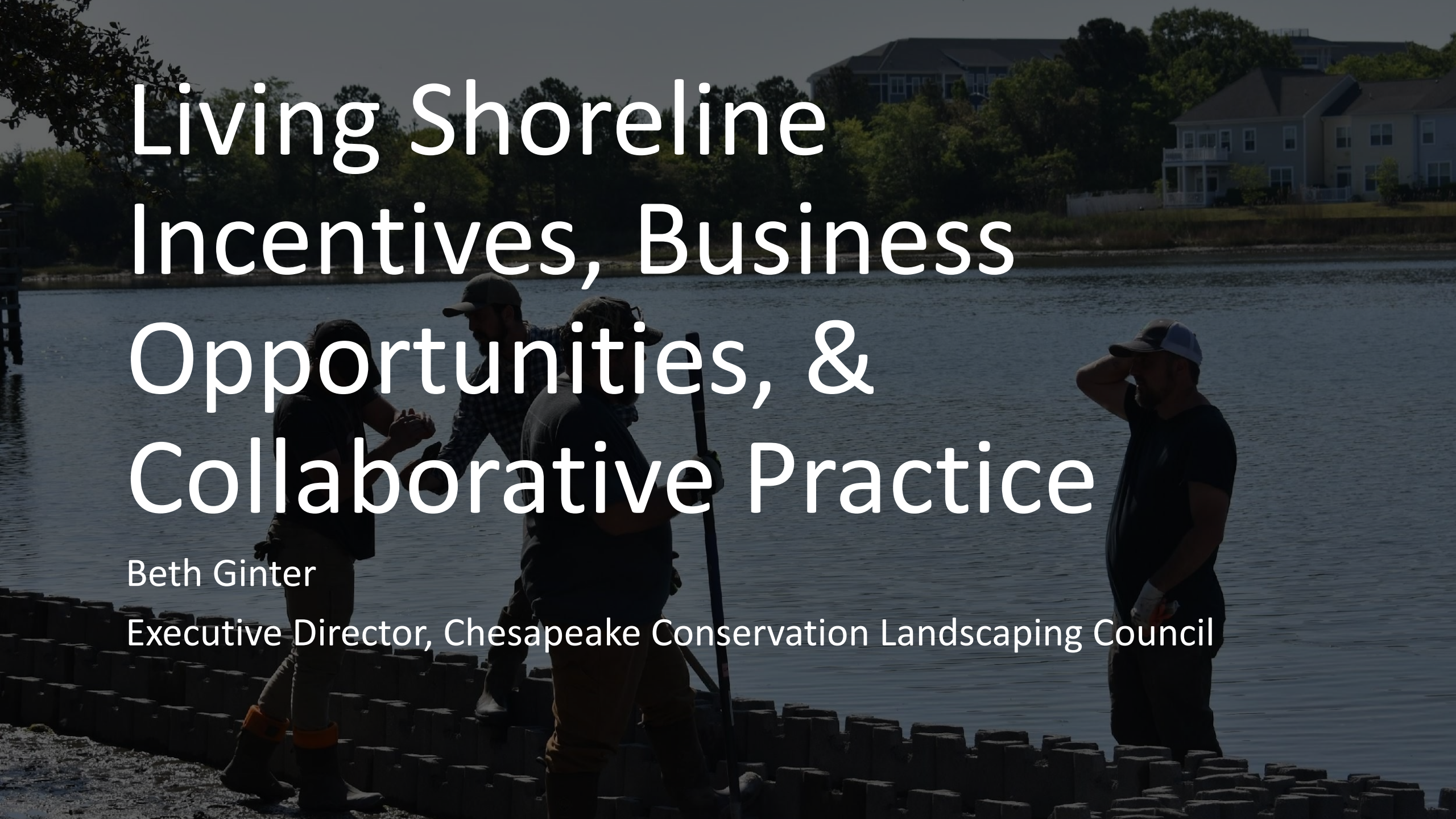


A group of four people are working on a shoreline. They are standing on a row of large, rectangular concrete blocks that form a barrier between the land and a body of water. The people are wearing casual work clothes, including hats and boots. One person is holding a long pole. In the background, there are trees and a large, multi-story house. The overall scene is dimly lit, suggesting dusk or dawn.

Living Shoreline Incentives, Business Opportunities, & Collaborative Practice

Beth Ginter

Executive Director, Chesapeake Conservation Landscaping Council

Shoreline Erosion Advisory Service

- Organization: Virginia Department of Conservation and Recreation
- What is Provided: free, unbiased technical assistance including site investigations, written advisory reports, design and plan reviews, construction inspections, and guidance on available financial incentive programs.
- Who Qualifies: private property owners (residential and agricultural), localities, and state and federal agencies experiencing shoreline or streambank erosion across Virginia
- Contact: Aaron Wendt
(804) 296-1701 or aaron.wendt@dcr.virginia.gov
<http://www.dcr.virginia.gov/soil-and-water/seas>



Opportunities: VCAP

Organization: Virginia Association of Soil and Water Conservation Districts; administered by individual districts

What is Provided: Financial reimbursement of 80% of the total costs, up to \$30,000

Who Qualifies: Public, private, non-profit, and commercial landowners within a participating district. Eligible shorelines must have no more than 1.5-mile fetch distances in any direction, and any structures onsite must be at least three years old

Contact: Your local district

Lower James SWCDs



Colonial SWCD: James City, Charles City

James River SWCD: Prince George

Peanut SWCD: Surry, Isle of Wight, Suffolk

Virginia Dare SWCD: Chesapeake, VA Beach

No District: Newport News, Hampton, Norfolk, Portsmouth

Opportunities: Friends of the Rappahannock and York River Steward

Living Shorelines on Rappahannock and York

- **Additional funding available to offset out of pocket expenses for VCAP living shorelines projects**
- Reimbursement of 50% of out of pocket expenses up to \$10,000
- Spotsylvania, Stafford, King George, Caroline, Essex, King William, King & Queen, Mathews, Middlesex, Gloucester, Westmoreland, Richmond, Northumberland and Lancaster counties
- Contacts:
Rappahannock - Brent Hunsinger
brent.hunsinger@riverfriends.org
York - Leslie Anne Hammond
leslianne.hammond@yorkriversteward.org



Opportunities: Elizabeth River Project

Living Shorelines on the Elizabeth River

- **ERP is actively looking for subcontractors to construct living shorelines**
- Projects mostly designed & permitted by ERP, subcontractors needed for install
- Projects cost shared to ease cost burden on landowners – tell your clients!
- Contractors with all levels of training welcome – Shadow an installation, volunteer, become familiar with techniques
- Contact: Barbara Gavin,
bgavin@elizabethriver.org
757-392-7135



Opportunities: James River Assoc.

Living Shorelines on the Lower James

- **JRA is looking for contractors!**
- Living shorelines are designed and permitted by JRA staff.
- Need contractors to do installations and maintenance on existing projects!
- Grant funded cost-share program for homeowners
- We will send out an RFQ soon
- Contact: Ryan Walsh
- rwalsh@thejamesriver.org
- 757-703-0671



LRNow Living Shoreline Opportunities



Little Haven 2012



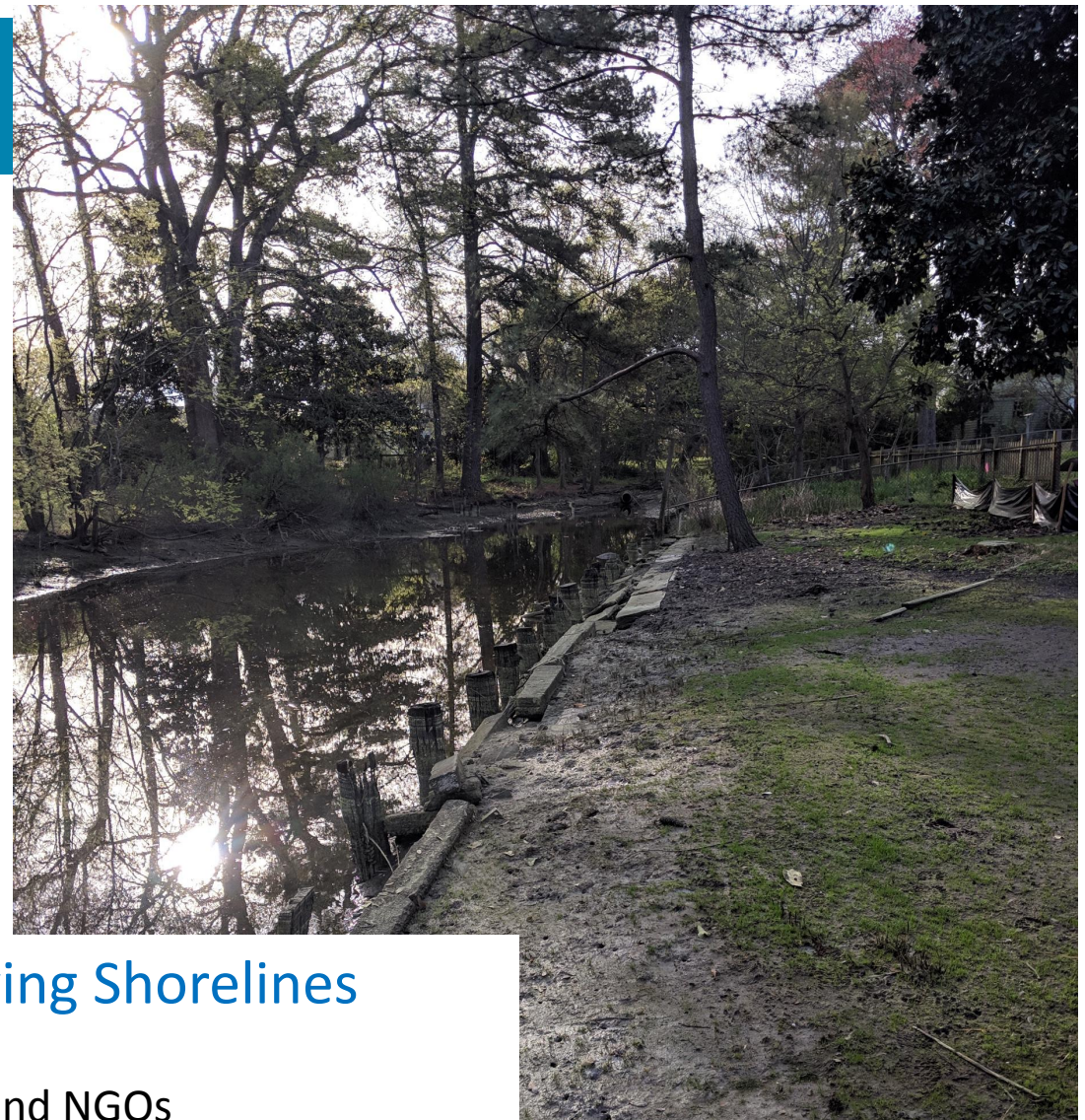
Little Haven 2014

- LRNow coordinates 1-3 residential living shorelines in Virginia Beach each year
- Subcontract for design and installation
- Funding assistance from VCAP, VBCAP
- Volunteer labor to further reduce cost to homeowners
- Contact: Vince Bowhers,
Vince@LRNow.org 757-773-1636

A scenic view of a body of water, likely a lake or river, with tall, green grasses growing along the shoreline. In the background, a modern house with large windows and a balcony is visible, surrounded by trees. The water reflects the sky and the surrounding landscape.

Business Opportunities

Advise & Manage



Evaluate the Site, Educate the Client, Recommend Living Shorelines

Look for need (failing bulkheads, eroding shorelines)

Vegetation assessment & management plan for shoreline contractors and NGOs

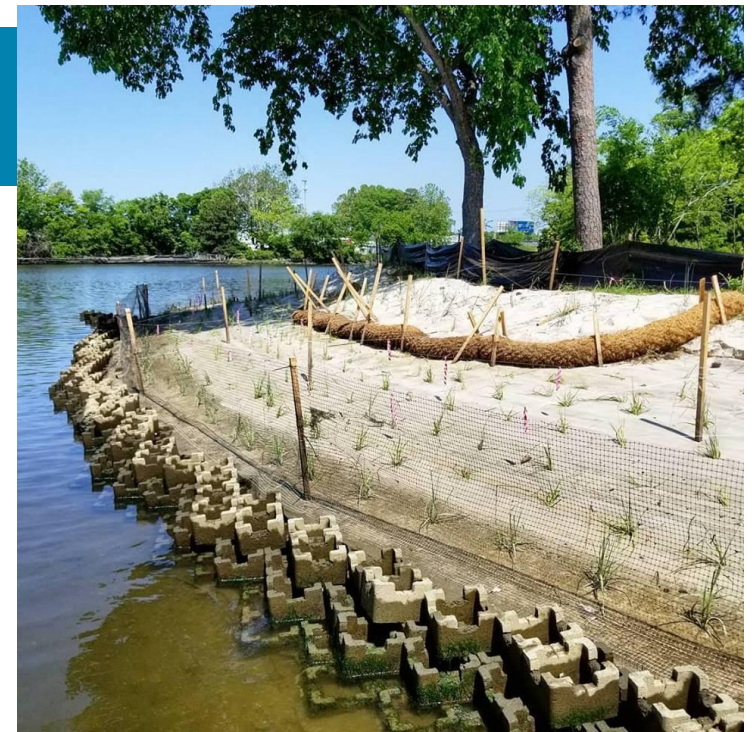
Sustainable and green infrastructure practices to reduce erosion (buffers, rain gardens, etc.)

Advise & Manage

ID best approach for your client & site

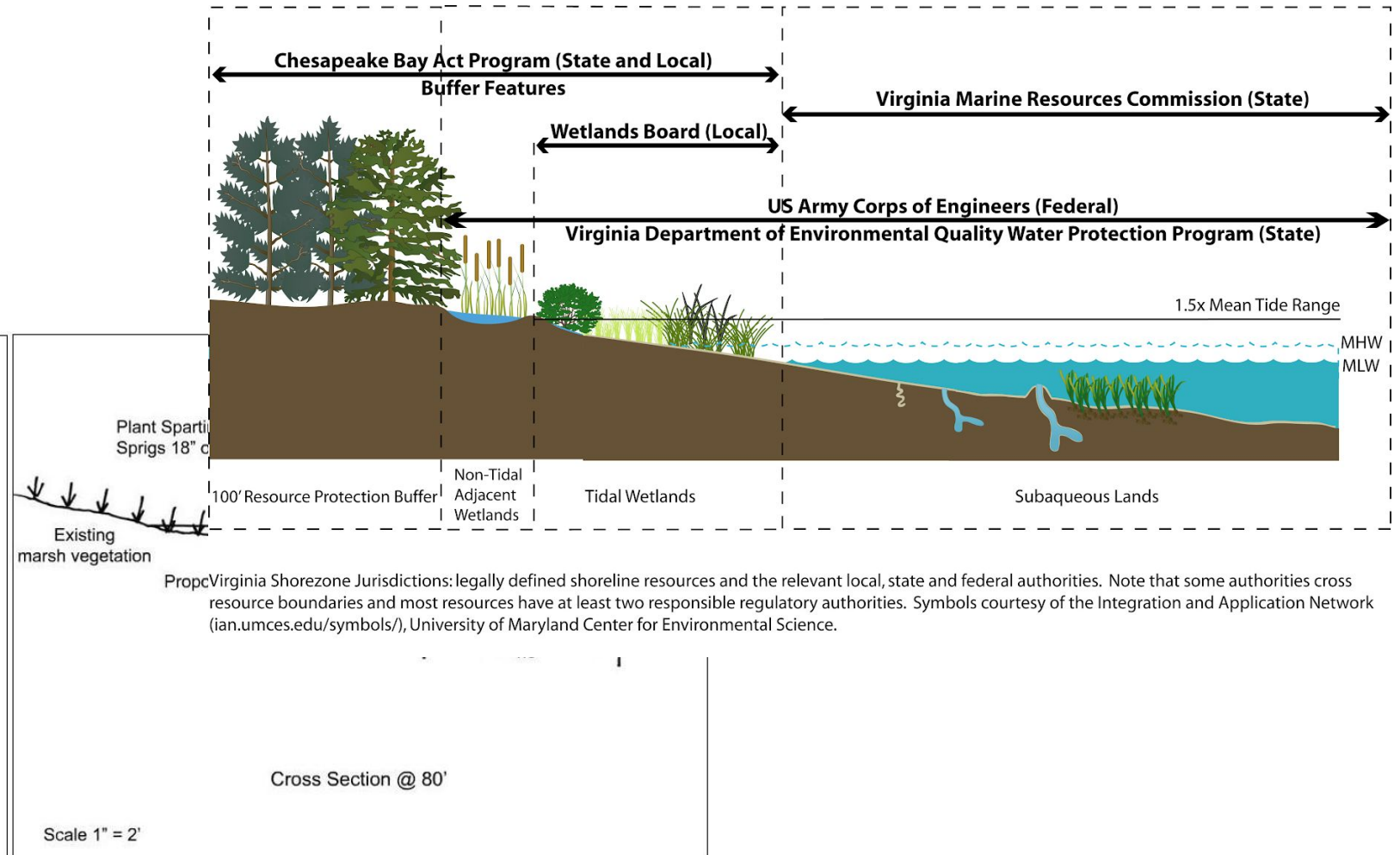
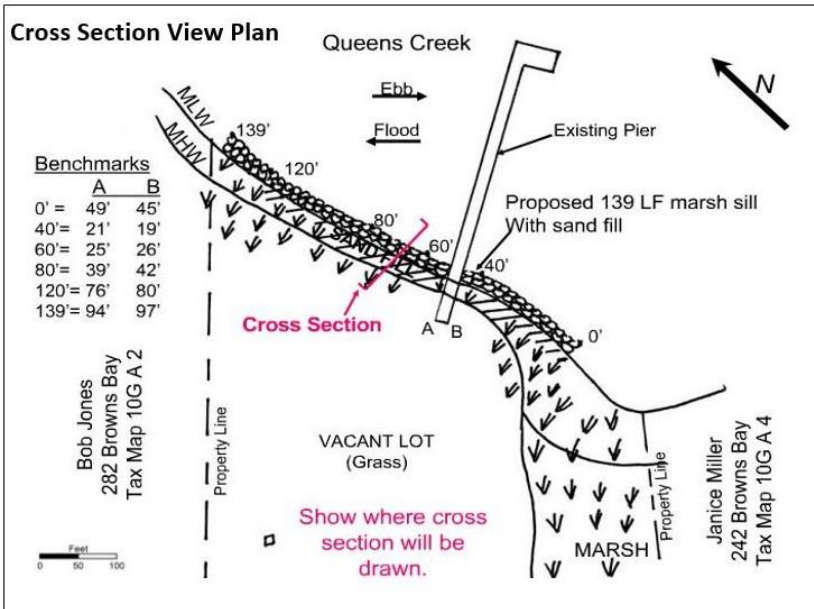
Research & connect with funding sources

Connect client with technical experts & subcontractors



Design, Drawings, Permitting

Start with low energy site
Partner with other pros



Planting Design



Glasswort
Has succulent
with scale-like
4-20 inches
July to Nov



Marsh hibiscus
mallow - *Hibiscus
moscheutos*. Has
showy white
and alternate
up to 12 ft. and
to Septemb



Marsh mallard
virginica. Has
hibiscus-like
alternate leaves
dense hairs
and blooms
August.

Detailed View



Salt Meadow Plants -
found in areas of periodic
inundation

Saltmeadow hay - *Spartina
patens*. Leaves are in-rolled
not 2-ranked with densely
overlapping spikelets borne
only one side of axis. It
grows from 1-3 ft. and blooms
from July to September.



Salt grass - *Distichlis
spicata*. Has a terminal spike
inflorescence and 2-ranked
leaves. It grows 8-16 inches
and blooms from July to
September.



Sea lavender - *Limonium
spp.* Has basal leaves and
lavender flowers that bloom
from July to October. Plant
grows up to 3 ft.



Salt marsh aster - *Aster
tenuifolius*. Has alternate,
flexuous linear leaves and
pale purple, blue or white
daisy-like flowers that bloom



conspicuous white flowers in
fall. Grows up to 8 ft and
blooms from September to
October.



Switch grass - *Panicum
virgatum*. Has straw-colored
paniculate inflorescence. It
grows up to 3 ft. and blooms
from July to September.



Seaside goldenrod -
Solidago sempervirens. Has
dense clusters of yellow
flowers and alternate lance-
shaped leaves. It grows from
4-5 ft. and blooms from
August to October.



Marsh elder - *Iva frutescens*
- has opposite fleshy, lance-
shaped toothed leaves, with
small greenish white flowers
that are not prominent. It
grows 2-6 ft. and blooms in
August to October.



Design

Enhance Water Views
Restore Buffer
Provide Access



Provide Materials, Labor, Equipment

- Plants
- Sand
- Coir logs
- Rock
- Fiber mats
- Goose fencing
- Wooden stakes
- E&S
- Site prep
- Aquatic pesticide applicator



Images: Elizabeth River Project & Bay Environmental

Monitor & Maintain



Images: Wetlands Watch
Elizabeth River Project's
River Star Homes Living Shorelines

Project Manager or Subcontractor

- Provide plans, ensure compliance and oversee implementation
- Manage contractors, consultants, permitting process
- Obtain permits/approval JPA, local wetlands and Chesapeake Bay boards
- Prepare site
 - Protect sensitive features
 - Establish construction staging & paths
 - Remove invasive species
- Lay out buffer and high marsh plantings
- Train maintenance people



Protect Sensitive Features During Construction

- Vegetation & Soil Protection - Exclusion Fencing
- Avoid soil compaction and tree root damage from vehicles & foot traffic – protect ground w/
 - 6-12" wood chips
 - ¾" thick plywood
 - 4x4" wood beams over 4"+ woodchips
 - 4-6" gravel over taut, staked geotextile fabric
 - Commercial logging or road mats on top of mulch layer.
- Make sure erosion control methods are in place and functioning at all times and remove when finished.



Image: Bay Environmental

Living Shoreline Outreach

Bay-Wide Resources
Tool Kit
Materials
Talking Points
Various Audiences

Living Shorelines

Better for property owners and
the environment:
Virginia's preferred approach for
shoreline erosion management



VIMS | WILLIAM & MARY
VIRGINIA INSTITUTE OF MARINE SCIENCE
CENTER FOR COASTAL RESOURCES MANAGEMENT

... researching shorelines
for over fifty years



Living Shorelines

KEY REFERENCES:
VIRGINIA



How long does it take to grow a living shoreline?



IDEATION



Consider your site

Are you interested in:

- erosion control?
- wildlife habitat?
- water quality?
- a natural appearance?
- coastal resilience?



Reach out

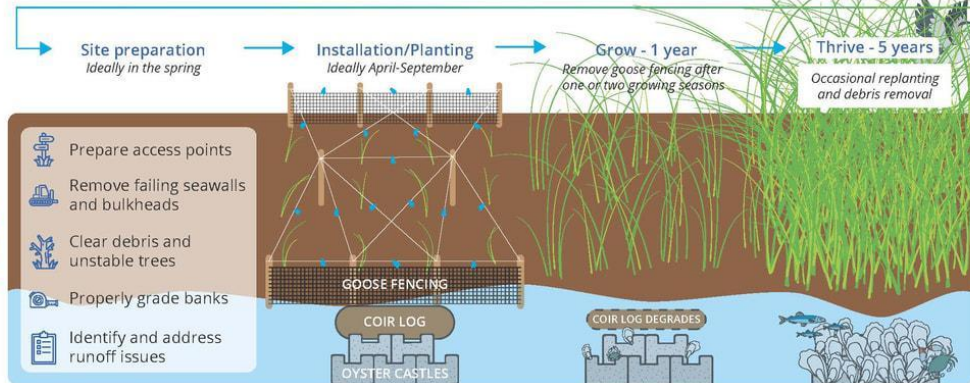
Contact the Living Shoreline Collaborative for more information or guidance. You can also find information about financial assistance through our website. Reaching out to contractors or landscape professionals early on means they can answer your questions from the outset and help you with permitting.



Permitting

It can take 3-5 weeks to gather the necessary information and put together your permit application. You can then expect a wait of 60-120 days or more for approval.

ON SITE



Note: Living shoreline designs start with plants and use biologically beneficial structures (like coir logs and oyster castles) as needed. Specific designs are dependent on the site or goal. For example, you can still have a strong, beautiful living shoreline in an area where oysters don't grow - you just wouldn't use oyster castles there.

LIVING SHORELINE OUTREACH

Chesapeake Bay Program

IMPLEMENTATION PLAN



Professional Standards of Conduct, How to Find a Pro

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

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?

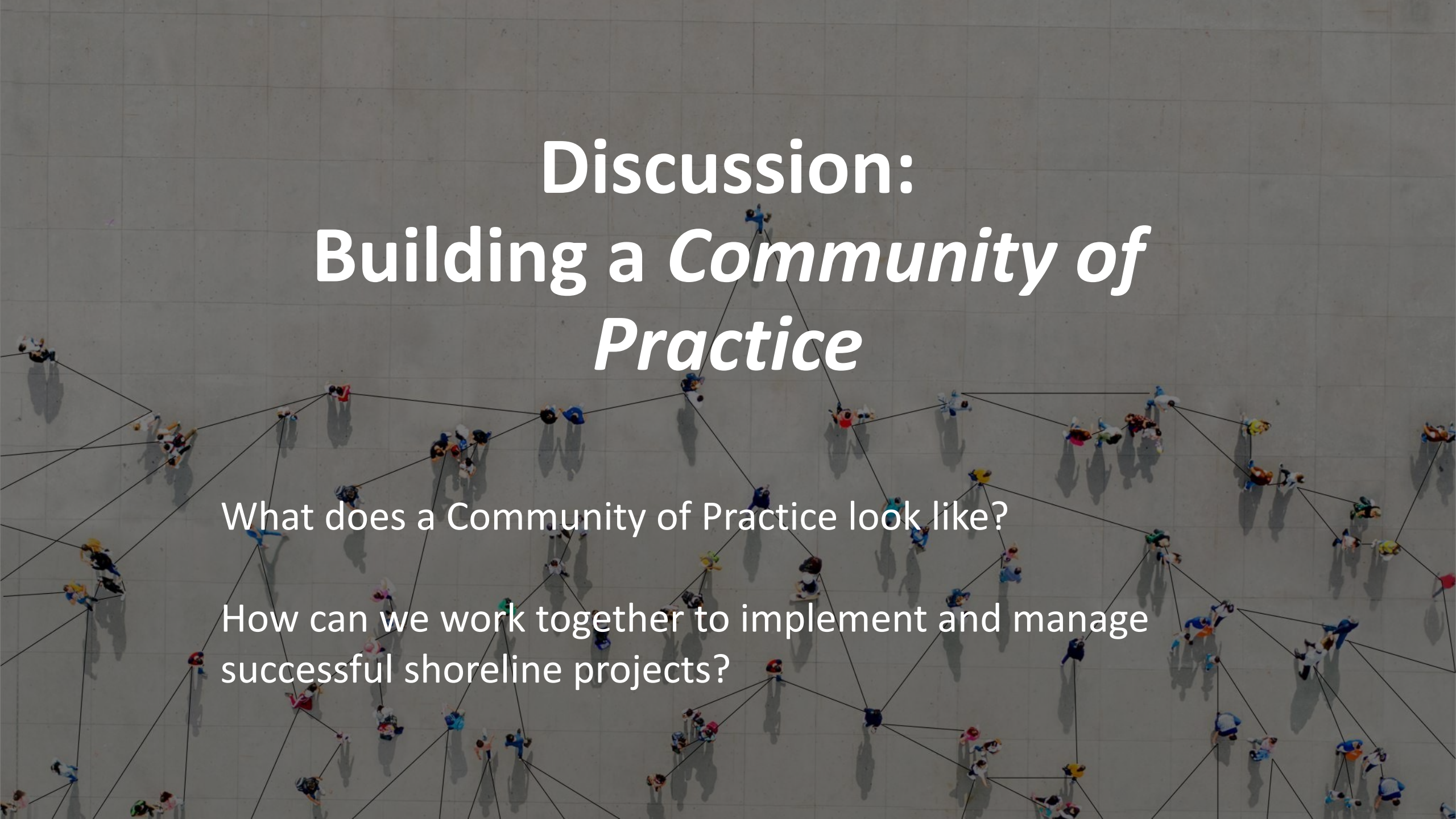
- *Ask for a copy of their license and contact the issuing authority to ensure it is current and in good standing.*

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?



Discussion: Building a *Community of Practice*

What does a Community of Practice look like?

How can we work together to implement and manage successful shoreline projects?