

**SAVE THE BAY®**

NARRAGANSETT BAY

# TIDES

## The Problem with Plastics

TAKING A COMPREHENSIVE APPROACH  
TO PREVENTING PLASTICS POLLUTION

**PLUS:** Vote YES on 3 | Take the Litter Free Pledge | Meet a Powerhouse Volunteer



ENJOY **THE BAY** ALL YEAR LONG!



GIFT CERTIFICATES AVAILABLE

**NEWPORT & WESTERLY, R.I.**  
401-203-SEAL • [SAVEBAY.ORG/SEALS](http://SAVEBAY.ORG/SEALS)

**SEAL & NATURE TOURS**



**EXPLORATION CENTER & AQUARIUM**

EASTON'S BEACH, NEWPORT, R.I.

• 401-203-SEAL • [SAVEBAY.ORG/AQUARIUM](http://SAVEBAY.ORG/AQUARIUM)

401-272-3540 x133 OR [SAVEBAY.ORG](http://SAVEBAY.ORG)  
FOR MORE INFORMATION

**SAVE THE BAY®**  
NARRAGANSETT BAY

est. 1970



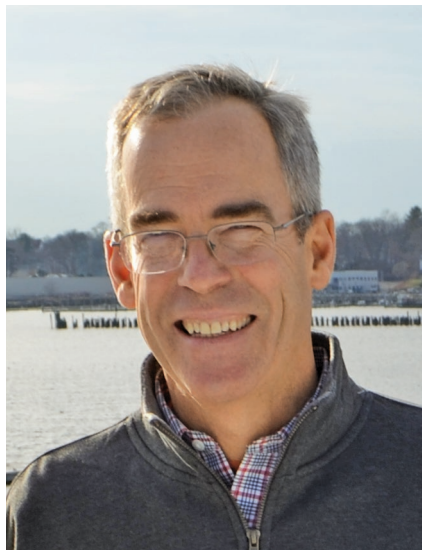
## FROM THE DIRECTOR

# A Trusted Approach to Bay Challenges

Where has all the sea glass gone? There was a time not long ago when beautiful shapes of colored glass, polished by sand and waves, would grace the shore—a beachcomber's holy grail. I'm not endorsing the idea of tossing your Narragansett beer bottle over the gunnel, but at least when glass bottles land in the sea they eventually are ground into sand.

Those days are gone, and plastics have replaced glass in our modern consumer society. Today, bottles, straws, shopping bags, fast food containers, fishing line, packaging, even cigarette butts are all made of plastic. And when plastics find their way into the Bay, they don't biodegrade. They persist. Forever.

In this issue of *Tides*, we highlight our commitment to solving the plastics problem. Like many environmental challenges we have confronted over the years, the plastics problem will require a variety of strategies sustained and implemented over years, even decades. When responding to a threat like plastics pollution, our actions are guided by the best available data and an assessment of where our efforts can achieve the greatest good.



While Save The Bay is broadening our efforts to prevent plastics pollution, we have always played a leadership role in securing public dollars to invest in clean water infrastructure. On election day, Nov. 6, you have an opportunity to cast your vote for a crucial environmental bond (*see story on page 4*). Please do your part, and encourage friends, colleagues, and family to vote YES on Question #3. Success at the polls will ensure continued progress in protecting the health and resilience of Narragansett Bay.

Jonathan Stone  
Executive Director

## What's Inside...

- 4 Advocacy**  
Make Rhode Island greener and cleaner by voting Yes on 3.
- 6 Who Saves the Bay? Staff Profile:**  
Kate McPherson, Riverkeeper
- 7 STB Action Updates**  
Learn about some of Save The Bay's current education, restoration and advocacy initiatives.
- 8 Restoration**  
The final chapter of New England dams?
- 10 Cover Story**  
The emergence of micropollutants and how we are leading research on microplastics in the Bay.
- 15 Who Saves the Bay? Volunteer Spotlight:**  
Danielle Perry
- 16 Community**  
Take the Litter Free Pledge.
- 18 Education**  
Save The Bay's partnerships with area schools are creating environmental stewards of the future.
- 21 Who Saves the Bay? Donor Spotlight:**  
The Dietrich Family

### ON THE COVER:

*Plastic washes in with the tides.*  
Photo by Rey Perezoso.



## ADVOCACY

# Rhode Island Voters: VOTE YES ON 3!



BY TOPHER HAMBLETT,  
DIRECTOR OF ADVOCACY

On November 6, Rhode Islanders will have an opportunity to vote for major investments in the health of Narragansett Bay and the quality of life in the Ocean State. Question 3—the *Green Economy and Clean Water Bond*—requires voter approval for \$47.3M toward a wide range of projects, from the upgrade of wastewater treatment plants that keep the Bay clean to the protection of open spaces that safeguard the Bay watershed.

Save The Bay strongly urges you to VOTE YES on 3!

The Green Economy and Clean Water Bond was introduced by Governor Gina Raimondo and passed by the General Assembly in June. Save The Bay joined with dozens of other organizations to win passage and put Question 3 before the voters. Voter approval of Question 3 will jump-start investments in water quality, land cleanup, open space preservation, farmland protection and recreational facilities. It will help Rhode Island communities cope with the impacts of climate change, including rising seas and increased flooding of communities along our coast and riverbanks.

“Question 3 asks Rhode Islanders to protect and improve what is best about the Ocean State: our Bay, open spaces, and urban environment,” says Save The Bay Executive Director Jonathan Stone. “This is an opportunity for you, the voter, to make an emphatic statement about the importance of continued investments in our environmental resources. Make the most of the opportunity. Vote Yes on 3, and urge everyone you know to do the same.”

## What the Green Economy and Clean Water Bond Covers:

**CLEAN WATER AND DRINKING WATER:** \$7.9 MILLION for the Clean and Drinking Water State Revolving Funds to improve the environmental quality of our state’s waters—including Narragansett Bay—create jobs, and make Rhode Island a better place to live, work and play. These matching funds will unlock \$35 million in federal funds over two years and an additional \$150-\$200 million in private sector capital.

**PROVIDENCE RIVER DREDGING:** \$7 million for dredging sections of the Providence River, the Woonasquatucket River and the Moshassuck River near downtown Providence and Waterplace Park to improve water depths for boating, recreation and climate resilience and enhance economic development and tourism.

**WASTEWATER TREATMENT FACILITY RESILIENCE:** \$5 MILLION will help ensure water quality by protecting wastewater treatment facilities from flooding, higher tides and major storm events. In the floods of 2010, the Warwick wastewater treatment plant was underwater—and stopped functioning—when the Pawtuxet River crested its banks. Together, Rhode Island’s 19 wastewater treatment facilities purify close to 100 million gallons of sewage each day.

**DAM SAFETY:** \$4.4 MILLION to repair or remove “high-hazard” state-owned dams. Rhode Island is experiencing 10 more inches of rainfall annually than in the 1940s, further stressing the state’s aging dams. The repair or removal of these structures will protect lives and property from the effects of a catastrophic failure, and, in some cases, allow river flow and habitats to be restored.







### COASTAL RESILIENCY AND PUBLIC ACCESS:

\$5 MILLION to restore and improve coastal habitats, rivers and stream floodplains, and communities that are vulnerable to rising seas and flooding. Iconic public parks and access points need to be protected for all Rhode Islanders and visitors. Moving infrastructure at public beaches and access points out of harm's way, while allowing natural systems like beach dunes to thrive, will preserve public access.

**LOCAL RECREATION:** \$5 MILLION to create new and improve existing community parks and recreation facilities. Studies show that access to green space improves health, promotes stronger social ties, and enhances neighborhood satisfaction and pride.

**BIKEWAYS:** \$5 MILLION to expand and improve the state's bikeway network that runs through many Rhode Island communities for bicyclists and pedestrians. More than 60 miles of bike paths in Rhode Island are used by nearly two million people each year. Bike paths also

connect people to Narragansett Bay and Rhode Island's rivers.

**OPEN SPACE:** \$2 MILLION for the Open Space Grant program to support local land protection and conservation efforts of communities and non-profit organizations. Since 1985, more than 10,000 acres of land have been protected in Rhode Island. A cohesive network of protected lands and habitat are important to the health of Narragansett Bay, and have economic, health and recreational benefits for communities.



Save The Bay urges all Rhode Island voters to take action to protect the Bay and its watershed by approving Question 3 on November 6. This \$47.3M ballot measure asks voters to invest in a wide range of projects that, together, improve Rhode Island's environment and resiliency against flooding and strengthen its economy.

**FARMLAND:** \$2 MILLION to preserve historic farmlands. Rhode Island has a thriving network of farmers and leads the nation in food-system planning and innovation—spurred on by a growing demand for fresh, locally grown food among consumers.

**BROWNFIELDS:** \$4 MILLION to clean up former industrial sites, or “brownfields,” through the Brownfields Remediation and Development Fund, so they may be returned to tax rolls, create jobs, and revitalize our neighborhoods. Brownfields projects also encourage development in already-built areas, and help protect open space. Since 1995, some 800 brownfields sites have been cleaned up with assistance from the Department of Environmental Management and its partners.

So, be sure to vote on November 6. And please, VOTE YES on Question 3! It's the best thing you can do to protect the Bay! ■

*OPPOSITE PAGE: Erosion at India Point Park threatens public access and safety. ABOVE: West Warwick's Regional Wastewater Treatment Facility after the great floods of 2010. BELOW: Panoramic shot of the East Bay Bike Path—the first multi-town bike path built in Rhode Island, stretching 14.5 miles from India Point Park in Providence to Independence Park in Bristol. Photo courtesy of Todd Van Hoosear via ShareAlike 2.0 Generic (CC BY-SA 2.0) at [www.creativecommons.org](http://www.creativecommons.org).*





## WHO SAVES THE BAY? STAFF PROFILE

# Kate McPherson: This Riverkeeper is Passionate About All Things Upstream



BY CINDY M. SABATO,  
DIRECTOR OF  
COMMUNICATIONS

*Meet Kate McPherson, our new Riverkeeper. A lifelong Rhode Islander who grew up fishing with her dad, this wetlands ecologist hails from North Smithfield, in the Branch River Watershed, and now lives in Harmony, in the Woonasquatucket River Watershed. She came to Save The Bay by way of the R.I. Department of Environmental Management, where she used her wildlife biology and management degree to evaluate ecosystem impacts of projects in and near wetlands. Kate has paddled salt ponds, reservoirs, lakes, and river sections throughout Rhode Island, mucked about in swamps in every city and town in the state, and is pretty great at songbird and plant identification.*

**For those who might be new to the term, what is a Riverkeeper and what does that mean for Save The Bay?** The Riverkeeper is affiliated with Waterkeeper Alliance, a global nonprofit focused on drinkable, fishable, swimmable water everywhere. I'm Save The Bay's eyes and ears out in the watershed, which encompasses over a million acres of wetlands, rivers, upland forests, towns, cities, roads and all the infrastructure that support nearly two million people who call it home. I respond to complaints from the public and forward them to the appropriate agency, and work with Save The Bay's policy team to ensure Massachusetts and Rhode Island agencies enforce environmental laws.

## What excites you most about being the Narragansett Bay Riverkeeper?

I love the reaction when I tell people I work at Save The Bay and that I'm the Riverkeeper. The title evokes some great imagery, and our natural resources within the Narragansett Bay watershed don't have a voice of their own. These are important places that have historically been misunderstood, ditched, drained, filled, dumped into, or piped under neighborhoods to make room for development. We need these wetlands to slow and store stormwater, filter nutrients before the water hits the Bay, and provide vital wildlife habitat. I feel great responsibility to be their voice.

**How do you hope to connect with the communities along the Bay's major tributaries and smaller rivers?** I plan to strengthen our partnerships with such watershed groups as the Blackstone River Coalition, Taunton River Watershed Association, Woonasquatucket River Watershed Council, and Seekonk River Revitalization Alliance, among others. I'm looking forward to being a familiar



presence out on the rivers, promoting water quality, recreation and Bay-friendly living throughout the watershed. Because of my work as a wetland scientist, I can respond more quickly and confidently to watershed threats like unauthorized dumping, filling, or polluting in swamps, ponds, marshes and rivers.

## In your first few years, do you have any top priorities, areas you particularly want to focus on, or work you specifically want to do?

I would love to organize river cleanups. Save The Bay does such a great job with the beach cleanups, but an amazing amount of trash, carried by stormwater, makes its way into our rivers before it reaches the Bay and the shoreline. I'd like to connect with people in our watershed that didn't realize their community drains to Narragansett Bay.

I also care deeply about human and wildlife interactions. Roadway wildlife fatalities because of inadequate culverts or bridge passage under the road are tragic. I'm excited to learn more about how culverts can affect stream continuity for wildlife passage and then work with towns and RI/MA-DOT to get better crossings where our roads intersect with our rivers.

I'm excited to develop and implement monitoring plans to measure the health of our rivers. For example, the dam at Shady Lea Mill was just removed in July, and anadromous fish will have additional spawning habitat in the Mattatuxet River as a result.

I am curious about other effects—for wildlife passage, water quality, and upstream wetland vegetation—the dam removal will have on the wetland system as a whole.

## What are the things you wish more people knew about a watershed?

One of the first things that comes to my mind is the connection between hard surfaces—like paved roads, driveways, roofs, and parking lots—and the stormwater runoff it generates, which directly affects stream health. When we get a storm, the rainwater that hits these impervious surfaces runs off, picks up anything harmful (like plastic, oil, fertilizer, pet waste) on the surface and very often flows directly into a stormdrain or directly into a river, posing risks to human and environmental health. I think a lot of folks who live in the headwaters of the Narragansett Bay watershed don't realize that what they do and how they live can impact the Bay. ■



# Save The Bay Action Updates

## Education

- An independent evaluation of the first year of our three-year Narragansett Bay Field Studies Program with 360 High School, Central Falls High School, and Woonsocket High School found our program to be an asset to students in Rhode Island's urban schools because it promotes relationships with nature, develops contextual understanding of watersheds and ocean science, and actively involves students in learning and civic opportunities they would not otherwise experience. When evaluating students' attitudes toward science and the environment, evaluators found that "the most significant change was the desire to continue studying science in the future."
- Every fourth-grade student in Warwick Public Schools will, for the third consecutive year, engage with Save The Bay's in-class and shipboard-based environmental education program, following a similar program with Providence Public Schools. District-wide partnerships are a great way to connect students to Narragansett Bay on a broad scale.
- This summer, we introduced more than 600 BayCampers to Narragansett Bay through 52 camps in eight locations throughout the Narragansett Bay watershed.

## Habitat Restoration

- Ongoing work at our Ninigret salt marsh adaptation project has continued, with excavation of a network of creeks in the newly elevated marsh along the Ninigret breachway, and the planting of 48,000 salt marsh plants by 35 volunteers. During this second growing season since the dredge sand was pumped onto the marsh, most plants have thrived, and seedlings have colonized a large percentage of the bare sand, creating habitat for willets, piping plovers and migratory shorebirds.
- At Sabin Point in East Providence (*Tides* story, Fall 2017), the City of East Providence installed the second infiltration area in the Sabin Point watershed to reduce the amount of stormwater that flows untreated through a pipe to the beach.
- At Potters Pond in South Kingstown, staff from Save The Bay and the Rhode Island Department of Environmental Management have been digging shallow creeks to allow drainage of water that's been trapped on the marsh's surface, which will help marsh grasses recolonize the mucky surface. Our efforts continue this fall, with the help of the state's low-ground-pressure excavator.
- This summer on the Mattatuxet River in North Kingstown, we led an effort to remove the dam at Shady Lea Mill and reopen this section of the river to greater wildlife passage and improve water quality conditions in the river overall. Funding for the projects came from the U.S. Department of the Interior Hurricane Sandy recovery and resilience funds through the U.S. Fish and Wildlife Service, Coastal Resources Management Council Coastal and Estuarine Habitat Restoration Trust Fund, NOAA's partnership with Restore America's Estuaries, the Bafflin Foundation and Patagonia. (*see story, page 8*)

## Advocacy

- Narragansett Baykeeper Mike Jarbeau has been on the case of a sunken barge and crane that have been on the bottom of the Providence River. The barge and crane have been sitting on the bottom of the river, but visible from the shore, for months. Save The Bay urged the Rhode Island Department of Environmental Management to use its authority to order removal of the barge, and in August, DEM issued a *Notice of Intent to Enforce* against the owner of the barge and required removal of the barge within 30 days.
- For two decades, high bacteria levels have kept shellfishing off limits in Hundred Acre Cove, shared by Barrington and East Providence, R.I. and Seekonk, Mass. For years, the source of the bacteria has been mere speculation. In September, Save The Bay, the Narragansett Bay Estuary Program and the three towns received a multi-year grant from the U.S. Environmental Protection Agency's Southern New England Program to study and develop an action plan to improve water quality and restore this once-thriving shellfishing ground.
- Recent stock assessments this summer led NOAA to take emergency action reducing the 2018 herring catch limit by 100 million pounds. Herring are an important species for Narragansett Bay and coastal southeastern New England and an important food source for whales, seals and other fish. As of this writing, Save The Bay is teaming up with the Rhode Island Saltwater Anglers Association, Audubon Society of Rhode Island, National Wildlife Federation, and others to recommend smart, conservation-based herring management practices to the New England Fisheries Management Council.



## RESTORATION

# Removal and Restoration: The Final Chapter for New England Dams



BY CHRIS JOSEPH,  
COMMUNICATIONS INTERN

In popular consciousness, dams are often associated with the enormity and grandeur of such marvels as the Hoover and Grand Coulee dams. But the truth is that of the more than 2.5 million dams in the U.S., nearly all of them are small, unique, privately-owned structures. The first of these was built right here in New England, as early as the 1630s, when rushing water was used to power pre-industrial labor such as grist milling and sawmilling. In a region thick with rivers and streams, damming was instinctual, and in many places, the colonists merely replaced pre-existing beaver dams.

However, as industry progressed, damming proliferated, and even the early projects were controversial. Fishermen opposed damming from the start because of its effect on fish runs, and local authorities required the construction of fish ladders, a seemingly modern consideration, as early as the mid-17th century. Nevertheless, local fishermen were no match for the rising corporate powers of the day, and the dams of New England remained in operation until the early 1900s, when the center of American industry moved west. Of the 14,200 dams left behind, some were converted to hydroelectric use, but most were simply abandoned.

The forgotten dams of New England now rest in obsolescence, but their story is not over yet. Today, their final exit is at hand.

## On Dam Removal

The benefits to migratory fish and the delight of fisherman are two key facets of this issue that were born on the same day as the first dam and that will probably persist until the fall of the last. Other issues have developed over time, such as the phenomenon of sediment starvation, which weakens downstream riverbanks, and flood risk, which increases every year as storms strengthen. The removal of a dam resolves all these problems. Combine the benefits with the money that dam owners stand to save on regular dam maintenance, and the argument for removal becomes almost irresistible.

But are these reasons enough to outweigh the cultural and aesthetic values of the dams themselves? New England dams have become part of our landscape. They recall the hardy times of early settlement and the stalwart beginnings of American



industry. How should we weigh these values when considering removal?

## Removal at Shady Lea

The answers lie at the site of Save The Bay's most recent dam removal project: Shady Lea Mill in North Kingstown, Rhode Island. The mill's nearly 200 years on the Mattatuxet River are well storied. The mill manufactured woolen blankets for Union soldiers during the Civil War, and, four years after the war, it was owned and operated by Mary Ellsworth, a woman whose professional career in industry was highly unusual for the time.

The brick mill building was repurposed into a studio for artists and craftsmen in the mid-1990s, but the reclamation process did not reach the dam until the Rhode Island Department of Environmental Management (DEM) deemed the structure a flood hazard in 2010. Save The Bay and the DEM Division of Fish and Wildlife found that, in addition to reducing flood risk, removal of the dam would extend the herring run of the Mattatuxet and replenish sediment downstream. The two groups partnered with the dam owner, Riesert Realty, and completed removal this summer.

Yet, as in the renovation of the mill building decades before, the removal of the dam required much more than a wrecking ball. The careful dismantling of the dam coincided with the construction of several new features, such as reinforced





embankments and four stone weirs that compensate for the dramatic slope of the river below the dam. The water babbles energetically over these low stone structures, breathing oxygen into the river and inviting herring to jump upstream.

North of the dam, where the pond impoundment once stood, the river now reveals its true character. In this stretch, the Mattatuxet is relaxed. The slow back channel that moves toward the old raceway will soon support a lush wetland. In fact, in a few short months, small plants have already colonized this area, and rocks that were once covered are now favorite basking sites for snakes and turtles.

Ultimately, the renovation maintains much of the feeling of the old dam, and the touch of the human hand persists in the form of river enhancement, rather than obstruction. The project proves that restored riverways can be just as captivating as impoundments.

Now that construction is complete, Save The Bay Riverkeeper Kate McPherson will monitor the area to confirm the benefits of dam removal. Her observations will strengthen the case for removal as Save The Bay looks forward to future river restoration projects.

### Kickemuit and Shad Factory Dams

One possible future project is the removal of old reservoir dams in Bristol County, Rhode Island. Though roughly 60 years younger than the dam at Shady Lea, the Bristol County Water Authority (BCWA) dams are just as obsolete. The Kickemuit

Reservoirs are overrun with algal growth caused by nutrient runoff. These conditions have degraded the water quality, and low oxygen levels have significantly diminished fish populations.

If the Kickemuit Reservoir dams were to be removed, natural river channels would replace the ponds now choked by algae and smothered by invasive plants. Native fish would be able to return to the Kickemuit River, and the dam's removal would provide space for salt marsh migration. In terms of habitat restoration, the BCWA project is in some ways similar to Shady Lea, but the size of the impoundments makes the Bristol project far more complicated.

Still, both projects represent progress toward a post-industrial world in which natural features are reclaimed. In some cases, dams will be missed. Each is individually unique, after all, and some are as historical and personal as a hometown's main street. But ultimately, our rivers, wildlife, and communities will benefit more from their removal than from their lasting presence.

Save The Bay thanks each of its partners that assisted in the removal of the Shady Lea Dam, including Riesert Realty, RI DEM Division of Fish and Wildlife, U.S. Fish and Wildlife Service, the Coastal Resources Management Council, the NOAA Restoration Center, Patagonia, and Bafflin Foundation. The organization looks forward to coordinating with these and other partners on future projects. ■

*OPPOSITE PAGE: Looking downstream at Shady Lea's headpond prior to the final phase of dam removal. ABOVE: The Mattatuxet River flows through low-flow notches in two of the four new weirs. BELOW: Sumco employee Matt Fernandes working to make sure in-river weirs below the former dam will function properly.*





## COVER STORY

# The Problem with Plastics



BY TOPHER HAMBLETT, DIRECTOR OF  
ADVOCACY AND JONATHAN STONE,  
EXECUTIVE DIRECTOR

## TAKING A COMPREHENSIVE APPROACH TO PREVENTING PLASTICS POLLUTION

The cleanup of Narragansett Bay is a remarkable achievement that the people of Rhode Island and Massachusetts are rightfully proud of. Bay waters and beaches that were, just a generation ago, choked with raw sewage, industrial waste and other pollutants are cleaner and healthier than they've been in 50 years. The Providence River, for example, is today teeming with marine life, fishermen and recreational boaters, and thousands of residents and visitors who are enjoying the shoreline and views of a healthier, productive Bay.

Despite these gains, a new, pernicious and persistent threat has become increasingly evident: plastics. Save The Bay is keenly aware of the growing problem

of plastics pollution, thanks to our long-standing and extensive beach cleanup program. Every year, Save The Bay and thousands of volunteers collect tons of debris from Rhode Island beaches. In 2017, 2,629 volunteers collected 16,484 pounds of trash during the International Coastal Cleanup, which we lead each September in partnership with the Ocean Conservancy. Most of this trash is plastics (see accompanying chart).

Longtime Save The Bay member Shawen Williams shared a story of how she came to appreciate just how bad the plastics problem has become. "My son Arthur actually pointed this out to me when he was only about four years old, when I took him and (daughter) Hope for a sea



glass hunt on Prudence Island. Hope was older and had the patience to sift for the glass, but Arthur saw the brightly colored plastic bits and decided to pick that up instead. At the end of the day, his bag was far fuller and more colorful than his sister's. The plastics situation is so out of control."

Plastics come in many forms: bottles and bottle caps, shopping bags, cups, lids, food wrappers and take-out containers, fishing line, utensils, diapers, dog waste bags, cigarette butts, packaging, balloons, and six-pack containers. They are ubiquitous in our modern consumer society. Littering on streets, as well as at beaches, fishing spots and public parks is all too common. Litter and inadequate trash disposal result in plastic bottles



ABOVE: Discarded plastic bottles gather along the shores of the Providence River. LEFT: Plastic litter breaks down into smaller and smaller pieces, becoming more and more difficult to discern from the natural environment. Photo by Hillary Daniels. RIGHT: Infographic from our 2017 International Coastal Cleanup Rhode Island Report shows the breakdown of trash collected along Rhode Island shorelines.



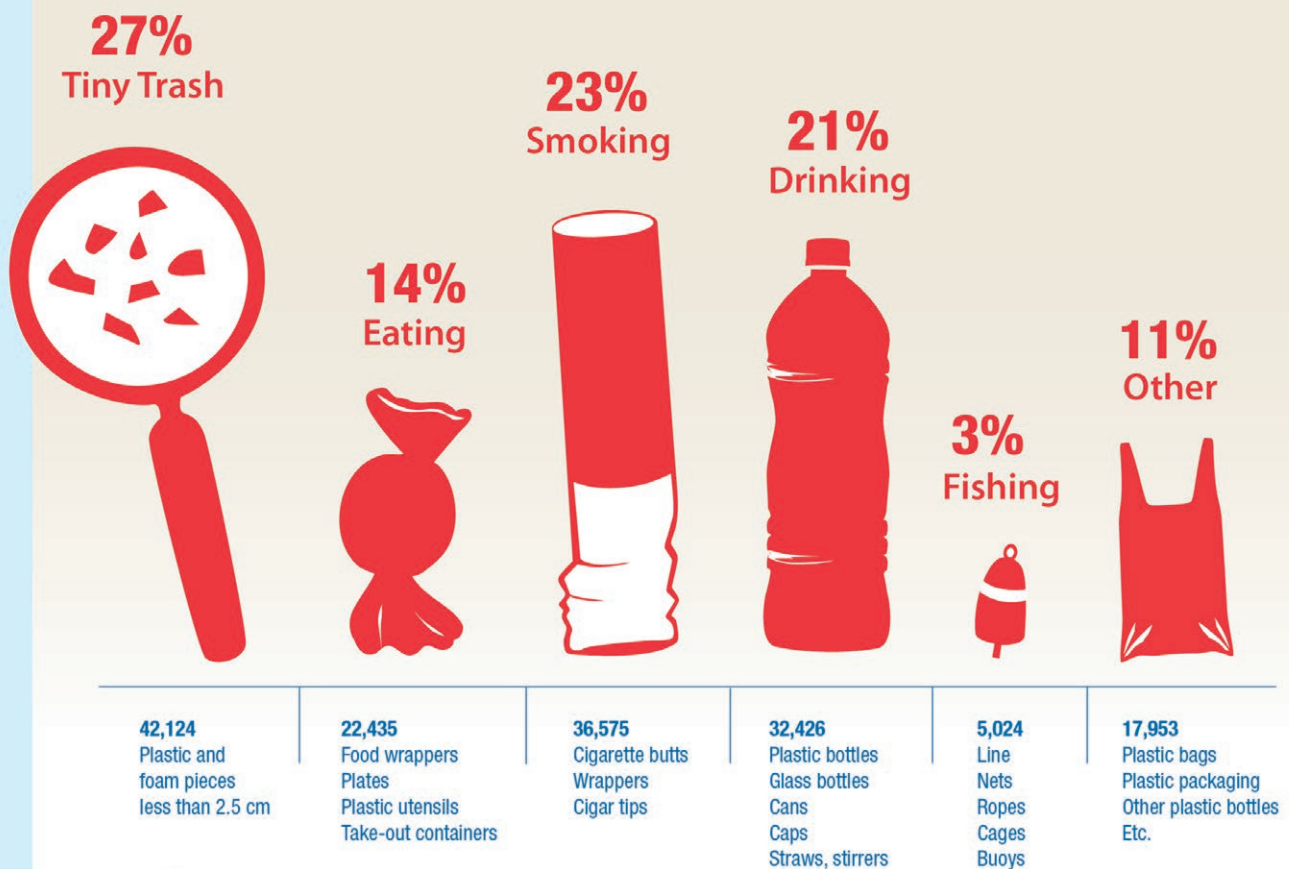
and food packaging landing in the street, where they are washed by rain into streams, rivers, and Narragansett Bay. Poorly maintained storm drain catch basins compound the problem.

The problem with plastics is that, unlike paper and glass, they do not biodegrade, but persist in the natural environment indefinitely. Discarded plastics are everywhere, and unfortunately, becoming increasingly difficult to clean up. Exposure to sunlight, water and wind breaks plastic down into tiny “microplastics” that persist in the water column and are ingested by birds, fish,

and—increasingly—humans. Plastic products also sink to the bottom of the sea. Rhode Island commercial fishermen regularly haul aboard large quantities of plastics in their nets.

Save The Bay has, for nearly 50 years, responded to emerging threats by developing new strategies to characterize the problem, mobilize citizens and promote thoughtful public policy. Plastics are no different. To combat the growing problem of plastics pollution, we are taking a three-pronged approach: response, research and prevention.

## TOP TRASH COLLECTED



### TINY TRASH IS A BIG PROBLEM!

Plastics never go away; they just break down into tinier and tinier pieces that end up being ingested by marine life, and, in turn, us humans. These “microplastics” are found in plankton, arctic sea ice, and the gills and digestive tracts of the seafood we humans eat. How much plastic do YOU want to eat?



## Response

Through our long-standing beach cleanup program, Save The Bay mobilizes teams of volunteers to collect and catalog trash from the shorelines of Narragansett Bay and coastal Rhode Island. In 2017, more than half of the trash picked up by volunteers was made of or contained plastics. As well, our Baykeeper, Coastkeeper and Riverkeeper respond to reports of illegal dumping and other plastic pollution events, such as last winter's system failure at the East Providence wastewater treatment plant, when tens of thousands of plastic disks were discharged into the Bay. Baykeeper Mike Jarbeau coordinated a volunteer effort to identify locations where these disks accumulated in order to target cleanup efforts.

## Research

Since 2014, in partnership with the Ocean Conservancy, we have gathered extensive data on the volume and types of plastics that reach Narragansett Bay and adjacent coastal waters, using this data to prioritize our advocacy efforts and formulate strategies.

To address microplastics, which are too small to be collected by volunteers during beach cleanups, we teamed up with Clean Water Action Rhode Island in 2017 to launch a microplastics monitoring program for Narragansett Bay. To improve our understanding of the sources, types and volumes of microplastics, we secured a grant to purchase a Manta trawl to monitor the presence of microplastics in surface waters (*see story on page 13*). We are also pursuing grant funding to conduct bottom trawls to characterize the amount and types of plastics that sink to the sea floor. Information from both initiatives will be essential to developing strategies for reducing microplastics and submerged plastics in the Bay.

## Prevention

The old adage, “an ounce of prevention is worth a pound of cure,” applies to plastics as much as it does to human health. Preventing plastics pollution is a daunting, long-term challenge that requires an array of strategies. Save The Bay has a multi-faceted effort underway, focusing on:

- Changing behavior through public education.
- Reducing or eliminating single-use plastics.
- Capturing and filtering polluted stormwater runoff.

In 2017, we published our *Bay-Friendly Living* guide, which provides individuals and families with dozens of important tips regarding how they can reduce their environmental impact, including behavior changes that diminish the risk of plastics ending up in the Bay (this guide is available upon request). Earlier this year, we launched the “Litter Free Pledge” campaign for the Narragansett Bay watershed to encourage individuals



ABOVE: Volunteers record all the trash the picked up during the International Coastal Cleanup.

and municipalities in Rhode Island and nearby Massachusetts to make litter prevention a priority (*see story on page 16*). Save The Bay is implementing a comprehensive public education pilot program in Warwick, R.I. to reduce litter rates, encourage local stewardship, and engage partners in the business community, schools, city government, and neighborhood associations in the task of reducing litter and plastics pollution. We hope it will become a model for other communities.

Legislation is an important tool to affect positive change across the Narragansett Bay region, particularly by eliminating or reducing single-use plastics. We are partnering with Clean Water Action Rhode Island to champion legislation that would dramatically reduce single-use shopping bags in favor of reusable ones. At the local level, South County Coastkeeper Dave Prescott is partnering with several restaurants in southern Rhode Island to phase out the use of plastic straws and other items.

For more than a decade, Save The Bay has been championing statewide investments to reduce polluted stormwater runoff and encouraging cities and towns to underwrite the costs of improved stormwater management—both crucial to preventing plastics and other pollutants from reaching the Bay.

Solving the plastics pollution problem won't come easily or quickly. But Save The Bay is determined to make an impact. It will take time—the most important battles usually do—but we are in the business of protecting and improving Narragansett Bay for the long haul. ■



# Trawling for Microplastics



BY SAVE THE BAY WATERKEEPERS,  
MIKE JARBEAU, KATE MCPHERSON,  
AND DAVID PRESCOTT

We've all heard the stories and seen the pictures of giant mats of plastic trash floating in our oceans. But it's not just an issue in faraway oceans on the other side of the globe. Plastic trash litters our own coasts and beaches, floats down our rivers and streams, collects along our roads, and travels with the wind, creating an eyesore and hazards for birds, fish and other marine life.

Compounding the problem, as these plastic materials get tossed around in the water and photodegrade in the sun, they continue to break down into tiny fragments known as "microplastics." The National Oceanic and Atmospheric Administration defines microplastics as small plastic pieces less than five millimeters long (about the size of a sesame seed) that can be harmful to our ocean and aquatic life.

Microplastics threaten marine animals because the animals can easily mistake these tiny pieces as food. The harmful toxins that adhere themselves to plastic make these tiny bits even more dangerous. What's more, these toxins and plastics can even enter the human food web through fish and shellfish tissue.

Save The Bay is playing a leadership role in research to establish baseline data and understand local impacts of this microplastics problem in our tidal rivers and the larger Bay. Our goal is to highlight the local problem of microplastics and tie it into regional campaigns to eliminate single-use plastic, such as bags and straws, and Save The Bay's own Litter Free Pledge campaign (see story on page 15).

*Generally, fewer plastic pieces were found upriver, while the most plastic was collected in the southernmost trawl at Battleship Cove*

Microplastics are much too small to be seen on the water, so we applied for and received funding through the Taunton River Wild and Scenic Stewardship Council to purchase a Manta trawl, designed specifically to collect floatable debris off the surface of the water, and conduct microplastic sampling trawls within Mount Hope Bay and the Taunton River.

The Manta trawl is a unique piece of equipment because of its ability to float at the surface of the water and take surface samples. Floating debris is funneled into the trawl's wide rectangular mouth, down a trailing cone-shaped mesh net, and into a detachable capped terminus called a "cod end." The net's tiny .33 mm mesh allows us to collect the smallest of specimens.

This summer, Save The Bay Waterkeepers Dave Prescott, Mike Jarbeau, and Kate McPherson set out in mid-June to sample the surface waters of the lower Taunton River for microplastic debris. Why the Taunton?

>>>

*Narragansett Waterkeepers tow a Manta Trawl to sample microplastics from surface water in the Taunton River.*



Because the cities of Taunton and Fall River together have 20 combined sewer overflow outfalls; if their combined sewers overflow, larger plastic waste is spilled into the river and adds to the microplastics problem in our waters.



*South County Coastkeeper Dave Prescott sorts microplastics from a trawl on the Taunton River.*

On this particular day in June, the Waterkeepers sampled five trawl locations, starting at the Taunton Yacht Club in the north and ending near Battleship Cove in Fall River, Mass., before the brisk wind and choppy water ended their efforts. At each sampling site, they launched the Manta trawl from the side of the boat and

secured it there so that the trawl is undisturbed by the boat's wake when towing. This ensures a representative sample of the plastic and other materials floating on the water's surface. The trawl moved alongside the boat at about two miles per hour for 20 minutes, recording wind speed, boat speed, date, start time and end time, and GPS coordinates at the start and end of each trawl. At the end of the trawl, the Waterkeepers pulled the equipment from the water and sprayed down the net mesh to ensure all debris particles collected at the cod end. They washed the sample through a stack of sieves that sorted the particles by size, and then separated the microplastics by hand, preserving the samples in an alcohol solution and labeling them for future analysis.

Sadly, but not surprisingly, the trawl found microplastics in every sample collected. Generally, fewer plastic pieces were found upriver, while the most plastic was collected in the southernmost trawl at Battleship Cove, including some larger pieces of Styrofoam. They also captured natural floating debris and aquatic life, including pieces of plant materials, zooplankton, small fish and algae. Hand-picking out the tiny pieces of plastic from among the marine life in rough bay conditions was truly an exercise of balance, coordination and steady hands.

These samples will be compared to samples collected in other locations around the Bay over time. The Save The Bay Waterkeepers hope to revisit trawl sites during varying weather conditions to compare the amount of plastics in the water before and after storms, to get a better understanding of the primary sources of microplastic pollution.

They'll share the results with the public and with public officials to help generate more discussion about the dangers of plastics and the role we all play in keeping our watershed healthy. As always, this new microplastic monitoring effort will combine with ongoing water quality monitoring and outreach efforts with on-the-ground beach cleanups as part of Save The Bay's beach cleanup program and water quality advocacy efforts. ■

## IT'S SEAL SEASON, SO KEEP THESE SEAL WATCHING TIPS IN MIND!

Winter seal watching can easily stress out seals and scare them off their resting spots, causing them to lose precious energy they need for survival. The Marine Mammal Protection Act prohibits disturbing, feeding or harassing seals. Follow these tips to get the most out of your seal-watching experience and keep seals safe.

**WHEN TO WATCH:** Low tide, on a calm day.

**HOW TO WATCH:** Stay at least 50 yards away (it's the law); use binoculars for close-up views. Keep pets leashed by your side.

**FROM A BOAT:** Stay on a parallel course rather than a direct approach. Avoid sudden changes in course or speed. Don't circle. The low profiles of kayaks and canoes can actually be more threatening than motorboats.

**BE ALERT FOR SIGNS OF DISTURBANCE:** Back away immediately if you see the seals stretching their necks, moving toward the water, looking at you, or increasing their vocalization.

**LEAVE STRANDED SEALS ALONE:** If you find a seal that is dead, stranded, or being harassed, contact Mystic Aquarium's Marine Mammal Stranding Program at 860-572-5955.





# Danielle Perry: A South Coast Center Powerhouse Volunteer



BY MIA CHIAPPONE,  
COMMUNICATIONS INTERN

Two years ago, Save The Bay gained an energetic, determined volunteer in Danielle Perry, who spends her time working with children and doing research at Save The Bay's South Coast Center in Westerly. The South Coast Center is a small, interactive aquarium where locals and visitors can learn about the diverse habitats and animals of the region, as well as Save The Bay's work in Rhode Island's salt ponds and southern coast. Wanting to be involved in the local community and learn more about conservation and restoration firsthand, Danielle became a volunteer in 2016. "Save The Bay seemed like a great opportunity to accomplish my goals and expand my experience in environmental management and community engagement," she said.

At the South Coast Center's cozy store location in the old McCormick's department store building on Westerly's Broad Street, Danielle shows visitors the interactive touch tank, describes the south coast watershed map and reads stories for children in the kids' story time area. She exudes enthusiasm and passion as she meets the visiting children and adults and educates them about Rhode Island's southern coast. "My favorite part is interacting with the children, whether it is helping them make a marine craft or showing them animals in the touch tank. It's nice knowing you helped put a smile on a child's face," Danielle said.

Determined to help make a positive environmental change, Danielle also enjoys getting her hands dirty with other volunteers on many habitat restoration projects.

"It is nice working with people on a common goal and accomplishing something important together," said Danielle, who has participated in salt marsh restoration monitoring and planting as well as water quality restoration in the coastal waters of Narragansett Bay.

"Danielle has been a great help with water quality testing," Dave Prescott, Save The Bay's South County Coastkeeper said. "She plays a vital role in both the education and research departments and continues to be a real leader here at the South Coast Center."

During her restoration work with Save The Bay, Danielle has learned so much about the issues salt marshes are facing that she's developed her graduate research around the topic. "Save The Bay has become a large part of my Rhode Island and graduate school experience, and the individuals working there have been very influential in this journey," she said.

With a special place in her heart for Narragansett Bay, Danielle wants to see the Bay thrive and witness restored habitats and improved water quality. "Saving the Bay has important implications that go beyond Rhode Island and New England. The strategies used within the Narragansett Bay watershed could be implemented in other systems across the country, and so saving the Bay could lead to saving other estuaries in the country," she said.

Meet Danielle at Save The Bay's South Coast Center at 12 Broad Street, Westerly, RI from 10 a.m. to 3 p.m. every Monday, Wednesday, Friday and Saturday. ■



*Volunteer Danielle Perry shows young visitors critters in the touch tank at the South Coast Center in Westerly.*

*"My favorite part is  
interacting with the children...  
It's nice knowing you helped  
put a smile on a child's face."*

## COMMUNITY

# The Litter Free Pledge

PUTTING A STOP TO OCEAN TRASH AT THE SOURCE



BY JULY LEWIS,  
VOLUNTEER AND  
INTERNSHIP MANAGER

Litter. Are we really still talking about this?

Yes, we are! Litter is the number one source of plastics in the Bay, and as long as people are littering, we'll keep talking about it. Save The Bay supporters are already on board with the anti-littering cause, of course—over 4,000 of us participate in shoreline litter cleanups every year. But how do we make lasting progress on this issue when littering behavior by the general population is so stubborn and so pervasive? When every time we do a beach cleanup, more litter appears? Part of the answer lies in reaching beyond our “choir” of conservationists and getting our message out to everyone in the Narragansett Bay watershed. That's why in 2018 we launched the Litter Free Pledge initiative.

The Litter Free Pledge grew out of a 2017 pilot program focused on litter reduction at four sites in Warwick—

Conimicut Point, Oakland Beach, Rocky Point and Salter Grove—that included local anti-littering messaging and a weekly cleanup that rotated around each site. Research indicates that people are less likely to litter on a clean beach, so cleaning up is in itself a prevention strategy.

The cleanups were very successful, with high participation and large amounts of trash cleaned up. And with the support of the Warwick Beacon, the anti-littering message got out there in the local community. However, we found no measurable difference in littering during our weekly beach litter surveys at the cleanup sites. And surveys indicated that these beaches were used by visitors from outside of Warwick who were not reached by our messaging.

So this summer, we decided to adapt this approach by “going small” in our

cleanup focus and “going big” in our messaging, and that's where the Litter Free Pledge was born.

**I TOOK THE  
LITTER FREE  
PLEDGE.**

**WILL YOU?**



[litterfreepledge.com](http://litterfreepledge.com)



“Going small” was simple. Instead of rotating our weekly cleanups between four different sites, we did the entire weekly summer cleanup series at a single location—Conimicut Point in Warwick. Partnering with the Conimicut Village Association, our fun weekly cleanups became a regular social event for many participants. Through the series, 287 total participants cleaned up 1,116 pounds of trash at Conimicut Point. And every time they went out, beachgoers approached them, marveling at how clean the beach was this summer! (Note: our cleanups were in addition to the daily litter cleanups done by the City of Warwick parks staff.) We feel that holding regular, weekly cleanups was a strong success and a good model for community groups

*Volunteers celebrate the cleanup at Conimicut Point one Thursday afternoon this summer.*





ABOVE: These young volunteers were determined to pick up every piece of litter they could. RIGHT: Volunteer manager July Lewis and volunteer Mikayla Barnwell holding some of the many cigarette butts they picked up at Conimicut Point.

looking to clean up and reduce littering behavior at their own local beaches.

To “go big” with our messaging, we launched The Litter Free Pledge, a new initiative aimed at reducing littering across the entire Narragansett Bay watershed. The core of this effort is a website, [LitterFreePledge.com](http://LitterFreePledge.com), where people can make a public commitment to not litter—not ever—not even one piece! The website also has resources on how to lead a litter-free life, ways to spread the word, and a list of local organizations that organize cleanups.

Along with the website, we created Litter Free Pledge social media pages to engage people in the conversation about litter, to share information about the harmful effects of litter, and to inspire people to take better care of their communities and the Bay. We partnered with WPRI, who worked with us to produce a public service announcement about the Litter Free Pledge that is estimated to have reached 455,000 households. The Rhode Show filmed a special segment on the Litter Free Pledge at Conimicut Point.

We supplemented our media outreach with in-person tabling at community fairs and festivals, including National Night Out at Oakland Beach,

Food Truck Night in Conimicut Point, and Partnership for Providence Parks “Parties in the Park.” We made connections with other organizations that work on the issue of litter and asked them to share and promote this effort too.

Now that we have the infrastructure of this initiative, we can take it and run with it. Over the winter we will be developing strategies to increase and improve our messaging, bringing more and more partners into the mix. Because one thing is for sure: as long as there is littering, we at Save The Bay will be fighting to stop it. ■



## How You Can Help Save The Bay

### Volunteer at One of Our Hands-on Centers

If you're friendly, outgoing and willing to learn, consider becoming a docent at our Exploration Center & Aquarium in Newport. Our volunteer docents greet visitors and teach them about marine life, lead craft activities, take care of critters and much more. On-the-job training is provided! Contact July Lewis: [jlewis@savebay.org](mailto:jlewis@savebay.org) or sign up to volunteer at [savebay.org/volunteer](http://savebay.org/volunteer).



### Become a Water Reporter

We need your eyes to help us spot pollution and other water issues from the mouth of Narragansett Bay all the way up to its head waters in Worcester, Stoughton and Carver, Mass. The Water Reporter App is a social network of community volunteers who share pictures of water and shoreline conditions with Save The Bay's Waterkeepers. Your pictures help us document and respond as needed.

Download the Water Reporter App for iOS or Android at: [savebay.org/waterreporter](http://savebay.org/waterreporter), join Save The Bay's group, and begin sharing photos and reports about what you see out there.





## EDUCATION

# THE NEXT GENERATION: How Students at Two Local High Schools Take On the Plastics Problem



BY KATY DORCHIES,  
MARKETING &  
GRAPHICS SPECIALIST



*If the early years of the plastics war had a mascot, it would have been bottled water. The early generation of environmentalists did their best to convince the public of the hazardous impacts of single-use plastic bottles, but the American obsession persisted. Now, plastic waste has infiltrated waters everywhere, including Narragansett Bay. And, since plastic can take hundreds of years to break down, the burden of managing this problem will fall on the youngest among us today—which is why Save The Bay puts fostering the next generation of Bay stewards at the forefront of its education programs.*

"If you want kids to become involved in their community, they have to experience success in their attempts to make change," said Kerry Tuttlebee, principal of 360 High School in Providence. "They need to see that being socially active can produce the changes they need. In order to do that, they need to be deeply engaged in the subject matter."

When it comes to the sciences, however, even educators admit that achieving full student engagement can be difficult.

"Analyzing water and taking measurements? These activities can be dry," admits 360 High School Science Teacher Ramiro Gonzalez. "But if students can see the ecosystems that are right in their backyard and learn why those places are important—all the commercial and recreational benefits—they can really start to understand the importance of the science."

That's where Save The Bay fits in. In 2016, 360 High School, as well as Woonsocket and Central Falls high schools, worked with Save The Bay to complete an application for a three-year Bay Watershed Education and Training (B-WET) grant through the National Oceanic and Atmospheric Administration. The proposed curriculum



focused on uncovering the answer to the question: "How healthy is your local urban ecosystem?"

The grant was awarded in time for the 2017-18 academic year, and the resulting course was named "Narragansett Bay Field Studies." The class comprises activities and projects that promote hands-on engagement: field studies with Save The Bay, campus storm drain marking, habitat restoration, a civic action advocacy project, and an end-of-year ecosystem summit where the students presented their findings to fellow students. Throughout the school year, students made weekly visits to Save The Bay to collect water samples, examine local biodiversity and native vegetation, and to study human impacts on the Bay—including the threat of plastics and microplastics.

"At school, there are plastic bottles everywhere," said Gonzalez. "The students don't like drinking from the water fountains. They complain about the taste and the temperature. They'd rather buy water bottles from the vending machine."

Once students saw the damaging effects that plastics and microplastics have on oceans and marine life, however, they knew something had to change. (Plus, they were tired of wasting their money buying water.)

During college visits, 360 High School students and faculty began noticing water bottle filling stations on many of the campuses. The more they saw, the closer they got to identifying the "civic action" component of their Narragansett Bay Field Studies Course: acquiring a water bottle filling station for their school.

*"If you want kids to become involved in their community, they have to experience success in their attempts to make change."*

To make the case for their desired filling station—a piece of equipment with a \$1,500 price tag—the students developed surveys for their schoolmates, prepared a petition and collected signatures. They held a mock town hall meeting at a school assembly, where they held a blind taste-test experiment to demonstrate the comparable qualities of filtered and bottled water, and



presented their proposal to replace an outdated school water fountain with a filling station.

The school then reached out to the Greenlove Foundation, a Rhode Island-based nonprofit with a focus on providing filling stations to parks and schools. After filing a proposal built upon the students' collected data and research, 360 High School finally received the funding it was looking for. The 2018-19 school year will feature a brand new way for students at the school to stay hydrated—a way that doesn't involve single-use plastics.

"Projects like these remind students to think of the hundreds, even thousands, of people in the future who will benefit from the changes they are making now," remarked Tuttlebee. "When they start to see that the decisions they make extend into the future, kids can feel a true sense of ownership."



Students at 360 High School aren't alone in their endeavor to reduce plastic use and waste in their communities. In Bristol, the Mt. Hope High School Environmental Club—whose members have all been involved in Save The Bay's field studies program, volunteer programs, or habitat restoration projects—are also fighting against single-use plastics. During the 2017-18 school year, the club took up a campaign to replace plastic utensils in their cafeteria with a more environmentally-friendly metal utensil system, an accomplishment that

earned them Save The Bay's 2018 Student of the Year award.

The students developed and presented a cost estimate for the change in the utensils and presented this information to the Budget/Facilities Subcommittee at its January meeting. The subcommittee approved the students' proposal unanimously, praising the them for their research, factual presentation and stewardship.

The Environmental Club then brought its presentation to the Bristol Town Council. With a recommendation from the subcommittee on the students' side, the Town Council agreed to rid, not just the high school, but several district schools of single-use plastic utensils.

If student successes continue at this rate, it stands to reason that the future may very well be in good hands. Maybe the decades of excessive plastic use are finally coming to an end; maybe, if we continue to provide students with hands-on learning and engaging educational experiences, it can end with the next class of high school graduates. ■

*OPPOSITE: Jeymi, a student at 360 High School works to remove mugwort, an invasive species, from the shoreline at Fields Point in Providence.*

*ABOVE: Students in the Mt. Hope High School Environmental Club present their proposal to do away with plastic utensils to members of the Bristol Town Council.*



# A Trip to the Bottom of the Bay

BIRD SCHOOL STUDENTS DISCOVER ANOTHER WORLD IN OUR EXPLORE YOUR ESTUARY PROGRAM



BY CHRIS JOSEPH,  
COMMUNICATIONS INTERN

"And are there any whales in our Bay?" Meghan asked, rising on her toes to see both rows of students on the *MV Alletta Morris*. The boat's engine was low, and the bow faced into the wind. A young student in the second row raised her hand.

"No," she answered, "it's too shallow."

"That's right," Meghan said. "Our Bay is only 25 feet deep on average, so it's too shallow for a whale to live here. But sometimes we've had visitors." Behind Save The Bay's *Alletta Morris*, two long lines dragged a trawling net along the bottom.

It's been said that we know more about the moon than about the bottom of our ocean. Anyone with a telescope can see the moon, but the ocean floor is sealed in total darkness, and its alien features are sometimes otherworldly. This is true even of Narragansett Bay, where the greatest depth is only 184 feet. For the darkness of the water, the depth might as well be twice as great, and even shallow waters can hold surprises, such as traveling dolphins and beluga whales. Such sightings are rare, but the mere mention of these visitors was enough to hold the students' attention as Meghan spoke. They couldn't wait to retrieve the net and discover what they had caught.

Save The Bay's education programs make Narragansett Bay available to every student in the watershed, many who would be unlikely to visit the coast otherwise, like this group from the Bird School in Walpole, Massachusetts. They were participating in Save The Bay's Explore Your Estuary program, during which students study the Bay in the classroom, on the shoreline and on the water.

The classroom microscopes were fun, as was the shoreline crab-hunting, but the Bird School students were most excited when traveling out on the Bay aboard *Alletta Morris*. Their excitement grew when

they learned they'd be catching fish with a trawl, but first, they had to conduct a few water tests.

Save The Bay educators Meghan Kelly and Jeannine Louro helped the students collect two unique samples. Jeannine chose a volunteer to retrieve some surface water, with just a bucket and short line. A moment later the student presented the catch of green water to his class. Meanwhile,



*This Bird School student gets up close with two spider crabs pulled in during their trawl.*

Meghan and her volunteer prepared the special capsule needed to take a sample of bottom water. They lowered their bucket to the bottom, then closed the lid remotely by dropping a "messenger" weight down the line. When they were sure the lid was secure, they hauled in the 60-foot line and presented their sample to the class. There was no green hue of plankton; the bottom water was clear.

In fact, besides color, there were a number of differences between the two samples. The surface water was warm and brackish, while the bottom water was cold, salty and dense. The surface water, where the plank-

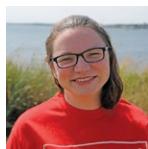
ton thrived, was rich with oxygen, but the sample from the bottom, where there were no plankton, had far less. Compared to its shallow counterpart, the deep water was like another substance entirely. The educators explained that while water layers might seem the same to us, to the creatures of the Bay, they mark aquatic regions as different as the regions of the earth, or as the moon and the sea.

Once the water tests were complete, all attention returned to the trawl lines at the rear of the boat. Working together, the team of students hauled the net back to the surface, and the boat crew quickly deposited the catch into onboard touch tanks. The yield was impressive, including many snails and hermit crabs, several stony spider crabs, a horseshoe crab and many flounder of different sizes. The students set about the tank, handling the crabs and snails and gently petting the flounder along their flanks.

Captain Alex Couturier noted that the catch had contained no fewer than nine unique animal species, plus many plants and seaweeds. Such a colorful haul is a testament to the biodiversity of the Bay, but the processes involved, the deep trawls and weighted messengers, also suggest the fascinating distance of the ocean bottom. The Bird School students had bridged that distance with long lines and nets, and for an afternoon, they had glimpsed that faraway place at the bottom of the Bay.

Bird School is 40 miles from the Bay, and some of these students had likely visited the Bay for the first and last time that year. But Narragansett Bay belongs to them as much as it does to the dolphins and whales that pop in on the course of longer journeys. If it's true that our oceans are more obscure than our moon, what an opportunity for our students, to take to the water and discover the Bay firsthand. Their journey is greater than a moonshot. ■

# THE DIETRICH FAMILY: A Tale of Never-Lapsing Membership



BY JACKIE CARLSON,  
MEMBERSHIP AND  
INDIVIDUAL GIVING MANAGER

To the Dietrich family, Narragansett Bay conjures nostalgic feelings of being together with family.

John and Dinusha Dietrich live in the Edgewood neighborhood of Cranston with their two children, Lia, 17, and Timothy, 12, and their dog, Bella, whom they often take for walks down to Stillhouse Cove. John, a professor at Bryant University, is a native Rhode Islander who grew up on Providence's East Side and has enjoyed the Bay his whole life. Dinusha, a pediatrician, grew up in Miami and has always loved being in, on or near the water. Lia and Timothy love the beach, especially in the summer months, but in the fall and winter as well. The whole family enjoys visiting Newport, where they discovered Save The Bay's hands-on Exploration Center and Aquarium and became Save The Bay Family members back in 2011.

Since then, the Dietrichs have been loyal members and volunteers. They've made the very most of their membership benefits by visiting the Exploration Center and Aquarium often (always for free, thanks to Corvias Solutions) and enjoying member discounts on seal watch tours out of Newport. Timothy has been a regular attendee of summer BayCamps, and both children have participated in other Save The Bay education programs.



After meeting Save The Bay Habitat Restoration Coordinator Wenley Ferguson, the Dietrich family ended up learning even more about Save The Bay's mission and developed an even stronger connection by becoming shoreline cleanup volunteers. "When you know someone who is involved in such important work, it makes it even more meaningful," said Dinusha.

With a shared passion for keeping the environment clean and healthy for the next generation, the Dietrichs feel it is very important to support Save The Bay. "At a national level, the environmental protection rollbacks can be really scary, so supporting groups that can make a difference at a local level is very important," Dinusha said.

When deciding which organizations to support, the Dietrichs choose organizations they are confident in, and Save The Bay's mission fits nicely into their family's passions. "We are confident that our donations are being put to good use. Save The Bay is a responsible and thoughtful organization and very mission driven. We know our dollars are being well-managed," Dinusha explains.

In 2015, these long-time supporters discovered Save The Bay's monthly giving option, which allowed them to increase their contribution with a recurring credit card charge each month. "We felt it was an easier way to give more and to ensure that we didn't forget to renew our annual support," said Dinusha.

From all of us at Save The Bay, thank you John, Dinusha, Lia and Timothy for your loyal support of Save The Bay! ■

## Become a Recurring Supporter

Some of our Save The Bay members and donors have chosen to participate in our monthly giving program, with an automatic monthly credit card charge. These monthly gifts help Save The Bay spend more money on the work protecting and improving Narragansett Bay and less on administrative costs. Monthly giving is an easy and affordable way for Save The Bay members to make their support go even further, and a way to ensure that Save The Bay membership never lapses.

If you are interested in having your membership spread out with a charge monthly, please contact Jackie Carlson, Membership and Individual Giving Manager at 401-272-3540 x106.



**Board of Directors**

Cheryl Nathanson  
*President*  
 Gilbert Conover  
*Vice President*  
 Justin DeShaw  
*Vice President*  
 Gail Ginnetty  
*Vice President*  
 Eugene McDermott, Esq.  
*Secretary*  
 Steve Geremia  
*Treasurer*

**Board Members**

Michael Blitzer  
 Robin Boss  
 George Coleman  
 Joseph "Bud" Cummings  
 Stephen Gerencser  
 Jenn Harris  
 Chris Lee  
 Lynn Manning  
 Anne Miller  
 Ruth Mullen  
 Alan Nathan  
 George Shuster  
 Samuel Slade  
 Robert Vierra  
 Alisson Walsh

**Board of Trustees**

Joan Abrams  
 Trudy Cox  
 Kate Kilguss  
 Sarah Beinecke  
 Richardson  
 Dr. Vincent Rose  
 H. Curtis Spalding  
 Ellicott Wright

**President's Leadership Council**

Alden Anderson, Jr.  
 Ruud Bosman  
 Nick and Wendy Bowen  
 Timothy Burns  
 Duncan and  
 Barbara Chapman  
 Steve Clark  
 Jemma Craig  
 Denise Dangremont  
 Elizabeth M. Delude-Dix  
 Joseph DiBattista  
 Bradford S. Dimeo  
 Patrick Driscoll  
 Anne G. Earle  
 Jonathan D. Fain  
 Mark J. Formica  
 Leslie Gardner  
 Thomas P. I. Goddard  
 Bob and Robin Hall  
 Peter Hallock  
 Steven Hamburg  
 Alan G. Hassenfeld  
 C. Michael Hazard  
 David and Susan Hibbitt  
 Mr. and Mrs. Richard  
 Higginbotham  
 Jennifer Hosmer  
 Kate and Howard Kilguss  
 Brooke Lee

Raymond T. Mancini  
 Brad Miller  
 F. Paul Mooney  
 Raymond F. Murphy, Jr.  
 Tim Palmer  
 Aidan and Kate Petrie  
 Warren Prell  
 Elizabeth Prince  
 Jeffrey Rasmussen  
 Michael Rauh  
 Sarah Beinecke  
 Richardson  
 Marty Roberts  
 Nancy Safer  
 Paul Salem  
 George Shuster and  
 Stephanie Van Patten  
 Jeffrey Siegal  
 Eric R. C. Smith  
 Hon. O. Rogerie  
 Thompson  
 Philip Torgan  
 Geoff Tuff  
 William Vareika  
 Kenneth W. Washburn  
 Ellicott Wright

**Executive Director**

Jonathan Stone

**Staff**

Joan Abrams  
 Kendra Beaver  
 Jess Bornstein  
 Tammy Camillo  
 Jackie Carlson  
 Kaitlyn Cedergren  
 Joshua Cherwinski  
 Grainne Conley  
 Leanne Daniels  
 Nicole Delos  
 Stan Dimock  
 Chris Dodge  
 Kathryn Dorchie  
 Katharine Estes  
 Lauren Farnsworth  
 Wenley Ferguson  
 Maureen Fogarty  
 Topher Hamblett  
 Letty Hanson  
 Stephany Hessler  
 Mike Jarbeau  
 Jennifer Kelly  
 Meghan Kelly  
 Mary Klimasewski  
 Adam Kovarsky  
 July Lewis  
 Jeanine Louro  
 Kate McPherson  
 Leslie Munson  
 Eric Pfirrmann  
 Bridget Kubis Prescott  
 David Prescott  
 Michael Russo  
 Cindy Sabato  
 Celina Segala

**Tides Editor:**

Cindy Sabato  
*Editorial inquiries to:*  
 tides@savebay.org

# SAVE THE DATE

**Artists for the Bay Show & Sale**

Opening reception: Thursday, November 29, 2018  
 6:00 - 8:30 p.m. • Bay Center, Providence

**21 Months, 147 Miles:****Lorena Pugh Paints the Bay**

Show runs through December 1, 2018  
 Dryden Gallery at Providence Picture Frame  
 27 Dryden Lane, Providence

**Westerly Seal Tours**

Weekends through December 15 and  
 daily December 27-31, 2018  
 Viking Marina, 19 Margin Street, Westerly

**Newport Seal Tours**

Weekends, November 10, 2018 - April 28, 2019  
 and some holidays  
 Bowen's Ferry Landing, 18 Market Square,  
 Newport

**Earth Day Birthday Celebration**

Kicking off Save The Bay's  
 50th Anniversary Celebration  
 Saturday, April 27, 2019  
 175 Memorial Blvd., Newport

**Annual Meeting & Taste of the Bay**

Thursday, June 13, 2019 • 5:30 – 9:00 p.m.  
 Bay Center, Providence

**43rd Annual Save The Bay Swim**

Saturday, July 27, 2019  
 Start: Naval War College, Newport  
 Finish: Potter Cove, Jamestown

## Connect with Us



Save The Bay is on social media, including Facebook, Twitter, Instagram and Blogger. Follow along, share your stories and pictures, plan a visit and spread the word about the importance of a healthy Narragansett Bay.

Like us on Facebook at: [facebook.com/savebaynarragansett](https://facebook.com/savebaynarragansett)

Follow us on Twitter at: [twitter.com/savethebayri](https://twitter.com/savethebayri)

Follow us on Instagram at: [instagram.com/savethebayri](https://instagram.com/savethebayri)

Read our blog at: [tides-blog.blogspot.com](https://tides-blog.blogspot.com)



# ARTISTS FOR THE BAY

## SHOW & SALE

CALL FOR SUBMISSIONS: OCT. 1-NOV. 5  
OPENING RECEPTION: NOV. 29, 6 P.M.

EXHIBIT & SALE: NOV. 29-JAN. 26  
CLOSING RECEPTION: JAN. 26, 11 A.M.

Featuring  
the work  
of over 60  
local artists,  
jewelers &  
artisans

50% of all  
proceeds  
benefit Save  
The Bay

**SAVE THE BAY®**

NARRAGANSETT BAY

*est. 1970*

[SAVEBAY.ORG/ART](http://SAVEBAY.ORG/ART)

ARTWORK BY BEV SILVA



100 Save The Bay Drive  
Providence, RI 02905  
SAVEBAY.ORG

**SAVE THE BAY®**

NARRAGANSETT BAY

non-profit  
US Postage  
PAID  
Providence, RI  
Permit No. 758

ADDRESS SERVICE REQUESTED



# Join Save The Bay today and help us protect Narragansett Bay.



BE PART OF A MOVEMENT, A TRADITION, A COMMUNITY  
DEDICATED TO PROTECTING AND IMPROVING NARRAGANSETT BAY.  
TOGETHER, WITH YOUR SUPPORT, WE:

- Serve as the VOICE of the Bay.
- ADVOCATE for clean water and a healthy environment.
- INSPIRE the next generation of Bay stewards.
- RESTORE rivers and coastal wetlands.
- LEAD the fight to protect Rhode Island's most valuable natural resource.

As a Save The Bay member, you enjoy: member rates on exciting public programming, invitations to special events, monthly member e-newsletter, biannual *Tides* magazine, discounts at local merchants, and more.

**JOIN TODAY!** [savebay.org/membership](https://savebay.org/membership)