

# CITY ISLANDS EROSION WHAT THE SITES REVEALED AND POSSIBLE NEXT STEPS



**THE MAY 7TH WEBINAR** explored shoreline conditions across Portland's islands through real property evaluations conducted using DEP's OUR SHORE framework. Discussions focused on erosion patterns, runoff, bluff conditions, shoreline structures, upland influences, and potential management approaches.

MISSED IT? TAP FOR REPLAYS

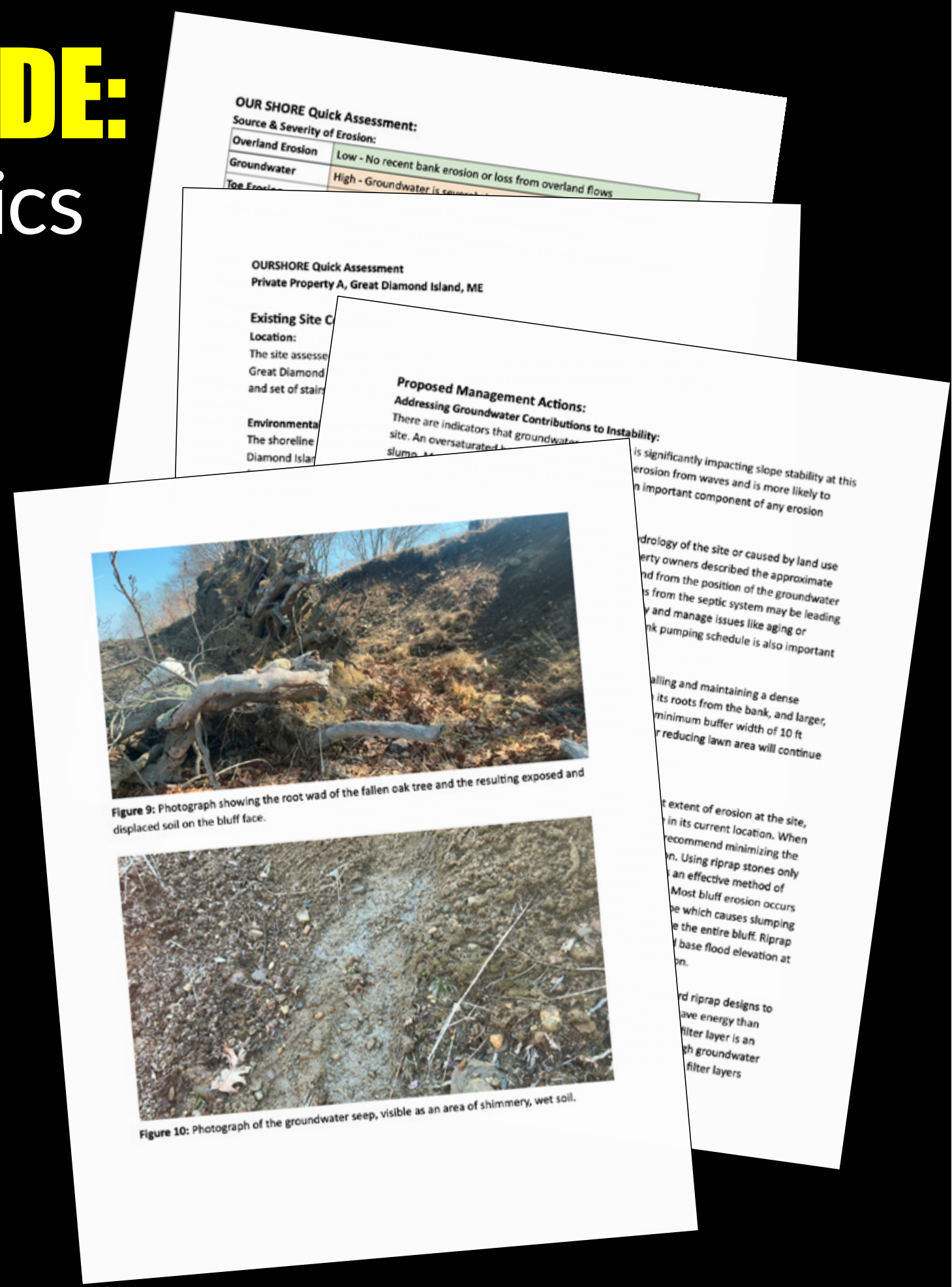
PRESENTATION

Q AND A

**ARE YOU SEEING EROSION ON YOUR PROPERTY** and not sure where to start? Keep scrolling to explore the featured GDI sites to better understand your shoreline conditions, contributing erosion factors, and potential next steps for long-term management.

## THE REPORTS INCLUDE:

- shoreline characteristics
- erosion causes and patterns
- potential management approaches
- permitting regulatory considerations





SITE A

## OBSERVATIONS

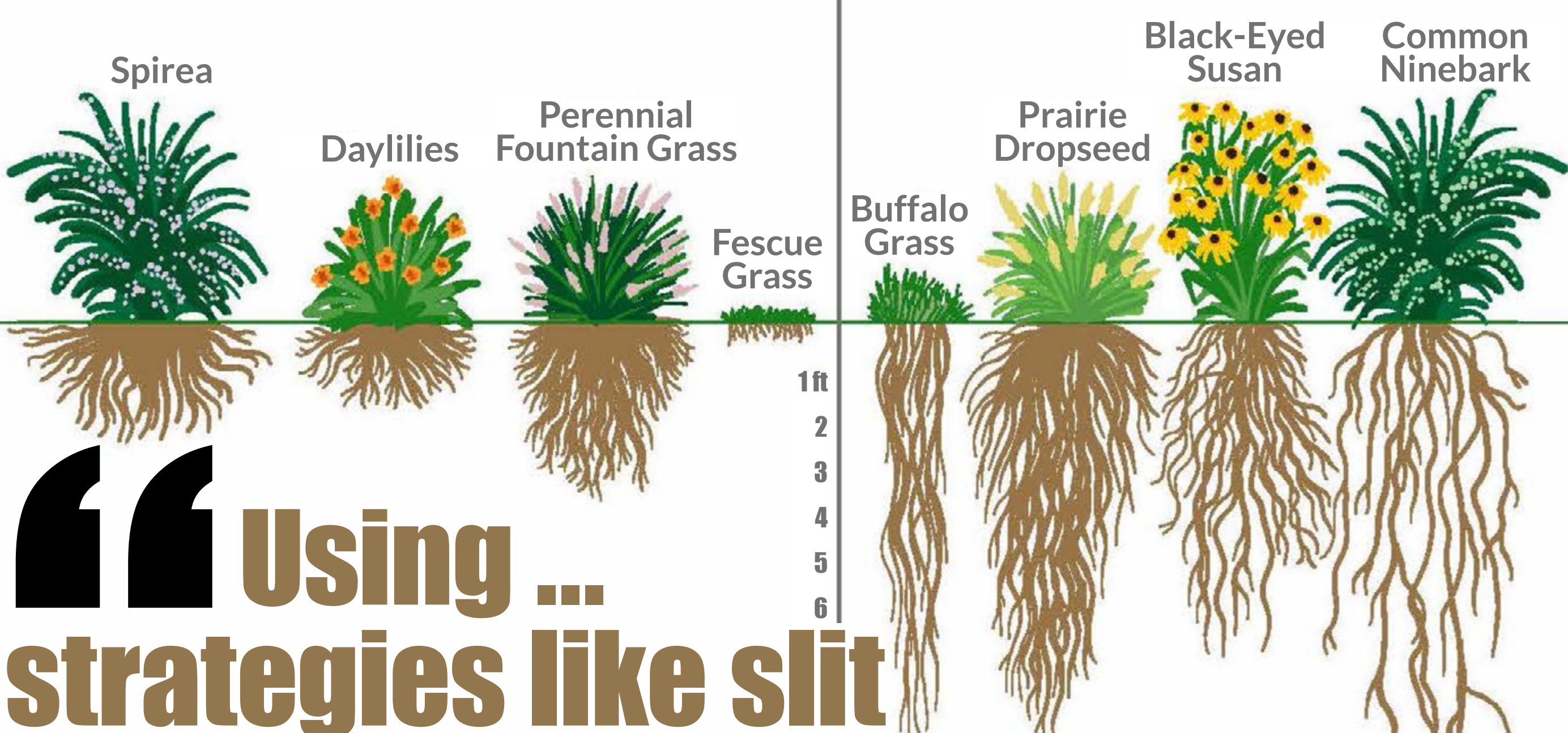
- Lawn-dominated upland
- Roads, driveways, and other impervious surfaces near the shoreline
- Overland flow of water is a significant contributor to instability in the bluff

## NEXT STEPS

- Address ground water instabilities
- Increase deep-rooted vegetation, including shrubs and trees, to absorb water before it reaches the bank
- Minimize irrigation and maintain septic systems to help reduce groundwater instability

### NON-NATIVE PLANTS

### NATIVE PLANTS



“ Using ... strategies like slit planting and live staking disturb less soil than planting potted plants that require large planting holes. These planting practices ... don't require a state permit to implement. ”

TAP FOR FULL REPORT P.14

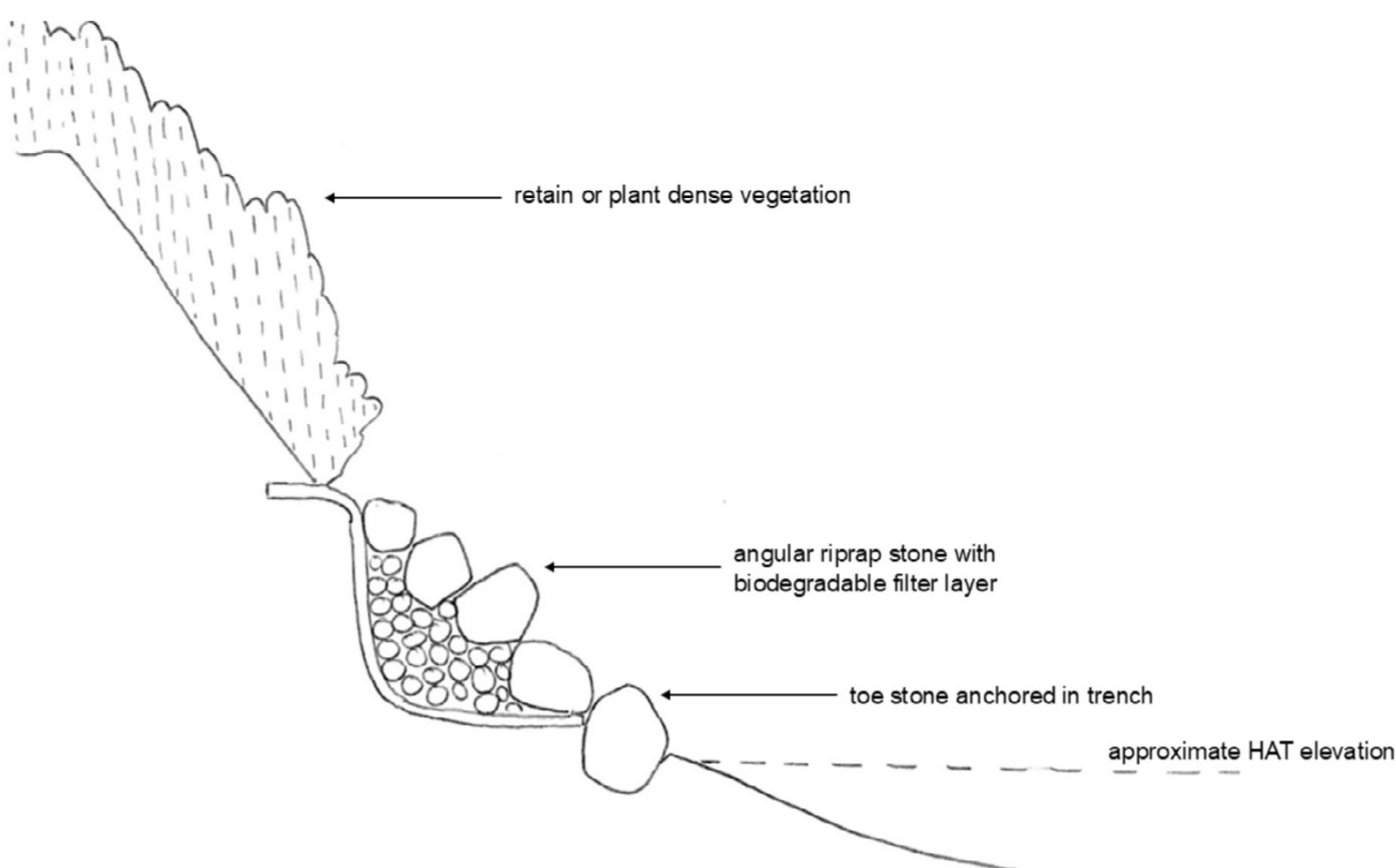
SITE B

## OBSERVATIONS

- Saturated bluff conditions
- Severe bluff slumping
- Erosion at the bluff base
- Annual storm-driven wave erosion
- Lawn-dominated upland

## NEXT STEPS

- Address upland ground water instabilities
- Plant dense native vegetation with deep root systems in the upland zone to reinforce bluff integrity
- Use a hybrid stabilization approach for the bluff toe and slope



**“ An oversaturated bank is more vulnerable to erosion from waves and is more likely to slump. ”**



SITE C

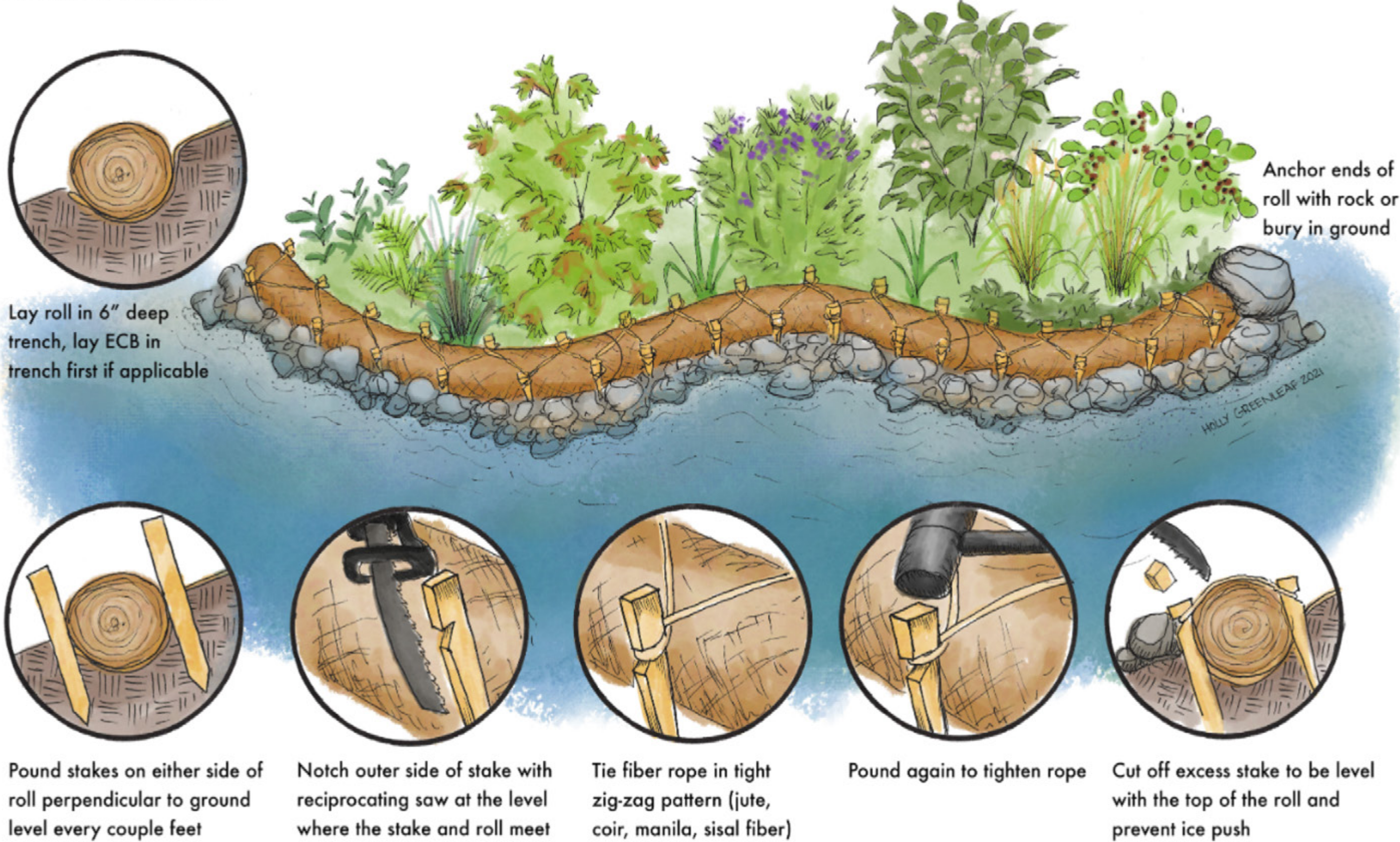
# OBSERVATIONS

- Impervious surfaces and sparse vegetation near bank
- Moderate wave erosion from large storms
- Lawn and bare ground on bank and upland

# NEXT STEPS

- Consider coconut fiber stabilization to support plantings at the eroded toe
- Historic salt marsh presence suggests strong potential for marsh restoration to reduce wave energy and erosion at the shoreline
- Establish a 10–15 ft salt-tolerant upland vegetation buffer to help absorb storm tides

## FIBER COIR ROLLS



“Lawn grass ... has a shallow root system that doesn't effectively stabilize soil.”

# RESOURCES [TAP IMAGES FOR LINKS]

**Shoreline Stabilization Options in Maine**

The "O.U.R. S.H.O.R.E." Program is being developed to provide guidance and training for using nature-based design practices to protect against shoreline erosion. This program serves homeowners, contractors, resource managers, and community leaders, providing them with how-to information and showcases different project examples from throughout the state to successfully use nature-based designs. OUR SHORE is also an emerging network of engineers, earthwork contractors, designers, and municipal officials interested in learning and sharing these techniques in Maine.

Through "O.U.R. S.H.O.R.E.," people can:

1. **Assess sources of erosion**
2. **Identify design recommendations** while preserving and restoring natural functions to shorelines
3. **Navigate regulatory process** to streamline installation of erosion control measures

The **OUR SHORE Guide to Nature-Based Shoreline Stabilization Options in Maine (PDF) – DRAFT IN DEVELOPMENT** includes basic guidance on shoreline function, erosion processes in different environments, and the importance of vegetation in stabilizing soils. The OUR SHORE approach relies on targeting the contributing sources of erosion and instability to select and combine erosion control practices that will address these causes using the least intervention necessary while using natural, biodegradable or living materials. The guidance provides techniques and considerations to include habitat and shoreline functions into the design of any project, even when riprap is used, so the outcome over time is a naturalized and more resilient shoreline. A short list of common materials, and how to descriptions and pictures of common design practices are included.

**What does OUR SHORE stand for?**

<b>Goals and Objectives</b>	<b>Access Instability</b>	<b>Erosion Control Practices</b>
• Observe and blend project	• Source and severity of	

DEP's OUR SHORE page includes the pdf *Guide to Nature-Based Shoreline Stabilization Options in Maine*, along with related shoreline stabilization resources, contractors, and resource managers.

**About This Toolkit**

This toolkit offers educational materials related to building resilience in coastal communities. It includes lessons learned, ideas for how to use the resources, and links to further information. The project strengthens shoreline resilience through collective planning and action.

**DID YOU KNOW?**

More than 20% of Casco Bay's coastal bluffs have been armored—often with riprap. These hard structures don't adapt to changing conditions and often lead to a costly cycle of damage and rebuild.

**Nature-based solutions** have similar upfront costs but are more cost-effective over the long term, offering stronger resilience to flooding and climate impacts.

**Monitoring erosion rates helps identify how shorelines are shifting—and those changes matter for resilience planning.**

The *Calling Your Bluff Toolkit*, developed by the GDI Partnership with Long, Chebeague, and Little Diamond in collaboration with Island Institute, includes educational materials, Casco Bay nature-based shoreline examples, and resource links.

**Living Shorelines Decision Support Tool**

To view the data, zoom in on the map to your area of interest. The data will activate automatically while zooming in.

The tool shows a map of a coastal area with a color-coded overlay representing potential shoreline suitability. The map includes labels for 'N Shore Dr' and 'McKinley Estates'.

This Maine Geological Survey tool shows potential shoreline suitability for living shoreline approaches based on factors such as fetch, bathymetry, shoreline type, slope, and exposure.

**Certified Companies**

Contact: **John MacLaine**, (207) 615-3279, fax 207- 287-2814.

**What it means to be a certified company.** A company certified in erosion control practices by the Department is one that, at a minimum, has all of its construction site supervisors individually trained and certified in erosion control practices by the DEP. The basic premise in certifying a company in this manner is to ensure that all of the company's construction sites are supervised by an individual that is certified in erosion and sediment control practices.

**Companies Currently Certified**

Town	Company	Address	Phone
Skowhegan	Lynch Landscaping, Inc.	PO Box 2219, Skowhegan, ME 04976	(207) 474-2420
Alfred	J.R. Gerrish & Sons LLC	867 Gore Road, Alfred, Maine 04002	(207) 324-4984

Search this list for a contractor certified by DEP in erosion control practices, not all listed contractors have experience with nature-based shoreline approaches.

**Chapter 305: NATURAL RESOURCES PROTECTION ACT**

**PERMIT BY RULE**

The document features a circular logo with a landscape scene including mountains, water, and birds.

Use this resource to understand the types of shoreline stabilization activities that are eligible for the permit by rule process. The permit by rule timeline is faster than other DEP permitting and on average around 20 working days.

**STATE OF MAINE**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**JANET T. MILLS**  
GOVERNOR

**MELANIE LOYZIM**  
COMMISSIONER

**MEMORANDUM**

TO: Interested persons

FROM: Maine Department of Environmental Protection

DATE: June 4, 2025

RE: Hand-Planting Native Vegetation Adjacent to a Protected Natural Resource

The Maine Department of Environmental Protection (Department or DEP) regularly provides the assurance that they are doing so in compliance with the State's natural resource protection laws. Under the Natural Resources Protection Act (NRPA), a permit is typically required by DEP for alterations in, on, or over any protected natural resource and within 75 feet of a wetland.

Read this memo to understand which activities and plantings are allowed without a DEP permit.

**Best practices for ecological gardening**

- Plant in layers
- Plant densely, "green mulch"
- Always something in flower
- Get to know your soil as well as your sun/shade

The webinar features a photo of a lush garden with various plants and flowers.

Watch this 30-minute webinar to learn landscaping practices that help support more stable shorelines and resilient upland landscapes. While this presentatin does not specifically focused on shoreline buffer zones, it highlights techniques that use native vegetation with varied root depths to improve soil stability, manage runoff, and strengthen coastal shorelines against erosion.

**Cumberland County Soil & Water Conservation District** provides technical assistance, educational resources, and guidance on erosion control, stormwater management, native plantings, buffer restoration, and nature-based approaches that help improve shoreline stability and resilience.

The collage includes several informational cards:

- COASTAL PLANTING GUIDE**: Planting for Slope Stabilization on Maine's Coastal Bluffs. Discusses the stability of a coastal bluff and provides a list of recommended plants.
- Vegetative Buffer**: Explains what a vegetative buffer is, its benefits, and provides a list of recommended plants.
- Wildflower Meadow**: Explains what a wildflower meadow is, its benefits, and provides a list of recommended plants.