

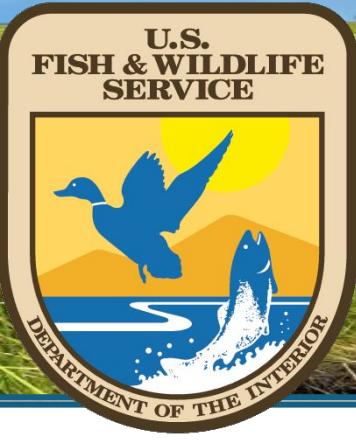


# Roots for Resilience: *Strong Roots for a Changing Landscape*



Delmarva Restoration &  
Conservation Network  
Presentation

December 17, 2025



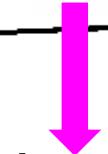
NFWF



**Marsches for Tomorrow:**  
A Strategic Plan for the  
Restoration & Resilience of  
Maryland's Salt Marshes



<https://media.audubon.org/2025-11/MfT%20Final%20Technical%20Report%20111825.pdf>



*Implementation*

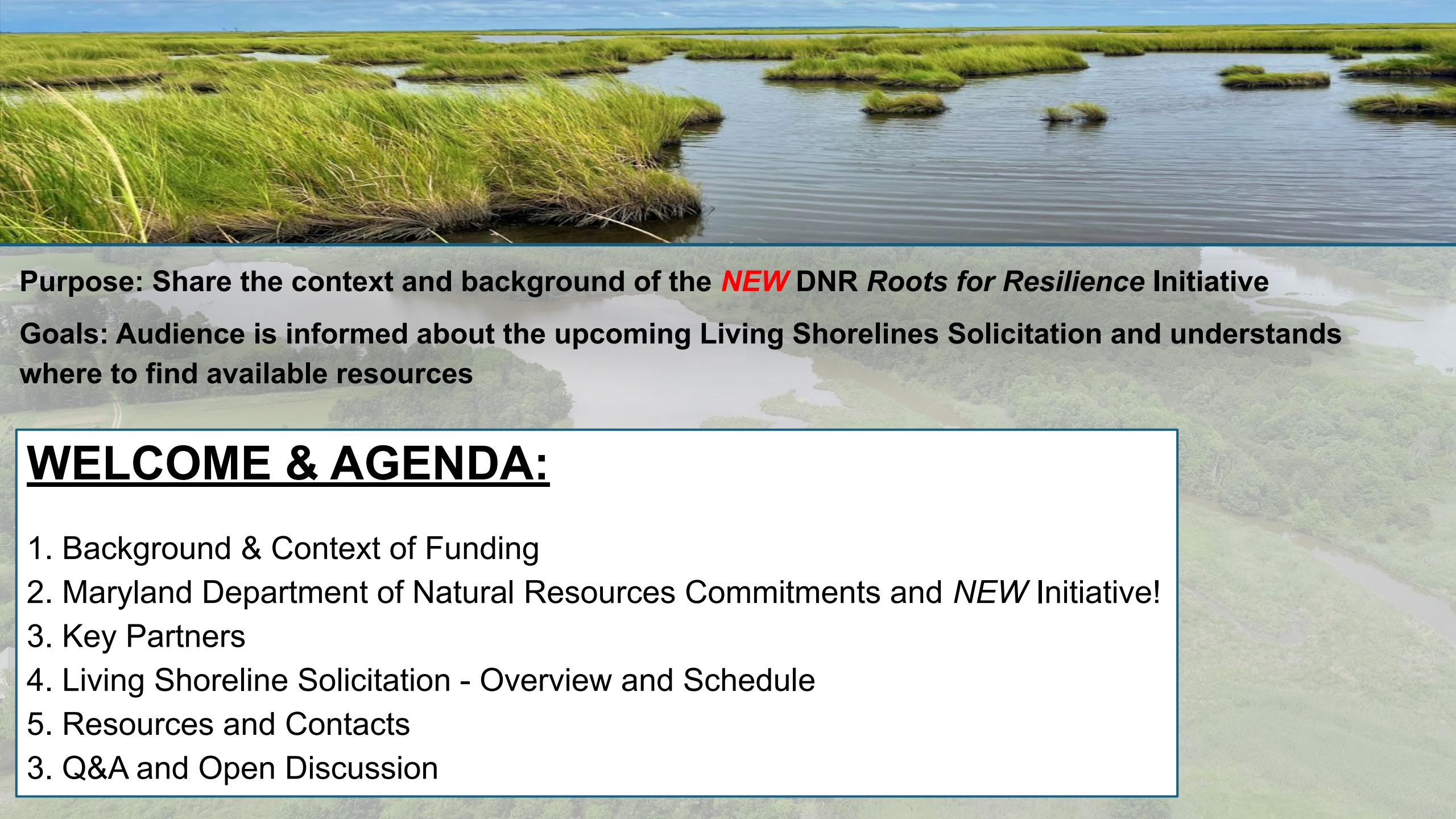
**Roots for Resilience:**  
Strong Roots for a  
Changing Landscape



**CLIMATE POLLUTION REDUCTION GRANTS**

U.S. Environmental Protection Agency





**Purpose:** Share the context and background of the **NEW DNR Roots for Resilience Initiative**

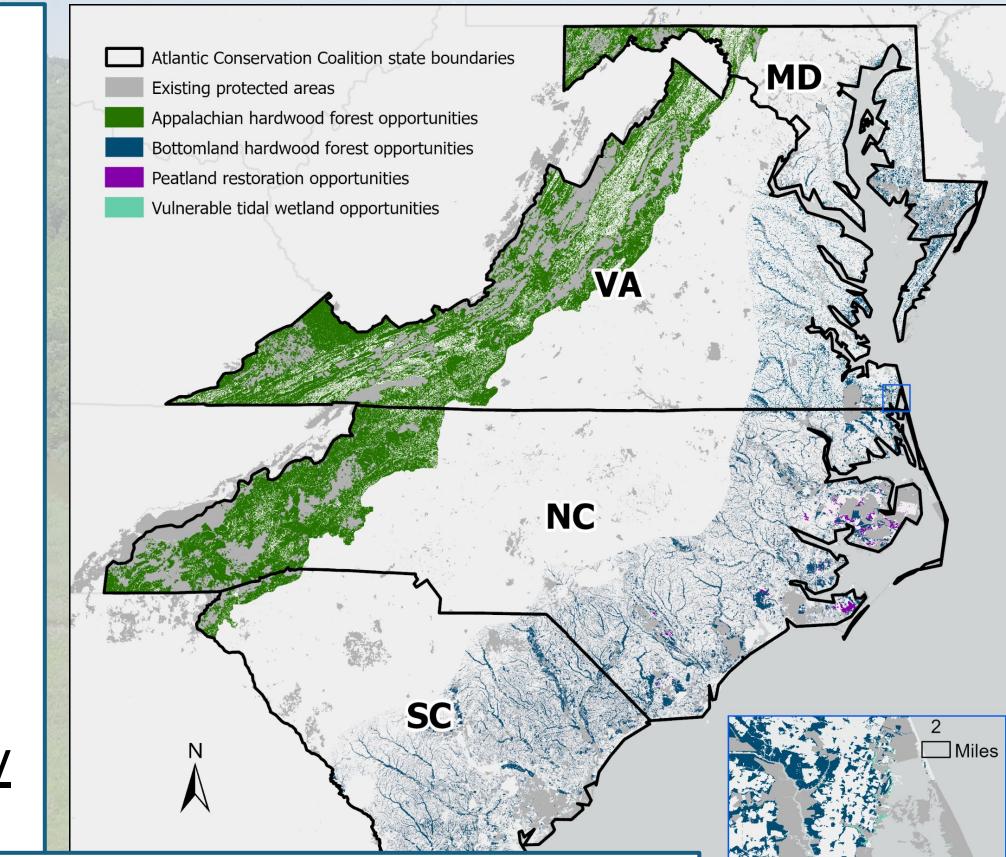
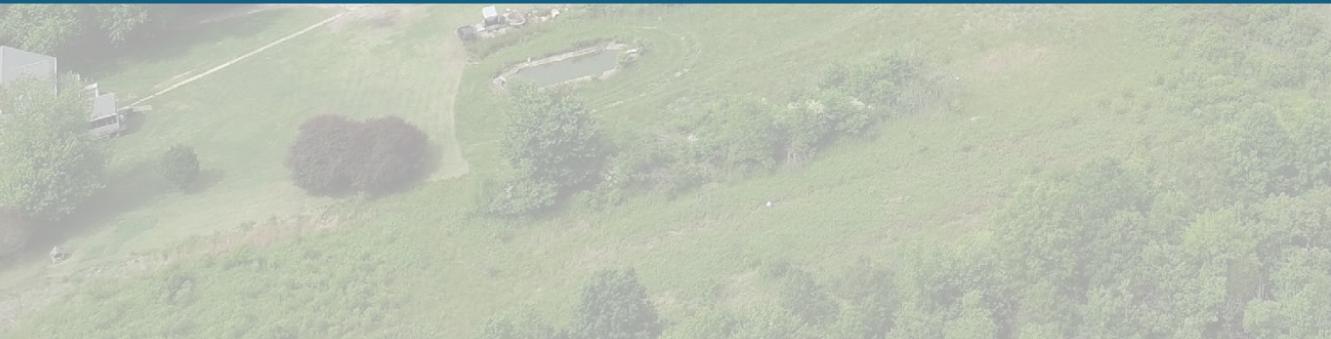
**Goals:** Audience is informed about the upcoming Living Shorelines Solicitation and understands where to find available resources

## **WELCOME & AGENDA:**

1. Background & Context of Funding
2. Maryland Department of Natural Resources Commitments and **NEW Initiative!**
3. Key Partners
4. Living Shoreline Solicitation - Overview and Schedule
5. Resources and Contacts
3. Q&A and Open Discussion

# Background: EPA Funding

- Funding (\$421M) through the EPA Climate Pollution Reduction Grant (CPRG) provided to the Atlantic Conservation Coalition (ACC) to implement a regional approach to **reduce greenhouse gas emissions through carbon sequestration**
- This multi-state coalition will implement carbon sequestration projects through enhanced forest management, and the protection and restoration of high-value coastal habitats and forests with the greatest carbon storage capacity
- Goal = reduce carbon emissions through conservation and restoration of natural resources while increasing community resilience to natural hazards



## Coalition Partners:

- State of North Carolina (**LEAD**)
- State of South Carolina
- State of Maryland
- Commonwealth of Virginia

# Atlantic Conservation Coalition (ACC)



## Coalition State Partners:

**North Carolina (Coalition Lead)**

South Carolina

Virginia

Maryland:

- Maryland Dept. of the Environment (MDE) is the State Lead!
- Maryland Dept. of Natural Resources (DNR) awarded \$43 Million

*Coalition-wide: The Nature Conservancy & Duke University (will support all four states)*

## Partners



# Roots for Resilience: Strong Roots for a Changing Landscape



MARYLAND DEPARTMENT OF NATURAL RESOURCES  
**CLIMATE RESILIENCE**

Impacts of Climate Change

Climate Data and Tools

Our Climate Initiatives

## Our Initiative:

- To help Maryland's Lower Eastern Shore adapt to the challenges of climate change.
- Includes tree planting, coastal habitat restoration, and community engagement.
- Will unite existing relationships, initiatives, and passions on the Lower Shore to nourish roots — ecologically and socially — to preserve this rapidly changing landscape.



## Roots for Resilience: Strong Roots for a Changing Landscape

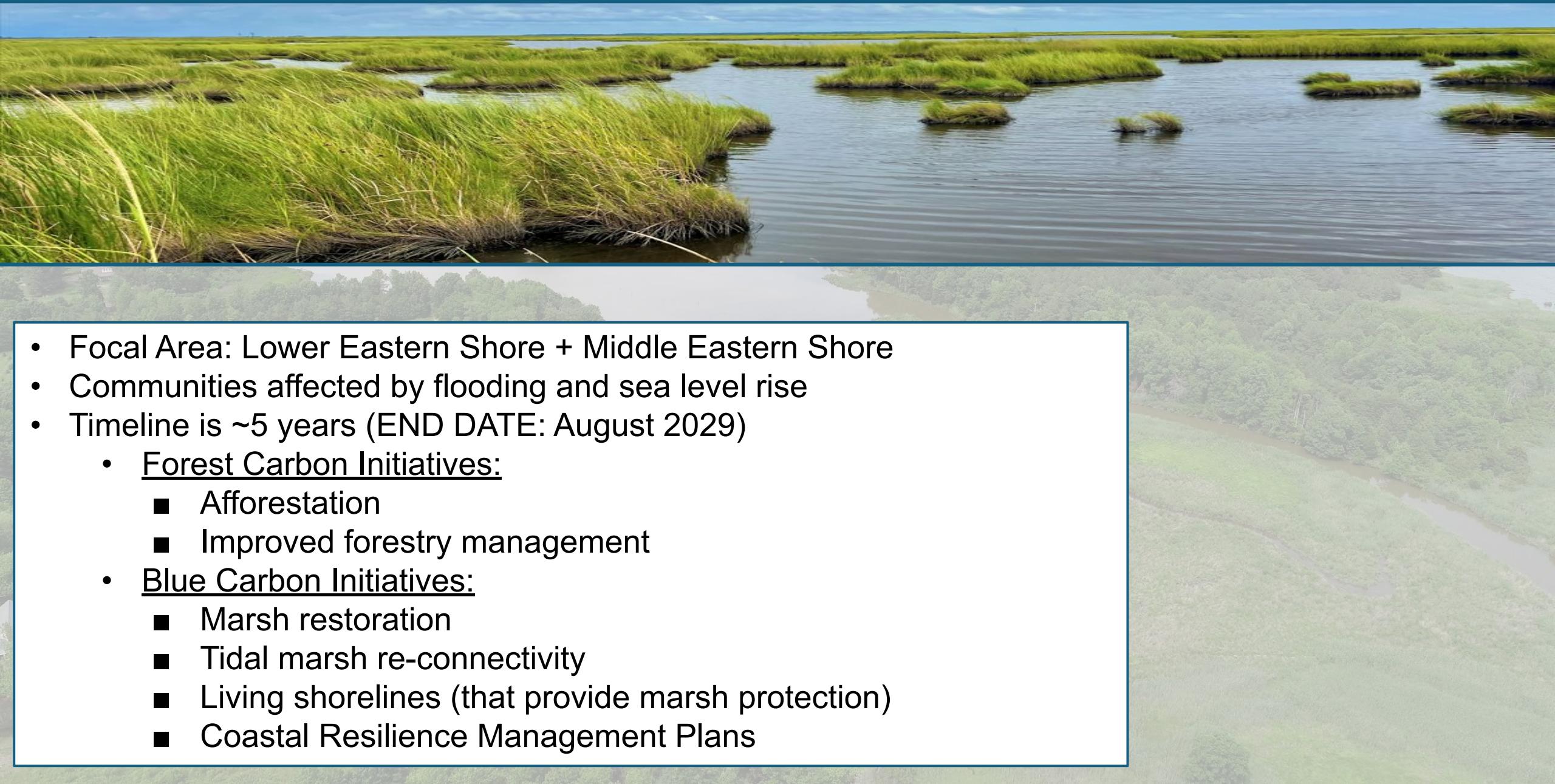


Roots for Resilience is a new Initiative designed to help Maryland's Lower Eastern Shore adapt to the challenges of climate change by enhancing nature's ability to store carbon and buffer climate impacts. Through tree planting, coastal habitat restoration, and community engagement, the Initiative strengthens our natural defenses while reducing carbon emissions. Roots for Resilience unites the existing relationships, initiatives, and passions on the Lower Shore to nourish roots — ecologically and socially — to preserve this rapidly changing landscape.

At Maryland DNR, we are proud to collaborate with our nonprofit partners to fulfill our commitments in the areas of forestry and wetland restoration. Our key partners include:

- Audubon Mid-Atlantic
- Lower Shore Land Trust
- Eastern Shore Land Conservancy

# MDNR Commitments



- Focal Area: Lower Eastern Shore + Middle Eastern Shore
- Communities affected by flooding and sea level rise
- Timeline is ~5 years (END DATE: August 2029)
  - Forest Carbon Initiatives:
    - Afforestation
    - Improved forestry management
  - Blue Carbon Initiatives:
    - Marsh restoration
    - Tidal marsh re-connectivity
    - Living shorelines (that provide marsh protection)
    - Coastal Resilience Management Plans

# Detailed MDNR Commitments



## Blue Carbon - Coastal Wetlands:

- Restore 200 acres of marsh
- Protect 400 acres marsh through living shorelines projects
- Restore the tidal connectivity of 400 acres of marshes
- Using conservation easements and Coastal Resilience Management Plans, work with private landowners to develop plans to transition land to wetlands or actively restore wetlands on their property

## Forest Carbon - Afforestation & Improved Management:

- Restore 500 acres of Atlantic white-cedar, bald-cypress, shortleaf pine, and other trees on public & private lands
- Target a fisheries restoration priority of the black-banded sunfish
- Evaluate forest stand condition using drone technology and remote imagery
- Improve forestry management on at least 1,000 acres
- Conduct landowner outreach, and planning for landscape-scale habitat opportunities for high-priority regions

# How Can We Achieve these Goals?



## Internal DNR Units Working Collaboratively

**External Partners:** USFWS; Delmarva Restoration Conservation Network (DRCN); University of Maryland

At Maryland DNR, we are proud to collaborate with our nonprofit partners to fulfill our commitments in the areas of forestry and wetland restoration. Our key partners include:

- Audubon (Marsh restoration; tidal connectivity assessments & implementation)
- Lower Shore Land Trust (Coastal Resilience Management Plans)
- Eastern Shore Land Conservancy (Coastal Resilience Management Plans)

**Community Liaisons:** to support outreach and engagement; known/trusted members to support work

**+Release a Solicitation to request projects to meet our goals and commitments!**

# Living Shoreline Solicitation

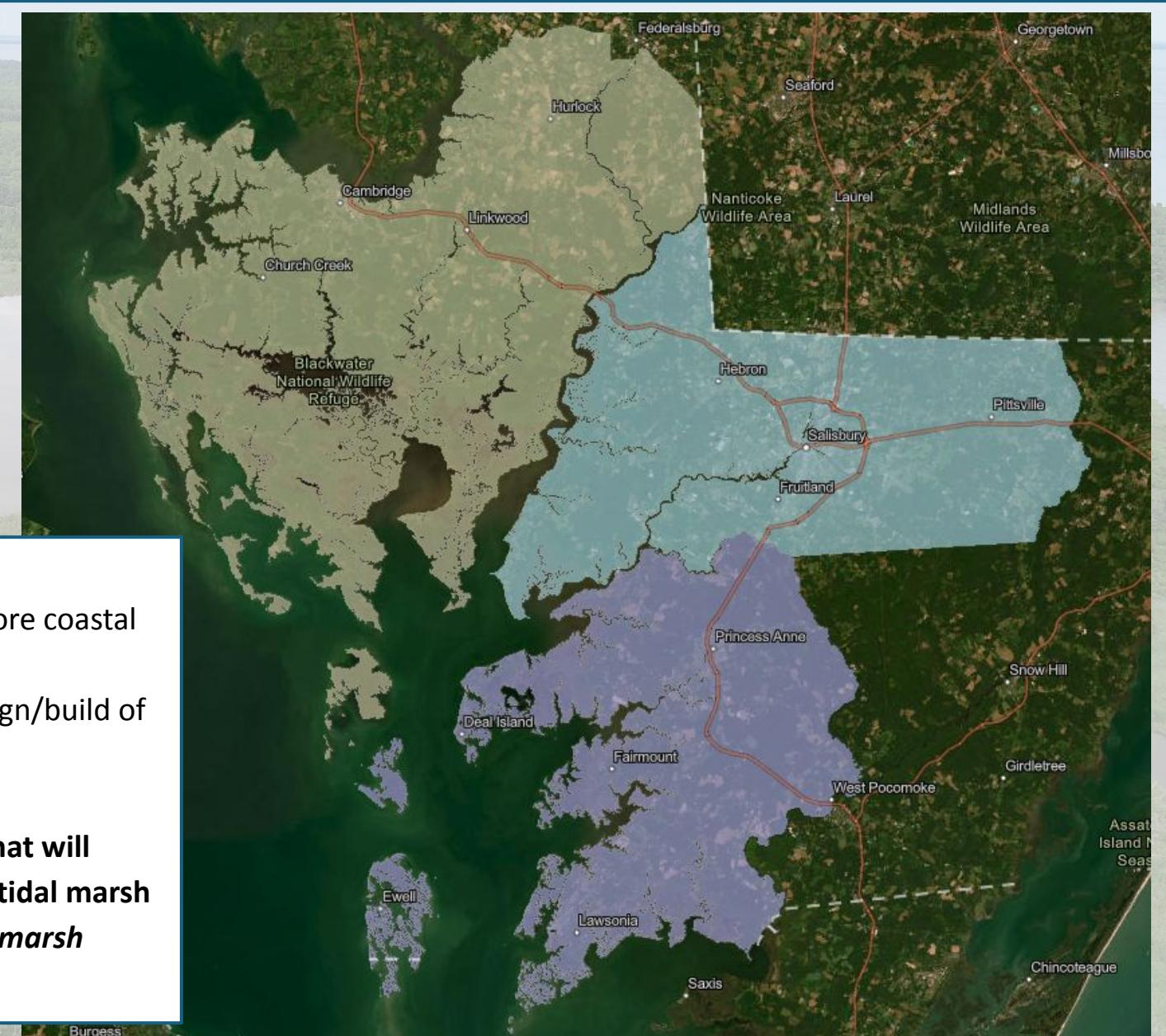
- Living Shoreline projects must protect coastal wetlands
- Eligible Project Locations:
  - **Dorchester County**
  - **Wicomico County**
  - **Somerset County**
- Available funds: ~\$17M



## The Solicitation will:

- focus on requests for living shoreline projects that will restore coastal shorelines and protect tidal marsh habitat
- invite applications for the design, construction, and/or design/build of living shoreline projects on the Lower Eastern Shore.
- open in January 2026

**GOAL** = award large-scale living shoreline restoration projects that will collectively protect a total of 400 acres of adjacent high quality tidal marsh habitat. *Multiple awards are expected to be made to meet our marsh protection goal*



# Project Goals



- **Project Location->** Within eligible counties and Chesapeake Bay
- **Project Need and Context->** Public land, Active erosion, Marsh restoration
- **Cost effective->** At least 2.3 acres of marsh per 100 ft living shoreline protected
- **Readiness and Ability to proceed->** Realistic timeline for design/permitting/construction, Construction completed by July 2029
- **Long Term Success->** Sea Level Rise incorporated into design, Appropriate stakeholders involved, Long term Adaptive management plan in place

# Potential Restoration Techniques - Living Shorelines



*Headland Breakwater*



*Vegetated Headland Breakwater*



*Sill*



*Groin*



*Shingle Beach*



*Coir Fiber Log*

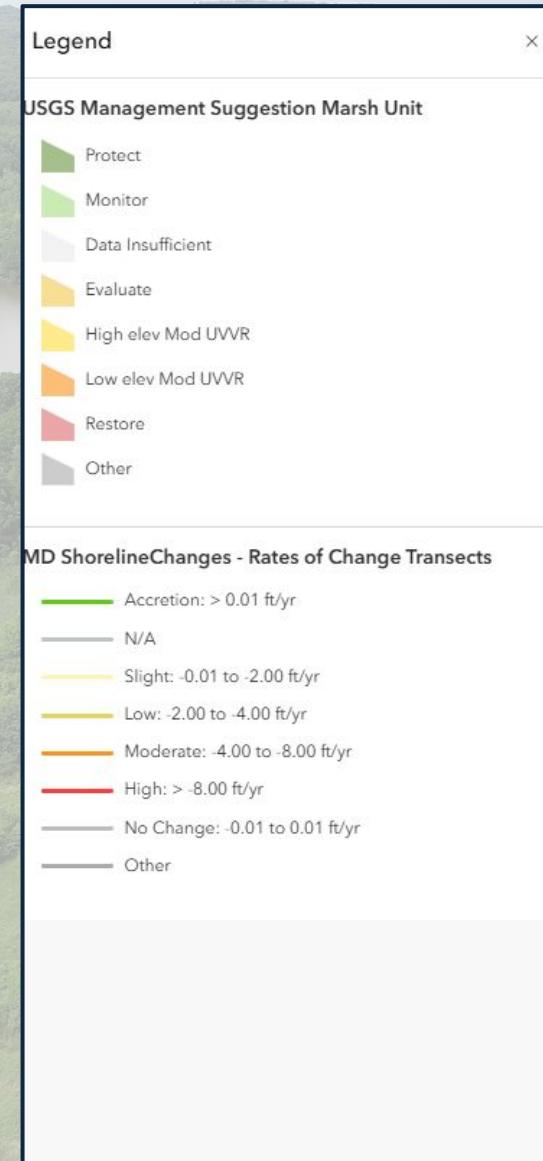


*All projects will avoid natural resources (SAV, existing wetlands, etc.) to maximum extent practicable*

# Project Targeting Map

Map web link:  
<https://arcg.is/vCaS>  
W3

**\*\*Map and guidance documents are subject to changes.**



# Project Types

**Priority #1:**  
Construction-ready  
request for living  
shoreline project\*

- Highly suggested to apply
- Design complete [or near completion]
- Permits in-hand [or ready to be submitted]
- Project should maximize marsh protection

**Priority #2:**  
Design/Build  
request for living  
shoreline project\*

- Encouraged to apply for design and construction funding
- Funds for permitting are eligible
- Project should maximize marsh protection

**Priority #3:**  
Design/permitting  
request for living  
shoreline project\*

- Welcome to apply, but future construction funding not guaranteed
- Project should maximize marsh protection

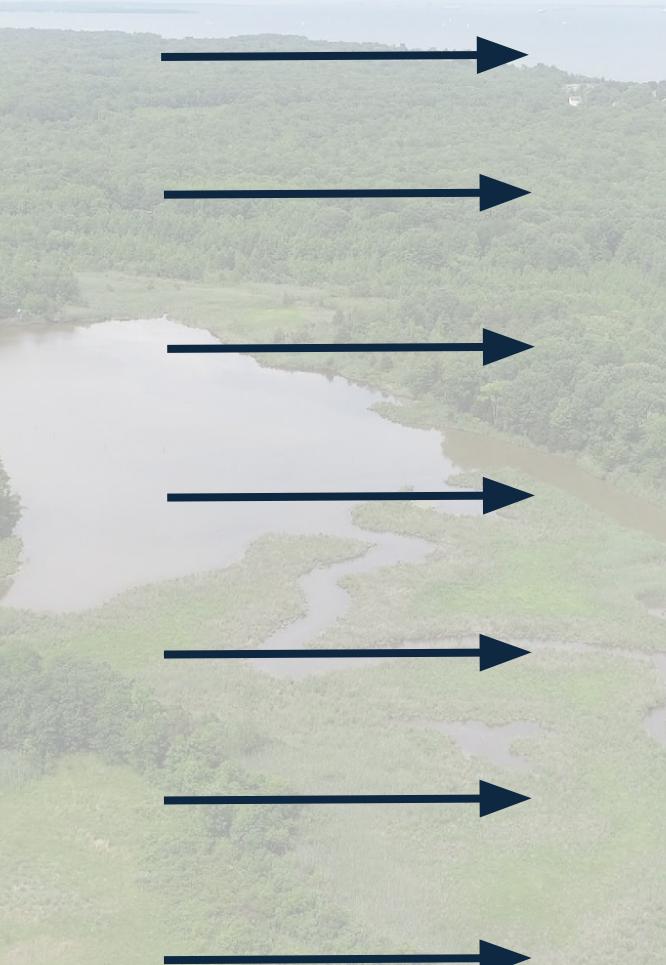
# What information is needed to apply?



- **Budget**-Estimates of personnel, equipment, field supplies, and contractual costs.
- **Timeline**- Estimate of implementation, activities, major tasks, milestones, and deliverables with their associated start and end dates. \*All construction must be completed by July 1, 2029
- **Project location and basic concept design**- Total wetland area protected, Living Shoreline length, design type (e.g., headland breakwater, sill, groin, etc)
- **Partner engagement**- Do you have landowner permission and/or an agreement in place?

# RFP Timing

- RFP Release
- Info sessions and site visits
- RFP Deadline
- Technical Review
- Project Selection
- Applicants Notified of Awards
- Project Funding Begins



January 2026

January-March 2026

Late March 2026

April-May 2026

June 2026

July 2026

July 2026-July 2029

# Contact us!



**Ari Office Hours: Roots for Resilience: Strong Roots for a Changing Landscape**

Fridays· 1:00 – 2:00pm

Google Meet joining info: <https://meet.google.com/jtz-zkfh-fip>

Or dial: (US) +1 401-903-3424 PIN: 617 166 843#

**Ari contact info:** [ari.engelberg@maryland.gov](mailto:ari.engelberg@maryland.gov); 401-260-8734

**Sarah contact info:** [sarah.koser@maryland.gov](mailto:sarah.koser@maryland.gov); 410-260-8758

# Resources

Email: [dnr.rootsresilience@maryland.gov](mailto:dnr.rootsresilience@maryland.gov)

- General email for communication and correspondence

Roots for Resilience Webpage: <https://dnr.maryland.gov/climateresilience/Pages/rootsforresilience.aspx>

- RFP will be posted here
- Recorded Webinars will be posted here

Technical Support with Applications: reach out to University of Maryland Environmental Finance Center (EFC) for technical support: [efc\\_climateaction@umd.edu](mailto:efc_climateaction@umd.edu)



# Questions?



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