



Maryland Wetland Program Update

**Joint Mid-Atlantic Wetland Work
Group and New England Biological
Assessment of Wetlands Work Group
Meeting**

Presented by:

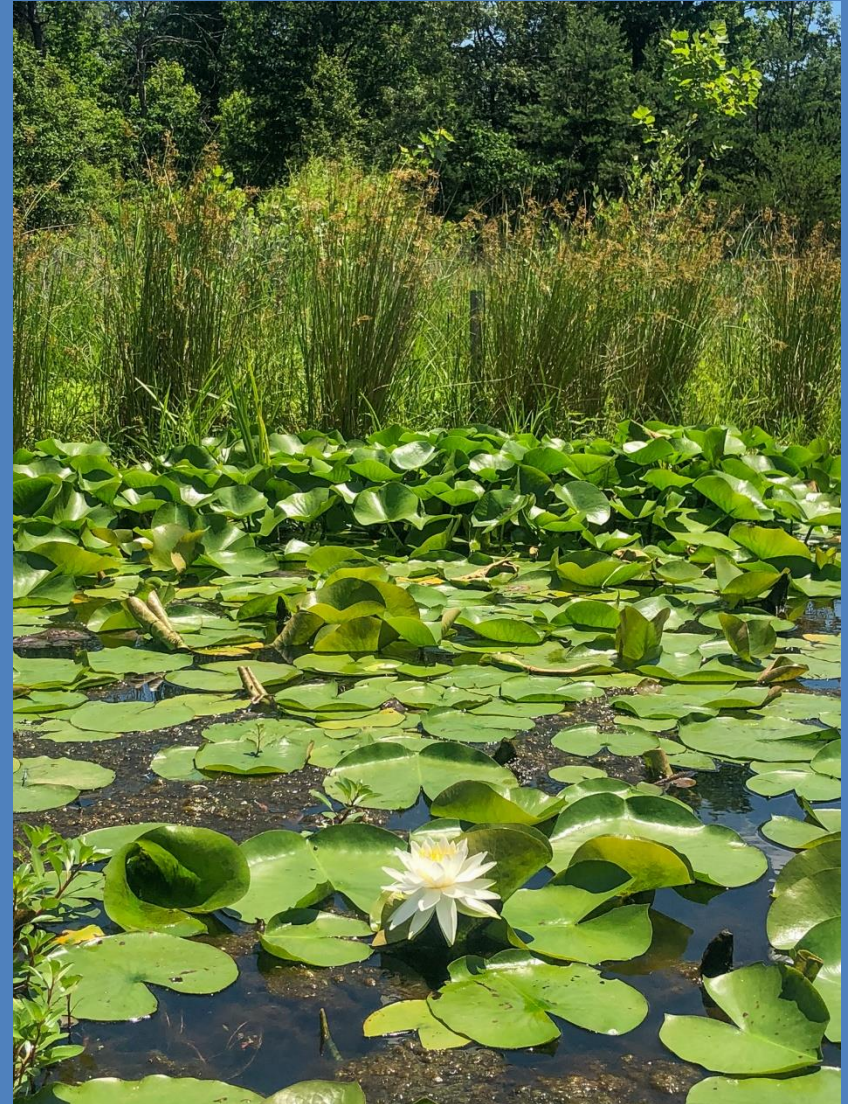
Denise Clearwater

**Wetlands and Waterways Protection
Program**

**Maryland Department of the
Environment**

November 12-14, 2024

Photo: MDE





What is your agency's biggest success in the past two years?

- Creation of the checklists and forming new shoreline management teams to modernize the permitting process
 - New tracking system for tidal wetland mitigation and living shoreline projects
 - Maryland Shoreline Stabilization Mapper
 - Completion of mapper <https://cmap22.vims.edu/MSSMTOOL/>
 - Active outreach to various venues and new educational material
- photo (top) MDE(below): Canva

SHORELINE NEIGHBORS

Eastern mud turtle
(*Kinosternon subrubrum*)



Turtles

Turtles have been around for hundreds of millions of years, even living alongside dinosaurs. But their numbers have gone down because of overharvesting and losing their homes. By creating a living shoreline, you can help give turtles a safe place to live!

Read the back of the card to learn more about the Eastern Mud Turtle

For More Information:  Maryland Department of the Environment

Eastern Mud Turtle



Scientific Name:
Kinosternon subrubrum

These turtles can release smelly liquid like a skunk when disturbed. They have a brownish shell and light mottles on their heads and necks. They match their activities to the tides and hide in the mud during low tide and emerge when the water rises. They leave the marshes and move to higher ground inland in the fall to begin hibernation. Eastern mud turtles eat both small animals and aquatic plants.

Funded by U.S. Environmental Protection Agency State Wetland Program Development Grants.
Reference: Cunningham, Heather and Nathan Nadrowicz (Eds). 2018. The Maryland Amphibian and Reptile Atlas. Johns Hopkins University Press.



What is your agency's biggest success in the past two years? (cont.)

9/17/24, 9:51 AM

Maryland Shoreline Stabilization Mapper

Maryland Department of the Environment

Maryland Shoreline Stabilization Map (MSSM)

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

Map Glc

Getting Started

Recommended Shoreline Practice

Zoom to

landward of the measure from further erosion. The measure may include the use of a bulkhead, revetment, groin, breakwater, jetty, sand, beach nourishment, and any other similar structure.

NOTE this is an Area of Special Consideration: **Highly Modified Area** Consult with MDE Tidal Wetlands Division

Definition for Area of Special Consideration: Management options for this shoreline may be limited due to the presence of Federal navigation channels, highly developed upland (e.g. commercial wharfs), channel modifications (e.g. canals) or infrastructure directly adjacent to the shoreline (e.g. road). Seek expert advice on the design of your project.

Other Information (see below table for definitions)

Existing Shoreline Marina and

Scrolling through information notes presence of:

- Existing marsh
- SAV
- Fetch distance
- Bank height
- Nearshore depth

<https://cmap22.vims.edu/MSSMTool/>



Challenges

What is your agency's biggest environmental challenge right now?

- **Implementation of the Living Shoreline Protection Act**
- **Criticisms of stream restoration project successes**
- **Community education at the residential scale on benefits of success of living shorelines**
- **Lack of staff to follow up on the success of restoration projects**



Photo: MDE



Requested Feedback and Collaboration

- **Opportunities to streamline permitting processes for living shorelines and stream restoration where federal authorizations are also required**
- **How other agencies analyze and address resource tradeoffs**



- **Specific actions related to addressing climate change in regulatory review:**
 - **culvert sizing**
 - **storm modeling**
 - **significant filling of a resource (tidal or nontidal) resulting in resource conversion (uplands conversion, etc.)**



Climate Change: What is your agency doing or thinking about to address climate change?



- **Science & Planning**: Harness science and planning to account for changing climate conditions such as rising sea levels, increased rainfall, and prolonged droughts



- **Climate Smart Water Permits**: Review regulatory approval procedures and permits to ensure they support the safe and sustainable management of water resources and infrastructure in the context of a changing climate



Climate Change: What is your agency doing or thinking about to address climate change?

- Green, Blue, & Traditional Infrastructure: Accelerate the implementation of green, blue, and traditional infrastructure to enhance resilience
- Emergency Preparedness & Response: Periodically update and exercise response procedures to safeguard public health, water resources, and critical infrastructure from increasingly frequent and severe emergency incidents due to climate change



Photo: MDE



Photo: MDE



Climate Change: What is your agency doing or thinking about to address climate change?

- **Nontidal wetland mitigation:**
Proponents of mitigation sites are asked to describe how their project will be resilient to climate change
- **Nontidal waterways:** Applicants are informed of changing climate and potential for new flood risks. Applicant has the responsibility to consider flood risks

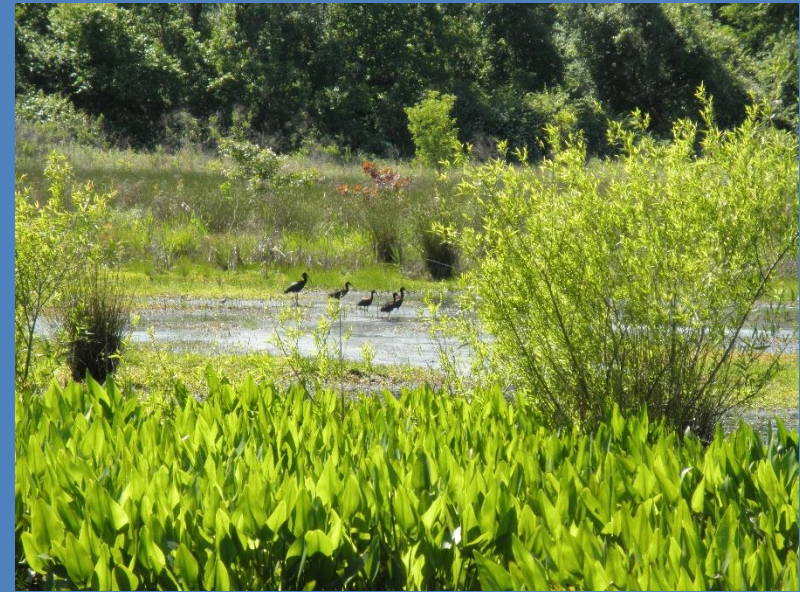


Photo: MDE



Climate Change: What is your agency doing or thinking about to address climate change?

- Case-by-case consideration of designs to support tidal wetlands based on 2050 sea level rise projections
 - Structures/sills in tidal waters can be higher
 - More high marsh rather than low marsh



Photo: MDE



Climate Change: How are you coordinating with other state agencies or across state lines?



Photo: MDE

- Quarterly Living Shoreline Multiagency Subgroup Meetings that are MDE-facilitated with federal and state agency partners
- Participate on Chesapeake Bay Program Climate Resiliency Workgroup
- Specific checklist associated with coastal resiliency that was created through collaboration with federal and state agencies for living shoreline projects