

THE DELAWARE CENTER FOR THE INLAND BAYS

ANNUAL REPORT 2016



PARTNERS

WORKING TOGETHER FOR HEALTHY WATERS

LETTER FROM THE DIRECTOR

For me, science has always been the most exciting aspect of the Center's mission—2016 was thrilling in that respect. In November, the Center demonstrated continued improvements in Bay health with the publication of its five-year State of the Bays Report. The previous report, published in 2011, had shown some promising indicators of water quality. To see these improvements confirmed and continued five years later stopped me in my tracks.



Like most scientists, I am a healthy skeptic. Admittedly, it wasn't easy for me to accept the improvements that the environmental indicators showed; the decrease in concentration of excess nutrients and algae in the Bays seemed too good to be true. But as the news sank in, I realized the origin of these positive changes.

The Bays became healthier because of your support. They are healthier because of every person who applied themselves to protect these beautiful and productive estuaries. From farmers to engineers, to business owners, municipal officials, scientists, educators, and volunteers—all of these folks have put their energy into solving environmental problems together. These efforts are paying off through the partnerships that the Center fosters.

I hope that you enjoy reading about the Center's other shared successes in 2016. It is my hope that 2016 is the beginning of a continued and accelerating restoration of the Bays. I know that through continued partnerships there are more great things to come.

Thank you for all that you do to preserve, protect and restore Delaware's Inland Bays, the water that flows into them, and the watershed around them.

A handwritten signature in black ink, appearing to read 'Chris Bason'. The signature is fluid and cursive, written on a white background.

Chris Bason
Executive Director

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DELAWARE CENTER FOR THE
INLAND BAYS
Research. Educate. Restore.

LIVING SHORELINES

HEALTHY BAYS NEED LIVING SHORELINES



CIB staff and partners survey the North Beach shoreline in Dewey Beach where wind, wave energy and boat wakes are causing erosion. Dewey Beach's Sunset Park was selected as a demonstration living shoreline that will be engineered in partnership with the Town to address stormwater and shoreline protection.

Healthy Bays require resilient, healthy, and natural shorelines that will not only prevent erosion, but also mitigate the impacts of increased flooding—a visible symptom of climate change affecting the watershed.

Traditionally, hardened shorelines (like bulkheads and rip-rap) are used to stabilize shorelines. But these techniques can actually increase erosion on nearby shores, eliminate sandy beaches and natural marshes, and reduce the shallow water habitats that provide nurseries and shelter for fish and wildlife. On Indian River Bay and Rehoboth Bay, more than 20% of the shoreline has already been hardened.

The CIB is a founding partner of the Delaware Living Shoreline Committee, partners statewide working together to promote new alternatives that protect against erosion while preserving the function and beauty of a natural shoreline.

In 2016, the CIB was awarded a grant from the Delaware Water Infrastructure Advisory Council to identify priority sites for living shoreline demonstration projects. The CIB designed five projects where we will be working with communities, property owners, and municipalities on demonstration living shorelines. Each demonstration site represents different shoreline conditions, restoration techniques and materials to address shoreline erosion. These projects offer opportunities to demonstrate the advantages of living shorelines while working with communities, property owners, marine contractors, landscape architects and contractors, and public officials.

Promoting the use of living shorelines is a major focus of our efforts. In March 2016, we conducted a two-day technical training on the design, permitting and installation of living shorelines to 34 marine contractors, engineers, and landscape architects. We also presented our living shorelines exhibits at community events throughout the year.

CITIZEN SCIENTISTS

GATHER CRITICAL DATA ON FISH AND HORSESHOE CRABS IN THE BAYS

After a successful tagging event on July 3, 2016, a young citizen scientist releases a horseshoe crab back into Rehoboth Bay.

During 2016, over 200 citizen scientist volunteers conducted the CIB's annual Inshore Fish and Horseshoe Crab Surveys.

Completing over 1,300 hours of work, the teams from both surveys collected data that assists the CIB and its partners in understanding the abundance and variety of fish species found in the Inland Bays, as well as the number of spawning horseshoe crabs and the male-to-female ratio of their populations.

Since its inception in 2011, the inshore fish survey has identified 74 species of fish at the seventeen survey sites around the three Bays. The data collected has documented which species use inshore areas and at what stages in their life cycle they use them. With additional years of data, long term trends will show changes in abundance over the last decade and highlight the effects of positive or negative trends in water quality.



The horseshoe crab survey has tagged 5,581 horseshoe crabs since 2002, with the majority of tagging occurring over the last four seasons. Crab counts have demonstrated a regional difference in sex ratios between the Inland Bays and the Delaware Bay, with the Inland Bays having a higher male to female ratio in four of the last five years.

The CIB also provides support to the University of Delaware's Citizen Monitoring Program, which provides data for the State of the Inland Bays Reports.

CLEAN WATER

WATER WARRIORS NEEDED TO MAKE THE CASE FOR CLEAN WATER IN DELAWARE

On June 7, 2016, over 120 people and 15 exhibitors rallied outside of Legislative Hall in Dover to show their support for clean water funding. Two young visitors stopped by the CIB table to check the watershed model and stayed awhile!

Contaminated water doesn't just affect fish and wildlife—it affects our everyday lives from the food we eat and the water we drink, to the trips we take to our beaches and bays.

100 miles of Delaware's waters have fish-consumption advisories caused by high PCBs, metals, and pesticides in the water, and 86% of the state's rivers and streams are not recommended for swimming due to high levels of bacteria.

Solving these problems will cost money. The Clean Water Alliance's campaign, titled 'Clean Water: Delaware's Clear Choice', is working with its many Alliance members, including the CIB, to help secure citizen and legislative support for additional funding for clean water projects for the coming years.



In 2016, the CIB hosted a Water Warrior Workshop for volunteers, collected 198 signatures of support at outreach events throughout the watershed, and participated in the 2016 Clean Water Rally at Legislative Hall in Dover to inform and empower the public to advocate for clean water in their own communities and statewide.

RESTORING LAND

FOR WILDLIFE AND CLEAN WATER— CREATING
PRODUCTIVE, CONTIGUOUS FORESTS



In 2016, 47 volunteers teamed up with the CIB, The Nature Conservancy in Delaware, and DNREC Division of Parks and Recreation, to reforest 37 acres of former cropland at Bullseye-Ferry Landing Preserve near Millsboro and the Perry Tract at Angola Neck Preserve near Lewes.

Viewed as a win for native wildlife, local residents, and our Inland Bays—these sites will no longer be fertilized, and the trees planted can help remove some of the nutrient pollution in the soil and groundwater. It is estimated that we will see a pollution reduction of 15 pounds of phosphorus and 592 pounds of nitrogen to the Bays annually—that's an impact equivalent to removing 55 small septic systems from the watershed!

CIB volunteers and students from Sussex Technical High School teamed up to reforest the Bullseye-Ferry Landing Preserve. The project took a combined total of 152 volunteer hours!

By reforesting cropland adjacent to other forested areas, the projects are reducing the amount of "edge habitat" (smaller, less-productive areas next to roads, fields and developed areas) and creating a good chunk of "interior habitat" (contiguous, healthy forest).

The 31 new acres of interior habitat created at Bullseye Ferry Landing Preserve and 6.26 acres at the Perry Tract at Angola Neck Preserve, will provide nesting and foraging habitat for native birds and wildlife like the Delmarva fox squirrel, the Cope's gray tree frog, and songbirds including the wood thrush, scarlet tanager, and yellow-throated warbler.

THANK YOU

TO OUR GENEROUS DONORS

Names listed reflect those who donated during the 2016 Fiscal Year 10/2015-9/2016

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THANK YOU, CIB VOLUNTEERS!

During 2016, 449 of our volunteers logged an outstanding 3,374 hours of work by participating in outreach events, bagging oyster shells, planting trees, completing citizen science surveys, and more! Together, these volunteer services are valued at approximately \$79,491.44! Thank you for being "on board with the bays!"

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**Statements of Assets, Liabilities and Fund Balances—Accrual Basis
 September 30, 2016 and September 30, 2015**

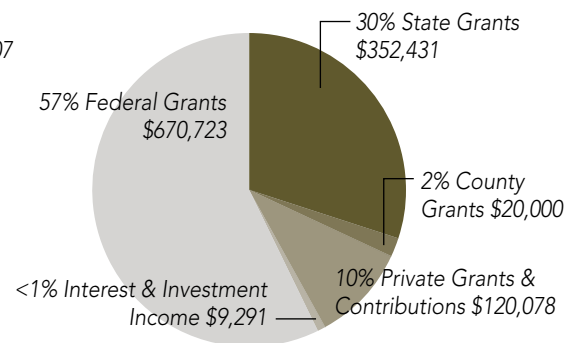
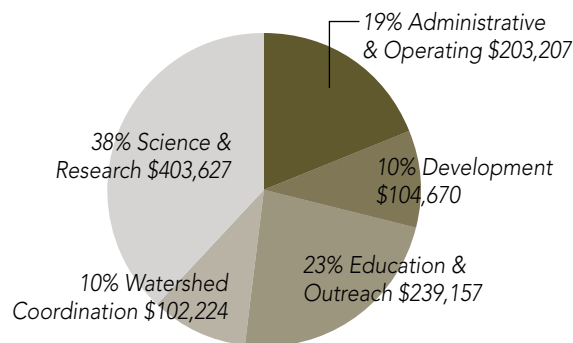
ASSETS

Current Assets	2016	2015
Cash	\$ 439,957	\$ 342,731
Grants receivable	204,621	198,700
Prepaid expenses	26,881	13,112
Accounts receivable	4,370	3,650
Total Current Assets	675,829	558,193
Property, Plant and Equipment (at Cost)		
Land	125,000	125,000
Building	887,716	885,216
Furniture and Equipment	343,286	327,187
	1,356,002	1,337,403
Less Accumulated Depreciation	(554,021)	(527,826)
Net Property, Plant and Equipment	801,981	809,577
Other Assets		
DE Community Foundation Endowment Fund	115,480	108,076
Total Assets	1,593,290	1,475,846

LIABILITIES AND NET ASSETS

Current Liabilities	2016	2015
Accounts Payable	\$ 16,653	\$ 17,324
Payroll Taxes	2,043	1,264
Accrued Salaries and Benefits	24,717	27,019
Total Current Liabilities	43,413	45,607
Net Assets		
Unrestricted		
Board Designated*	115,480	108,076
Invested in Property and Equipment	676,981	684,577
Undesignated	227,792	212,923
Total Unrestricted	1,020,253	1,005,576
Temporarily Restricted	404,624	299,663
Permanently Restricted**	125,000	125,000
Total Net Assets	1,549,877	1,430,239
Total Liabilities and Net Assets	\$ 1,593,290	\$ 1,475,846

* Endowment Fund ** Protected Land





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The 2016 State of the Bays Report was released in November—a compilation of environmental data about the Bays and the surrounding land.

The report, which is published every five years, provides communities, decision makers, and concerned citizens with data to support actions and advocacy for protection and restoration of Inland Bays waterways and watershed.

The report can be viewed online at inlandbays.org. Copies of the report are available at the CIB office.

