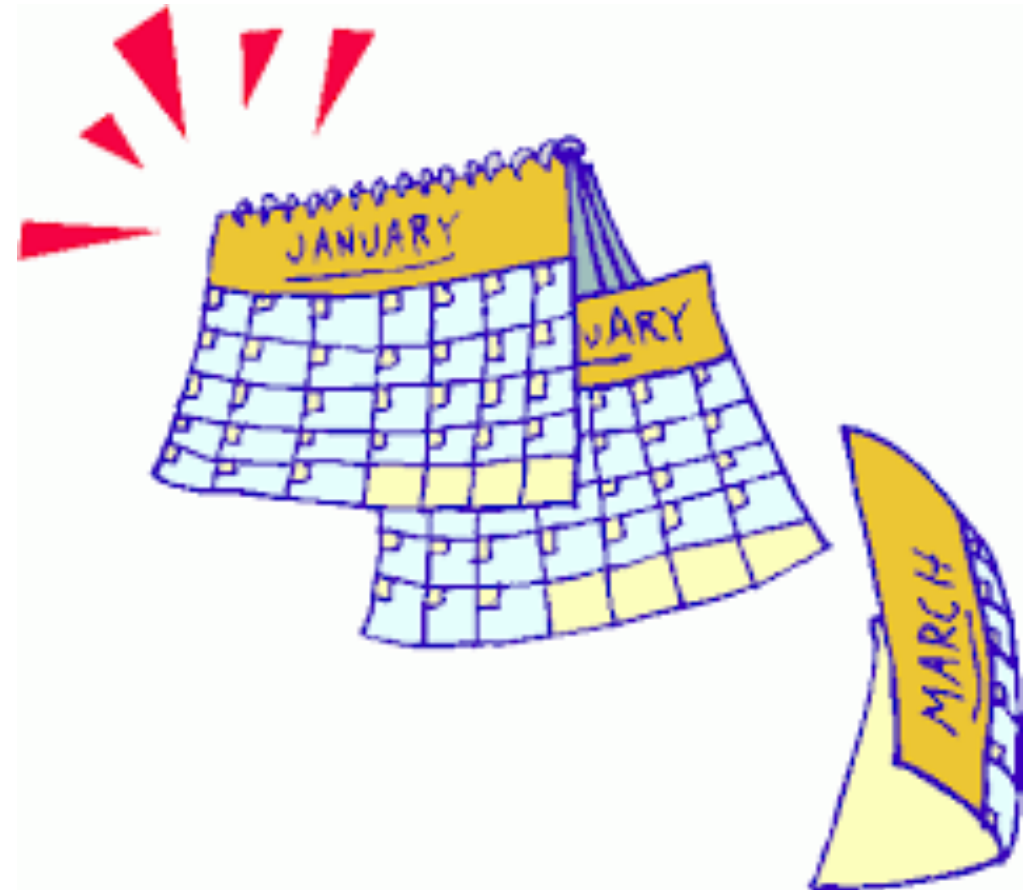
Powers and Responsibilities



Poll Question 1

How long have you served on your EC or EAC?

- 1) Never
- 2) 0-1 years
- 3) 1-3 years
- 4) 3-6 years
- 5) 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](#) [Search Within](#)

-  [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.](#)



Different Formats – Cranford EC – Associate Members

Commission Members

Name	Title
Daniel J. Aschenbach	
Carol Berns	
Michael Bond	
Dave Coughlin	
Ann Darby	
Steve Jandoli	
Donald Jones	
Ronald Margulis	
Frank Klapinski	
William King	
Patricia Pavlak	
Kate Rappa	
Farhan Ahmed	
Marya Helmstetter	
Barbara Krause	
Jay Stevens	
Matthew Lubin	Fire Prevention Official
Monika Koscova-Jencik	Health Officer Sanitarian
Ben Cohen	
Jane Glass	
Kevin Harrison	

Different Formats –

Wyckoff EC – Junior Commissioners

2022 Jr. Commissioners Projects

Sebastian D- Pollinators Video

Eve N- Green Fair

Justin S- Trees Video

Justin Trees Presentation



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

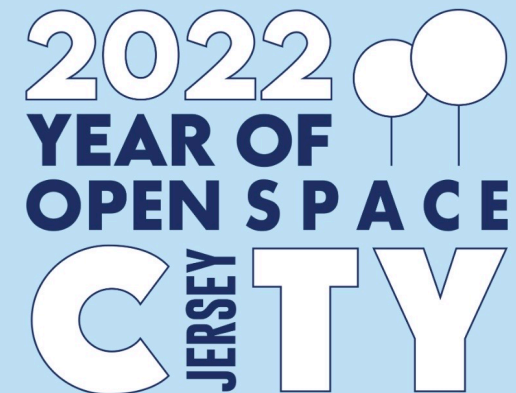


Commission Powers

- 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



Commission Powers

Develop the Municipal Environmental Resource Inventory (ERI)



CITY OF
NEWARK

DEPARTMENTS ▾

NEWS

EVENTS

FORMS

MAYOR ▾

CONTACT

Search our site...

MAY 11, 2021

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

[← Back to News overview](#)



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

- A. Environmental Commission
- B. Environmental Committee
- C. Green Team
- D. A and B
- E. A, B, and C.



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

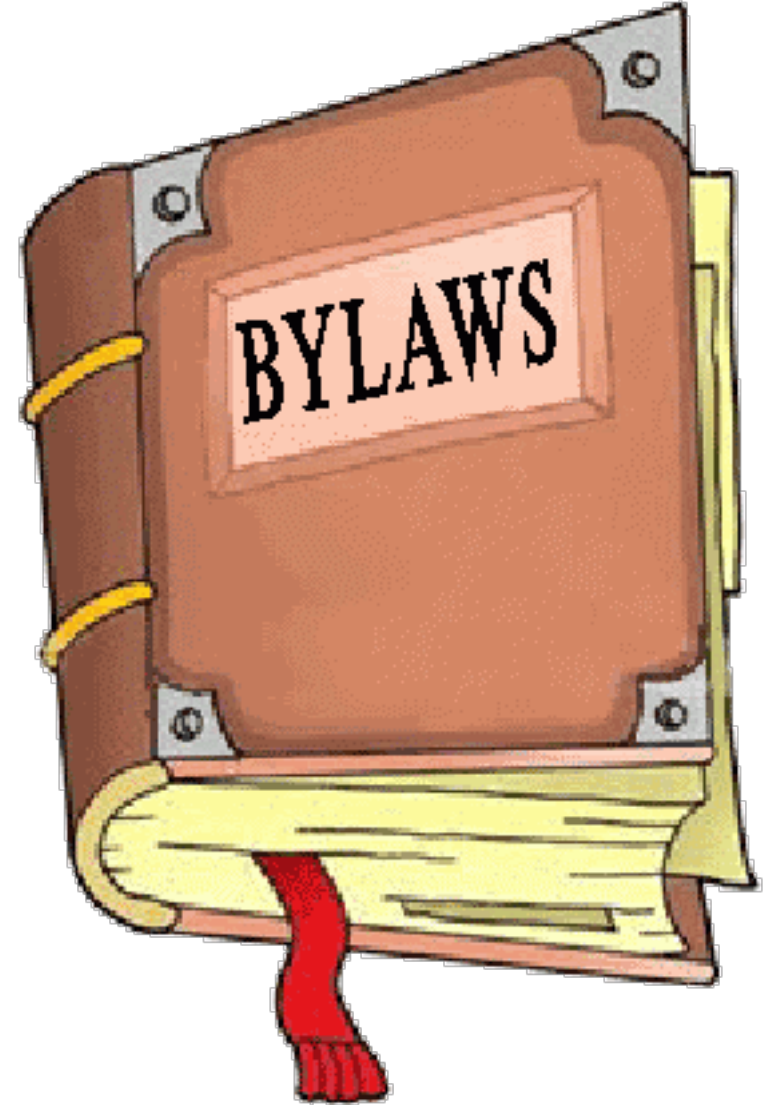
“The **Mantoloking Environmental Commission** seeks to improve the environmental quality of our **land, bay, and ocean**. Through education and outreach, the Commission encourages citizens to incorporate environmentally responsible practices into homes, gardens, and daily life. The Commission’s goal 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?

Manchester Township Environmental Commission GOALS and OBJECTIVES 2023



MANCHESTER
TOWNSHIP
OCEAN COUNTY, NEW JERSEY

- GOAL 1: Continue working with the Manchester Green Team to achieve Sustainable Jersey Bronze or Silver Certification; participate in “Green Day” event and attempt to include it in a larger Township event; and organize a cleanup of open space; consider partnering with Pinelands Preservation Alliance.
- GOAL 2: Continue to provide timely recommendations to the Planning Board on Development Applications and Areas in Need of Redevelopment.
- GOAL 3: Improve communication and develop a relationship with the Zoning Board of Adjustment.
- GOAL 4: Continue to hold regular educational presentations on topics of public interest at our meetings.
- GOAL 5: Promote recreational use of open space in Manchester and develop a relationship with the Township’s Open Space Committee.
- GOAL 6: Review and make recommendations on the Township’s Master Plan.
- GOAL 7: Review and make recommendations on the Township’s updated Storm water Management guidelines, and continue educating the community on the importance of Green Infrastructure.
 - Facilitate installation of rain gardens throughout the town.

Working to preserve and protect our precious natural resources and quality of life in all parts of the Township



GOALS AND OBJECTIVES

GOAL NO. 1: Promote Environmental Awareness and Communicate Environmental Issues to the Public

1. Continue to support the Community Gardens in Naaman Williams Park and at the Pine Grove Manor School. Support the planned new Community Garden at Catalpa Park.
2. Continue the Environmental Stewardship Awards program for outstanding environmental contributions by a citizen and a group or local business
3. Update and maintain the Environmental Commission website
4. Sponsor a “Build a Rain Barrel Workshop” by the NJ Water Supply Authority in the Spring
5. Sponsor and participate in a stream cleanup in April
6. Participate in appropriate community events
7. Publish articles in the Franklin Times on timely environmental issues
8. Serve as an advocate for expanded use of renewable energy within the Township
9. Serve as a resource for residents regarding environmental questions and issues
10. Search out opportunities to advise and encourage one or two youth oriented environmental groups
11. Maintain and update the Environmental Resource Inventory (ERI) as necessary
12. Update and reprint the the Environmental Commission flier

GOAL NO. 2: Provide Support and Environmental Expertise to the Township Council and Other Governmental Entities

OBJECTIVES:

- 1. Review and comment on site plans for residential, non-profit, and commercial development**
- 2. Provide support to the Township for the Somerset County Improvement Authority's Renewable Energy Initiative Program**
- 3. Coordinate and hold joint meetings with the Township Advisory Board of Health**
- 4. Develop resolutions on environmental issues affecting the Township**
- 5. Coordinate with ANJEC on policy statements regarding environmental issues**
- 6. Work with the Green Team in leading the Township's efforts to continue to grow as a sustainable community with Bronze, Silver, Gold or Platinum status**
- 7. Continue to assist the Stony Brook- Millstone Watershed Association in their efforts to remove, the one remaining, of two dams on the Millstone River in Franklin Township**
- 8. Gather information and develop an integrated pest management policy for the Township**
- 9. Represent the Township in the Sustainable Raritan River Initiative program sponsored by the Rutgers University Bloustein School of Planning and Public Policy**
- 10. Work with the New Jersey Water Supply Authority regarding the proposed dredging of the Delaware and Raritan Canal to minimize environmental damage**
- 11. Be an advocate for LEED Certified buildings in the Township**
- 12. Support ANJEC with their project to promote access to the lower Raritan River**
- 13. Assist and support the Millstone River Flood Commission with their efforts to alleviate flooding in the Millstone River basin**
- 14. Track the Franklin Township Resolution against the Compressor Station/Pipeline Expansion**
- 15. Promote the installation of an electric car charging station and the purchase and use of electric vehicles in the Township fleet.**
- 16. Seek additional ways to build on the Township Resolution to Support the Paris Accord**

Poll Question 3

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

- a) General public
- b) Town council
- c) Schools
- d) Businesses
- e) Clubs, organizations
- f) Schools
- g) All of the above

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)

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
2022

Borough of Somerville, New Jersey



Contents

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

Annual Report



Ringwood Environmental Commission 2022 Annual Report

Prepared for the Ringwood Mayor and Borough Council



Summary and Overview

The Ringwood Environmental Commission met in person once again in 2022 and we hosted more meetings than during Covid-19. We followed the usual pattern of identifying goals for the year and assigning some Areas of Focus. For some Commissioners, it was their first time meeting in the council chambers.

Trails were a focus for the year. Areas around Ringwood were scoped out for further trail access. Acquiring the land adjacent to the Jerry Wyckoff Natural Area was identified as a priority. We can get land from the PRC to build a hiker's lot to Governor's Mountain and decrease the reliance on the church nearby. The Library Trail has been a success and the Commission spent the year getting approvals for a complete trail from the Library to the viewpoint, avoiding the cell tower road. Construction will begin in the spring of 2023.

Large environmental projects were a big focus in 2022. The Tennessee Gas Pipeline Compressor expansion in West Milford is moving forward, but the Commission tried to block it. Special thanks to the Ringwood Council for their support and the resolution that was passed in 2021 to resist the pipeline. The Superfund site saw heavy activity until November. The OCDA remains as the last of the three sites to be completed.

The Commission continued to push for improvements to our borough-wide septic issues. This year we sent a letter to the Board of Health to ask them to begin tracking the septic pump outs and send specific letters to those who have not pumped. The Commission will continue to push for septic education and specific updates to homeowners. The Commission discussed ways to improve communication of various government tests that are done on our lakes.

Our State Parks are underfunded and abused. The cub shooting in November put a spotlight on the issues and the Commission coincidentally sent out a letter requesting funding for the parks at our November meeting. This will be a focus in 2023.

Environmental commission chair details panel's achievements in 2022

By MARK ROSMAN, Managing Editor December 22, 2022

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Annual Report

MANALAPAN — During the Dec. 14 meeting of the Township Committee, Jenine Tankoos, the chairwoman of the Manalapan Environmental Commission, presented municipal officials with the panel's annual report detailing its busy year in the community.

Tankoos said that during 2022, 10 public meetings were held; one new member was appointed to the panel; 12 applications for development were reviewed at public meetings, with comments and recommendations provided to the Planning Board, the Zoning Board of Adjustment and to the applicants.

She said the commission was the recipient of an Environmental Achievement Award from the Association of New Jersey Environmental Commissions. The award was in recognition of the commission's ongoing efforts to host native plant sales and to provide education to the public about native plants.

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

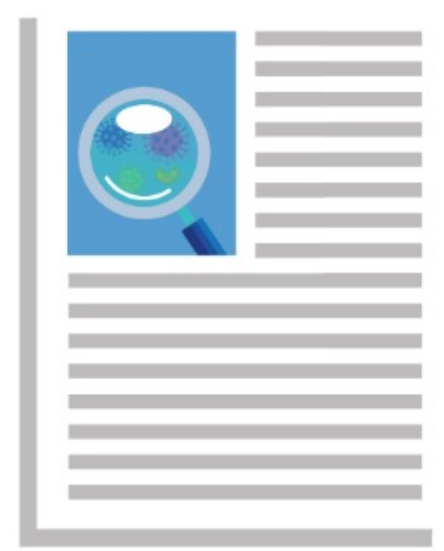
ANJEC Resource Center



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

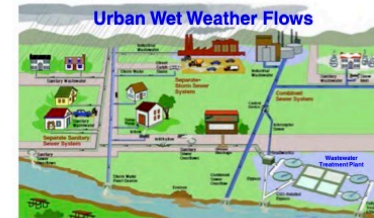
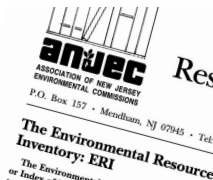


Figure 1: The "urban water cycle," where impervious or hard surfaces have decreased the amount of infiltration and transpiration that takes place throughout the natural water cycle. Source: EPA



The Environmental Resource Inventory: ERI

The Environmental Resource Inventory: ERI

The Environmental Resource Inventory (ERI), or Index of Natural Resources, is a compilation of text, tables, maps and other visual information about the natural resource characteristics and environmentally significant features and resources of a municipality. The title "Environmental Resource 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 and 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. The planning board should adopt the ERI as part of the municipal master plan, plan conservation element. As part of a 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 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. 40:26A) 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 municipality, plans and programs for inclusion in the municipal master plan and the development and use of such areas."

The Municipal Land Use Law (M.L.U.L.) (N.J.S.A. 40:55D, et seq.) requires municipalities to have a land use plan element in their master plan. "Included, but not necessarily limited to, topography, soil conditions, water supply, drainage, flood plain areas, marshes, and woodlands..." (N.J.S.A. 40:55D-28b(2)).

Environmental Commissioners' Handbook

SIXTH EDITION



2021 EDITION

REMIEDIATING & REDEVELOPING BROWNFIELDS IN NEW JERSEY

A GUIDE FOR MUNICIPALITIES & COMMUNITY ORGANIZATIONS



Resource Papers



Stormwater Management for Municipalities: Green Infrastructure designs and options

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An ANJEC Resource Paper



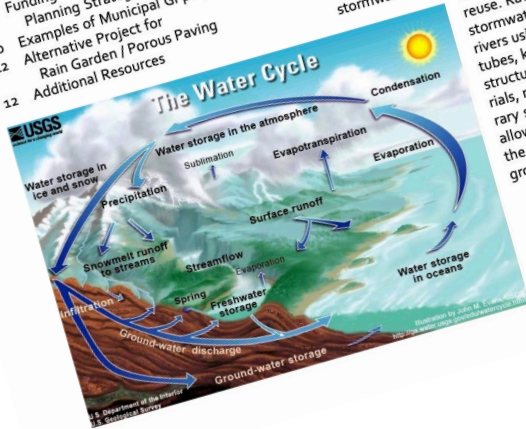
INSIDE

- 2 Why Use Green Infrastructure?
- 3 What Must Municipalities Do?
- 3 Common Types of Green Infrastructure Strategies
- 6 When Should GI Be Considered?
- 6 Who Should GI Be Used?
- 7 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
- 9 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 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, infrastructure, known as "gray" infrastructure, GI uses porous materials, native plants, or temporary storage methods that allow stormwater to soak into the ground to recharge the groundwater and aquifers.

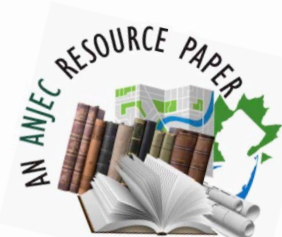


The Water Cycle
Source: USGS, 2014



Land use planning in your community

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INSIDE

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- 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, has an impact on our environment. All of the 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. Polluting 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 (Ariiluoma 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).



New from Jersey Water Works

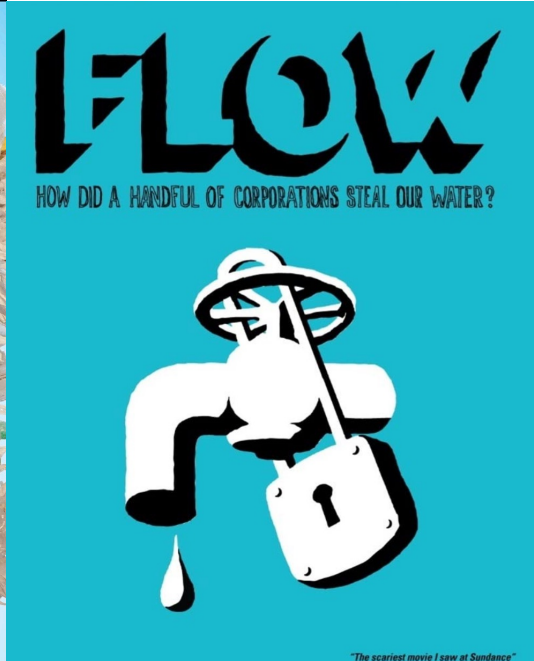
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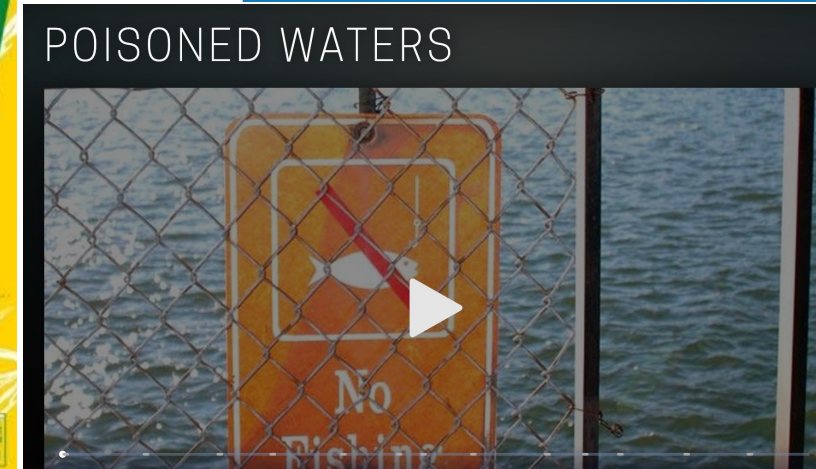
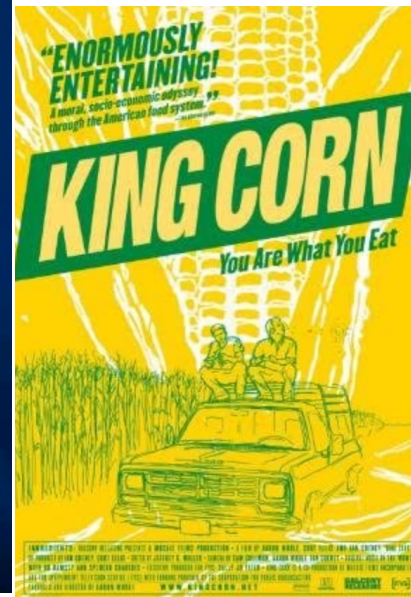
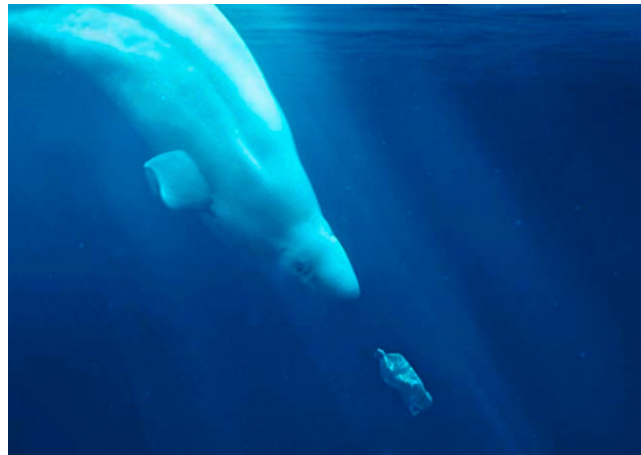




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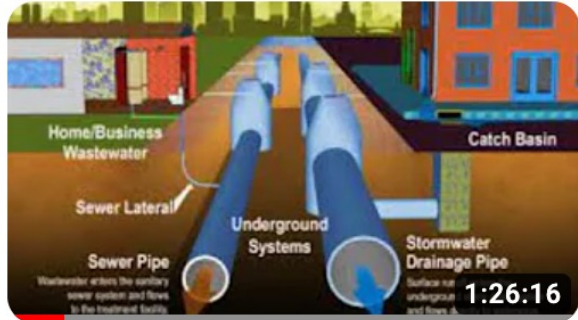
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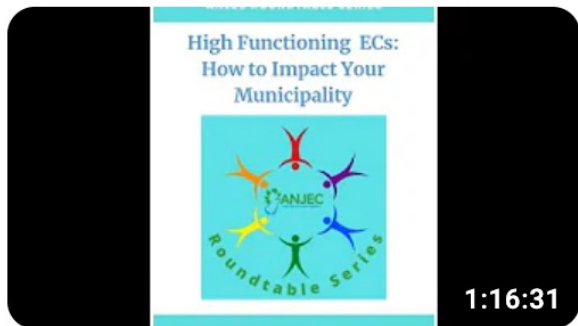
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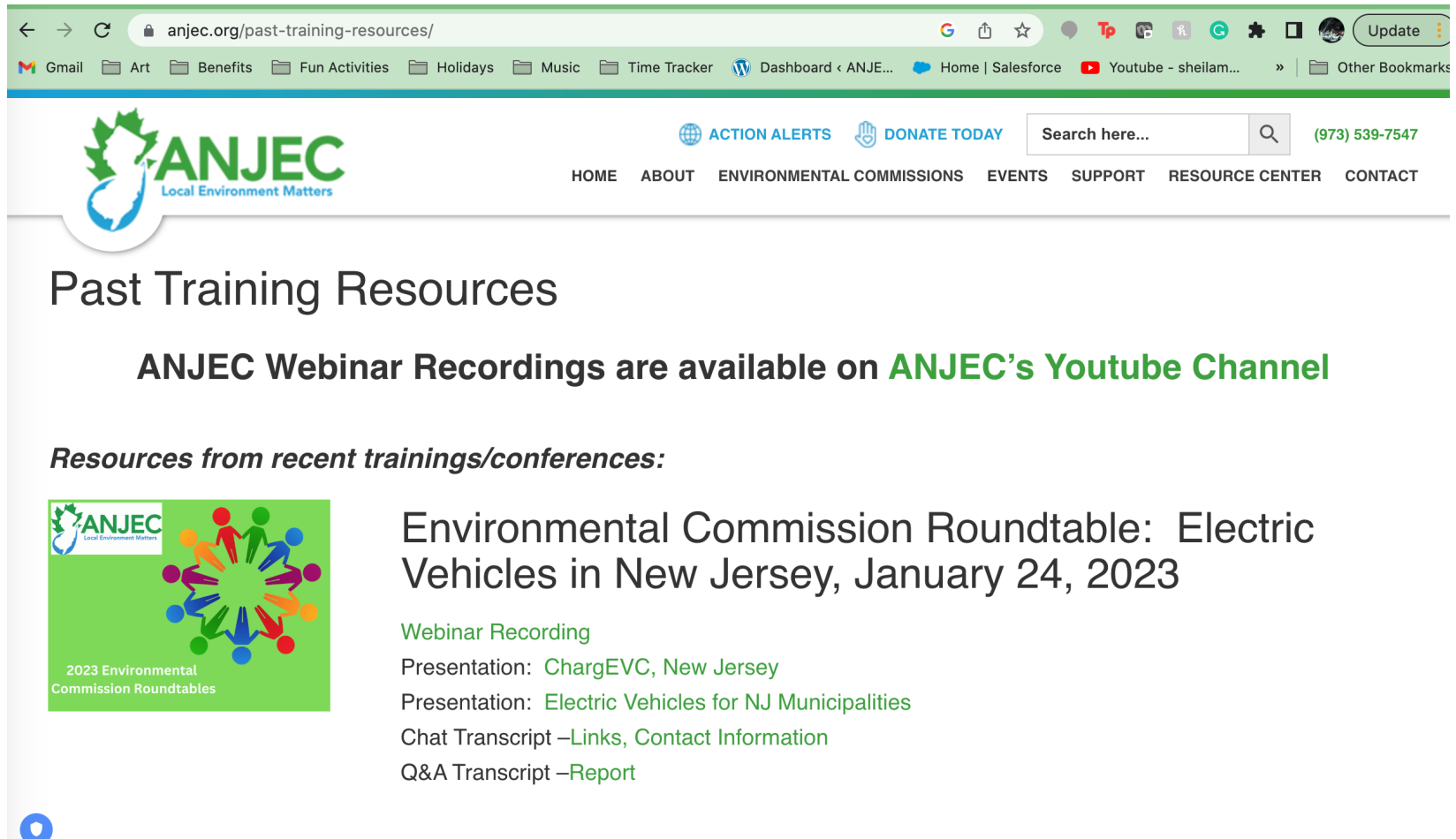
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Chat Transcript –[Links, Contact Information](#)

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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.

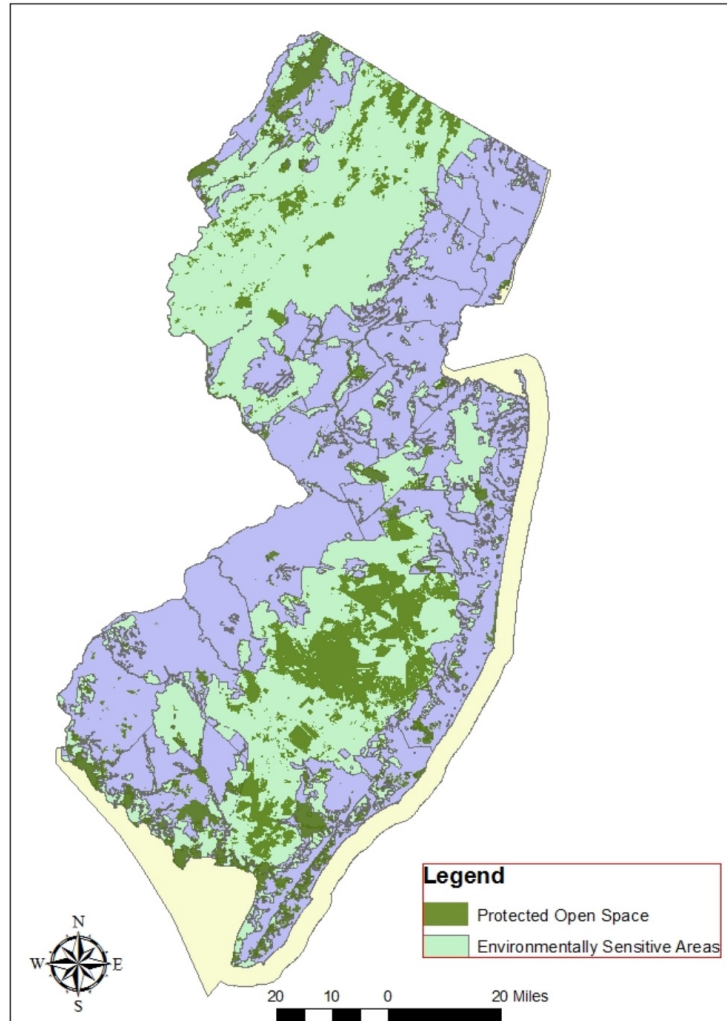


An ANJEC grant funded a pollinator garden planting event at Bergen Hill Park in Jersey City



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

Open Space Grants



2023 ANJEC OPEN SPACE STEWARDSHIP GRANTS FOR ENVIRONMENTAL COMMISSIONS *Instructions/Requirements for applicants*

ANJEC will provide small grants of up to \$1500 each to environmental commissions to support projects that do **both** of the following:

- advance local open space stewardship, *and*
- help to raise the profile of the environmental commission in the community through publicity and public participation or collaboration with local groups on the project.

**** 2023 Funding includes possibility for projects completed on/near remediated sites.**

The grants will fund environmental commission projects related to open space preservation, management, maintenance, restoration and education. Two-thirds of the grant will be paid to the commission up front, with the balance (1/3) paid when the project is complete.

Commission members and local volunteers must provide and track a minimum of 80 hours of labor toward the project. No cash match is required to apply.

Eligible Applicants: NJ environmental commissions that are established by ordinance

Eligible project locations: Municipal or other parcel(s) that are preserved open space.

Eligible Expenses: materials, speakers, professional services, printing, mailing, advertising. For events, a maximum of \$100 from the grant is allowed toward food.

Ineligible Expenses: travel or labor by local volunteers, officials or municipal staff

Applications due: 4:30pm, Monday, April 17, 2023

All applications must use the format/template provided below, and be submitted to info@anjec.org. Application length is limited, so please be concise but thorough.

Notification of grant selections: ANJEC will notify successful grantees by May 13th *by email* to the commissioner listed as the application contact person.

In addition to the application questions (template) and responses, 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. ANJEC will confirm receipt of your application file and letter file.

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