Hudson Branch Stream Restoration
Public Meeting

Newport Bay Partnership

Clean water through science and community

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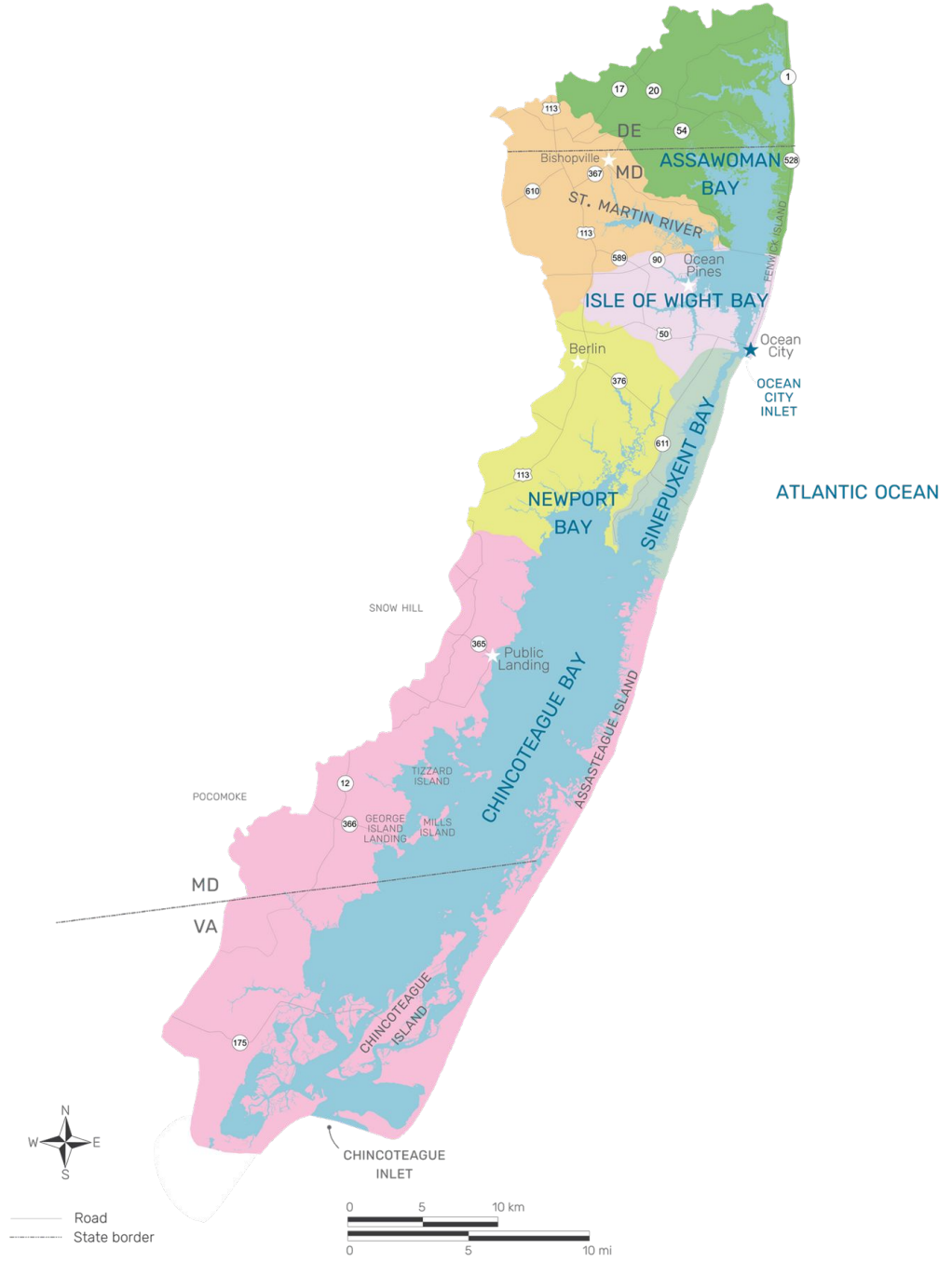
Jessica McIntosh
Maryland Coastal Bays Program

4/29/26 Meeting Agenda

5:30 p.m.	**Welcome** Mayor Zack Tyndall: Town of Berlin
	Overview and Whole Watershed Act Jessica McIntosh, Newport Bay Partnership Coordinator: Maryland Coastal Bays Program
	Hudson Branch Stream Restoration Design Plans Steven Lemasters, Project Manager: EA Engineering, Science and Technology, Inc. PBC
	Discussion: Comments and Questions
6:45 p.m.	**Adjourn**

COASTAL BAYS WATERSHEDS



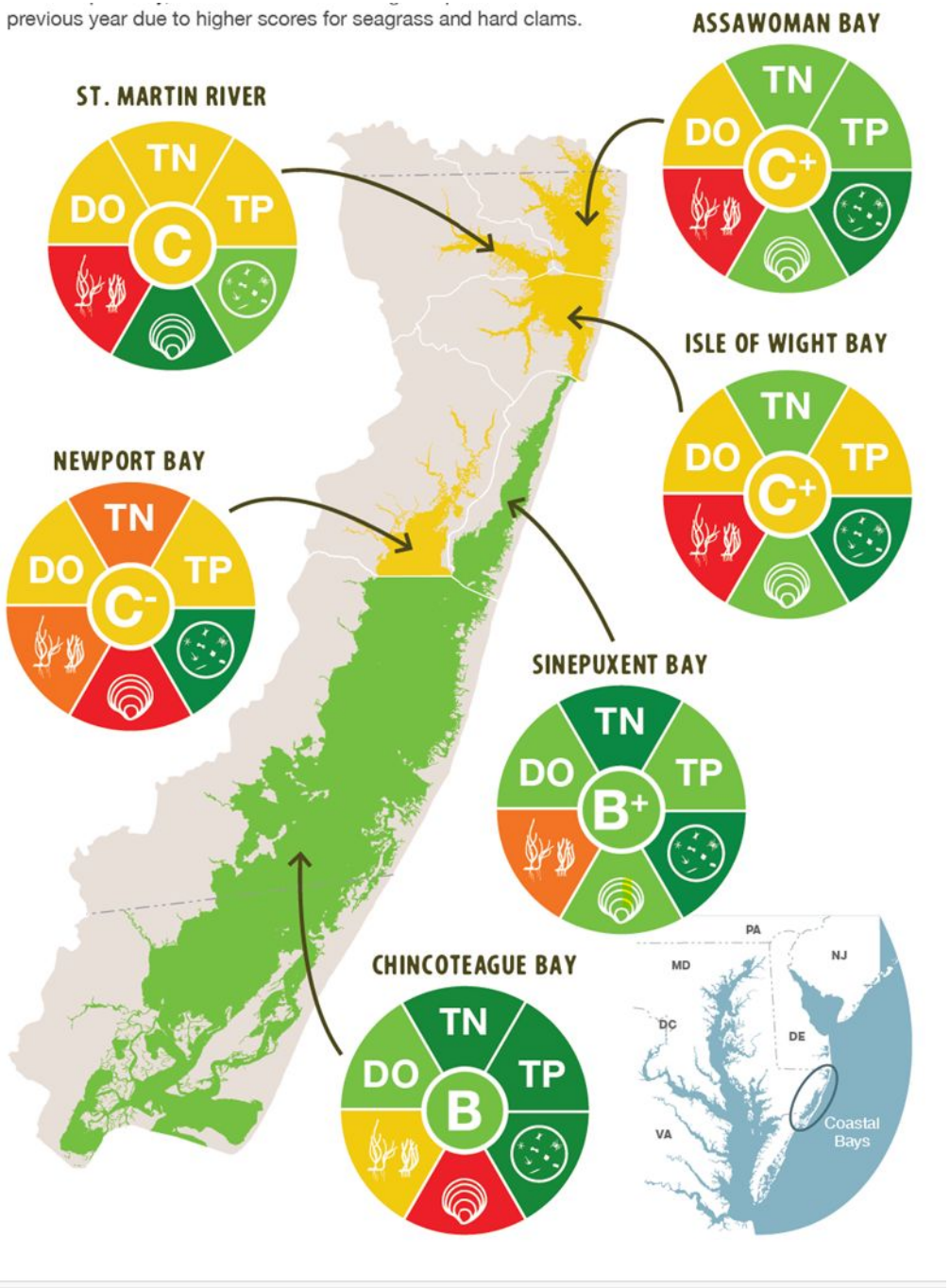
NEWPORT BAY WATERSHED

Conceptual diagram of Newport Bay in the Maryland Coastal Bays.

Diagram courtesy of the Integration and Application Network (ian.umces.edu), University of Maryland Center for Environmental Science. Source: Shifting Sands: Environmental and cultural change in Maryland's Coastal Bays book, IAN Press 2009.

ian.umces.edu

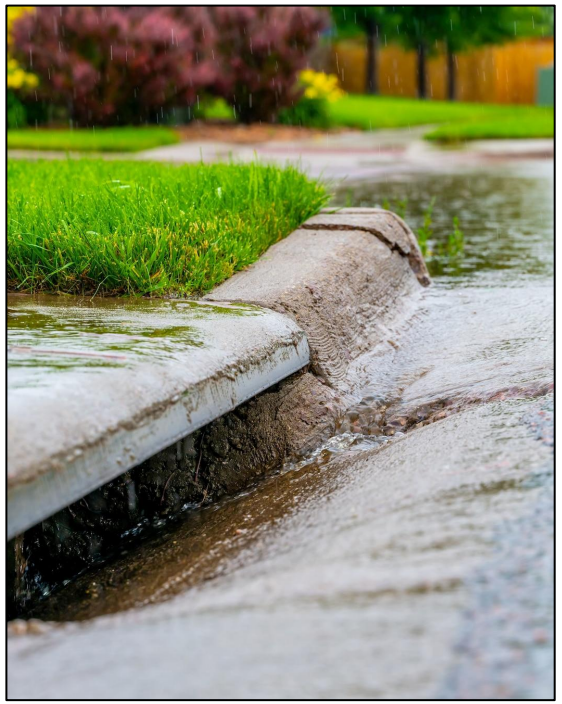
WATERSHED SCORES



Newport Bay Partnership

Clean water through science and community

Projects



Stormwater Management

Sewer Infrastructure

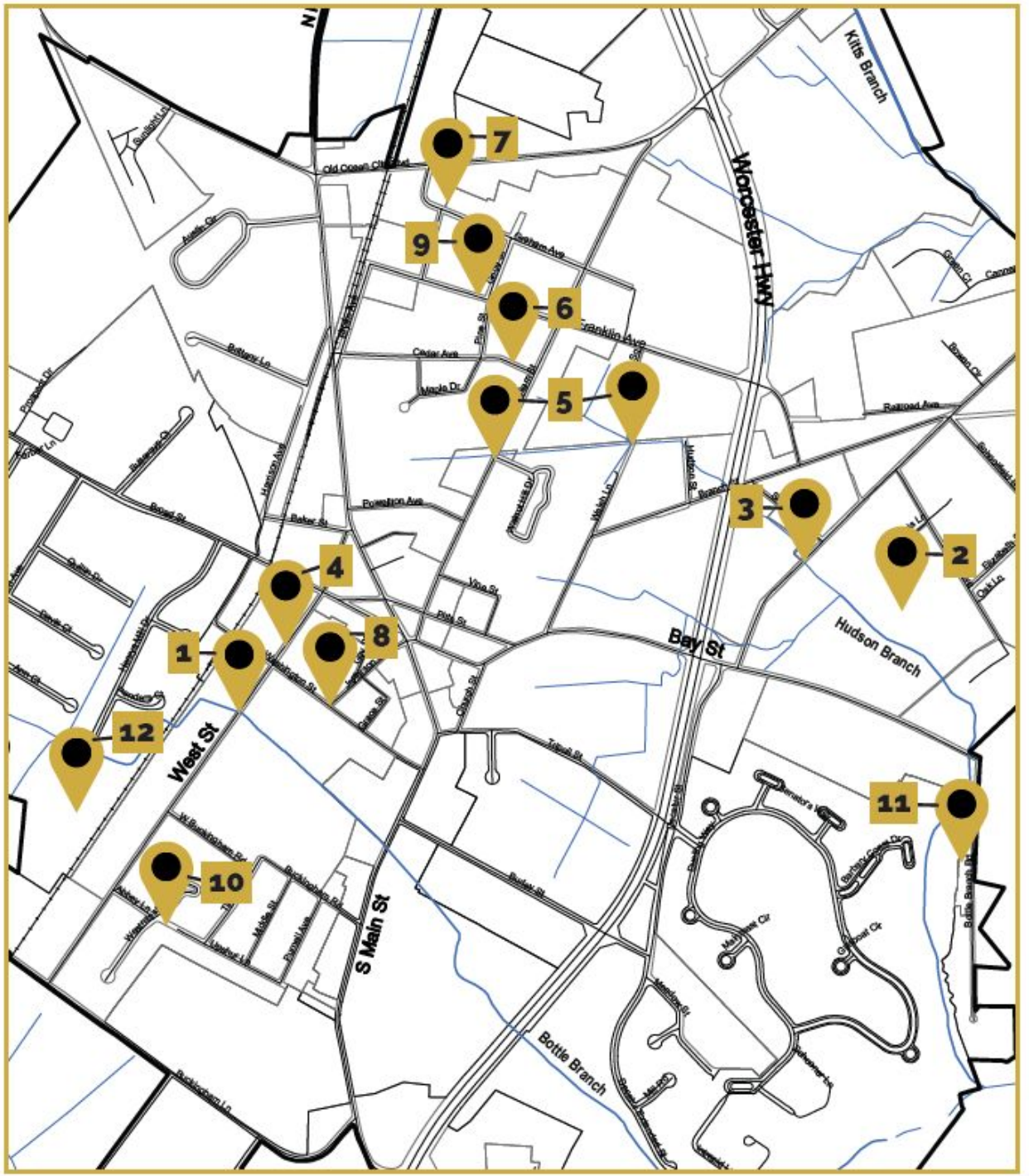
Coastal Resilience

EA Introduction

- Steven Lemasters, P.E.; Project Manager
  - Maryland Professional Engineer
  - 19 years in Industry
  - 10 years in Town of Berlin
- Gregory Zuknick, CERP; Stream Designer
  - Certified Ecological Restoration Practitioner
  - 16 years in Industry
- Berlin's Stormwater On-Call Consultant
  - Performing Private Development Stormwater Reviews
  - Planning, Design, & Implementation of CIP SWM Projects
  - Advising on nuisance flooding

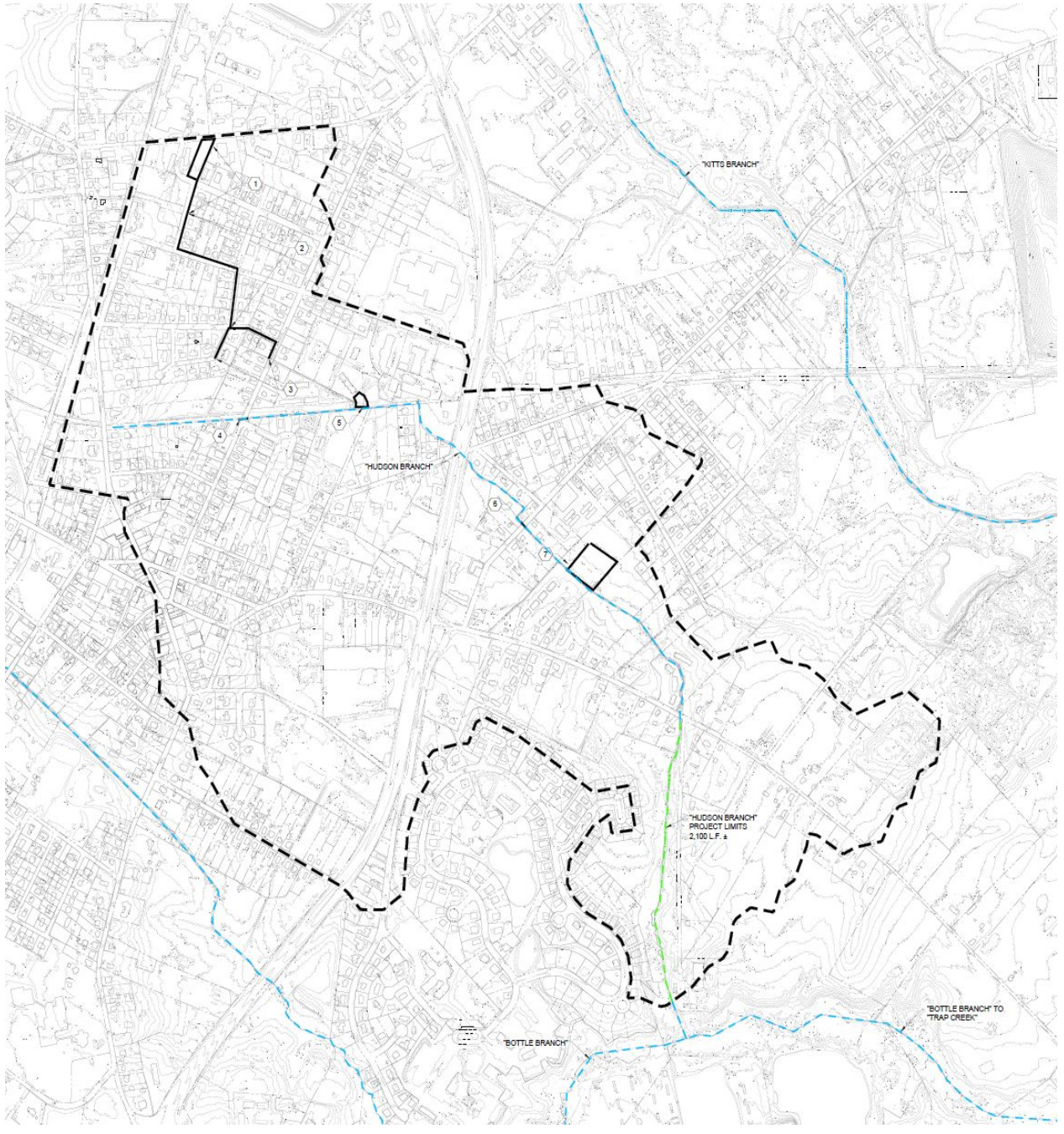
Berlin Stormwater Introduction

- Initiative started in 2012
- 10 Projects Constructed to Date
  - Offline Wetlands
  - Submerged Gravel Wetlands
  - Culvert Replacements
  - Closed Storm Drain Systems
- Funding Sources: FEMA/MEMA, HUD CDBG, MD DNR, CBT, MCBP, BIL



Project Introduction

- Bay Street / Assateague Road culvert to Berlin's WWTP
- Land Owners: Town of Berlin and Decatur Farms HOA
- Originally Identified in 2018 Grant Application
- MCBP funded Design in 2023.
- 481+/- Acres of Contributing Drainage Area
  - Approximate Impervious Coverages
    - 25.4 Ac. Residential
    - 49.1 Ac. Commercial
    - 48.2 Ac. Roadway



Project's Goals

- Water Quality Improvements and Sustainability
  - Reduction in bank erosion
  - Natural Processes
  - Floodplain Reconnection
- Enhancement of Natural Habitat
  - Increased wetland area with increased diversity and density
  - Increased pool area for in-stream habitat
- Upstream Flood Reflief
  - Most Downstream section of Hudson Branch within Town limits
  - Reduce backwatering of Bay Street Culvert
- Protection of Critical Facilities
  - 15-inch Sewer Gravity Main
  - Wastewater Treatment Plant

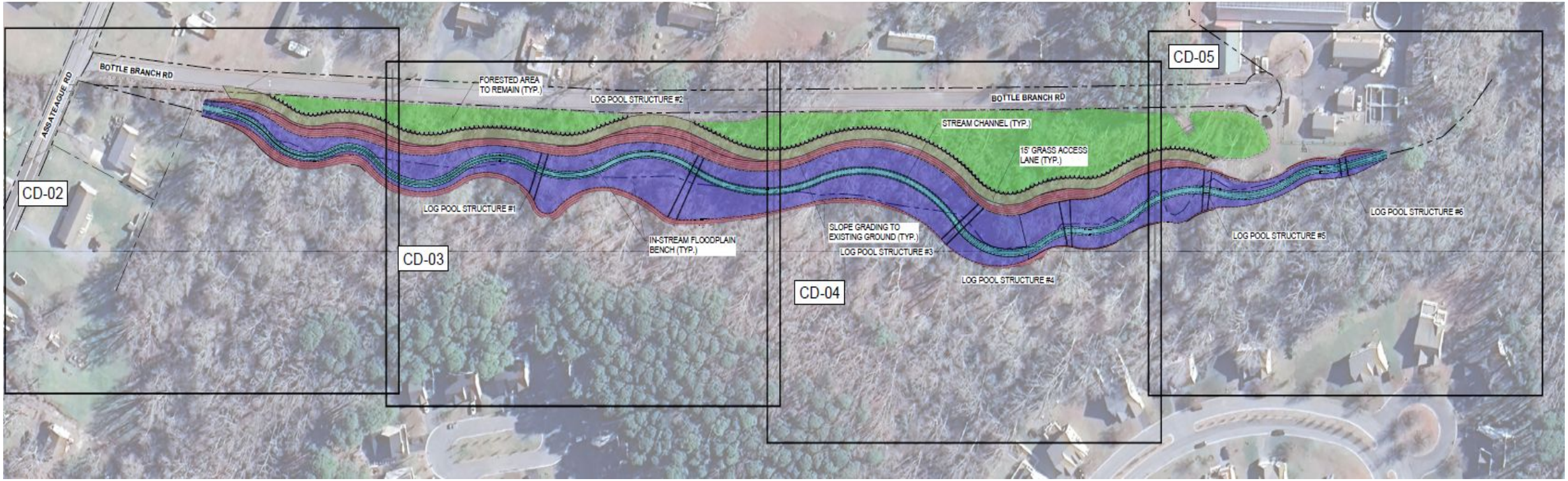
Pre-Design Efforts

- Wetland & Stream Delineation
- Forest Stand Delineation
- Topographic and Property Line Survey
- Stream Assessment / Nutrient Crediting
  - Bank Erosion Hazard Index (BEHI)
  - Near Bank Stress (NBS)
  - Benthic Index of Biotic Integrity (BIBI)

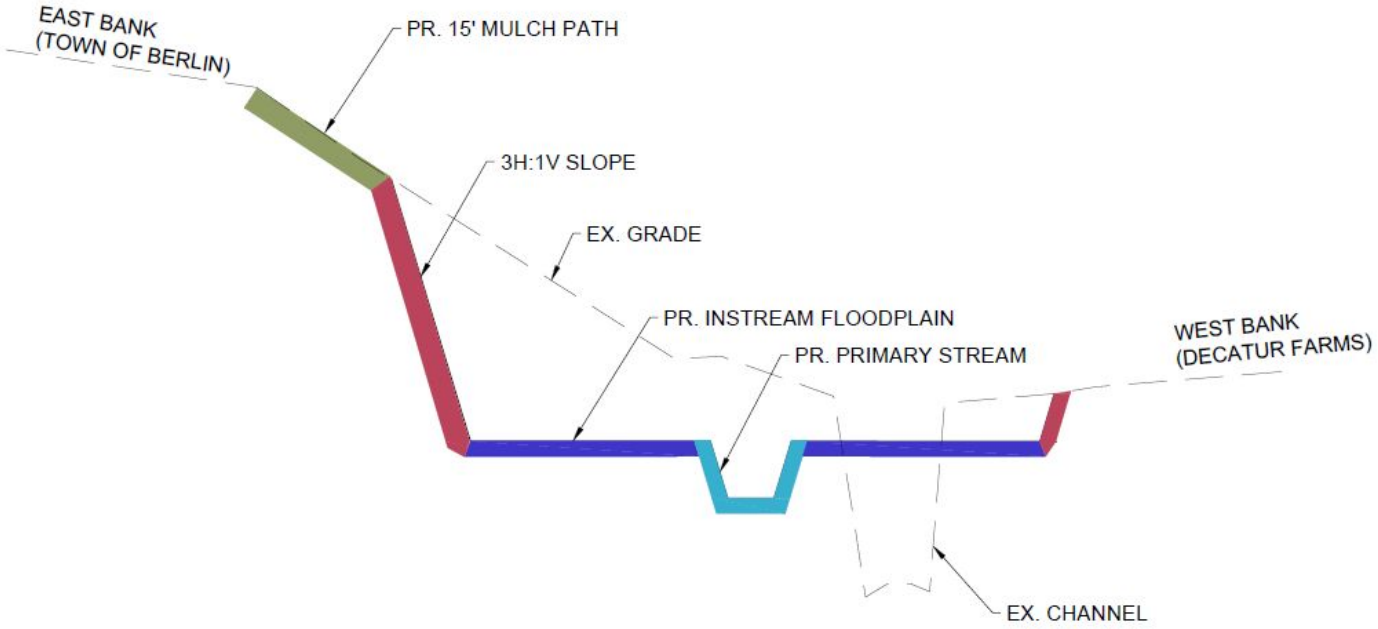
Forest Stand Delineation

- Conducted in Nov. 2023
- 1 Forest Stand, Mixed Deciduous
  - 4 Plots in 4.3 acre area of review
  - 3-7 Trees per Plot = 250 Trees / Acre
  - 75% Canopy Coverage: Sweet Gum, Red Maple
- 12 Specimen Trees (30-Inch+ DBH)
  - 8 Red Maple
  - 4 Tuliptree

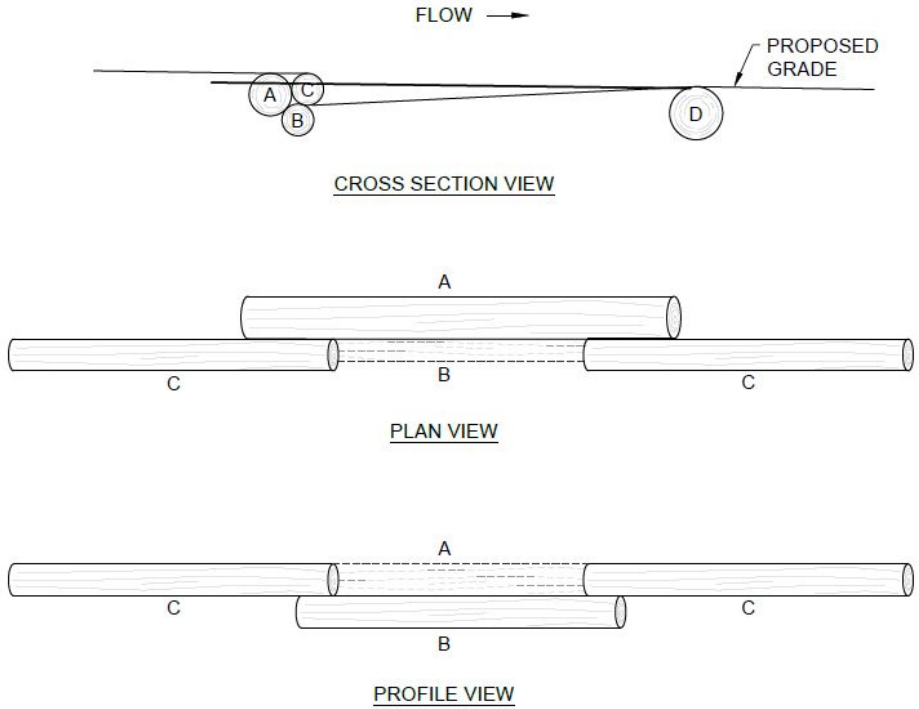
Concept Design



Preliminary Design



Stream Section



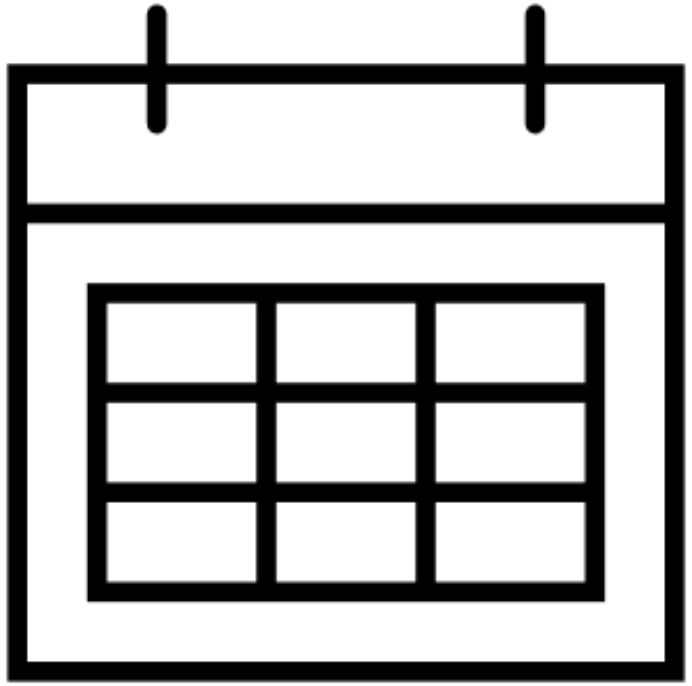
Log Structures

Natural Resource Considerations

- Forested Areas
  - Maintain Healthy Tree Stands
  - Removal of Invasive Species
- Streams
  - Stable, Non-Erosive Flow
  - Floodplain Reconnection/Creation
- Wetlands
  - Self-Mitigating w/ wetland creation
  - Increased Diversity/Density
- On-Site Material Reuse

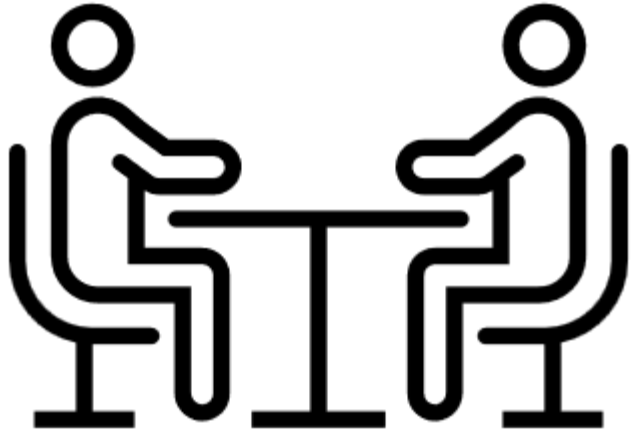
Next Steps

- Joint Permit Application
  - Spring 2026
- Forest Conservation
  - Summer/Fall 2026
- Erosion & Sediment Control
  - Summer 2026
- Finalize Design
  - Summer/Fall 2026
- Construction
  - Winter 2026/2027



Discussion Ground Rules

- Be respectful
- Be curious first
  - Ask questions
- Share your thoughts
  - 2 minute verbal comments
  - Written comments



Partnership for Newport Bay

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Get Involved.

Join

- Stormwater management in your backyard
- Participate in Community Listening Sessions
- Native Plantings
- Field Trips
- Volunteer

Support

- Donate – We can't do this without you.