

Packet information for 4/26/2022 Coastal Resilience Advisory Committee

Contents.

Pages 2-3 Letter of Support

Request for Letter of Support from Natural Resource Department staff for an Municipal Vulnerability Preparedness (MVP) program. The project is for Reef balls and a living shoreline at Sesachacha Pond by Polpis Road. A project summary is included.

Pages 4-16 Grant pre-application

National Fish and Wildlife Foundation (NFWF) pre-application grant information submitted on 4/21/2022.

Pages 17 – 35 CZM grant draft information for Downtown Neighborhood Flood Barrier.

Grant information developed by Arcadis with input from Vince Murphy. For committee consideration.

Project Summary:

In March of 2018 Winter Storm Riley caused significant impacts to the Island of Nantucket. One area severely impacted was at Sesachacha Pond which is a coastal eutrophic salt pond located on the northeast end of Nantucket Island. The resulting coastal flooding damaged Polpis Road which runs along the southwestern shore of the pond causing the roadway to fail and making it unpassable for several weeks to allow for repairs. Polpis is one of two improved roads that provides access to the village of Sconset at the far eastern end and the only road that provides access to the Quidnet and Wauwinet areas. The current Coastal Bank is protected by a series of concrete barriers installed to shelter the road during repair and to provide protection until a long-term system can be installed.

To protect this vulnerable area from storm damage, the Town of Nantucket is proposing a two-pronged nature-based protection system. Using a nature-based system is in keeping with the goals of the Town's MVP workshop. The focus of the design will be to stabilize the Coastal Bank with a living shoreline which will mimic biological and physical conditions that naturally exist along the coast to provide better ecosystem services such as wave energy dissipation, pollution and nutrient filtration, and soil stabilization. For this project coir rolls and native vegetation will be used as the structural component. The second portion is geared toward dissipating wave energy coming across the pond. The design will include the installation of pre-made reef balls and bags of cured oyster shells to enhance the habitat for the existing population of oysters within Sesachacha Pond. There will be no live shellfish added to the Pond, only increasing available habitat for in pond oyster populations. The combination of these two systems will help prevent the failure of the road and maintain this critical transportation link.

Goals:

1. Protect Polpis Rd. by reducing wave energy and erosion associated with storm surge and northeasterly winds
2. Increase shellfish habitat
3. Improve pond water quality through natural filtration systems
4. Serve as an educational platform for climate change adaptation
5. Serve as a model for future innovative projects that are transferable around New England of an adaptable, nature-based solution to address problems exacerbated by climate change

*Please insert letter head of organization

Date

To Whom It May Concern,

[insert organization's name] is writing in support of the Town of Nantucket's Natural Resources Department Municipal Vulnerability Preparedness Action Grant application.

How this project will benefit your organization and the island community as a whole. Some examples to include:

- Promotes Biodiversity (habitat restoration, creation, or enhancement)
- Restores/remediates Project Site
- Promotes Environmentally-Sustainable Development / Reduces Development in Climate Vulnerable Areas
- Improves Water Quality and/or Increased Groundwater Recharge
- Climate Mitigation (carbon sequestration, site-scale improvements for cooling, reduced energy use)
- Promotes education about nature-based solutions to climate change (if you're an educator please include that your classes will come out to the site for experiential learning opportunities and also a chance to help install/monitor the project)

If applicable, please include how this project will address Climate Vulnerable Populations which are those who have lower adaptive capacity or higher exposure and sensitivity to climate hazards like flooding or heat stress due to factors such as access to transportation, income level, disability, racial inequity, health status, or age.

To further these goals, we are fully supportive of the Natural Resources Department Application for the MVP Action Grant.

Sincerely,

Your name

Credentials



NFWF

EasyGrantsID: 76177

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2022, Pre-Proposal

Title: Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies, Nantucket, MA

Organization: Town of Nantucket, Natural Resources Dept.

Grant Request Information

Title of Project

Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies, Nantucket, MA

Project Description

Enhance ecological as well as infrastructure connectivity resilience to neighborhoods in the northeast quarter of Nantucket Island. Projects will focus on designs for ecological enhancement while also providing a road network resilient to Nantucket's greatest climate hazard; sea level rise. Polpis Rd will be raised out of the 2070 flood Zone at two key locations. At Folger's Marsh an undersized culvert will be replaced by a larger culvert or bridge crossing with associated salt marsh restoration to provide natural ecologic resilience. Improvements at the Sesachacha Pond causeway would also increase the hydrological connection and allow for marsh migration. Reef balls and a living shoreline in Sesachacha Pond would protect the bank edge, increase the availability for fish and shellfish habitat and improve water quality while also creating resilience. All combined, resilience for two major wetlands and northeast Nantucket.

Abstract

Nantucket's eastern side is served by 2 major roads that form a loop around more than half the island. Polpis road is 7.5 miles long and about 3.8 miles of this road will become unusable and the communities it serves become isolated if the road floods at Folger's Marsh and also at Sesachacha Pond. This has happened in recent years when Folger's Marsh flooded and Sesachacha Pond was also impassable. Sea level rise may make this a more regular occurrence. Raising the road through the use of a bridge at Folger's Marsh and causeway at Sesachacha Pond would have two-fold benefits. Increase wetland connectivity at both locations and create a resilience road infrastructure. At this stage, engineering designs that are acceptable to the community and to the partners is the priority for road elevations. The third project focuses on designs to create resilience for the troubled eroding road edge at Sesachacha Pond is to install reef balls and a living shoreline to increase resilience and improve water quality and not have the road under washed again. These efforts would be a step towards reducing the roads impact on the natural ecosystem and ecosystem services. This will require community support and a partnership between the Town of Nantucket and Nantucket Conservation Foundation for the Folger's Marsh portion of the project and Town of Nantucket for the Sesachacha Pond Project.

Project Location Description

Nantucket is an island in Massachusetts, 30 miles south of Cape Cod. The project locations are Polpis Road at Folger's Marsh and Polpis Road at Sesachacha Pond.

Total Amount Requested
Matching Contributions Proposed

\$650,000.00
\$65,000.00

Proposed Grant Period

10/03/2022 - 10/04/2024

1133 15th Street, NW
Suite 1100 Washington, DC 20005

Page 1 of 4

Version 1.1



NFWF

EasyGrantsID: 76177

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2022, Pre-Proposal

Title: Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies,
Nantucket, MA

Organization: Town of Nantucket, Natural Resources Dept.

Organization
Organization Type
City, State, Country
Primary Contact
Position/Title
Phone and E-mail

Town of Nantucket, Natural Resources Dept.
State or Local Government
"
Vincent Murphy
Ext: ; vmurphy@nantucket-ma.gov

Additional Contacts

Role	Name



EasyGrantsID: 76177

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2022, Pre-Proposal

Title: Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies, Nantucket, MA

Organization: Town of Nantucket, Natural Resources Dept.

Matching Contributions

Matching Contribution Amount:	\$65,000.00
Type:	In-kind
Status:	Application Submitted
Source:	Town of Nantucket, Natural Resources Department
Source Type:	Non-Federal
Description:	Natural Resources Department staff time and Nantucket Conservation Foundation staff time to include surveys, education, public outreach and also grant administration. possibility also of cash match as well as in kind to total \$65,000 combined

Total Amount of Matching Contributions:	\$65,000.00
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NFWF

EasyGrantsID: 76177

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2022, Pre-Proposal

Title: Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies,
Nantucket, MA

Organization: Town of Nantucket, Natural Resources Dept.

The following pages contain the uploaded documents, in the order shown below, as provided by the applicant:

Upload Type	File Name	Uploaded By	Uploaded Date
NCRF Pre-Proposal Narrative 2022	Polpis Road at Sesachacha Pond and Folger's Marsh NFWF pre-proposal 04212022.docx	Murphy, Vincent	04/21/2022
Project Site Map	Sesachacha MC-FRM Pres, 2050 2070 flood probabilities.pdf	Murphy, Vincent	04/21/2022

The following uploads do not have the same headers and footers as the previous sections of this document in order to preserve the integrity of the actual files uploaded.

NCRF Project Narrative -Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies, Nantucket, MA

Part I Pre-Proposal – Project Overview

1. Project Context: Nantucket, Massachusetts is an island about 30 miles out to sea, south of Cape Cod, Massachusetts. The island faces significant coastal resilience challenges and an island-wide Coastal Resilience Plan (completed 2022) identifies coastal resilience issues related to public infrastructure, resident access and ecological impacts. A priority area identified in the plan is the Polpis Rd access corridor which connects communities in the northeast corner of the island including Polpis, Quidnet, Pocomo and Wauwinet and amenities including Polpis Harbor, upper Nantucket Harbor, Great Point Lighthouse, and a substantial number of recreation and wildlife areas. Polpis Road contains multiple culvert crosses through salt and freshwater wetlands, creating areas of vulnerability during storms as well as ecological impacts to adjacent wetlands. In particular, two points on the Polpis Road are in both current flood zones, the severity of these flood zones will expand over time as sea level rises. Currently, Polpis Road at Folger's Marsh floods occasionally during severe storms and Polpis Road at Sesachacha Pond (~3.8 miles away) has experienced flooding and road undermining during significant storms. When both locations are impacted during a storm, a substantial number of people become isolated with no access to the islands grocery stores, hospital, ferries and other vital services. This isolation currently happens a few times a decade, but the risk is increasing as sea level rises. These two "pinch points" along Polpis Road both traverse exceptional quality wetlands, that can be enhanced to provide increased resilience to this key access road. Folger's Marsh, owned by the non-profit Nantucket Conservation Foundation, is an extensive salt marsh that connects to Nantucket Harbor. Polpis Road crosses the southern section of this marsh over an undersized culvert which has isolated areas of Folger's Marsh that were historically salt marsh and have transitioned to brackish marsh. The undersized culvert has impacted the current salt marsh extent through widening marsh creeks and loss of salt marsh habitat. This salt marsh provides important ecological services including habitat for many species of nesting and migratory shorebirds and colonial waterbirds, nurseries for commercially important fish and shellfish and significant carbon sequestration. The marsh also provides nesting habitat for the vulnerable salt marsh sparrow. Mapped salt marsh migration indicates the importance of the entire salt marsh to mitigating predicted sea level rise. Sesachacha Pond is a coastal eutrophic salt pond located on the northeast end of Nantucket Island. It was formed by the flooding of a kettle pond because of rising sea level following the last glacial period approximately 18,000 years. Sesachacha Pond covers 255 acres and consists of two deep areas with a maximum depth of about 43 feet. The pond is naturally non-tidal, and the salinity is maintained by periodic breaching of the barrier beach by the Town. The Polpis road edge at Sesachacha Pond has suffered erosion in the past and also splash over icing in storms that rendered the road impassable. The road is currently at a lower risk of direct flooding, though that changes to significantly higher flood risks as sea level rises. Both of these locations were identified in the 2019 Hazard Migration Plan as areas that needed improvements. In 2022 the Coastal Resilience Plan identified the risks both present and future risks to these areas. Analysis performed as part of the Coastal Resilience Plan indicate an increase in road elevation to elevation 7 in the Massachusetts Coastal Flood Risk Model in order to respond to predicted sea level rise. Ecological enhancement of the associated wetland resources at each pinch point will provided added coastal resilience opportunities.

2. Proposed Solution: Three proposed solutions were outlined in the Coastal Resilience Plan for these two sites. Assistance is now sought for developing engineering plans for three solutions. **(1)** Raising Polpis Road at Folgers Marsh coupled with salt marsh and associated barrier dune restoration. The primary infrastructure enhancement would include road design to increase elevation and incorporate a bridge or culvert crossing designed to raise road elevation to at least above 2070 predicted flood zones. A bridge crossing would increase environmental connectivity as well as resilience to coastal storms. Both a bridge and a culvert option will be explored to inform future funding and design. Preliminary design for Folger's marsh will also include salt marsh restoration as well as barrier dune restoration. The salt marsh provides extensive ecological habitat as well as services related to increased resilience to storm and

NCRF Project Narrative -Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies, Nantucket, MA

flooding events of both Polpis Road and adjacent private and public property. The salt marsh has been impacted by the current culvert, restoration will plan to restore lost salt marsh habitat, increase ecological connection under Polpis Road and provide for enhancement of predicted salt marsh migration corridors. The barrier dune separating Folger's Marsh from Nantucket Harbor has been eroded during recent storms, restoration of this dune will extend the resilient capacity of the salt marsh. (2) Polpis Road at Sesachacha Pond sits on what once may have been a functioning causeway with culverts. It appears this system is mostly choked. It is proposed to redesign the causeway and to reestablish or redesign the culverts with appropriately sized connection to create a better hydrological connection. The road surface elevation would also be increased out of the flood zone to 2070. As engineering plan for both of these efforts will take time as well as identifying funding sources for construction, there is also a pressing need to protect the edge of the road at Sesachacha Pond. (3) This can be remedied with the use of appropriately design a reef ball wave attenuation and living shoreline system. This would involve some 130 dome shape eco-friendly concrete reef balls that are imbedded with oyster shell. This would provide habitat for wild oyster spat to settle on and habitat for fish as well as wave attenuation. This would be further supported by a living shoreline that would be a planted shoreline with gradations to emulate the surrounding native vegetation from in water grasses to shrubs as the elevation increases, the effect of which would also stabilize the bank edge, reduce erosion and increase habitat. Conceptual designs have already been developed and received public support.

3. Project Category: Select the category of activity in the Request for Proposals that will be addressed by your proposal. Project Site(s) Assessment and Preliminary Design

4. Communities to Benefit: Approximately 450 homes are at a potential isolation risk between Folgers Marsh and Sesachacha Pond. As with any part of Nantucket this is a historic part of the island with a verity of former farms that are now recreation and conservation areas owned by island-based conservation groups. There is no regional breakdown for this part of the island's population. Recently released 2020 data from the U.S. Census Bureau indicates a resident population of 14,255 residents. The island is also known for its seasonal influx of vacationers, who rent or own vacation homes on the island. By some estimates, the population on the island increases to more than 54,000 during the summer months in a normal year. The resident island wide population breakdown is 87.6% white, 9.4% Hispanic or Latino, 6.8% black, 1.2% Asian, 0.1% American Indian, 2.6% from other races, and 1.8% from two or more races. 7.2% of the population live below the local poverty line. Significant public engagement has already taken place for these projects within the Coastal Resilience Plan. The planning process of these projects will involve public education through the expertise of the Town of Nantucket Natural Resources Department, ecologists at the Nantucket Conservation Foundation and students groups at the UMASS Boston Nantucket Field Station which is located adjacent to Folger's Marsh. Field trips and education with the local school systems will be combined with community level site visits and the potential for undergraduate and graduate monitoring research projects. and localized engagement efforts will also form part of this specific quarter of the island in a public meeting style charrette. The outlined projects in this proposal would reduce isolation risk of impacted neighborhoods and fulfill recommendations for the Coastal Resilience Plan including Project 4-1 *Polpis Road Raising and Bridge Conversion at Folgers Marsh* and Project 4-2 *Polpis Road Raising, Culvert Expansion, and Wave Attenuation at Sesachacha Pond*. Folger's Marsh is owned by the Nantucket Conservation Foundation, a 501(C)(3) non-profit and will be the primary partner with the Folger's Marsh property.

5. Anticipated Community and Fish and Wildlife Benefits: These projects will provide significant ecological and community infrastructure resilience that will benefit the entire island. Raising road elevation out of the future flood elevations will reduce the risk of community isolation over time with rising sea levels. These designs and eventual construction will strengthen the resilience of approximately a quarter of the land area of Nantucket. Having designs that the community can understand the need for and support is invaluable as the Town and NCF progress plans that can later be put forward for private,

NCRF Project Narrative -Sesachacha Pond and Folger's Marsh Ecological Enhancement and Resilience Strategies, Nantucket, MA

state and federal (as appropriate) grant funding for the construction phases. Fish and wildlife benefits at both sites come in the form of more resilient wetlands, enhanced marsh ecology, and increasing habitat diversity. The completion of both project designs will facilitate wetland expansion and migration in the future. The benefits to fish and shellfish is to increase the area and quality of habitat available to them. Restoration monitoring projects undertaken by Natural Resources Department and Nantucket Conservation Foundation, and others, will examine benefits to species including the vulnerable salt marsh sparrow. At Sesachacha Pond, the oyster reef balls wave attenuation system will also increase habitat for the resident oyster population to settle on and develop. The reef will also increase habitat diversity for fish and invertebrate populations in this unusual salt pond. The living shoreline will also enhance protection from erosion along the road edge. The baseline data has been collected for the Reef ball and living shoreline element of this proposal. The next step is to replace the rendering with an engineered design and that is the purpose of this request. That can then be taken to the permitting, and finalize the budget and ready of the construction phase and provides a highly visual "early win" that can commence in the near future. This means that the Reef ball and living shoreline could be constructed and provide resilience before the causeway portion of the project. Design efforts would see about a 30-60% design for each location and at Folger's Marsh about 1300 feet of road taken out of the flood zone to 2070 and at Sesachacha Pond about 1600 feet of road taken out of the flood zone to 2070.

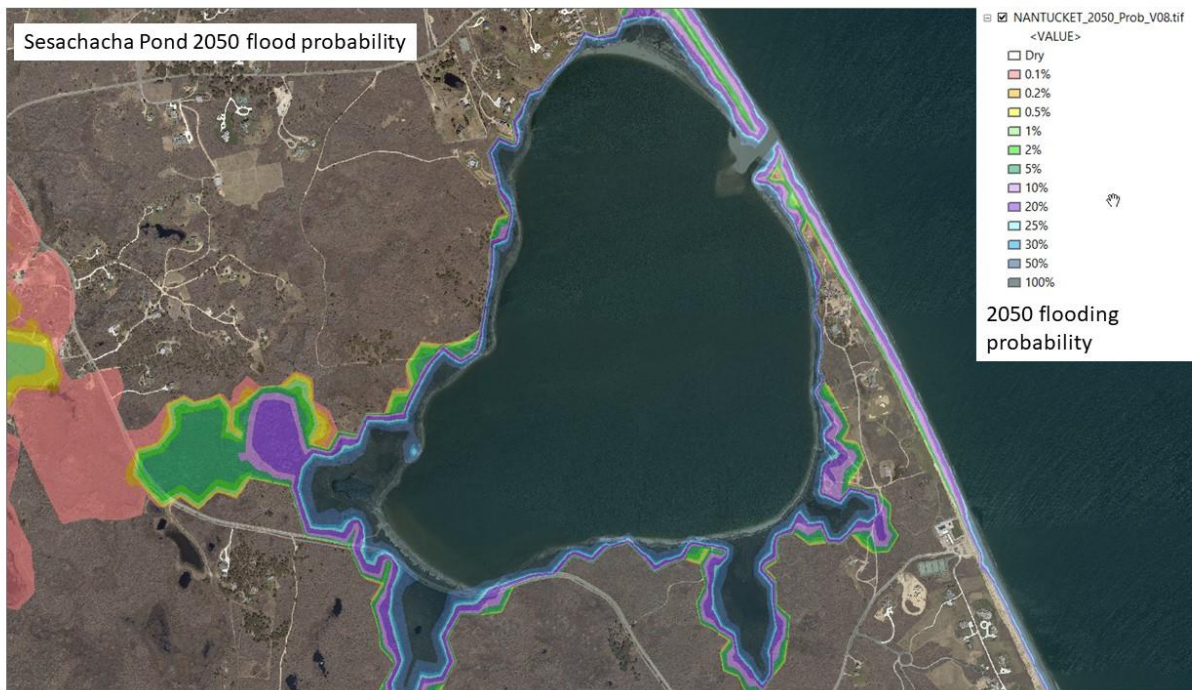
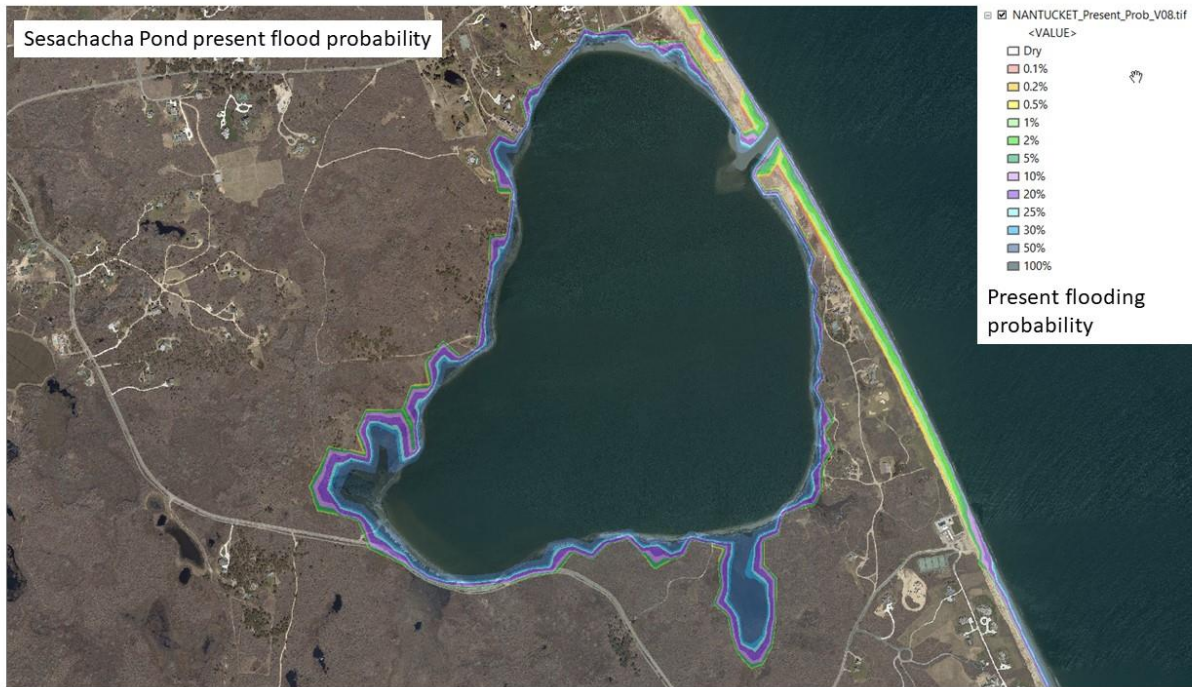
6. Other: Concept level designs for these projects are in the Coastal Resilience Plan

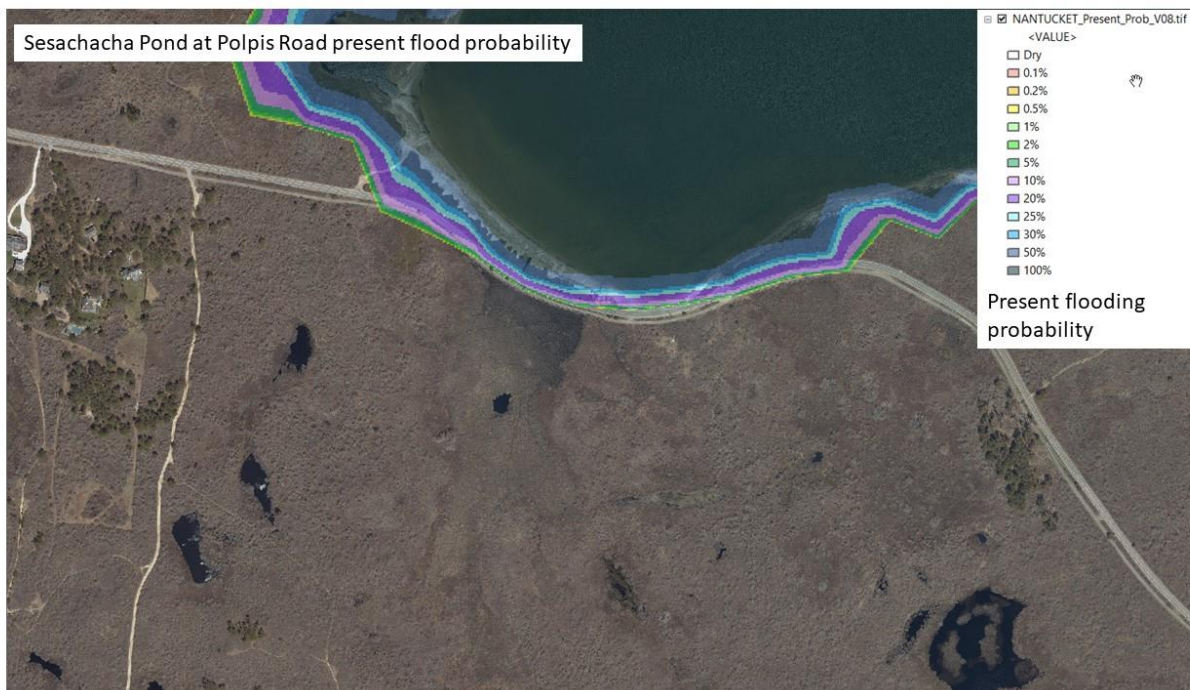
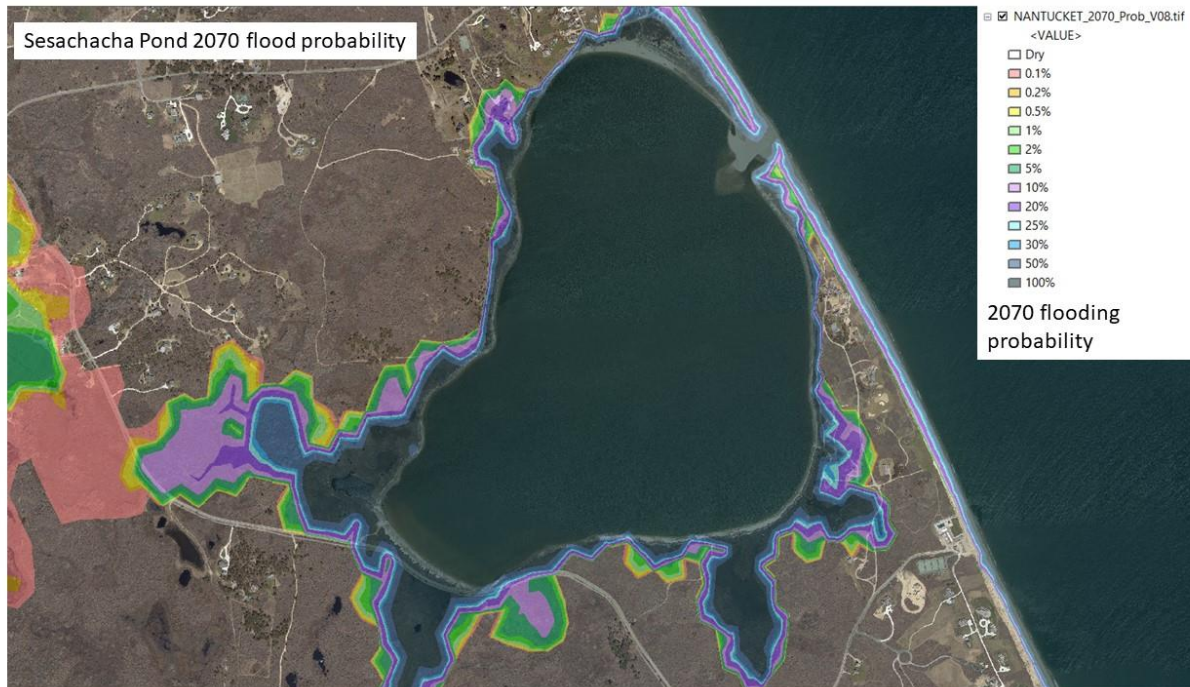
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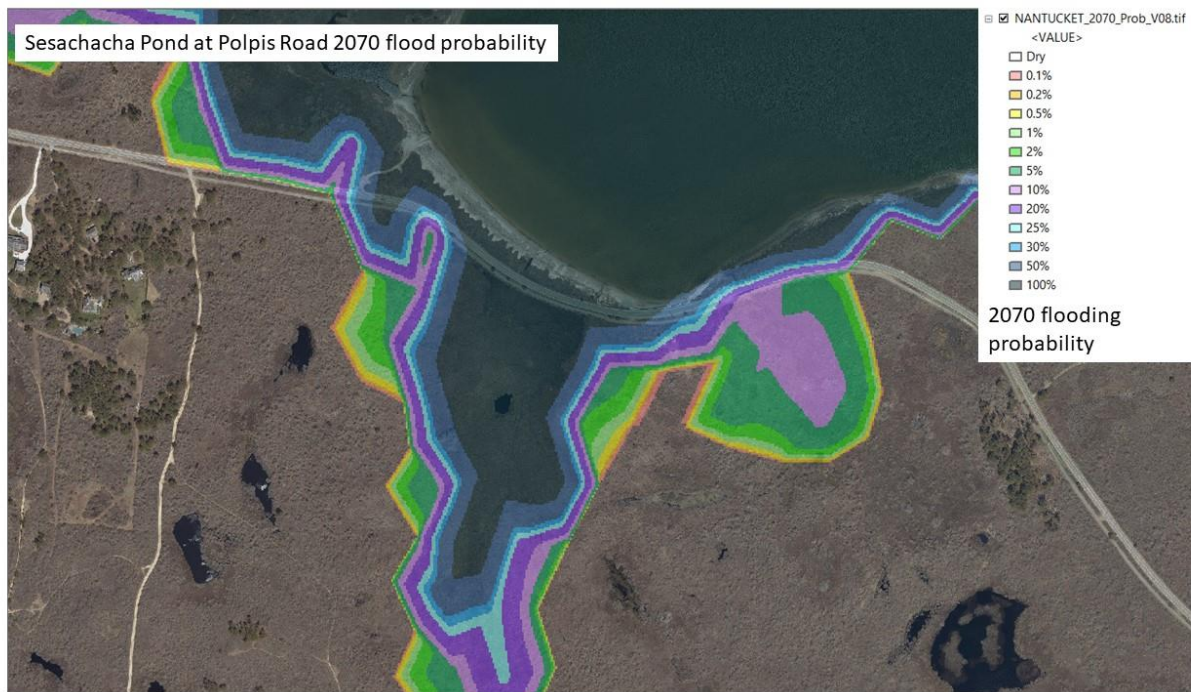
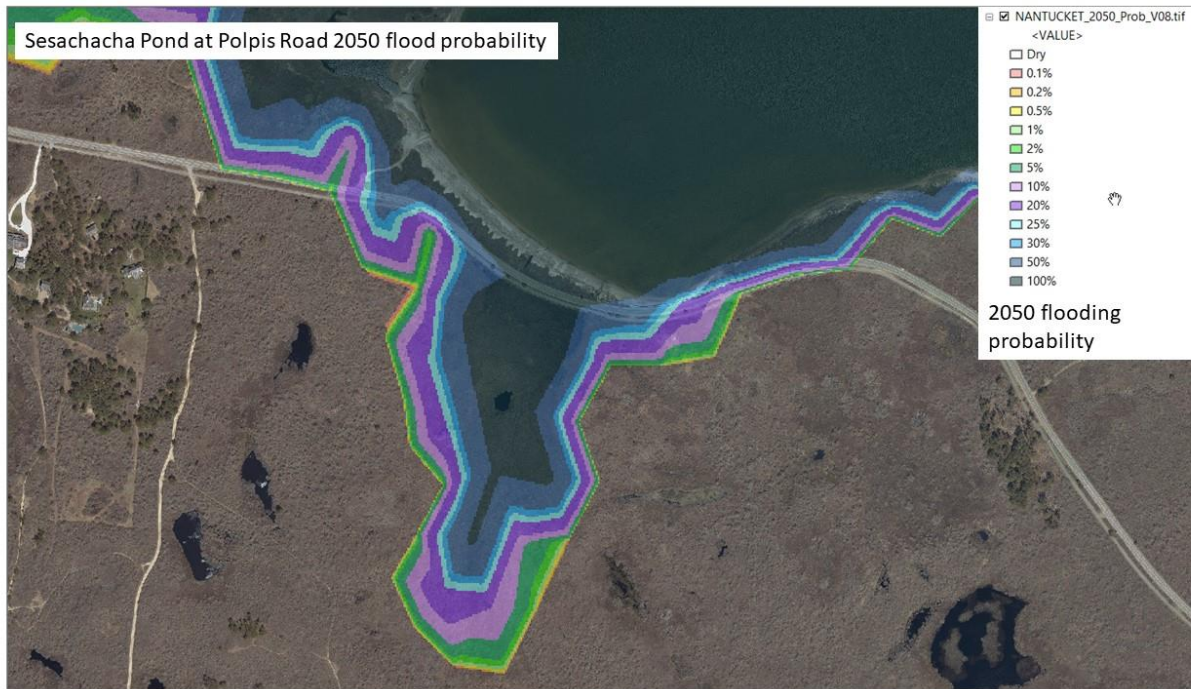
See pages 192 to 194 for information and images on Folgers Marsh road raising and marsh enhancement and pages 198 to 203 for Sesachacha Pond road raising, culverts and wave attenuation information. These projects also align with project identified in the Nantucket Hazard Mitigation Plan. Project #F10 *Participate in a limited public-private partnership with Nantucket Engineering & Survey to complete a study of the Fulling Mill Brook watershed, in particular the hydrologic conditions at Polpis Road, to identify alternatives for improvements to this area.* This was attempted though ultimately has not yet been completed and is now reenvisioned as part of this grant application. Fulling Mill Brook is the name of the stream that flows through Folger's Marsh. This broadens out the scope to cover the whole marsh, not just the brook. Project #F10 was the second highest scoring project in the 2019 Hazard Migration Plan. Other Hazard Mitigation Plan recommendations include Project #F16 *Increase the elevation of Polpis Road at Fulling Mill Brook and harden the embankment for wave action. Final elevation to be examined and analyzed considering sea-level rise* and Project #F17 *Increase the elevation of Polpis Road at Sesachacha Pond and harden the embankment for wave action. Final elevation to be examined and analyzed considering sea-level rise.* <https://www.nantucket-ma.gov/DocumentCenter/View/24719/Town-of-Nantucket-2019-Hazard-Mitigation-Plan> These have now also been further developed in the Coastal Resilience Plan.

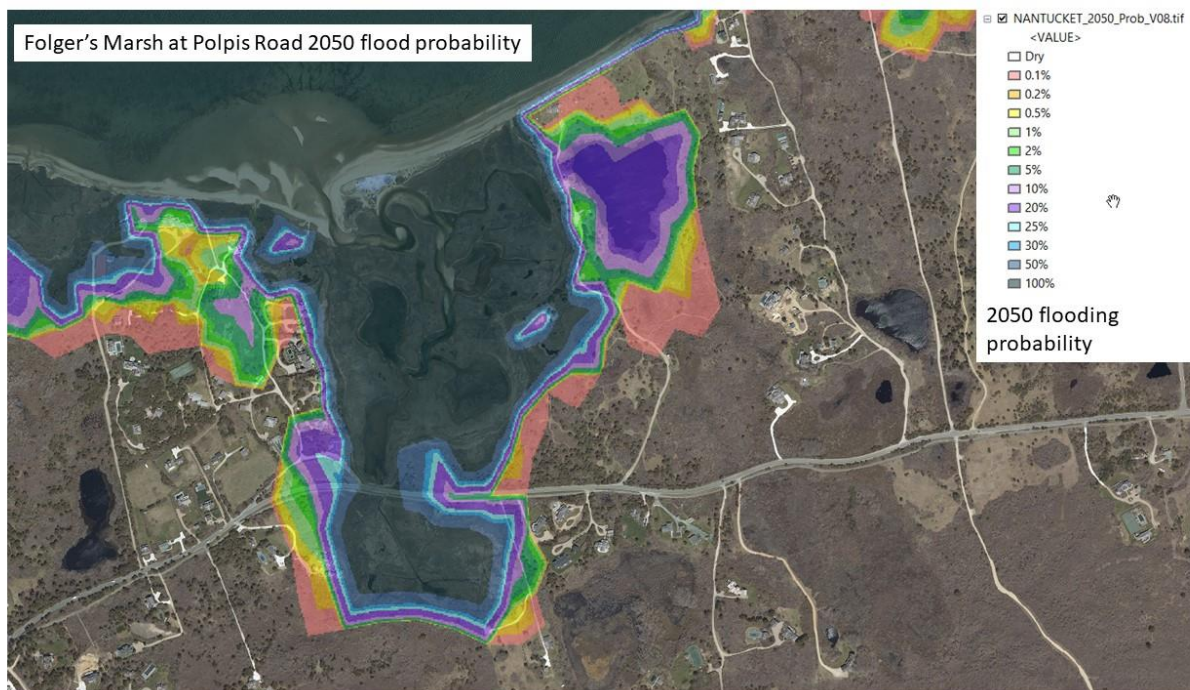
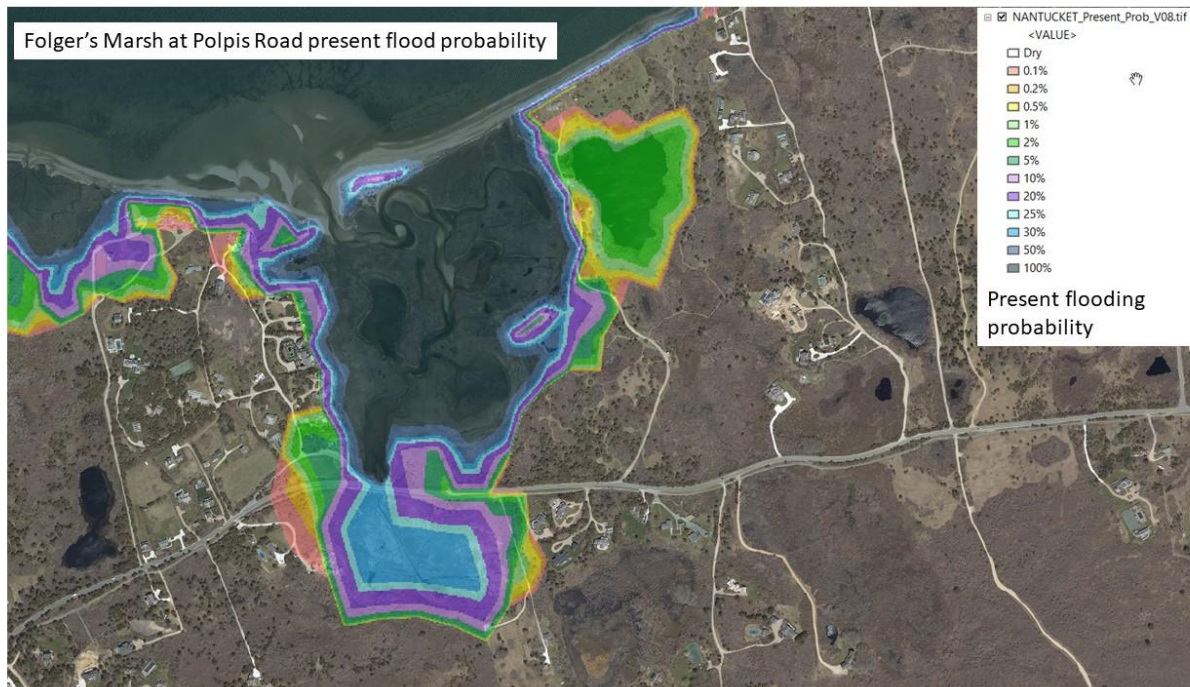
7. Other Uploads (please answer the following questions you are allowed to upload a 1-page summary to answer these specific questions, where applicable): **These do not apply to these projects.**

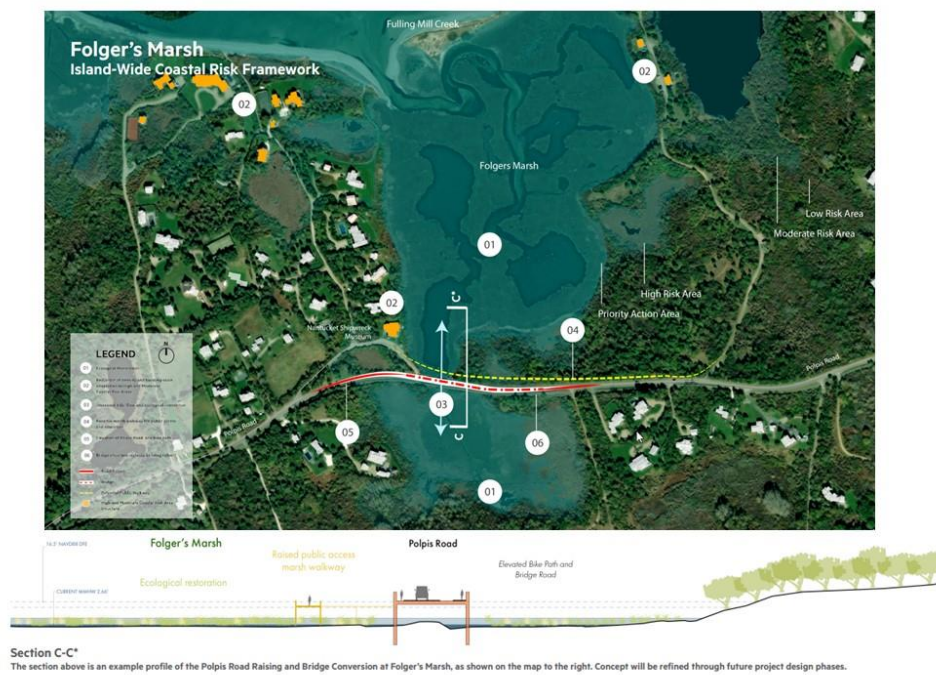
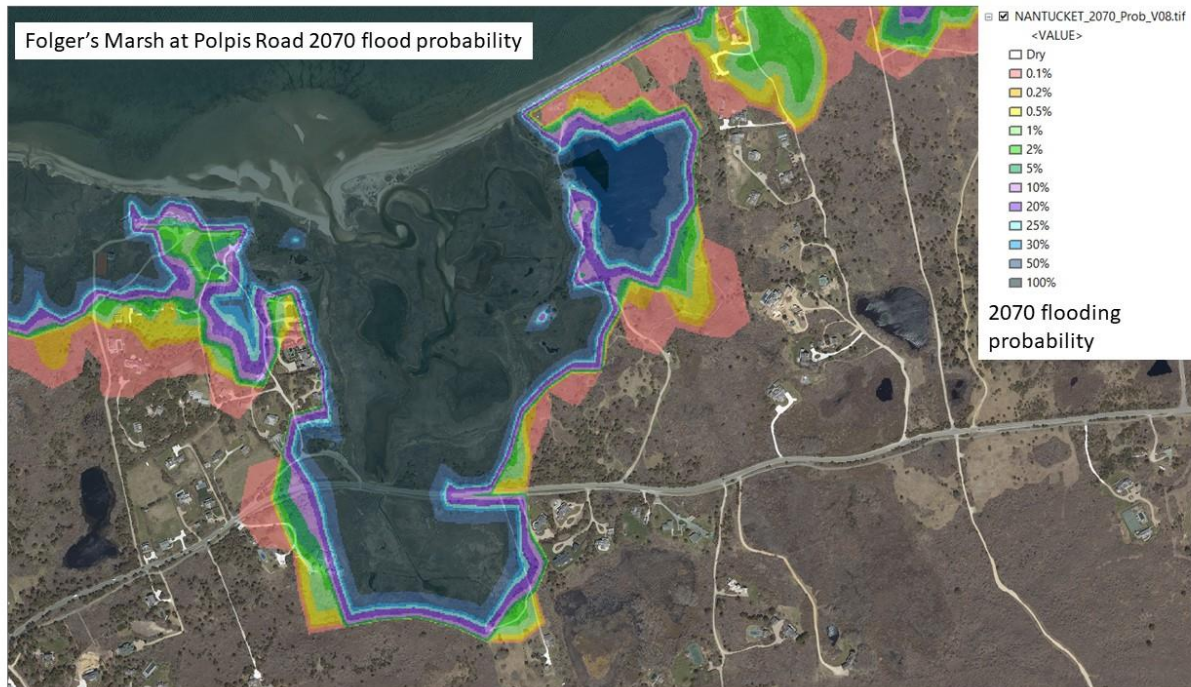
- **For projects requesting funds for land acquisition or equipment purchase** provide a rationale for why NFWF funding is needed to support Restoration-Implementation activities; why acquisition or purchase cannot be supported through other sources (federal or state programs, donation, leasing, etc.); and a rough estimate of the budget needed to pay for these costs. For land acquisitions also describe plans for ensuring public access.
- **For projects requesting U.S. Department of Defense partner funding** provide a description of the coastal hazards that threaten the military mission, the nature-based solution(s) proposed to address those threats, how those solutions will maintain and improve military resilience and/or directly benefit mission capabilities (see the RFP Funding Availability and Match section for more information).



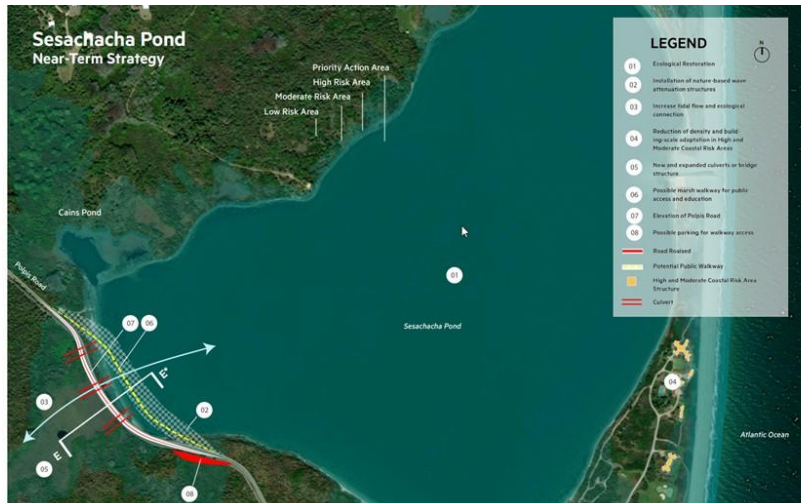








Concepts for Nantucket Coastal Resilience Plan for Folger's Marsh

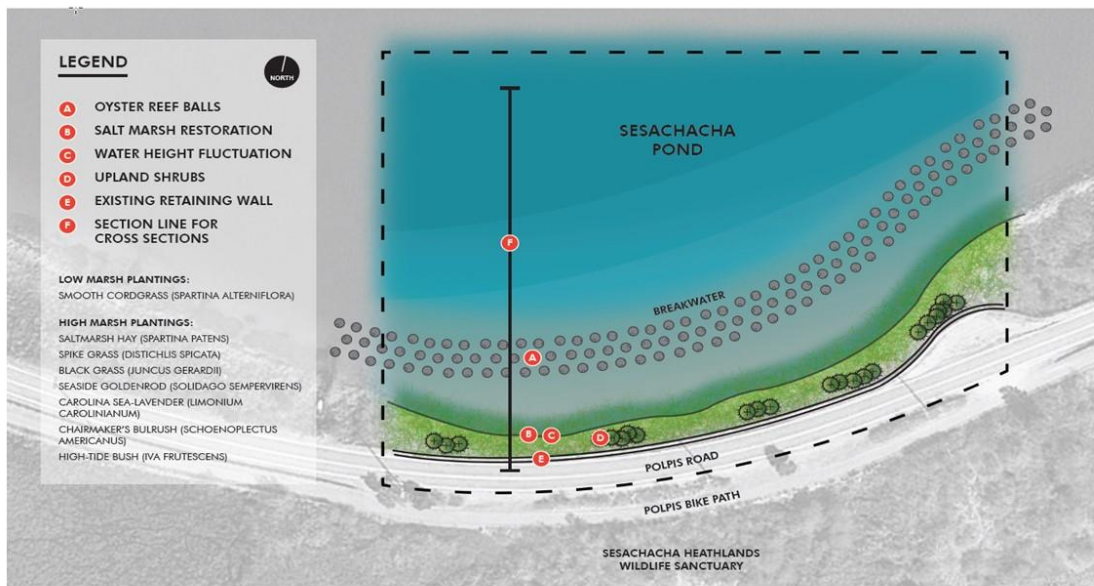


Concepts for Nantucket Coastal Resilience Plan for Sesachacha Pond



Section E-E'

The section above is an example profile of the Polpis Road Raising, Culvert Expansion, and Wave Attenuation at Sesachacha Pond project, as shown on the map to the right. Concept will be refined through future project design phases.



SESACHACHA POND RECOMMENDATIONS FOR RESTORATION

(NOT TO SCALE)

Horsley Witten Group
Sustainable Environmental Solutions
horsleywitten.com

Concept design for Oyster reef balls and living shoreline

DRAFT CZM grant information

MA CZM Coastal Resilience Grants FY23

Draft Form (Based on FY22 RFR)

NOTE: Submissions to CZM will ultimately be submitted as a narrative (not to exceed 12 pages). This form compiles response requirements from the RFR's main body and Appendices and organizes them in a logical manner to support development of a cohesive narrative that directly responds to each prompt and criterion in the RFR.

3. Instructions for Application Submission

A. EVALUATION CRITERIA: CZM will evaluate all proposals on a competitive basis and select projects across CZM's regions (i.e., North Shore, Boston Harbor, South Shore, Cape Cod and Islands, and South Coastal), provided successfully completed applications that meet the criteria are submitted. CZM reserves the right to request additional, clarifying information from the applicant during the evaluation period, and to reject any or all proposals that do not meet the goals and terms of this RFR. Each proposal will be reviewed based on the criteria and point values below (total of 100). Please refer to the resources listed in Attachment C when developing your proposal.

Submit an electronic file (PDF preferred) of the main body of the proposal **(no more than 12 pages) plus a cover sheet, maps, photos, resumes, and letters of support (which are not counted in the 12-page limit)** to <mailto:coastal.resilience@mass.gov>. Also, complete the Scope and Budget (Attachment D) in Excel format and submit with the digital proposal.

The response must clearly identify the RFR number (ENV 22 CZM 01) on the cover page (see Attachment E) and on the email to deliver the electronic application.

1. Cover Sheet

RFR Number	TBD
Applicant (Municipality/ Organization)	Town of Nantucket
Address	Nantucket Town Hall 16 Broad Street Nantucket, MA 02554
Project Manager	
Name	Vince Murphy, Coastal Resilience Coordinator
Department	Natural Resources
Email	vmurphy@nantucket-ma.gov
Phone	Office (508) 228 7200 Ext 7608 Mobile (520) 955 2179
Type of Resilience Project (list primary) <i>See 5. Project Description for overview of each project type.</i>	1. Detailed Vulnerability and Risk Assessments 2. Public Education and Communication 3. Proactive Planning 4. Redesigns and Retrofits 5. Shoreline Restoration

Project Title	Downtown Neighborhood Flood Barrier Feasibility Study
Total Project Cost	\$300,000
Match Amount (at least 25% of total)	\$75,000
Grant Amount Requested	\$225,000
Project summary (brief description of the proposed project in one or two short paragraphs)	The proposed project is the next step toward implementing a priority recommendation of the Town's Coastal Resilience Plan (CRP), adopted by the Nantucket Select Board on 1/12/2022. The CRP was developed based on over a year of island-wide community engagement, detailed risk analysis, technical evaluation, conceptual design, and implementation planning. The activities for this CZM Coastal Resilience grant request will include continued community engagement, more detailed feasibility evaluation, and project phasing for the preferred locations of the Downtown Neighborhood Flood Barrier and Resilience Project. The outcome is expected to be a refined and community-supported implementation phasing and feasibility assessment for the project to advance to the next stage of design with a goal for implementation of a first phase project by the mid-2020s. To do this the project will produce information to help local leaders refine the project's concept design, build support, prioritize investment in near-term actions, and seek additional funding from local, state, and federal partners.

2. Coastal Hazards Management (5 points)

Provide a brief description of the community or organization impacted as an introduction to the project.	The island of Nantucket is located east of Martha's Vineyard and south of Cape Cod off the coast of mainland Massachusetts. Nantucket is approximately 48 square miles and forms the southern boundary of Nantucket Sound, approximately 30 miles from the mainland. The island was formed by the Laurentide Ice Sheet that was associated with the last North American glaciation, dating back to less than 25,000 years ago. The main bodies of water surrounding Nantucket include Nantucket Sound to the north, as well as the Atlantic Ocean which surrounds the east and south of the island.
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	With approximately 88 miles of shoreline Nantucket is, and always has been, highly exposed to a range of coastal hazards, most notably flooding and erosion. The features that make Nantucket an attractive place to live and visit – the ocean, the beaches and bluffs, tidal ponds, historic character, and the ways in which humans have altered and occupied the coastline over time – are also the features that create the need for coastal resilience planning to ensure that Nantucket can continue to adapt to changing conditions and evolving risks. Estimates for the effective population of Nantucket range from between 11,000 to over 17,000 year-round residents, a combination of life-long Nantucketers and those who have arrived on the island fulltime later in life. Recently released 2020 data from the U.S. Census Bureau indicates a year-round population of 14,200 residents. The island is also known for its seasonal influx of vacationers, who rent or own vacation homes on the island. By some estimates, the population on the island increases to more than 54,000 during the summer months in a normal year. In recent years, the Nantucket community has coalesced around the need to proactively plan for coastal resilience. The Town has undertaken several coastal resilience planning projects, laying the groundwork for a comprehensive coastal resilience approach. These efforts have resulted in plans, including the 2019 MVP Community Resilience Building Summary of Findings, 2019 Natural Hazards Mitigation Plan, and the 2021 Coastal Resilience Plan. Related efforts include: • <u>2009 - Nantucket and Madaket Harbors Action Plan</u> • <u>2014 – Coastal Management Plan</u> • <u>2015 - Center for Coastal Studies, Empowering Coastal Communities to Prepare for and Respond to Sea Level Rise and Storm-related Inundation: A Pilot Project for Nantucket Island</u>
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	• 2017 - Trustees of Reservations, Climate Vulnerability Assessment Coastal Properties • 2019 – MVP Community Resilience Building Workshop Summary of Findings • 2019 – Natural Hazard Mitigation Plan • 2020 – Coastal Risk Assessment and Resiliency Strategies • 2021 – Resilient Nantucket Design Guidelines and Resilience Toolkit • 2021 – Coastal Resilience Plan The Town has funded a fulltime Coastal Resilience Coordinator staff position and created the citizen-led Coastal Resilience Advisory Committee to lead these efforts. At the same time, a number of local advocacy and land conservation organizations have been undertaking planning, community engagement, and capital projects to advance resilience. Together, these widespread efforts have generated significant momentum to advance the goals of coastal resilience within the community. To build on this momentum and take meaningful next steps towards resilience, the Town is now working with partners to seek funding.
Brief description of current vulnerability and approach to management of erosion and flooding hazards.	Nantucket is, and always has been, highly exposed to a range of coastal hazards, most notably flooding and erosion. In recent years, the Downtown neighborhood has been impacted by a number of flood events. These include wind driven flooding along Easy Street during a winter storm in January 2022, high tide flooding in November 2020, and flooding after heavy rainfall in April 2020. Attachment X includes images and additional information about these and other recent flood events in the Downtown neighborhood. As noted above, the Town has been leading a series of proactive planning initiatives in recent years to better understand risk and vulnerability and to help prioritize investment to reduce risk and build resilience. The Coastal Resilience Advisory Committee has also been helping to engage the public in risk awareness and foster a

	collective approach to resilience that combines practices steps by public and private actors. Anything we can add here re: ongoing projects, things from CRP already in the works? Through the funding requested in this grant application, Nantucket will build on this existing body of work to begin implementing one of the top priority recommendations of the CRP, the Downtown Neighborhood Flood Barrier and Resilience Project. This project is an essential next step to reduce current and future risk to essential infrastructure and service for the entire island and offers an opportunity to leverage current momentum into a transformative project for the community, as described below.
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3. Climate Adaptation (10 points)

Preference will be given to proposed projects that build on previous coastal resilience projects or address priority actions identified through the MVP Community Resilience Building (or similar) process. Relevant MVP priority actions should be highlighted and included in the proposal.

Description of relevant climate impact(s) or long-term problem(s). Address the current and future vulnerability to climate impacts. What are the specific threats to the project area/site and reasons for applying to the grant program? Include an explanation of likely future vulnerability and risk to public safety, coastal infrastructure, and natural resources from sea level rise, storm surge, and precipitation, as well as the primary drivers (e.g., economic, environmental, political, or other) for engaging in climate adaptation activities. If your community or organization has completed a climate vulnerability assessment, please incorporate the results into your project proposal.	By the end of this century, climate change will increase the frequency and severity of coastal hazards impacting Nantucket. As sea levels rise, high tide flooding will happen more often, coastal flooding will reach new areas and coastal erosion may progress more rapidly. The Nantucket CRP included a comprehensive assessment of risks from flooding and erosion under present and future conditions. The results of this assessment showed cumulative risk from flooding and erosion totaling \$3.4 Billion dollars through 2070, including 2,373 structures across the island. The vast majority of at-risk structures are located in the Downtown neighborhood which is vulnerable to high tide flooding and coastal storm surge today and in the future. This includes risk to numerous structures designated historically significant within the Downtown Local Historic District as well as essential facilities and services, such as Steamboat Wharf (the primarily supply chain and point of access to mainland Massachusetts), Hy-Line Cruises Terminal, Stop &
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	Shop, and the primary electrical substation for National Grid, in addition to dozens of businesses that support the local economy. The concentrated risk in Downtown has island-wide consequences, as people across the island depend on the Downtown for goods, services, and transportation. The CRP found that the risk of flooding in the Downtown neighborhood is significant, totaling 300 buildings and \$940M dollars of damage through 2070, not including loss of services to roads and community services, or access to vital services like ferry terminals. The first priority for Downtown Nantucket is maintaining access to and from the island for people and supplies via Steamboat Wharf. The Wharf is both the most essential and most at risk facility on Nantucket. Both it and the access roads leading to it, especially Broad Street and Easy Street, are vulnerable to frequent flooding and loss of service by 2050 and are impacted by more severe coastal storms already. To mitigate this risk, the CRP recommended the Downtown Neighborhood Flood Barrier, with the goal of reducing impacts from coastal flooding and mean monthly high water through 2070, assuming 4.3 feet of sea level rise. The Design Flood Elevation for the project, to be further studied and confirmed through this study, is based on projections for frequent flooding from high tides and regular storms in 2070 based on the Commonwealth's sea level rise projections and the sea level rise scenario (High) recommended by the Coastal Resilience Advisory Committee. These projections are consistent with those used in the development of the Massachusetts Coastal Flood Risk Model, which was the basis of the CRP's coastal resilience planning. Through the CRP's recommendations for the Downtown focus area, a conceptual plan for the Flood Barrier project and related projects was developed (CRP recommendations 2-1, 2-2, and 2-6). Based on this conceptual plan, the barrier has the potential to reduce risk Downtown by
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	protecting 2.5 miles of public roads and 230 structures within the Nantucket Downtown Historic District from the 2070 high tide flooding level (mean monthly high water) and coastal storm surge events. Potentially protected structures include eight municipal buildings and five critical facilities including an electricity substation, grocery store, telephone exchange station, and community center. The scale of the project is significant and will require additional planning to determine specific locations for coastal resilience infrastructure, engage the community in key considerations and tradeoffs, further evaluate technical and regulatory feasibility, assess opportunities for nature-based approaches and transportation/recreational improvements, and determine phasing for long-term implementation. The CRP has preliminarily identified a first phase project focused on the lowest-lying section of the Downtown waterfront along Easy Street from Straight Wharf to Steamboat Wharf. The reach experiences tidal and coastal flooding today and will be vulnerable to frequent flooding in the future due to sea level rise, threatening emergency access on Easy Street and nearby street, access to Steamboat Wharf and damaging adjacent structures. This grant request focuses, in part, on confirming the extent of the first phase project and further assessing the feasibility and preliminary design for the first phase of the Downtown Neighborhood Flood Barrier and Resilience Project. Based on the conceptual plans developed through the CRP, the first phase of the project was estimated to cost \$120M with \$320M in benefits. Feedback received through community engagement conducted during the CRP indicated there was preliminary support for the project, however the Nantucket community is committed to ongoing inclusive engagement through all project phases. Thus, in addition to a feasibility assessment, funding is needed for additional community engagement to advance the
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	Downtown Neighborhood Flood Barrier and Resilience Project to the next step of implementation. If awarded, this grant project (Downtown Flood Barrier Feasibility Study) would fund three primary deliverables, in addition to management of the project. More specifically, the proposed project will result in the following: - A detailed risk-based phasing plan for and refinement of the conceptual design for the Downtown Neighborhood Flood Barrier to confirm location and timing of near- and longer-term investments. - A feasibility assessment package for the first phase project including technical feasibility assessment, permitting and regulatory requirements, assessments for opportunities to incorporate nature-based approaches and transportation enhancements, refined cost estimate and benefit cost analysis, operation and maintenance requirements, and design drawings suitable for federal funding applications. - A community engagement strategy and process with the goals of engaging the community in the resilience planning process for Downtown and bringing property owners and other stakeholders (including the Steamship Authority, regulatory agencies and funders) to the table to reach consensus on the project location, design, and implementation phasing. Once constructed, the Downtown Neighborhood Flood Barrier is intended to reduce long-term risk to priority community assets located Downtown and maintain everyday functions that are threatened by sea level rise. The project is a significant and the community is eager to take meaningful action to adapt its Downtown center to increasing risks. Smaller actions such as tide gates, limited bulkhead improvements, and wave attenuation barriers have been installed in the area but only solve part of the problem in the near-term, given the scale and long-term nature of the flood risk. In light of this, the Town seeks
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	assistance and partnership from CZM to support taking next steps towards a long-term term solution. It is anticipated that community engagement and capacity building over the lifetime of this project will also help inform property owners and other stakeholders about the existing and future coastal hazard risks and begin to provide them with the tools needed to take action to reduce risk on their property.
What are the specific goals of the project?	All aspects of the project are geared toward positioning the project for the next stages of implementation, including detailed design, permitting, and construction. A primary near-term goal of all work funded by this grant will be to assemble a package of information suitable for federal funding applications through BRIC, HMGP, RAISE, or similar programs The specific goals of the Downtown Neighborhood Flood Barrier Feasibility Study are to: • Develop long-term community engagement strategy to support the Downtown Neighborhood Flood Barrier and Resilience Project over its lifetime • Continue community engagement to determine preferences, constraints, and opportunities for the phase 1 project • Advance conceptual design for the phase 1 project to a level of design suitable for federal funding applications • Implementation and phasing strategy developed based on CRP risk assessment and community input collected during the engagement process. The long-term goals of the project are to construct a community-supported flood protection barrier in Downtown Nantucket that protects critical facilities, supports community vitality and accessibility, has multiple public and ecological benefits, and that prolongs the life of Nantucket's historic, cultural, and economic center.

4. Need for Assistance (10 points)

Points are reserved for proposed projects that increase coastal resilience of Environmental Justice neighborhoods and are led by or engage with Environmental Justice community representatives. MassGIS provides an online Environmental Justice Viewer at http://maps.massgis.state.ma.us/map_ol/ej.php to help identify environmental justice neighborhoods.

Describe how project will increase coastal resilience of Environmental Justice neighborhoods.	While Downtown Nantucket census blocks do not meet the criteria for Environmental Justice designation, Block Group 4, Census Tract 9502, located on the South Shore, is a designated Environmental Justice community. This project will directly benefit Census Tract 9502 by protecting Downtown community assets and access and operability of the ferry. Further, it is important to note that Census data do not capture the diverse population of seasonal workers and visitors who depend on Nantucket's tourism industry for employment. Each day, especially in the Summer and Fall, many workers travel from the mainland through Downtown to reach places of employ or to visit friends and family. This population is highly vulnerable to the effects of climate change and its potential to disrupt access to jobs. Stakeholder engagement through this effort will include outreach to this population through sharing of flyers and surveys on peak commute ferries during the summer and fall months. Flyers, surveys and other outreach materials will be translated into languages including X, Y, Z to enable broad participation among those with limited English-speaking proficiency. The Downtown Neighborhood is the economic, cultural, and transportation center of Nantucket. As such, its protection benefits the entire population who live and work on Nantucket, most directly by serving as the hub for ferries transiting to and from the mainland.
Description of current financial and technical capacity to advance coastal resilience efforts and need for assistance.	Like most Towns, Nantucket has the types of expected departments such as Department of Public Works, Sewer Dept and a Water Company. The Town also has a well staffed Natural Resources Department. There are also some specific positions within the town such as the Coastal Resilience Coordinator in Natural Resources Department, Special Project Manager in Town Administration, Preservation Planner in

	the Planning and Land User Series Department. The Town's budge is set each spring, and like every municipality, there are more needs than funds to meet those needs. Though Nantucket is seen as a wealthy community, our municipal budget is still too tight to undertakes these vitally needed climate projects without grant assistance. We can sustain the matching portion of the grant and committee inter-departmental staff resources throughout. Additionally, we can partner with local organizations such as Nantucket Land Bank and Nantucket Conservation Foundation to assist as needed with project delivery. The Coastal Resilience Advisory Committee, a committee established by the Nantucket Select Board can also provide assistance and facilitate public conversations, feedback and give guidance to the project throughout. Technical capacity = higher Staffing = vince, crac, other town depts, conservation orgs, NGOs, etc. Financial = need money
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5. Project Description (15 points) – For Discussion

Detailed description of the proposed coastal resilience project, broken down by specific project tasks, within the context of the five climate adaptation action(s) listed in Section B, as well as the selected sea level rise scenario(s) if applicable. Projects must implement one (or more) of the five climate adaptation actions below. A proposal should articulate how the project approach addresses known coastal storm and climate vulnerabilities on a site, and at a local or regional scale, if possible.

- *Detailed Vulnerability and Risk Assessments * Communities must be MVP certified in order to be eligible for this project type.*
- *Public Education and Communication*
- *Proactive Planning*
- *Redesigns and Retrofits*
- *Shoreline Restoration *Green infrastructure projects and bio-retention systems are NOT eligible, wetland and aquatic ecological restoration projects are also NOT eligible unless they are specifically designed to reduce coastal storm damages to public facilities and infrastructure*
 - *Beach, Berm and Dune building*
 - *Coastal bank stabilization*
 - *Fringing salt marsh restoration*
 - *Living breakwater or sill construction*

If the project advances or utilizes products from a previous coastal resilience project or applies innovative techniques to address coastal hazards or climate impact(s), please describe.

YEAR 1 (September 2022 – June 2023)

TASK 1 – Project Management Year 1	
Work that will be completed	
Methodology	
Deliverables	Reporting and invoicing per CZM requirements,
Budget	10%
Project team members assigned to task	

TASK 2 – FY23 – Long-term Community Engagement Plan	
Work that will be completed	
Methodology	
Deliverables	Project website, long-term engagement strategy including outreach to property owners in Downtown Neighborhood and all Downtown stakeholders (anyone who uses or benefits from ferry)
Budget	10%
Project team members assigned to task	

TASK 3 – FY23 – Community Engagement Activities Year 1	
Work that will be completed	
Methodology	
Deliverables	Prep for summer population engagement, Focus groups, public design workshops, interviews, CRAC and SB presentations
Budget	25%
Project team members assigned to task	Town-led

TASK 4 – FY23 – Project Phasing and Implementation Planning	
Work that will be completed	
Methodology	
Deliverables	A detailed risk-based phasing plan for and refinement of the conceptual design for the Downtown Neighborhood Flood Barrier to confirm location and timing of near- and longer-term investments.
Budget	15%
Project team members assigned to task	

TASK 5 – FY23 – Phase 1 Project Feasibility Assessment Year 1
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Work that will be completed	
Methodology	
Deliverables	Feasibility study including technical feasibility assessment, permitting and regulatory requirements, assessments for opportunities to incorporate nature-based approaches and transportation enhancements, refined cost estimated and benefit cost analysis, operation and maintenance requirements, and design drawings suitable for federal funding applications
Budget	40%
Project team members assigned to task	

YEAR 2 (July 2023 – June 30, 2024)

TASK 6 – FY24 – Project Management Year 2	
Work that will be completed	
Methodology	
Deliverables	Reporting and invoicing per CZM requirements,
Budget	10%
Project team members assigned to task	

TASK 7 – FY24 – Community Engagement Activities Year 2	
Work that will be completed	
Methodology	
Deliverables	Summer population engagement, Focus groups, public design workshops, interviews, CRAC and SB presentations
Budget	25%
Project team members assigned to task	Town-led

TASK 8 – FY24 – Phase 1 Project Feasibility Assessment Year 2	
Work that will be completed	
Methodology	
Deliverables	Feasibility study including technical feasibility assessment, permitting and regulatory requirements, assessments for opportunities to incorporate nature-based approaches and transportation enhancements, refined cost estimated and benefit cost analysis, operation and maintenance requirements, and design drawings suitable for federal funding applications

Budget	40%
Project team members assigned to task	

6. Public Benefits and Interests (10 points)

Preference will be given to proposed projects that support comprehensive community resilience plans or regional efforts.

Description of how the project will improve coastal resilience at project site.	Based on the initial conceptual plan, the barrier has the potential to reduce risk Downtown by raising or otherwise protecting 2.5 miles of public roads from the 2070 high tide flooding level (mean monthly high water) and coastal storm surge events. Through this project, a feasibility level design will be developed for phase 1 of the Downtown Neighborhood Flood Barrier. Refinement of this design will allow more detailed assessment of the project's costs, benefits and overall improvement of coastal resilience in the Downtown Neighborhood.
Description of how the project will improve coastal resilience adjacent to the project site.	Based on the initial conceptual plan, the barrier has the potential to reduce risk to 230 structures within the Nantucket Downtown Historic District. These structures are located landward of the barrier and potentially include eight municipal buildings and five critical facilities including an electricity substation, grocery store, telephone exchange station, and community center. A central goal will be to engage with the Steamship Authority to coordinate on long-term risk reduction efforts. The design of the barrier will also need to be consistent with future plans for the adaptation of Steamboat Wharf and related ferry terminal facilities. It is crucial that the Town and Steamship Authority collaborate to prolong the life and access to this community lifeline.
Description of how the project will improve coastal resilience beyond the project site.	The proposed project is a critical first step to increase the resilience of Nantucket as a whole by maintaining access to and from the island for people and supplies via Steamboat Wharf. Without a project like the one proposed here, access to Steamboat Wharf may be regularly blocked by flooding by 2050, preventing the ingress and egress of people, food and other

	supplies critical to survival on the island. Maintaining access to and reducing flood risk to the wharf and surrounding roads will improve resilience for the entire island of Nantucket by enabling continued movement of people and supplies and a thriving Downtown neighborhood with vibrant history, natural environment and community.
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7. Transferability (10 points)

Proposed projects that create or update an existing project webpage (on a community or organization's website or other web platform) to communicate project updates, public meeting notices, and host final deliverables are strongly encouraged. Links to funded coastal resilience project information and products can be found using CZM's Grant Viewer (<https://mass-eoeea.maps.arcgis.com/apps/webappviewer/index.html?id=55671f1a117c4139874543bba50b8a3c>).

Description of transferability of the proposed project (i.e., how the project approach, techniques, and products can be used by or serve as models for other coastal communities and organizations facing similar issues; or how the project builds on innovative coastal resilience techniques).	While Nantucket is unique in many ways, several aspects of the project offer transferable lessons to other coastal communities in Massachusetts and throughout New England. These opportunities are highlighted below. The Nantucket community is proud of its efforts to proactively advance resilience and is eager to share its work with CZM, partner organizations, and other communities. The Downtown Neighborhood Flood Barrier projects offers opportunities to advance and share lessons related to: ➔ Adapting and building resilience in historic downtowns that vulnerable to coastal flooding ➔ Inclusive community engagement for coastal resilience planning ➔ Exploring opportunities for infrastructure with multiple benefits (streetscape and transportation improvements, new or enhance waterfront public access, green infrastructure, and nature-based solutions) ➔ Risk-based planning and decision-making to focus investment on highest priority areas ➔ The process of taking a project from planning to implementation through a multi-year, inclusive planning process
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Describe details of education and outreach efforts to communicate lessons learned. All applicants are required to provide opportunities for community engagement in project tasks, develop transferable deliverables, and communicate lessons learned at the completion of the project.	<i>Through Task 2 – Long-term Stakeholder Engagement Strategy</i> a project website will be developed to support the Downtown Neighborhood Flood Barrier and Resilience Project over its lifetime. The website will communicate project updates, share public meeting notices, and provide access to project deliverables. Additionally, this website will host a project case study developed at the completion of the project using CZM’s template. The case study will share lessons-learned throughout the technical assessment and project process that may be relevant to other municipalities working to reduce their coastal flood and erosion risks.
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8. Timeline (10 points) – **TO BE COMPLETED AFTER DISCUSSION W/ VINCE**

If applying for an extended contract period, the timeline must show which tasks will be completed by June 30, 2022 and, then, by June 30, 2023, as well as all other anticipated deliverable due dates in the interim. Please incorporate reasonable time to execute contracts with sub-consultants, obtain permits, and receive draft deliverable feedback from CZM and other partners. Projects typically start in September and draft deliverables should be provided to CZM for review at least 2 weeks prior to the final deliverable due date.

Detailed timeline with realistic milestones and completion dates for project tasks.	Year 1 – July 2022 – June 30, 2023 Year 2 – July 2023 – December 30, 2023
Year 1 – September 2022 – June 30, 2023	
September 2022	
October 2022	
November 2022	
December 2022	
January 2023	
February 2023	
March 2023	
April 2023	
May 2023	
June 2023	
Year 2 – July 2023 – June 30, 2024	
July 2023	
August 2023	
September 2023	
October 2023	
November 2023	
December 2023	

9. Budget (10 points) – TO BE COMPLETED AFTER DISCUSSION W/ VINCE

The budget must show the total grant and match costs anticipated for each fiscal year. If funding is requested for FY22 and FY23, most grant funds should be allocated to tasks to be completed in FY22. Include sufficient details (e.g., hourly rates and hours worked per task, and other direct costs) to justify deliverable costs and substantiate the grant request. The total in-kind and cash match (25% or more of the total project cost) that has not been used for other projects must be documented (please complete and include **Attachment D**). As a deliverable-based grant program, all project costs must be directly tied to project deliverables to be eligible for reimbursement. General project management costs and other charges to administer the grant (e.g., overhead fees) must be built into tasks toward specific deliverables and documented as expected number of hours worked and hourly rates.

Attachment D - Detailed budget, broken down by grant funds and matching funds, for the components of each project task including an explanation of how the funding and other support provided by project partners will ensure success of the project.	Complete in Attachment D – not included in page count
Signed statement from authorized signatory of the municipality or eligible non-profit entity acknowledging at least a 25% match commitment of the total project cost, and that funds have been approved and/or appropriated (or are in process of being approved).	ATTACHMENT – not included in page count

10. Project Management and Partners (10 points)

The name of a qualified individual with proven capacity to serve as the project manager and point of contact	Vince Murphy, Coastal Resilience Coordinator
Resumes for the project manager and other staff and pre-qualified or selected consultants who will work on the project.	ATTACHMENTS – not included in page count
Signed support letters from all relevant local boards, departments, commissions, neighborhood groups, environmental justice organizations, and other partners with a commitment to participate, as necessary, in the project.	ATTACHMENTS – not included in page count – select board, CRAC, town entities at this stage

11. Overall Project Quality (10 points)

The overall quality of the grant application and benefit of the coastal resilience project.

**There is no specific prompt for this criterion.*

12. Supporting Attachments

- CRP excerpts

- Flood risk Downtown - mapping
- Downtown Neighborhood Flood Barrier pgs.
- Recent flooding – pics and narrative
- Include social vuln mapping (?)

13. Additional Required Documentation (not needed for submission)

If selected for an award and not already on file, the applicant may be required to submit the following forms to complete a contract. Applicants are encouraged to review these forms prior to submission of a Response.

1. Commonwealth Terms and Conditions filled out and signed by the applicant
2. Commonwealth W-9 tax information form filled out and signed by the applicant with DUNS number and Federal Tax ID
3. Authorized Signatory Listing Form
4. Prompt Payment Discount Form
5. Electronic Funds Transfer (EFT) set-up form

14. Task list for Vince

- Letter of match
 - Discuss split between in-kind services and cash
- Letters of support (select board, CRAC, town entities)
- Complete **2. Coastal Hazards Management** – is there ongoing capital work focused on risk reduction and resilience the Town would like to highlight?
- Complete **2. Coastal Hazards Management** – develop summary of recent flood events Downtown with emphasis on impacts to critical and historical assets.
- Complete **4. Need for Assistance** – “Description of current financial and technical capacity to advance coastal resilience efforts and need for assistance.”
- CONFIRM: Appropriate scope for 8 month (1 year grant) vs 20 months (2 year grant) project?
 - Question for CZM – would a project shorter than 2 year grant still be competitive?
- CONFIRM: Is there a requirement for this project to be competitively bid?

NOTES – 4/8/2022

- Reference C. Larson report for proposed phasing of project
- Vince Q – level of design produced by this project?
 - 30%? Will need to sell this project to town admin
 - Would like to stay away from committing to a specific percent design until we know what the first phase will entail
 - Small scale – can get to 30%+ design
 - The scope of work will result in the technical and other information necessary to secure additional funding for the next phase of design and construction (could be 20, 30, etc.)
 - Need enough design to get to a FEMA-approved BCA, usually about 30% but 30% design typically includes additional technical assessment of site (geotech, etc)
 - Could we say 10-25% design depending on outcome of prelim analyses?

- Yes. There are existing studies we can leverage and build on.
- Review of application by Jen and other experienced grant writers on CRAC will be helpful
 - Focus of reviews should be on substance re: scope of work and value added by this project for both Nantucket and the Commonwealth
- Updates from Vince
 - 4/1 - launch event for land bank – project for newly acquired properties on Washington St. (nature based, living shorelines, consistent with CRP, interim solutions until road elevation completed)
 - Town Admin and Select Board want to resurface road at Washington St & Francis St, not considering elevation, broken catch basins in area, mostly aesthetic.
 - Lifetime of road resurfacing in Downtown = 10 years
 - 120 yards of road = \$800k budget
 - Schedule – 1 vs. 2-year project
 - Finance department having serious staffing issues at the moment.
 - CRAC is now a permanent committee – increased membership to 11, one of the new permanent people on CRAC will be a staff member from the land bank, the other is undecided (finance or capital program)
- Will this project need to go out to bid?
 - Maybe not, trying to get around it. Retainer Contract could cover it. This project is short time frame, difficult to get another contractor up to speed. CZM grant may need to come through a different contract any way, may not make sense to try and align contracting now.
- Letter of Match – Vince to handle
- Letters of Support – premature to have letter of support from landbank, NCF, others at this point – may want to drive scope of work, Vince can start collecting internal letters (natural resources dept, CRAC, admin)
 - CRAC will want to review the application (4/26 or 5/10 - standing CRAC meetings, could present and receive feedback)
 - Which date is preferred will depend on RFR release and details, will share application beforehand
 - May not want to share grant application publicly (competitive)
- Schedule
 - \$300k is sufficient for scope but not for a 2-year timeframe
 - 2-year schedule preferred due to Vince's availability.
 - When Vince spoke to CZM, they made it clear that a two-year contract would require resubmission of the application, just a formality, two separate one-year contracts from CZM
 - CRP – negative feedback – not enough summer feedback incorporated, it would be nice to have more opportunities for engagement
 - Could we do a 16-month time frame?

CRAC to play meaningful role in engagement and lead some of it (extend budget)