



JUG BAY WETLANDS SANCTUARY ECOLOGICAL RESTORATION

Virtual Community Meeting

May 4, 2026



Jug Bay Wetlands Sanctuary Ecological Restoration



Meeting Information

- **Tonight's meeting will be audio and video recorded**
 - You will only hear the voices of the presenters
- **For questions and comments:**
 - Please submit all questions into the Q&A chat box
 - Questions will be answered at the end of the presentation



Introductions

- **Anne Arundel County Department of Recreation and Parks**
 - Patricia Delgado, Ph.D., Jug Bay Wetlands Sanctuary Superintendent – Wetland Ecologist
- **BayLand Consultants & Designers, Inc.**
 - Caitlin Sporik, PE, CFM, Senior Project Manager
- **Maryland DNR Chesapeake Bay National Estuarine Research Reserve** CS0
 - Shelby Johnson, Restoration Coordinator
- **Friends of Jug Bay**
 - Allison Anderson, Director of Operations



Slide 3

CS0

I can add/remove attendees?

Caitlin Sporik, 2026-04-28T16:54:53.667

GU0 0

IF FOJB is not speaking, should we be left off this intro list? Let me confirm FOJB rep attending.

Guest User, 2026-04-29T16:39:18.345

Purpose and Agenda

- **Meeting Purpose**
 - Overview of the project features
 - Introduce construction activities
 - Answer questions
- **Meeting Agenda**
 - Background
 - Project Objectives
 - Existing Conditions
 - Project Goals
 - Proposed Design Components
 - Schedule
 - Construction Activities
- **Q&A on Project**



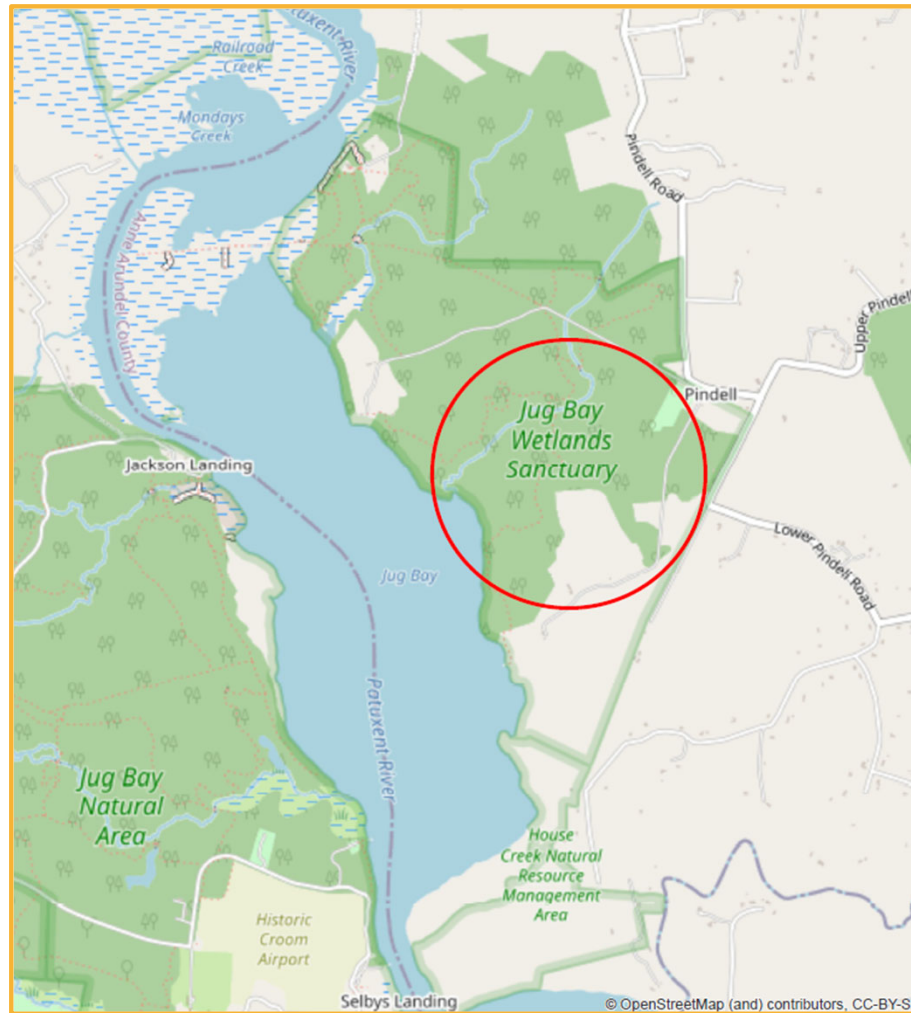
Project Background

- 560 LF living shoreline & 7,100 LF stream restoration
- Partnership between JBWS, AACO, MD DNR, NOAA, FOJB
- Grant Funded (State & Federal)
 - Phase I – Design & Permitting
 - Phase II - Implementation



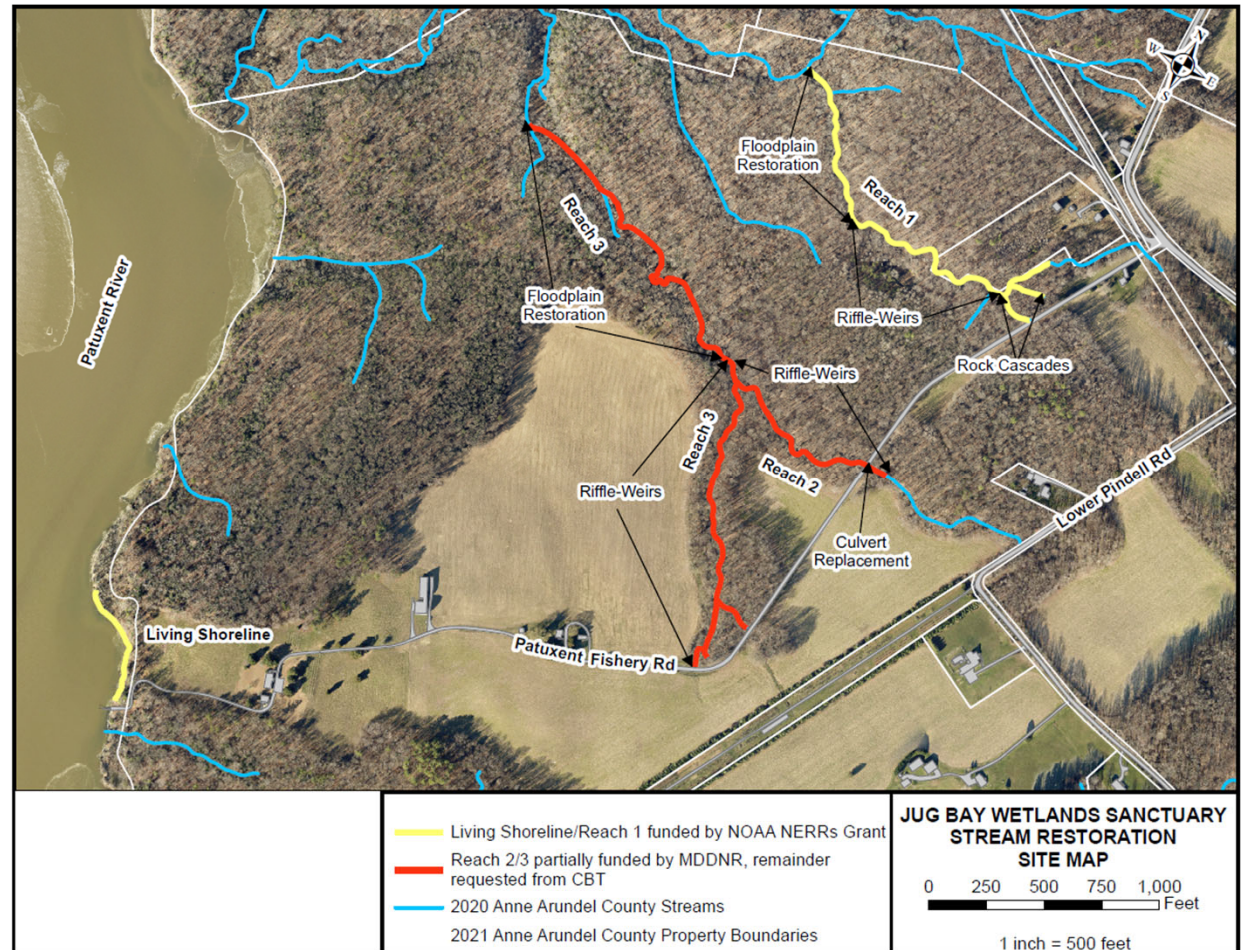
Project Background

- **Patuxent River Watershed**



Project Background

- One living shoreline reach
- Three stream reaches
- One culvert replacement



Project Objectives

- Reduce sediment and nutrient pollution to Patuxent River & Chesapeake Bay
- Enhance JBWS resilience to S&I & increased rainfall intensity
- Protect critical infrastructure the long-term
- Increase public understanding of habitat restoration & climate change



Slide 8

GU0

Might want to zoom in more on shoreline, not house

Guest User, 2026-04-29T16:31:51.374

Existing Conditions - Streams



Habitat and Biological Monitoring

- **Baseline habitat & biological assessment in 2013 & 2021**

- US EPA Rapid Bio Assessment Protocol (RBP) Score
- MD DNR Physical Habitat Index (MPHI) Score
- Benthic Index of Biological Integrity (BIBI) Score

Habitat and Biological Monitoring			
Monitoring Year	Measurement Method	Pre-Restoration Rating Value	
2013	RBP Score	141	Supporting
	MPHI Score	92.74	Minimally Degraded
	BIBI Score	4.43	Good
2021	RBP Score	111	Partially Supporting
	MPHI Score	73.95	Partially Degraded
	BIBI Score	3.29	Fair



Slide 10

GU0

Does Pati want to include other monitoring done in addition to these scores? Or allow that to come up in comments?

Guest User, 2026-04-29T16:37:25.011

Existing Conditions - Shoreline



Targeted Benefits and Goals

- Reduce sediment and nutrient pollution to Patuxent River & Chesapeake Bay
- Enhance JBWS resilience to SLR & increased rainfall intensity



- Reduce stream bed & bank erosion
- Optimize floodplain reconnection
- Promote denitrification
- Minimize impacts to natural resources
- Enhance native/riparian vegetation
- Enhance habitat for local flora/fauna

“Slow it down, spread it out”



Targeted Benefits and Goals

- Reduce sediment and nutrient pollution to Patuxent River & Chesapeake Bay
- Enhance JBWS resilience to SLR & increased rainfall intensity



- Stabilize the toe of steep slope
- Provide transitional area between water's edge and uplands
- Provide habitat uplift to resources
- Minimize impacts to natural resources



Community Meeting per Code § 17-2-107

- Funding: MD DNR & NOAA
- Address: 6032 Pindell Road, Lothian, MD 20711
- Property Owner: Public (Anne Arundel County)
- Grading Permit Number: G02020688
- Zoning: RA – Rural agricultural
- Water & Sewer Type: Public
- Impacted Schools: None CS0
- Number of Proposed Lots: None
- Type of Proposed Product: Stream Restoration, Living Shoreline, Pocket Beach
- Approximate Road Configuration: None
- Limits of Disturbance = 13.4 acres
- Modifications Anticipated: None
- Environmental Features On-Site: Critical area, floodplain, tidal waters
- Impacts of Proposed Development on Environmental Features: Temporary 100-year floodplain impact, impact from existing MHW into tidal waters, permanent impact to shallow water habitat
- Critical Area Designation: Resource Conservation Area (RCA)
- Conceptual Stormwater Management: N/A



Slide 14

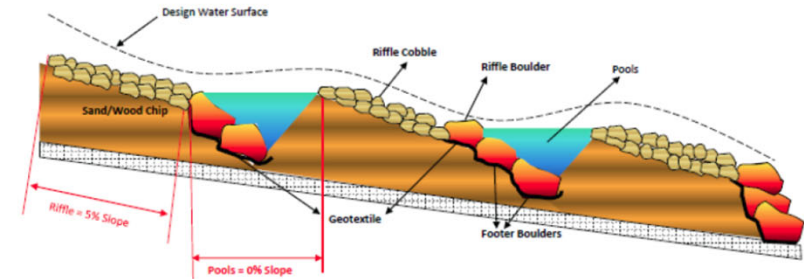
CS0

Can someone confirm if this is septic, sewer, etc?

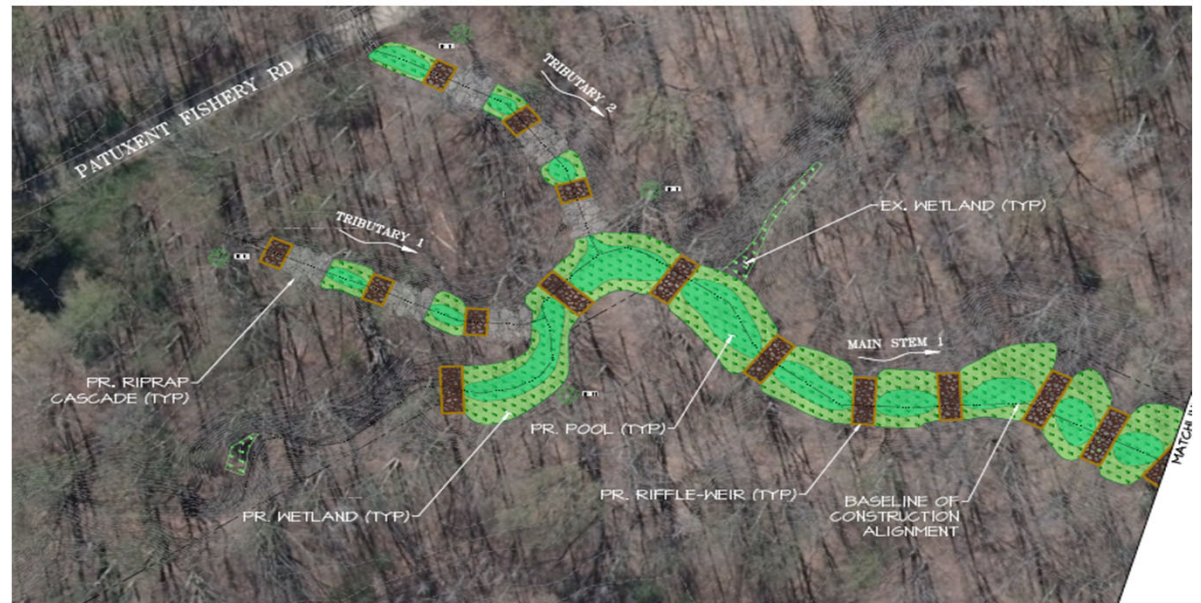
Caitlin Sporik, 2026-04-28T17:24:13.403

Proposed Design - Streams

- Upstream Areas → Step-pool systems
 - Steep Areas
 - Reduce flow through steps
 - Rock structures (“Cascades” or “Riffle-Weirs”)



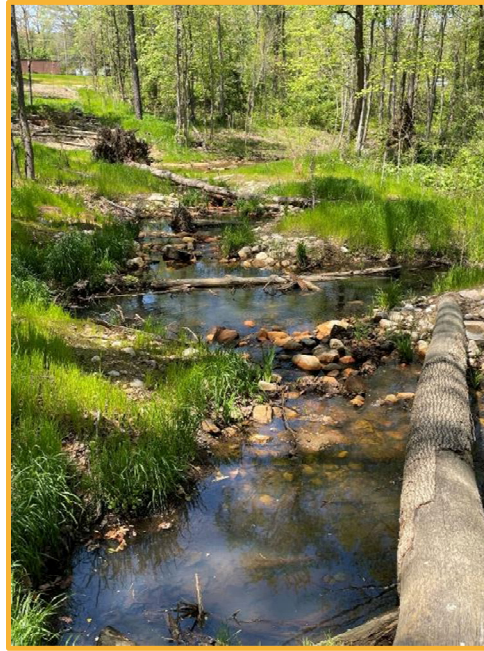
Profile view of typical RSC system, including media (sand), riffles and pools, and native vegetation. Source: Anne Arundel County, 2011.



Proposed Design – Example Boulder Cascades

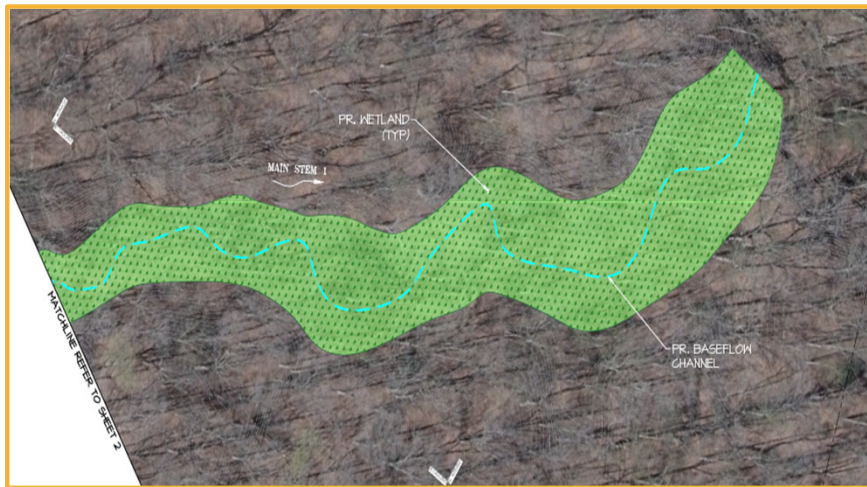


Proposed Design – Example Riffle-Weir Steps

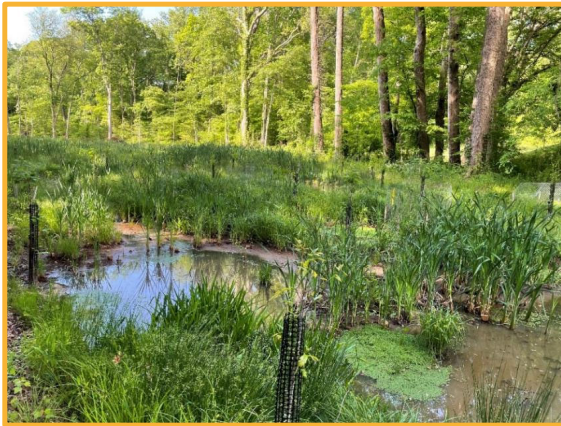


Proposed Design - Streams

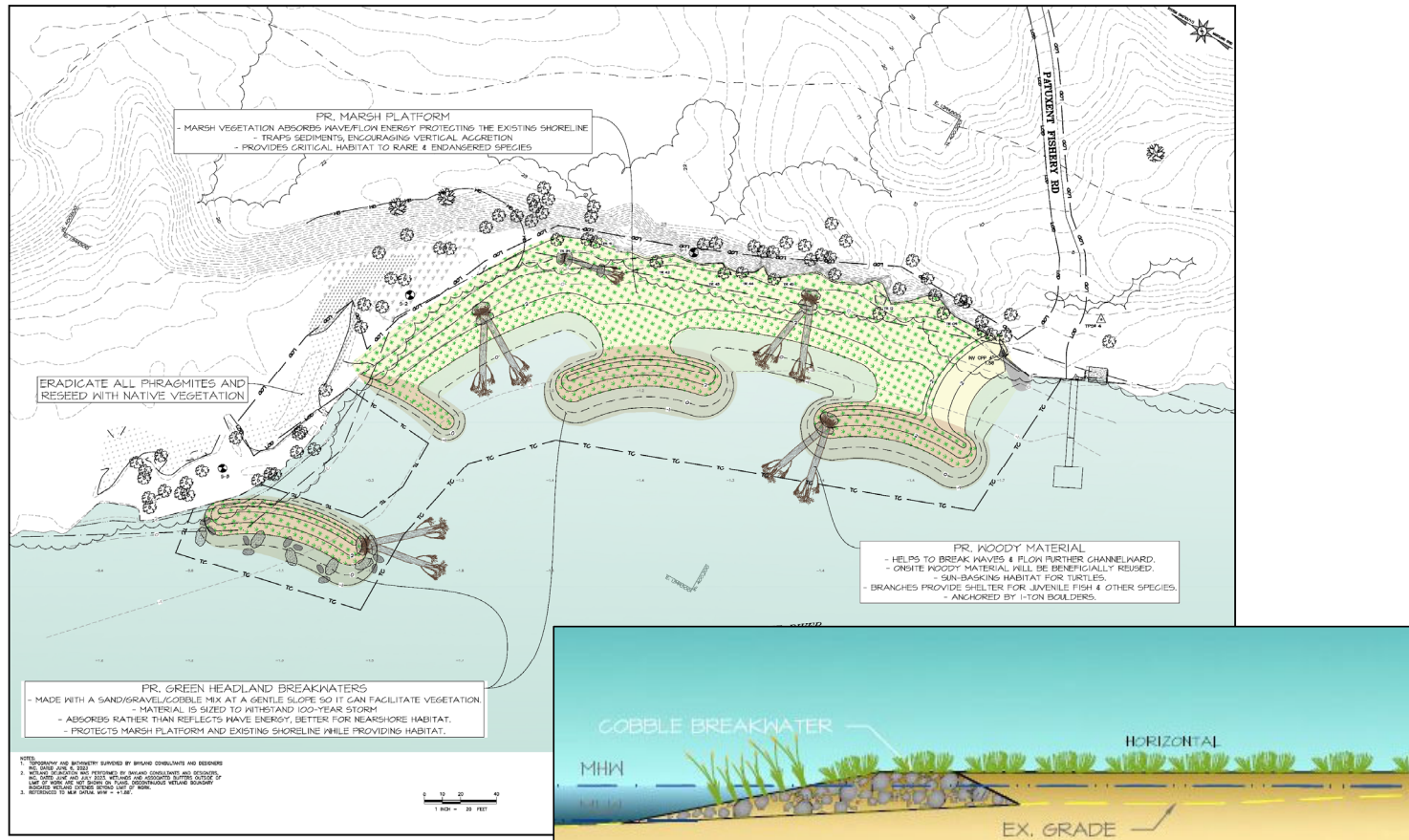
- Downstream Areas → Valley Restoration
 - Flatter, wider areas
 - Raise existing streambed
 - Increase channel & floodplain connectivity



Proposed Design – Example Valley Restoration



Proposed Design - Shoreline



Proposed Design – Example Shoreline



Schedule (Tentative)

- **Final Design & Permits – Spring 2026** ← We are here
- **Construction of Living Shoreline – Summer/Fall 2026**
- **Construction of Reach 1 – Summer 2026 to Spring 2027**
 - Time of Year – Stream Closure 3/1 to 6/15
- **Construction of Reaches 2 & 3 – Summer 2027 to Spring 2028**
- **Post Construction Monitoring**



Slide 22

GU0

Consider removing "Final" and just name the phase "Design & Permits"

Guest User, 2026-04-29T16:35:39.474

Construction

- **Construction Sequence**
 - Issue Notice to Proceed & Pre-Construction Meeting
 - Mobilization of the Equipment and Personnel
 - Installation of Sediment Controls
 - Installation of Structures
 - Stabilization
 - Planting
- **Sites are not fully established until after 1-2 growing seasons**



Construction – Immediately after



Construction – Before & After one growing season



Construction – After one growing season



Questions and Discussion

Contact Information:

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