

LIVING SHORELINE OUTREACH

Chesapeake Bay Program

IMPLEMENTATION PLAN



Chesapeake Bay Program
Science. Restoration. Partnership.

LIVING SHORELINE OUTREACH

PURPOSE

The goal of the living shorelines program is to improve the health of the Chesapeake Bay and its tributaries by building resilient infrastructure, reducing excessive shoreline erosion, as well as preventing sediment, nitrogen and phosphorus pollution, thereby creating healthier ecosystems, protecting communities and mitigating the impacts of climate change. A key component of this program is for shoreline property owners to increase adoption of living shorelines or keep existing shorelines natural.

BUILDING THE PROGRAM FOUNDATION

To develop the program, we contracted with Action Research to use a behavior-based approach called community-based social marketing (CBSM). CBSM is a best practice methodology to achieve lasting, quantifiable behavior change. The process included behavior selection and research to identify the barriers and benefits of the selected behaviors. Using the research outcomes, a strategy was developed to reduce barriers and enhance perceived benefits. In addition, a steering committee of shoreline and communication experts was assembled to provide oversight and expertise.

The program's primary audience is shoreline property owners along the Chesapeake Bay and its tidal tributaries. From a preliminary list of 11 residential shoreline management behaviors, two behaviors were selected as the focus of the program: (1) Keeping a natural shoreline or (2) Installing a living shoreline. These two behaviors were selected after conducting a literature review, a web survey of shoreline management experts and a mail survey of Maryland and Virginia shoreline property owners.

The research results were used to design outreach strategies and materials to encourage shoreline property owners to keep a natural shoreline or install a living shoreline. Installing a living shoreline can be challenging for property owners to pursue on their own. The process involves collaboration with local, county and state government agencies, hiring of contractors or other technical experts as well as financial resources. However, this program is designed to provide guidance to community members and non-profit agencies assisting property owners to take crucial steps towards protecting their shoreline and the health of the Bay.

THE PLAN

This plan includes instructions for creating a customized program to match the size of your target audience, the local neighborhood culture or communication practices, and the availability of community advocates to conduct one-on-one outreach versus plan and implement an event. The plan can be utilized by community organizations using volunteers who live in the neighborhoods, and it also includes tools best suited for promotion by local and state government agencies.

The outreach materials were created to educate property owners as well as assist organizations with planning and implementing outreach. The materials are visually beautiful, and the images are authentic, taken by employees of government agencies, the Chesapeake Bay Program and Bay families. The program poster is suitable for framing and placement in local restaurants and other public spaces.

HOW TO USE THIS IMPLEMENTATION PLAN

The outreach guidance in this document is provided as packages of tools instead of a discrete set of steps that might be understood as a one-size-fits-all approach. Each package is organized by who is conducting the outreach, an individual (community ambassador), a community or watershed organization, or a state government agency. All the tools are available in a separate toolkit document.

COMMUNITY ORGANIZATIONS AND AMBASSADORS

Outreach to property owners can take a variety of forms. A community organization can take initial outreach steps by tabling at or organizing a public event, inviting a group of neighbors to view a living shoreline at a demonstration site or writing an article for a local publication. In whatever form the initial outreach is conducted, it will ultimately funnel into one-on-one conversations that support individual property owners. While the packages of materials and tools are organized by who is conducting the outreach, the materials are the same for all groups. The distinction is in the initial steps to attract property owners to consider and then install a living shoreline, which is more likely to be taken up by a community organization than an individual.

STATE GOVERNMENT AGENCIES

There is a package of materials and tools to support state government agencies in providing information to property owners.

HOW TO RECRUIT COMMUNITY AMBASSADORS

Independent from the outreach to property owners, is a set of tools created for recruiting living shoreline ambassadors who can assist community organizations with outreach. Community ambassadors, those who are committed to promoting the benefits of living shorelines, will be integral to the success of the living shorelines program.

The main section of this plan, Conducting the Outreach, includes the following subsections:

- How to combine outreach materials with social science tools;
- A summary table that displays materials and tools by outreach group;
- Communication channels;
- A table that explains all program materials and tools; and
- How to recruit community ambassadors.

The Chesapeake Bay Program has prepared a separate toolkit guide which contains all the outreach materials for the living shorelines program in one place without the how-to instructions contained within this document. It is available at <https://www.chesapeakebehaviorchange.org/campaigns>.

CONDUCTING THE OUTREACH

COMBINING OUTREACH MATERIALS WITH SOCIAL SCIENCE TOOLS

The overarching message in the outreach materials is that keeping a natural shoreline or installing a living shoreline protects your property and the health of the Bay. Importantly, education alone is not likely to influence adoption of complex behaviors. How the materials are presented to property owners, and by whom, are vitally important in piquing interest in living shorelines. In addition, seeing what their neighbors have done, and knowing there are others in the community who support living shorelines, are influential forces for engaging residents in this highly visible behavior. Social science tools have been integrated into outreach materials and strategies. The tools include commitments, education, personal contact, social diffusion and testimonials. Below is an explanation about how each can be used.

Commitments. People who agree or commit to engage in an action, tend to follow through with that action. Commitments that are written and displayed publicly are more powerful than those that are verbal and privately held. The toolkit includes commitment cards for use in engaging residents in keeping their shoreline natural or installing a living shoreline. The cards can also be used to demonstrate (visually) how many residents currently have a living shoreline. Publicly displaying commitments is a highly influential tool to bring about behavior change.

Education. The toolkit includes several documents to increase knowledge and communicate the importance of living shorelines to protecting shoreline properties and the health of the Bay. Importantly, the toolkit includes a document that compares the resiliency of living shorelines to bulkheads.



Commitments by anglers at an Upper Texas Coast fishing location to recycle their monofilament fishing line in specialized recycling bins.



Guests looking for their names on the projected "Wall of Shore Heroes," where guests commit to engage in behaviors that promote healthy seashores, ©National Aquarium, David Coffey.

Personal Contact. One-on-one personal conversations are more productive than mass communications for moving people through challenging and elaborate processes. While initial outreach can be conducted through community events to increase awareness and pique interest in a living shorelines project, personal contact will be necessary to keep residents engaged in the process.

Social Diffusion. Utilize social networks to encourage engagement in new or emerging behaviors. This is a process by which a few early adopters of a behavior can influence others in their social circles to adopt the

behavior. What one neighbor does on their property highly influences what others choose to do. For this reason, the toolkit includes a shoreline sign to be placed on properties that have natural or living shorelines. The sign draws attention to the property and facilitates conversations between neighbors.

Testimonials. Communicate messages about the social approval of the target behavior or the extent to which others are engaged. Six property owners (three families in Maryland and three in Virginia) tell their living shorelines' stories in easy-to-read two-page documents. The stories highlight the variety of reasons residents embark on a living shorelines project. Each story shows before and after photos and provides compelling testimony to the benefits of building a resilient infrastructure, and how they successfully completed their project.

MATERIALS AND TOOLS BY OUTREACH GROUP

This summary table lists the materials and tools grouped by who is conducting the outreach. All the items listed are explained in detail in the subsequent section. These documents were created to support community organizations, ambassadors and state government agencies communicating with shoreline property owners. Materials are tailored to property owners who desire information about keeping their shorelines natural or installing a living shoreline. Most documents can be provided to property owners in hard copy or digital form, whichever best suits the situation.

Summary Table of Materials and Tools by Outreach Group

TOOLS AND RESOURCES	COMMUNITY ORGANIZATIONS	COMMUNITY AMBASSADORS	STATE GOVERNMENT AGENCIES
Channels			
Local Publications	X	X	
Social Media Posts	X	X	X
Demonstration Site Events	X	X	X
Public Events	X	X	
Materials			
Commitment Card	X	X	
Poster, You are the Lifeline	X	X	
Shoreline Sign	X	X	
Video, Living Shorelines (7 minutes)	X	X	X
Documents			
Academic, Agencies, and NGOs (List)	X	X	X
Case Studies	X	X	X
Contractors (List)	X	X	X
Contractor Questions	X	X	X
Event Planning Guide (Demonstration Site)	X	X	X
Event Planning Guide (Public)	X	X	X
Funding Resources (List)	X	X	X
Living Shorelines v. Bulkhead	X	X	X
Native Plant Resources (List)	X	X	X
Permit Process Flyer	X	X	X
Talking Points	X	X	X
Resources			
Resources Document	X	X	X
CBP Campaigns Website	X	X	X

COMMUNICATION CHANNELS

Here are three ways to reach and engage property owners along with the suggested materials and tools designed to support each activity.

Local Publications and Social Media Groups

Many residents throughout the Bay rely on hyper-local news sources, such as neighborhood newsletters and Facebook groups. These localized communications can be used to recruit community ambassadors, promote living shorelines education, as well as outreach events.

Social media posts were created expressly to assist with the recruitment of ambassadors. The posts are in the resources document, which is explained in the program materials and tools table. Three additional sections within the resources document display dozens of local publications and social media groups within the Bay region.

Demonstration Site Events

Viewing a living shoreline can facilitate a greater understanding of a project outcome. The installation of a living shoreline affects neighboring sites, so working with a community of residents increases knowledge and project buy-in and helps to manage the expectations of all concerned. These events can be used to show how living shorelines protect property from erosion and floods (including a comparison to bulkheads), improve water quality, support aquatic habitats, are aesthetically beautiful and align with shoreline management practices and law.

A comprehensive guide to planning and implementing a demonstration site event was created for this program. The content is detailed in the program materials and tools table. Most of the program materials can support a demonstration site event. Review the materials for relevancy to your event.

Public Events

Public events come in many forms. An event can be created expressly for promoting natural shorelines or within a general interest city or county event. Specialty events that draw residents who are invested in environmental issues and habitat conservation, such as birding festivals, may be a good target for promoting living shorelines.

A comprehensive guide to planning and implementing a public event was created for this program. The content is detailed in the program materials and tools table. Most of the program materials can support a public event. Review the materials for relevancy to your event.

MATERIAL OR TOOL	CONTENT	PURPOSE
Commitment Card Social Science Tools: Commitment Personal Contact	<p>This is a two-sided postcard size durable card. There is an aerial view of the Bay on one side and kayakers using the Bay on the other.</p> <p>Side one: You are the lifeline. Keep a living shoreline. I commit to keeping my shoreline natural.</p> <p>Side two: The Chesapeake Bay is my Community. The signature line is for the property owner to sign the card to show their commitment to keeping a natural shoreline.</p>	<p>The purpose of the commitment card is to gain commitments from shoreline property owners to keep their shoreline natural or install a living shoreline.</p> <p>Commitments are powerful behavior-change tools, especially if they are displayed publicly. The best use of these commitment cards would be to find a public space, such as a kiosk at a public park or trail head, where the cards can be displayed together. The greater the number of commitments, the better. The commitments could be from a neighborhood or town or other familiar area or region. This could also be done at a popular restaurant or other neighborhood gathering place. Ideally, the program poster is exhibited, and commitment cards, clearly showing the property owner name, are displayed around the edges of the poster. Signatures on the commitment cards could be collected at public meetings and events.</p>
Poster Social Science Tools: Education, Awareness	<p>This is a beautiful one-sided poster that printed, measures 18" x 24".</p> <p>Text: You are the lifeline. Keep a living shoreline. It's up to you to preserve the Chesapeake Bay. Help by installing a living shoreline.</p>	<p>This poster is to be placed in public and private spaces, such as business windows, restaurants, kiosks at trail heads and community rooms to promote natural and living shorelines as essential to maintaining and increasing the beauty and health of the Bay.</p> <p>This poster could be displayed at demonstration sites and public tabling events.</p>
Shoreline Property Sign Social Science Tool: Social Diffusion	<p>This is a beautiful one-sided sign that when printed, measures 24" x 18".</p> <p>The shoreline sign is to be placed on the shoreline, facing the water and is used to increase the visibility of shoreline property owners who have committed to keep their shoreline natural or install a living shoreline.</p>	<p>The purpose of the shoreline sign is to promote living shorelines through social networks. Since property owners view each other's properties from the Bay and commonly talk about their shorelines and yards, the sign provides an opportunity to facilitate conversations specifically about living shorelines.</p>
Video Social Science Tools: Education	<p>This is a seven-minute living shorelines overview video. The video covers the benefits of living shorelines and ways to get information and support for installing a living shoreline.</p>	<p>The video is appropriate for individual viewing by property owners, for web-based meetings and public events.</p>
Academic, Agencies, and NGOs (List) Social Science Tool: Education	<p>This is one document.</p> <p>This is a list of links to living shorelines resources provided by federal and state agencies, local jurisdictions, non-profit community organizations and academic organizations.</p>	<p>This document is for anyone who wants to delve deeper into any aspect of living shorelines from technical assistance to permitting. The resources are shown by state (DE, MD, VA). There are links to educational videos, documents and guidebooks from dozens of agencies and organizations such as state government websites, the National Fish and Wildlife Foundation, the National Oceanic and Atmospheric Administration (NOAA), the Virginia Institute of Marine Science (VIMS) and many non-profit community organizations.</p>

MATERIAL OR TOOL	CONTENT	PURPOSE
Case Studies Social Science Tool: Testimonials	There are six documents. Each document is two pages in length and tells the story of a family's living shoreline experience. Each story includes before and after photos.	These documents are descriptive, interesting stories about why and how property owners installed their living shoreline. There are three stories from families in Maryland and three from Virginia. The stories document different scenarios and reasons for completing a project. The stories can be matched to address the concerns of those currently in the decision-making process.
Contractors Social Science Tool: Education	This is one document. This is a list of contractors by state (DE, MD, VA) who have expertise in living shoreline design, engineering and/or installation.	The list provides property owners with a starting place for hiring a qualified contractor.
Contractor Questions Social Science Tool: Education	This is one document. This is a comprehensive list of questions for property owners to ask of prospective contractors.	This document is a comprehensive list of questions to assist property owners in selecting experienced, qualified and properly licensed contractors.
Event Planning Guide (Demonstration Site)	There are four documents. The documents contain details for every aspect of planning and implementing an event from initial planning to day-of-event checklist and an example agenda. Although similar, these documents are different from the public event documents.	These documents provide ambassadors, community organizations and state government agencies with tools and checklists to plan and create a successful outreach event.
Event Planning Guide (Public)	There are four documents. The documents contain details for every aspect of planning and implementing an event from initial planning to day-of-event checklist and an example agenda. Although similar, these documents are different from the demonstration site event documents.	These documents provide ambassadors, community organizations and state government agencies with tools and checklists to plan and create a successful outreach event.

MATERIAL OR TOOL	CONTENT	PURPOSE
Funding Resources Social Science Tool: Education	<p>There are three documents, one for each state (DE, MD, VA).</p> <p>Each document provides information about state and local government and non-profit funding assistance programs that may be available to shoreline property owners.</p>	<p>This document provides information from various sources about funding opportunities for residential living shoreline projects.</p>
Living Shorelines vs. Bulkhead Social Science Tool: Education	<p>This is one document.</p> <p>The document includes data-driven arguments for selecting living shorelines over hardened structures (in appropriate locations), a vivid graphic comparing a living shoreline to a bulkhead and references.</p>	<p>This document provides property owners with scientifically backed data on why living shorelines are more resilient than hardened structures. This is appropriate for residents who are early in the decision-making process and for those who live in areas with hardened structures.</p>
Native Plant Resources Social Science Tool: Education	<p>There is one document.</p> <p>This is a list of native plant resources by state (DE, MD, VA). The list contains links to native plant societies and nurseries.</p>	<p>This document provides information for property owners to do research on the variety of plants suitable to the objective of their living shoreline project. This document is a good resource for contractors and landscapers as well.</p>
Permit Process Social Science Tool: Education	<p>This is one document.</p> <p>The document takes the challenges of the complex permitting process and distills it into five basic steps.</p>	<p>This document is to be provided to shoreline property owners who are assessing their desires or need for shoreline modification. Ideally, this document is provided to property owners early in the decision-making process to encourage them to seek technical assistance before getting mired and discouraged in the complexities of the permitting process. This document should be accompanied by the contractors list and contractor questions document.</p>
Talking Points	<p>This is one document.</p> <p>The contents support conversations between ambassadors and property owners. This document emphasizes the benefits of keeping a shoreline natural or installing a living shoreline.</p>	<p>This document is for ambassadors or organization staff who may need support for conversations with property owners. It can be used during one-on-one conversations at public events or during presentations. It is useful as a conversation starter for introducing the concept of a living shorelines to property owners who may be unfamiliar with the shoreline management technique.</p>

MATERIAL OR TOOL	CONTENT	PURPOSE
Resource Document	<p>This is one document.</p> <p>The document includes 12 topics:</p> <ul style="list-style-type: none"> • Index • Organization Facebook Pages • Local Facebook Pages • Nextdoor Groups • Community Newsletters • Public Event Spaces • Demonstration Sites • General Resources • Educational Organizations • Training and Workshops • Other Programs • Other Campaigns 	<p>This document is for ambassadors and organization staff. It is a comprehensive resource to support ambassadors, organizations and state government agencies conducting outreach to coastal communities across Maryland and Virginia.</p>
Chesapeake Bay Program Behavior Change Campaigns Website	<p>https://www.chesapeakebehaviorchange.org/campaigns</p> <p>This site provides a gateway for resources (DE, MD, VA) to ambassadors, organizations, state government agencies and property owners regarding decision-making, funding and the permitting process.</p> <p>This implementation plan, as well as the tool kit and video are located on the site. The toolkit includes all the documents explained in this table.</p>	

RECRUIT COMMUNITY AMBASSADORS

Their Role

Shoreline property owners discuss and share resources on the topic of shoreline management. Recruiting living or natural shoreline ambassadors in each community is critical for facilitating engagement in nature-based shoreline management practices. One-on-one conversations with trusted neighbors are significantly more persuasive than mass media for influencing decision-making. Property owner decisions are highly influenced by what others in the neighborhood are doing. The movement to make natural shorelines and living shorelines the norm begins with one or two properties. Long-term residents who are well-known and well-respected by their neighbors are ideal candidates for community ambassadors. Therefore, efforts should be made to identify the right individuals through discussions with area residents.

Promote the Benefits

The foundational research for this program revealed that potential ambassadors were motivated to volunteer because they thought doing so would increase their knowledge of living shorelines and Bay habitats by providing access to experts. It also revealed that residents were proud of their shorelines and wanted to share their process with others. Thus, the social media posts created to assist with ambassador recruitment promote these benefits. They are included in the resources document in the toolkit.

Selecting Ambassadors

Interested property owners should be briefly interviewed to confirm if they are suitable ambassadors and to identify additional well-respected and well-known members of their community. This could include questions, such as:

1. How do you typically interact or communicate with your neighbors? Do you communicate with them about shoreline management issues?
2. How do you typically communicate with your family and friends about shoreline issues?
3. Are there any formal or informal neighborhood associations where residents can communicate with one another? [PROMPT: For example, Is there a HOA where you live?
 - a. Do residents regularly interact with [organization]?
 - b. Which is the most respected? [if multiple organizations]
 - c. Would you consider this organization to be well-respected?
4. For your immediate neighborhood, are there any homeowners who you would consider well-known AND well-respected among the neighbors? Who are they?

5. Do long-term residents (from here) communicate and socialize with newer residents (come here)? Note: In the research shoreline residents identified two groups – the ‘come here’ residents and the ‘from here’ residents. When choosing ambassadors, we recommend selecting ambassadors from each group to ensure relevance and accessibility across groups.
6. Who would you go to for shoreline management questions and advice? Why?

In addition to social media posts developed to assist with recruitment of ambassadors, the resources document includes a listing of neighborhood and special-interest Facebook and Nextdoor groups and newsletters.

LIVING SHORELINE OUTREACH

Chesapeake Bay Program

TOOL KIT GUIDE

LIVING SHORELINE OUTREACH

INTRODUCTION

The materials contained in this toolkit are based on research conducted with Chesapeake Bay area property owners. A team of biologists, communication specialists, and social scientists used the research findings to develop outreach strategies and materials. The toolkit contents were created to support community ambassadors, non-profit organizations, and government agencies who advocate for natural and living shorelines.


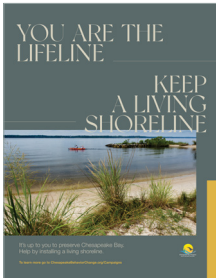


The goal of the Living Shorelines Program is an increase in nature-based solutions among property owners who are considering a shoreline modification. This toolkit was created to provide easily consumable information for a living shoreline installation process.


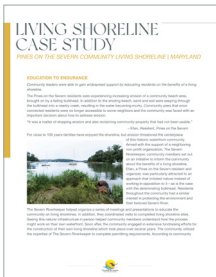
Most importantly, this program relies on face-to-face conversations between neighbors, and well-known and respected community members, like you, to provide the outreach to property owners in need of advising, education, or guidance.

HOW TO USE THIS GUIDE

This guide is organized to provide the reader with quick access to living shoreline documents that contain information on specific topic areas. These documents were created to support ambassadors in communicating with shoreline property owners who desire information about keeping their shorelines natural or installing a living shoreline. Most documents can be provided in hard copy or digital form, whichever best suits the situation. The guide table includes three columns:

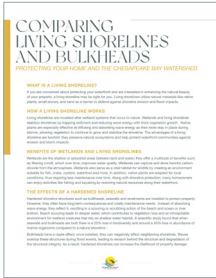

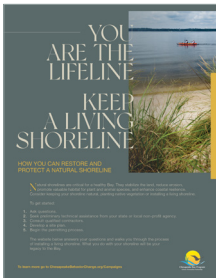

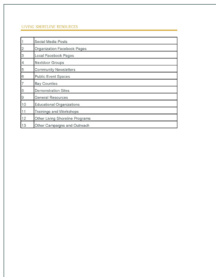
- 1. Thumbnail:** This is an image of the first page of each document.
- 2. Document Name:** This is the name of the file. Access the files in the Related Files section for this program.
- 3. Use:** This is a summary of the intended use of and audience for each document (i.e., to respond to shoreline property owner requests, plan an event, or conduct general outreach and education).

THUMBNAIL IMAGE	DOCUMENT NAME	USE
 A commitment card with a green and blue background. The text reads: "YOU ARE THE LIFELINE" at the top, "KEEP A LIVING SHORELINE" in the middle, and "I commit to keeping my shoreline natural." at the bottom. A small logo is in the bottom left corner.	Commitment Card	This outreach material is for community ambassadors, non-profits, and state or local agencies. The card is used to facilitate commitments from shoreline property owners to keep their shoreline natural or install a living shoreline. More details on its use can be found in the program implementation guide.
 A poster with a dark background and a photo of a shoreline. The text reads: "YOU ARE THE LIFELINE" at the top, "KEEP A LIVING SHORELINE" in the middle, and "It's up to you to protect Chesapeake Bay. Help by creating a living shoreline." at the bottom. A small logo is in the bottom right corner.	Poster	This outreach material is for community ambassadors, non-profits, and state or local agencies. This poster is to be placed in public and private spaces to promote natural and living shorelines as essential to maintaining and increasing the beauty and health of the Bay. More details on its use can be found in the program implementation guide.
 A white sign with blue and green text. The text reads: "CHESAPEAKE BAY LIVING SHORELINE" at the top, "I'M A GUARDIAN OF THE BAY." in the middle, and "To learn more go to ChesapeakeBehaviorChange.org/Campaigns" at the bottom. A small logo is in the bottom right corner.	Shoreline Property Sign	This outreach material is for community ambassadors, non-profits, and state or local agencies. The shoreline sign is to be placed on shoreline, facing the water, and is used to increase the visibility of shoreline property owners who have committed to keep their shoreline natural or install a living shoreline. More details on its use can be found in the program implementation guide.
 A video thumbnail showing two people in kayaks on a calm body of water at sunset. A play button icon is overlaid on the image.	Video, Living Shorelines	This is a seven-minute video. The video promotes the benefits of living shorelines, as well as ways to get information and support for installing a living shoreline. The video is appropriate for individual viewing by property owners, web-based meetings, and public events.

THUMBNAIL IMAGE	DOCUMENT NAME	USE
	Agencies & NGOs	<p>This document is for community ambassadors, non-profits, state agencies, and shoreline property owners. This is a list of links to living shoreline resources provided by federal and state agencies, local jurisdictions, NGOs, and academic organizations.</p>
	Living Shoreline Case Study: Cape Saint Claire	<p>This document is for shoreline property owners. By conducting thorough research, the Cape Saint Claire Community was able to connect with experts and design a living shoreline that fit the needs of the whole community.</p>
	Living Shoreline Case Study: Pines on the Severn	<p>This document is for shoreline property owners. Community leaders were able to gain widespread support by for installing a living shoreline on their community beach by educating area residents.</p>
	Living Shoreline Case Study: Eden Property	<p>This document is for shoreline property owners. Homeowners Scott and Jan took a chance on a new approach to protect their home from erosion and runoff.</p>

THUMBNAIL IMAGE	DOCUMENT NAME	USE
	Living Shoreline Case Study: Ivey Property	<p>This document is for shoreline property owners. After installing a living shoreline, Tom's newly purchased property went from what felt like a dumping ground to a beautiful waterfront home.</p>
	Living Shoreline Case Study: Elizabeth River	<p>This document is for shoreline property owners. Homeowner Jenn worked closely with her neighbor on a joint project that addresses the unique needs of their individual shoreline properties.</p>
	Living Shoreline Case Study: Lafayette River	<p>Mary Carol and Littleton's living shoreline was as much a preservation of their waterfront as it was a celebration of family history.</p>
	List of Contractors	<p>This document is for shoreline property owners. This is a list of contractors by state (DE, MD, VA). The contractors have expertise in living shoreline design, engineering, and/or installation.</p>

THUMBNAIL IMAGE	DOCUMENT NAME	USE
	Contractor Questions	This document is for shoreline property owners. This is a comprehensive list of questions for property owners to ask of prospective contractors.
	Event Planning Guide: Shoreline Demo Site	This document is for community ambassadors, non-profits, and state or local agencies. There are four documents, one for creating a demonstration site event and the other for a public space event. The documents contain details for every aspect of planning and implementing a demonstration site event.
	Event Planning Guide: Public	This document is for community ambassadors, non-profits, and state or local agencies. There are four documents, one for creating a demonstration site event and the other for a public space event. The documents contain details for every aspect of planning and implementing a public event.
	Funding Resources	This document is for shoreline property owners. There is one document for each state (DE, MD, VA). Each document provides information about state, local, and non-profit funding assistance programs that may be available to shoreline property owners.

THUMBNAIL IMAGE	DOCUMENT NAME	USE
	Living Shorelines Vs. Bulkhead	This document is for shoreline property owners who are early in the decision-making process or live in areas with hardened structures. The document provides data-driven arguments for selecting living shorelines over hardened structures (in appropriate locations), a vivid graphic comparing a living shoreline to a bulkhead, and references.
	Native Plant Resources	This document is for shoreline property owners. This is a list of native plant resources by state. The list contains links to native plant societies and nurseries.
	Permit Process Flyer	This outreach material is for shoreline property owners. This flyer is to be provided to shoreline property owners who are assessing their desires or need for shoreline modification. More details on its use can be found in the program implementation guide.
	Talking Points	This document is for community ambassadors and program staff. The contents support conversations between ambassadors and property owners. This document emphasizes the benefits of keeping a shoreline natural or installing a living shoreline.
	Living Shorelines Resources Spreadsheet	This document is for ambassadors or organization staff. It is a comprehensive resource to support ambassadors, organizations, and agencies conducting outreach to coastal communities throughout the Bay. It includes everything from neighborhood newsletters and Facebook groups to lists of public sites suitable for events.

YOU ARE THE LIFELINE



KEEP A LIVING SHORELINE

I commit to
keeping my
shoreline
natural.



To learn more go to ChesapeakeBehaviorChange.org/Campaigns

The Chesapeake Bay is my Community. I commit:

- *To not removing natural vegetation on my property.*
- *To explore options on how to plant natural vegetation.*
- *To create a better habitat for wildlife.*
- *To protect the health of the Bay.*



**Inspire others to become guardians of the Bay
by protecting our shorelines.**

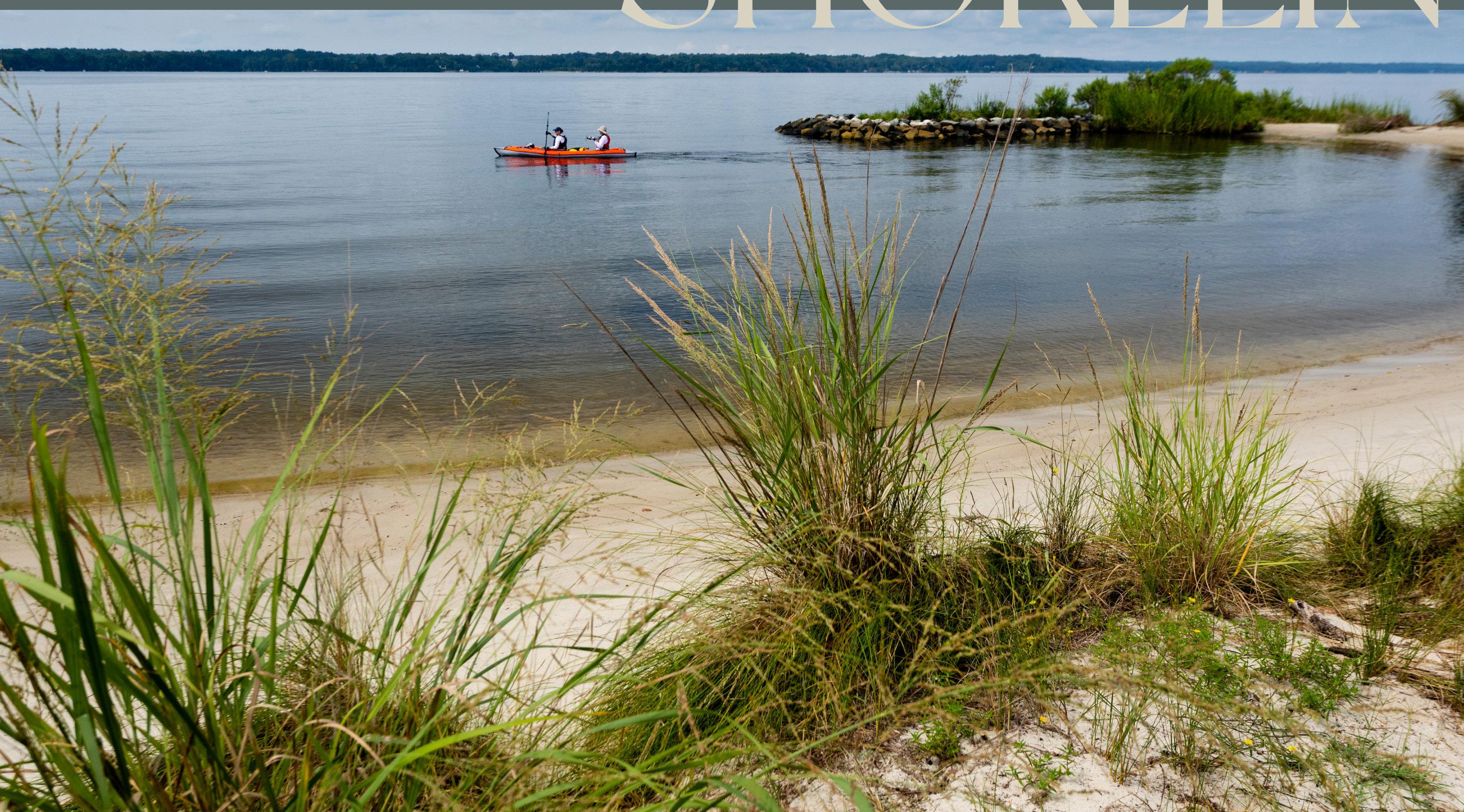
SIGN HERE

CHESAPEAKEBAY.NET



YOU ARE THE LIFELINE

KEEP A LIVING SHORELINE



It's up to you to preserve Chesapeake Bay.
Help by installing a living shoreline.

To learn more go to ChesapeakeBehaviorChange.org/Campaigns



CHESAPEAKE BAY
LIVING SHORELINE

I'M A
GUARDIAN
OF THE BAY.

To learn more go to
ChesapeakeBehaviorChange.org/Campaigns



STATE AGENCIES AND NGO RESOURCES

STATE AND GOVERNMENTAL AGENCIES

DELAWARE

- **Delaware Department of Natural Resources and Environmental Control (DNREC)**
Main site: dnrec.alpha.delaware.gov/
Living Shorelines FAQs: dnrec.alpha.delaware.gov/watershed-stewardship/wetlands/living-shorelines/questions-and-answers/

MARYLAND

- **Maryland Department of the Environment (MDE)**
Main site: dnr.maryland.gov/Pages/default.aspx
Living Shorelines: dnr.maryland.gov/ccs/Pages/livingshorelines.aspx
- **Maryland Department of Natural Resources (DNR)**
Main site: dnr.maryland.gov/
Living Shorelines FAQs: dnr.maryland.gov/ccs/Pages/livingshorelines/faq.aspx
Living Shorelines Guide for Waterfront Property Owners:
dnr.maryland.gov/ccs/Documents/ls/LivingShorelines.pdf

VIRGINIA

- **Virginia Department of Conservation and Recreation (DCR)**
Main site: www.dcr.virginia.gov/
Shoreline Erosion Advisory Service Brochure:
www.dcr.virginia.gov/soil-and-water/document/seas-brochure-2018.pdf
- **Virginia Department of Environmental Quality (DEQ)**
www.deq.virginia.gov/home

NATIONAL

- **National Fish and Wildlife Foundation**
www.nfwf.org/
- **National Oceanic and Atmospheric Administration**
Main site: www.fisheries.noaa.gov/
Office for Coastal Management: coast.noaa.gov/
Understanding Living Shorelines:
www.fisheries.noaa.gov/insight/understanding-living-shorelines
Guidance for Considering Living Shorelines:
www.habitatblueprint.noaa.gov/wp-content/uploads/2018/01/NOAA-Guidance-for-Considering-the-Use-of-Living-Shorelines_2015.pdf

NON-GOVERNMENTAL AND ACADEMIC RESOURCES

DELAWARE

- **Delaware Center for the Inland Bays**
Main site: www.inlandbays.org/
Living Shorelines:
www.inlandbays.org/projects-and-issues/all/living-shorelines/
- **Delaware Living Shorelines Committee**
www.delawarelivingshorelines.org/
- **Partnership of the Delaware Estuary**
Main site: www.delawareestuary.org/
Living Shorelines: www.delawareestuary.org/science-and-research/living-shorelines/

MARYLAND

- **Severn River Association**
Main site: severnriver.org/
Living Shorelines: severnriver.org/programs/save-your-shoreline/
- **Arundel Rivers Federation**
Main site: arundelrivers.org/
Living Shorelines:
arundelrivers.org/how-we-fix-rivers/living-shorelines-restoration/
- **Maryland Sea Grant, Watershed Stewards**
www.mdsg.umd.edu/topics/watershed-stewards/watershed-stewards

VIRGINIA

- **Adapt Virginia**

Main site: adaptva.org/

Living Shorelines: adaptva.org/info/adaptations.html

- **Elizabeth River Project**

Main site: elizabethriver.org/

- **James River Association/Living Shorelines Collaborative**

Main site: thejamesriver.org/

Living Shorelines:

thejamesriver.org/?s=living+shorelines, <https://thejamesriver.org/livingshorelines/>,

<https://thejamesriver.org/programs/james-riverkeeper-program/>

- **The Nature Conservancy: Coastal Resilience**

Main site: coastalresilience.org/

Living Shorelines: hcoastalresilience.org/project/living-shoreline-virginia/

- **Virginia Institute of Marine Science (VIMS)**

Main site: www.vims.edu/

Center for Coastal Resources Management:

<https://www.vims.edu/ccrm/topics/shoreline/index.php>

Living Shorelines Brochure:

www.vims.edu/ccrm/outreach/living_shorelines/ls_brochure_updated2020.pdf

Living Shorelines Fact Sheet:

ccrm.vims.edu/livingshorelines/documents/Promotional/VACZMFactSheet.pdf

OTHER

- **American Littoral Society**

Main site: www.littoralsociety.org/

Living Shorelines: www.littoralsociety.org/living-shorelines.html

- **Chesapeake Bay Foundation**

Main site: www.cbf.org/

Six Steps to Create Your Living Shoreline:

www.cbf.org/about-cbf/locations/virginia/issues/living-shorelines/six-steps-to-create-your-living-shoreline.html

Top Ten Reasons to Build a Living Shoreline:

www.cbf.org/about-cbf/locations/virginia/issues/living-shorelines/top-10-reasons-to-build-a-living-shoreline.html

Living Shorelines Checklist:

www.cbf.org/document-library/cbf-guides-fact-sheets/living-shorelines-checklist.pdf

- **Chesapeake Bay Program**

www.chesapeakebay.net/

- **Living Shorelines Academy**

Main site: livingshorelinesacademy.org/

Living Shorelines: livingshorelinesacademy.org/index.php/live-projects

- **Natural and Structural Measures for Shoreline Stabilization Brochure, Systems Approach to Geomorphic Engineering (SAGE)**

sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf

- **Restore America's Estuaries**

Main site: estuaries.org/

Living Shorelines: estuaries.org/livingshorelines/

LIVING SHORELINE CASE STUDY

CAPE SAINT CLAIRE COMMUNITY LIVING SHORELINE | MARYLAND

RESEARCH TO RESILIENCE

By conducting thorough research, the Cape Saint Claire Community was able to connect with experts and design a living shoreline that best fit their community needs.

The Cape Saint Claire community is a long-standing neighborhood in Anne Arundel County, Maryland. The community, which was originally established as a summer retreat, now boasts around 2,300 homes and 8,000 residents. Cape Saint Claire features several marinas and beaches, and the beautiful shorelines remain a focal point for community gatherings. Residents enjoy swimming and fishing at their beaches, just steps away from their homes. However, over the years erosion has significantly reduced beach access. The Cape Saint Claire Improvement Association Beaches & Parks Chair, Beau, who grew up in “The Cape”, remembers a time when residents could spread out along their vast beaches. Today certain parts of the beach are inaccessible, especially during high tide. Hurricane Isabel in 2003 further exacerbated issues with erosion. The Maryland Department of Natural Resources (DNR) confirmed the concerns about erosion, projecting up to three-foot annual loss of the beach.

In 2007, the Cape Saint Claire Improvement Association (CSCIA), a board of volunteer residents, spearheaded an initiative to protect their community beaches. After initially exploring living shorelines, the project was put on hold due to the 2008 financial crisis. The community was finally able to pursue a living shoreline project in 2013. The first phase of the project included assessments of several waterfront sites throughout the community conducted by the Maryland Department of Natural Resources (DNR). Next, the CSCIA selected consultants to not only assist with the permitting and designing of their expansive living shoreline, but also, and perhaps most importantly, one who agreed to hold public meetings for the residents. The CSCIA was committed to making sure the large number of residents in Cape Saint Claire were informed about the living shoreline project, which required extensive coordination between the consultant and the CSCIA. Overall, community members were supportive of the living shoreline project to protect their beloved beaches.



The consultant was able to utilize previous projections of erosion conducted by DNR, as well as an assessment of community properties to update their restoration priorities. The consultant provided the CSCIA with expectations for installation and potential costs. Eventually, the CSCIA decided to pursue the construction of living shorelines along their main beach and a lake site. The two sites provide more than 1,000 linear feet of waterfront, an ambitious project in both size and scope that would require community fundraising and support from grants.

The CSCIA partnered with the Alliance for the Chesapeake Bay (Alliance), a nonprofit organization that brings together communities, companies, and conservationists to improve the lands and waters of the Chesapeake Bay watershed. The Alliance assisted them with grant applications and offered technical advice. Through their partnership, the Cape Saint Claire community was able to obtain several grants from the Chesapeake Bay Trust, Anne Arundel County, the Bureau of Watershed Protection and Restoration, the State of Maryland and the U.S. Fish and Wildlife Service.

“...we struck out. We were 0-6 for bids on grants. It wasn’t until we engaged the Alliance in the spring of ’18...since then have been able to gain \$900,000 dollars in matching funds.”

– Beau, CSCIA Beaches and Parks Chair

Considering the size of the living shoreline, the CSCIA knew it would take a minimum of nine months to get permits approved. However, when all was said and done, it took about two years to get all permits approved. Construction of the beach took place in 2021 and construction of the lake site will take place later in the year.

Wave action and hydrology analyses were instrumental for the design of a hybrid living shoreline at the main beach site. The hybrid living shoreline includes both hardened structures and dense planting to achieve stabilization against wave action and erosion. Over 7,000 native plants were installed, along with beach-sand replenishment and a stone jetty. A hardscape was built along a fetch to slow wave action. Areas already protected by the hardscape feature natural materials to absorb further wave action and offer overall protection of the beach. In total, the construction phase took about two weeks to complete.

Beau, CSCIA Beaches & Parks Chair, stated that his community is in the process of measuring the progress of the living shoreline at the main beach. The living shoreline has not reached its final stage yet, but the Cape Saint Claire community feels positive about its progress in protecting against erosion.

Beau has become well-versed in living shorelines after leading the initiative for his community. He recommends that other private communities considering a living shoreline should partner with an advocacy organization to obtain grants and offer advising. Additionally, he recommends that large communities should consider setting aside initial funding to cover the planning and design of a living shoreline. The initial research the Cape Saint Claire community conducted, DNR assessments, and scientific studies of wave action and hydrology were all key steps to successfully installing their large living shoreline projects. By connecting with local experts, the Cape Saint Claire community was able to fund half of their living shoreline through grants. Preliminary research and pursuing partnerships with advocacy groups are essential actions for any homeowner interested in living shorelines.



LIVING SHORELINE CASE STUDY

PINES ON THE SEVERN COMMUNITY LIVING SHORELINE | MARYLAND

EDUCATION TO ENDURANCE

Community leaders were able to gain widespread support by educating residents on the benefits of a living shoreline.

The Pines on the Severn residents were experiencing increasing erosion of a community beach area, brought on by a failing bulkhead. In addition to the eroding beach, sand and soil were seeping through the bulkhead into a nearby creek, resulting in the water becoming murky. Community piers that once connected residents were no longer accessible to some neighbors and the community was faced with an important decision about how to address erosion.

“It was a matter of stopping erosion and also reclaiming community property that had not been usable.”

– Ellen, Resident, Pines on the Severn

For close to 100 years families have enjoyed the shoreline, but erosion threatened the centerpiece of this historic waterfront community.



Armed with the support of a neighboring non-profit organization, The Severn Riverkeeper, community members set out on an initiative to inform the community about the benefits of a living shoreline. Ellen, a Pines on the Severn resident and organizer, was particularly attracted to an approach that imitated nature instead of working in opposition to it—as is the case with the deteriorating bulkhead. Residents throughout the community had a similar interest in protecting the environment and their beloved Severn River.

The Severn Riverkeeper helped organize a series of meetings and presentations to educate the community on living shorelines. In addition, they coordinated visits to completed living shoreline sites. Seeing this natural infrastructure in person helped community members understand how the process might work on their own waterfront. Soon after, the community engaged in extensive fundraising efforts for the construction of their own living shoreline which took place over several years. The community utilized the expertise of The Severn Riverkeeper to complete permitting requirements. According to community

members, the permitting process was straightforward and completed within a few months.

Community leaders also sought out funding and advice from a variety of non-profit and state government sources. The Chesapeake Bay Trust provided funding for the design phase of the living shoreline, while the Maryland Department of Natural Resources supplied grant funding from the Chesapeake Atlantic and Coastal Bays Trust for installation. The combination of fundraising and grants made it possible for the community to hire a consultant to design the living shoreline. The community selected a consultant that had previous experience with living shoreline projects, the backing of The Severn Riverkeeper and who provided information and regular updates to residents. During the two-week installation phase, numerous native grasses and trees were planted along the shoreline. Now, six years after construction, community members have increased access to their neighborhood piers with the assurance that natural barriers are protecting against erosion.

“The shoreline is a very popular area for people to be in. The installation made it possible for people to access two community piers, piers that were only really accessible from private property, but now people can walk along the shoreline. So, they can get to these piers, they can fish, they can sit in the sun, just enjoy being close to the water.”

– Ellen, Resident, Pines on the Severn

Ellen, who was deeply involved with the living shoreline initiative, recommends that waterfront communities take opportunities to learn as much as they can by attending educational events and visiting existing projects for inspiration. By involving the entire community in this effort, residents were able to assess how a living shoreline might benefit them. As a result, residents extended their full support by participating in fundraising and helping to install native plants. In the end, the living shoreline was much more than protection for the waterfront, it strengthened community bonds.

“It has really engaged the community in a very active way, the community loves the shoreline.”

– Ellen, Resident, Pines on the Severn



LIVING SHORELINE CASE STUDY

SOUTH RIVER SHORELINE | MARYLAND

INNOVATION TO INTEGRITY

Scott and Jan took a chance on a new approach to protect their home from erosion and runoff.

When Scott and Jan purchased their waterfront property in the early 1990's, they noticed a failing sea wall at their property line. At the time, living shorelines were less common. The couple believed there was no alternative to a sea wall and thus no options to address the eroding riverbank on their property. When Hurricane Isabel struck in 2003, they faced even more issues. A large deposit of sand surrounded their sea wall, which disrupted wave energy and prevented the sand from naturally depositing onto the shore. In another instance, a live tree fell into the water which destroyed a portion of the riverbank. Prolonged heavy rains drenched the ground and eventually saturated their yard, which created the conditions for the fallen tree.



“Looking at the original state of it, with this rotting sea wall with no tidal flow and a lot of stagnant water and muck behind it. The water on the house-side of the seawall is now much better quality”

- Scott, Homeowner

Meanwhile, Scott and Jan had always been interested in environmental causes and were active members of the Arundel Rivers Federation. They learned about living shoreline solutions through their membership with the Federation and presentations hosted by the Chesapeake Bay Foundation. By way of living on the water, they became aware of a neighbor and marine contractor, John, who had completed numerous restoration projects on the river. The homeowners relied heavily on John as source of expertise. He devised an original project plan that would also cut down on potential costs. He proposed that sections of the sea wall be removed, with native grasses planted in between the gaps of the remaining wall. Rocks and stones would be placed on both sides of the sea wall for reinforcement. He was also responsible for submitting permits and coordinating with an engineer to design and install the living shoreline. Given the uncommon nature of the project and their expansive 600 linear-foot shoreline, it took several years for permits to be approved by the County and the State of Maryland. Scott and Jan admit that their process may have been different compared to most homeowners, considering the length of their shoreline and the uniqueness of their hybrid design. Scott and Jan did initially apply for grants but found that if they wanted to pursue their specific

design, they would have to fund it independently. Scott and Jan were willing to make an investment to execute their vision. Based on their experience, necessary funding for a living shoreline will vary based on shoreline length and wave energy. The overall construction of their living shoreline took about a month to complete.

“I was happy about the fact that we could have wetlands, wildlife and a habitat for animals, because if you’ve just got rip rap or a wall, you’ve taken away those opportunities for the wildlife.”

- Scott, Homeowner

The homeowners have had their living shoreline for twelve years now and have noticed a significant increase in native plants and wildlife. In addition to their living shoreline, they have also installed a rain garden at the front of their property to prevent runoff. They believe these two features in tandem have created a positive impact in protecting and beautifying their property. Since the initial installation, they have created more openings in the sea wall to make space for additional native grasses. Because of their living shoreline and the openings in their sea wall, they have created the conditions for a sandy beach. They now enjoy launching kayaks and paddle boards from their beach, something they never thought was possible before. Recently, they have been working with the Arundel Rivers Federation to address invasive plants on their property and introduce more native species. They believe their living shoreline was well worth the time and effort, and that other property owners who face similar challenges should consider a living shoreline. They also recommend that waterfront property owners invest in regular maintenance to further protect their living shoreline and rain garden investment. Along with a better protected property, Scott and Jan enjoy their property even more with wildlife sightings and more time spent on the water.



LIVING SHORELINE CASE STUDY

IN PARTNERSHIP WITH THE ELIZABETH RIVER PROJECT

EASTERN BRANCH OF THE ELIZABETH RIVER
LIVING SHORELINE | VIRGINIA

NEGLECT TO NOURISHMENT

After installing a living shoreline, Tom's newly-purchased property went from a dumping ground to a beautiful waterfront home.

Tom purchased land on the Eastern Branch of the Elizabeth River knowing that it would be quite an undertaking to construct a home and restore the shoreline. His new home is located near a concrete plant, and over the years this section of the river became a hot spot to dispose of construction debris and trash.

"It was bad. There were refrigerators sitting out there, tires, I mean anything you could throw in the river was out there."

– Tom, Homeowner

Not only were there issues with debris contaminating the water, but routine flooding also caused erosion. One day Tom measured 10 feet of flooding in his yard and instantly knew that something had to be done to protect his property. Having never lived on a shoreline, Tom was unfamiliar with shoreline protection methods. After some research Tom came across the Elizabeth River Project (ERP), who had built living shorelines throughout the region. To begin, the ERP staff showed Tom examples of completed living shoreline projects, including a section of the river that remained natural with native grasses, and he was quickly on board with installing one of his own. The cost of the living shoreline was split between Tom and funding sourced by the ERP from the City of Norfolk and a National Fish and Wildlife Foundation (NFWF) grant focused on restoring the Eastern Branch of the Elizabeth River. Although project costs were not inexpensive, Tom believes he made an investment in his property that will benefit his home for generations to come. He notes that the dedicated staff of the ERP made him feel at ease about the process.

The ERP helped Tom select a contractor who would conduct surveying, acquire materials, and install the living shoreline. The ERP staff also assisted with submitting permits to the U.S. Army Corps of Engineers, Norfolk Wetlands Board and the Virginia Marine Resource Commission. All in all, permitting took around five months to complete. The two-week construction phase began with the installation of an Oyster Castle™ sill on a portion of the property that receives significant wave and wind energy. Coir logs—a natural fiber product used to protect



shorelines from erosion—were placed on the south side of the property that has reduced exposure to waves and less significant erosion. To install the coir logs, upland grading was completed throughout the shoreline area and backfilled with clean sand. Next, sand and marsh plants were added to the shoreline.

After the living shoreline was installed, there was an unforeseen challenge. Tom's home, which was built on an empty lot, began depositing stormwater runoff towards his shoreline. The stormwater runoff eventually created a gully. The contractor was quick to respond by adjusting the placement of the coir logs and sand to combat runoff. One year after the living shoreline was built, the ERP installed upland plants. Additionally, abandoned, repurposed crab traps (dipped in concrete) that once littered the river were used to create a border around the Oyster Castles™ to create an “oyster reef”. The installation of the crab traps with the Oyster Castles™ was built to imitate a barrier reef, which offer protection from storms and strong waves. This second project was completed with funding from a NFWF Five Stars Urban Waters grant.

In the two-and-half years since the construction took place, Tom has been extremely impressed with the transformation. He is especially pleased with the wildlife his oyster reef has attracted.

“It's beautiful, we've got otters that will sit there on the oyster castles and eat the oysters. The wildlife is incredible. I'm really interested in seeing how the oyster reef will get the smaller fish to come in there...it's really truly gorgeous when you sit back and look at it.”

- Tom, Homeowner

Neighbors took an interest in the living shoreline Tom had constructed and just recently completed a one of their own with guidance and funding from the ERP and NFWF. Tom is glad to be a part of a project that restored the natural beauty of land that was once underappreciated. He would advise any waterfront homeowner experiencing erosion to consider a living shoreline. He believes that his living shoreline, and other projects to restore the river, have led to better water quality. And now, every once in a while, Tom gets a glimpse of a dolphin from his pier.

“The primary benefit for me is being able to sit out there and look out at my pier... Being able to sit out there and relax and have a glass of wine and see the egrets, foxes, otters, how all of it meshes together—walk down there and watch the oysters at low tide, spitting the water out knowing that's how they purify the water. The ultimate goal is to get the dolphins back in the river and the dolphins have come back because the quality of the water has improved.”

- Tom, Homeowner



LIVING SHORELINE CASE STUDY

IN PARTNERSHIP WITH THE ELIZABETH RIVER PROJECT

ELIZABETH RIVER LIVING SHORELINE | VIRGINIA

PARTNERSHIP TO PROTECTION

Homeowner Jenn worked closely with her neighbor on a joint project that addresses the unique needs of their individual shoreline properties.

Jenn's home once featured a traditional design with concrete bulkheads and large hedges along the edge of her backyard. Over time these two structures began to cause serious issues. Nearly three feet of Jenn's backyard was taken out by rising water levels and her hedges became overgrown and consumed by invasive weeds. It seemed that the features put in place to protect her home were doing the very opposite. Jenn was not the only person facing these issues; her next-door neighbor, Julie, was also experiencing problems with erosion. Julie's home was located in an area with continuous wave action and her wooden bulkhead was failing against increased boat traffic. Both Jenn and Julie were part of the River Star Home program with the Elizabeth River Project (ERP)—a homeowner pledge to protect the Elizabeth River. Given their familiarity with the ERP's work, the homeowners decided to pursue a collaborative living shoreline project to protect their homes from further erosion.

"Part of my yard was just washing away, and we were trying to figure out how to deal with that...and we ended up with not just doing the shoreline, we did a full oyster reef with our next-door neighbor."

- Jenn, Homeowner



To combat erosion, the ERP designed a hybrid living shoreline, which utilized Oyster Castles™— interlocking blocks made from a blend of concrete and oyster shells—as an oyster reef to slow down erosion and establish a wetland. The Oyster Castle™ reefs and the living shorelines were designed to fit the contours of each property. Julie, whose home is more impacted by wave action, required a longer oyster reef that connected to Jenn's oyster reef situated on slightly higher ground. The areas extending from each of their backyards were updated with a wetland area and lowland plantings.

The hedges that once crowded Jenn's backyard was replaced with native grasses, perennials and shrubs that frame her river view. Jenn lauds these features as making the space much more open and enjoyable.

In addition to the living shoreline in Jenn's backyard, she decided to install native plants at the front of her house. The native plants will protect her home from stormwater runoff.

"It really has held up, the backfill from the oyster reef and the sand has held up. The grasses are all growing in really nicely. And it seems to be stopping where that part of our yard was washing away every time we had a big storm."

- Jenn, Homeowner

In the three months since the two homeowners have installed their living shorelines, they have seen major improvements in erosion prevention and the overall look of their homes. According to Jenn, the ERP made the process easy by providing 50% of funding through a partnership with the City of Norfolk and a National Fish and Wildlife Foundation Innovative Nutrient & Sediment Reduction grant. The ERP also facilitated the permitting, design and installation of the project. The overall planning and construction took a few months to complete.

Jenn also noted that these activities have made for excellent family-time and restored her family's connection to the natural environment. She was pleasantly surprised to see her son become engaged in the project—he and other neighborhood kids assisted with transporting sand and planting native grasses. Since then, Jenn's whole family has become more involved in the maintenance of their home by working on the yard weekly.

Jenn states that the success of her project is owed to the ERP. She highly recommends that other waterfront homeowners work with organizations like them, who are well-versed in acquiring funding and completing living shoreline projects. Jenn also notes that by working with her next-door neighbor they were both able to achieve more protection from erosion and safeguard the river they call home.

"I love that we're helping keep the river clean and stop runoff, but it's also an improvement in how our yard looks."

- Jenn, Homeowner



LIVING SHORELINE CASE STUDY

IN PARTNERSHIP WITH THE ELIZABETH RIVER PROJECT

LAFAYETTE RIVER LIVING SHORELINE | VIRGINIA

ROOTS TO RESTORATION

Mary Carol and Littleton's living shoreline was as much a preservation of their waterfront as it was a celebration of family history.

Littleton, or 'Lit' as he's better known, has fond memories of the family home which has been under their stewardship for over seventy years. Once belonging to his grandfather, Lit treasures a live oak tree on the property, which he refers to as the "Grandmother Tree". Lit has always believed that the live oak tree perfectly captures the iconic beauty of the region, but over time erosion began to take hold of the waterfront property. Just 10 years ago, a long-standing pier was reconstructed to increase its height by a full foot to address rising water levels during spring high tides. In addition, a shoreline area that was once used as a boat launch became a soggy bog. The combination of these factors led Lit, and his wife, Mary Carol to consider a new approach to maintaining their cherished shoreline.



"We have a beautiful live oak that sits right down at the very edge of our shore; it's a significant feature of the property. Unfortunately, over the last twenty years with the rising water level the tree has been undermined. We were potentially going to lose it."

– Lit, Homeowner

By chance, several years ago, the couple hosted an Elizabeth River Project (ERP) employee at their home. It was during this visit that they learned about the possibility of constructing a living shoreline at their

property. The reputation of the ERP had always impressed them, so they decided to partner with them to complete a living shoreline project. During an initial site assessment, the homeowners learned that their property was also an excellent location for an oyster reef. Oyster Castles™—interlocking blocks made from a blend of concrete and oyster shells—were used to create a sill structure, which runs parallel to the shoreline, slowing down wave energy. Coir logs—a natural fiber product used to protect shorelines from erosion—were placed along the waterfront, and wetland grasses were planted around the live oak to protect its exposed roots.

The cost of the project was shared between the homeowners and grant funding from the City of Norfolk's contract with ERP for their River Star Homes pledge program to protect the Elizabeth River watershed. The project was completed in a year and a half, which included several months of permitting and a few weeks of construction. Permitting was processed through the U.S. Army Corps of Engineers and the City of Norfolk with very few delays. Mary Carol and Lit describe the process as being straightforward and with no significant challenges. In addition, the ERP was able to facilitate this project while the homeowners worked abroad. Upon their return, they were highly satisfied to find a finished living shoreline, which restored native trees, grasses, and bushes. The oyster reef, in particular, led to a resurgence in wildlife.

"The opportunity to create an environment for water birds, an extension of the wetlands...was very attractive to us. The outcome is a beautiful piece of waterfront property that is clearly feeding into the oysters, which we love. As well as supporting crabs and other sea creatures... what we are able to achieve, for what I feel was a modest investment, it transformed the shoreline."

– Lit, Homeowner

It has now been five years since the initial installation of the living shoreline and Mary Carol and Lit look forward to spending their retirement years at their home. They feel a sense of pride knowing their shoreline, and Grandmother Tree, will be protected for years to come.

"Being on a shoreline you're subjected to the elements and having a shoreline be resilient to the storms and exceptionally high tides... and not see the erosion, but actually recovery in some areas...it's really quite a positive outcome.

– Lit, Homeowner

Mary Carol and Lit recommend waterfront property owners consider living shorelines. In their view, it should be the first choice for any homeowner. They have seen firsthand how a shoreline is best protected by a natural ecosystem. Additionally, they believe that the long-term vision for their property was realized by consulting with living shoreline experts and advisory organizations. During each phase of the project, professionals offered guidance and, in turn, accelerated and simplified the process. Most importantly, the homeowners have found that by embracing a natural approach, they have restored the lush beauty of their property and enhanced wildlife habitats.



LOCAL LIVING SHORELINE DESIGNERS, ENGINEERS, AND INSTALLERS

GENERAL ORGANIZATIONS

Chesapeake Bay Landscape Professional: certified.cblpro.org/

Anne Arundel Watershed Steward Academy: aawsa.org/connect/

- **Contractors**

[static1.squarespace.com/static/544916c3e4b09edc336b555e/t/5d9ca712618dd9479c
ba8237/1570547475105/Contractor+List+For+Website.pdf](https://static1.squarespace.com/static/544916c3e4b09edc336b555e/t/5d9ca712618dd9479cba8237/1570547475105/Contractor+List+For+Website.pdf)

- **Vendors**

[static1.squarespace.com/static/544916c3e4b09edc336b555e/t/5d9ca73a618dd9479c
ba8552/1570547514988/Vendor+List+for+Website.pdf](https://static1.squarespace.com/static/544916c3e4b09edc336b555e/t/5d9ca73a618dd9479cba8552/1570547514988/Vendor+List+for+Website.pdf)

SELECT CONTRACTORS BY STATE

Contractors listed below have expertise on living shoreline design/installation including innovative living shoreline features, as well as experience working on residential projects. For a more complete list of contractors serving the Chesapeake Bay and surrounding states, see contractor lists above.

Note we do not endorse or recommend any individual contractor and are not responsible for the accuracy of claims made by those organizations included in this listing.

DELAWARE

- **Bella Terra Landscapes**
Contact: 302-422-9000, contact@bellaterra.de.com
Website: www.bellaterrade.com/
- **Cardno**
Contact: 302-395-1919, www.cardno.com/contact-us
Website: www.cardno.com/regions/americas/
- **Coastal & Estuarine Research, Inc.**
Contact: 302-645-9610
- **Environmental Resources, Inc.**
Contact: 302-436-9637, thomas@ericonsultants.com
Website: www.ericonsultants.com/
- **Hastings Marine Consulting**
Contact: 302-629-0749, www.hastingsmarineconstruction.com/contact
Website: www.hastingsmarineconstruction.com/
- **Landscape Architectural Services, LLC**
Contact: 302-284-4578, matt@las-llc.net
Website: www.las-llc.net/contact_us.htm
- **RK&K**
Contact: 302-468-4879, www.rkk.com/contact/
Website: www.rkk.com/
- **Tributaries Ecological Restoration**
Contact: 302-381-3630, burr@coastaltributaries.com
Website: www.coastaltributaries.com/
- **Underwood & Associates**
Contact: Keith Underwood, (410) 849-3211, administration@ecosystemrestoration.com
Website: www.ecosystemrestoration.com/

MARYLAND

- **BayLand Consultants & Designers, Inc.**
Contact: Sepehr Baharlou; (410) 694-9401; sbaharlou@baylandinc.com
Website: www.baylandinc.com/
- **Biohabitats**
Contact: Joe Berg, (410) 554-0156, jberg@biohabitats.com
Website: www.biohabitats.com
- **Environmental Concern**
Contact: Gene Slear, 410-745-9620, gslear@wetland.org
Website: wetland.org/nursery/
- **Environmental Quality Resources, LLC**
Contact: Liam O'Meara, (410) 923-8680, contact@eqrllc.com
Website: www.eqrllc.com/
- **Flood Brothers Marine Consultants**
Contact: John Flood, (410) 267-9692, floodbros@yahoo.com
- **Mahan Rykiel Associates**
Contact: Isaac Hametz, 732-742-7188, ihametz@mahanrykiel.com
Website: www.mahanrykiel.com/
- **Resource Restoration Group**
Contact: info@rrgroup.us
Website: www.rrgroup.us/index.shtml
- **Sustainable Science, LLC**
Contact: Albert McCullough, (410) 924-4316, albert@sustainablescience.com
Website: www.sustainablescience.com/
- **Underwood and Associates**
Contact: Keith Underwood, (410) 849-3211,
keith.underwood@ecosystemrestoration.com
Website: www.baylandinc.com/

VIRGINIA

- **Bay Environmental**

Contact: Jim Cahoon, 757-436-5900, Jim@bay-environmental.com

Website: bay-environmental.com/wetland-studies.html

- **Coastal Design & Construction**

Contact: Jim Gunn, (804) 693-4158, jim@coastaldesign.net

- **Coastline Design and Construction, Inc.**

Contact: Scott Hardaway, (804) 684-7277, hardaway@vims.edu

- **David Chewey Landscape Architect**

Contact: David Chewey, (757) 272-7515

Website: www.davidchewey.com

- **Environmental Quality Resources, LLC**

Contact: (804) 441-6117, contact@eqrllc.com

Website: www.eqrllc.com/

- **Shoreline Erosion Advisory Service – Virginia Department of Conservation and Recreation (DCR)**

Contact: DCR Shoreline Engineers:

Mike Vanlandingham, 804-443-1494, mike.vanlandingham@dcr.virginia.gov

Aaron Wendt, 804-443-4534, aaron.wendt@dcr.virginia.gov

Website: www.dcr.virginia.gov/soil-and-water/seas

LIVING SHORELINE QUESTIONS FOR CONTRACTORS

GENERAL EXPERIENCE AND CREDENTIALS

How long have you been in the landscaping design, consulting, or installation business?

- *Ask about acknowledgements, awards or accolades earned for their work.*

Are you licensed within your State?

- *Ask for a copy of their license and contact the issuing authority to ensure it is current and in good standing.*

What types of insurance do you carry?

- *General liability insurance – ask for a copy of contractor's general liability insurance certificate.*
- *Workers' compensation insurance – ask for copy of current worker's compensation certificate.*

What kind of written warranty or guarantee do you offer?

How do you typically communicate with your clients about projects and keep them informed along the way?

LIVING SHORELINE EXPERIENCE

How many years of experience do you have in designing, consulting or installing actual living shorelines?

- *How many living shorelines have you designed or consulted on versus installed?*
- *Does your work include private, public, or community living shorelines?*

What type of specific living shoreline services do you offer?

- *Site assessment and analysis including evaluation of erosion potential and duration of erosion protection?*
- *Design plan?*
- *Funding sources?*
- *Permitting process?*
- *Plant selection?*
- *Maintenance advice?*

Can you provide a list of references for completed living shorelines projects?

- *Include contact names and actual addresses so you can go and physically view the work.*
- *Ensure you ask references the following:*
 - » Was work completed in a timely manner?
 - » Was work of sufficient quality within contracted price?
 - » Were you satisfied with the way the project was managed and communications along the way?

LIVING SHORELINE PROJECT-SPECIFIC QUESTIONS

What is the typical range of costs for a living shorelines project??

- *Are you able to offer a fixed cost vs. estimated?*
- *What's your typical payment schedule?*

What is an expected timeline for this type of project?

Who will be actually doing the work on my property?

- *Who will the Team be comprised of? Get names and their experience levels.*
- *Will you be hiring sub-contractors for this work? How do you choose your sub-contractors?*

How long does it take for vegetation to propagate or mature into a working, living shoreline?

How long will erosion protection last?

Will I still have access to my shoreline?

How will your Team access my site – by land or by barge?

What kind of post-installation maintenance work will I be required to do?

OTHER KEY TIPS:

Approach multiple contractors for quotes. You want to have a good understanding of the market to ensure that you are getting a reasonable quote.

Make sure all project material selections are spelled out and signed in a written contract. Ensure your contract includes plans, costs, and timelines. If you don't understand the contract, have a private attorney review it.

Pay no more than 1/3 down as a deposit. Never pay cash.

Refer to Chesapeake Bay Landscape Professional Directory:

<https://certified.cblpro.org/>

EVENT PLANNING GUIDE: SHORELINE DEMO SITE

Detailed Task List

EVENT PLANNING

Secure community living shoreline demonstration sites for desired dates

- See living shoreline demonstration sites [[link to resource list](#)]
- Ensure sufficient space and parking
- Factor in seasonality and potential weather conditions when choosing date

Determine agenda topics and secure speakers

- Determine relevant topics/agenda ideas – (SEE SAMPLE AGENDA)
- Determine speakers most suitable to address agenda topics – ideas follow:
 - » *Sponsoring NGO, CBP, CBF, municipality representative or event host*
 - › *Consider naming this individual as event emcee who will open and close event and introduce and transition speakers throughout the event*
 - » *Site demonstration expert, project engineer or manager who can act as demo site tour guide*
 - » *Other relevant and credible speakers with living shoreline expertise*
 - › *designers, contractors, consultants, engineers*
 - › *academic speakers*
 - › *permitting agency representatives*
 - › *private property owners who have installed living shorelines or living shoreline ambassadors*

- Solicit and secure potential speakers
 - » *See resource table link for variety of presenter options and contact information [link to resource list]*
 - » *Solicit suggestions from state and governmental agencies, non-governmental agencies [link to resource list]*
- Develop speaker guidelines and expectations to aid in development of presentations including any elements for desired level of consistency
 - » *Send to speakers well in advance of event*
- Establish draft and final presentation due dates

Develop plan and flow for demonstration site tour

- Engage demo site tour guide/project manager in plan development

Solicit vendors, contractors, demo site experts, and living shoreline ambassadors for post-event mini expo [link to resource list]

- Consider the following informational booths or display tables:
 - » *Living shoreline vendors/contractors (nurseries, contractors, designers, consulting firms)*
 - » *Living shoreline ambassadors to share their first-hand experiences*
 - » *Demonstration site experts or project managers to address Q&As*
 - » *Sponsoring/host organization*

Arrange for event and audio/visual equipment needs; determine physical layout of event

- Order tents, tables, chairs (attendee seating during presentations, vendor display tables, tables for eating while mingling pre-event)
- Arrange for A/V expert, technology and equipment
 - » *Portable audio/visual equipment for main presentation*
 - » *Microphones for main speaker and attendees for closing Q&A session*
 - » *Several laptops for pre-presentation slide show to showcase successful living shoreline case studies, exemplary sites, before/after images*
 - » *Speaker lectern*
- Arrange for event photographer/videographer if desired

Promote event/invite attendees

- Consider the following attendees:
 - » *Private property owners (targeted attendees) [link to resource list]*
 - » *Living shoreline ambassadors (invite to participate in closing Q&A session or during post-event mini expo for purposes of sharing their testimonials or experiences) [link to resource list]*
- Assemble invitee lists; consider the following sources:
 - » *Marketing lists (for purchase) of private property owners living around Bay*
 - » *Social marketing through local groups – Facebook, Twitter, Instagram, Nextdoor Neighbor [link to resource list]*
 - › *Community or neighborhood social marketing groups/sites*
 - › *NGO, CBP, CBF, municipality social marketing sites or newsletters*
 - » *Marketing through local publications [link to resource list]*
- Develop invite materials
 - » *Write outreach script (email, phone, or social media content)*
 - » *If using regular mail, ensure sufficient envelopes and postage*
 - » *Develop tracking system to record responses; follow up if needed*

Arrange for refreshments

- Food caterers, food trucks, beverage coolers and ice, paperware, utensils, etc.

Arrange for event freebies from sponsoring/host organization

- Consider environmentally-themed or living shoreline-relevant freebies

PRE-EVENT PREPARATION

(Days/weeks leading up to event)

Re-confirm availability and readiness of venue

Re-confirm speakers, vendors, contractors, equipment rental (tables, chairs, tents, audio/visual), refreshments

- Remind speakers, vendors/contractors to bring sufficient educational materials and handouts
- Remind speakers of presentation due date

Create and assemble event educational displays and attendee materials

- Include living shoreline educational handouts, brochures, infographics, toolkits and other resources
- Include before/after living shoreline images (this is an important element)

Finalize agenda and send to speakers

Send out reminders/directions to attendees

- Develop reminder script (email, phone or social media content)
- Pull together directions to demo site – do a test drive using GPS enabled devices to ensure location accuracy and note any discrepancies
- Reference any safety protocols it relates to tour of physical site (e.g. wear closed-toe shoes, bring umbrella, etc.) or possible current COVID-19 guidelines (e.g. masks, distance-seating, etc.)
- If using regular mail, ensure sufficient envelopes and postage

Ensure sufficient resources for set-up, take down and cleanup

Pull together speaker presentations into one PowerPoint to ensure seamless flow of presentations

- Request speaker presentations one to two weeks before event to allow for edits

Perform presentation dry-run and walk-through

- Arrange for online meeting with all speakers present

Load up speaker presentations on main PC and pre-event slideshows on laptops

- Have presentation and slideshow backups on flash drive

Create and have handy event participant contact list with cell phone numbers

- Include anyone who is part of the day's program; ensure cell phones are charged

Assemble box of supplies (tape, scissors, pens/pencils, glue, stapler, etc.) and have handy for any event snafus

EVENT DAY

Arrive early to allow for sufficient set-up time and potential problem resolution

Event set-up tables (tents, audio/visual equipment, displays, signage, handouts)

- Set-up tents, attendee tables and chairs, post-event mini expo tables, attendee check-in table, visual displays, educational handouts, and event freebies; place event directional signage
- Set-up audio/visual equipment - main PC, projector, microphones and pre-event slideshows

Test audio/visual technology to ensure everything is working properly

- Test speaker presentations on main PC and pre-event slideshows on laptops
- Test daylight lighting for impact on presentation screen

Staff up check-in table for attendee sign in

Run event – (SEE SAMPLE AGENDA AND RUN OF SHOW DAY FLOW)

Take down displays and cleanup event site

Event Checklist

KEY TASK *	WHEN
Event Planning	
Secure community living shoreline demonstration site for desired dates	6 months – 1 year
Determine agenda topics and secure speakers	6 months
Solicit vendors/contractors, demo site experts, and living shoreline ambassadors for post-event mini expo	6 months
Arrange for event and audio/visual equipment needs; determine physical layout of event	4 months
Promote event and invite attendees	3 months
Arrange for refreshments	2 months
Arrange for event freebies from sponsoring organization	2 months
Pre-Event Preparation (days/weeks leading up to event)	
Re-confirm availability and readiness of venue	2 months
Re-confirm speakers, vendors, contractors, equipment rental (tables, chairs, tents, audio/visual), refreshments	2 months
Create and assemble event educational displays and attendee materials	1 month
Finalize agenda and send to speakers	2 weeks
Send out reminders/directions to attendees	2 weeks
Ensure sufficient resources for set-up, take down and cleanup	2 weeks
Pull together final speaker presentations into one PowerPoint	1 week
Perform presentation/speaker dry-run and walk-through	1 week
Load up speaker presentations on main PC and pre-event slideshows on laptops	1 day
Create and have handy event participant contact list with cell phone numbers - anyone who is part of the day's program	1 day
Assemble box of supplies (tape, scissors, pens/pencils, glue, stapler, etc.) and have handy for any event snafus	1 day

KEY TASK *	WHEN
Event Day (arrive early)	
Event set-up tables (tents, audio/visual equipment, displays, signage, handouts)	Event Day
Test audio/visual technology and daylight lighting impact on presentations	
Ensure arrival of all speakers and post-event mini expo participants; contact if necessary	
Staff up check-in table for attendee sign in	
Run event – (SEE SAMPLE AGENDA AND RUN OF SHOW DAY FLOW)	
Take down displays and clean up event site	

Day Flow and Schedule

TIME	LENGTH	PROGRAM	CUES	SCREEN CONTENT	AUDIO/PCS/LIGHTING	NOTES
10:00	:30	Pre-event mingling and refreshments; attendees begin arriving	Attendee check-in begins		Test prior to event start; test lighting to ensure outdoor day lighting doesn't interfere with presentation screen	
10:30	:10	Attendees arrive and seat themselves for presentation; (if visual elements, have slideshow of LS projects and property owner, ambassador testimonials)	Announcement of program start; all to take their seats and mute phones	PowerPoint Presentation - Event Intro and Welcome Slide		
10:40	:05	Meeting Host Speaker - Event Introduction and Meeting Etiquette	Meeting host approaches lecturn	Welcome and Meeting Etiquette Slides		
10:45	:20	Speaker #1: Overview of Living Shorelines	Meeting host introduces 1st speaker	PowerPoint Presentation #1		
11:05	:20	Speaker #2: Living Shoreline Practical Applications for Private Landowners	Speaker #1 ends; meeting host introduces 2nd speaker	PowerPoint Presentation #2		

TIME	LENGTH	PROGRAM	CUES	SCREEN CONTENT	AUDIO/PCS/LIGHTING	NOTES
11:25	:20	Speaker #3: Living Shoreline Resources	Speaker #2 ends; meeting host introduces 3rd speaker	PowerPoint Presentation #3		
11:45	:10	Pre-Demo Tour Meeting Break	Speaker #3 ends; meeting host introduces meeting break	Meeting Break Slide		
11:55	:45	Living Shorelines Demonstration Site Public Tour	Meeting host announces start of demonstration site tour; introduces demonstration site tour guide	Proceed to Demonstration Site Slide		
12:35	:05	Event Close and Thanks	Mmeeting host announces close of meeting and post-event mini expo	Thanks and Closing Slide		
12:40	:20	Vendor and contractor mini-expo – browsing and attendee education; ambassador Q&A		Mini-Expo Now In Session Slide (ends at xx:xx)		
1:00	:00	Event Conclusion			Take down	

Agenda

POSSIBLE TOPICS	TIME	SPEAKER
Event Introduction/Purpose and Meeting Etiquette <i>(mute cell phones, restroom location, safety issues, etc.)</i>	5 mins	Meeting host
Overview of Living Shorelines: Why Living Shorelines? <i>(purpose, importance, benefits, and realities of living shorelines)</i>	20 mins	Speaker #1
Living Shoreline Practical Applications for the Private Landowner <ul style="list-style-type: none"> › <i>(Option 1)</i> Private Landowner, Ambassador Case Study, and Testimonial › <i>(Option 2)</i> Private Landowner Ambassador Panel 	20 mins 30 mins	Speaker #2 Speaker panel
Living Shoreline Resources <i>(planning/design, contractor selection, funding, permitting, installation, plant selection)</i>	20 mins	Speaker #3
Meeting Break	10 mins	Meeting host
A Living Shoreline In Action - Public site tour including Q&A <ul style="list-style-type: none"> › Project overview, background, and need for living shoreline › Specific living shoreline technique used (address benefits; compare and contrast to other types) › Types of plants (plant choice, plant features; certain plants have certain ecological functions) › Post-installation maintenance requirements › Q&A 	45 mins – 1 hour	Demo site expert and tour guide
Event Close and Thanks	5 mins	Meeting host
Commence Post-Event Mini Expo	As time allows	

EVENT PLANNING GUIDE: PUBLIC EVENT

Detailed Task List (Public Space Only/No Living Shoreline)

EVENT PLANNING

Secure community public event sites for desired dates

- See public event sites [[link to resource list](#)]
- Ensure sufficient space and parking
- Factor in seasonality and potential weather conditions when choosing date

Determine agenda topics and secure speakers

- Determine relevant topics/agenda ideas – (SEE SAMPLE AGENDA)
- Determine speakers most suitable to address agenda topics – ideas follow:
 - » *Sponsoring NGO, CBP, CBF, municipality representative or event host*
 - › *Consider naming this individual as event emcee who will open and close event and introduce and transition speakers throughout the event*
 - » *Other relevant and credible speakers with living shoreline expertise*
 - › *designers, contractors, consultants, engineers*
 - › *academic speakers*
 - › *permitting agency representatives*
 - › *private property owners who have installed living shorelines or living shoreline ambassadors*
- Solicit and secure potential speakers
 - » *See resource table link for variety of presenter options and contact information [[link to resource list](#)]*
 - » *Solicit suggestions from state and governmental agencies, non-governmental agencies [[link to resource list](#)]*

- Develop speaker guidelines and expectations to aid in development of presentations including any elements for desired level of consistency
 - » *Send to speakers well in advance of event*
- Establish draft and final presentation due dates

Develop plan and flow for demonstration site tour

- Engage demo site tour guide/project manager in plan development

Solicit vendors/contractors and living shoreline ambassadors for post-event mini expo [\[link to resource list\]](#)

- Consider the following informational booths or display tables:
 - » *Living shoreline vendors/contractors (nurseries, contractors, designers, consulting firms)*
 - » *Living shoreline ambassadors to share their first-hand experiences*
 - » *Sponsoring/host organization*

Arrange for event and audio/visual equipment needs; determine physical layout of event

- Order tents, tables, chairs (attendee seating during presentations, vendor/contractor display tables, tables for eating while mingling pre-event)
- Arrange for A/V expert, technology and equipment
 - » *Portable audio/visual equipment for main presentation*
 - » *Microphones for main speaker and attendees for closing Q&A session*
 - » *Several laptops for pre-presentation slide show to showcase successful living shoreline case studies, exemplary sites, before/after images*
 - » *Speaker lectern*
- Arrange for event photographer/videographer if desired

Promote event/invite attendees

- Consider the following attendees:
 - » *Private property owners (targeted attendees) [link to resource list]*
 - » *Living shoreline ambassadors (invite to participate in closing Q&A session or during post-event mini expo for purposes of sharing their testimonials or experiences) [link to resource list]*
- Assemble invitee lists; consider the following sources:
 - » *Marketing lists (for purchase) of private property owners living around Bay*
 - » *Social marketing through local groups – Facebook, Twitter, Instagram, Nextdoor Neighbor [link to resource list]*
 - › *Community or neighborhood social marketing groups/sites*
 - › *NGO, CBP, CBF, municipality social marketing sites or newsletters*
 - » *Marketing through local publications [link to resource list]*
- Develop invite materials
 - » *Write outreach script (email, phone, or social media content)*
 - » *If using regular mail, ensure sufficient envelopes and postage*
 - » *Develop tracking system to record responses; follow up if needed*

Arrange for refreshments

- Food caterers, food trucks, beverage coolers and ice, paperware, utensils, etc.

Arrange for event freebies from sponsoring/host organization

- Consider environmentally-themed or living shoreline-relevant freebies

PRE-EVENT PREPARATION

(Days and weeks leading up to event)

Re-confirm availability and readiness of venue

Re-confirm speakers, vendors, contractors, equipment rental (tables, chairs, tents, audio/visual), refreshments

- Remind speakers, vendors, and contractors to bring sufficient educational materials and handouts
- Remind speakers of presentation due date

Create and assemble event educational displays and attendee materials

- Include living shoreline educational handouts, brochures, infographics, toolkits and other resources
- Include before/after living shoreline images (this is an important element)

Finalize agenda and send to speakers

Send out reminders and directions to attendees

- Develop reminder script (email, phone or social media content)
- Pull together directions to demo site – do a test drive using GPS enabled devices to ensure location accuracy and note any discrepancies
- If using regular mail, ensure sufficient envelopes and postage

Ensure sufficient resources for set-up, take down and cleanup

Pull together speaker presentations into one PowerPoint to ensure seamless flow of presentations

- Request speaker presentations one to two weeks before event to allow for edits

Perform presentation dry-run and walk-through

- Arrange for online meeting with all speakers present

Load up speaker presentations on main PC and pre-event slideshows on laptops

- Have presentation and slideshow backups on flash drive

Create and have handy event participant contact list with cell phone numbers

- Include anyone who is part of the day's program; ensure cell phones are charged

Assemble box of supplies (tape, scissors, pens, pencils, glue, stapler, etc.) and have handy for any event snafus

EVENT DAY

Arrive early to allow for sufficient set-up time and potential problem resolution

Event set-up tables (tents, audio/visual equipment, displays, signage, handouts)

- Set-up tents, attendee tables and chairs, post-event mini expo tables, attendee check-in table, visual displays, educational handouts, and event freebies; place event directional signage
- Set-up audio/visual equipment - main PC, projector, microphones and pre-event slideshows

Test audio/visual technology to ensure everything is working properly

- Test speaker presentations on main PC and pre-event slideshows on laptops
- Test daylight lighting for impact on presentation screen

Staff up check-in table for attendee sign in

Run event – (SEE SAMPLE AGENDA AND RUN OF SHOW DAY FLOW)

Take down displays and cleanup event site

Event Checklist

KEY TASK *	WHEN (Prior to Event)
Event Planning	
Secure community living shoreline demonstration site for desired dates	6 months – 1 year
Determine agenda topics and secure speakers	6 months
Solicit vendors, contractors, demo site experts, and living shoreline ambassadors for post-event mini expo	6 months
Arrange for event and audio/visual equipment needs; determine physical layout of event	4 months
Promote event and invite attendees	3 months
Arrange for refreshments	2 months
Arrange for event freebies from sponsoring organization	2 months
Pre-Event Preparation (days/weeks leading up to event)	
Re-confirm availability and readiness of venue	2 months
Re-confirm speakers, vendors, contractors, equipment rental (tables, chairs, tents, audio/visual), refreshments	2 months
Create and assemble event educational displays and attendee materials	1 month
Finalize agenda and send to speakers	2 weeks
Send out reminders/directions to attendees	2 weeks
Ensure sufficient resources for set-up, take down and cleanup	2 weeks
Pull together final speaker presentations into one PowerPoint	1 week
Perform presentation dry-run and walk-through	1 week
Load up speaker presentations on main PC and pre-event slideshows on laptops	1 day
Create and have handy event participant contact list with cell phone numbers - anyone who is part of the day's program	1 day
Assemble box of supplies (tape, scissors, pens/pencils, glue, stapler, etc.) and have handy for any event snafus	1 day

KEY TASK *	WHEN (Prior to Event)
Event Day (arrive early)	
Event set-up tables (tents, audio/visual equipment, displays, signage, handouts)	Event Day
Test audio/visual technology and daylight lighting impact on presentations	
Ensure arrival of all speakers and post-event mini expo participants; contact if necessary	
Staff up check-in table for attendee sign in	
Run event – (SEE SAMPLE AGENDA AND RUN OF SHOW DAY FLOW)	
Take down displays and clean up event site	

Day Flow and Schedule

TIME	LENGTH	PROGRAM	CUES	SCREEN CONTENT	AUDIO/PCS/ LIGHTING	NOTES
10:00	:30	Pre-event mingling and refreshments; attendees begin arriving	Attendee check-in begins		Test prior to event start; test lighting to ensure outdoor day lighting doesn't interfere with presentation screen	
10:30	:10	Attendees arrive and seat themselves for presentation; (if visual elements, have slideshow of LS projects and property owner/ ambassador testimonials)	Announcement of program start; all to take their seats and mute phones	PowerPoint Presentation - Event Intro/ Welcome Slide		
10:40	:05	Meeting Host Speaker - Event Introduction and Meeting Etiquette	Meeting host approaches lecturn	Welcome and Meeting Etiquette Slides		
10:45	:20	Speaker #1: Overview of Living Shorelines	Meeting host introduces 1st speaker	PowerPoint Presentation #1		
11:05	:20	Speaker #2: Living Shoreline Practical Applications for Private Landowners	Speaker #1 ends; meeting host introduces 2nd speaker	PowerPoint Presentation #2		
11:25	:20	Speaker #3: Living Shoreline Resources	Speaker #2 ends; meeting host introduces 3rd speaker	PowerPoint Presentation #3		

TIME	LENGTH	PROGRAM	CUES	SCREEN CONTENT	AUDIO/PCS/ LIGHTING	NOTES
11:45	:10	Meeting Break	Speaker #3 ends; meeting host introduces meeting break	Meeting Break Slide		
11:55	:45	Speaker #4: A Living Shoreline in Action Presentation: Project XYZ (presentation walk-through of complete project, start to finish)	Meeting host introduces 4th speaker	PowerPoint Presentation #4		
12:35	:05	Event Close and Thanks	Meeting host announces close of meeting and post-event mini expo	Thanks and Closing Slide		
12:40	:20	Vendor/contractor mini-expo – browsing/ attendee education; ambassador Q&A		Mini-Expo Now In Session Slide (ends at xx:xx)		
1:00	:00	Event Conclusion			Take down	

Agenda

POSSIBLE TOPICS	TIME	SPEAKER
Event Introduction or Purpose and Meeting Etiquette <i>(mute cell phones, restroom location, safety issues, etc.)</i>	5 mins	Meeting host
Overview of Living Shorelines: Why Living Shorelines? <i>(purpose, importance, benefits, and realities of living shorelines)</i>	20 mins	Speaker #1
Living Shoreline Practical Applications for the Private Landowner » <i>(Option 1)</i> Private Landowner, Ambassador Case Study, Testimonial » <i>(Option 2)</i> Private Landowner Ambassador Panel	20 mins 30 mins	Speaker #2 Speaker panel
Living Shoreline Resources <i>(planning and design, contractor selection, funding, permitting, installation, plant selection)</i>	20 mins	Speaker #3
Meeting Break	10 mins	Meeting host
A Living Shoreline In Action - Project XYZ (presentation walk-through of complete project, start to finish) » Project overview, background, and need for living shoreline » Specific living shoreline technique used (address benefits; compare and contrast to other types) » Types of plants (plant choice, plant features; certain plants have certain ecological functions) » Helpful resources or steps taken to implement successful project (attempt to address any key perceived barriers): › project planning and design › contractor selection › funding › post-installation maintenance requirements » Q&A	45 mins – 1 hour	Project manager, expert, or living shoreline private landowner, ambassador
Event Close and Thanks	5 mins	Meeting host
Commence Post-Event Mini Expo	As time allows	

FUNDING RESOURCES

INTRODUCTION

Delaware offers landowner assistance for shoreline stabilization projects through a cost-share program that reimburses landowners 50% of their expenses up to \$5,000. Financial assistance is available for shoreline projects in the Inland Bay and Chesapeake Bay watersheds. This program is great for low-energy projects that do not require any rock work. Participants need to commit to maintaining their shoreline for three years.

- <https://www.sussexconservation.org/services/agriculture/cost-share-programs.html>

Here are two other resources that may be helpful in your quest for financial support of your living shorelines project.

One is an online searchable database provided by the Institute for Public Administration (IPA) at the University of Delaware, with support from Delaware Coastal Programs. It allows property owners to search for financial assistance programs that support the implementation of resiliency-building plans and projects in Delaware.

- <https://www.bidenschool.udel.edu/research-public-service/ddfrc>

The nonpartisan Georgetown Climate Center has created a toolkit for property owners implementing resiliency projects, including installation of living shorelines. Their Green Infrastructure Toolkit can be found at:

- <https://www.georgetownclimate.org/adaptation/toolkits/green-infrastructure-toolkit/how-to-pay-for-green-infrastructure-funding-and-financing.html>

FUNDING RESOURCES

INTRODUCTION

In the State of Maryland, funding assistance programs can be found by searching the Maryland Resiliency Partnership Grant database. The programs are tied to pollution prevention and conservation outcomes and vary in their cost-share percentages and limits. Access the database on the partnership website and search keyword living shoreline.

- md-resiliency-partnership-maryland.hub.arcgis.com/pages/grants
The Department of Natural Resources provides information about loans and technical assistance for property owners considering installing living shorelines.
- dnr.maryland.gov/ccs/Pages/livingshorelines.aspx
At the bottom of the page is a link to Financial and Technical Assistance. On the Financial and Technical Assistance page, you will find a link to a document, Living Shoreline Financial Assistance Matrix. In the matrix there is some information about residential projects.

FUNDING RESOURCES

INTRODUCTION

In the Commonwealth of Virginia, several funding assistance programs are available through state and local jurisdictions as well as conservation districts. The programs are tied to pollution prevention and conservation outcomes and vary in their cost-share percentages and limits. They can be reviewed by going to the Shoreline Management Handbook on the Virginia Institute of Marine Science website. Search in the table of contents for *Restoration for Resilience* then *Project Funding and Incentives*.

- <https://www.vims.edu/ccrm/ccrmp/handbook/resources/index.php>

Cost-share funding may be available for installing living shorelines through the Elizabeth River Project. The Elizabeth River Project is a non-profit dedicated to the health and well-being of the river. In addition, their experts can provide design and permitting guidance for your project.

- <https://elizabethriver.org/living-shorelines-shoreline-buffers>

The City of Norfolk offers a Residential Fee Reduction Program for property owner projects that align with defined storm water management practices. The city's Environmental Storm Water Management Program created this booklet to inform and guide property owners through the process. An application is included in the booklet.

- <https://www.norfolk.gov/DocumentCenter/View/28851/SWFEEBOOKLET-11-15-16?bidId>

COMPARING LIVING SHORELINES AND BULKHEADS

PROTECTING YOUR HOME AND THE CHESAPEAKE BAY WATERSHED

WHAT IS A LIVING SHORELINE?

If you are concerned about protecting your waterfront and are interested in enhancing the natural beauty of your property, a living shoreline may be right for you. Living shorelines utilize natural materials like native plants, small stones, and sand as a barrier to defend against shoreline erosion and flood impacts.

HOW A LIVING SHORELINE WORKS

Living shorelines are modeled after wetland systems that occur in nature. Wetlands and living shorelines stabilize shorelines by trapping sediment and reducing wave energy with thick vegetation growth. Native plants are especially effective at diffusing and absorbing wave energy as their roots stay in place during storms, allowing vegetation to continue to grow and stabilize the shoreline. The advantages of a living shoreline are twofold: they preserve natural ecosystems and help protect waterfront communities against erosion and storm impacts.

BENEFITS OF WETLANDS AND LIVING SHORELINES

Wetlands are the shallow or saturated areas between land and water; they offer a multitude of benefits such as filtering runoff, which over time, improves water quality. Wetlands can capture and store harmful carbon dioxide from the atmosphere. Wetlands also serve as a vital habitat for wildlife by creating an environment suitable for fish, crabs, oysters, waterfowl and more. In addition, native plants are adapted for local conditions, thus requiring less maintenance over time. Along with shoreline protection, many homeowners can enjoy activities like fishing and kayaking by restoring natural resources along their waterfront.

THE EFFECTS OF A HARDENED SHORELINE

Hardened shoreline structures such as bulkheads, seawalls and revetments are installed to protect property. However, they often have long-term consequences and costly maintenance needs. Instead of absorbing wave energy, they reflect it, resulting in a scouring or scrubbing action of the beach and ocean or river bottom. Beach scouring leads to deeper water, which contributes to vegetation loss and an inhospitable environment for wetland creatures that rely on shallow water habitat. A scientific study found that when seawalls and bulkheads are built there is a 23% loss in biodiversity and around a 45% loss in abundance of marine organisms compared to a natural shoreline¹.

Bulkheads have a ripple effect; once installed, they can negatively affect neighboring shorelines. Waves overtop these structures during flood events, leading to erosion behind the structure and degradation of the structural integrity. As a result, hardened shorelines can increase the likelihood of property damage

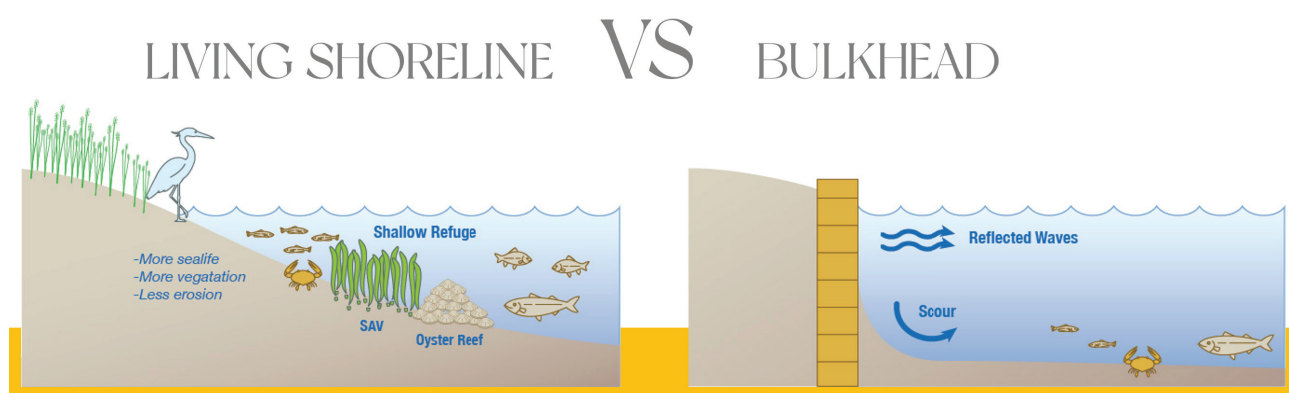
while also taking away habitat for shallow-water creatures. Impacts are often more pronounced after major storm events. After Hurricane Isabel in 2003, many property owners with riprap and bulkheads requested assistance from the State of Maryland to repair their shorelines while those who had worked with the state to install living shorelines did not². A living shoreline's efficacy increases over time as plant roots and shoots continue to grow and strengthen, even within dynamic environments, whereas a hardened shoreline can only degrade over time.

HARDENED VERSUS NATURAL APPROACHES

In the Chesapeake Bay region, bulkheads and seawalls have traditionally been used to protect upland areas. However, in the past few decades marine scientists have learned that these hardened structures can have adverse effects on the larger wetland system. The concept of a living shoreline was first established in the Chesapeake Bay and is therefore well-suited for our watershed. Living shorelines were developed as a cost-effective solution for homeowners to address erosion concerns while mitigating environmental damage. Research on material costs found that, on average, living shorelines are approximately 82% less expensive per linear foot compared to bulkheads³. In the long run, contracting and construction costs of a living shoreline are typically offset because they require far less maintenance and repairs compared to hardened shorelines. Hybrid living shorelines, which include a combination of strategically placed hard structures and natural features, are an alternative method for homeowners who live in areas with high wave action.

WHAT YOU CAN DO

Homeowners can ensure the protection of their shoreline by consulting with local government agencies and local watershed protection groups. These groups can offer expert advice on how to maintain natural shorelines or restore eroding shorelines. Overall, waterfront communities are increasingly vulnerable to sea level rise, storms, and erosion. Living shorelines are resilient in the face of our everchanging environment. Homeowners can protect their waterfront and the natural resources that make the Chesapeake Bay a great place to call home.



1 Gittman, R. K., Scyphers, S. B., Smith, C. S., Neylan, I. P., & Grabowski, J. H. (2016). Ecological consequences of shoreline hardening: A meta-analysis. *BioScience*, 66(9), 763–773. <https://doi.org/10.1093/biosci/biw091>

2 Maryland Geological Survey. (2003). Chesapeake Bay Shore Erosion. Hurricane Isabel and Shore Erosion in Chesapeake Bay, Maryland. Retrieved October 12, 2021, from http://www.mgs.md.gov/coastal_geology/isabel/isabel4.html.

3 Living shorelines. Naturally Resilient Communities. (n.d.). Retrieved October 12, 2021, from <http://nrcsolutions.org/living-shorelines/>.

NATIVE PLANT RESOURCES

NATIVE PLANT ORGANIZATIONS/RESOURCES

- **Delaware Native Plant Society**
Main Site: delawarenativeplants.org/
- **Maryland Native Plant Society**
Main Site: mdflora.org/
- **Virginia Native Plant Society**
Main Site: vnps.org/
- **Chesapeake Bay Native Plant Center**
www.nativeplantcenter.net/
- **Chesapeake Bay Foundation, Native Plants**
www.cbf.org/join-us/more-things-you-can-do/in-your-yard/native-plants.html
- **Chesapeake Natives**
chesapeakenatives.org/
- **Choose Natives**
choosenatives.org/
- **Ernst Seeds Native Planting Guides**
www.ernstseed.com/resources/planting-guides/
- **Native Plants for Wildlife Habitat and Conservation Landscaping
Chesapeake Bay Watershed, U.S. Fish & Wildlife Service**
[www.fws.gov/Chesapeakebay/pdf/
NativePlantsforWildlifeHabitatandConservationLandscaping.pdf](http://www.fws.gov/Chesapeakebay/pdf/NativePlantsforWildlifeHabitatandConservationLandscaping.pdf)

NATIVE PLANT NURSERY LISTS & RESOURCES

- **Delaware Nursery & Landscape Association**
www.dnlaonline.org/resources/purchasing-native-plants/
- **Maryland Native Plant Society**
Nursery list: mdflora.org/nurseries.html
- **Virginia Native Plant Society**
Nursery list: vnps.org/native-plant-nursery-list/
- **Choose Natives**
choosenatives.org/location/native-nurseries/
- **PlantNative Regional Plant Nursery & List Finders**
plantnative.org/

SELECT LOCAL AND/OR WETLAND PLANTS' NURSERIES

The list below represents a select list of native plant nurseries based on locale and/or having a wetland/restorative specialty. For a complete list of nurseries serving the Chesapeake Bay and surrounding states, see full list of native plant nursery lists & resources above.

Note we do not endorse or recommend any individual nursery and are not responsible for the accuracy of claims made by those organizations included in this listing.

NURSERIES SERVING CHESAPEAKE BAY

- **American Native Plants**
www.americannativeplants.com/
Wholesale
- **Delmarva Native Plants**
delmarvanativeplants.com/
Wholesale
- **Izel Plants**
www.izelplants.com/
Online only – retail, wholesale
- **Mid-Atlantic Natives**
www.americannativeplants.com/
Not open to the public – wholesale
- **Octoraro Native Plant Nursery**
www.octoraro.com/our-nursery/
Wholesale

DELAWARE

- **Retail/Wholesale Nurseries serving Delaware (and other areas of the Bay)**
www.dnlaonline.org/wp-content/uploads/2019/08/Native-plants-WS-RT-2019.pdf
- **Wholesale Nurseries serving Delaware (and other areas of the Bay)**
www.dnlaonline.org/wp-content/uploads/2015/08/Native-plants-WS.pdf

MARYLAND

- **Adkins Arboretum**
www.adkinsarboretum.org/
Retail
- **Direct Native Plants**
www.directnativeplants.com
Retail, mail order
- **Environmental Concern**
wetland.org/nursery/
Retail by appointment
- **Herring Run Nursery**
bluewaterbaltimore.org/herring-run-nursery/
Retail, wholesale
- **Kollar Nursery**
www.kollarnursery.com/
Retail
- **Signature Horticultural Services**
www.signaturehort.com/
Retail

VIRGINIA

- **Against the Wind Liners, Plugs & More**
(757) 894-5025 or sales@againstthewindliners.com
Wholesale
- **Coastal Plants**
(757) 721-7456 or bocull@msn.com
- **Meadowview Biological Research Station**
pitcherplant.org/
Retail, wholesale – by appointment
- **The Natural Garden**
www.thenaturalgarden.net/
No physical location – sells through local co-ops/farmer's markets
- **Poplar Ridge Nursery**
www.poplarridgenursery.com/
Wholesale
- **Reedy Creek Environmental**
reedycreekenvironmental.wordpress.com/
Retail
- **Southern Branch Nursery**
www.southernbranchnursery.com/
Retail, wholesale
- **Wetland Design**
(804) 642-5737

YOU ARE THE LIFELINE KEEP A LIVING SHORELINE

HOW YOU CAN RESTORE AND PROTECT A NATURAL SHORELINE



Natural shorelines are critical for a healthy Bay. They stabilize the land, reduce erosion, promote valuable habitat for plant and animal species, and enhance coastal resilience. Consider keeping your shoreline natural, planting native vegetation or installing a living shoreline.

To get started:

1. Ask questions.
2. Seek preliminary technical assistance from your state or local non-profit agency.
3. Consult qualified contractors.
4. Develop a site plan.
5. Begin the permitting process.

The website below answers your questions and walks you through the process of installing a living shoreline. What you do with your shoreline will be your legacy to the Bay.

To learn more go to ChesapeakeBehaviorChange.org/Campaigns



TALKING POINTS

NATURAL AND LIVING SHORELINE AMBASSADOR TALKING POINTS

Keeping shorelines natural is the preferred method of managing and stabilizing shoreline erosion which threatens coastal properties, degrades water quality, and damages wildlife habitats in the Chesapeake Bay. You can play a key role in helping your local community understand the benefits and importance of keeping shorelines natural instead of using hardened control measures such as riprap, bulkheads, and retaining walls.

You are an Ambassador because . . .

- **You like talking about your shoreline.** Your property is a great model and visual representation of how a successful natural or living shoreline can look and function.
- **You have completed a living shorelines project.** You have lived through a shorelines project, so you have the experience needed to help your community understand the benefits and importance of keeping shorelines natural.
- **You have connections.** People talk and neighbors gather! Whether you are a newer or long-time resident of your community, through conversations with neighbors, friends, and family, you can encourage others to protect the Bay by keeping their shorelines natural or installing a living shoreline.

KEY TALKING POINTS

The Problem/Challenge:

- Erosion is a natural and integral process to preserving ecosystems, but excessive shoreline erosion is a growing concern.
- Erosion is accelerated by increasing populations around the Bay, and associated development.
- Key impacts include threatening coastal property and the infrastructure on it as well as sediment pollution which contributes to degraded water quality and damages critical habitats and living creatures.

The Solution¹:

Natural and Living Shorelines achieve multiple goals.

- Stabilizing the shoreline and reducing current rates of shoreline erosion and storm damage; they can be left alone without causing issues.
- Providing ecosystem services, such as habitat for fish and other aquatic species and increasing flood storage capacity.
- Maintaining connections between land and water ecosystems to enhance resilience.
- Natural shorelines are the easiest, cheapest choice and work to protect the Bay.
- Many property owners like the look of a natural shoreline.

Benefits¹:

Compared to hardened shorelines lined with riprap, bulkheads, retaining walls, and concrete, leaving your shoreline natural or installing a living shoreline offers many benefits to the environment and community.

- Erosion control and shoreline stabilization.
- Improved water quality from settling or trapping sediment (e.g., once established, a marsh can filter surface water runoff or oysters can provide coastal water filtration).
- Restored and enhanced habitat which supports fish and wildlife populations.
- Evidence shows that during major storms, a living, natural shoreline performs better than a hardened shoreline. The softer materials provide increased resilience and absorption of wave energy, storm surge and floodwaters.
- Increased property values.
- Enhanced community enjoyment.
- Opportunities for education.
- Adherence to State guidelines ensuring protection of shorelines and coastal habitat – Maryland and Virginia have established [authorized, mandated, required] living shorelines as the preferred method (over hardened structures) to reduce erosion, except in areas where it can be demonstrated that these measures are not feasible.

What can you do to protect the health of the Bay?

- Identify your property's shoreline characteristics to determine whether to keep your shoreline natural or install a living shoreline.
 - » *Is erosion low? Do you have existing vegetation? If so, a full living shoreline may not be appropriate or necessary for your shoreline.*

- » *Additional investment in erosion techniques like armoring or hardened structures may not yield a good return on investment.*
- » *Maintaining original vegetation may be superior to clearing and planting due to topsoil and root structure being more resilient to erosion and providing denser vegetation for habitat.*
- Determine your need for shoreline erosion control. Ask yourself these questions²:
 - » *Has your shoreline noticeably receded during the last two years?*
 - » *If you have marsh along your shoreline, has it been disappearing?*
 - » *Do you have to step down to walk on your beach?*
 - » *Are trees along your shoreline falling into the water?*
 - » *Is your beach submerged at high tide?*
 - » *Have your neighbors installed shore erosion control measures?*

Understand the benefits of natural and living shorelines and more importantly, set realistic expectations and outcomes.

- **Learn from your neighbors and projects within the community.** Talk with your neighbors about their properties, observe natural and living shorelines in their real settings, and attend living shoreline demonstration events. Sign up for your local Facebook or neighborhood chat groups.
- **Reach out to the professionals.** Restoration or ecological designers, engineers and consultants are great resources to help guide you through the decision-making process and can help you with many of the steps required to maintain or install natural and living shorelines.
 - » *Chesapeake Bay Landscape Professional certified.cblpro.org/*
- **Address perceived barriers by exploring natural and living shoreline resources.** Common barriers to keeping shorelines natural or installing living shorelines include level of erosion control, shoreline accessibility, cost and funding availability, permitting process, vegetation maintenance. Fortunately, there are resources available on coastal and shoreline management to help guide you through your decision-making process. Key organizations to contact for more information include:
 - » *Chesapeake Bay Foundation www.cbf.org/index.html*
 - » *Chesapeake Bay Program www.chesapeakebay.net/*
 - » *Virginia Institute of Marine Science (VIMS) <https://www.vims.edu/ccrm/topics/shoreline/index.php>*

- » *Virginia Department of Environmental Quality (DEQ)*
www.deq.virginia.gov/home
- » *Maryland Department of the Environment (MDE)*
mde.maryland.gov/Pages/index.aspx
- » *Maryland Department of Natural Resources*
dnr.maryland.gov/ccs/Pages/default.aspx
- » *Delaware Department of Natural Resources and Environmental Control (DNR)*
dnrec.alpha.delaware.gov/
- » *Living Shorelines Academy* livingshorelinesacademy.org/

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¹ Adapted from the Natural and Structural Measures for Shoreline Stabilization Brochure (2015), Systems Approach to Geomorphic Engineering (SAGE).

² Determine the need questions are from the Shore Erosion Control Guidelines for Waterfront Property Owners (2008) 2nd Edition, Maryland Department of the Environment Water Management Administration.

LIVING SHORELINE RESOURCES

1	Social Media Posts
2	Organization Facebook Pages
3	Local Facebook Pages
4	Nextdoor Groups
5	Community Newsletters
6	Public Event Spaces
7	Demonstration Sites
8	General Resources
9	Educational Organizations
10	Trainings and Workshops
11	Other Living Shoreline Programs
12	Other Campaigns and Outreach

SOCIAL MEDIA POSTS

Post 1
Image



Facebook	Content	Hashtags
	Do you love talking to your neighbors about the Bay's health and beauty? Protect it by becoming an Ambassador of the Bay! As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience, providing a thriving habitat for plants and animals, and stabilizing our shorelines. Learn more: chesapeakebay.net . #ChesapeakeBay #GreenInfrastructure #LivingShoreline	#ChesapeakeBay #GreenInfrastructure #LivingShoreline
Instagram	Content	Hashtags
	Do you love talking to your neighbors about the Bay's health and beauty? Protect it by becoming an Ambassador of the Bay! As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience, providing a thriving habitat for plants and animals, and stabilizing our shorelines. Learn more: chesapeakebay.net . #GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay	#GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay
Twitter	Content	Hashtags
	Do you love talking to your neighbors about the Bay's health and beauty? Protect it by becoming an Ambassador of the Bay! As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience + more. Learn more: chesapeakebay.net . #ChesapeakeBay	#ChesapeakeBay

SOCIAL MEDIA POSTS

Post 2
Image



Facebook	Content	Hashtags
	Do you enjoy identifying the birds, fish, and wildlife that visit your shoreline? Protect the Bay and its wildlife by becoming an Ambassador of the Bay! Join us to promote natural and living shorelines. As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience, providing a thriving habitat for plants and animals, and stabilizing our shorelines. Learn more: chesapeakebay.net . #ChesapeakeBay #GreenInfrastructure #LivingShoreline	#ChesapeakeBay #GreenInfrastructure #LivingShoreline
Instagram	Content	Hashtags
	Do you enjoy identifying the birds, fish, and wildlife that visit your shoreline? Protect the Bay and its wildlife by becoming an Ambassador of the Bay! Join us to promote natural and living shorelines. As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience, providing a thriving habitat for plants and animals, and stabilizing our shorelines. Learn more: chesapeakebay.net . #GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay	#GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay
Twitter	Content	Hashtags
	Do you enjoy identifying your shoreline's birds, fish, & wildlife? Protect the Bay & its wildlife by becoming an Ambassador of the Bay! As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience + more. Learn more: chesapeakebay.net	

SOCIAL MEDIA POSTS

Post 3
Image



Facebook	Content	Hashtags
	Do you have a natural or living shoreline? Are you proud of it? You should be! Living shorelines prevent erosion, provide a thriving habitat for plants and animals, increase coastal resilience, and stabilize the shoreline. Become an Ambassador of the Bay! Join us to encourage others to leave their shoreline natural. Plus, as an Ambassador, you'll connect with local living shoreline experts. Learn more: chesapeakebay.net . #ChesapeakeBay #GreenInfrastructure #LivingShoreline	#ChesapeakeBay #GreenInfrastructure #LivingShoreline
Instagram	Content	Hashtags
	Do you have a natural or living shoreline? Are you proud of it? You should be! Living shorelines prevent erosion, provide a thriving habitat for plants and animals, increase coastal resilience, and stabilize the shoreline. Become an Ambassador of the Bay! Join us to encourage others to leave their shoreline natural. Plus, as an Ambassador, you'll connect with local living shoreline experts. Learn more: chesapeakebay.net . #GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay	#GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay
Twitter	Content	Hashtags
	Do you have a natural or living shoreline? They prevent erosion, provide a thriving habitat for plants and animals, & more. Become an Ambassador of the Bay & encourage others to leave their shoreline natural, + connect with local experts . Learn more: chesapeakebay.net .	

SOCIAL MEDIA POSTS

Post 4

Image



Facebook	Content	Hashtags
	<p>Want to learn more from experts about living shorelines? Become an Ambassador of the Bay to help promote natural and living shorelines. As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience, providing a thriving habitat for plants and animals, and stabilizing our shorelines. Learn more: chesapeakebay.net. #ChesapeakeBay #GreenInfrastructure #LivingShoreline</p>	<p>#ChesapeakeBay #GreenInfrastructure #LivingShoreline</p>
Instagram	Content	Hashtags
	<p>Want to learn more from experts about living shorelines? Become an Ambassador of the Bay to help promote natural and living shorelines. As an Ambassador, you'll learn from shoreline experts about increasing coastal resilience, providing a thriving habitat for plants and animals, and stabilizing our shorelines. Learn more: chesapeakebay.net. #GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay</p>	<p>#GreenInfrastructure #ChesapeakeBayLife #NativeVegetation #ErosionControl #NativePlant #ChesapeakeBayWorld #ShorelineLiving #OneChesapeake #FindYourChesapeake #ChesapeakeBay</p>
Twitter	Content	Hashtags
	<p>Want to learn more from experts about living shorelines? Become an Ambassador of the Bay to help promote natural & living shorelines. You'll also learn from experts on providing a thriving habitat for plants & animals + more. Learn more: chesapeakebay.net. #ChesapeakeBay</p>	<p>#ChesapeakeBay</p>

ORGANIZATION FACEBOOK PAGES

State	Facebook Page	Contact Information	FB Link
MD	Maryland Coastal Bays Program	(410) 213-2297	https://www.facebook.com/coastalbays/?ref=page_internal
MD	Maryland DNR	(410) 260-8367	https://www.facebook.com/MarylandDNR/
MD	Bayland Consultants & Designers, Inc.	(410) 694-9410	https://www.facebook.com/baylandconsultants/
MD	Maryland Water Monitoring Council		https://www.facebook.com/MDWaterMonitoring/
MD	Chesapeake Conservation Partnership	(443) 261-2378	https://www.facebook.com/ChesapeakeConservationPartnership/
MD	Anne Arundel County Bureau of Watershed Protection and Restoration	(410) 222-4240	https://www.facebook.com/aawprp/
MD	Colliflower & Peterson Marine Construction	(301) 994-2824	https://www.facebook.com/colliflowerandpeterson/
MD	Sassafras Riverkeeper	(410) 810-7556	https://www.facebook.com/sassafrasriverkeeper/
MD	Shore Rivers	(443) 385-0511	https://www.facebook.com/ShoreRivers/
MD	Ecotone, Inc.	(410) 420-2600	https://www.facebook.com/EcotoneInc
MD	Waterkeepers Chesapeake	info@waterkeeperschesapeake.org	https://www.facebook.com/WaterkeepersChesapeake/
MD	University of Maryland Center for Environmental Science	(410) 228-9250	https://www.facebook.com/UMCES/
MD	Environmental Concern	(410) 745-9620	https://www.facebook.com/EnvironmentalConcernInc/
MD	Cape St. Claire Improvement Association	(410) 757-1223	https://www.facebook.com/CapeStClaireImprovementAssociation/
MD	Slayden's	(410) 310-4516	https://www.facebook.com/slaydens/
MD	National Park Service Chesapeake Bay	(410) 260-2470	https://www.facebook.com/ChesapeakeNPS/
MD	Potomac Conservancy	(301) 608-1188	https://www.facebook.com/PotomacConservancy/
MD	Maryland Stream Restoration Association	marylandstreamrestoration@yahoo.com	https://www.facebook.com/Maryland-Stream-Restoration-Association-187913797933553/
MD	Alliance for the Chesapeake Bay	(443) 949-0575	https://www.facebook.com/Allianceforthebay/
MD	Oyster Recovery Partnership	(410) 990-4970	https://www.facebook.com/OysterRecovery/
MD	Horn Point Laboratory	(410) 221-8357	https://www.facebook.com/HornPointLaboratory/
MD	Spa Creek Conservancy	(410) 271-5546	https://www.facebook.com/SpaCreekConservancy/
MD	Unity Gardens	unitygardensaa@gmail.com	https://www.facebook.com/unitygardensaacounty
VA	Virginia Oyster Shell Recycling Program		https://www.facebook.com/VaOysterShell/
VA	Living River Trust	(757) 500-4579	https://www.facebook.com/LivingRiverTrust/
VA	Flora of Virginia Project	flora@floravirginia.org	https://www.facebook.com/Flora-of-Virginia-Project-477628538956684/
VA	Chesapeake Environmental Communications	(804) 824-3945	https://www.facebook.com/ChesapeakeData/
VA	James River Association	(804) 788-8811	https://www.facebook.com/jamesriverassociation/
VA	James River Advisory Council	(804) 748-1567	https://www.facebook.com/JamesRiverAdvisoryCouncil/
VA	Reedy Creek Environmental	(804) 980-0013	https://www.facebook.com/reedycreekenv/
VA	Elizabeth River Project	(757) 399-7487	https://www.facebook.com/ElizabethRiverProject/
VA	Rivanna Conservation Alliance	(434) 977-4834	https://www.facebook.com/RivConAlliance/
VA	Friends of the Lower Appomattox River	contactus@folar-va.org	www.facebook.com/FriendsoftheLowerAppomattoxRiver/
VA	Bay Environmental, Inc.	(757) 436-5900	https://www.facebook.com/BayEnvironmentalInc/
VA	Wetlands Watch	(757) 621-1185	https://www.facebook.com/wetlandswatch/
VA	Virginia Institute of Marine Science	(804) 684-7000	https://www.facebook.com/fbvims/
VA	Defensores de la Cuenca	info@defensoresdelacuenca.org	https://www.facebook.com/DefensoresdIC/
VA	Lafayette Wetlands Partnership	ruth_m_martin@hotmail.com	https://www.facebook.com/LafayetteWetlandsPartnership/
VA	Ready Reef Inc.	(804) 338-3103	https://www.facebook.com/ReadyReef/
VA	Restore America's Estuaries	(703) 524-0248	https://www.facebook.com/RestoreAmericasEstuaries/
DE	Delaware Botanic Gardens at Pepper Creek	(202) 262-9856	https://www.facebook.com/delawaregardens/
DE	Delaware Native Plant Society	(302) 735-8918	https://www.facebook.com/Delaware-Native-Plant-Society-114294605325604/
DE	Delaware Invasive Species Council		https://www.facebook.com/DEInvasiveSC/
DE	Delaware Wetlands	(302) 739-9939	https://www.facebook.com/delawarewetlands
DE	Restoring the Environment and Developing Youth		https://www.facebook.com/Restoring-the-Environment-and-Developing-Youth-READY-310643849029954/
DE	DE Center for the Inland Bays	(302) 226-8105	https://www.facebook.com/deinlandbays/
DE	MERR Institute	(302) 228-5029	https://www.facebook.com/MERRInstitute/
DE	Delaware National Estuarine Research Reserve	(302) 739-6377	https://www.facebook.com/DNERR/

ORGANIZATION FACEBOOK PAGES

State	Facebook Page	Contact Information	FB Link
PA	Water Science Institute	shelby@waterscienceinstitute.org	https://www.facebook.com/waterscienceinstitute/
Regional	Atlantic Estuarine Research Society	aersscience@gmail.com	https://www.facebook.com/AERSScience/
State	National Fish and Wildlife Foundation	(202) 857-0166	https://www.facebook.com/FishandWildlife/

LOCAL FACEBOOK PAGES

State	Facebook Page	Contact Information	FB Link
MD	Magothy Beach Improvement Association		https://www.facebook.com/MagothyBeachImprovementAssociation/
MD	Admiral Heights Community	info@admiralheights.org	https://www.facebook.com/AdmiralHeights/
MD	Anchorage Marina Baltimore	(410) 522-7200	https://www.facebook.com/AnchorageMarinaBaltimore/
MD	Canton, MD		https://www.facebook.com/groups/107915962696038/
MD	Canton Neighbors		https://www.facebook.com/groups/canton.neighbors.baltimore/
MD	Fells Point Neighbors		https://www.facebook.com/groups/1418640871686612/
MD	Annapolis Roads, MD		https://www.facebook.com/pages/Annapolis-Roads-Maryland/109171149111161
MD	Watergate Pointe Annapolis Residents		https://www.facebook.com/Watergate-Pointe-Annapolis-MD-Residents-299067264109876/
MD	Hillsmere Shores Community Page		https://www.facebook.com/groups/120520198130422/
MD	POA of Arundel on the Bay		https://www.facebook.com/ArundelOnTheBay/
MD	Residents of Arundel on the Bay		https://www.facebook.com/groups/AOTBMD/
MD	Cherry Hill Connection		https://www.facebook.com/groups/Cherryhillconnexion
MD	Crisfield, Maryland	(410) 968-2500	https://www.facebook.com/crisfieldmd/
MD	St. Margaret's Landing Board Members	smhoaboard@gmail.com	https://www.facebook.com/St-Margarets-Landing-Board-Members-2064568470535442/
MD	I Live in Cape Saint Claire a Waterfront Community		https://www.facebook.com/groups/575871549100873/
MD	Shore Acres Then & Now	will@brattain.io	https://www.facebook.com/profile.php?id=100041220225356
MD	Maryland Native Plant Discussion Group		https://www.facebook.com/groups/marylandnativeplantsocietydiscussiongroup/
MD	Beachwood on the Burley Neighborhood		https://www.facebook.com/groups/BeechwoodontheBurley/
MD	Neighbors on Drum Point		https://www.facebook.com/DealeDrumPoint/
MD	Chesapeake Village HOA	chesapeakevillage@gmail.com	https://www.facebook.com/cvhoaboard/
MD	Breezy Point Beach		https://www.facebook.com/BreezyPointBeach/
MD	North Beach Maryland	info@northbeachmd.org	https://www.facebook.com/NorthBeachMaryland/
MD	North Beach House and Garden Club		https://www.facebook.com/North-Beach-House-and-Garden-Club-341994317844/
MD	Calvert County Maryland	mel@4salebymel.com	https://www.facebook.com/CalvertCountyMaryland/
MD	Neeld Estate		https://www.facebook.com/groups/254887491285326/
MD	Willows Beach Colony		https://www.facebook.com/pages/Willow%20Beach%20Colony,%20Maryland/110476905644881/
MD	The Homeowners of Charlestown Crossing		https://www.facebook.com/groups/theneighborsofcharlestowncrossing/
MD	Cambridge, MD		https://www.facebook.com/Cambridge-MD-206584269356265/
MD	Experience Oxford MD		https://www.facebook.com/groups/OxfordMD/
MD	Easton Maryland Community Group		https://www.facebook.com/groups/951943581666361/
MD	Easton Club East		https://www.facebook.com/eastonclubeast/
MD	Waverly Improvement Association		https://www.facebook.com/groups/BaltimoreWaverly/
MD	St. Michaels, Maryland		https://www.facebook.com/groups/stmichaelsmdgroup/
MD	This Is Harve de Grace		https://www.facebook.com/groups/1741929199360740/about
MD	Chesapeake Landing		https://www.facebook.com/groups/1378033375922398/
MD	Chester River Beach Community Group		https://www.facebook.com/groups/109509259089256/
MD	Rock Hall Life		https://www.facebook.com/groups/rock.hall.life/
MD	Town of Rock Hall	(410) 639-7611	https://www.facebook.com/rockhallmd/
MD	Crisfield News		https://www.facebook.com/page/701133973355015/search/?q=virginia
MD	Parkwood Civic Association		https://www.facebook.com/Parkwood-Civic-Association-266835930056887/
MD	Deal Beach Citizens Association		https://www.facebook.com/dealebeachcitizensassociation/
VA	Virginia Beach Family Events		https://www.facebook.com/groups/VirginiaBeachFamilyEvents
VA	Seagate Colony	donna.dalton2016@gmail.com	https://www.facebook.com/SeagateColonyVirginiaBeach
VA	Aeries on the Bay Civic League	aeriesonthebaycl@gmail.com	https://www.facebook.com/AeriesOnTheBayCivicLeague
VA	Cape Story By the Sea		https://www.facebook.com/CapeStoryByTheSea
VA	Northumberland Shores		https://www.facebook.com/groups/118581061516554
VA	Alanton Civic League	info@alanton.org	https://www.facebook.com/alanton.civic.league
VA	Aragona Village Community		https://www.facebook.com/groups/AragonaVillage
VA	Chadswyck Terrace Neighbors		https://www.facebook.com/groups/533047800983503
VA	Colony Pointe		https://www.facebook.com/groups/colonypointe

LOCAL FACEBOOK PAGES

State	Facebook Page	Contact Information	FB Link
VA	Atlantic Shores Retirement Community	(757) 716-2000	https://www.facebook.com/atlanticshoresliving
VA	Broad Bay Island		https://www.facebook.com/groups/308360180074
VA	Inlynnview Civic League		https://www.facebook.com/groups/InlynnviewCL
VA	Laurel Cove Neighborhood		https://www.facebook.com/laurelcoveneighborhood
VA	Ballentine Place Civic League		https://www.facebook.com/BallentinePlace
VA	Roland Park Neighbors		https://www.facebook.com/groups/Roland.Park.Neighbors
VA	Lafayette Winona Civic League		https://www.facebook.com/groups/LafayetteWinona
VA	Azalea Acres/Lakes	avonlady1955@gmail.com	https://www.facebook.com/AzaleaAcresLakes
VA	Lake Whitehurst West Civic League		https://www.facebook.com/groups/lakewhitehurstwest
VA	Hampton Roads		https://www.facebook.com/hampton.roads.946/
VA	Volunteer Hampton Roads	(757) 624-2400	https://www.facebook.com/volunteerhr/
VA	Northampton County Government	(757) 678-0440	https://www.facebook.com/northamptoncountyva/
VA	Seaford, VA		https://www.facebook.com/groups/1666789016897138/
VA	Chesopeian Colony		https://www.facebook.com/groups/49876773172
VA	Municipal Corporation of Cape Charles	(757) 331-3259	https://www.facebook.com/Municipal-Corporation-of-Cape-Charles-1432620693545754/
VA	Reedville, Virginia		https://www.facebook.com/ReedvilleVirginia/
VA	St. Mary's Episcopal Church	(804) 453-6712	https://www.facebook.com/stmarysfleeton/
VA	Cedar Point Association	cedar.point.association@gmail.com	https://www.facebook.com/CedarPointAssociation/
VA	Twin Harbors Community Association		https://www.facebook.com/Twin-Harbors-616630992150461/

NEXTDOOR GROUPS

State	County /City	Nextdoor Page
MD	Annapolis	https://nextdoor.com/city/annapolis--md/
MD	Baltimore	https://nextdoor.com/city/baltimore--md/
MD	Cambridge	https://nextdoor.com/city/cambridge--md/
MD	Chesapeake Beach	https://nextdoor.com/city/chesapeake-beach--md/
MD	Chestertown	https://nextdoor.com/city/chestertown--md/
MD	Crisfield	https://nextdoor.com/city/crisfield--md/
MD	Deale	https://nextdoor.com/city/deale--md/
MD	Deal Island	https://nextdoor.com/city/deal-island--md/
MD	Easton	https://nextdoor.com/city/easton--md/
MD	Havre de Grace	https://nextdoor.com/city/havre-de-grace--md/
MD	North Beach	https://nextdoor.com/city/north-beach--md/
MD	North East	https://nextdoor.com/city/north-east--md/
MD	Oxford	https://nextdoor.com/neighborhood/oxfordmd--oxford--md/
MD	Rock Hall	https://nextdoor.com/city/rock-hall--md/
MD	Solomons	https://nextdoor.com/city/solomons--md/
MD	St. Michaels	https://nextdoor.com/city/saint-michaels--md/
VA	Chesterfield County	https://nextdoor.com/city/chesterfield--va/
VA	Hampton County	https://nextdoor.com/city/hampton--va/
VA	Lancaster County	https://nextdoor.com/city/lancaster--va/
VA	Mathews County	https://nextdoor.com/city/mathews--va/
VA	Cape Charles	https://nextdoor.com/city/cape-charles--va/
VA	Prince George County	https://nextdoor.com/city/prince-george--va/
VA	Hampton	https://nextdoor.com/city/hampton--va/
VA	Irrington	https://nextdoor.com/city/irvington--va/
VA	Norfolk	https://nextdoor.com/city/norfolk--va/
VA	Portsmouth	https://nextdoor.com/city/portsmouth--va/
VA	Poquoson	https://nextdoor.com/city/poquoson--va/
VA	Reedville	https://nextdoor.com/city/reedville--va/
VA	Urbanna	https://nextdoor.com/city/urbanna--va/
VA	Virginia Beach	https://nextdoor.com/city/virginia-beach--va/

COMMUNITY NEWSLETTERS

State	Newsletter	Website
ALL	Save The Bay Magazine	https://www.cbf.org/news-media/features-publications/save-the-bay-magazine/
VA	News Leader	https://www.newsleader.com/
VA	Alexandria Times	https://alextimes.com/
VA	Accomack County New! The Quarterly Newsletter	https://www.co.accomack.va.us/Home/Components/News/News/148/18?arch=1
VA	Chesterfield County Newsletter	https://www.chesterfield.gov/4412/County-Newsletters
VA	Chesterfield Observer	https://www.chesterfieldobserver.com/
VA	Hampton County Newsletter	https://hampton.gov/1652/Be-informed
VA	The Virginian Pilot	https://www.pilotonline.com/
VA	Northern Neck Land Conservancy Newsletter	http://nnconserve.org/about-us/publications/newsletters/
VA	Lancaster County News	https://lancasteronline.com/
VA	Be Here Mathews County Newsletter	https://www.mathewscountyva.gov/CivicSend/ViewMessage/message/136724
VA	Mathews County Historical Society	https://www.mathewscountyhistoricalsociety.org/mchs-newletters.html
VA	Decklines Newsletter Mathews Yacht Club	https://mathewsysc.org/news/
VA	Mathews Community Foundation	https://www.mathewscf.org/
VA	Community Foundation of Middlesex County	https://middlesexcountycf.org/news-events/newsletters-annual-reports/
VA	Southside Sentinel	https://www.ssentinel.com/
VA	Daily Press	https://www.dailypress.com/cities/york-poquoson/
VA	Prince George County Newsletter	https://www.princegeorgecountyva.gov/residents/community_development_and_code_compliance/newsletters.php
VA	The Prince George Journal	https://www.theprincegeorgejournal.com/news/
VA	North Virginia Beach Civic League	https://nvbcl.org/newsletters/
VA	Croatan Civic League	https://www.croatanbeach.org/newsletter-archive/
VA	Sanbridge Beach Civic League	https://www.sandbridgecivicleague.org/newsletters/
VA	City of Norfolk Newsletter	https://www.norfolk.gov/4599/E-Newsletter
VA	The Buzz City of Portsmouth Newsletter	https://portsmouthva.gov/463/The-Buzz-Newsletter
VA	Urbanna Virginia Events	https://urbanna.com/
VA	Virginia's River Realm	https://www.virginiariverrealm.com/
VA	News on the Neck	https://www.newsontheneck.com/
VA	River Country News	https://rivercountrynews.com/index274.htm
VA	Shore Daily News	https://shoredailynews.com/
VA	Eastern Shore Post	https://www.easternshorepost.com/
VA	Onancock Main Street Events	https://www.onancock.com/community
VA	Cape Charles Gazette	https://www.capecharles.org/pview.aspx?id=10808&catid=604
VA	Cape Charles Mirror	http://www.capecharlesmirror.com/
VA	Cape Charles Wave	https://capecharleswave.com/category/news/
VA	Blue Ridge Outdoors Magazine	https://www.facebook.com/BlueRidgeOutdoors/
MD	Arundel News	https://www.arundel.news/
MD	The Business Monthly	https://www.bizmonthly.com/
MD	Baltimore Magazine	https://www.baltimoremagazine.com/section/community/
MD	The Daily Record	https://thedailyrecord.com/
MD	The Baltimore Times	http://baltimoretimes-online.com/
MD	Baltimore Brew	https://www.baltimorebrew.com/
MD	Calvert County Maryland	https://www.calvertcountymd.gov/1238/County-Newsletters
MD	The Calvert Recorder	https://www.somdnews.com/recorder/
MD	The Bay Net	https://www.thebaynet.com/
MD	Calvert Beacon	https://www.calvertbeacon.com/
MD	County Times	https://countytimes.somd.com/
MD	Cecil County Maryland News	https://www.ccgov.org/about-us/county-news
MD	Cecil Daily	https://www.cecildaily.com/
MD	The Dorchester Star	https://www.myeasternshoremmd.com/dorchester_star/
MD	Bay To Bay News	https://baytobaynews.com/dorchester/
MD	Harford County News	https://www.harfordcountymd.gov/CivicAlerts.aspx?CID=8
MD	The Baltimore Sun	https://www.baltimoresun.com/
MD	Kent County News	https://www.myeasternshoremmd.com/kent_county_news/
MD	Queen Anne's County Newsletter	https://www.qac.org/1075/Monthly-Newsletter
MD	Somerset County News and Announcements	https://www.somersetmd.us/
MD	Southern Maryland News	https://www.somdnews.com/enterprise/news/local/

COMMUNITY NEWSLETTERS

State	Newsletter	Website
MD	The Talbot Spy	https://talbotspy.org/
MD	The Southern Maryland Chronicle	https://southernmarylandchronicle.com/
MD	The Town of Chesapeake Beach Newsletter	https://www.chesapeakebeachmd.gov/about/town-newsletter
MD	North Beach News and Announcements	https://www.northbeachmd.org/node/1/news
MD	North Beach Newsletter	https://www.northbeachmd.org/marketing-public-relations/pages/newsletters
MD	The Citizen Connection Newsletter	https://havredegracemd.gov/citizen-connection-newsletter/
MD	Main Street Chestertown News	https://mainstreetchestertown.org/main-street-news/
MD	The Shore Update	https://www.shoreupdate.com/
MD	Talk of Town Newsletter	https://stmichaelsmd.gov/a-place-to-live-2/talk-of-the-town-newsletter/
MD	Town of Oxford Newsletter	https://oxfordmd.net/main/newsletters/
MD	Downtown Cambridge News	https://downtowncambridge.org/news/
MD	Capital Gazette	https://www.capitalgazette.com/
MD	Alexandria Now	https://www.alxnow.com/
MD	Severna Park Voice	https://severnaparkvoice.com/
MD	Pasadena Voice	https://pasadenavoice.com/
MD	Arundel Voice	https://www.arundelvoice.com/
MD	Chesapeake Bay Magazine	https://chesapeakebaymagazine.com/

PUBLIC EVENT SPACES

State	County	Community Gathering Spaces	Address	Hours and Features
MD	Anne Arundel	Beverly Triton Nature Park	1202 Triton Beach Rd, Edgewater, MD 21037	7am-5pm. Picnic area available.
MD	Anne Arundel	Downs Park	8311 John Downs Loop, Pasadena, MD 21122	7am-7pm. Outdoor pavilion rentals available/ Information Center Room Rental Available. Vehicle parking fees.
MD	Anne Arundel	Quiet Waters Park	600 Quiet Waters Park Rd, Annapolis, MD 21403	7am-7pm. Park pavilion rentals. Vehicle parking fees. Special Events application: https://www.aacounty.org/departments/recreation-parks/parks/forms-and-publications/QuietWaters_SpecialEvents_Guidelines.pdf
MD	Anne Arundel	Sandy Point State Park	1100 E College Pkwy, Annapolis, MD 21409	7am-Sunset. Picnic areas.
MD	Anne Arundel	Thomas Point Park	3890 Thomas Point Rd, Annapolis, MD 21403	8am- Half hour before sunset. Vehicle entry by permit.
MD	Anne Arundel	Tick Neck Park	7750 Edwin Raynor Blvd, Pasadena, MD 21122	No posted hours. Free parking. Picnic area/bathrooms.
MD	Baltimore	Canton Waterfront Park	3001 Boston St, Baltimore, MD 21224	6am-8pm. Passive seating. Free parking.
MD	Baltimore	Cromwell Valley Park	2002 Cromwell Bridge Rd, Parkville, MD 21234	Sunrise-Sunset.
MD	Baltimore	Miami Beach Park	4001 Bay Dr, Middle River, MD 21220	Sunrise-Sunset. Pavilions available, first come first served.
MD	Baltimore	North Point State Park	8400 North Point Rd, Edgemere, MD 21219	8am-Sunset. covered picnic area.
MD	Baltimore	Patterson Park	2601 E Baltimore St, Baltimore, MD 21224	Open 24 hours. Picnic Pavilion.
MD	Baltimore	Riverside Park	1 E Randall St, Baltimore, MD 21230	8am-6pm. Pavilion available for http://bcpr.baltimorecity.gov/sites/default/files/Picnic%20Areas%20%26%20Rental%20Fees.pdf
MD	Baltimore	Rocky Point Park and Beach	2200 Rocky Point Rd, Essex, MD 21221	Sunrise-Sunset. Pavilion and Picnic Grove available for rental. Bathrooms. Admission rates apply. (Memorial Day-Labor Day)
MD	Calvert	Calvert Cliffs State Park	10540 H G Trueman Rd, Lusby, MD 20657	Sunrise-Sunset. Vehicle parking fees.
MD	Caroline	Martinak State Park	137 Deep Shore Rd, Denton, MD 21629	Sunrise-Sunset. Call for reservations: 1-888-432-2267 . Pavilion and Amphitheater available for rental.
MD	Caroline	Tuckahoe State Park	13070 Crouse Mill Rd, Queen Anne, MD 21657	Sunrise-Sunset. Call for reservations: 1-888-432-2267. Picnic tables. Bathrooms.
MD	Cecil	Elk Neck State Park	4395 Turkey Point Rd, North East, MD 21901	9am-Sunset. North East Beach Area Picnic Shelters requires permit and reservation.
MD	Dorchester	Egypt Road Park/Snow Turns Park	Snow Turns Park, Cambridge MD 21613	Sunrise-Sunste. Picnic Tables.
MD	Harford	Flying Point Park	511 Kennard Ave, Edgewood, MD 21040	8am-4:30pm. Pavilion rental. Picnic areas.
MD	Harford	Heavenly Waters Park	608 N Tollgate Rd, Bel Air, MD 21014	No posted hours. Rain Garden Site.
MD	Harford	Mariner Point Park	100 Kearney Dr, Joppatowne, MD 21085	No posted hours. Pavilions. Picnic areas. Bathrooms. Free parking.
MD	Harford	Shucks Regional Park	301 Schucks Rd, Bel Air, MD 21015	7am-8pm. Pavilions. Open space. Bathrooms.
MD	Kent	Betterton Beach	1 Idlewhile Ave, Betterton, MD 21610	No posted hours. Boardwalk. Bathrooms. Picnic Pavilion.
MD	Kent	Still Pond Station Park	24188 Still Pond Neck Rd, Worton, MD 21678	No posted hours. Will include picnic pavilion, bathrooms. Contact #: (410) 778-1948
MD	Prince George's	Acredale Community Park	4200 Metzerott Rd, College Park, MD 20740	6am-8pm. Picnic shelter requires reservation/rental fee.
MD	Queen Anne's	Terrapin Nature Park	191 Log Canoe Cir, Stevensville, MD 21666	Sunrise-Sunset. Picnic tables. Free parking.
MD	Somerset	Janes Island State Park	26280 Alfred J Lawson Dr, Crisfield, MD 21817	Sunrise-Sunset. Picnic pavilions for rental: https://dnr.maryland.gov/publiclands/Pages/eastern/JanesIsland/Picnicking-Pavilions.aspx . Bathrooms. Free entry.
MD	St. Mary's	Chapitco Park	26600 Budds Creek Rd, Mechanicsville, MD 20659	Sunrise- Sunset. Pavilion, first come, first serve. Picnic tables.
MD	St. Mary's	Elms Beach Park	19350 Back Door Rd, Lexington Park, MD 20653	Picnic pavilion. Bathrooms. Entrance Fees. Call for hours: (301) 475-4200
MD	St. Mary's	Greenwell State Park	25420 Rosedale Manor Ln, Hollywood, MD 20636	Sunrise-Sunset. Picnic and Pavilion, call to reserve: (301) 872-5688. Parking fees.
MD	St. Mary's	Leonardtown Wharf Park	22510 Washington Street Leonardtown, Maryland 20650	Call for hours/reservations: (301) 475-9791. Bathrooms. Event space venue.
MD	St. Mary's	Newtone Neck State Park	MD 243 Compton, Maryland 20627	Call for hours: (301) 743-5161
MD	St. Mary's	St. Clement's Island State Park	Coltons Point, MD 20626	Sunrise-Sunset. Picnic Pavilion.
MD	St. Mary's	St. Mary's Rvier Park	11175 Point Lookout Road Scotland, MD 20687	Sunrise-Sunset. Contact #:(301) 872-5688. Entrance fee.Picnic tables. Bathrooms.
MD	Talbot	Bill Burton Fishing Pier State Park	29761 Bolingbroke Point Drive Trappe, MD 21673	Open 7am-Sunset. Piers.
MD	Talbot	Idlewild Park	115 Idlewild Avenue Easton, MD 21601	Sunrise-Sunset. Picnic area. Gazebo
MD	Talbot	Wye Oak State Park	14214 Old Wye Mills Road Wye Mills, MD 21679	Sunrise-Sunset. Pavilion.
MD	Wicomico	Pemberton Historical Park	5561 Plantation Ln, Salisbury, MD 21801	Sunrise- Sunset. Call for events: (410) 548-4900 x108
MD	Wicomico	Roaring Point Park	Red Hill Ln Nanticoke, MD 21840	Sunrise-Sunset. Preserved by Chesapeake Bay Foundation. Free parking.
MD	Wicomico	Schumaker Pond	1019 S Schumaker Dr, Salisbury, MD 21804	Sunrise-Sunset. Picnic tables. Benches.
VA	Accomack	Chincoteague National Wildlife Refuge	8231 Beach Rd, Chincoteague, VA 23336	Seasonal Hours. Entrance fee. Call: (757) 336-6122, fw5rw_cnwr@fws.gov
VA	City of Alexandria	Waterfront Park	1A Prince St, Alexandria, VA 22314	5am-10pm. Open lawn space.
VA	Chesterfield	Rockwood Park	3401 Courthouse Rd, Richmond, VA 23236	7am-10pm. Picnic shelters. Bathrooms.
VA	Fairfax	Bull Run Regional Park	7700 Bull Run Dr, Centreville, VA 20121	7am-8pm. Vehicle entrance fee. Large picnic areas, picnic shelter rentals. Bathrooms.
VA	Fairfax	Burke Lake Park	7315 Ox Rd, Fairfax Station, VA 22039	7am-7pm. Picnic shelters, available for rental: https://www.fairfaxcounty.gov/parks/picnics/burke-lake
VA	Fairfax	Eakin Community Park	8515 Tobin Rd, Annandale, VA 22003	7am-6pm. Picnic shelters available for rental: https://www.fairfaxcounty.gov/parks/picnics/eakin-community-park . Seasonal portable bathrooms.
VA	Gloucester	Ark Park	7963 Number 9 Rd, Gloucester, VA 23061	No hours posted. Picnic areas. Bathrooms. Parking.
VA	Hampton	Sandy Bottom Nature Park	1255 Big Bethel Road Hampton, VA 23669	Sunrise-Sunset. Picnic shelters. Nature Center. Call: (757) 825-4658, sbottom@hampton.gov
VA	Lancaster	Belle Isle State Parks	1632 Belle Isle Rd, Lancaster, VA 22503	Sunrise-Sunset. Picnic shelters. Boarwalks. Event spaces.Call: (804) 462-5030. Belleisle@dcv.virginia.gov
VA	Mathews	Williams Wharf Landing	1039 Williams Wharf Rd, Mathews, VA 23109	No posted hours. Waterfront park. Call for details: (804) 725-9685, info@mathewslandconservancy.org
VA	City of Norfolk	Community Beach Park	700 E Ocean View Ave, Norfolk, VA 23503	6am-8pm. Picnic tables. Access ramp/walkways. Bathrooms.
VA	Northampton	Cape Charles Natural Area Preserve	301 Patrick Henry Avenue, Cape Charles, VA 23310	Handicap accessible boardwalk. Observation platform. Parking.
VA	Northampton	Kiptopeke State Park	3540 Kiptopeke Dr, Cape Charles, VA 23310	6am-10pm. Picnic areas.
VA	Norhtumberland	Bush Mill Stream Natural Area Preserve	Heathsville, VA 22473	Sunrise-Sunset. Boardwalk. Call: (804) 225-2305 for information.
VA	Poquoson	Thomas Jefferson Rollins Nature Area	Big Salt Marsh, Poquoson, VA 23662	Sunrise-Sunset.
VA	Prince William	Andrew Leitch Park	5301 Dale Blvd, Dale City, VA 22193	Sunrise-Sunset. Picnic areas. Bathrooms.
VA	Prince William	Nokesville Park	12560 Aden Rd, Nokesville, VA 20181	7am-5pm. Picnic Pavilion. Parking. Bathrooms.
VA	City of Richmond	Canoe Run Park	23227, 600 W 22nd St, Richmond, VA 23225	Open 24 hours. Open grass area.

PUBLIC EVENT SPACES

State	County	Community Gathering Spaces	Address	Hours and Features
VA	City of Richmond	Joseph Bryan Park	4308 Hermitage Rd, Richmond, VA 23227	Sunrise-Sunset. Picnic shelters. Parking.
VA	City of Richmond	William Byrd Park	600 S Arthur Ashe Blvd, Richmond, VA 23220	Open 24 hours. Picnic areas. Open spaces.
VA	Stafford	Patawomeck Park	25 Chopawamsic Pkwy, Stafford, VA 22554	8am-8pm. Picnic pavilion, with reservation: https://secure.rec1.com/VA/stafford-county-parks/catalog/index?filter=dGFjTVCMjg2NyU1RD0xJnNlYXJjaD0= . Parking. Bathrooms.
VA	Stafford	Willowmere Park	21 Willowmere Pond Rd, Stafford, VA 22556	8am-8pm. Picnic Area, with reservation: https://secure.rec1.com/VA/stafford-county-parks/catalog/index?filter=dGFjTVCMjg2NyU1RD0xJnNlYXJjaD0= . Bathrooms.
VA	City of Virginia Beach	First Landing State Park	2500 Shore Dr, Virginia Beach, VA 23451	8am-7pm. Picnic area. Vehicle parking fee: https://www.first-landing-state-park.org/
VA	York	Kiln Creek Park	2901 Kiln Creek Parkway Yorktown =, VA 23693	No posted hours. Picnic tables. Bathrooms.
VA	York	New Quarter Park	1000 Lakeshead Dr, Williamsburg, VA 23185	Seasonal Hours Picnic shelters rental. Bathrooms.

DEMONSTRATION SITES

State	Demonstration Site	Address, Access, Contact	Demonstration Site Features	Source
VA	Birdsong Wetlands, Larchmont Library	6525 Hampton Blvd, Norfolk, VA 23508 Public Property, public access.	Built 1997	https://www.norfolk.gov/DocumentCenter/View/15450/Living-Shoreline-Brochure?bidId=
VA	Virginia Zoo	3500 Granby St, Norfolk, VA 23504(East end of the parking lot.) Public property, public access.	Built 2009	https://www.norfolk.gov/DocumentCenter/View/15450/Living-Shoreline-Brochure?bidId=
VA	Hermitage Museum and Gardens Oyster Reef and Living Shoreline	7637 N Shore Rd, Norfolk, VA 23505 Public Property, Public access. Curator of Gardens: (757) 423-2052 x 202	Marsh sills, oyster reefs, restored riparian buffer, sand fill, salt marsh.	City of Norfolk Brochure: https://www.norfolk.gov/DocumentCenter/View/15450/Living-Shoreline-Brochure?bidId= Project Video: https://www.youtube.com/watch?v=XixhvaH9DYc&t=74s VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44feb61cac08ae07798f#detail
VA	Haven Creek Shoreline	4001 Llewellyn Ave, Norfolk, VA 23504(North of public boat ramp at the corner of Llewellyn Ave and Delaware Ave) Public property, public access.	Built 2012	City of Norfolk Brochure: https://www.norfolk.gov/DocumentCenter/View/15450/Living-Shoreline-Brochure?bidId= VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44feb61cac08ae07798f#detail
VA	Leesylvania Living Shorelines Project	2001 Daniel K Ludwig Dr, Woodbridge, VA 22191 Public Access, public property.	Segmented rock sills, sand infill, vegetation planting	VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44feb61cac08ae07798f#detail Project Video: https://www.youtube.com/watch?v=nGw-arWF2WI
VA	Deltaville Yachting Center	18355 General Puller Hwy, Deltaville, VA 23043 Public access, private property. Contact #: (804) 776-9898 info@dycboat.com		https://www.youtube.com/watch?v=EsYOFyhobq8
VA	Captain Sinclair Recreation Area	Captain Sinclair's Recreation Area: located on the Severn River in Gloucester County, VA. Public access.	Low/medium energy exposure, sand fills, erosion-control. Built 2016	https://www.vims.edu/research/departments/physical/programs/ssp/_docs/LS%20Project%20information%20captnSinclair-lr.pdf
VA	Grasses on the Half Shell, Portsmouth	4510 Twin Pines Rd, Portsmouth, VA 23703 Public access, limited access (Tuesday-Sunday 10a-4p) Contact #: (757) 686-8684	Built 2012. Oyster Reef, native planting	Living Shoreline Academy: https://livingshorelinesacademy.org/index.php/highlighted-projects/item/grasses-on-the-half-shell NOAA Restoration Atlas: https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?3064
VA	Colley Bay Living Shoreline and Wetland Restoration Project	1145 Bolling Avenue, Norfolk, VA 23508(Along the shoreline behind the Larchmont Elementary School.) Public property, public access.	Built 2013	https://www.norfolk.gov/DocumentCenter/View/15450/Living-Shoreline-Brochure?bidId=
VA	Reedville Living Shorelines Teaching Gardens	504 Main St, Reedville, VA 22539 Public access.	Invasive plant removal, sand fill, marsh fill, salt marsh vegetation.	https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44feb61cac08ae07798f#detail
VA	Holly Pointe Nature Park	287 Jackson Creek Rd, Deltaville, VA 23043(Deltaville Maritime Museum) Public access.	Sand fills, fiber logs, salt marsh vegetation. Bulkhead replacement.	https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44feb61cac08ae07798f#detail

DEMONSTRATION SITES

State	Demonstration Site	Address, Access, Contact	Demonstration Site Features	Source
VA	Carl Hershner VIMS Teaching Marsh	Inquire about exact location. Public Access by appointment. VIMS Public Relations: (804) 684-7846	Riparian Buffer, salt marsh vegetation, Marsh with stone sill.	VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44ffeb61cac08ae07798f#detail LS Features: https://www.vims.edu/ccrm/outreach/teaching_marsh/demonstrations/index.php
VA	Jamestown Beach Park	2205 Jamestown Rd, Williamsburg, VA 23185 Public access, public property.	Offshore breakwaters, spur, sand fill, dune planting	VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44ffeb61cac08ae07798f#detail Project Video: https://www.youtube.com/watch?v=7oPK5ApH-a8
VA	46th Street	W 46th St & Colley Ave (Near Lafayette River) Public access.	Salt marsh vegetation, riparian buffer planting, coir logs	VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44ffeb61cac08ae07798f#detail LRW Completed Projects: http://lrwpartners.org/projects/completed-projects/
VA	47th Street	47th Street and Colley Avenue, Norfolk, VA Public access.	Rain garden, oyster reef, wetland planting	City of Norfolk Brochure: http://lrwpartners.org/projects/completed-projects/ LRW Completed Projects: http://lrwpartners.org/projects/completed-projects/
VA	Phoebus Living Shoreline	Mugler Bridge at E. Mellon St, Hampton, VA Public access.	Built 2013. Retrofit rubble shoreline with marsh sill, planted marsh	https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44ffeb61cac08ae07798f#detail
VA	Camp Occohannock Living Shoreline	9403 Camp Ln, Belle Haven, VA 23306 Public access.	Built 2014. Hybrid green-gray, incl. Bank re-grading, sand augmentation, marsh grass planting.	https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/virginia/Documents/Living%20Shorelines%20Camp%20Occ.pdf
VA	Hoffler Creek Wildlife Preserve	4510 Twin Pines Rd, Portsmouth, VA Public access.	Oyster shell bags, planted marsh.	http://ccrm.vims.edu/livingshorelines/demonstration_sites.html
VA	Johns Point Landing	John's Point Rd, Gloucester, VA 23061(Along Gloucester Blueways Water Trail) Public access.	Seg. Rock breakwaters, sand infill, salt marsh vegetation.	https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44ffeb61cac08ae07798f#detail
VA	Hull Springs Farm/Long Wood University	645 Hull Springs Farm Rd, Montross, VA 22520 Public access.	Marsh sill, sand fill, marsh vegetation.	VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44ffeb61cac08ae07798f#detail Project Video: https://www.youtube.com/watch?v=R1Z_DtLdR0w
VA	Chincoteague Bay Field Station	34001 Mill Dam Rd, Wallops Island, VA 23337 Limited access. cortney@cbfieldstation.org	Built 2012. Invasive plant removal, oyster castles,	http://www.cbfieldstation.org/old-living-shoreline.html
VA	Oyster Village/Sunnyside Road Living Shoreline	6431 Sunnyside Rd, Cape Charles, VA 23310 Public access.	Bulkhead removal, sand fill, rock fill, marsh/riparian veg., oyster reef	https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44ffeb61cac08ae07798f#detail
VA	Cape Charles Town Beach	4 Bay Ave, Cape Charles, VA 23310 Public access.	Built 2007. Breakwaters, beach fill, oyster reef, native planting	https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?1769

DEMONSTRATION SITES

State	Demonstration Site	Address, Access, Contact	Demonstration Site Features	Source
VA	Jamestown 4H Educational Center	3751 4-H Club Rd, Williamsburg, VA 23185 Public access, Limited access. Contact #: (757) 253-4931	Built 2011. Breakwaters, sand fill, wetland vegetation.	https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?2858
VA	Camp Young Living Shoreline	145 Deepwater Dr, Chesapeake, VA 23322 Limited access, public property. Contact #: (757) 547-4245 changeme@changeme.org	Built 2012. Native planting	https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?2098
VA	Lindenwood Elementary/Barraud Park	2540 Barraud Ave Norfolk, VA 23504 Public access, via park.	In Progress. Rock/coir log sills, sand fill, marsh planting, native planting.	https://www.norfolk.gov/DocumentCenter/View/60451/Lindenwood-Barraud-Park-Living-Shoreline
VA	Yorktown Public Beach	608 Water St, Yorktown, VA 23690 Public Access, public property.	Segmented breakwaters, beach nourishment, vegetation planting	https://www.norfolk.gov/DocumentCenter/View/60451/Lindenwood-Barraud-Park-Living-Shoreline
MD	Deal Island Shoreline & Marsh Enhancement	Crowell Rd, Deal Island Historic District, MD 21821 Public access, Public property. nicole.carlozo@maryland.gov	In Progress. Breakwaters	https://maryland.maps.arcgis.com/apps/Cascade/index.html?appid=7842e9bf5d214de68a5eebd1fd896b70
MD	Ferry Point Park	425 Piney Narrows Rd, Chester, MD 21619 Public access Danielle Parkerson: dparkerson@qac.org (410) 758-0835 ext. 2531	Built 2014. Sand fill dredged via hydraulic pump, beach nourishment, erosion control	https://maryland.maps.arcgis.com/apps/MapSeries/index.html?appid=c76b3b66b57747c6aca654a33db68f0a
MD	Hurst Creek Shoreline	Dorchester County 38.5659515 -76.0221607 *Possible, public access	Dredged fill materials	https://maryland.maps.arcgis.com/apps/MapSeries/index.html?appid=c76b3b66b57747c6aca654a33db68f0a
MD	West River Methodist Center	5100 Chalk Point Road, West River, MD 20778 Limited access. Contact #:(800) 922-6795 admin@bwccampsandretreats.com	In progress. Bulkhead replacement	Public Notice: https://www.nab.usace.army.mil/Portals/63/PN%2020-31.pdf MD DNR Coastal Resilience Project: https://news.maryland.gov/dnr/2018/08/22/six-coastal-resiliency-projects-approved-by-board-of-public-works/
MD	St. Mary's Catholic Church/ Spa Creek	109 Duke of Gloucester St, Annapolis, MD 21401 Limited access. Contact #: (410)-263-2396 parishinfo@stmarysannapolis.org	In progress. Bulkhead replacement	https://news.maryland.gov/dnr/2018/08/22/six-coastal-resiliency-projects-approved-by-board-of-public-works/
MD	Franklin Point State Park	1100 East College Parkway Annapolis, MD 21409 Limited access, gated park. Contact #: (410) 974-2149	In progress. Marsh planting, sand sill, breakwater, stone groin	https://www.nab.usace.army.mil/Portals/63/PN-20-47.pdf

DEMONSTRATION SITES

State	Demonstration Site	Address, Access, Contact	Demonstration Site Features	Source
MD	Camp Woodlands Living Shoreline	2744 Riva Rd, Annapolis, MD 21401 Limited access. Contact #: (410) 358-9711 membercare@gscm.org	Built 2014	https://arundelrivers.org/how-we-fix-rivers/living-shorelines-restoration/
MD	Assateague State Park	6915 Stephen Decatur Hwy, Berlin, MD 21811 Paid access, public property.	Built 2018. Headland breakwaters, sand fills, beach nourishment, dynamic LS.	https://www.facebook.com/watch/?v=239502040765727
MD	Havre Degrace Promenade/Concord Point	700 Concord St, Havre De Grace, MD 21078 Public access.	In progress. Regenerative stormwater conveyance and LS, native planting, sand fill, breakwaters, pocket beaches	Project Description: https://www.ecosystemrestoration.com/concordpoint News Article: https://www.baltimoresun.com/maryland/harford/aegis/cng-ag-hdg-living-shoreline-0925-20200924-bxqhxkfjbjc6vjwwdw7gb7bfm-story.html
MD	St. Lukes Parish	1101 Bay Ridge Ave, Annapolis, MD 21403 Limited access, private property. Contact #: (410)-268-5419 office@stlukeseastport.org	Native upland planting	Project Description: https://www.ecosystemrestoration.com/stlukes WSA Project: http://aawsa.org/st-lukes Webinar: https://www.youtube.com/watch?v=OQMC1VDKAXU
MD	St. Johns College	60 College Ave, Annapolis, MD 21401 Limited access. Contact #: (410)-263-2371	Built 2007. Bulkhead replacement, rock sill, sand fill for tidal marsh, marsh planting.	https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?1764
MD	YMCA Camp Letts	4003 Camp Letts Rd, Edgewater, MD 21037 Limited access. Contact #: (410) 919-1410	Built 2015. Beach nourishment, erosion control, native planting, structure placement	https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?4354
MD	Tilghman Island (PWEC Oyster House)	6129 Tilghman Island Road Tilghman, MD 216761 Public access, limited Access. Saturdays & Sundays, 10am-4p Mathew Albers: (410)-886-9200 malbers@phillipswharf.org	Boat slip removal, marsh with kayak launch, sand fill, native planting	https://livingshorelinesacademy.org/index.php/highlighted-projects/item/oyster-house-tilghman-island
MD	MAP Turtle Nesting Enhancement	64 S Main St, Port Deposit, MD 21904 Public access, limited Access. Dr. Richard Seigel: (410) 704-3123 rseigel@towson.edu	Invasive removal, natives trees/plants, sand fill	Living Shorelines Academy Highlighted Project: https://livingshorelinesacademy.org/index.php/highlighted-projects/item/map-turtle-nesting-enhancement Project Video: https://youtu.be/3JTPWfHJWgU
MD	Annapolis Maritime Museum	723 Second St, Annapolis, MD 21403 Public access, limited access. Contact #: (410) 295-0104	Erosion control, marsh creation, native planting, rock/sand stabilization	Living Shoreline Academy Highlighted Project: https://livingshorelinesacademy.org/index.php/highlighted-projects/item/annapolis-maritime-museum Project Video: https://vimeo.com/146044560
MD	Spaniard Point	Queen Anne's County 39.092611 -76.144949 Public access.	Built 2006 Erosion control, oyster reef, native planting, breakwaters	https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?1975
MD	Ayers Creek	10, Ocean City, MD Public access, public property.	Built 2012 Biologs, sand fill, native planting	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD02

DEMONSTRATION SITES

State	Demonstration Site	Address, Access, Contact	Demonstration Site Features	Source
MD	Jefferson Patterson Park & Museum Living Shorelines (4 sites)	10515 Mackall Rd, St Leonard, MD 20685 Public Access, limited access (M-S 7:30a-5p) Contact #: (410) 586-8501	Planter breakwaters, breakwaters, pocket beach, sills	https://jefpat.maryland.gov/Pages/education/living-shorelines.aspx
MD	Grey's Creek Nature Park Shoreline Restoration	6030 Public Landing Road	Built 2013. Bulkhead replacement, high/low marsh, native planting	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD06
MD		Snow Hill, Maryland 21863 Public access, limited access. Pavillion reservation: Lisa Gebhardt (410) 632-2144 x2500 lgebhardt@marylandscoast.org		
MD	Old Trinity Church Stabilization	1716 Taylors Island Road Church Creek, Maryland 21622 Limited access, private property. Contact #: (410)228-2940	Built 2007. Sill, sand fill, native planting	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD07
MD	Sharptown Living Shoreline	Sharptown, MD 38.54446667 -75.7194 Public access.	Built 2006. Sill, native planting, debris removal	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD08
MD	Cooperative Oxford Laboratory	904 South Morris Street Oxford, Maryland 21654 Limited access. M-F 8a-4:30p Contact #: (410) 226-5193	Built 2010. Sill, sand fill, native planting	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD09
MD	Oxford Living Shoreline (Tred Avon River)	Oxford, MD 38.6888 -76.1733 Public Access.	Built 2010. Erosion control, marsh, sill, salt marsh planting	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD10
MD	Oxford-Bellevue Ferry Landing	27456 Oxford Rd, Oxford, MD 21654/ Bellevue-Oxford Ferry, Royal Oak, MD 21662 Public access, limited access (9a-Sunset). Contact #: (410) 745-9023	Built 2009. Marsh, sill, sand fill, native planting, bioretention swale.	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD11
MD	Piscataway Park	3400 Bryan Point Rd, Accokeek, MD 20607 Public access, Limited access (Dawn-Dusk). Contact #: (301) 763-4600	Built 2006-2010. Marsh, sill, sand fill, freshwater marsh planting.	https://fergusonfoundation.org/the-farm/piscataway-park-living-shoreline-restoration/

DEMONSTRATION SITES

State	Demonstration Site	Address, Access, Contact	Demonstration Site Features	Source
MD	Chesapeake Bay Maritime Museum	213 N Talbot St, St Michaels, MD 21663 Public access, limited access (admission fee, 10a-4p) Contact #: (410) 745-2916 havefun@cbmm.org	Built 2008, 2009, 2013 Marsh, sill, vegetation planting, bank grading, bulkhead replacement,	Project Video: https://m.facebook.com/watch/?v=10156420535831212&_rdr Project Announcement: http://www.cbmm.org/news/2013_PDF/NEWS_CBMM_LivingShorelineExtension.pdf SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD14
MD	Smithsonian Environmental Research Center/Cheston Point	647 Contees Wharf Road Edgewater, MD 21037-0028 Public access, limited access (M-Sa 8:30a-4:30p) Karen McDonald: (443) 482-2216 mcdonaldk@si.edu	Built 2012. Offshore breakwaters, sand fill, marsh planting, invasive removal	SERC Article: https://sercblog.si.edu/taking-back-the-marsh-at-cheston-point/ SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD19
MD	Mayo Beach	4150 Honeysuckle Dr, Edgewater, MD 21037 Public access.	In Progress. Stone sills, offshore breakwaters, sand fill, dune planting	SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD20 Project Announcement: https://www.aacounty.org/departments/recreation-parks/capital-projects/Projects/mayo-beach-shoreline
MD	South River Farm Park	3538 Loch Haven Dr, Edgewater, MD 21037 Public access. M-Su 6:30a-7:45p Contact #: (410) 222-7317	Built 1995. Marsh, sill, vegetation planting.	Case Study: https://floridalivingshorelines.com/wp-content/uploads/2015/05/Burke.2005.LSL-effectiveness-study.pdf SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD23
MD	Jonas Green Park	2001 Baltimore Annapolis Blvd, Annapolis, MD 21409 Public access. M-Su 7a-8p. Contact #: (410) 222-6141	Sill, breakwater, vegetation planting, sand fill placement	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD34
MD	Centreville Marina/Park	212 Watson Rd, Centreville, MD 2161 Public access, public property.	Built 2011. Sill, vegetation planting	SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD37 Corsica Rivers Area: https://www.qac.org/DocumentCenter/View/5996/Corsica-River-Water-Trail?bidId=
MD	The Gunston School	911 Gunston Rd, Centreville, MD 21617 Limited access. Marie Thomas: (410) 758-0620 mthomas@gunston.org	Built 2012. Sills, vegetation planting.	SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD38 News Article: http://www.gunston.org/cf_news/view.cfm?newsid=334
MD	Pecometh Camp & Retreat Ministries	401 Jack Elliot Way Centreville, MD 21617 Limited access, reservations. Richelle Darrell: (410) 556-6900 x100 richelle@pecometh.org	Built 2013. Sill, sand fill, native planting.	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD41
MD	Wilmer Park	413 S Cross St, Chestertown, MD 21620 Public access, public property. Contact #: (410)-778 9737	Built 2008. Bulkhead removal, sill, sand fill, marsh planting, kayak ramp.	SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD42 Chestertown Comprehensive Plan: https://planning.maryland.gov/Documents/OurWork/compplans/2015-adopted-comprehensive-plan.pdf
MD	Masonville Cove Urban Refuge	1000 Frankfurst Ave, Baltimore, MD 21226 Public access, M-Sa, 9a-4p. Contact #:(410) 246- 0669 Events@masonvillecove.org	Built 2013. Debris removal, invasive removal, sill, sand fill, vegetation planting	http://sagecoast.vims.edu/info/searchdetail.php?recid=MD43

DEMONSTRATION SITES

State	Demonstration Site	Address, Access, Contact	Demonstration Site Features	Source
MD	Essex Skypark	1401 Diffendall Road Essex, MD 21221 Public, access, limited access. info@essexskyparkassn.org	Built 2011. Breakwaters, sill, vegetation planting, regrading	SAGE Coast Database: http://sagecoast.vims.edu/info/searchdetail.php?recid=MD44 Project Description: https://www.baylandinc.com/essex-skypark-living-shoreline
MD	Gibson Road Living Shoreline	Adjacent to Gibson Road along Whites Neck Creek shoreline, located in the Bushwood area. Public access.	Built 2013. Segmented stone sill revetment, sand fill, marsh vegetation planting, geese netting.	VIMS Story Map: https://vims-wm.maps.arcgis.com/apps/MapJournal/index.html?appid=0132309272c44feb61cac08ae07798f#detail Project Release: https://www.stmarysmd.com/pio/docs/2013-63GibsonRoadLivingShorelineandRevetmentProjectCompleted.pdf
MD	Alice Ferguson Foundation, Hard Bargain Farm Environmental Campus	2301 Bryan Point Rd, Accokeek, MD 20607 Public access. Brenda Wright: (301) 292-5665 x 213 bwright@fergusonfoundation.org		https://geodesy.noaa.gov/web/science_edu/ecosystems_climate/piscataway.shtml
MD	Jack Creek Park	1600 Snug Harbor Rd, Shady Side, MD Public Access. Contact #: (410) 222-7317	Soft canoe/kayak launch, stone/sand fill, marsh planting	Project Video: https://www.aacounty.org/departments/public-works/engineering/2017-10-02%20Jack%20Creek%20Park%20Presentation.pdf Project Video: https://www.youtube.com/watch?v=_GbPxuXBKN0
MD	Wye House Farm Living Shoreline	26080 Bruffs Island Rd, Easton, MD 21601 Public Access	Built 2009. Low profile stone sill, sand fill, marsh vegetation	https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?2625
MD	Hails Cove Living Shoreline	1730 Eastern Neck Rd, Rock Hall, MD 21661 Public access. Contact #: (410) 639-7056 EasternNeck@fws.gov	Built 2009. Beach replenishment, native wetland planting	NOAA Restoration Atlas: https://www.fisheries.noaa.gov/data-tools/noaa-restoration-project?2624 Project Description: https://www.ducks.org/maryland/maryland-conservation-projects/hail-cove-living-shoreline-project
MD	Conquest Preserve	1000 Conquest Beach Road Centreville, MD 21617 Limited access, reservation. M-Su, 8a-Sunset Danielle Parkerson 410-758-0835 ext. 2531	Sand "shingle beach", sill, dune nourishment, vegetation planting	Case Study: https://maryland.maps.arcgis.com/apps/MapJournal/index.html?appid=4b2608d5e34d40cfb77b50e16805649f#map Project Video: https://www.youtube.com/watch?v=EVAAsnA4jWFE&t=210s
MD	Hawkins Cove	Hawkins Cove is located off Spa Creek in Eastport, directly downhill from the HACA headquarters off Windsor Avenue and in between the Spa Cove Apartments off Primrose Road and the Shearwater Condominiums off Boucher Avenue.	In progress	https://www.annapolis.gov/1765/Hawkins-Cove-Restoration

GENERAL RESOURCES

State	Organization	Resource	Website/Source Link
MD	The Pew Charitable Trust	Maryland's Living Shorelines Help Communities Become Resilient	https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/11/marylands-living-shorelines-help-communities-become-resilient
MD	Maryland DNR	Step-By-Step Procedure for the Establishment of Non-Structural, Living Shoreline Projects on Private Property	https://www.stmarysmd.com/docs/DNRStepbyStepPocedures.pdf
VA	Virginia SWDC		https://vaswcd.org/living-shorelines
VA	Restore America's Estuaries		https://estuaries.org/livingshorelines/
VA	James River Association		https://thejamesriver.org/livingshorelines/
VA	Chesapeake Bay Foundation		https://www.cbf.org/about-cbf/locations/virginia/issues/living-shorelines/index.html
VA	Virginia Institute for Marine Science (VIMS)	Center for Coastal Resources Management General LS Info/FAQs	https://www.vims.edu/ccrm/topics/shoreline/index.php
VA, General	Elizabeth River Project	Water Words that Work Waterfront Homeowner Survey Report	https://www.hrpdcva.gov/uploads/docs/03_Presentation_Living%20Shoreline%20Survey%20ERP.pdf
DE	Delaware DNREC	Living Shoreline Information	https://dnrec.alpha.delaware.gov/watershed-stewardship/wetlands/living-shorelines/
Regional	SAGE Coast		http://sagecoast.org/
National	Environmental Protection Agency	List of Local National Estuary Programs	https://www.epa.gov/nep/individual-estuary-program-websites
National	National Coastal Zone Management Program	National Coastal Management Program, State Fact Sheets	Delaware Coastal Management Program- https://coast.noaa.gov/states/delaware.html Virginia Coastal Management Program- https://coast.noaa.gov/states/virginia.html Maryland Coastal Management Program- https://coast.noaa.gov/states/maryland.html
National, General	Living Shorelines Academy	Living Shorelines Academy Resources	Main webpage https://livingshorelinesacademy.org/ Literature Resource Center https://livingshorelinesacademy.org/index.php/resources/online-resources-and-publications
General	National Wildlife Federation	Softening Our Shorelines — Policies/Procedures for Atlantic Coast	https://www.nwf.org/-/media/Documents/PDFs/NWF-Reports/2020/Softening-Our-Shorelines.ashx
General	Restore America's Estuaries	Special Report Living Shorelines: From Barriers to Opportunities	https://estuaries.org/wp-content/uploads/2018/08/RAE_LS_Barriers_report_final.pdf

EDUCATIONAL ORGANIZATIONS

State	Organization Name	Website	Contact	Event Calendar	Newsletter	Additional Resources
VA, MD	Chesapeake Bay Landscape Professionals	https://cblpro.org/	Beth Ginter: beth@cblpro.org	https://cblpro.org/training-calendar/	http://www.virginiamasternaturalist.org/receive-communications.html	CBLP Pros Directory: https://certified.cblpro.org/
VA	Virginia Master Naturalists	http://www.virginiamasternaturalist.org/	Michelle Prysby: mprysby@vt.edu , Tiffany Brown: tiffany.brown@vt.edu	http://www.virginiamasternaturalist.org/calendar-of-events.html		List of Chapters: http://www.virginiamasternaturalist.org/chapters-a-map-and-contacts.html , Coastal and Estuarine Systems Training: http://www.virginiamasternaturalist.org/coastal-and-estuarine-systems.html
VA	Virginia Master Gardners	https://vmga.net/wordpress/	Deb Straw: membership@vmga.net	https://vmga.net/wordpress/vmga-education-events/		List of Counties: https://ext.vt.edu/lawn-garden/master-gardener/Become-a-Master-Gardener.html
VA	Virginia Native Plant Society	https://vnps.org/	vnps.org@gmail.com , (540) 837-1600	https://vnps.org/events/		List of Chapters: https://vnps.org/chapters/
MD	Anne Arundel WSA	http://aawsa.org/	(410) 222-3831, Steward Directory: http://aawsa.org/contact-a-steward	http://aawsa.org/events	http://aawsa.org/blog	http://aawsa.org/become-a-wsteward
MD	Cecil County WSA	https://www.ccgov.org/government/public-works/public-works-divisions/stormwater-management-division/watershed-stewards-academy	Marshall McSorley: MMcSorley@ccgov.org , Eric Buehl: ebuehl@umd.edu			
MD	Harford County WSA	https://www.harfordcountymd.gov/2459/Watershed-Stewards-Academy	Kelsey Brooks: kebrooks@umd.edu Laura Coste: wsa@harfordcountymd.gov			
MD	Howard County WSA	https://www.howardwsa.org/	Terry R. Matthews: trmatt@umd.edu			https://www.howardwsa.org/what-you-can-do/
MD	National Capital WSA	https://www.anacostiaaws.org/what-we-do/education/adult-education/watershed-stewards-academy.html	(301) 699-3317			
MD	St. Mary's County WSA	https://extension.umd.edu/resource/st-marys-county-watershed-stewards-academy	Nicole Basenback: 301-475-4484, Jackie Takacs: 240-393-6508			
MD	Maryland Master Naturalists	https://extension.umd.edu/programs/environment-natural-resources/program-areas/master-naturalist-program	Joy Rafey: jrafey@umd.edu , (410) 531-0534			

EDUCATIONAL ORGANIZATIONS

State	Organization Name	Website	Contact	Event Calendar	Newsletter	Additional Resources
MD	Maryland Master Gardeners	https://extension.umd.edu/programs/environment-natural-resources/program-areas/master-gardener-program	(410) 531-5557, statemg@umd.edu			Local Programs: https://extension.umd.edu/programs/environment-natural-resources/program-areas/home-and-garden-information-center/master-gardener-program/local-programs
MD	Maryland Native Plant Society	https://mdflora.org/	info@mdflora.org	https://mdflora.org/events		List of Chapters: https://mdflora.org/chapters , Listerve: https://groups.io/g/nativeplantseast
MD	Watershed Protection and Restoration Program	https://extension.umd.edu/programs/environment-natural-resources/program-areas/watershed-protection-and-restoration-program	Jennifer Dindinger: (410) 228-8800, jdinding@umd.edu			

TRAININGS AND WORKSHOPS

State	Organization Name	Trainings and Workshops	Website/Source Link
DE	Delaware Living Shorelines Committee	Delaware Trainings, Workshops & Webinars	Delaware Introduction to Living Shoreline Design- https://www.delawarelivingshorelines.org/recorded-trainings Other training, workshops and webinars https://www.delawarelivingshorelines.org/trainings-workshops
DE	Delaware Living Shorelines Committee	Webinar Training on Assateague Living Shoreline	https://www.delawarelivingshorelines.org/trainings-workshops/2021/4/21/webinar-assateague-living-shoreline-project
MD	Environmental Concern	Training Course for Wetland Professionals	https://wetland.org/wp-content/uploads/2020/02/2020-Pro-Courses-Brochure-Fin.pdf Note: Pamphlet is outdated but course still offered in 2021
MD	Maryland DNR	Trainings & Workshops	https://dnr.maryland.gov/ccs/Pages/livingshorelines/training.aspx Professionals workshops (2010 - Centreville MD) Homeowners workshops (2008 – Kent County) Homeowners workshops (2008 – Calvert County) Local government workshops (2009 – Calvert County)
MD	Maryland DNR	Living Shorelines & Habitat Reconstruction Presentation	https://s3.amazonaws.com/delawareestuary/pdf/Living+Shorelines/DE_Wkshp/MD.pdf
VA	VA Master Naturalists	Master Naturalists Shoreline Program	http://www.virginiamasternaturalist.org/coastal-and-estuarine-systems.html
VA	Living Shorelines Collaboration	Living Shorelines Webinar for Homeowners	https://www.youtube.com/watch?v=0RAqRrru_PM&feature=youtu.be
VA	Living Shorelines Collaboration	Resources and Training for Virginia Living Shoreline Professionals	Professional Workshops/ Training Events Webpage- https://www.jamesrivershorelines.org/lsc.html Resources and Training for VA Shoreline Professionals- https://www.jamesrivershorelines.org/uploads/2/4/1/2/24124749/resources_for_virginia_shoreline_professionals.pdf Living Shoreline Design Guidelines- https://www.jamesrivershorelines.org/uploads/2/4/1/2/24124749/living_shoreline_design_guidelines_for_shore_protection_in_virginia.pdf
VA	The Nature Conservancy	Coastal Resilience Project: Living Shoreline Explorer Site Screening Tool	media.coastalresilience.org/VA/LivingShoreline_TryMe/index.html LivingShorelineExplorerApp_FactSheet.pdf (coastalresilience.org)
VA	Virginia Institute for Marine Science (VIMS)	CCRM - Decision Tools/Best Mgmt Practices	https://www.vims.edu/ccrm/ccrmp/bmp/index.php
Regional	Chesapeake Bay Landscape Professional	Living Shorelines for Landscape Professionals Online Workshop	https://certified.cblpro.org/product/living-shorelines-for-landscape-professionals/
National, NC	Restore America's Estuaries & North Carolina Coastal Federation	Living Shoreline Academy for Property Owners	https://www.livingshorelinesacademy.org/index.php/learn/for-property-owners
National, NC	Restore America's Estuaries & North Carolina Coastal Federation	Living Shoreline Academy for Design and Construction Professionals	https://www.livingshorelinesacademy.org/index.php/learn/for-design-and-construction-professionals
National Regional	Restore America's Estuaries	Living Shorelines Technical Transfer Workshops (2019, 2018, 2015)	2019 - https://estuaries.org/livingshorelines/2019-workshop/ 2018 - https://estuaries.org/livingshorelines/2018-workshop/ 2015- https://estuaries.org/wp-content/uploads/2018/09/2015_LS_Summit_agenda_final.pdf
National Northeast	American Littoral Society	Living Shorelines Presentation (see .pdf file)	https://www.littoralsociety.org/living-shorelines.html
National	Living Shoreline Academy	Training Resources for Homeowners, Professionals and Contractors	Living Shorelines Workshops, Webinars, Videos: Workshops/webinars https://livingshorelinesacademy.org/index.php/resources/living-shorelines-workshops-and-webinars Videos https://livingshorelinesacademy.org/index.php/resources/living-shorelines-videos

TRAININGS AND WORKSHOPS

State	Organization Name	Trainings and Workshops	Website/Source Link
General	Chesapeake Bay Foundation	Living Shorelines: Controlling Shorelines Erosion Materials	Video https://www.cbf.org/news-media/multimedia/video/cbf-education-videos/living-shorelines.html Worksheet https://www.cbf.org/document-library/education-resources/shoreline-erosion-investigation-worksheet.pdf
General	NOAA, NERRS	Living Shoreline Webinar Series Archive	Webinars- https://nerrssciencecollaborative.org/webinar-series Living Shoreline Collection- http://nerrssciencecollaborative.org/collections?collection=601
General	NOAA: Digital Coast	Living Shorelines: Bringing Together Science, Restoration, and Management on our Nation's Coasts	Webinar - https://coast.noaa.gov/living-shorelines-webinar/ Toolkit - https://coast.noaa.gov/digitalcoast/training/planning-living-shorelines-projects.html Training - https://coast.noaa.gov/digitalcoast/training/living-shorelines.html Case Study- https://coast.noaa.gov/digitalcoast/training/nc-coast.html Case Study- https://coast.noaa.gov/digitalcoast/training/cardiff-state-beach.html

OTHER LIVING SHORELINE PROGRAMS

State	Organization Name	Program, Outreach or Training Name	Website/Source Link
DE	Delaware DNREC	Living Shoreline Information	https://dnrec.alpha.delaware.gov/watershed-stewardship/wetlands/living-shorelines/
MD	The Pew Charitable Trust	Maryland's Living Shorelines Help Communities Become Resilient	https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/11/marylands-living-shorelines-help-communities-become-resilient
MD	Maryland DNR	Step-By-Step Procedure for the Establishment of Non-Structural, Living Shoreline Projects on Private Property	https://www.stmarysmd.com/docs/DNRStepbyStepPocedures.pdf
VA	Virginia SWDC		https://vaswcd.org/living-shorelines
VA	Restore America's Estuaries		https://estuaries.org/livingshorelines/
VA	James River Association		https://thejamesriver.org/livingshorelines/
VA	Chesapeake Bay Foundation		https://www.cbf.org/about-cbf/locations/virginia/issues/living-shorelines/index.html
VA	Virginia Institute for Marine Science (VIMS)	Center for Coastal Resources Management General LS Info/FAQs	https://www.vims.edu/ccrm/topics/shoreline/index.php
VA, General	Elizabeth River Project	Water Words that Work Waterfront Homeowner Survey Report	https://www.hrpdcva.gov/uploads/docs/03_Presentation_Living%20Shoreline%20Survey%20ERP.pdf
Regional	Systems Approach to Geomorphic Engineering (SAGE)		http://sagecoast.org/
National	Environmental Protection Agency	List of Local National Estuary Programs	https://www.epa.gov/nep/individual-estuary-program-websites
National	National Coastal Zone Management Program NOAA	National Coastal Management Program, State Fact Sheets	Delaware Coastal Management Program- https://coast.noaa.gov/states/delaware.html Virginia Coastal Management Program- https://coast.noaa.gov/states/virginia.html Maryland Coastal Management Program- https://coast.noaa.gov/states/maryland.html
National, General	Living Shorelines Academy	Living Shorelines Academy resources	Main webpage https://livingshorelinesacademy.org/ Literature Resource Center https://livingshorelinesacademy.org/index.php/resources/online-resources-and-publications
General	National Wildlife Federation	Softening Our Shorelines — Policies/Procedures for Atlantic Coast	https://www.nwf.org/-/media/Documents/PDFs/NWF-Reports/2020/Softening-Our-Shorelines.ashx
General	Restore America's Estuaries	Special Report Living Shorelines: From Barriers to Opportunities	https://estuaries.org/wp-content/uploads/2018/08/RAE_LS_Barriers_report_final.pdf

OTHER CAMPAIGNS AND OUTREACH

State	Organization Name	Program or Outreach Name	Website/Source Link
DE	Delaware Center for the Inland Bays	Living Shorelines Video	https://nexusmedianews.com/living-shorelines-video-3101f5b73799/#.bckl9rhch
DE	Partnership for the Delaware Estuary	Living Shorelines: Healthy Shores, Healthy Communities Brochure (Download PDF)	https://delawareestuary.org/science-and-research/living-shorelines/shoreline-reports/
DE	Delaware DNREC	Living Shorelines Video and other information	https://dnrec.alpha.delaware.gov/watershed-stewardship/wetlands/living-shorelines/
MD	Maryland DNR	Living Shorelines & Habitat Reconstruction Presentation	https://s3.amazonaws.com/delawareestuary/pdf/Living+Shorelines/D E_Wkshp/MD.pdf Note: older 2011-2012
MD	Maryland DNR	Living Shorelines – A Guide for Waterfront Property Owners	https://dnr.maryland.gov/ccs/Documents/ls/LivingShorelines.pdf
VA	Virginia Dept. of Conservation and Recreation	Shoreline Erosion Advisory Service Brochure	https://www.dcr.virginia.gov/soil-and-water/document/seas-brochure-2018.pdf
VA	Virginia Institute for Marine Science (VIMS)	CCRM Living Shorelines Educational Materials	Main site - https://www.vims.edu/ccrm/topics/shoreline/index.php Outreach materials: Videos Living Shoreline/shoreline hardening informational interview with Karen Duhring Living Shorelines https://www.youtube.com/watch?v=aZGELI4i_Ys&list=PLAC34A507465F473B&index=2 Brochure https://www.vims.edu/ccrm/outreach/living_shorelines/ls_brochure_updated2020.pdf Fact Sheet http://ccrm.vims.edu/livingshorelines/documents/Promotional/VACZMFactSheet.pdf
Northeast, General	American Littoral Society Coastal Conservation	-General education -PowerPoint	https://www.littoralsociety.org/living-shorelines.html
National, General	Restore America Estuaries	An Introduction to Living Shorelines Video	https://estuaries.org/livingshorelines/
General	SAGE Systems Approach to Geomorphic Engineering (SAGE)	Living Shoreline Brochure	http://sagecoast.org/docs/SAGE_LivingShorelineBrochure_Print.pdf
General	National Oceanic Atmospheric Admin (NOAA)	Guidance for Considering the Use of Living Shorelines (Download PDF)	https://seagrant.noaa.gov/News/Article/ArtMID/1660/ArticleID/497/NOAA-Releases-Guidance-for-Considering-the-Use-of-Living-Shorelines
General	North Carolina Coastal Federation	Shorefront Property Owner Guide to Erosion Control: Non-structural Alternatives	https://www.ncccoast.org/uploads/documents/guides/ErosionBro.pdf
General	Ecology Action Centre	Living Shorelines Brochure	https://www.ecologyaction.ca/files/images-documents/file/Coastal/LivingShorelines_Brochure_Aug28-REG.pdf
General	Wetlands Watch	Homeowner's Guide to Wetlands Mailer: Waterfront Homeowners	https://wetlandswatch.org/homeowners-guide?rq=living%20shorelines

OTHER CAMPAIGNS AND OUTREACH

State	Organization Name	Program or Outreach Name	Website/Source Link
General, MD, VA	Chesapeake Bay Foundation	Various outreach materials	Six Steps to Create Your Living Shoreline https://www.cbf.org/about-cbf/locations/virginia/issues/living-shorelines/six-steps-to-create-your-living-shoreline.html Top Ten Reasons to Build a Living Shoreline https://www.cbf.org/about-cbf/locations/virginia/issues/living-shorelines/top-10-reasons-to-build-a-living-shoreline.html Living Shoreline Checklist https://www.cbf.org/document-library/cbf-guides-fact-sheets/living-shorelines-checklist.pdf