MAKE CAMBRIDGE RESILIENT STAKEHOLDER MEETING NOTES

August 5, 2025
1:30- 3:00 PM

The Make Cambridge Initiative serves as an umbrella for multiple common efforts & grants:

- Flood Mitigation Plan & Concept Design
- Flood Mitigation Project (Phase 1 Design)
- Community Development
- NFWF Habitat Enhancements & Green Stormwater Management

Virtual meeting conducted. Stakeholders and invited guests in attendance:

Name	Organization/Department
Larry White	Strategic Programs Development, LLC
Wayne Suggs	City of Cambridge DPW Director
Mayor Lajan Cephas	City of Cambridge - Mayor
Glenn Steckman	City of Cambridge - Manager
Brian Herrmann	City of Cambridge – Planning Director
Jimmy Windsor	Dorchester County- Emergency Management
Dr. Kenny Rose	UMCES – Horn Point
Theresa Davenport	UMCES – Horn Point
Stephen Liu	Maryland Department of the Environment
Bryan Bay	Maryland Department of the Environment
Leah Sheppard	Maryland Department of Natural Resource
Thomas Laczo	USACE Baltimore District
Megan Spindler	USACE Baltimore District
Amanda Pollack	Center for Watershed Protection
Allison Lee	Center for Watershed Protection
Megan Barniea	BayLand Consultants
Anna Johnson	BayLand Consultants
Sepehr Baharlou	BayLand Consultants
Virginia Smith	SP&D

The meeting focused on updates to the flood mitigation design project, highlighting community collaboration, ongoing outreach efforts, and strategies for enhancing stormwater management and habitat.

Agenda

- 30% Design Embankment and Living Shoreline – Anna Johnson, PE, CC-P, Project Engineer, BayLand Consultants & Designers, Inc.
- 30% Design Stormwater Management – Megan Barniea, P.E., Senior Project Manager, BayLand Consultants & Designers, Inc.
- NFWF Scope of Work - Dr. Kenneth Rose, Horn Point Laboratory, University of Maryland Center for Environmental Science

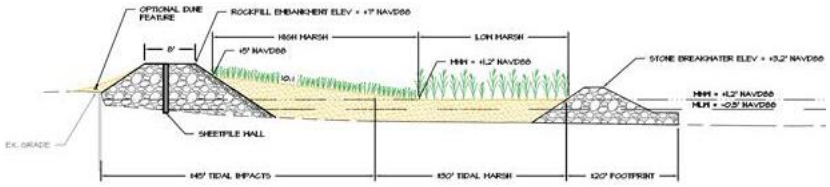
Larry White, Project Manager introduced new meeting attendees and provided a brief overview of the project.

Flood Mitigation Project Phase 1 Design

Project Update: The design team has been working hard these past few months following the preliminary alignment and incorporation of public review comments.

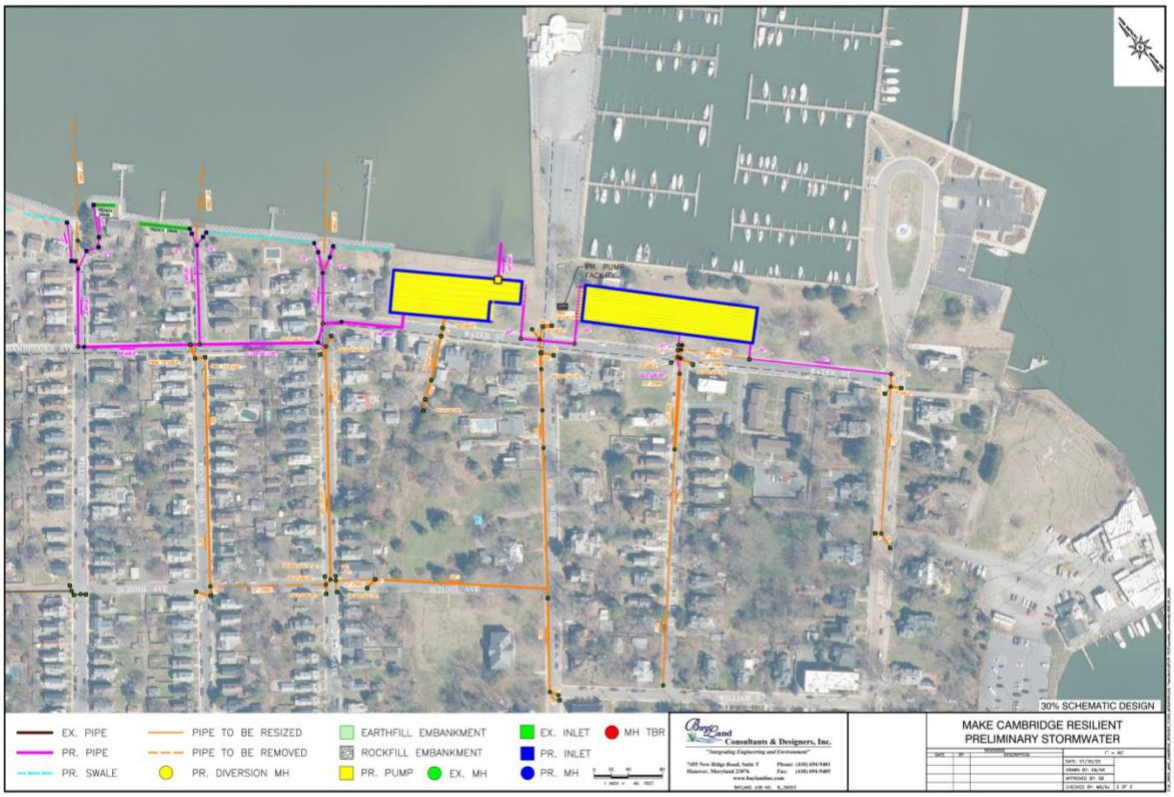
- 30 % design review and feedback is being sought from both the stakeholder group and the public. In addition to this stakeholder group meeting, a public meeting has been scheduled for September 9, 2025, at the Dorchester County Library-Cambridge Branch .

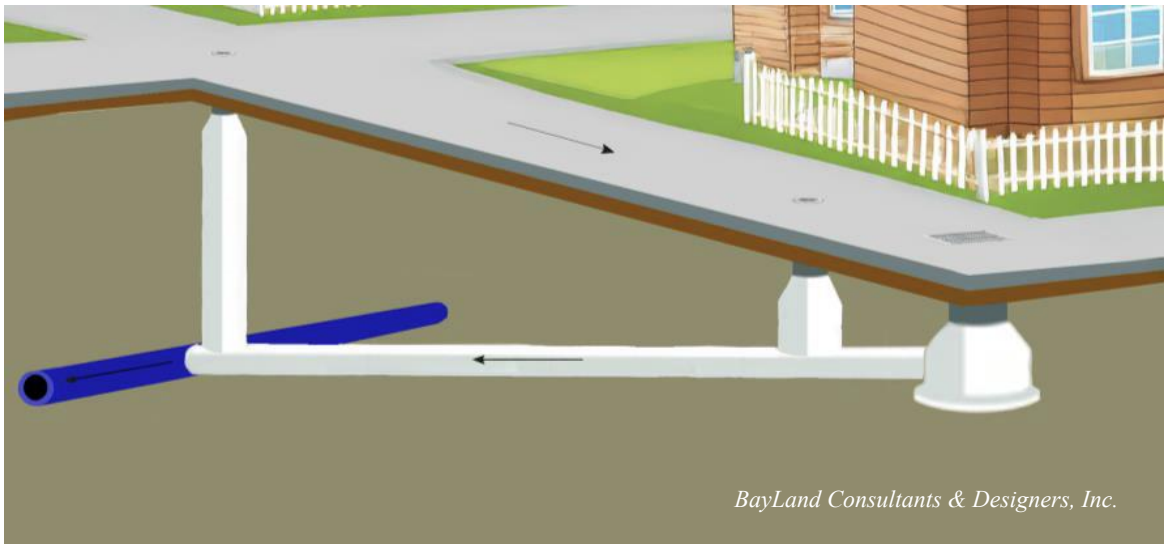
- Anna Johnson, Project Engineer, Bayland Consultants & Designers, Inc. presented the embankment and the living shoreline, 30% design. The embankment serves as the primary flood protection structure. There are two types of embankments, earthen and rock filled. The earthen embankment will be used in areas that deviate away from the shoreline and a larger footprint is available, whereas the rock-filled embankment is used in front of private property along immediate shoreline area (both designing to a plus 7ft. above NAVD 88.) For reference, Ms. Johnson pointed out that the Cambridge shoreline is on average between 3-4 ft. above mean sea level, resulting in an embankment between 3-4 ft. to achieve 7 ft. flood protection level, thereby affording a water view from the shoreline.
- Embankment includes a sheet pile wall, serving as the impermeable barrier.
- Design also includes several roadways crossings that will need to be raised. This design includes a gentle slope up, flattening at the top, and gentle slope down the other side, as to not cause a transportation issue.
- Ms. Johnson displayed the project area, starting at the northwest end of the project. At various points during Ms. Johnson's presentation, she discussed how feedback obtained from outreach efforts and property owner comments from the preliminary alignment, were incorporated into the 30% design. The slides displayed during the presentation, have been included as a PDF for your review.



General schematic of embankment with living shoreline. BayLand Consultants & Designers, Inc.

- Megan Barniea, Senior Project Manager, Stormwater Management, Bayland Consultants & Designers, Inc. discussed how stormwater will essentially be will essentially be collected, stored and slowly released to the Choptank River.
- Details on piping, collection points, and temporary storage areas were presented. A new stormwater interceptorwill be installed along Hambrooks Blvd parallel to the shore and extending from Glenburn Ave to Water Streetwith stormwater storage at Gerry Boyle Park to the west and the marina area to the east. This allows removal ofeight of the existing gravity discharge pipes from Hambrooks to the shoreline and proposed tide gates, eliminating the flooding threat when tides are high and there is not sufficient hydraulic head for stormwater to discharge through the tide gates. It also eliminates the need for the long-term maintenance and operation costs of eight tide gates.
- In addition, the design maximizes gravity flow and storage within the system to minimize pumping. The second major component in the design of a stormwater system is a system for the collection and channeling of stormwater within the last block between the shoreline and Hambrooks Blvd to the new Hambrooks stormwater line. Grass swales with French drains (cyan) will be constructed along the landside edge of the flood protection embankment to convey stormwater runoff from rear yards into the streets where a catch basin will be installed with a gravity flow pipe connected to the new Hambrooks Stormwater line. The invert of storm pipe in Hambrooks is lower than the ends of street at the shoreline to facilitate conveyance via gravity. The Hambrooks collector pipe then conveys all runoff for these areas to the two detention areas at Gerry Boyle Park and the Marina area with a single gravity discharge pipe with tide gate and pump station discharge. Ms. Barniea provided a schematic, included on the next page.





- Tide gates are included in the design at the two major storage locations, as well, at gravity outfalls.
- The design of Gerry Boyle Park into a Green Stormwater Management site under our NFWF Grant will serve as our stormwater treatment and storage site on the west end of the project. It includes wetland features to allow for the temporary storage of stormwater as an alternative to relying on underground storage tanks. Thus, our Phase I preliminary design is conveying stormwater collected from Willis St to the west end of the project to Gerry Boyle Park where stormwater will be stored overnight allowing nutrient and contaminants to settle out and then slowly released to the living shoreline the next day. This initiative is totally funded under our NFW. In the event of largerstorms, pump station(s) activate.

- Project team members met with park users, including the general public, organizers of Ironman/Eagleman and the Power Boat Racing Association to review the preliminary alignment. Comments provided from these meetings were incorporated into the 30% design.
- Larry White indicated that the 30% design for this project area has been significantly changed from the concept design. The design changes improves efficiency, eliminating the need for eight current discharge- outfalls from Hambrooks to the Choptank River. These changes have increased the budget, however necessary, as they are best practices.

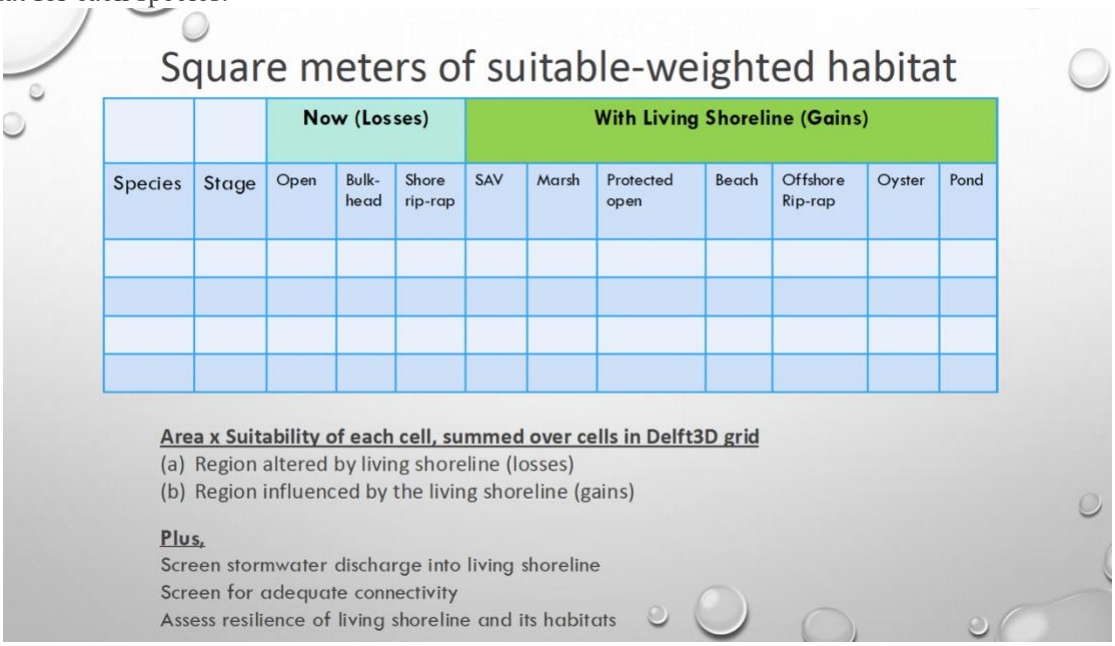
National Fish and Wildlife Foundation (NFWF)

Kenneth Rose And Theresa Davenport, Horn Point Laboratory, University Of Maryland Center For Environmental Science

The National Fish and Wildlife Foundation (NFWF) – National Coastal Resilience Fund is providing funding for the habitat restoration project. NFWF is the nation's largest private conservation foundation.

- The project aims to guide the design of the living shoreline and its stormwater discharge to maximize fish and wildlife habitat and improve water quality discharging to the living shoreline.
- Three main goals for NFWF grant portion of the project:
  1. Maximizing restoration of fish and wildlife habitat of the living shoreline project design
  2. Maintaining and enhancing the habitat benefits of the living shoreline by capturing and treating stormwater before it discharges to the river
  3. Engaging stakeholders in design of the ecological, environmental, & recreational features
- Dr. Rose discussed some of the design considerations, including:
  - Tidal openings of rock sill
  - Shore orientation
  - Size and depth of rock sill
  - Rip-rap and breakwaters at the toe of living shoreline
  - Vegetation density and seasonality on marsh
  - Slope of the vegetation bed

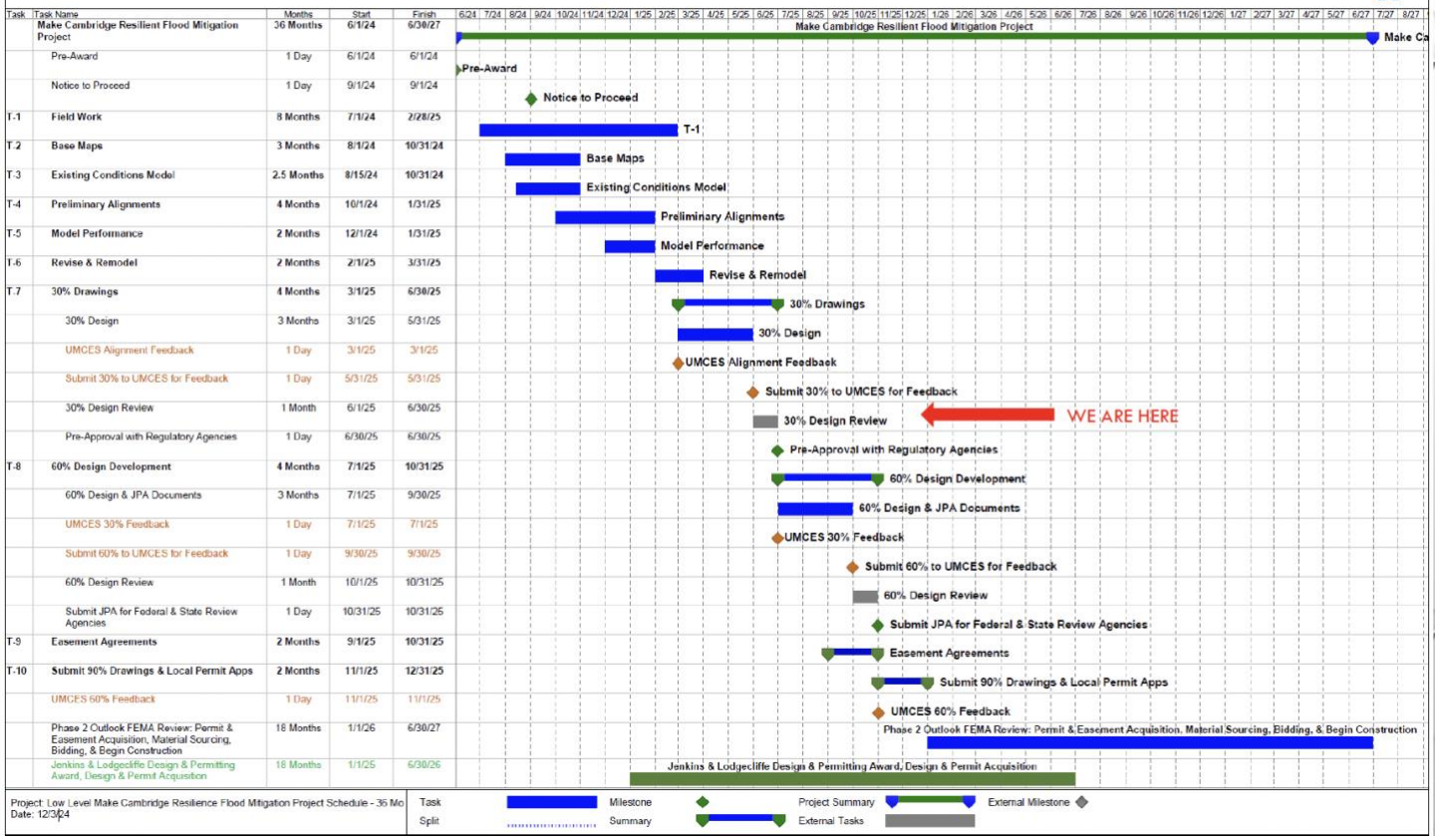
    - Location and 3-d shape of oyster reefs
- Different key species and their habitats will be determined based on engagement with a variety of people.
- Habitat suitability assessments will be conducted using models and data to determine the quality and quantity of habitat for different species.
- The project will involve community engagement and use decision analysis to inform the design process.
- Scalability and transferability are important components of the project.
- Kenneth Rose & Theresa Davenport are currently reviewing 20+ yrs. of DNR survey data. The next step includes additional sampling in the project area by UMCES, which will occur in September. The field sampling entails:
    - Beach Test Seine, the same way as DNR – comparable to 20+ yrs. of data.
    - Within the project footprint
    - Use of Go Pro transects to look at viability of oysters.
- One of the results of this work will include a populated data table, Square meters of suitable-weighted habitat. For each species a habitat model is created, the area is added up. Basically, if the area is weighted high, the habitat score is good in a cell and down weighted when bad, resulting in number per square meters of suitable weighted habitat for each species.



Next Steps

- Distribution of Stakeholder Group Meeting Notes & Meeting Slide Deck
- Long Wharf Park Area Public Meeting – September 4, 2025
- 30% Design Public Meeting – September 9, 2025
- 60% Design – Fall/Winter 2025

Make Cambridge Resilient
Flood Mitigation Project
Project Schedule - December 3, 2024



Task	Task Name	Months	Start	Finish
	Make Cambridge Resilient Flood Mitigation Project	36 Months	6/1/24	6/30/27
	Pre-Award	1 Day	6/1/24	6/1/24
	Notice to Proceed	1 Day	9/1/24	9/1/24
T-1	Field Work	8 Months	7/1/24	2/28/25
T-2	Base Maps	3 Months	8/1/24	10/31/24
T-3	Existing Conditions Model	2.5 Months	8/15/24	10/31/24
T-4	Preliminary Alignments	4 Months	10/1/24	1/31/25
T-5	Model Performance	2 Months	12/1/24	1/31/25
T-6	Revise & Remodel	2 Months	2/1/25	3/31/25
T-7	30% Drawings	4 Months	3/1/25	6/30/25
	30% Design	3 Months	3/1/25	5/31/25
	UMCES Alignment Feedback	1 Day	3/1/25	3/1/25
	Submit 30% to UMCES for Feedback	1 Day	5/31/25	5/31/25
	30% Design Review	1 Month	6/1/25	6/30/25
	Pre-Approval with Regulatory Agencies	1 Day	6/30/25	6/30/25
T-8	60% Design Development	4 Months	7/1/25	10/31/25
	60% Design & JPA Documents	3 Months	7/1/25	9/30/25
	UMCES 30% Feedback	1 Day	7/1/25	7/1/25
	Submit 60% to UMCES for Feedback	1 Day	9/30/25	9/30/25
	60% Design Review	1 Month	10/1/25	10/31/25
	Submit JPA for Federal & State Review Agencies	1 Day	10/31/25	10/31/25
T-9	Easement Agreements	2 Months	9/1/25	10/31/25
T-10	Submit 90% Drawings & Local Permit Apps	2 Months	11/1/25	12/31/25
	UMCES 60% Feedback	1 Day	11/1/25	11/1/25
	Phase 2 Outlook FEMA Review: Permit & Easement Acquisition, Material Sourcing, Bidding, & Begin Construction	18 Months	1/1/26	6/30/27
	Jenkins & Lodgecliffe Design & Permitting Award, Design & Permit Acquisition	18 Months	1/1/25	6/30/26