



# BARNEGAT BAY PARTNERSHIP

RESEARCH · EDUCATE · RESTORE

## Annual Report | 2016-2017





## Think globally, act locally!

The phrase “Think globally, act locally,” attributed to the Scottish town planner Patrick Geddes in 1915, is widely considered an exhortation to people to consider the health of the entire planet and to take action in their own communities and cities. Now more than ever, this grass-roots approach gives us hope as we work together to address the challenges facing the Barnegat Bay.

As we reported last year, part of our commitment to revising the Barnegat Bay Partnership’s (BBP’s) 2002 *Comprehensive Conservation and Management Plan (CCMP)* was to reach out to the public and listen to everyone’s concerns about the bay and ideas for “acting locally.” For the past year, all BBP staff have attended meetings of various community groups to get input. The feedback we’ve received from hundreds of people is helping us get a good handle on your, or should I say, *our* concerns and how we can work together to improve the bay.

### *Our Concerns*

Most importantly, we agree that a healthy bay is vital to us. We use and enjoy the bay through boating, fishing, crabbing, clamming, and other recreational activities. Far and away everyone’s biggest concern remains the condition of the bay’s water quality. We agree that eutrophication and poor water quality, such as high nutrients

and low oxygen, are affecting the bay’s critical habitats and the abundance of fishes, crabs, and other species. We agree that sea nettle jellyfish and pathogens (disease-causing bacteria) sometimes prevent our enjoyment of the bay.

Most respondents identified fertilizer and other chemical pollutants as problems for the bay’s water quality. Equally important, between one-third and one-half of us also identified poor land use practices (e.g., too much impervious cover, development up to the water’s edge) as major contributors to a decline in water quality.

Our biggest concerns about bay habitats and living resources are the following: (1) damages to, and losses of, eelgrass and other submerged aquatic vegetation (SAV), (2) loss of tidal marshes, and (3) development of remaining open space. Careless boating (for example, going too fast in shallow water and near shorelines) was singled out as one of the culprits in the decline of SAV beds and other sensitive habitats. Some citizens are concerned about over-harvesting of fishes and shellfishes; others expressed worries about threatened and endangered or other species of concern, such as the diamondback terrapin.

Superstorm Sandy clearly remains a huge issue in everyone’s mind. About one-third of us identified flooding as a continuing and significant problem and expressed some concern about sea-level rise



substantially changing our communities and the Shore's future landscape. Perhaps reflecting Sandy's impact on our lives, few people locally were outright dismissive of climate change and sea-level rise. Nonetheless, about one-third of us said that collectively "the government" was unprepared or didn't know what to do, reflecting frustrations about the pace of the post-storm recovery.

### *Working Together*

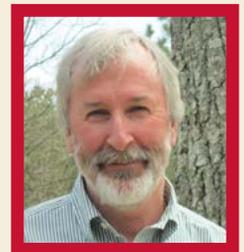
We have a better understanding of what everyone is doing to help protect the bay. Between one-half and two-thirds of us reported using less fertilizer (to learn how to do more to take care of your property, see our Jersey-Friendly Yards website at [www.jerseyyards.org](http://www.jerseyyards.org)). Many actively participate in community recycling programs and environmental clean-ups; others volunteer with environmental organizations. Your enthusiasm for environmental stewardship appears to be growing, but if we are to protect the bay as the Shore continues to grow, we must all do more!

### *Moving Forward: Collaborate and Educate*

Lastly, in talking with us, many people have emphasized the importance of coordination among all groups working on bay issues and want to see more education about the bay's problems and how to fix them. It's gratifying to see that many of you are familiar with the

BBP and our partners' collaborative efforts to protect and restore the bay, but please help us spread the word about our *State of the Bay Report – 2016* (an assessment of the bay's condition based on the latest science) so that everyone is up to date with the best available science. Collaboration among everyone with a stake in the bay's health is at the core of crafting a new CCMP that will successfully direct our efforts in the future.

If you haven't already done so, we invite you to share with us your thoughts and ideas about the bay at [www.surveymonkey.com/r/X2R92DY](http://www.surveymonkey.com/r/X2R92DY). It helps us identify your priorities so we can better focus our efforts on what's important to you. After all, it's your bay, and there's *never* been a better time to think globally AND act locally!



A handwritten signature in black ink that reads "Stan Hales".

Stan Hales  
Director



## Climate Change Initiatives

Working with local partners on diverse climate change efforts, the Barnegat Bay Partnership continued to lead efforts to: 1) identify vulnerable communities and groups, 2) promote sound strategies to become more resilient, and 3) expand our local understanding of impacts of climate change, especially sea-level rise.

### *Preparing for the Future*

The BBP continues its leadership role in two significant statewide initiatives, the *New Jersey Climate Adaptation Alliance* and the *New Jersey Coastal Resilience Collaborative*, which are both working towards helping communities respond to the challenges of climate change. Established in 2011 by a diverse group of stakeholders, the *New Jersey Climate Adaptation Alliance* now focuses on climate change preparedness in key impacted sectors: public health; watersheds, rivers, and coastal communities; built infrastructure; agriculture; and natural resources. Led by the NJDEP Coastal Management Office, the *New Jersey Coastal Resilience Collaborative* guides climate resilience efforts throughout the state.

As the BBP revises its Comprehensive Conservation and Management Plan over the next two years, we will be conducting a broad, risk-based climate change vulnerability assessment to determine the potential effects of climate stressors on the BBP's goals. Additionally, the BBP will be developing outreach strategies (including brochures, fact-sheets, Public Service Announcements, and short YouTube and other video pieces) to inform the public about the impacts of climate change on coastal community residents.

### *Mid-Atlantic Coastal Wetlands Assessment (MACWA)*



MACWA was established as a partnership between National Estuary Programs to monitor and assess the

condition of coastal marshes in New Jersey, Delaware, and Pennsylvania. As a founding member of MACWA, the BBP and its regional partners have collected data to establish baseline wetland conditions within our respective estuaries. With ongoing monitoring, we are able to detect changes and identify trends over time. Because coastal wetlands provide critical services, including flood protection, maintenance of water quality, carbon and nutrient sequestration, and fish and wildlife habitat, it is imperative that we monitor, manage, and enhance vulnerable wetlands as sea level continues to rise.

Analyses of the MACWA data at our three long-term monitoring locations (Reedy Creek, Island Beach State Park, and West Creek) and systematic field observations indicate that our coastal marshes are showing clear signs of their vulnerability to sea-level rise: rapid exterior and interior shoreline erosion, an increase in ponding on the marsh surface, and conversion of vegetated zones to mud flats. This information is being used by federal and state resource agencies and others to better manage and protect wetland resources and to inform restoration decisions. In 2017, we will continue MACWA monitoring as we seek a sustainable funding source for this assessment program.



## Science and Research

Research increases our knowledge of the Barnegat Bay ecosystem and provides a scientific basis for management, restoration, and related decisions. In 2016, the BBP continued its research programs on subjects as varied as water quality, coastal acidification, American eels, river herring, and shellfishes. BBP research projects, whether conducted by our staff or supported through our Science and Technical Advisory Committee (STAC) grants program, address one or more of our current *Strategic Plan* priorities (water quality, water supply, habitat, fisheries and wildlife, and land use).

### Water-Quality Research

#### *Ambient Water-Quality Monitoring*

In 2016, BBP staff continued supporting the New Jersey Department of Environmental Protection's (NJDEP's) Barnegat Bay water-quality monitoring effort by collecting water-quality data and samples at sites on Mill Creek and Westecunk Creek. Information about the monitoring program, including the data, can be found on the [NJDEP's website](#).

The BBP has also purchased new continuous water-quality monitoring equipment in order to re-establish two long-term monitoring sites at Seaside Park Yacht Club and Mantoloking Yacht Club. Data from these sites will be transmitted in near real-time to the [NJDEP's continuous water-quality monitoring website](#), and be digitally archived at USEPA's [STORET Warehouse](#). These stations are scheduled to come online in the spring of 2017.

#### *Ocean and Coastal Acidification Monitoring*

The BBP received a grant from the USEPA to install and maintain high-precision monitoring sensors to monitor acidity and carbon dioxide (CO<sub>2</sub>) levels in the Barnegat Bay. An increase in acidity of the earth's oceans and coastal waters can adversely affect the ability of shellfishes, larval fishes, and other aquatic creatures to

utilize calcium carbonate (CaCO<sub>3</sub>) to build shells, bones, and other important body structures, which can negatively impact their populations. The monitoring station, which is located in Beach Haven, was tested during the fall of 2016. The station will be re-established in early spring 2017, with the data transmitted in near real-time to the [NJDEP's continuous water-quality monitoring website](#) and digitally archived at USEPA's [STORET Warehouse](#).

### Fisheries and Wildlife Research

#### *Long-Term Juvenile Fish and Nekton Seining*

BBP staff initiated a long-term monitoring project in 2011 to assess variations in the abundance and distribution of juvenile fishes and jellyfishes in the central and northern portions of the bay. In 2016, we seined bi-weekly from May through October at our eight long-term locations and added four new locations in the southern portion of Barnegat Bay. All data collected as part of this project were the basis for the "Estuarine Fish Communities" indicator in the [State of the Bay Report - 2016](#), which found a diverse fish assemblage across all sites. Future analyses of these data will help identify trends in the populations of many recreationally and commercially important species, and allow us to ask questions about the effects of changes in water quality, habitat, and climate on the bay's fauna.

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### Juvenile Eel Monitoring

If you ventured out to some of our local waterways this past winter, you may have seen BBP researchers monitoring for the winter ingress of juvenile American eels into the Barnegat Bay watershed, as we have been doing since 2012. Catches this past winter were similar compared to previous years, with peak ingress occurring in early April. The data collected as part of this project are shared with our state and federal partners for use in state- and coast-wide assessments of the American eel population. The low population numbers of this important species remain of concern coast-wide; thus, we will continue with our monitoring program to provide much needed data on trends in their abundance.

### River Herring Spawning Runs

Our broad initial surveys of blueback herring (*Alosa aestivalis*) and alewife (*Alosa pseudoharengus*) in 2015 found small spawning runs at a limited number of locations. In 2016, we focused our efforts on the Toms River, Cedar Creek, and Mill Creek (Manahawkin). Herrings were captured in the Toms River in higher abundances than in 2015, but in lower abundances in Mill Creek. Scales collected in the current year's survey, as well as in previous surveys, have been prepared for age determination, which will be completed in 2017.

### Westecunk Creek Community Study

As part of a larger study on the Westecunk Creek with the US Fish and Wildlife Service, BBP ecologists deployed a pair of fyke nets during spring 2015 to identify the fish communities located above and below a barrier to fish passage on the creek. After the barrier was removed during the winter of 2015-2016, BBP ecologists repeated the sampling in spring 2016. A second year of post-removal surveys will be completed in spring 2017.

## Habitat Research

### Stream Connectivity

Thanks to a grant from the [Wildlife Management Institute](#), the BBP continued assessing road-stream crossings throughout the watershed in 2016. When our road networks cross over streams, the types of structures used (pipe culverts, box culverts, bridges) and their installation and maintenance can impact natural stream-flow characteristics and/or the ability of aquatic species to move through the crossings. Identification of problematic crossings will allow the BBP and its partners to target the crossings most in need of rehabilitation. With over 2,000 suspected crossings within the Barnegat



Bay watershed, this is anticipated to be a long-term effort. During 2016, the BBP assessed nearly 300 crossings; all data are available on the [North Atlantic Aquatic Connectivity Collaborative's website](#).

### *Oyster Reef Restoration*

Stockton University, American Littoral Society, and Parsons Mariculture LLC are partnering on an oyster reef research and restoration project, which was selected for funding through the BBP's STAC grant program. The goals of this pilot project are to implement and assess experimentally-designed restoration efforts at two sites in the Barnegat Bay system and to increase public awareness on the ecological and economic role of oyster beds. The project will compare the biological and economic metrics of disease-resistant oyster spat remotely set on whelk shell and Mullica River seed oysters and monitor oyster growth, survivability, and disease prevalence at different bay locations. In the summer of 2016, "baby" oysters were remote-set in holding tanks, grown out, and then transferred to two sites, one each in the northern and southern portions of the bay. In the fall of 2016, the first round of surveys reported promising results – good survival and growth of the baby oysters at both locations. Additional surveys will be conducted in 2017 to assess growth and survival.

### *Hard Clam modeling*

Rutgers University, US Geological Survey (USGS), and the BBP are collaborating on a STAC-funded research project to modify a USGS-developed hydrodynamic model to aid in our understanding of how hard clam larvae are dispersed throughout the bay. Starting with the USGS model of how water circulates throughout Barnegat Bay, the project team will add shellfish larval behavior (sinking, swimming, etc.) to estimate larval dispersal pathways and connectivity. These estimates will provide important guidance for developing shellfish restoration strategies.

Additionally, the Rutgers Film Center is creating a documentary film that will be used to enhance public awareness about the importance of shellfish restoration and the efforts underway to rebuild clam populations in the bay. The modelling work and analyses are nearly complete, and film production has begun, with completion slated for the summer of 2017.

**Check out the Barnegat Bay Partnership's YouTube channel to see our partners and researchers in action ([www.youtube.com/user/BarnegatBayP](http://www.youtube.com/user/BarnegatBayP)).**

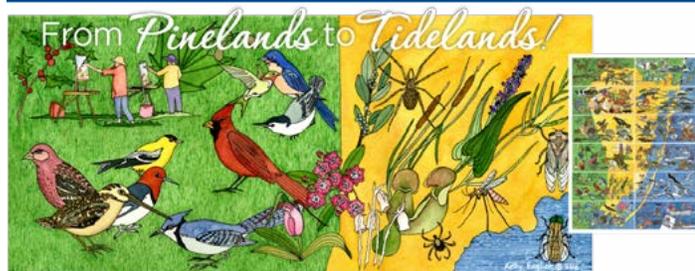


## Education and Outreach



Guided by the Barnegat Bay Partnership’s *Communication and Outreach Plan*, our staff and partners reach out to watershed residents and visitors to increase public understanding of the human impacts on the bay’s ecology, promote stewardship of the bay’s ecosystem, and grow public participation in its protection and restoration.

### The Barnegat Bay Festival



Always held on the first Sunday in June, the annual Barnegat Bay Festival is the BBP’s premier outreach event, with educational exhibits and interactive activities showcasing all things Barnegat Bay. The 2016 festival theme of “Pinelands to Tidelands” highlighted the Pinelands region as a critical part of a healthy Barnegat Bay watershed. In spite of a forecast of rain on festival day, the majority of exhibitors and vendors set up as usual, and as the sun came out in mid-morning, the festival-goers started arriving. By the end of the day, we had a total of approximately 2,000 attendees, about half of the previous year’s crowd.

At the festival, we honored two recipients of our annual *Guardian of Barnegat Bay* awards. Mr. Tom Belton, a recently retired NJDEP Research Scientist, received the “Lifetime Achievement” award for working to increase our knowledge of the bay’s ecosystem through research and lay the foundation for future management decisions. The Kettle Creek Crusaders, an after-school environmental club of Brick middle school students, received the “Pete McLain Young Environmental Stewards” award for their efforts to be good stewards of their local Kettle Creek watershed.

Join us in 2017 as we celebrate the 20th year of this wonderful family-friendly festival!

### Jersey-Friendly Yards [www.jerseyyards.org](http://www.jerseyyards.org)



In 2016, the BBP continued to spread the word about *Jersey-Friendly Yards*, an important educational tool for improving water quality in the Barnegat Bay watershed and throughout New Jersey. The website is a comprehensive “how-to” guide for New Jersey property owners, offering a wealth of practical information and resources about eco-friendly, low-maintenance landscaping. *Jersey-Friendly Yards* includes information about how to maintain healthy soil, plant native species, reduce fertilizer and pesticide use, conserve water, attract pollinators and other wildlife, and improve overall yard health.

In 2016, the *Ocean County Soil Conservation District*, one of our partners, successfully completed nine *Jersey-Friendly Yards* demonstration projects. Six community groups and three OceanFirst bank branches all used *Jersey-Friendly Yards* to design their own beautiful native plant gardens adapted to the conditions at their specific sites. These demonstration gardens are now available to local communities as models of healthy low-maintenance landscaping.



## Educational Videos

We added exciting new videos to our gallery in 2016:

[“Monitoring American Eel Migration in the Barnegat Bay”](#) highlights staff research on the ingress of juvenile American eels into the streams and rivers of the watershed. Each winter, the juveniles arrive in the bay after a journey of over 1,000 miles from the Sargasso Sea. Once here, they make their way into freshwater rivers and streams, where they spend most of their lives maturing before returning to the Sargasso Sea to spawn.

[“State of the Bay – 2016”](#) provides a video overview of the findings of the *State of the Bay Report – 2016*. It shows scientists collecting data on water quality, fish and wildlife resources, and habitats to determine the status and trends of these indicators of the bay’s health. Viewers also learn how the BBP is using the latest science and public input to make revisions to our Comprehensive Conservation Management Plan.

[“I Love Barnegat Bay!”](#) is a series of 17 short videos showcasing the everyday experiences of BBP staff and partners as they work to protect the bay. Field researchers, educators, students, conservation officers, pump-out boat captains, and others show viewers what they do and why they love the bay.

## Citizen Representative to the Policy Committee

The BBP’s Citizen Representative to the Policy Committee represents public interests in efforts to protect and restore the Barnegat Bay. George Murnyak has been an active Citizen Representative, reaching out to community members for their thoughts and ideas about the bay and offering his insight into effective ways to get public input during the CCMP revision.

## Barnegat Bay Partnership Workshops and Conferences

### State of the Bay Conference

The BBP’s “State of the Bay Conference” on June 15, 2016 marked the official release of our *State of the Bay Report – 2016*, which assesses the condition of the bay by examining the status and trends of 17 environmental indicators. Attended by over 130 people, the conference began with an introductory video summarizing the report findings, followed by four panel discussions with experts commenting on the report and answering questions from the audience. To create the *State of the Bay Report*, which is prepared every five years, a technical workgroup of Barnegat Bay scientists reviews data from recent and ongoing research to determine the status and trends of the key indicators (e.g., dissolved oxygen, water withdrawals, shellfish bed closures) used to observe changes in the bay over time.



### Education and Outreach Retreat

The annual retreat fosters the exchange of information and ideas for collaborative Barnegat Bay education and outreach efforts. “Communicating Our Changing Environment” was the theme of this year’s retreat, which was attended by over 60 educators. A Rutgers graduate student introduced a new game under development for communicating climate change; retreat participants then tested the game and provided feedback to improve it. The day included presentations on two citizen science projects helping to measure potential climate change impacts – MATES’ [Project Terrapin](#) and the BBP’s own [Paddle for the Edge](#). During a special brainstorming session, participants developed a strategy for reaching out to stakeholders and the public for their input during the BBP’s revision of its CCMP.

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## Programs at Brown's Woods Preserve

Thanks to the joint efforts of the Township of Toms River and Ocean County College (OCC), the BBP office moved to Brown's Woods Preserve in January 2013. Over the past four years, our program has grown in many ways. We have started new research projects, increased our science staff, and offered new educational programs. At the end of 2016, we moved back to the OCC campus into a newly renovated office space in the former bookstore. We thank the Township for its support during the past four years, and we look forward to continuing our collaboration with Toms River to protect the bay.

One of our partners, Save Barnegat Bay, has moved into the building at Brown Wood's Preserve. We look forward to working with its staff to continue offering various educational programs offered in previous years.

### *Great Backyard Bird Count*

In February 2016, the BBP again hosted a site for this annual citizen science event sponsored by Cornell University and the National Audubon Society. During a walk through Brown's Woods, volunteers, led by experienced naturalist Becky Laboy, observed 15 species and submitted their detailed count to Cornell University. Scientists use the information from the Great Backyard Bird Count to get the "big picture" about what is happening to bird populations around the world.

### *YMCA Day Camp Programs*

On Wednesdays in August, day campers from the Toms River YMCA visited Brown's Woods for a morning of educational activities. A total of 85 elementary and middle school campers explored both aquatic and upland habitats, identifying fishes and crabs caught in the seine net, feeling soil textures, and learning how to prevent litter and other non-point source pollution from entering our waterways.

### *Programs for Ocean County College Students*

In 2016, the BBP provided a total of 133 students in 10 Ocean County College Ecology and Environmental Science course sections with an educational program and outdoor field session about the Barnegat Bay estuary. Students learned about the ecological and economic value of the bay's resources, impacts of non-point source pollution, and ways to protect the estuary as watershed residents.

## Newsletter and Social Media

In 2016, six electronic issues of *The Barnegat Bay Beat* kept more than 2,500 readers informed about the research, education, and stewardship efforts of the Partnership. News alerts, such as information about preparing for impending storms, are also shared through *Beat* updates. Information is also shared via BBP social media (Facebook, Twitter, and YouTube). We worked with other estuary programs and our partners on joint social media messaging for the "I Heart Estuaries" campaign in February and National Estuary Week in September of 2016, and will continue to do so in 2017.

## Communication and Education Grant Program

The goal of the Partnership's [Communication and Education Grant Program](#) is to increase public understanding of the bay's ecology and the impact of human activities, promote stewardship of the bay and its watershed, and encourage public participation in actions to protect and restore the estuary.

In 2015, we had awarded grants for five projects. One of the projects, *Streaming the Rivers and Creeks in the Barnegat Bay Watershed*, has been completed; the other four (*Everything Eventually Ends Up in the Water*; *Barnegat Bay Turtle Gardens: Supporting Living Shorelines to Safeguard Terrapins for Sea-Level Rise*; *From Lawn to Garden – Going Green, Saving Green*; and *The Beneficial Indigenous Plants Project*) are ongoing and scheduled to be completed by early 2017. Visit the BBP website for more information about these projects.

At the end of 2016, the BBP issued a new Grant Funding Opportunity through its Communication and Education Grant Program. A total of \$45,000 in funding is available for education projects which promote stewardship of the estuary and watershed. Proposals will be reviewed in early 2017, and grant recipients announced by April.



## Citizen Science and Stewardship Activities

The Barnegat Bay Partnership provides many opportunities for people interested in helping to preserve and restore the Barnegat Bay and its watershed. Our office receives calls daily from citizens offering to help. We enjoy getting to know our volunteers, learning where their strengths and interests lie, and then matching them with a Program Partner, event, or research project which would inspire them to continue learning and working towards a more sustainable and healthy future for our bay and watershed. We, in turn, are inspired by their enthusiasm and follow-through, which makes our working together so rewarding.

### *Watershed Cleanups*

This October's Clean Ocean Action "[Beach Sweep](#)" at the Brown's Woods Preserve was a soggy mess due to torrential rain, but that didn't stop eager volunteers (including students from Kean-Ocean Tri Beta National Biological Honor Society and Rider University) from donning their rain gear, getting out in the woods, and cleaning up the property. Once again, in both the April and October Beach Sweeps, the majority of the litter was plastic, which is increasingly recognized as dangerous to our aquatic ecosystem. The volunteers also found a fully decorated Christmas tree tucked into the underbrush!

### *Field Work/Citizen Science*

The BBP Field Technicians were helped this year with our eel and herring research, lab work on wetland biomass assessment, oyster larvae research, seining population study of the Bay, stream-crossing project, and "Paddle for the Edge" shoreline assessment project. Volunteers go out in all kinds of weather and are able to learn how a science program like ours gathers and records data on Barnegat Bay issues. We want to make sure our policymakers have access to the best available science before making decisions for the Barnegat Bay. This year's volunteers contributed over 600 hours being a part of that process. Thank you!

### *Barnegat Bay Volunteer Master Naturalist Program*

The BBVMN program produced another 10 well-trained volunteers this spring to help spread the word on how to be a good steward of the Barnegat Bay watershed. We now have a total of 60 enthusiastic graduates. The spring 2017 course offered by Ocean County College will be taught by a team of two environmental educators. The Master Naturalist alumni have devoted thousands of hours this year to maintaining their certification by volunteering for not

only the Barnegat Bay Partnership, but its many partners. Follow their activities on the [BBP Master Naturalist Course Facebook page](#).

### *Jersey Shore Chapter of the Native Plant Society of New Jersey (JSCNPS)*

The fourth year of BBP staff providing leadership to the JSCNPS brought many more folks into the native plant "family." Over the course of the year in our monthly meetings and field trips, we **learned** about beekeeping, pollinators, designing with native plants, and restoration projects; **toured** cranberry bogs, native plant nurseries, Monarch Butterfly way-stations, green infrastructure projects, private waterfront native plant gardens; and **created** our own bog gardens and Christmas decorations. We also took our show on the road and exhibited at a variety of summer festivals, as well as provided lecturers on native plants to a number of garden clubs and other community organizations. Join us by requesting to be added to our [email list](#)!

### *Watershed Ambassador*

The BBP is the host agency for the [NJDEP's Watershed Ambassador](#) for the Barnegat Bay. This year's ambassador, Danielle Fadeski, planned and executed an extremely successful dunegrass planting (funded in part by the Barnegat Bay Partnership) at Island Beach State Park, which attracted almost 300 volunteers who were rewarded for their work by a bonfire and s'mores on the beach! In addition to all of the above work, BBP volunteers have contributed their time staffing the BBP table at environmental festivals, helping with a summer YMCA camp event, and making presentations to outside groups.

### *Trash-Free Waters*

The trash that enters our streams, rivers, and bays is a threat to both aquatic life and human health. Mostly plastic, bags, bottles, food boxes, packaging, and other trash causes harm to aquatic animals through ingestion and strangulation. Microplastic particles and their associated toxic chemicals are also a threat to human health, since they can be consumed through the food web and end up in the fishes, crabs, and other aquatic animals that we eat. The BBP is working to reduce sources of land-based aquatic trash as a participant in EPA Region 2's [Trash-Free Waters Program](#). This program encourages innovative trash management strategies and projects, with the ultimate goal of zero-trash loading to aquatic systems within 10 years.

# Barnegat Bay Foundation



The Barnegat Bay Foundation generously provides financial support to the BBP for activities that promote the bay's protection and restoration. The Foundation is a major supporter of the annual Barnegat Bay Festival and donated \$10,600 in festival funding in 2016. Each year, the Foundation holds a Gala under the tents on the Friday before the festival. Thanks to this year's successful Gala, it is committed to co-sponsoring the festival again in 2017.

SUEZ, a local water service company, awarded a \$1,000 North America Foundation Environmental Grant to the Foundation to support BBP activities. SUEZ presented the award during the *Stand-Up Paddle Board Race* ("SUP the River!") event held in September 2016. The Toms River Chamber of Commerce and the Toms River Country Club partnered to organize this fund-raising event, also held in part to encourage this low-impact water-sport.



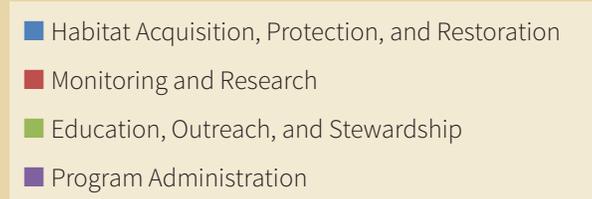
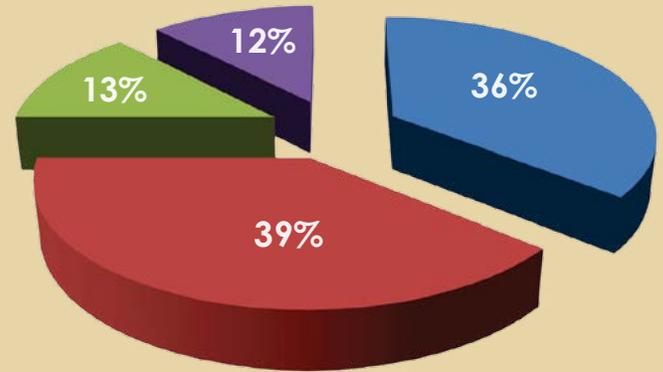
As a National Estuary Program established pursuant to the Clean Water Act (33 U.S.C. 1330; PL 100-4, *et seq.*), the Barnegat Bay Partnership receives section 320 grant funding from USEPA. The County of Ocean, through the Ocean County Natural Lands Trust and Ocean County College, provides the annual matching funds required for the grant. Through the BBP work plan and related activities, the BBP and its partners are able to leverage other investments to protect and restore the watershed. During the federal fiscal year 2016, the total amount leveraged was \$20.8 million, which resulted in a 28-to-1 total return on investment. We thank Ocean County College and all of our partners for their continuing support of our efforts to protect the bay.

## FUNDING FOR FISCAL YEAR 2016

(July 1, 2015 – June 30, 2016)

<b>US Environmental Protection Agency (USEPA):</b>	
Section 320 Grant .....	\$736,000
<b>Ocean County Natural Lands Trust:</b>	
320 Grant Program Match .....	\$656,035
<b>Ocean County College:</b>	
320 Grant Program Match .....	\$79,965
<b>USEPA Region 2: FY16 Wetlands Program</b>	
Development Grant .....	\$184,547
<b>USEPA Region 2: FY16 Wetlands Program</b>	
Development Grant Match .....	\$62,365
<b>National Fish and Wildlife Foundation/ NJ Department of Environmental Protection</b>	
<b>Subaward: Building Ecological Solutions to Coastal Community Hazards.....</b>	
	\$160,000
<b>NJ Coastal Wetlands Restoration Partnership .....</b>	\$25,526
<b>Barnegat Bay Festival: Barnegat Bay Foundation Sponsorship and Vendor fees .....</b>	\$15,889
	<b>Total \$1,920,327</b>

## FISCAL YEAR 2016

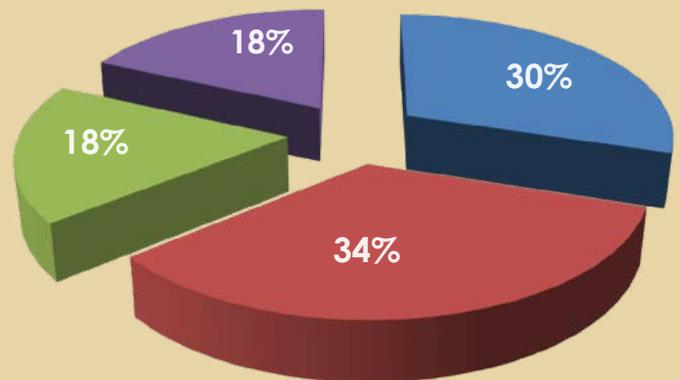


## FUNDING FOR FISCAL YEAR 2017

(July 1, 2016 – June 30, 2017)

<b>US Environmental Protection Agency (USEPA):</b>	
Section 320 Grant .....	\$726,352
<b>Ocean County Natural Lands Trust:</b>	
320 Grant Program Match .....	\$681,352
<b>Ocean County College:</b>	
320 Grant Program Match .....	\$57,603
<b>Federal Highway Authority/ Stockton University Subaward:</b>	
<i>Quantification of flood event forcing and the impact of natural wetland systems; Great Bay Boulevard, Ocean County, New Jersey. ....</i>	
	\$14,571
<b>Barnegat Bay Festival: Barnegat Bay Foundation Sponsorship and Vendor fees .....</b>	\$10,600
	<b>Total \$1,490,478</b>

## FISCAL YEAR 2017



## Our Staff

### Director

L. Stanton Hales, Jr., Ph.D.

### Project Coordinator

Martha Maxwell-Doyle

### Program Assistant

Mary Judge

### Program Scientist

James Vasslides, Ph.D.

### Public Outreach Coordinator

Karen Walzer

### Special Events Coordinator

Betsy Hyle

### Field and Lab Coordinator

Erin Reilly

### Field and Lab Technicians

Tina Barreiro	Sam Seland
Stephanie Beck	Ashley Sousa
Ceili Pestalozzi	Talia Stillman
Nicole Petersen	GraceAnne Taylor
Emily Pirl	Gerald Wilders

### USEPA Region 2 Coordinator

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**OCEAN**  
COUNTY COLLEGE

**Jon H. Larson, Ph.D.**  
President



### The Ocean County Board of Chosen Freeholders

Freeholder Liaison, Joseph H. Vicari



This document has been funded by the USEPA under a Clean Water Act grant agreement to Ocean County College; information herein has not undergone USEPA review and may not necessarily reflect the agency's official views.

## Our Partners

American Littoral Society

Barnegat Bay Foundation

Brick Township Municipal Utilities Authority

Clean Ocean Action

Conserve Wildlife Foundation of New Jersey

Georgian Court University

Jersey Coast Anglers Association

Long Beach Island Foundation of the Arts and Sciences

Marine Trades Association of New Jersey

Monmouth County Division of Planning

Monmouth University

National Oceanic and Atmospheric Administration, National Marine Fisheries Service

NJ Department of Environmental Protection

NJ Department of Transportation

NJ Pinelands Commission

NJ Sea Grant Consortium

Ocean County Board of Chosen Freeholders

Ocean County College

Ocean County Department of Parks and Recreation

Ocean County Health Department

Ocean County Mayors Association

Ocean County Planning Department

Ocean County Soil Conservation District

Ocean County Utilities Authority

Ocean County Vocational Technical School

Pinelands Preservation Alliance

ReClam the Bay

Rutgers Cooperative Extension of Ocean County

Rutgers University: Jacques Cousteau National Estuarine Research Reserve

Save Barnegat Bay

Stockton University

Trust for Public Land

US Army Corp of Engineers

US Department of Agriculture, Natural Resources Conservation Service

US Environmental Protection Agency

US Fish and Wildlife Service

US Geological Survey

# Partners In Action



**American Littoral Society**  
(Oyster reef restoration project)



**Conserve Wildlife Foundation of NJ**  
("Turtle garden," diamondback terrapin nesting habitat)



**Jacques Cousteau National Estuarine Research Reserve**  
(Staff)



**NJ Department of Environmental Protection**  
(Rain Barrel Challenge winners)



**Ocean County Department of Parks and Recreation**  
(Outdoor Adventure Club)



**Ocean County Soil Conservation District**  
(Jersey-Friendly Yards project)



**ReClam the Bay**  
(Oyster reef restoration project)



**US Army Corp of Engineers**  
(Mordecai Island marsh restoration)



**USDA Natural Resources Conservation Service**  
(Barnegat Bay soil survey)

## Photo credits

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**BARNEGAT BAY PARTNERSHIP**

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# Annual Report | 2016-2017

*One of 28 National Estuary Programs, the Barnegat Bay Partnership comprises federal, state, county, municipal, academic, business, and private stakeholders working together to help restore, maintain, protect, and enhance the water quality and natural resources of the Barnegat Bay estuary and its contributing watershed.*