

# Conservation Conversation



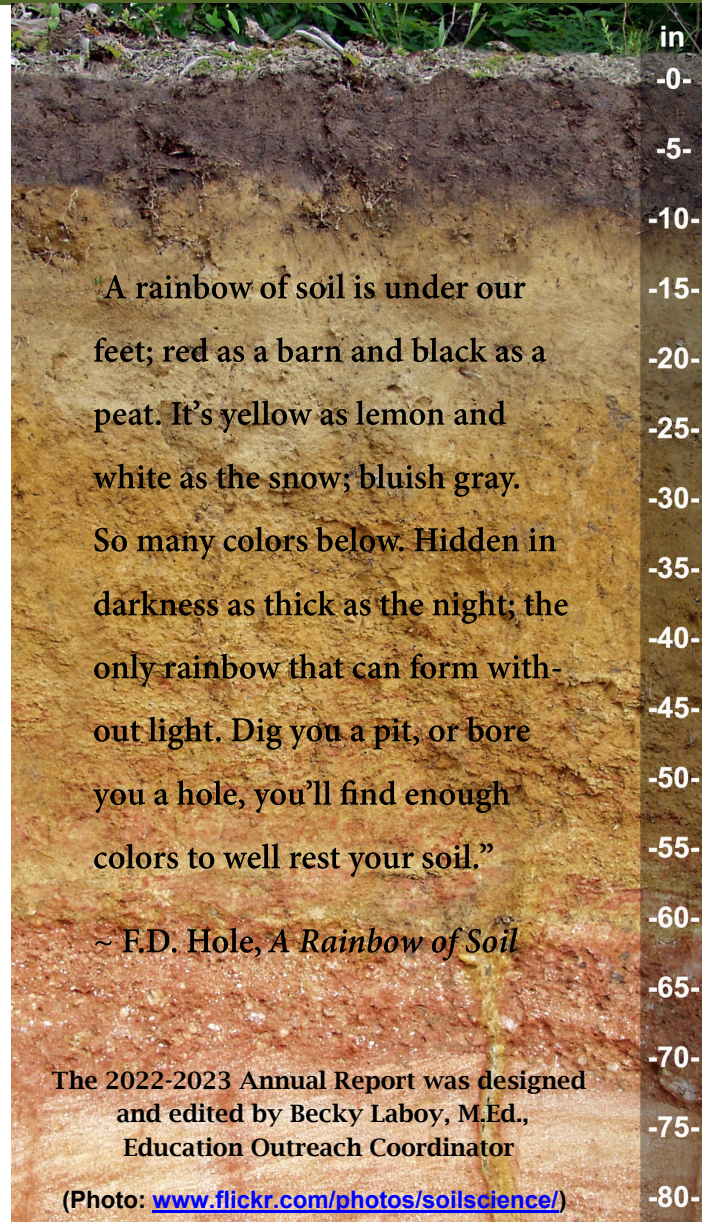
# Ocean County Soil Conservation District Annual Report 2022 - 2023



Photo: Georgie Grieb

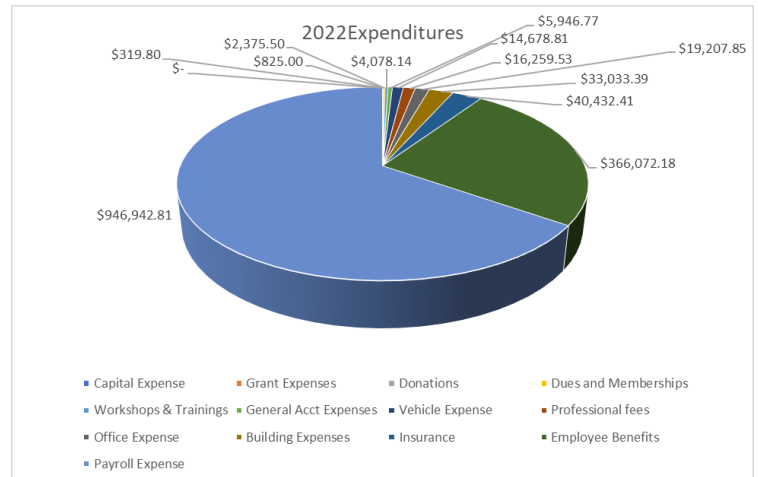
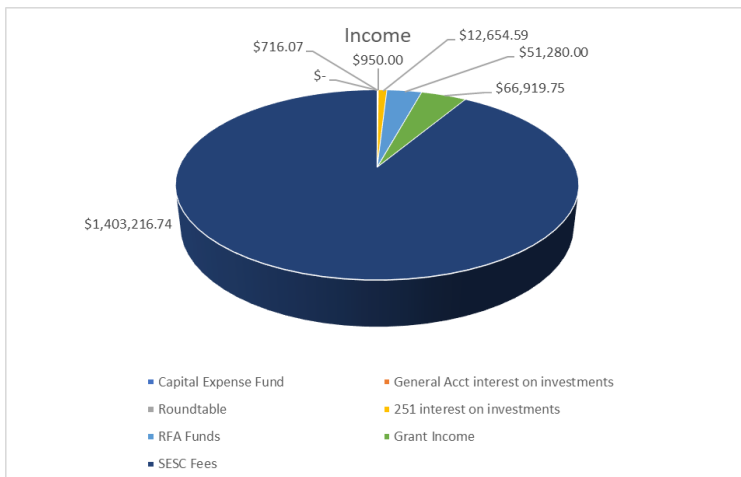
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## Operational Funding

Compiled by Mary Ellen Banfield, Office Manager



# Meet OCSCD's Board of Supervisors



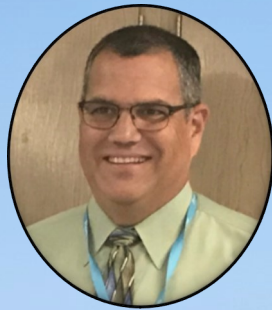
**Dr. William J. Pollock, Chair**  
Served since 2000



**John Tiedemann, Vice Chair**  
Served since 2022



**Dr. Michael Gross, Secretary**  
Served since 2005



**Gary Paxton, Treasurer**  
Served since 2022



**Ray Bukowski, Member**  
Served since 2022

## Message from the Director's Desk

Ocean County Soil Conservation District functions as a locally-led governmental entity responsible for implementing the Soil Erosion and Sediment Control Act, as well as conservation initiatives in collaboration with the New Jersey Department of Agriculture, and various state and federal agencies and organizations. OCSCD is dedicated to spearheading endeavors aimed at preserving our soil and water resources. The effective management of soil stands as a cornerstone in safeguarding water resources and curtailing issues such as erosion and nutrient loss.

Situated in the Barnegat Bay watershed, renowned for its pristine Pine Barrens habitat and picturesque beaches, Ocean County boasts an impressive ecological diversity that renders it one of New Jersey's most sought-after places to reside. Given this appeal, the role of OCSCD in safeguarding and conserving our soil, water, and natural resources becomes crucial to the overall well-being of our communities.



OCSCD is committed to establishing itself as a leader in conservation, possessing the capability to form effective partnerships, devise strategic plans, and offer technical assistance. In addition to these efforts, the District actively promotes natural resource stewardship through educational programs, outreach initiatives for educators and youth, involvement in grant projects, and collaborative partnerships with public agencies, elected officials, non-profit organizations, and community stakeholders. Visit our [website](#) to learn more about the Ocean County Soil Conservation District.

*Christine R. Raabe*

Christine R. Raabe, District Director

# Meet the Staff



Left to Right, Back Row: Ramon Mejia, Amanda Sullivan, Alexandra Augustino, Jean Baluski, Christine Raabe, Rachel Hammack, Georgie Grieb, Ben Hayden, Sean Yeats, Becky Laboy. Front Row: Kristin Adams, Jessica Pinto, Brittany Moore. (Not Pictured: Mary Ellen Banfield, Mary Elliott.)

Annual Report 2022-2023

## Our Partners in Conservation

Ocean County Soil Conservation District regularly works with local and regional partners to coordinate and collaborate on numerous natural resource projects and programs. We welcome opportunities to leverage resources, share expertise and assist with initiatives that benefit not only the agencies and organizations involved but, importantly, the natural resources of Ocean County. Visit our website to learn more about our many [partnerships](#) and [projects](#). **Together** we accomplish more than we can alone!



# Soil Erosion and Sediment Control Program Report

By Jessica Pinto, Senior Erosion Control Specialist

*At the Ocean County Soil Conservation District we seek to minimize soil erosion and sedimentation problems resulting from land disturbance activities through review of the Soil Erosion and Sediment Control Plan and site inspection to determine compliance with the New Jersey Soil Erosion and Sediment Control Standards.*

The [Ocean County Soil Conservation District \(OCSCD\)](#) is a special purpose subdivision of the New Jersey Department of Agriculture serving Ocean County since its first organizational meeting held on July 25, 1952.

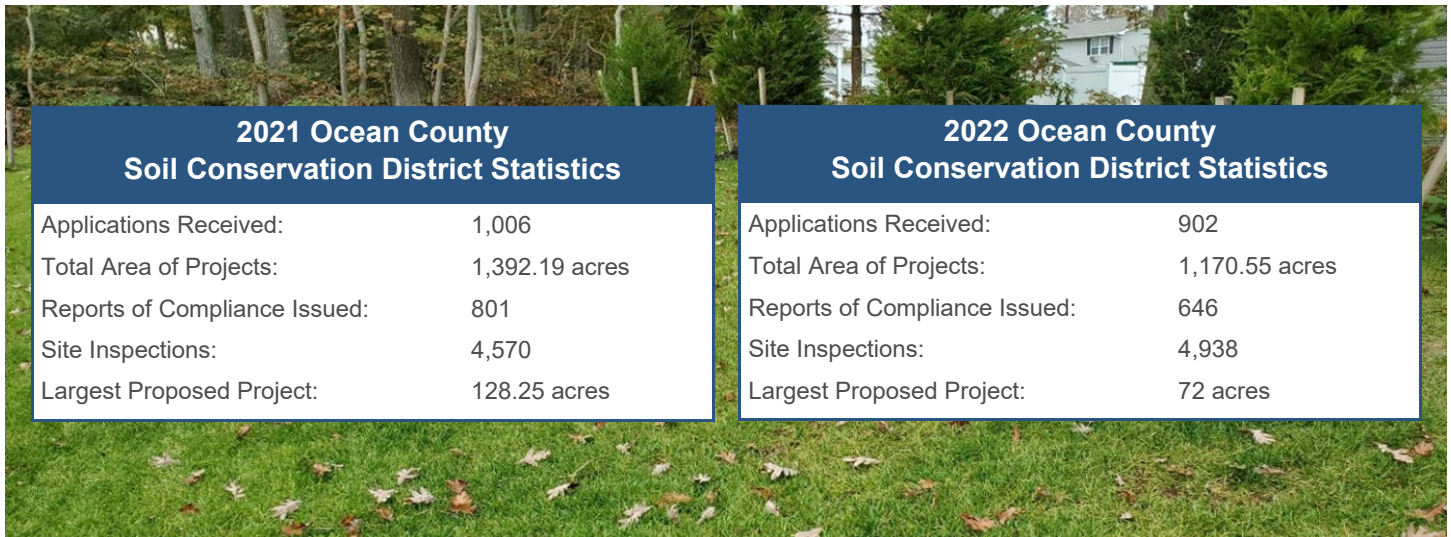
Districts are public bodies, corporate and politic, with a five-member Board of Supervisors comprised of county residents appointed by the State Committee as the governing body. Boards of Supervisors pursue available technical, financial, and educational resources and focus on addressing the needs of the District's constituents. Districts play a very unique role in the protection of New Jersey's natural resources. There are 14 NJ Soil Conservation Districts, and over 3,000 nationwide.

In New Jersey, a District's purpose is to implement the [NJ Soil Erosion and Sediment Control Act \(1975\)](#), which was amended to apply conservation practices to urban development. Any disturbance exceeding 5,000 square feet would require a Soil Erosion and Sediment Control Plan certification by a District. Disturbance is defined as any activity involving clearing, excavation, storing, grading, filling, or transporting of soil.

At the Ocean County Soil Conservation District, the 9 technical staff review Soil Erosion and Sediment Control Plans to verify that the designs meet current [NJ Soil Erosion and Sediment Control Standards](#). These Standards are a blend of agronomic science and state of the art engineering practices, embodied in 32 individual design chapters and detailed appendices that enable developers to successfully design erosion control practices for construction sites. Staff provide inspection and enforcement of the Soil Erosion and Sediment Control Plan and Standards during the construction process to minimize offsite erosion and sedimentation, protecting both the environment and neighboring properties.

The tables below provide the 2021 and 2022 statistics for OCSCD, including number of applications received, number of inspections conducted, and total proposed new development area.

More details about the Soil Erosion and Sediment Control Program, as administered by OCSCD, can be found on the District's [website](#).



2021 Ocean County Soil Conservation District Statistics		2022 Ocean County Soil Conservation District Statistics	
Applications Received:	1,006	Applications Received:	902
Total Area of Projects:	1,392.19 acres	Total Area of Projects:	1,170.55 acres
Reports of Compliance Issued:	801	Reports of Compliance Issued:	646
Site Inspections:	4,570	Site Inspections:	4,938
Largest Proposed Project:	128.25 acres	Largest Proposed Project:	72 acres

# Staff in the Field

By Georgie Grieb, Inspector II

OCSCD staff provide inspection and enforcement of construction sites that meet the definition of soil disturbance “project” as defined by the [Soil Erosion and Sediment Control Act](#). The District ensures each site remains in compliance with the [NJ State Soil Erosion and Sediment Control Standards](#) during the construction process. Each site must minimize offsite erosion and sedimentation, protecting both the environment and neighboring properties. The current Standards, revised in 2017, contain 32 practices that focus on the safe conveyance of runoff, off site and downstream of the site. Below are examples of a few Standards implemented in the field.

**DUST CONTROL (16-1)** - Natural surface barriers, such as trees, shrubs and groundcovers keep fine soil on the ground and hold moisture in the soil during times of dry conditions. Without proper precautions, active construction sites may be vulnerable to releasing dust once the natural surface barriers are removed. The New Jersey Soil Erosion and Sediment Control [Standard for Dust Control](#)

addresses this concern. Staff at OCSCD require construction sites to minimize dust through the installation of mulches, temporary vegetation, and even spray-on adhesives. Another option provided within the Standards is sprinkling the surface of haul roads until wet, applying stone, and installing barriers like snow fences to control air currents and soil blowing and deposition into local surface water resources. (Photo: Georgie Grieb, July 2023)



**PERMANENT STABILIZATION (4-1)** - Seeding as per the NJ State [Standard for Permanent Vegetative Cover for Soil Stabilization](#) requires topsoil of 5 inch depth, lime application based on a soil test, fertilizer (10-10-10), straw mulch and an anchoring method with the seed chosen. Straw mulch is required for all seeding to ensure the seed stays in the soil throughout various types of environmental conditions such as rain, wind, and wildlife disturbance. The Standard describes many appropriate seed mixtures for use in NJ, including warm season grasses, cool season grasses, pinelands native seed mixtures, coastal, wildflower and meadow seed mixtures. Each seed mixture approved for use is further broken down by soil drainage class as well as planting rates and seeding methods. (Photo: Georgie Grieb, September 2023)

**TEMPORARY STABILIZATION (7-1)** - Stabilization is a key conservation practice. Soil health is dependent on the protection of soil even during the nongrowing season. A bare condition leaves soil vulnerable to nutrient loss, erosion by wind and water, and is destructive to soil microbes. When the ground is bare and not yet prime for new seeding work, the New Jersey Soil Erosion and Sediment Control Standards has a solution. Temporary stabilization is a great way to cover bare or disturbed areas subject to erosion in non-seeding months. The best way to temporarily stabilize areas is with straw mulch, tack and a temporary seed mix, such as annual ryegrass or spring oats. (See the NJ Soil Erosion and Sediment Control [Standard for Temporary Vegetative Cover for Soil Stabilization](#).) If permanent seeding is a priority in March, there are several mixtures approved for [Permanent Vegetative Cover for Soil Stabilization](#) that have optimal planting dates between March 1st and April 30<sup>th</sup> for Ocean County’s hardiness zones, as shown in Table 4-3 in the Standards. (Photo: Georgie Grieb, April 2023)



# Farmland Preservation Program Update

By Jessica Pinto, Senior Erosion Control Specialist

Ocean County Soil Conservation District  
bolsters partnerships to preserve  
farming legacies.

*Photo: NJ State Agriculture Development Committee*

The [State Agriculture Development Committee](#) (SACD) and [County Agriculture Development Boards](#) (CADBs) are important partners in [New Jersey's Farmland Preservation Program](#) and [Right-to-Farm](#) efforts.

As of October 2023, New Jersey reached a milestone of preserving 250,000 acres of farmland under the NJ Farmland Preservation Program. Contributing to that milestone, 58 farms totaling 3,466 acres have been preserved in Ocean County. As a non-voting member, the OCSCD representative attends Ocean County Agricultural Development Board (OCADB) meetings, annual farmland inspections, and provides technical soil erosion and sediment control guidance for farmers. The Ocean County Agriculture Development Board was established in 1984 to review and select agricultural land for preservation. The first easement was purchased on the Hallock U-Pick farm in Plumsted Township in 1991. The Ocean County Natural Lands Trust Fund provides the funding match for preserving farmland. As of January 2020, 55 farms totaling 3,357 acres have been preserved. For additional information, please contact the [Ocean County Planning Department](#) that administers the program.

## **Special Occasion Events (SOE) on Preserved Farmland**

A property owner can now hold a cultural or social event, such as a wedding, on their preserved farm. P.L. 2023, c.9 became law on February 3, 2023. The law recognizes the positive effects of holding special events on preserved farms. SOEs may not interfere with the use of the preserved farm for agricultural or horticultural production.

## **Soil Protection Standards on Preserved Farmland**

The [Soil Protection Standards](#) is “probably the most significant programmatic change that has been made since the inception of the program 40 years ago” ~ Susan Payne Executive Director SADC. The proposed rule sets a limit for soil disturbance on preserved farms. Exceeding the limitation is detrimental to soil conservation, negatively impacting the ability of landowners to devote the preserved land to various agricultural uses. There are many exemptions that align with generally accepted agricultural management practices that do not count as soil disturbance under the purpose of the rule. Some examples of soil disturbance are soil compaction, soil surfacing and soil movement. This rule change is a result of a 2018 NJ Supreme Court case involving soil destruction on a preserved farm, the SADC was required to adopt regulations that ensure preserved farmland is managed in a manner that protects both the soil and water resources, and the agricultural use of the farm.

# Education & Outreach

By Becky Laboy, M.Ed., Education Outreach Coordinator



Student conducts NPK testing on soil samples. Photo: courtesy of The CAT EYE Pinelands Regional High School

Ocean County Soil Conservation District places a high value on education, recognizing its significance and impact on the Ocean County community. The District is deeply committed to connecting with constituents and fostering an understanding of the crucial role soil, water and natural resources play in maintaining a healthy and vibrant Barnegat Bay watershed.

Over the past 30 years, OCSCD has crafted an [Education Program](#) aimed at raising awareness about the importance of healthy soil and clean water. Our educational initiatives seek to emphasize the numerous benefits provided by our local natural resources and encourages stewardship of the native landscapes.

The District offers a variety of educational programs for community members, including [students](#), [scouts](#), [teachers](#), [environmental commissions](#), [garden clubs](#), [green groups](#) and [professionals](#). Active participation in statewide educational initiatives such as the annual [Poster Contest](#) and the [New Jersey Envirothon](#) is a testament to OCSCD's commitment.

Each spring, in April, the District hosts the [Barnegat Bay Environmental Educators Roundtable](#), our annual signature event that brings local educators together for

professional development in an engaging outdoor setting that highlights the unique natural resources of the Barnegat Bay watershed. The 2024 Barnegat Bay Environmental Educators Roundtable is scheduled for Wednesday, April 17.

Collaborations and partnerships with agencies such as the NJ Department of Environmental Protection, USDA -NRCS, Rutgers Cooperative Extension of Ocean County, the Barnegat Bay Partnership, and the Lighthouse Center for Natural Resource Education have further enriched OCSCD's education efforts. To explore the multitude of inspiring education and outreach programs and resources available to the community, visit the [Education](#) and [Projects](#) pages on our website. Stay updated on upcoming programs and events by checking our [Calendar](#), and sign up for our monthly [Newsletter](#) to receive current information about programs, projects and District news.

For specific inquiries about our education and outreach programs, feel free to contact me!

~Becky Laboy, Education Outreach Coordinator  
[education@soildistrict.org](mailto:education@soildistrict.org)



Students explore soil biota in a sample of compost. Photo: Becky Laboy





# Barnegat Bay Environmental Educators Roundtable

By Becky Laboy, M.Ed., Education Outreach Coordinator

Since 1997, the Ocean County Soil Conservation District has been hosting this much anticipated annual professional development event, designed to immerse educators in environmental education, enhance their knowledge of local natural resources, culture and history, and to nurture a sense of place. Dozens of environmental organizations exhibit their displays and share their educational materials. Teachers attend a rotation of experiential workshops and receive an array of valuable tools and resources that support the development of environmental stewardship in the students they teach.

## Data - Calculating the Importance of Nature

Our 2023 Barnegat Bay Environmental Educators Roundtable was centered on the theme **Data – Calculating the Importance of Nature**. Our hands-on interactive workshops and field trips focused on data collection and analysis. Talented watershed partners provided a diverse menu of programs: *Water Quality Assessment of the Bogs at Pinelands Regional High School*, presented by Jim Ardoin, AP Ecology Teacher, Pinelands Regional High School and Joel Mott, Principal Public Programs Specialist, [NJ Pinelands Commission](#); *Biodiversity Assessment of Brown’s Woods Preserve*, presented by Dr. John Wnek and his Kean OCEAN Field Studies students; *Schoolyard Soil Science*, presented by Jessica Pinto, Senior Erosion Control Specialist, [OCSCD](#); *Beach Collection and Data*, presented by Rosemary Higgins and Mindy Ross of [NJ Sea Grant Consortium](#); *Data Hidden in Wood: Extracting Data from Patterns in Tree Growth*, presented by LeeAnn Haaf, Ph.D., Estuary Science Manager, [Partnership for the Delaware Estuary](#); *Using Aquatic Macroinvertebrate Data to Estimate Stream Health*, presented by Bailey Sanders, Stewardship Specialist for the [Barnegat Bay Partnership](#); *Waste Reduction by the Numbers*, presented by Sandra Blain-Snow, Tanara Hall and Margaret Deleon-Rivera, [Ocean County Department of Solid Waste Management](#); *Frogs – Listening for Data*, presented by Dr. Dane Ward, Associate Professor, Drexel University.

Christine Girtain, pictured left, delivered the [Keynote Presentation](#). She provided an engaging discussion about data collection and analysis techniques, and shared a plethora of online tools and resources for teachers to use.

Visit [OCSCD’s website](#) to view past Roundtable agendas, read detailed descriptions of the workshops and field trips, link to lesson plans and resources, and view our Photo Gallery!

Be sure to mark your calendar and save-the-date of **Wednesday, April 17, 2024**, for our 27th Annual Barnegat Bay Environmental Educators Roundtable!



# Statewide Initiatives

By Becky Laboy, M.Ed., Education Coordinator

## NJ Envirothon

The [New Jersey State Envirothon](#) is an annual competition of high school students who test their knowledge of environmental topics through hands-on interactive problem solving. The team that best demonstrates a comprehensive understanding of natural resources, as well as teamwork and communication skills, moves on to represent New Jersey in the [North American Envirothon](#) competition. It is North America's largest high school environmental education competition. The 2022 Envirothon competition focused on the current issue, "Waste to Resources", and in 2023 the current issue was "Adapting to a Changing Climate". The 2024 current issue is "Renewable Energy for a Sustainable Future".



The Envirothon teams are tested on their knowledge in several categories: Soil, Forestry, Wildlife, Aquatics and a Current Issue, through a written test, as well as a hands-on component. Each year, Ocean County Soil Conservation District assists with the administration of the Wildlife Station. The Envirothon typically includes an overnight camping experience, as well as games, prizes, food and a DJ to celebrate everyone's success. Congratulations to the 2022 Envirothon Champions, Livingston High School and the 2023 Envirothon Champions, Ocean County's very own [MATES!](#) Consider entering your team of high school students in the 2024 NJ Envirothon competition. Contact the [NJ Envirothon Coordinator](#) for more information.

## Congratulations to the 2023 Winners: our Hometown Team - MATES!

Congratulations to our hometown team, [MATES](#) (Marine Academy of Technology and Environmental Science), of Ocean County, for winning First Place at the 2023 NJ Envirothon! This year's NJ Envirothon took place at [YMCA Camp Zehnder](#) in Wall Township, Monmouth County, with fourteen high schools from across the state participating. Teams of five students engaged in a comprehensive examination of their environmental expertise with a central focus on the current issue of this year's competition, "Adapting to a Changing Climate".

This event seamlessly integrates STEM principles (science, technology, engineering, and math), offering experiential learning and hands-on outdoor field experiences to the participants. OCSCD works with our 14 sister Soil Conservation Districts throughout NJ to help facilitate this event. In 2023, [Freehold SCD](#) took the lead in organizing

the NJ Envirothon in collaboration with the [NJACD](#) (New Jersey Association of Conservation Districts).

*MATES: Advisor Dave Werner, Cailean Connolly, Caroline Liebmann, Megan Ebinger, Michelle Karamian, Amalie Werner, Advisor Adam Sprague.*



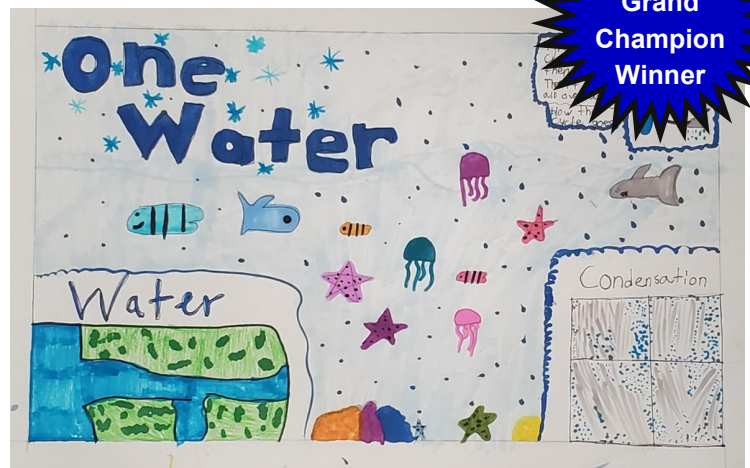
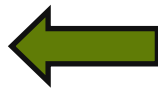
# Annual Poster Contest

The New Jersey Conservation [Poster Contest](#) is an annual contest sponsored by [NJDA](#), [NACD](#), [NJACD](#) and the [Ocean County Soil Conservation District](#). The contest aims to promote a better understanding of the connection between natural resources and humans in a fun and creative way. Each year features a new theme.

## Healthy Soil, Healthy Life



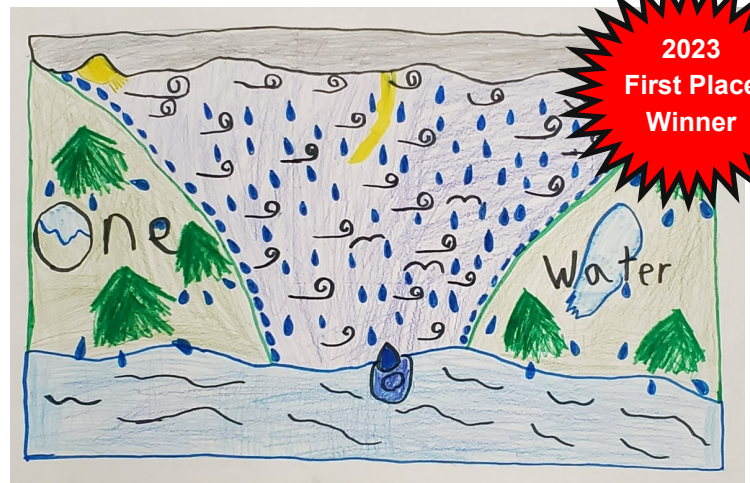
Pictured left is the 2022 "Healthy Soil, Healthy Life" Grand Champion Winner, Owen Hein, of Southern Regional High School.



## One Water

Congratulations to the 2023 Grand Champion, Mia Faulkner, Grade 4, Cedar Creek Elementary School (right, top).

First Place was awarded to Landon DeRosa, Grade 3, Cedar Creek Elementary School.



Visit OCSCD's website to learn more about the [Poster Contest](#) and how your child or students can enter. The theme for the 2024 Poster Contest is "May The Forest Be With You, Always".

# Jersey-Friendly Yards Stewardship Certification Program

By Becky Laboy, M.Ed., Education Outreach Coordinator



The Jersey-Friendly Yards initiative is spearheaded by the [Barnegat Bay Partnership](#) (BBP) and funded by the [New Jersey Department of Environmental Protection](#) (NJDEP). [Ocean County Soil Conservation District](#) (OCSCD) has been a valued partner since its inception, in 2013. Together with Rutgers Cooperative Extension (RCE) of Ocean County, Jersey-Friendly Yards partners provide education, outreach, tools and resources to individuals, schools, community groups and municipalities, in an effort to spur stewardship actions for a healthy [Barnegat Bay watershed](#). The [Jersey-Friendly Yards](#) website is a comprehensive online guide to landscape practices for managing stormwater and reducing non-point source pollution. [Webinars](#) and outreach programs have educated thousands of NJ residents on best landscaping and gardening practices. Each year, BBP, OCSCD and RCE of Ocean County host an annual [Jersey-Friendly Yards Conference](#), featuring guest speakers and a native plant sale.

Over the past three years, BBP's Senior Public Outreach Coordinator, Karen Walzer, and OCSCD's Education Outreach Coordinator, Becky Laboy, have focused efforts to expand and grow the [Jersey-Friendly Yards](#) initiative by creating the [Jersey-Friendly Yards Stewardship Certification Program](#). The primary objective of the program is to engage individuals and communities in a series of actions to manage stormwater, reduce pollution and conserve natural resources in the Barnegat Bay watershed. The certification program encompasses three distinct stewardship components tailored for [residents](#), [schools](#) and [municipalities](#). Successfully completing the prescribed actions outlined in the program standards earns participants certification and public acknowledgement as dedicated Jersey-Friendly stewards of the Barnegat Bay watershed.

## Jersey-Friendly Yards Resident Certification Program

Join the growing network of Barnegat Bay watershed residents making their yards healthier for people and wildlife! Small changes in our yards make a big difference. To get your yard certified, complete the [Jersey-Friendly Yards Resident Certification Checklist](#), and send us a few photos of your yard. Residents who complete the requirements will receive a Jersey-Friendly Yards sign, while supplies last.



# Brick Township High School Jersey-Friendly Pollinator Garden



## Jersey-Friendly Yards School Certification Program

Karen Walzer, Senior Public Outreach Coordinator (BBP), Bailey Sanders, Stewardship Specialist, (BBP), Becky Laboy, Education Outreach Coordinator (OCSCD), Jessica Pinto, Senior Erosion Control Specialist (OCSCD), and subcontractor, Eileen Miller, proprietor of Healthy Landscapes, Inc., collaborated with STEM teacher Gary Paxton, Brick Township High School, and Honors Ecology teacher, Jim Ardoin, Pinelands Regional High School, to pilot the Jersey-Friendly Yards School Certification Program in 2022-2023. Students engaged in multiple lessons and activities aligned with the [8 Steps to a Jersey-Friendly Schoolyard](#), covering topics focused on the importance of clean water, healthy soil and essential habitat for wildlife. Using their new knowledge, students planned, designed and implemented their culminating project.

Brick Twp High School STEM students tackled an erosion problem occurring in one area of their courtyard, due to rooftop runoff. Students designed a plan to capture and divert the water into a new pollinator garden (pictured above). Students used the [Jersey-Friendly Yards Plant Database](#) to select plants that were appropriate for the soil, water and light conditions on site.

Pinelands Regional High School students utilize a large area of natural lands on their southern Ocean County school property as an outdoor ecology classroom in support of their “Barrens to Bay” curriculum. For their culminating project, the students helped create interpretive signage to place along a trail leading to Gifford’s Creek and bogs. The signs (e.g.: “Start With Healthy Soil”, pictured right) include educational information about water, soil, plants and wildlife. Artwork and photos created by the students were incorporated into several of the signs.

**START WITH HEALTHY SOIL**

**Soil Texture** is determined by the percentage of sand, silt and clay within your soil sample.

**PROPERTIES OF SOIL**  
Soil properties are categorized as physical (texture, color), chemical (pH, nutrients), or biological (organic matter, species).

Dig a hole to examine the soil profile. How many horizons do you see? Colors?

**SOIL PARTICLE SIZES**

**DIGGING DEEPER**  
Mycorrhizae provides a symbiotic relationship between fungi and plants. Plants make sugars and supply them to the fungi; the fungi supply plants with water and nutrients from the soil.

# Jersey-Friendly Yards Municipal Certification Program



Landscaping practices have a huge impact on our water quality and natural resources. To achieve certification, municipalities complete actions that reduce sources of pollution, conserve water supplies, improve stormwater management and restore wildlife, all of which support a healthy environment and economy. Karen Walzer, Senior Public Outreach Coordinator (BBP), Bailey Sanders, Stewardship Specialist (BBP), Becky Laboy, Education Outreach Coordinator (OCSCD) and subcontractor, Eileen Miller, proprietor of Healthy Landscapes, Inc., worked with Pine Beach Borough and Point Pleasant Borough to pilot the [Jersey-Friendly Yards Municipal Certification Program](#). Using the [8 Steps to a Jersey-Friendly Yard](#), and the [New Jersey Soil Health Assessment](#) as guides, the municipalities engaged in education and outreach programs and environmental projects that would have a positive impact on the community.

A coalition of Pine Beach community members, led by Dave McKeon, Justine Saxton, and Jason and Kelly Austin, focused their efforts on restoring Pocket Park, a local native plant garden that was overtaken with invasive species. After eradicating the invasives, volunteers planted native species that thrive in sandy soil along the riverfront (pictured above). In addition, they enhanced Admiral Park garden with additional native species that support Monarch butterflies and other beneficial insects. These demonstration gardens provide models for local residents who want to create wildlife friendly gardens at home.

Kelly Noto and Cheryl Saccente, members of the [Point Pleasant Garden Club](#), took the lead on creating Pollinator Point, a native plant demonstration garden located at the Point Pleasant Borough Municipal property. Soil tests were conducted and drought tolerant plants were considered when making selections. Native plants that provide essential food and habitat for pollinators, including Monarch butterflies and caterpillars, were prioritized. Visit to find some inspiration for your own garden!





Staff from Ocean, Freehold and Camden Soil Conservation Districts install native plants in Shemen St. basin, Lakewood Township.  
L-R: Ramon Mejia, Rachel Hammack, Michael Infanti, Nicholas Lund, Ben Hayden, Enis Zimmerman, Becky Laboy, Brittany Moore, Craig McGee.

# Lakewood Township Stormwater Basin Retrofit Project



*By Brittany Moore, Senior Erosion Control Specialist*

Over the past three years, the [Ocean County Soil Conservation District](#) has partnered with [Camden County Soil Conservation District](#), [South Jersey Resource Conservation and Development Council \(SJRC&D\)](#), and [Lakewood Township Department of Public Works](#) on a grant project called the Lakewood Township Stormwater Basin Retrofit Project (WM20-008). The project is funded by a [Federal 319\(h\) Water Quality Restoration grant](#) awarded by the [NJ Department of Environmental Protection](#) to [SJRC&D](#).

The primary emphasis of the 4-year grant is in the modification of stormwater basins situated in the North and South Branches of the Metedeconk River watershed. The Metedeconk River watershed is a sub-watershed within the larger Barnegat Bay watershed, covering areas in both Ocean and Monmouth counties. The restoration of the Metedeconk River watershed holds significant value as it serves as a vital water source for more than 100,000 residents, supplying clean water for various purposes, including drinking and personal use.

The main objectives of the project involve mitigating non-point source pollutant loading, enhancing water quality, and improving wildlife habitat by retrofitting stormwater basins. The plan envisions the retrofitting of up to 12 stormwater basins in Lakewood Township, each with a unique design that may include revegetation with native grasses and wildflowers, reforestation of the basin, structural modifications, or other methods aimed at achieving an efficient and cost-effective retrofit. Following the renovations, these basins will possess the capability to effectively treat and filter target pollutants from stormwater runoff, as well as enhance groundwater recharge more effectively. This comprehensive approach is expected to result in a reduction in pollutant levels and the volume of stormwater discharged into receiving streams.

Lakewood Township's 181 stormwater basins underwent analysis and ranking for retrofit potential. Ranking criteria included proximity to waterways or wetlands, soil conditions, basin type and condition, as well as construction costs, feasibility and potential public acceptance. Additional factors included soil type, deer browse, geese pressure and maintenance. Priority was given to basins near wetlands or waterbodies, due to their greater impact on receiving waterbodies. The analysis identified 10 publicly maintained basins within 250 feet of designated wetlands. Subsequent field inspections by Camden County Soil Conservation District Director, Craig McGee, Senior Erosion Control Specialists with OCSCD, Ramon Mejia and Brittany Moore, and Team Habitat Coordinator for South Jersey Resource Conservation & Development Council, Eileen Miller, resulted in a shortlist of target basins.

Stormwater basins, vital for capturing excess runoff due to changes in land cover after construction and development, offer a unique landscape opportunity in neighborhoods and communities. They endure prolonged inundation, and the species planted in the basin need to be carefully selected to withstand rainfall events, but also persist through periods of dry weather. Facultative plant species, or plants that are equally likely to occur in wetlands and non-wetlands areas, are better able to tolerate the harsh growing conditions of stormwater basins compared to wetland



*Soil sample collection of the retrofitted Lakewood Blue Claw's FirstEnergy Park basin, to monitor soil health.*

obligate plant species. OCSCD staff assisted in multiple basin inspections and soil sample collections from potential retrofit project basins, as well as from completed retrofitted basins, to determine the existing conditions and monitor the positive changes native vegetation provides to the basin's soil health.

**This stormwater basin that serves the residential community near Rachel Court in Lakewood Township was retrofitted with native grasses that support healthy soil.**







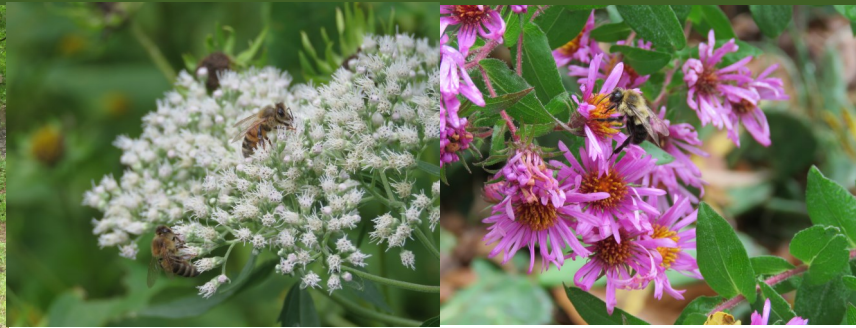
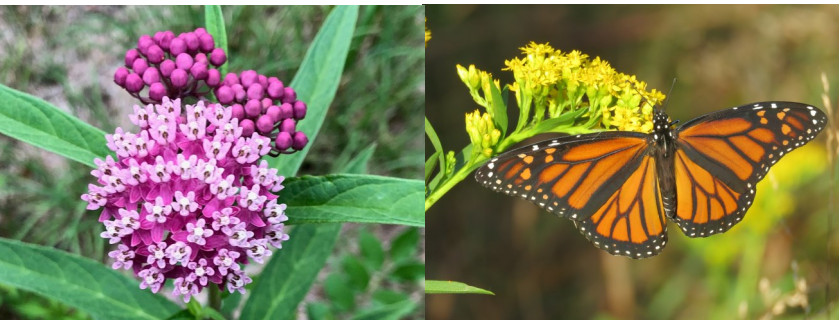
Senior Erosion Control Specialist, Ramon Mejia, installs native plugs in Shemen St. basin, Lakewood Township.

In spring 2022, Ocean County Soil Conservation District (OCSCD) staff aided in retrofitting the stormwater basin at Shemen Street's cul-de-sac. This stormwater basin manages 7.68 acres of a residential development, discharging to a designated wetland of the Cabinfield Branch of the Metedeconk River. OCSCD, South Jersey Resource Conservation & Development Council, Camden County Soil Conservation District, and Freehold Soil Conservation District participants planted around 1200 native landscape plugs from Pinelands Nursery.

Landscape plugs, small-sized seedlings grown in trays with potting soil, establish roots rapidly and resist drought and stress better than conventional seeding. Species like Swamp Milkweed, Broom Sedge, Riverbank Wild Rye, Boneset, Swamp Sunflower, Blue Flag Iris, Blue Lobelia, Cutleaf Coneflower, Seaside Goldenrod, Salt Meadow Cordgrass, Smooth Aster, New York Ironweed, and Big Bluestem were planted.

Swamp Milkweed  
(*Asclepias incarnata*)

Seaside Goldenrod  
(*Solidago sempervirens*)



Common Boneset  
(*Eupatorium perfoliatum*)

New England Aster  
(*Symphotrichum novae-angliae*)

In spring 2023, five more stormwater basins were retrofitted at Bnos Orchos Chaim School, Department of Public Works, and three residential developments. Depending on basin conditions, native grasses and wildflower seed mixtures were chosen and planted using SJRC&D's Kasco Versa-Drill or conventional hand-seeding.

The unique Kasco Versa-Drill, durable in no-till conditions, offers exact seed placement, improving germination. It's compatible with the "fluffy" seeds of native grasses, planted for erosion control. Over 3 acres were retrofitted using Pinelands Nursery seed, improving the local environment and reducing pollutant loads to the Metedeconk River. Native plants with long roots filter and infiltrate stormwater effectively, prevent compaction, and enhance soil water storage, turning the soil into a sponge. Flowering perennials, sedges, and grasses offer beauty, require less maintenance, and provide habitat for beneficial insects and supports local wildlife. The team aims to retrofit the remaining basins over the remaining time of the 4-year grant.

Senior Erosion Control Specialist, Brittany Moore, prepares native plugs for planting in Shemen St. basin, Lakewood Township.





Forty North Oyster Farms – Barnegat Light, NJ

## ***District Boots on the Ground & in the Water with USDA-NRCS***

*By Kristin Adams, PSM, Conservation Specialist*

This past September, the Ocean County Soil Conservation District completed the third and final year of the [Sustainable Practices for Aquaculture Resources Conservation](#) (SPARC) project, which was funded through a technical assistance grant from the National Association of Conservation Districts (NACD). The project focused on establishing a broad-based advisory committee partnership to connect with **local shellfish farmers, primarily within Barnegat and Great Bays**, to gain a better understanding of their specific natural resource concerns. The District also aimed to provide a boots-on-the-ground, local **connection between NRCS and the shellfish producers, to further develop the conservation practices** of the NJ NRCS Aquaculture Initiative, while **increasing funding opportunities for producer participation** and involvement.

Through participation in the [Barnegat Bay Partnership's Shellfish Working Group](#), the newly established [New Jersey Shell Recycling Partnership](#), and continued outreach and technical assistance aimed at shellfish aquaculture producers through NRCS, connections were built among industry members and those of other government agencies, academia, research and non-profits. These partner and industry connections were crucial to preparing, submitting, and being awarded the USDA-NRCS COASTAL RCPP grant project in August 2022. The [COASTAL](#) project aims to support industry and conservation by partnering with shellfish producers through NRCS contracts to help restore oyster reefs. OCSCD is the lead partner along with 14 additional partners, all providing technical advisement, monitoring assistance, cash-match or some combination therein. Through an in-kind match contribution, the District is overseeing the project management, partner communication and coordination, outreach efforts, assisting Stockton University with environmental monitoring and reporting. The District is also receiving funds from NRCS to provide the technical assistance aspect of the project on behalf of NRCS and will oversee most aspects of the planning process through the local field office.

OCSCD was also recently awarded a [Conservation Planning and Technical Assistance grant](#) that will provide funding for Conservation Specialist, Kristin Adams, to assist with conservation planning out of the Columbus Service Center. Kristin will continue to work with aquaculture producers as the State's Aquaculture Specialist, but also with forestry, wildlife, vegetable, row crops and livestock operations. The COASTAL RCPP project and the Conservation Planning and Technical Assistance Grant will each allow for the District to continue making boots on the ground (and in the water) connections between NRCS and local producers through Kristin's time and efforts (both grants will account for 50% of Kristin's time). The District looks forward to the next five years of involvement with NRCS programs, especially with regards to serving on a local and statewide capacity and with a special concentration assisting aquaculture producers.

# New Jersey Bay Islands Initiative

*By Becky Laboy, M.Ed., Education Outreach Specialist*

The Jersey Shore's allure extends beyond its beaches, encompassing the back bay area, a haven for kayakers, clammers, boaters, and birders. Among these waters lie the bay islands, visible patches of marsh muck and salt hay, stitched together by plant roots and ribbed mussels. These islands play a vital role in supporting New Jersey's coastal ecosystem, offering benefits such as carbon sequestration, nutrient cycling, and habitat for diverse bird species, including endangered salt marsh sparrow and yellow-crowned night heron. Migratory shorebirds frequent the islands in August, while winter brings waterfowl and harbor seals seeking refuge. Despite their ecological significance, studies conducted by the [Barnegat Bay Partnership](#) and academia reveal that bay islands face threats from recreational boating, intensified storms, and sea level rise resulting in degradation and erosion. This poses a significant challenge to the overall health and resilience of the Bayshore ecosystem.

In response to these challenges, the [New Jersey Bay Island Initiative](#) (NJBII) was formed in 2020. Led by Virginia Rettig, Edwin B. Forsythe Wildlife Refuge Manager, US Fish & Wildlife Service and Angela Andersen, Recycling/Sustainability Director, Long Beach Township, NJBII aims to protect, restore and enhance bay islands through a comprehensive "island system" management approach. Over the past two years, NJBII has expanded to include over 20 organizations, agencies, non-profits and concerned citizens. Under the direction of OCSCD's Director, Christine Raabe, two staff members: Becky Laboy, M.Ed., Education Outreach Coordinator and Kristin Adams, PSM, Conservation Specialist, contribute to NJBII's communications and aquaculture efforts, respectively. Together, the collective efforts of the entire team aim to safeguard the ecological functionality of the bay islands and promote community resilience against future storm surges. Read more about [NJBII on our Blog](#).

***A Great Egret finds refuge on  
an island in the Barnegat Bay.***



*Photo: Becky Laboy*

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*Enos Pond  
County Park*



*Photo by Becky Laboy*