

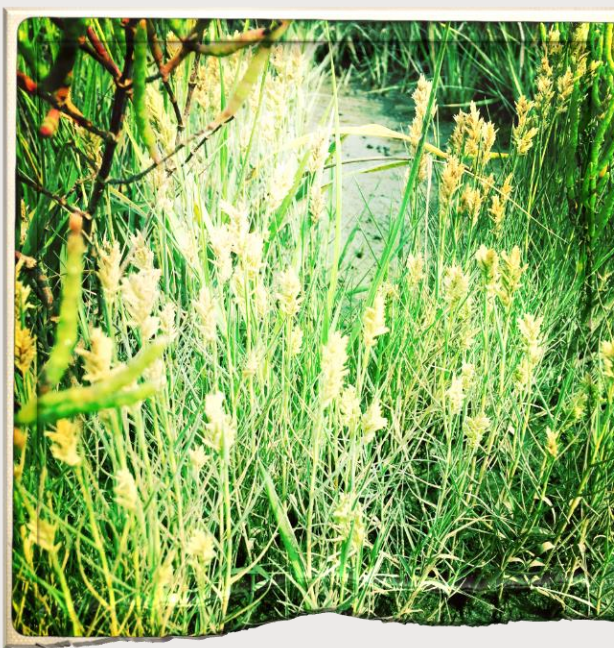


NJ's Wetland Program Plan

Metthea Yepsen and
Nick Procopio

Division of Science and
Research, NJDEP



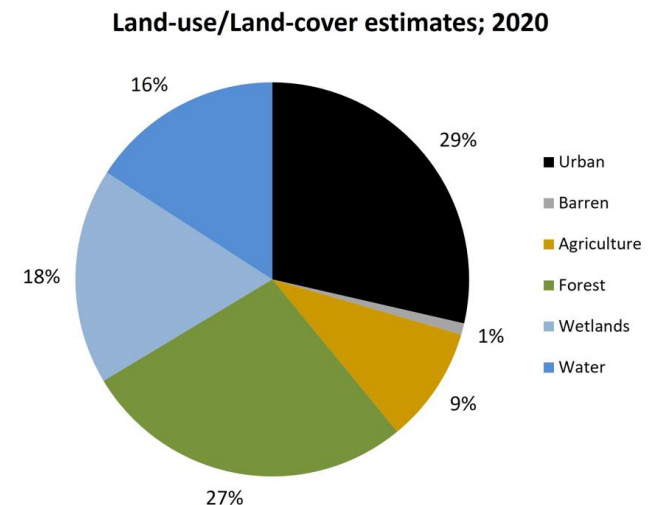
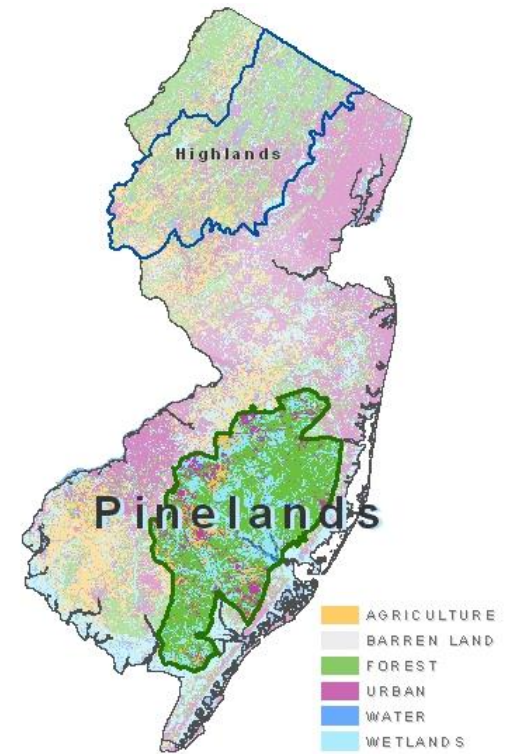


Outline

- Why do we have a Wetland Program Plan
- What is a Wetland Program Plan
- Iterations of the Plan
- Plan highlights

Why do we have a Wetland Program Plan

- Wetlands cover 18% of the state
- Satisfies a US EPA requirement for receiving Wetland Program Development Grants under the state and tribe track
- Framework for communication and coordination
- If we don't have a plan, how do we know where we are going or what we need to do to get there?



Wetland Ecosystem Services



Wetlands Are Awesome!

What is a Wetland Program Plan?

- State, tribal, or regional guidance document
- Follows EPA framework
- 3 - 6-years
- EPA Wetland Program Development Grant applications must reference the state Wetland Program Plan activities
- **No commitments are made to do any or all of the activities identified in the plan.**

NJ's WPP Overall Goal

Improve and protect the ecosystem services and functions
provided by wetlands

EPA's 2008 Core Element Framework

Iterations of the WPP



New Jersey Wetland Program Plan 2014-2018



First Iteration, December 2013

Prepared by:

New Jersey Department of Environmental Protection (NJDEP) pursuant to
The United States Environmental Protection Agency (EPA)
Enhancing State and Tribal Programs (ESTP) Initiative

Contacts:

New Jersey Department of Environmental Protection

Bob Hazen, Office of Science

Madhu Guru, P.E., Land Use Management

Leslie McGeorge, Water Resource Management

Kathleen Walz, Natural and Historic Resources



► 1st WPP (2014-2018) NJDEP Five Core Elements

1. Monitoring & Assessment
2. Regulation
3. Voluntary Wetland Restoration, Creation, Enhancement and Protection **and Improved Coastal Shoreline Resiliency**
4. Water Quality Standards for Wetlands
5. **Outreach & Education**

New Jersey Wetland Program Plan 2019-2022



Second Iteration, March 2019

Prepared by:

New Jersey Department of Environmental Protection pursuant to
The United States Environmental Protection Agency
Enhancing State and Tribal Programs Initiative

Key Contacts:

New Jersey Department of Environmental Protection
Metthea Yepsen, Nick Procopio, Division of Science & Research
Jill Aspinwall, Larry Torok, Land Use Management
Leslie McGeorge, Jay Springer, Water Resource Management
Iman Olguin-Lira, Site Remediation & Waste Management
Kathleen Walz, Natural and Historic Resources

New Jersey Pinelands Commission

John F. Bunnell

New Jersey Highlands Council

Keri Green



➤ Six Core Elements

1. Monitoring & Assessment
2. Regulation
3. Voluntary Wetland Restoration, Creation, Enhancement and Protection and Improved Coastal Shoreline Resiliency
4. Wetlands Water Quality Standards
5. **Adaptation, resilience and mitigation in a changing climate**
6. Outreach & Education

New Jersey Wetland Program Plan 2023-2027



Third Iteration, December 2022

Prepared by:

New Jersey Department of Environmental Protection pursuant to
The United States Environmental Protection Agency
Enhancing State and Tribal Programs Initiative

Key Contacts:

New Jersey Department of Environmental Protection

Metthea Yepsen

Metthea.yepsen@dep.nj.gov

(609) 940-4027

New Jersey Pinelands Commission

John F. Bunnell

New Jersey Highlands Council

Kelley Curran

New Jersey Sports and Exposition Authority

Terry Doss

➤ Seven Core Elements

1. Monitoring & Assessment
2. Regulation
3. Voluntary Wetland Restoration, Creation, Enhancement and Protection and Improved Coastal Shoreline Resiliency
4. Wetlands Water Quality Standards
5. Adaptation, resilience and mitigation in a changing climate
6. Outreach & Education
7. **Environmental Justice**

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division Of Science & Research

Bureau of Environmental Assessment

Water Resource Management

Bureau of Freshwater & Biological Monitoring

Bureau of Environmental Analysis Restoration and Standards

Watershed And Land Management

Watershed Protection & Restoration

Land Resource Protection

State Parks, Forests & Historic Sites

Bureau of Forest Management

Office of Natural Lands Management

State Park Service

Fish And Wildlife

Office of Environmental Review

Contaminated Site Remediation & Redevelopment Program

Division of Enforcement, Technical & Financial Support

Bureau of Environmental Evaluation and Risk Assessment (BEERA)

Air Quality, Energy & Sustainability

Climate Change, Clean Energy & Sustainability

Climate Resilience

Climate Resilience Planning

Community Investment & Economic Revitalization

Green Acres

Natural Resources Restoration

Department of Information Technology

Bureau of GIS

Commissioner's Office

Office of Environmental Justice

NEW JERSEY HIGHLANDS COUNCIL

Kelley Curran, Carolyn Klaube

NEW JERSEY SPORTS AND EXPOSITION AUTHORITY

Terry Doss

NEW JERSEY PINELANDS COMMISSION

John F. Bunnell, Kim Laidig

The 3rd Iteration of the NJ WPP (2023-2027) was written by an interdisciplinary team of 27 scientists in 17 Programs within the NJDEP, and several scientists in the Pinelands and Highlands Commissions and the NJSEA.





WPP Outline

- List of Contributors
- Introduction
- Core Element Tables
- Historical progress by Core Element

Core Element 1: Monitoring and Assessment

GOAL: To define ways to evaluate wetland condition to understand and preserve important wetland functions and ecosystem services that wetlands provide, including surface-water and ground-water quality, flood control, coastal storm surge detention, nutrient transformation, sediment and particulate retention, carbon sequestration, shoreline stabilization, and provision of plant and wildlife habitat.

OBJECTIVE 1: Develop a monitoring and assessment strategy using a multi-tier approach and testing innovative wetland condition and function assessment protocols.

Action 1: Identify program decisions and long-term environmental outcome(s) that will benefit from a wetland monitoring and assessment program					
ACTIVITY	2023	2024	2025	2026	2027
Update and codify long-term wetland-related environmental goals in agency plans (e.g., DEP Networked Wetland Plan)	X			X	
Continue to identify programs that will ultimately use monitoring data (e.g., track trends, restoration, permitting) and meet with those State programs periodically to share information about progress and components of the strategy	X	X	X	X	X
Identify new ways that wetland data can be used to implement watershed planning, coastal resilience planning, and wetland restoration projects	X	X	X		
Action 2: Define wetlands monitoring objectives and strategies					
ACTIVITY	2023	2024	2025	2026	2027
Coordinate with relevant partners, in federal, state, tribal, and local agencies, universities, conservation organizations, National Estuary Programs, USEPA Regional and National wetland work groups	X	X	X	X	X
Continue participation in the NJ Tidal Wetlands Monitoring Network	X	X	X	X	X
Continue to develop a sustainable long-term monitoring and reference network for freshwater wetlands	X	X	X	X	X
Update wetland monitoring objectives and strategy. Define data needs and applications, including statistical analysis	X	X	X	X	X
Examine how to integrate wetlands monitoring strategy into existing and developing water quality monitoring					

Plan Overview



CORE ELEMENT 1: MONITORING & ASSESSMENT

GOAL: Define ways to evaluate wetland condition to understand and preserve important wetland functions and ecosystem services that wetlands provide





Monitoring & Assessment Objectives

OBJECTIVE 1: Develop a monitoring and assessment strategy

OBJECTIVE 2: Implement a sustainable monitoring program

OBJECTIVE 3: Conduct research to fill knowledge gaps

OBJECTIVE 4: Incorporate monitoring data into agency decision-making.

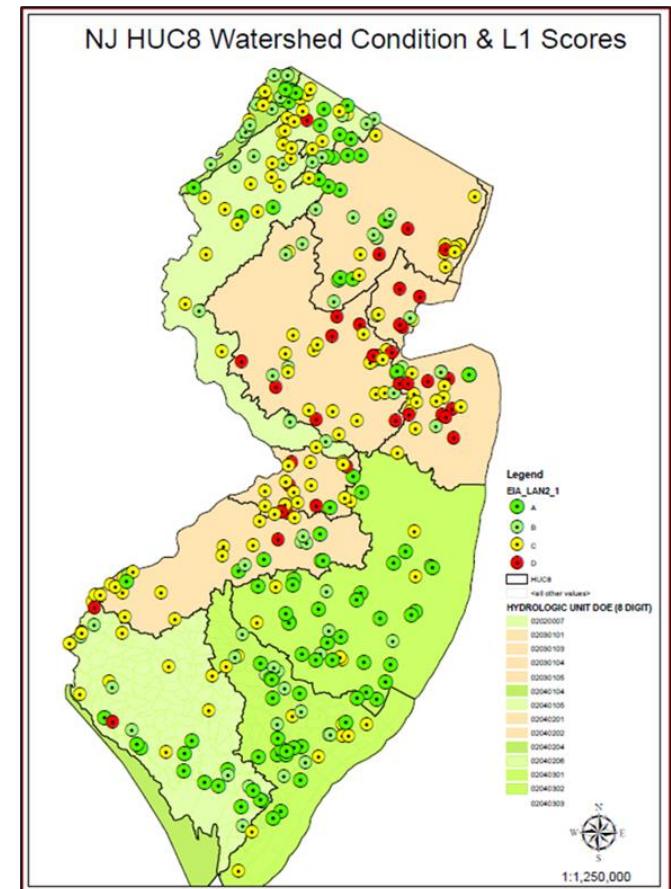
~100 activities identified

Monitoring

Activity: Establish a sustainable wetland monitoring network to research, monitor, and document trends

- NJ Tidal Wetland Monitoring Network
 - Sites
 - ~10 years of data
 - Partnerships
 - Funding
 - Methods
 - Database and website
 - Status and trends report
- NJ Freshwater (non-tidal) Wetlands Monitoring Network
 - Sites
 - 1 year of data (~2014)
 - Partnerships
 - Funding
 - Methods
 - Database and website
 - Status and trends report

Wetland Ecological Integrity Assessment (EIA) by Watershed





Core Element 2: Regulation

GOAL:

- Prevent wetland loss
- Preserve wetland function
- Replace unavoidable or unauthorized losses
- Increase the quantity and quality of wetlands
- OBJECTIVE 1: Improve existing wetland protection efforts
- ~40 activities identified

Regulation Examples:

Watershed & Land Management

Home  **eServices** Resources  Land Resource Protection  Watershed Protection  Resilience Engineering  Enforcement  Help 






Activity: Develop e-submission capabilities to allow for all permits to be electronically submitted

[Home](#) / **eServices**

Watershed & Land Management E-Services (DEP Online)

As part of its continued commitment to customer service and transformation, the Division of Land Resource Protection provides electronic services as an alternative to paper to allow property owners to apply online for certain land use determinations, authorizations and tidelands license renewals and ownership changes.

Quick Links for E-Services

-  Permit Checklists
-  NJDEP Online
-  Property Owner Certification Form
-  Public Notice Form
-  E-Services FAQ

Accessing the System

Users may access the electronic system at <https://njdeponline.com>. Follow the registration process and create an account. You must have a valid email address to create an online account. NJDEP Online offers two different types of services: Non-Registered and Registered.


Pay A Paper Invoice

You may pay a paper invoice online using our "[Pay a Paper Invoice](#)" service. You will need either an Invoice Number or NJEMS Bill ID which will be located on the invoice you've received.

Service Selector

Unsure which service to use? Select the type of permit you need to apply for from the drop down and find out!

Activity selection

Individual Permits (IP) 

You will need to use the "Apply for a Land Use General Authorization or Permit" service. You can find all the info you need on [this page](#).



Resilient Environments and Landscapes - NJ PACT

Action: Improve wetland regulations, policies, or guidelines



Core Element 3:

Voluntary Wetland
Restoration, Creation,
Enhancement and Protection
and Improved Coastal
Shoreline Resiliency



Core Element 3

Goal:

- To prioritize and implement programs for ecological restoration and protection of wetlands
- Land acquisition, watershed planning, and development of a coastal shoreline resiliency program



CORE ELEMENT 3

OBJECTIVE 1: Clearly and consistently define restoration and protection goals

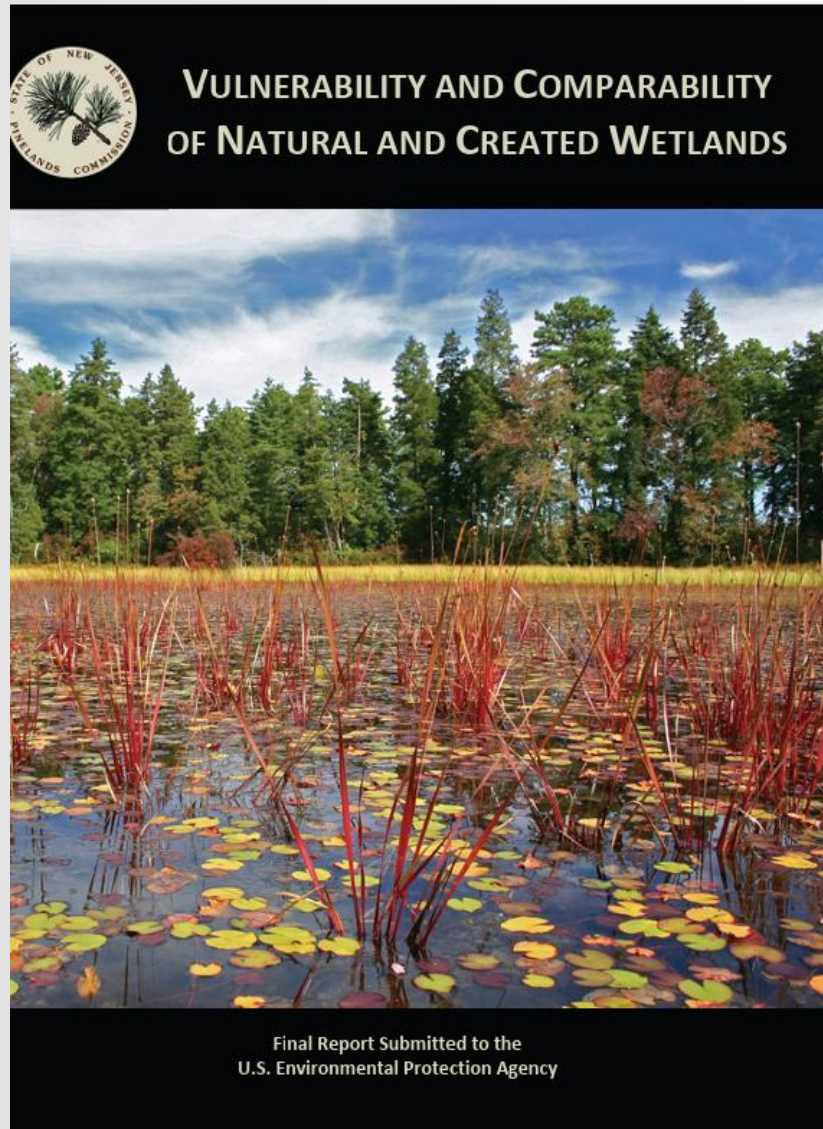
OBJECTIVE 2: Protect wetlands from degradation or destruction

OBJECTIVE 3: Increase wetland acres and improve wetland condition and function

OBJECTIVE 4: Public Education, Outreach, and Training

Example:

Activity: Develop guidance and training on the creation of resilient coastal and freshwater wetlands



Pinelands Commission
report “Vulnerability and
Comparability of Natural
and Created Wetlands” US
EPA project



Restoration Example:

Activity: Develop site-specific plans for wetland restoration, creation, and enhancement projects and monitor completed projects

State is very active in the funding, management, and monitoring of wetland restoration projects.



Core Element 4: Wetland Water Quality Standards



Goal

- To protect, maintain, and restore the quality of New Jersey wetlands in accordance with the Clean Water Act
- Set benchmarks for condition and/or function by wetland type
- Water Quality Standards will use monitoring data to define wetland quality

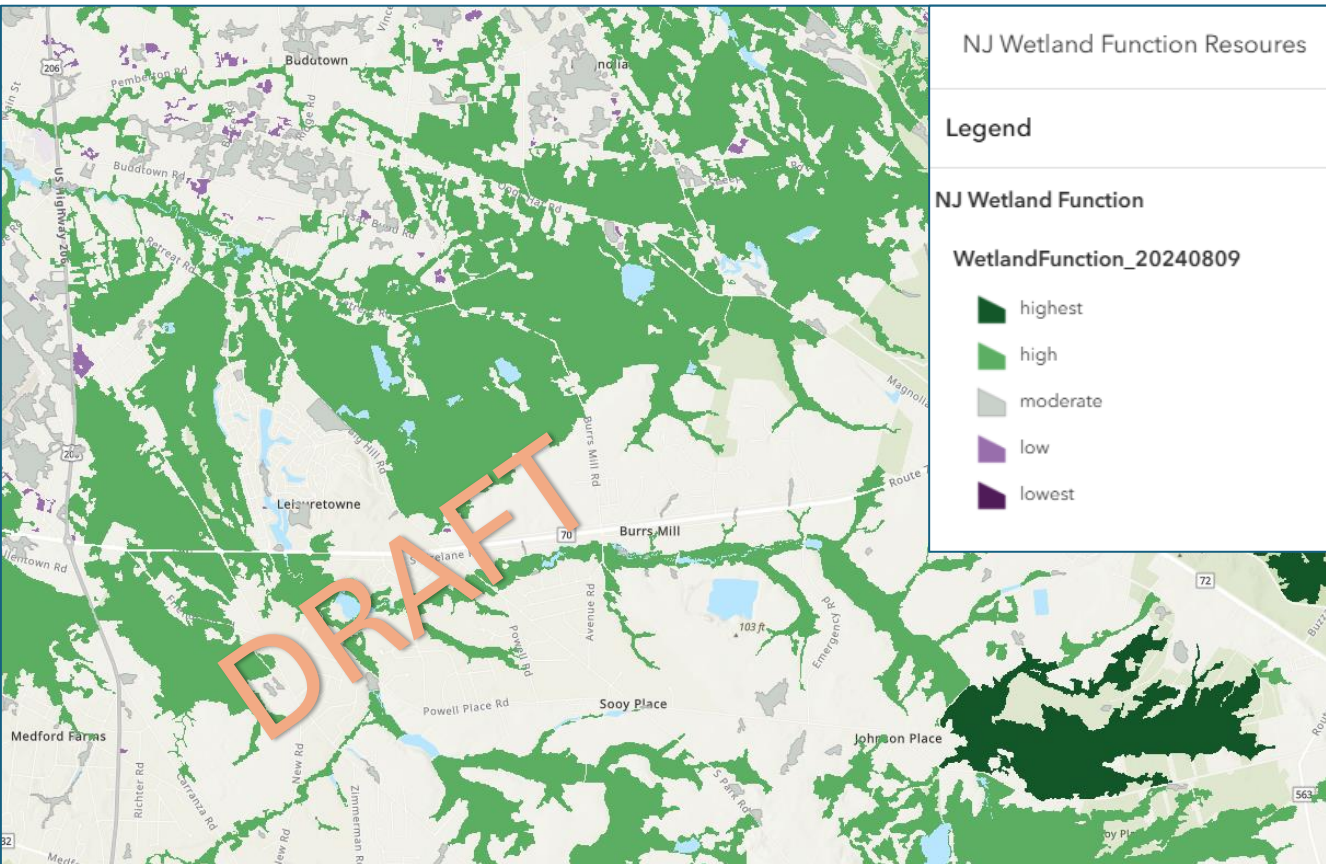
OBJECTIVE 1: Develop wetland-specific water quality standards.

~18 Activities identified

Example:

Activity: Explore options for differentiating and mapping wetland types by their functions and ecosystem services

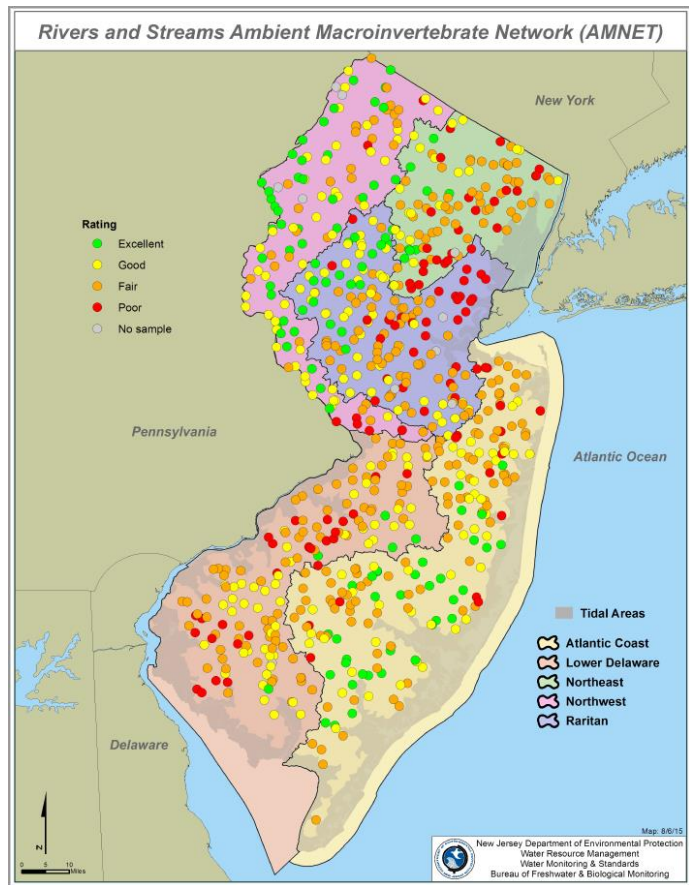
WatershedNJ Wetland Function Project



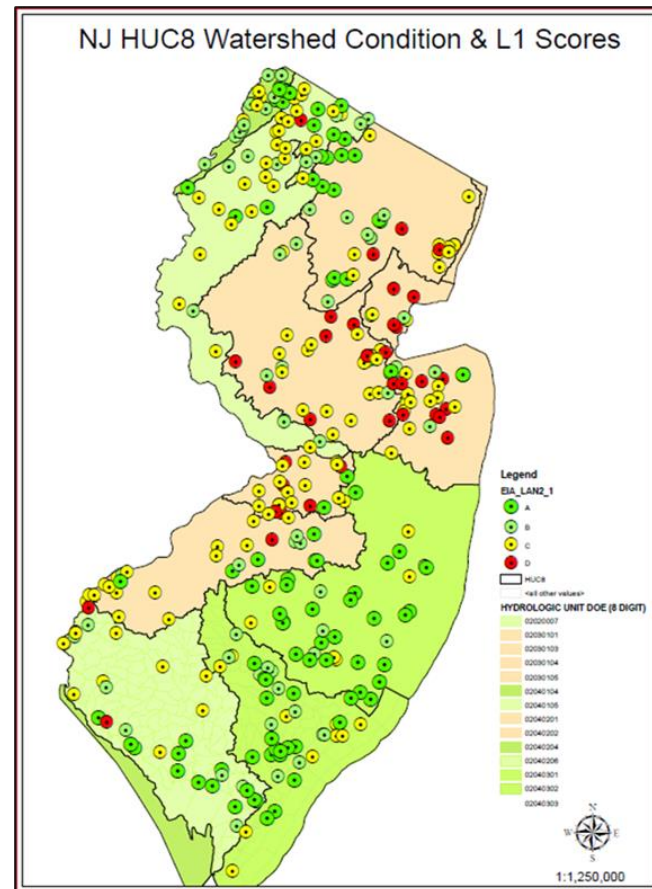
- WatershedNJ
Wetland
Functional layer
- Water quality
improvement is
one of the three
functions
assessed

Example: **Activity:** Conduct research on the relationship between groundwater quality and wetlands, and the influence of wetlands on downstream water quality

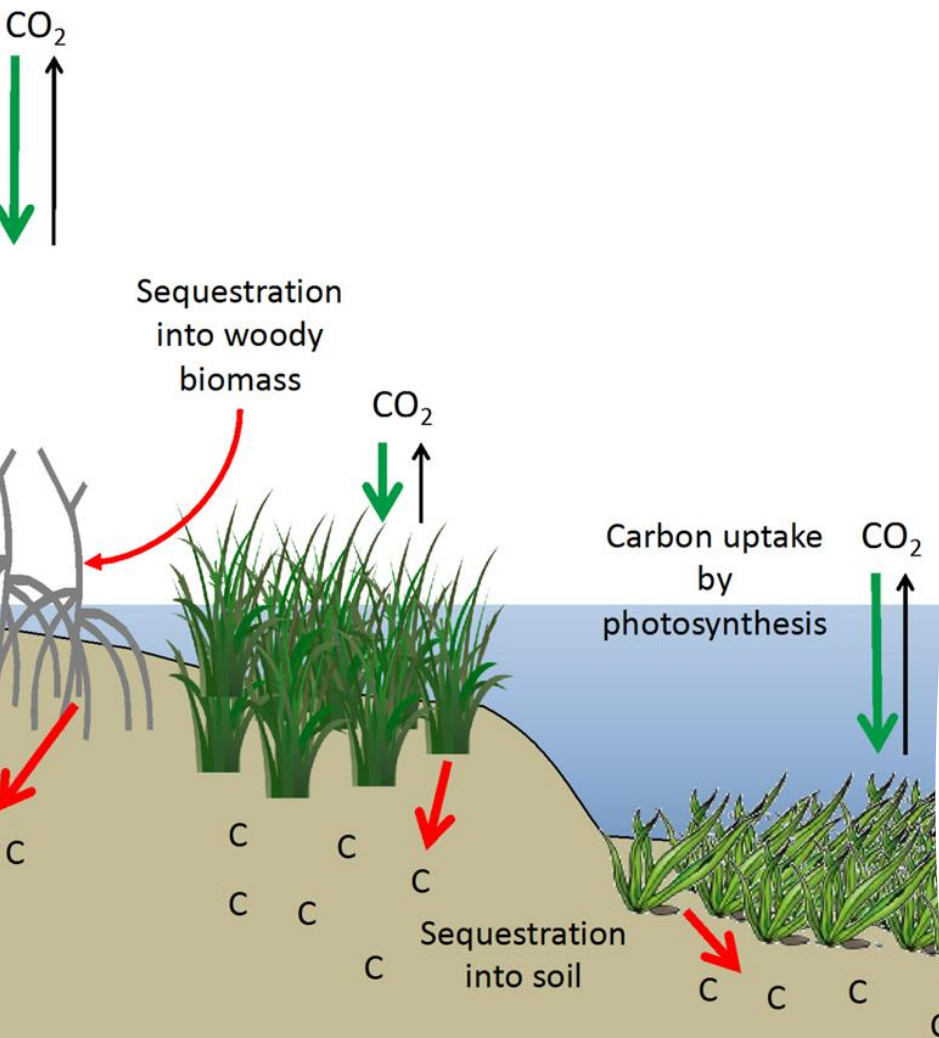
Ambient Macroinvertebrate Network (AMNET)



Wetland Ecological Integrity Assessment (EIA) by Watershed



Core Element 5: Adaptation, Resilience and Mitigation in a Changing Climate



GOAL:

- Reduce and respond to climate change
- Improve wetland resiliency
- Maximizing carbon sequestration
- Coastal resilience plans and policies that prioritize coastal ecosystems for habitat value and community resilience

A photograph showing a cross-section of a wetland core sample. The sample is a dark, moist, silty material, likely sediment, which is being measured with a yellow ruler. The ruler is placed horizontally across the middle of the sample, with markings from 13 to 40 visible. Above and below the sediment are layers of green and yellowish-brown marsh grasses. A person's hand is visible at the top right, holding the ruler.

Climate Change Element Objectives

OBJECTIVE 1: To improve ecosystem resiliency and adaptation in the face of climate change.

OBJECTIVE 2: Develop a strategic initiative that identifies a prioritization methodology for tidal marsh and forest carbon sequestration projects.

OBJECTIVE 3: Develop and implement coastal resilience planning and actions that prioritize ecological-based community and habitat resilience.

OBJECTIVE 4: Increase the public awareness and knowledge of the value of wetlands for climate change mitigation and resilience.

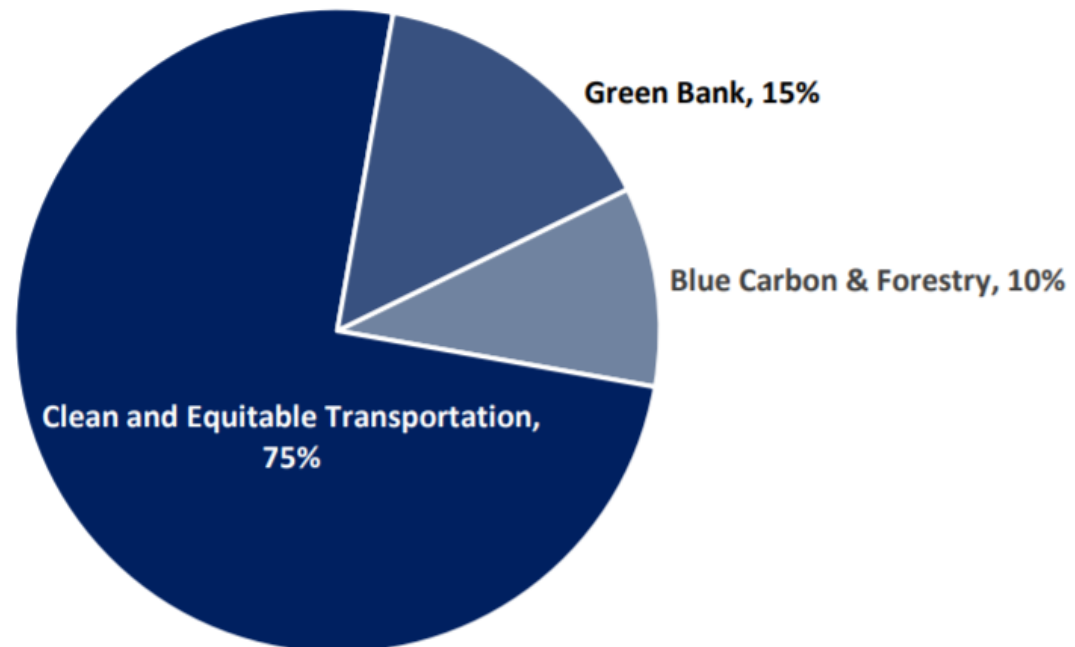
Example:

OBJECTIVE 2: Implement strategic initiatives that increase carbon sequestration in wetlands such as the Natural and Working Lands Strategy and RGGI Strategic Funding Plan

Natural Climate Solutions Grant Program funded ~\$15 Million worth of tidal wetland restoration projects in 2023



PERCENTAGE OF FUNDING BY INITIATIVE



Example:

Activity: Research non-tidal wetland capacity for net carbon sequestration, including fungal networks, by soil type (peat vs mineral) and wetland type (hydrology and vegetation)

- New Jersey Carbon Flux in Non-tidal Wetlands Pilot Project
- Study of net carbon flux in three forested wetland types (Atlantic White Cedar, Coniferous, Deciduous)
- Study in the Mulica River catchment





Core Element 6: Public Outreach and Education

GOAL:

- State actions that increase the public's understanding, awareness, and appreciation of wetlands
- Education, information, outreach, and involvement

OBJECTIVES

- One
 - Efforts to educate the general public on wetlands functions, benefits and values
 - Increase opportunities for recreational interaction
 - Raise awareness of regulations
- Two
 - Ensure long-term outreach, collaboration, and knowledge-sharing with the public
 - Focus on underserved groups and individuals including tribal and overburdened communities (OBC)



Example: Activity: Sponsor workshops and training opportunities for the public on wetland restoration and best management practices



NJ BU Summit on Beneficial Use of Dredged Material For Restoration

CELEBRATING 10 YEARS OF MAKING MUD MATTER

**DECEMBER 4, 2024
8:30 AM – 4 PM**

CO-HOSTED BY TNC (EVENT SPONSOR) & NJ DEP



Environmental Justice in New Jersey



GOAL:

- Provide and ensure equal access for overburdened communities to the benefits provided by wetlands
- Customized approach to assistance that enables and supports equitable access to and participation in the wetland programs provided by the State

OBJECTIVE: Enact principals of environmental justice in all facets of NJDEP wetland-related efforts

~40 Activities identified

Core Element 7: Environmental Justice

Examples:

Activity: Prioritize overburdened communities when selecting projects for restoration, creation, enhancement, and protection of wetlands

Cramer Hill Waterfront Park freshwater wetland restoration project - Camden



Natural Climate Solutions Grants – OBCs a priority



A close-up photograph of various succulent plants, likely from a coastal wetland. The plants have thick, fleshy leaves in shades of red, pink, and green. Some plants have small, pointed leaves, while others have more rounded, bead-like leaves. The background is blurred, showing more of the same vegetation under bright, natural light.

Questions?

Wetland Program Plan Contact:
Metthea Yepsen

Bureau Chief

Division of Science and Research
NJ DEP

Metthea.yepsen@dep.nj.gov

T (609) 940-4027

<https://www.nj.gov/dep/dsr/wetlands/>