

The Islands Coastal Conference  
Mike Barrett, WHOI  
October 2024



# Recognizing the Wampanoag

*We collectively acknowledge that Woods Hole Oceanographic Institution is located on the unceded ancestral and contemporary land of the Wôpanâak (Wampanoag) peoples. We acknowledge the Mashpee, Aquinnah, Herring Pond, and Assonet Wampanoag Tribes as the original stewards and protectors of this land and surrounding waters. We recognize the perpetuated detrimental effects that systemic governmental oppressions have had on indigenous communities as a result of colonization. By offering this land acknowledgement we accept our responsibility to understand this history, invest in reconciliation, and build accountable partnerships with these communities.*

# What is *ResilientWoodsHole*?



- **MISSION:**  
ResilientWoodsHole is a private-public initiative to ensure that the vibrant and productive village of Woods Hole prospers well into the future with the advent of major climate impacts.
- **GOAL:**  
Lead the way in developing and applying strategies for increasing coastal resiliency in Woods Hole and serve as model for other like-initiatives.

# What is *ResilientWoodsHole*?



## STEERING COMMITTEE

**Town of Falmouth:** Town Manager, Conservation Agent, Town Planner, Wastewater Superintendent

USCG Woods Hole

Steamship Authority

USGS

Woods Hole Business Association

Neighborhood Representatives (3)

Woods Hole Community Association

Woodwell Climate Research Center

Barnstable County Floodplain

Sea Education Association

# WHOI Waterfront Facility



BIGELOW  
BLDG

SMITH  
BLDG

Eel  
Pond

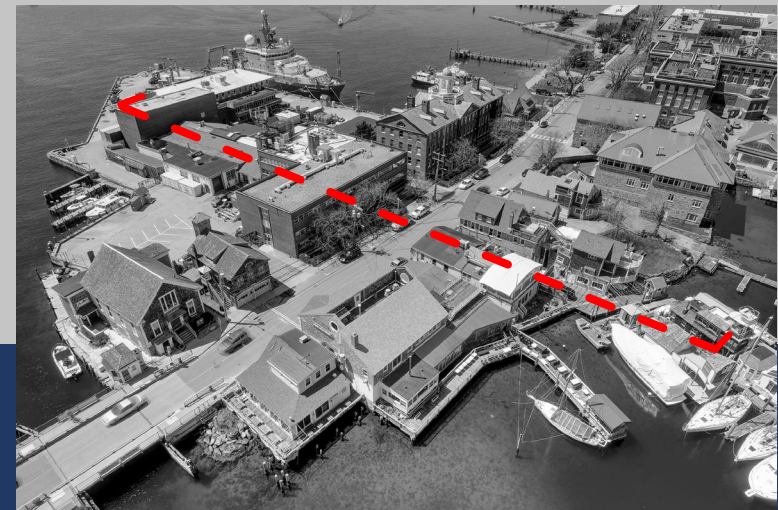
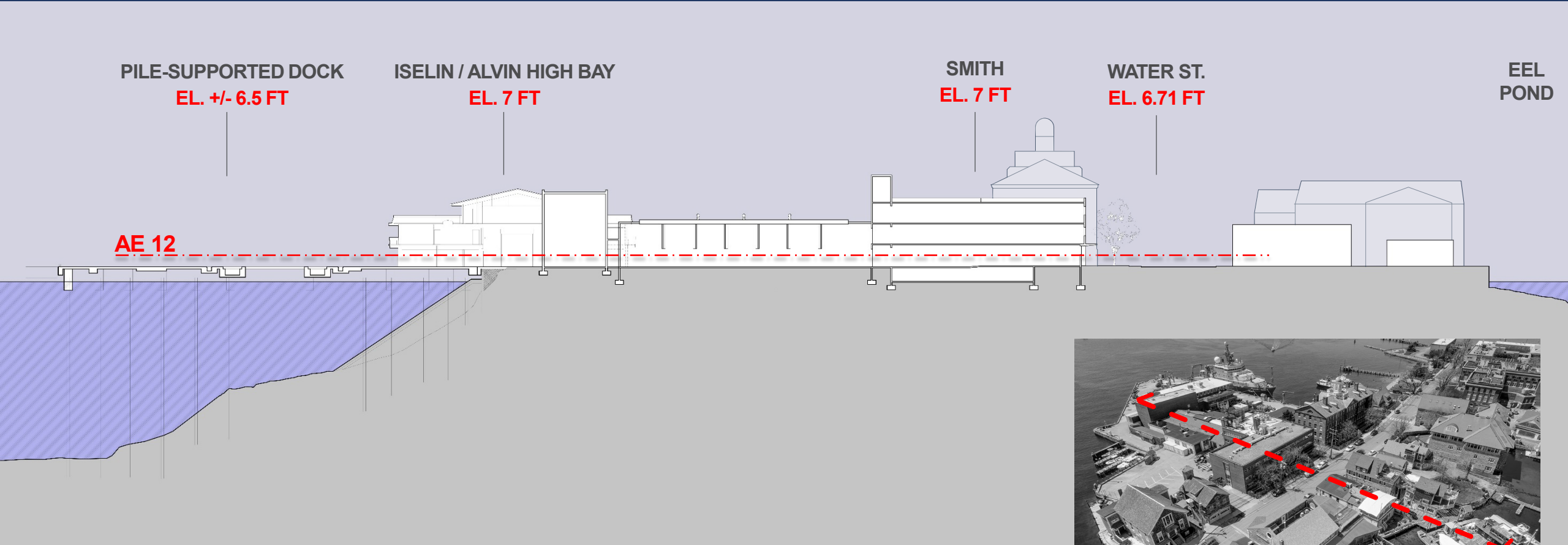
WEST  
BERTH

Great  
Harbor

EAST  
BERTH

ISELIN  
DOCK

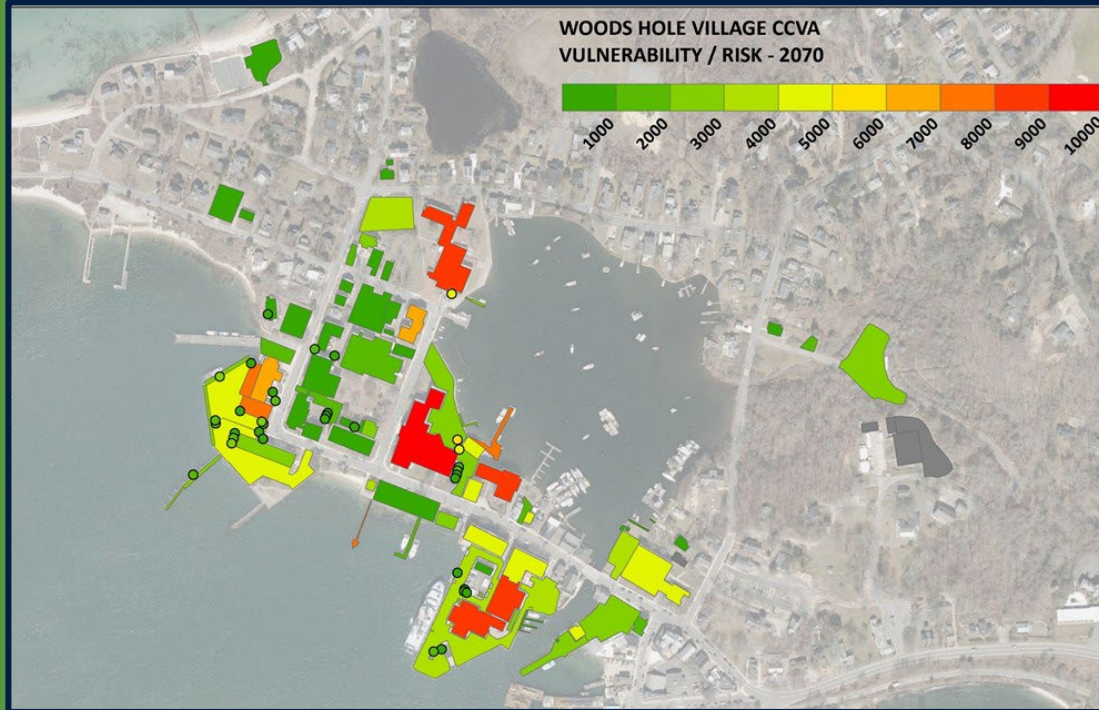
# Existing Village Section | Looking West



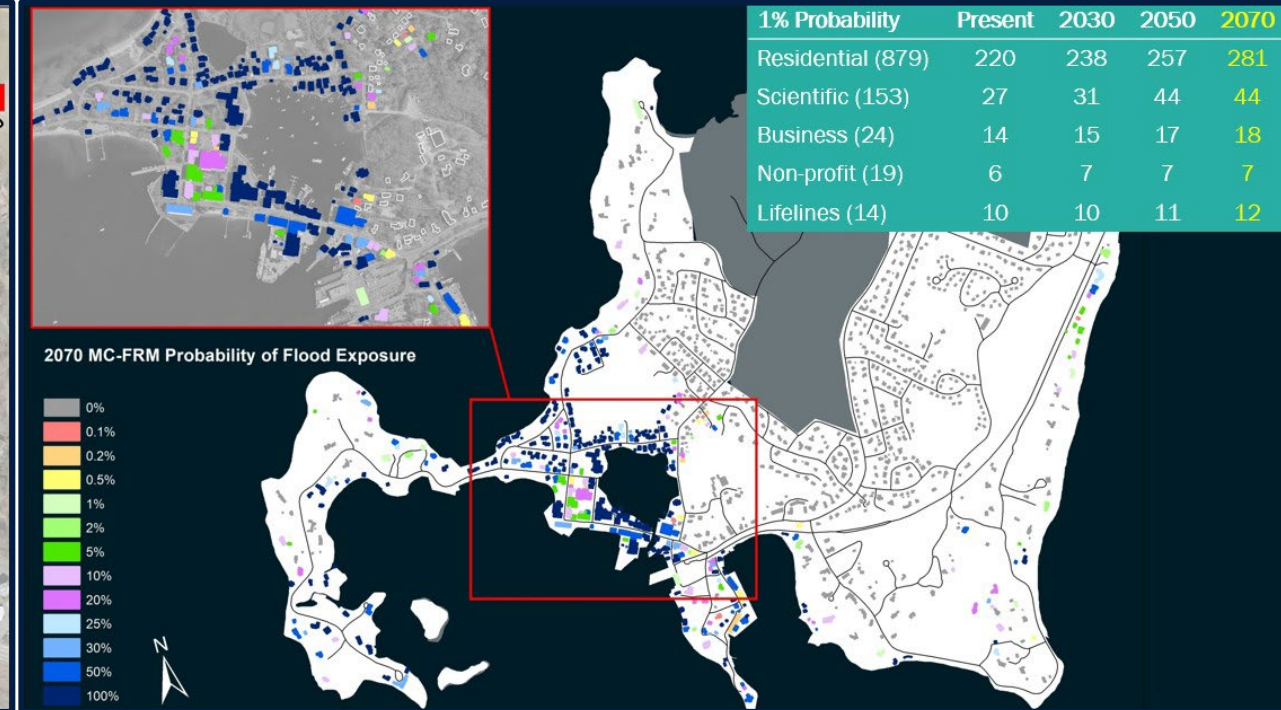
# Mapping Flood Pathways



# Phases 1 and 2



**Phase 1:** Woods Hole Climate Change Vulnerability Assessment (WHOI/MBL/NEFSC)  
January – September 2020



**Phase 2:** Extended vulnerability assessment (Woods Hole residences/businesses/lifelines)  
October 2020 – October 2021



# Phase 3

October 2021 – June 2022

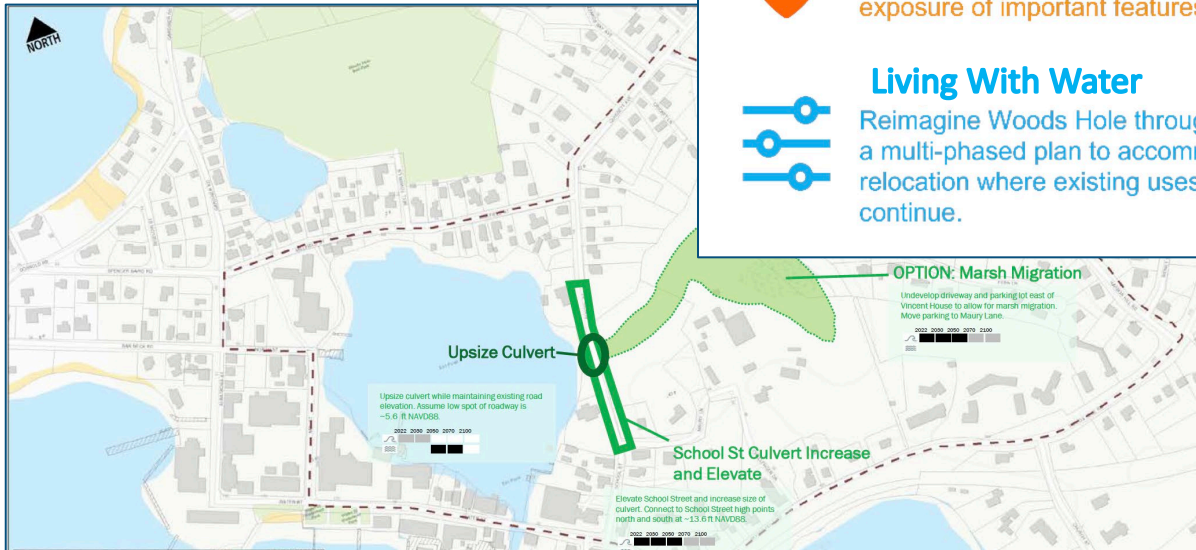
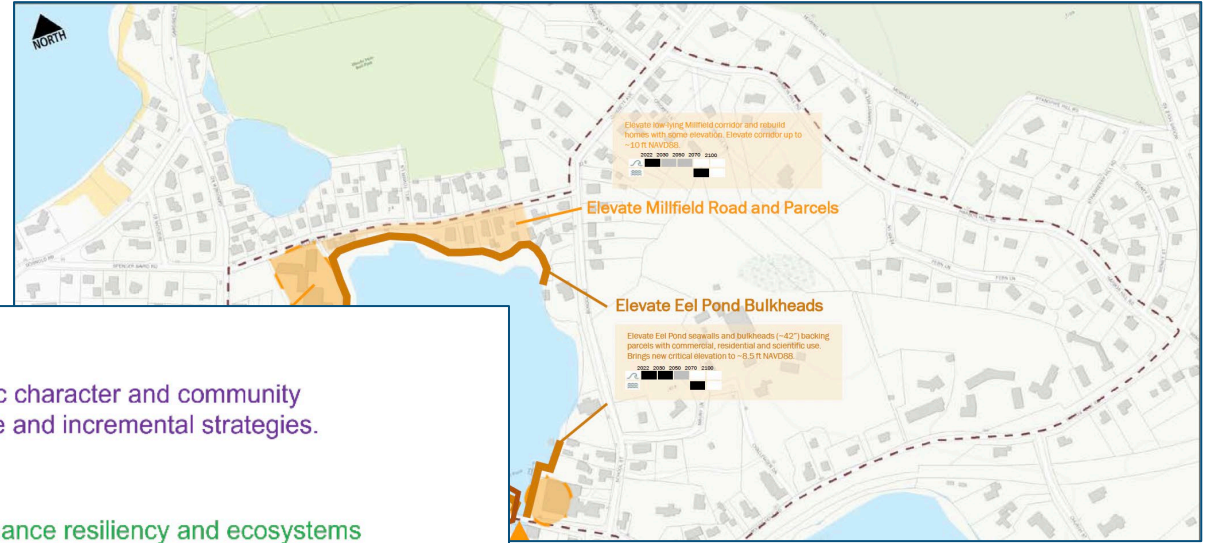
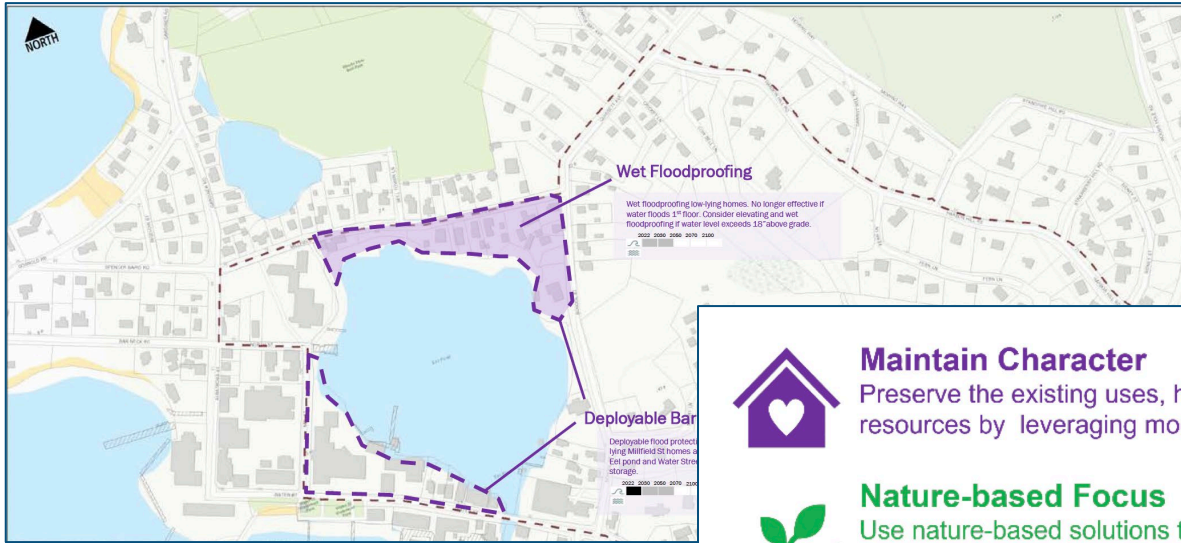


- **OBJECTIVES:**

- Engage the local community in a dialogue about coastal flooding risks
- Identify village flood pathways and vulnerabilities
- Discuss long-term protective strategies
- Analyze and detail regulatory hurdles for climate resiliency actions


# Community Involvement and Outreach


- Public Symposiums (Sept. '20, Nov. '21)
- Restore America's Estuary Session (Oct. '20)
- Falmouth Select Board Presentations (Dec. '20, Feb '24)
- Steering Committee Mtgs (10/21, 12/21, 3/22, 5/22, 1/23, 6/23, 2/24, 10/24)
- Stakeholder Interviews
- Public Workshop (Feb '22)
- Online Interactive Data Portal Launch
- Focus Groups + Survey
- Public Workshop (May '22)
- One Cape Summit Presentation (August '22)
- Neighborhood Working Group Meetings (Mar. '23, Jun. '23)
- Neighborhood Working Group Workshop (Aug. '23)
- WH Children's School of Science Presentation (Jun. '22, Aug. '23, Aug. '24)
- Woods Hole Science Stroll (Aug. '23 and '24)
- Woods Hole Community Association Annual Meeting (Aug. '23)
- RWH Climate Walking Trail Launch (Oct. '23)
- WaterWorks Event (Jan. '24)
- Added to 8<sup>th</sup> Grade Curriculum in Falmouth Schools
- Nobska Lighthouse Museum Exhibit (May '24)
- Cape Cod Climate Resilience Week (Jun. '24)



 **Maintain Character**  
Preserve the existing uses, historic character and community resources by leveraging moderate and incremental strategies.

 **Nature-based Focus**  
Use nature-based solutions to enhance resiliency and ecosystems services by extending the effectiveness and potential longevity of coastal green infrastructure and open space.

 **Protect/Connect**  
Emphasize protection and maintenance of existing infrastructure and ensure vital connectivity by using hard and/or hybrid solutions to reduce exposure of important features and preserve critical accessways.

 **Living With Water**  
Reimagine Woods Hole through the lens of living with water by developing a multi-phased plan to accommodate water with lateral or vertical relocation where existing uses and configurations cannot reasonably continue.

# Interactive Map Viewer Launched



[ABOUT](#) [OUR WORK](#) [EVENTS, NEWS, REPORTS](#) [GET INVOLVED](#) [CONTACT US](#)

PRIVATE-PUBLIC INVESTMENT TO ENSURE THE FUTURE OF A SEASIDE COMMUNITY AND BLUE ECONOMY VILLAGE



Important Features in Woods Hole

ResilientWoodsHole



ResilientWoodsHole, a collaboration between three major science institutions and local stakeholders, is developing coastal adaptation strategies for Woods Hole. ResilientWoodsHole and Woods Hole Group set up this data viewer and public comment portal to support online public engagement.

In this viewer you can (1) review information on structures and natural resources in the Village, and (2) share your opinion on what is important to the Village's character and function. This input will help us chart a course towards a resilient future for Woods Hole.

## Navigating the Viewer

In the upper right hand corner there are four icons that can be clicked:



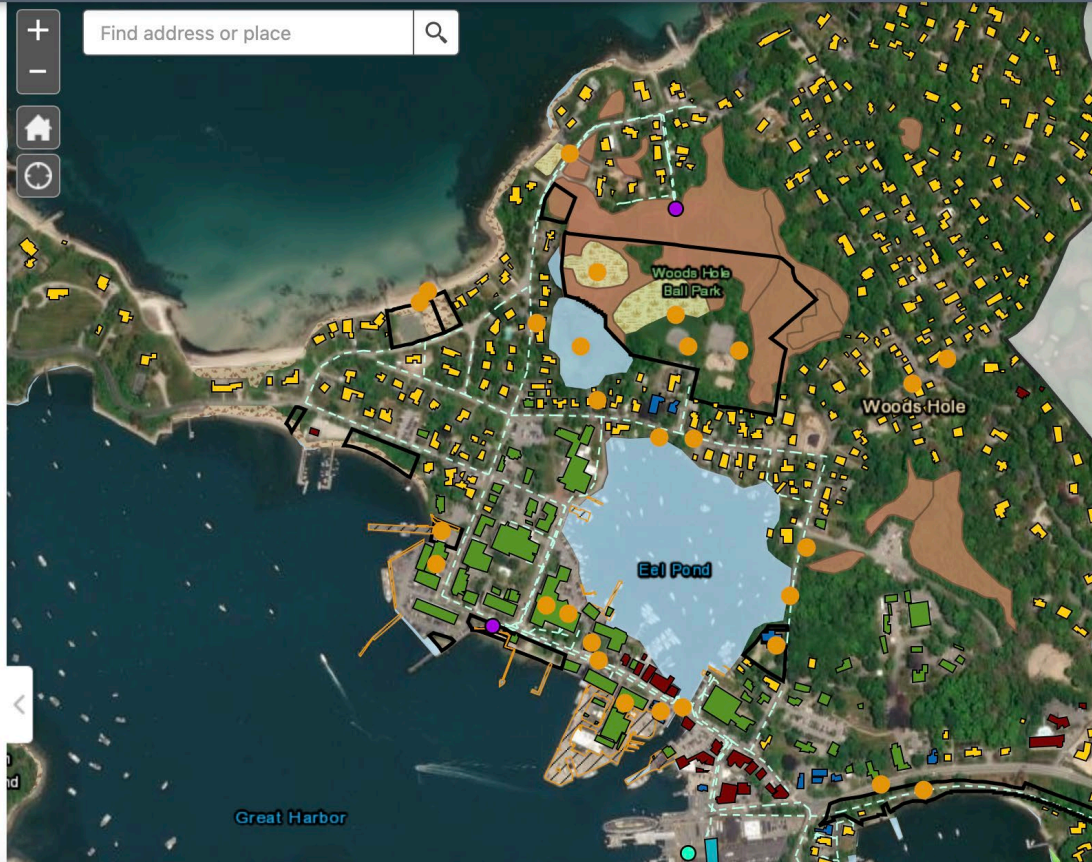
Legend

The legend shows the symbolization for active layers.



Layer List

Click on the layer list to activate layers in the viewer.



# Phase 4

October 2022 – present



## Near-term Action

Design/procure/deploy scientific facility floodproofing solutions.

## Mid-term Action

Feasibility and Alternatives Assessment for a Nature-Based Flood Resiliency Project at Stoney Beach.

## Long-term Action

Strengthen public/private partnership through Management Area Working Groups, social media outreach, and development of podcasts and a self-guided tour focused on climate resiliency.

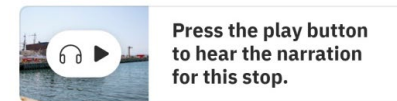
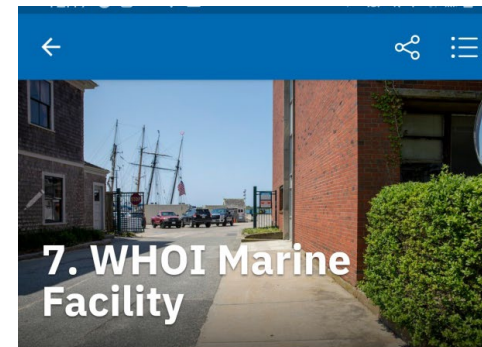
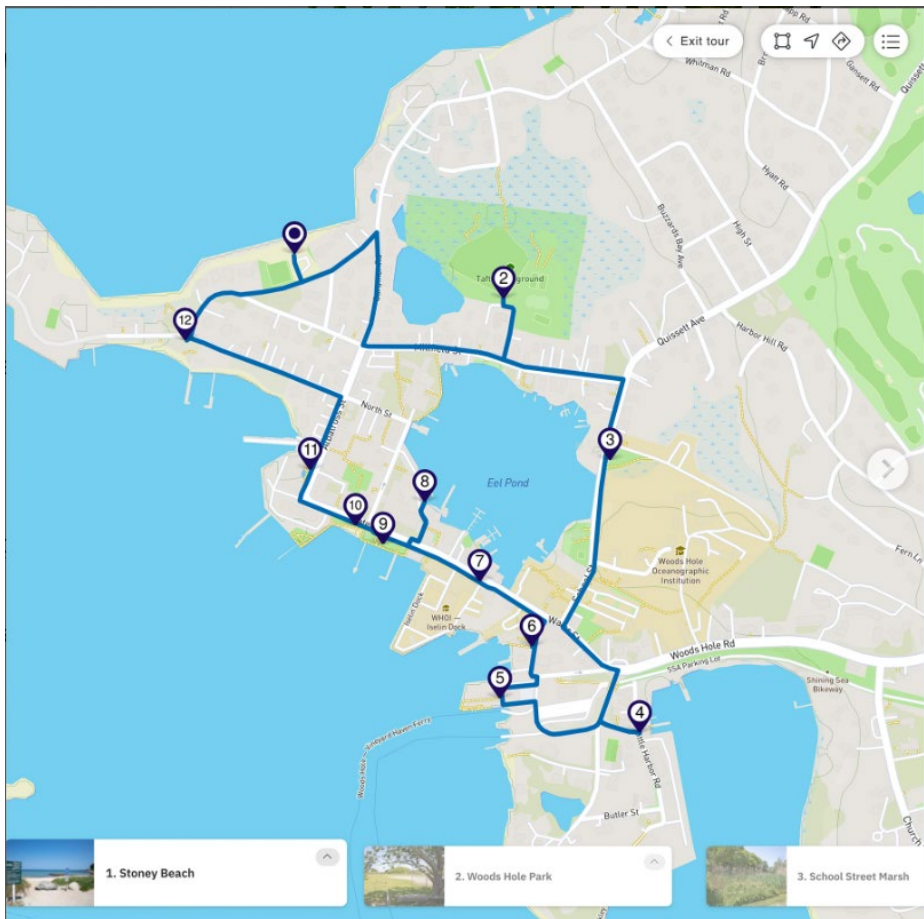
## ResilientWoodsHole Phase 4

How can we work together to ensure the future of our vibrant and productive seaside community?

**Comprehensive phased strategy for Woods Hole Village that integrates resilient design concepts and community visioning.**

# Phase 4

## Climate Walking Trail



### Institutional Planning of the WHOI Waterfront

Welcome to the [Woods Hole Oceanographic Institution](#), or WHOI as it's commonly known around here.

You are standing at the entrance to WHOI's Iselin Marine Facility, which provides operational support for all of WHOI's ocean research vessels and underwater vehicles. In addition to two large research vessel berths,



# Phase 4

## Outreach and Engagement Activities



ABOUT OUR WORK EVENTS, NEWS, REPORTS GET INVOLVED CONTACT US

PRIVATE-PUBLIC INVESTMENT TO ENSURE THE FUTURE OF A SEASIDE COMMUNITY AND BLUE ECONOMY VILLAGE

### Neighborhood Working Groups

Join more than 500 others on social media!

FB: [@resilientwoodshole](https://www.facebook.com/resilientwoodshole)

Instagram : [@resilientwoodshole](https://www.instagram.com/resilientwoodshole)

Twitter/X : [@ResilientWdHole](https://twitter.com/ResilientWdHole)

#### Overview:

The ResilientWoodsHole neighborhood working groups (NWG) met three times over 2023 to discuss climate change impacts, sea level rise and flooding projections, adaptation strategies and areas within their neighborhood that are of concern.

Each NWG was made up of 1-2 neighborhoods in Woods Hole, as shown in Figure 1, and comprised of 5-15 residents. The goal of each meeting was to gather input from the community on the different adaptation strategies, vision for the future of Woods Hole, and generally the RWH initiative. These meetings were also an opportunity for community members to get together and discuss projects for collective action.

#### You can read the summary of each meeting here:

- » [NWG Meeting 1](#)
- » [NWG Meeting 2](#)
- » [NWG Meeting 3](#)

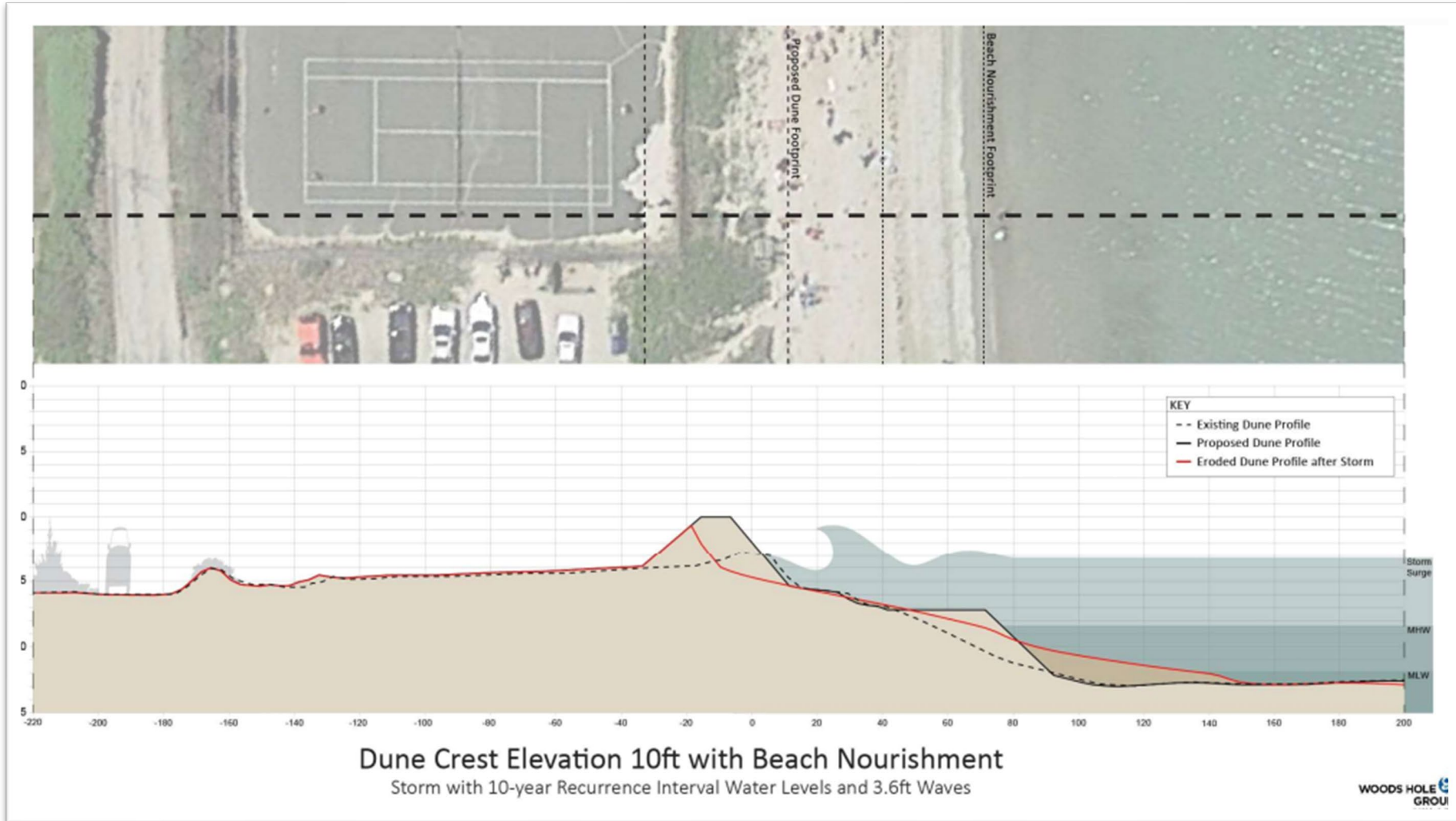


Figure 1. Neighborhoods in Woods Hole

[www.resilientwoodshole.org/nwg](http://www.resilientwoodshole.org/nwg)

# Phase 4

## Stoney Beach Feasibility Study

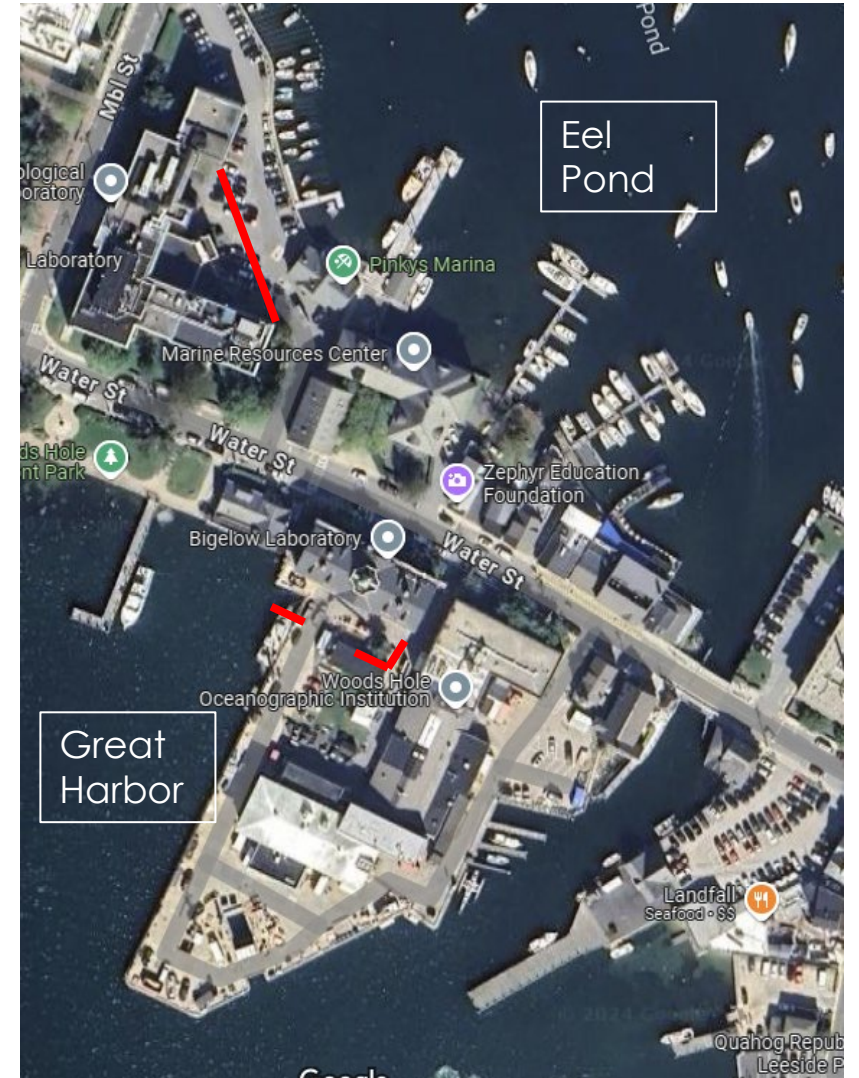
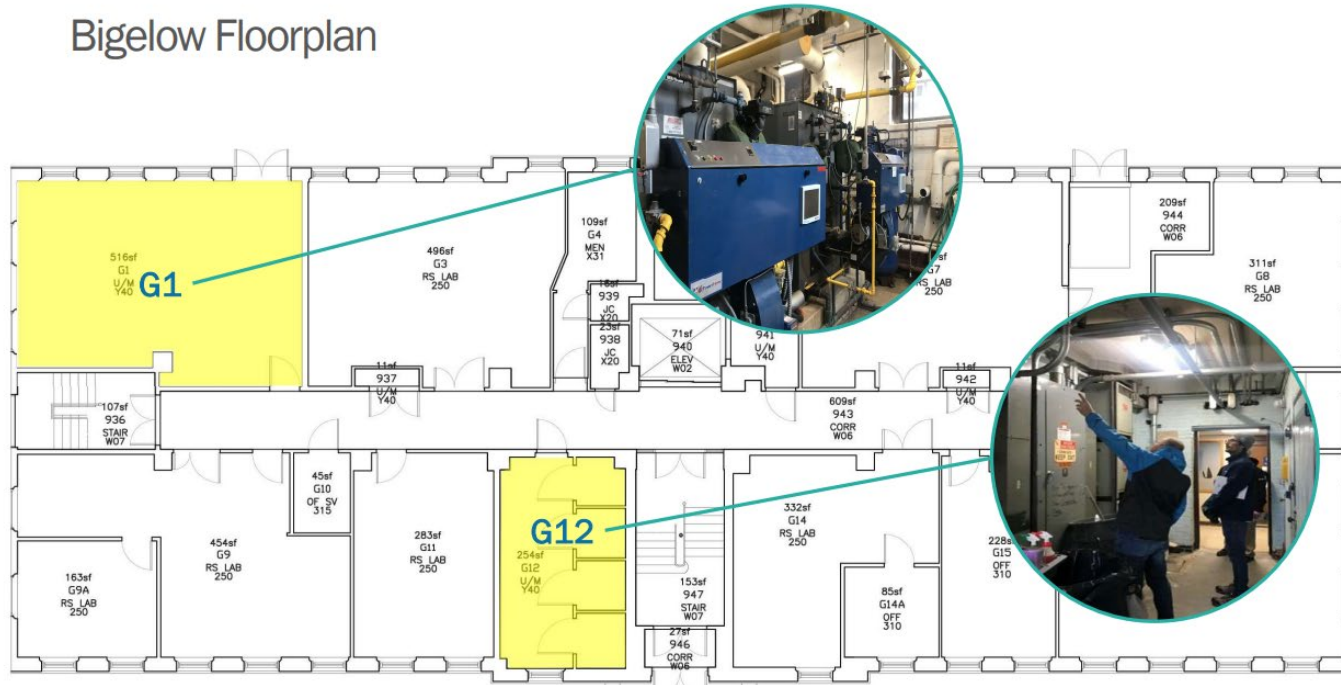


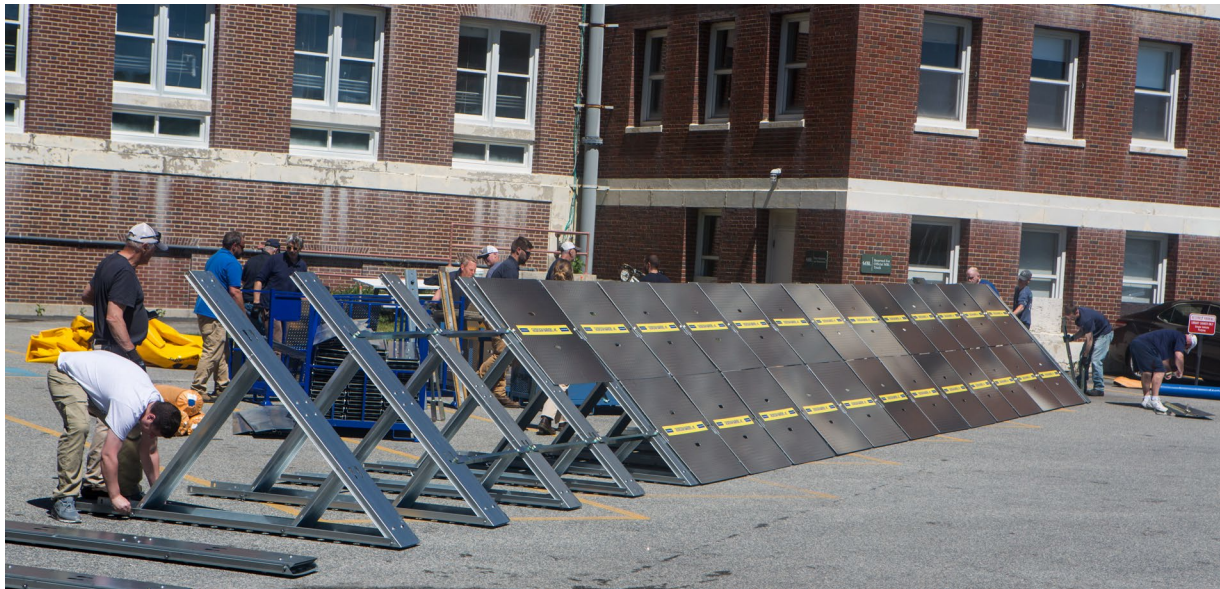


# Phase 4

## Floodproofing Demonstration Projects at Bigelow and Lillie Lab

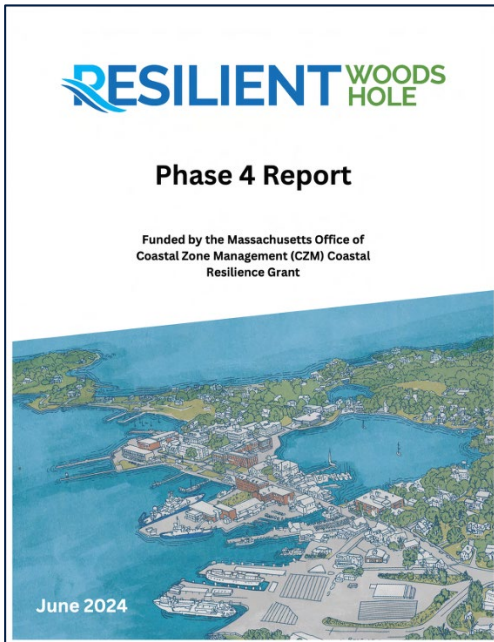
Bigelow Floorplan



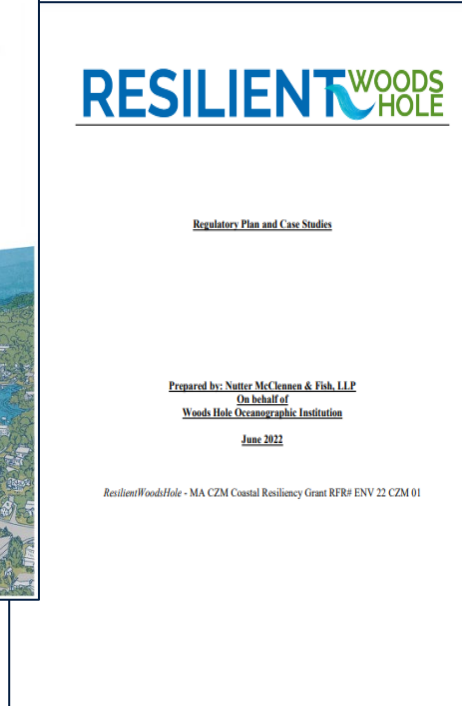


# Phase 4

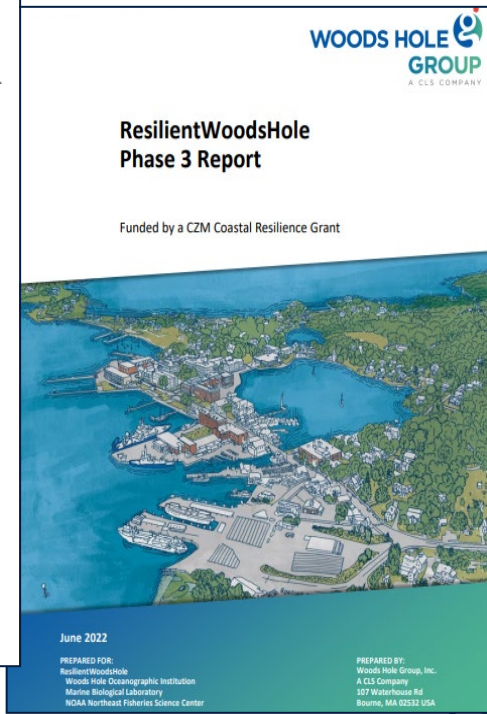
## Reference Reports



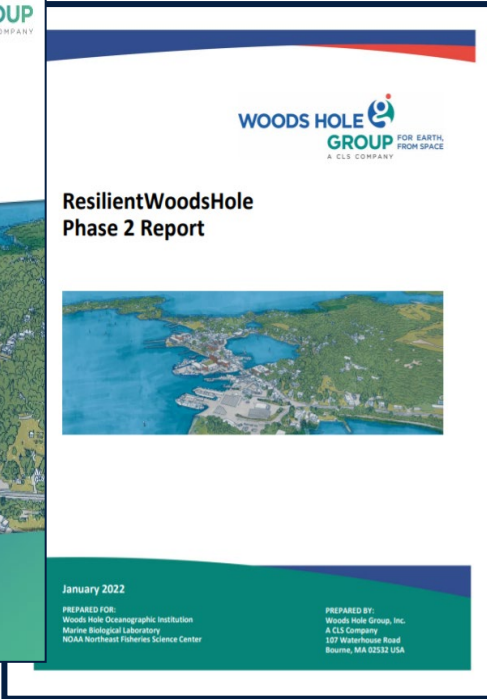
Phase 4 Report



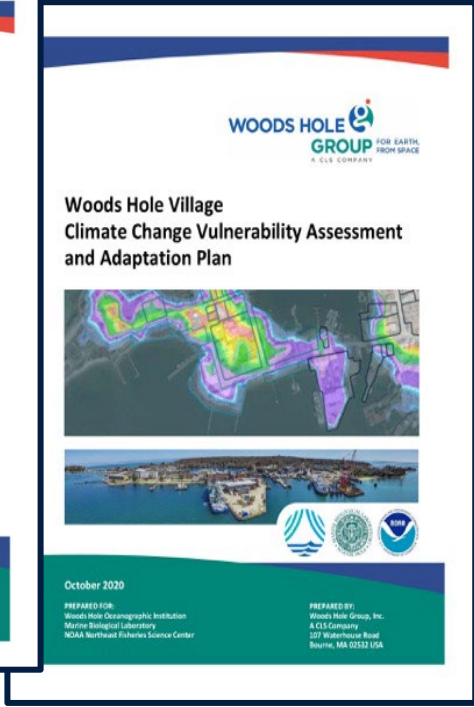
Regulatory Report



Phase 3 Report



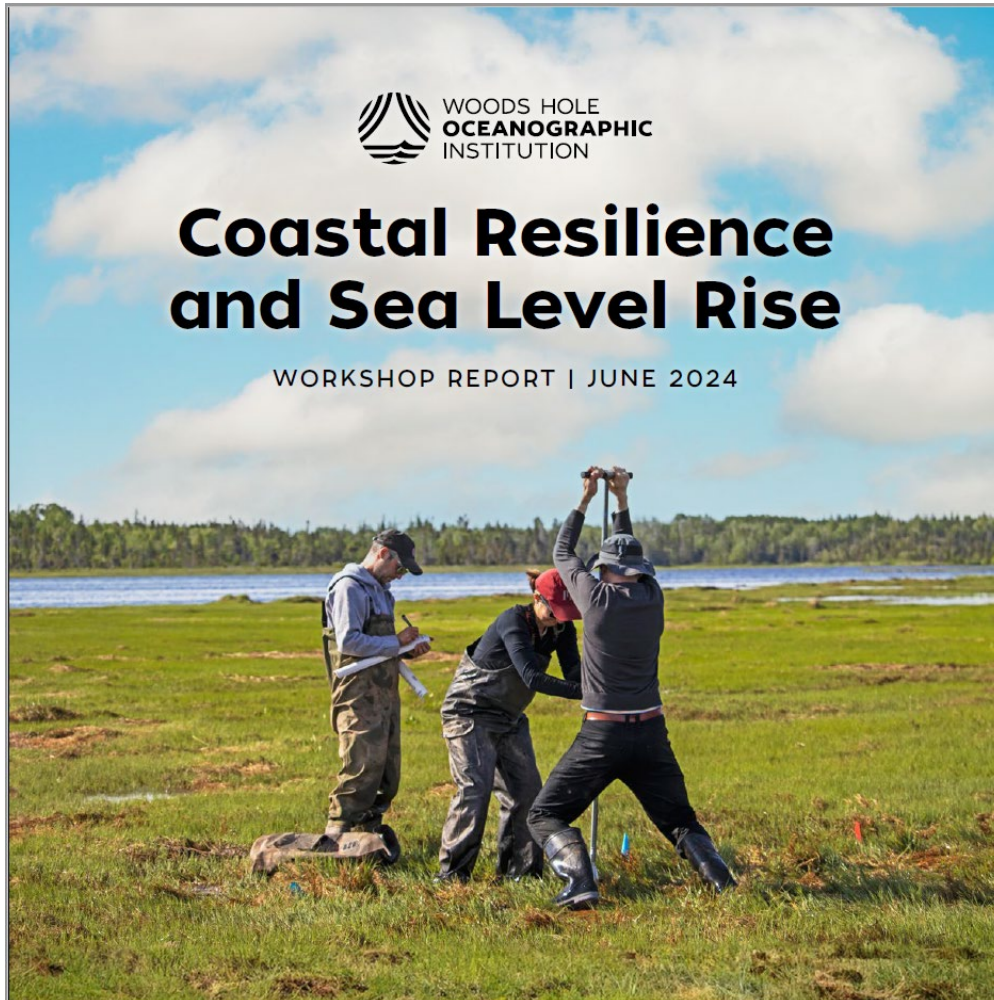
Phase 2 Report



Phase 1 Report

# Phase 4

## Key Community and State Recommendations



- Facilitate collaboration among communities to enable peer-to-peer learning
- Build community trust
- Develop State and Local Adaptation Plans
- Create capacity for communities, institutions, and organizations to address resilience
- Incorporate adaptation and resilience into regulatory measures

PRIVATE-PUBLIC INVESTMENT TO ENSURE THE FUTURE OF A SEASIDE COMMUNITY AND BLUE ECONOMY VILLAGE



## Take the RWH Climate Walking Trail!

Take a tour around Woods Hole Village and learn more about climate change impacts and resilience initiatives in the village. You can take the RWH Climate Walking Trail in-person via the RWH app or online via the tour platform.

[LEARN MORE](#)

Study Area

**860 Properties**

with nearly \$700M in assessed building value

Economic Impact

**\$385M**

Collectively, WHOI, MBL and NOAA Fisheries employ over 1,710 individuals

Infrastructure

**\$110M**

Revenue from ferry, with 3,004,436 passengers in 2019



Thank you...

On behalf of  
*ResilientWoodsHole*

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[www.resilientwoodshole.org](http://www.resilientwoodshole.org)  
[@resilientwoodshole](https://twitter.com/resilientwoodshole)

