

DELAWARE INLAND BAYS PUBLIC EDUCATION & ENGAGEMENT PLAN



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INTRODUCTION

The Delaware Center for the Inland Bays (Center) was established as a nonprofit organization in 1994 under the auspices of the Inland Bays Watershed Enhancement Act (Title 7, Chapter 76). It's mission is to preserve, protect, and restore Delaware's Inland Bays and their watershed. The Center is one of 28 National Estuary Programs (NEPs) and works with diverse partners on science-based: research, restoration, education, outreach, public policy, and advocacy.

Inland Bays Comprehensive Conservation & Management Plan

The Center focuses on promoting the wise use and enhancement of the Inland Bays and their watershed through the oversight of the Inland Bays Comprehensive Conservation and Management Plan (CCMP). Each NEP develops and implements a CCMP, which is a long-term plan that outlines goals and actions to address water quality and living resource challenges and priorities. The original CCMP was created in 1995 and updated in 2012. A years-long process has led to the updated, revised CCMP in 2021. The revised CCMP reflects new science and information gathered since 2012, as well as new understandings of the shifting landscape.

Delaware's Inland Bays

The Delaware Inland Bays are three shallow interconnected coastal lagoons situated behind a narrow barrier island that separates them from the Atlantic Ocean. The Bays and tidal tributaries cover approximately 32 square miles. The Inland Bays watershed comprises approximately 292 square miles of eastern Sussex County, Delaware. Based on 2017 estimates, land use and land cover in the watershed is 29% agriculture (including crops, orchard, and pasture), 14% upland forest, 12% open water (including the Bays and creeks), and 26% developed and developing lands.

There are many different habitats present in the Inland Bays watershed, including saltmarsh, maritime forest, freshwater wetlands, underwater baygrass meadows, intertidal flats, and sandy beaches. These habitats are home to a variety of plant and animal species, from resident and migratory birds (e.g., ospreys, herons, egrets, and bald eagles) to spawning fish (e.g., striped bass, herring, American shad, and American eels) to iconic species that nest on the Bays' sandy beaches (e.g., Diamondback terrapins and horseshoe crabs).

After years of accumulated nutrient pollution and habitat loss, driven by changes in the landscape, the conditions of the Bays have declined. There were once clear waters, plentiful baygrasses, productive oyster reefs, and oxygen levels that supported diverse and abundant fish populations. The Bays are now generally murky, dominated by algae, have very few baygrasses or oysters, and have unhealthy dissolved oxygen levels. Every five years the Center produces a State of the Bays Report which is a compilation of environmental data about the Bays and their

watershed. To assess the health of the Inland Bays, a suite of environmental indicators—specific species and conditions—is selected and measured over time to determine how the Bays are changing and how much progress has been made toward restoration goals. While the 1995 CCMP guided many successes to improving the Bays, like eliminating or mitigating all direct sources of pollution to the estuary, new challenges have risen such rapid changes in land use and climate change and associated sea-level rise. Some of the following data from the 2021 State of the Bays Report (anticipated summer 2022) supports the priorities outlined in the revised CCMP and drives the need to address these challenges through the collaborative efforts of the Public Education and Engagement Plan:

- Nonpoint source loads have not significantly decreased.
- All three Bays remain well above the goals for nitrogen, with no significant decrease over time. Only 36% of the water quality monitoring stations sampled in the Bays from 2016 to 2020 had healthy levels of nutrients that met water quality standards.
- Nitrogen concentrations in a number of tributaries continue to far exceed the levels needed to allow baygrasses to reestablish and allow for healthy dissolved oxygen levels.
- The upper Indian River experiences large-scale mahogany tide blooms in mid- to late summer each year, resulting in extremely low dissolved oxygen conditions and fish kills.
- Sussex County’s population increased 110% between 1990 and 2020. The Inland Bays’ population rose 145% during that same time period. The rapid increase of population and development within the watershed corresponds with an increase in impervious cover.
- Between 1992 and 2017, there has been an 18% loss in forest, 6% loss in wetlands, and 19% loss in agriculture with a 78% increase in developed/developing lands.
- Annual precipitation and the frequency of intense storms is increasing.
- Sea level has risen 15.7 inches since 1900.

PEEP OVERVIEW

Purpose

The Inland Bays Public Education and Engagement Plan (PEEP) is a living, 5-year action plan that was developed by the Center in collaboration with a network of entities working throughout the Inland Bays watershed and beyond. Through the development and implementation of the actions outlined in the plan, the goal is to collectively enhance public awareness of and engagement in the health of coastal ecosystems and the communities that depend on them. This plan will serve as a supporting document to the revised Inland Bays CCMP while guiding partners to leverage diverse knowledge, resources, and skill sets to meet mutual education and outreach goals throughout the region.

History

Beginning in 2020, numerous entities were invited to participate in the PEEP as either a partner or supporter (see below for descriptions and participant list). Due to the impacts of the COVID-19 pandemic, the Center strategically organized participants into three working groups based on their main areas of focus (i.e., Environmental, Education, and Community) for the purposes of coordinating smaller-scale virtual meetings during the planning stage. A survey was distributed to participants in an effort to help Center staff learn more about their organization, identify shared goals and challenges, prompt creative thinking, and pre-populate the collaborative online workspace (Padlet) used during the workgroup meetings. A series of three virtual meetings were held with each workgroup from February - April 2021 respectively. The meetings were intended to provide an overview of the PEEP, identify shared education/outreach needs and goals across entities, and hold an interactive discussion to guide the development of actions to be included in the plan.

Following the workgroup meetings, the Center compiled the notes across each session in order to prepare a drafted action plan and seek feedback from the partners. Upon completion of the plan, the PEEP partners will work together to implement the actions outlined over the plan's 5-year timeline (fall 2022 - fall 2027).

Moving forward, the Center will coordinate an annual workgroup meeting for PEEP partners to share progress updates and identify any necessary changes to the living, 5-year plan (e.g., changes to action items and/or participating entities). Additionally, the Center will explore options for developing a listserv or online platform to foster ongoing collaboration and resource sharing between both PEEP partners and supporters.

Participating Entities

Partners

Role: Provide stakeholder input during one workgroup meeting or call with a Center representative, assist the development and review of the action plan, collaborate on one or more actions outlined in the plan, and participate in the listserv/online workgroup platform.

1. Delaware Center for the Inland Bays (CIB)
2. Delaware Center for the Inland Bays' Citizens Advisory Committee (CAC)
3. Delaware Department of Natural Resources and Environmental Control Division of Fish and Wildlife (DNREC FW)
4. Delaware Department of Natural Resources and Environmental Control Division of Watershed Stewardship (DNREC WS)
5. Delaware Master Naturalists Program (MNP)
6. Delaware Nature Society (DNS)

7. Delaware Sea Grant (DESG)
8. Maryland Coastal Bays Program (MCBP)
9. Partnership for the Delaware Estuary (PDE)
10. Resilient and Sustainable Communities League (RASCL)
11. Southern Delaware Tourism (SDT)
12. Sussex Conservation District (SCD)
13. Sussex County Association of Realtors® (SCAOR)
14. University of Delaware Cooperative Extension (UDCE)
15. U.S. Environmental Protection Agency - Region 3

Supporters

Role: Provide stakeholder input during one workgroup meeting or call with a Center representative and/or participate in the listserv/online workgroup platform.

1. Association of Coastal Towns
2. Camp Arrowhead
3. Delaware Botanic Gardens
4. Delaware Department of Natural Resources and Environmental Control Division of Climate, Coastal and Energy Delaware National Estuarine Research Reserve
5. Delaware Department of Natural Resources and Environmental Control Groundwater Discharges Section
6. Delaware Seashore State Park
7. Indian River School District
8. La Esperanza
9. Sussex Academy
10. Sussex County Association of Towns

ACTION PLAN STRUCTURE

Elements

The PEEP action plan is structured into Themes, Objectives, Methods, and Actions. Together, they detail the efforts the partners plan to undertake throughout the watershed and beyond over the next five years.

Themes

Themes in the context of the PEEP reflect the core elements and their respective goals outlined in the 2021 revised CCMP (Themes 1-6) as well as those identified in collaboration with PEEP partners and supporters during the planning stage (Theme 7). These serve as the overarching

priorities of the PEEP and will help to guide the Center and its partners to implement the efforts outlined within this plan. These are as follows:

- Theme 1: Living with Climate Change
 - Goal: Help communities in the Inland Bays watershed understand, mitigate, and adapt to the impacts of climate change.
- Theme 2: Clean Waters: Healthy Agricultural Landscapes
 - Goal: Work with the agricultural community to implement TMDLs (total maximum daily loads) of pollution to improve water quality and to protect and restore fish and wildlife habitat.
- Theme 3: Clean Waters: Reducing Pollution from the Developed Landscape
 - Goal: Reduce the impacts of the developed landscape on water quality and wildlife habitat.
- Theme 4: Healthy Bay Ecosystems: Protect and Restore Thriving Habitats for Wildlife
 - Goal: Restore, enhance, and protect ecosystems of the Inland Bays estuary taking climate change adaptation into consideration so that they are healthy, productive, and resilient for the benefit of both people and the natural environment.
- Theme 5: Coordinated Land and Water Use Management
 - Goal: Use science and cross-jurisdictional governance to sustainably manage the effects of population growth while maintaining and improving water quality and access in the Inland Bays.
- Theme 6: Education, Outreach, and Marketing
 - Goal: Educate communities about the environmental and economic importance of the Inland Bays and provide opportunities for the public to support restoration efforts.
- Theme 7: Diversity, Equity, Inclusion, and Justice
 - Goal: Better understand, learn from, and equitably engage with all stakeholders within the Inland Bays watershed including underrepresented groups.

Objectives

Objectives specify the goals PEEP partners aim to achieve under each Theme.

Methods

Methods define the type of education effort that PEEP partners will implement to achieve the Objectives. This organizational approach allows for improved planning and collaboration of diverse efforts across multiple entities. Methods are categorized as follows:

- Event (e.g., conference, educational festival)
- Presentation/Workshop
- Program (e.g., multi-day educational offering, initiative, citizen science, volunteer program, etc.)
- Publication (e.g., factsheet, brochure, flyer, signage, etc.)

- Social Media
- Television/Radio
- Video
- Web Resource

Actions

Actions are the particular activities categorized for each Method that will be implemented in order to meet the associated Objective(s) listed under each Theme. Details associated with each Action include a general description, lead (i.e., PEEP partners that have volunteered to carry out the Action to the best of their ability pending resources and capacity), target audience, long-term intended outcome(s), frequency, and anticipated completion date. Note: CCMP actions linked to specific PEEP actions have been noted if/where appropriate within the general description. More details on CCMP actions can be found within the 2021 CCMP [Appendix C](#).

Target Audiences

As of April 2020, the population of Sussex County reached 237,378 people. According to the 2020 U.S. Census Bureau data, the largest racial/ethnic origin in the county are: White (83.0% alone; 75.4% White alone, not Hispanic or Latino), followed by Black or African American alone (12.2%), Hispanic or Latino (9.3%), two or more races (2.2%), Asian alone (1.4%), and American Indian and Alaska Native alone (1.1%). The age and sex demographics reported 51.6% females with 28.7% persons 65 years of age and over, followed by persons under 18 years (18.3%) and under 5 years (5.0%). Between 2015-2019, the median household income in 2019 was \$63,162 (\$35,491 per capita in 2019) with 11.0% of persons in poverty. The Center and its partners are interested in learning more about multiple tools (e.g., EJSCREEN) and approaches to better understand the full scope of stakeholders in the community and effective methods to engage with each appropriately.

Within the “general public” stakeholder group, there are numerous sub-groups (listed alphabetically below) to be considered. Reaching all stakeholders within the focus area is essential for addressing the guiding priorities of the PEEP. For example, the beauty of the Bays and the myriad of benefits they provide attract hundreds of thousands of tourists and outdoor recreationalists each year. Communicating how their actions, and the actions of the businesses who regularly engage with them, affect the Bays and surrounding areas is key for fostering connections with the local environment and active participation in their protection. With development on the rise, it is also critical for existing and newly established residents to be informed and engaged in the preservation of their community’s natural resources. Additionally, educating youth throughout the region is vital in order to inspire the next generation of environmental stewards. Messages that may assist in further reaching and connecting with these audiences in meaningful ways will be explored.

- Businesses/Professionals (e.g., engineers, realtors, restaurants, landscapers, marine contractors, healthcare practitioners, etc.)
- Decision Makers (e.g., elected/appointed officials, regulators)
- DEIJ Communities (e.g., Spanish-speaking communities, communities of color, LGBTQIA, low income, persons with disabilities, etc.)
- Educators (e.g., teachers, mentors, tutors, etc.)
- Farmers
- Homeowner Associations (HOAs)
- K-12 & Post-Secondary School Students
- Outdoor Recreationists (e.g., fishermen, crabbers, boaters, kayakers, gardeners, etc.)
- Residents (full time and seasonal property owners)
- Tourists (i.e., non tax-paying visitors)
- Youth Groups (e.g., Boy Scouts of America, 4-H clubs, camps, daycares, etc.)

Measuring Progress

Performance measures (quantitative and qualitative) used to evaluate the success of the intended long-term outcome(s) of each Action may include, but not be limited to, the following:

- Number of participants
- Number of publications distributed or signs installed
- Pre and post-program participant survey data
- Quantity (lbs) of debris removed from the environment
- Social media engagement (e.g., likes, followers)
- Number of video views
- Website traffic data

ACTION PLAN

Key:

Cost Estimate for Implementation: Estimates per Theme are categorized as follows:

\$ — Less than \$50,000

\$\$ — \$50,000 - \$100,000

\$\$\$ — Over \$100,000

Intended Long-Term Outcomes

1. Increased knowledge and/or skillset(s)
2. Positive behavior change (e.g., target audiences' adoption of stewardship practices)
3. Increased engagement (e.g., target audiences' participation in education or volunteer programs, projects/initiatives, social media platforms, community decision making, etc.)

4. Improved natural resource conditions (e.g., improved water quality, increased shoreline stability, enhanced wildlife habitat, reduction of debris, etc.)

Theme 1: Living with Climate Change

Cost Estimate for Implementation: \$\$

Objective 1.1: Increase public awareness of and engagement in climate change and sea level rise adaptation and mitigation.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Publication	Educate about sea level rise in interpretive signage at the James Farm Ecological Preserve (EO 3-1)	CIB	Residents, Tourists	1	1	2023
Program	Offer professional development opportunities for educators focused on climate change & sea level rise (e.g., presentations, conferences, teacher training)	DESG	Educators	1, 3	1/year	2023
Presentation / Workshop	Educate individuals to understand, mitigate and adapt to severe weather events, sea level rise, and flooding and stormwater (CC 1-1)	CIB, DESG, DNS, RASCL	Businesses / Professionals, Decision Makers, HOAs, Residents	1, 2, 3	Ongoing	Ongoing
Publication, Social Media, Television / Radio	Educate about community resiliency (e.g., mitigation & adaptation, emergency preparedness) (CC 1-1; EO 3-1)	CIB, DESG, PDE, RASCL	Businesses / Professionals, Decision Makers, Residents	1, 2, 3	Ongoing	Ongoing

Objective 1.2: Increase awareness related to marsh migration and planning for marsh migration.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Publication	Develop & distribute marsh migration educational materials	DNREC, WS, MCBP	Farmers, Residents	1, 3, 4	Ongoing	Ongoing
Presentation	Educate and promote wetland stewardship practices	DNREC WS	HOAs, local groups, Residents	1, 2, 3	Ongoing	Ongoing
Video	Develop videos of wetland assessments	MCBP	Residents	1, 4	Ongoing	Ongoing
Publication	Include marsh migration in interpretive signage (e.g., James Farm Ecological Preserve) (EO 3-1)	CIB	Residents, Tourists	1	1	2023

Objective 1.3: Increase awareness and use of renewable energy sources.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Presentation / Workshop	Educate the use of renewable energy sources (e.g., presentation / hands-on activity) (CC 1-2)	CIB, DESG	Residents, K-12, Youth Groups	1, 2	3/year	Ongoing
Social Media	Educate home and workplace energy conservation practices and combustion contributions to atmospheric pollution	MCBP	Businesses / Professionals, Residents	1, 3	Ongoing	Ongoing

Theme 2: Clean Waters: Healthy Agricultural Landscapes

Cost Estimate for Implementation: \$

Objective 2.1: Promote and celebrate those in the agriculture sector who are good stewards of the environment.

Method	Action	Lead	Target	Intended	Frequency	Anticipated
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			Audience	Outcome		Completion
Social Media	Highlight environmental stewards in agriculture (AG 1-2; EO 3-1)	CIB, MCBP, SCD	Farmers, Residents	1, 2, 3, 4	Ongoing	Ongoing
Program, Social Media	Educate the importance of regenerative agriculture practices (AG 1-3; EO 3-1)	DNS, MCBP, SCD	Farmers, Residents	1, 2, 3, 4	Ongoing	Ongoing
Program	Offer “Living Local” program highlighting small-scale farms employing best management practices	MCBP	Educators, K-12 & Post-Secondary Students, Residents, Tourists	2	Ongoing	Ongoing

Theme 3: Clean Waters: Reducing Pollution from the Developed Landscape

Cost Estimate for Implementation: \$\$\$

Objective 3.1. Conduct clean water educational initiatives.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Publication, Social Media, Web Resource	Educate about relationship between poverty rates and access to public drinking water/sewer systems (EO 2-3; EO 3-1; EO 3-4)	CIB, DNS	Businesses / Professionals, Residents, Decision Makers	1, 3	Ongoing	2022; Ongoing
Program	Educate importance of sustainable funding for clean water and conservation (EO 2-3)	CIB, DNS	Decision Makers, Residents	1, 3, 4	Ongoing	Ongoing
Program	Educate and encourage responsible stormwater management practices through the	SCD	Businesses / Professionals	1, 2, 3, 4	Ongoing	Ongoing

	Conservation Stewardship Award					
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Objective 3.2. Increase knowledge of and engagement in voluntary actions that improve the health of the natural resources and communities (e.g., backyard buffer care, stormwater pollution reduction, native plant use, septic system maintenance & central sewer education, shell recycling, etc.).

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Publication	Publish and distribute waterfront property owner guidebook (EO 3-1; EO 3-4; HB 3-1)	CIB	HOAs, Residents	1, 2, 3, 4	Ongoing	2022; Ongoing
Presentation/ Workshop	Deliver education presentations and/or workshops on diverse topics that improve natural resource health (e.g., stormwater best management practices) (EO 3-4, DL 1-2; DL 1-3; DL 1-4)	CIB, CAC, DNS, UDCE, SCD	Business / Professionals, HOAs, Residents, Tourists	1, 2, 3, 4	1-5/year	Ongoing
Web Resources	Promote benefit of sustainable landscaping practices for buffer zones, biodiversity, and climate (EO 3-1; EO 3-4; DL 1-2)	CIB, SCD, UDCE, DNREC	Business / Professionals, HOAs, Residents	1, 2, 3, 4	Ongoing	Ongoing
Publication, Social Media	Share educational messages and resources about septic systems and central sewer (DL 1-3; DL 1-4; EO 3-1; EO 3-4)	CIB, DNS	Residents	1, 2, 4	Quarterly	Ongoing
Presentation/ Workshop	Educate about septic systems and central sewer (DL 1-3; DL 1-4; EO 3-4)	CIB	Residents	1, 2, 3, 4	Ongoing	Ongoing

Presentation/ Workshop	Educate the wise use of fertilizer and impacts of runoff (DL 1-2; EO 3-4)	CIB, SCD, UDCE	Business / Professionals, HOAs, Residents	1, 2, 3 4	1/year	Ongoing
Publication, Social Media	Educate target audience on the wise use of fertilizer and impacts of runoff (DL 1-2; EO 3-1; EO 3-4)	CIB, DNS, SCD, UDCE	Business / Professionals, HOAs, Residents	1, 2, 3, 4	Quarterly	Ongoing
Program	Engage restaurants in oyster shell recycling programs statewide for restoration projects (HB 5-2)	CIB, DNREC WS	Businesses / Professionals	1, 2, 3, 4	Ongoing	Ongoing
Program	Engage residents in oyster gardening (EO 4-1)	CIB	Residents	1, 3, 4	Ongoing	Ongoing

Objective 3.3. Increase the awareness of and engagement in the prevention and removal of marine debris in the environment.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Event	Host community clean up event (EO 2-2)	CIB, DNREC FW, DESG, PDE, MCBP	Outdoor Recreationists, Residents, Tourists	1, 2, 3, 4	1/year	Ongoing
Event	Coordinate volunteer-based derelict crab pot removal events (EO 2-2)	CIB, DESG	Residents	1, 2, 3, 4	1/year	Ongoing
Presentation/ Workshop	Educate individuals about marine debris, including microfibers, derelict fishing gear, single-use plastic, etc. (EO 2-2)	CIB, DESG	Business / Professionals, Educators, K-12 & Post -Secondary School Students, Outdoor Recreationists,	1, 2, 3, 4	1/year	Ongoing

			Residents, Tourists			
Web Resource	Develop a story map highlighting examples of existing shoreline cleanups in the state	DESG	Residents, Tourists	1, 2, 3, 4	Ongoing	Ongoing
Publication, Social Media, Television / Radio	Educate about marine debris issues through educational messaging and resources (EO 2-2; EO 3-1)	CIB, DESG	Business / Professionals, Educators, K-12 & Post-Secondary School Students, Outdoor Recreationists, Residents, Tourists	1, 2, 3, 4	Quarterly	Ongoing

Theme 4: Healthy Bay Ecosystems: Protect and Restore Thriving Habitats for Wildlife

Cost Estimate for Implementation: \$\$

Objective 4.1: Research, enhance, and protect existing wildlife habitat.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Presentation / Workshop, Publication, Social Media	Educate on invasive species (e.g., plants) and management (HB 6-2; EO 3-1)	CIB, MNP, UDCE	Residents, Outdoor Recreationists	1, 2, 3, 4	Ongoing	Ongoing
Presentation, Social Media	Communicate findings of the 2021 State of the Bays Report (EO 3-1; EO 3-3)	CIB	Businesses / Professionals, Decision Makers, HOAs, Outdoor Recreationists, Residents	1, 2, 3, 4	Ongoing	Ongoing
Social Media	Educate the importance of contiguous forests to prevent habitat fragmentation	DNS	Residents	1, 4	Ongoing	Ongoing

Social Media	Educate the value of ecosystem-based management of fisheries (HB 2-3; EO 3-1)	CIB, DESG	Outdoor Recreationists, Residents	1, 4	Ongoing	Ongoing
Social Media	Educate the importance of migratory fish and fish passages (HB 2-2; EO 3-1)	CIB	Outdoor Recreationists, Residents	1, 4	Ongoing	Ongoing
Social Media	Educate the benefits of local shellfish farming (HB 5-2; EO 3-1)	CIB	Residents, Tourists	1, 3, 4	Ongoing	Ongoing

Objective 4.2: Educate and promote effective stormwater and shoreline management alternatives.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Event	Host tour of local living shoreline sites (HB 3-1)	CIB, SDT	HOAs, Residents	1, 2, 3, 4	1-5	2027
Program	Educate and increase the adoption of living shorelines and green infrastructure (HB 3-1)	CIB, DESG, DNREC, WS, PDE	Businesses / Professionals, HOAs, Residents	1, 2, 3, 4	Ongoing	Ongoing
Web Resources	Improve and increase visitation to the Delaware Living Shorelines Committee website (HB 3-1; EO 3-1)	CIB, DNREC, WS	Businesses / Professionals, Residents	1, 2, 3, 4	Ongoing	Ongoing
Social Media, Publication, Video	Educate about benefits of living shorelines (HB 3-1; EO 3-1)	CIB, DNREC	HOAs, Residents	1, 2, 3, 4	Ongoing	Ongoing
Publication	Develop and install educational signage at restoration sites (e.g., living shorelines) where appropriate (HB 3-1; EO 3-1)	CIB, DNREC	Decision Makers, HOAs, Residents, Tourists	1, 3, 4	Ongoing	Ongoing

Objective 4.3: Protect Diamondback terrapin populations.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Publication, Social Media	Share terrapin garden educational resources (EO 3-1)	CIB	HOAs, Residents	1, 2, 3, 4	Ongoing	Ongoing
Publication, Social Media	Educate the public on the importance of and threats to Diamondback terrapins (e.g., derelict crab pots, habitat loss, road mortality) (EO 3-1)	CIB, DESG	Businesses / Professionals, HOAs, Outdoor Recreationist, Residents, Tourists	1, 2, 3, 4	Ongoing	Ongoing

Theme 5: Coordinated Land and Water Use Management

Cost Estimate for Implementation: \$\$

Objective 5.1: Increase public access to water, focused on low-impact recreation and education.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Publication	Develop a plan to educate the importance of improved and expanded public water access for low-impact recreation and education purposes (CM 1-1b)	CIB, SDT	Businesses / Professionals, Outdoor Recreationists, Residents, Tourists	1, 3	1	2027

Objective 5.2: Educate benefits of open space preservation.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Program, Social Media	Educate the importance of open space and farmland preservation (EO 3-1)	CIB, DNS	Decision Makers, Residents	1, 3, 4	Ongoing	Ongoing

Objective 5.3: Educate eligible landowners about wetland restoration and conservation options.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Web Resource	Develop online materials and communications to educate landowners on wetland restoration and conservation options	DNREC WS	Residents	1, 2, 3, 4	Ongoing	2027
Social Media	Educate the importance of wetland restoration and conservation (EO 3-1, HB 4-1)	CIB, DNREC WS	HOAs, Residents	1, 2, 3, 4	Ongoing	Ongoing
Presentation / Workshop	Educate wetland restoration and conservation upon request and at public events	DNREC WS	HOAs, Residents, Tourists	1, 2, 3	Ongoing	Ongoing

Objective 5.4: Improve wetland conservation and management (e.g., better buffers, freshwater wetland program support, fewer impacts from development, incorporating green infrastructure, reduced litter and pollution, promoting native plants) through educational and voluntary means.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Program	Support efforts to explore options for a state freshwater wetland protection program	DNREC WS, DNS, UDCE	Decision Makers	1, 2, 4	Ongoing	Not available
Publication	Translate the results of latest status and trends report with wetland maps for promoting informed planning purposes	DNREC WS	Decision Makers	1, 3	Ongoing	Ongoing
Presentation	Educate the benefits of wetlands and share the status and trends of wetlands statewide to promote informed planning decisions	DESG, DNREC WS, RASCL	Decision Makers, Residents	1, 3	Ongoing	Ongoing

Social Media	Educate the benefits of freshwater wetlands, health and function of wetlands, and protection (EO 3-1, HB 4-1)	CIB, DNREC WS, DNS	HOAs, Residents	1, 2, 3, 4	Quarterly	Ongoing
Web Resources	Develop educational resources (e.g., mapping tools, guidelines, training) about wetlands for realtors to share with builders and homebuyers (EO 3-1)	CIB, DNREC WS, SCAOR	Businesses / Professionals	1, 2, 3, 4	Ongoing	2026

Theme 6: Education, Outreach, and Marketing

Cost Estimate for Implementation: \$\$\$

Objective 6.1: Educate tourists and the tourism sector on ways they can help support and protect the Inland Bays and their watershed.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Publication	Develop and distribute educational door hangers to vacation stays (e.g., hotels, motels, rental properties) (EO 3-1)	CIB, SCAOR, SDT	Businesses / Professionals, Tourists	1, 2, 3, 4	Ongoing	Ongoing
Program	Explore options for a certified ecotour guide program	DNREC FW, PDE	Outdoor Recreationists, Residents, Tourists	1, 3	Ongoing	Ongoing
Program	Offer responsible fishing, crabbing, and boating programs	DESG, DNREC FW	Outdoor Recreationists, Residents, Tourists	1, 2, 3	Ongoing	Ongoing
Publication	Develop and install a series of interpretive signage about the Inland Bays at the James Farm	CIB	K-12 & Post-Secondary School Students, Residents,	1	1	2023

	Ecological Preserve (EO 1-1; EO 3-1)		Tourists, Youth Groups			
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Objective 6.2: Offer and/or expand environmental education programming.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Program	Offer K-12 programming (e.g., at the James Farm Ecological Preserve, schools, virtual) (EO 1-2a)	CIB, MCBP, SCD	Educators, K-12 & Post-Secondary School Students, Youth Groups	1, 2, 3, 4	Ongoing	Ongoing
Program	Offer free intergenerational programming at the James Farm Ecological Preserve, offsite, and virtual (EO 1-2b)	CIB, DESG	Residents, Tourists	1, 2, 3, 4	Ongoing	Ongoing
Program	Offer relevant and new education content to county-specific realtor courses	CIB, SCAOR	Businesses / Professionals	1, 3, 4	1	2027
Program	Provide professional development opportunities for K-12 teachers and informal science educators annually	DESG, MCBP	Educators	1, 3	2-10/year	Ongoing
Program	Offer coastal and marine science career programming (in-person and online)	DESG	K-12 & Post-Secondary School Students	1, 3	3/year	2023
Web Resources	Provide virtually accessible information for educators and students (e.g., kits, classroom resources) (EO 3-1)	CIB, DESG, PDE, MCBP	Educators, K-12 & Post-Secondary School Students, Youth Groups	1, 2, 3, 4	Ongoing	Ongoing

Program	Expand the Green Jobs Program offerings	DESG	Educators, K-12 & Post-Secondary School Students	1, 3	1/year	Ongoing
Program	Collaborate on projects / programs with the Boy / Girl Scouts of America (e.g., Oceanography Merit Badge Class for Boy Scouts)	DESG	Youth Groups	1, 3	3/year	Ongoing
Event	Host Water Family Fest & Native Plant Sale public education event (EO 1-2b)	CIB, DNREC WS	Residents, Tourists	1, 2, 3, 4	1/year	Ongoing
Event	Educate coastal and marine ecosystems, wildlife, and human connections at local community events (e.g., Coast Day)	CIB, DESG, DNREC WS	Residents, Tourists	1, 2, 3, 4	1/year	Ongoing
Publication, Social Media	Educate functions and importance of Inland Bays, watersheds, and coastal ecosystems (EO 3-1)	CIB, DESG, DNREC WS	Residents, Tourists	1, 2, 3, 4	Ongoing	Ongoing
Social Media	Increase visitation to Center's website through social media efforts (EO 3-1)	CIB	Residents, Businesses / Professionals, Educators, K-12 & Post-Secondary School Students, Youth Groups, Tourists	1, 2, 3	Ongoing	Ongoing

Objective 6.3: Encourage volunteerism and build stewardship for natural resources through community science projects.

Method	Action	Lead	Target	Intended	Frequency	Anticipated
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			Audience	Outcome		Completion
Program	Train and engage volunteer citizen scientists (EO 4-1)	CIB, DESG	Residents	3	Ongoing	Ongoing
Program	Collaborate with community-serving organizations (e.g., REALTORS are Good Neighbors) to build stewardship for natural resources and volunteerism (EO 4-1)	CIB, PDE, SCAOR	Businesses / Professionals, Residents	1, 2, 3, 4	Ongoing	Ongoing
Program	Provide volunteer service opportunities for DE Master Naturalists (EO 4-1)	CIB, DNS, MNP	Residents	1, 3	Ongoing	Ongoing

Theme 7: Diversity, Equity, Inclusion, and Justice

Cost Estimate for Implementation: \$

Objective 7.1: Reach more diverse audiences through adult and youth programming.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Presentation / Workshop, Program	Educate diverse audiences on topics related to estuary and watershed health and community connections (EO 1-2b)	CIB, DESG, DNS, DNREC FW, UDCE	DEIJ Communities	1, 2, 3, 4	Ongoing	Ongoing
Program	Explore ways to improve the accessibility of and within education programs (e.g., provide beach wheelchairs for outdoor education programs at the James Farm Ecological Preserve)	CIB, MCBP	DEIJ Communities	1, 2, 3, 4	Ongoing	Ongoing

Program	Deliver career development opportunities (e.g., through Wilmington Green Jobs and Junior Achievement) to foster the next generation of coastal professionals	DESG, DNS	DEIJ K-12, Communities	1, 3	5/year	Ongoing
Presentation / Workshop, Publication, Social Media, Web Resources	Translate oral and written communications where possible (e.g., social media, interpretive signage, factsheets, videos, presentations, etc.) (EO 3-1)	CIB, DNREC FW, MCBP, PDE	DEIJ Communities	1, 2, 3, 4	Ongoing	Ongoing
Program	Include environmental justice representatives / experts in education and outreach programming and/or resources (e.g., Delaware Master Naturalists training curriculum)	CIB, DNS, MNP	DEIJ Communities	1	Ongoing	Ongoing

Objective 7.2: Capture diverse community feedback on the use of natural resources and how people respond to climate change.

Method	Action	Lead	Target Audience	Intended Outcome	Frequency	Anticipated Completion
Presentation / Workshop	Educate and engage diverse communities in natural resource use and climate change topics	CIB, DESG, DNS, PDE, RASCL, UDCE	DEIJ Communities	1, 2, 3, 4	Ongoing	Ongoing