



NFWF

Final Programmatic Report Narrative – Emergency Coastal Resilience Fund

1. **Project Highlights.** Provide a bullet list of the most significant (3-5) achievements of your project and a brief summary of whether these results met, fell short of, or exceeded the goals stated in your proposal and why.

Significant Achievements:

1. Educating the Masons Island Fire District (MIFD) residents of the district's sole egress road's risk to erosion from storm surge and sea level rise and gaining their financial support five years in a row to provide potential grant match funds and volunteer involvement
2. Navigating collaborative work with four essential community partners: (1) the MIFD voters; (2) the Masons Island Property Owners Association (MIPOA) members who own the abutting property needed to access the project site; and (3) the project site landowners the Masons Island Company (MICO); as well as (4) the Town of Stonington's Selectman and Director of Finance in managing the grant's financials.
3. Engineered design plans were developed for a living shoreline by GZA Environmental, Inc.. See attached design plans.
4. The design plans received favorable review from CT DEEP toward the Certificate of Permission despite the landowner's withdrawing permission. See attached design plans revised to include CT DEEP's suggestions.
5. United States Army Corp of Engineers issued a Certificate of Verification, USACE Section 404 Permit, General Permit, approving the proposed Living Shoreline Design. See attached USACE permit.

Brief Summary:

1. Educating the MIFD residents on the need to protect our shoreline road from environmental threats exceeded the proposed goals as there was nearly unanimous support for this project at the past five MIFD annual meetings. MIFD residents voted to approve funding the project's requested amounts since the project's inception five years ago.
2. Navigating collaborative work with three out of four essential community partners proved successful. Nearly all MIFD and MIPOA residents attended one or another of nine education sessions hosted for the project by the MIFD Shoreline Task Force. MIFD and MIPOA residents volunteered for project site work – plantings, photographing and measuring of shoreline losses. See attached photos 1 – Volunteers plant initial 30 switchgrass bushes as a line of coastal defense & Photo 3 of planting volunteers doing needed ongoing weeding. The Stonington Town Selectman came to a special meeting held by the Task Force and gave support for the Town to submit grant applications for the Masons Island project. The Town of Stonington's Director of Finance, James Sullivan, submitted multiple grant applications for our project and then managed the financials for the initial and then amended ECRF grants.
3. Engineered design plans were developed by GZA Environmental, Inc. and received favorable review from CT DEEP toward the Certificate of Permission despite the landowner's withdrawing permission. Due to one critical partner, the project goals will not be realized. The Masons Island Company (MICO) was an unreliable community partner, granting permission to MIFD for the project to proceed, then withdrawing it. MICO then made a request directly to CT DEEP for a "no-fill" living shoreline design. MIFD was in support of MICO's preferred design plan. CT DEEP thought MICO's design merited review and invited such a novel design to be submitted for permitting. After project designs were altered, to a "No-Fill" design, and a Certificate of Permission permit application was submitted to CT DEEP, MICO withdrew permit permission. MICO did the same with allowing a permit application to be

submitted to Stonington's Planning and Zoning for a Coastal Area Management permit, then withdrew permit permission. As a professional courtesy, CT DEEP reviewed the submitted "No-fill" plans and responded with feedback as if it was a pre-application. CT DEEP's feedback was very positive, only suggesting consolidation of the materials laydown areas from three to two and to include the potential to add fill to the site should that be a design change in the future which would save a need for re-permitting.

4. One of three permit goals met project expectations. United States Army Corp of Engineers issued a Certificate of Verification, USACE Section 404 Permit, General Permit, approving the proposed "No Fill" Living Shoreline Design. See attached USACE permit. MICO did not withdraw permission for said application

2. Project Activities & Outcomes

- Activities: Describe and quantify the primary activities conducted during this grant and explain any discrepancies between the activities conducted from those that were proposed.
 - MIFD Shoreline Protection Task Force continued measuring coastal land losses since 2020 to educate the community on the shoreline protection project. See Photo 4 - Rod Cook demonstrated shoreline losses by drawing a line in the sand where the land used to be & the uploaded doc records of our shoreline's erosion in "Shoreline Measurements July 2021 – August 2024". With the ECRF 2021 grant award to the Town of Stonington, CT, design plans were produced for our site on Masons Island – a project deliverable. See attached. This was despite a delay by MICO, the landowner's unexpected, preferred design change to a "No-Fill" living shoreline. With the 2023 ECRF Amendment funds were awarded for permitting the design plan. USACE issued a Section 404 Permit – a project deliverable. See attached. Our permitting goal fell short due to the landowner, The Masons Island Company, withdrawing permit permission after applications were submitted to CT DEEP and Stonington, CT's Planning and Zoning. CT DEEP treated our withdrawn application as a pre-application and gave overall endorsement for the design.
 - Minus landowner permission, MIFD funded a buried revetment wall on abutting MIPOA land beside the threatened road – an unexpected project outcome. An on-going activity has been the maintenance by MIPOA & MIFD resident volunteers of the 42 switchgrass bushes they dug in over multiple plantings. See attached photos 6 – MIFD resident, Ricardo Kleinbaum, donates 12 transplanted switchgrass bushes. Both the buried revetment wall and the bushes may one day help to buffer the threatened roadway – a primary project goal. The plantings offer cover and seed for migratory birds visiting the abutting projects site's cove – adding to the project's community resilience goal.
- Outcomes: Describe progress towards achieving the project outcomes as proposed and briefly explain any discrepancies between your results compared to what was anticipated. Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.
 1. One of three permits was awarded by the USACE for permission to construct a "No-Fill" living shoreline in Chippechaug Cove – partially achieving the project outcomes as proposed. We also applied for two other permits – CT DEEP and Stonington Planning and Zoning. Because the landowner withdrew permission for the proposed project these two permit applications were withdrawn before agencies could act on them. All the same, it was satisfying to know the project was permitted by USACE.
 2. The MIFD voters' backing for efforts to protect the community's sole egress road have been steadfast throughout the project. At successive annual MIFD meetings, voters approved project matching funds for project implementation. See attached 2023 -2025 Annual Meeting Shoreline Road Protection Task Force Reports, by Chair Kristin Foster and 2022 by Tom Cooke, MIFD Secretary.
 3. An unanticipated collaborative effort occurred with a National Science Foundation funded project team: the Emerald Tutu, of data sharing. Using our project site's fetch and hydraulic activity as experienced by their sister test floating bio-mat within our project's cove supplied both collaborators with valuable data. See link with reference to data collaboration at <https://emerald-tutu.com/floating-wetland-deployment-locations/mason'sisland> and in Photo 2 – Cate Moffit can be seen in her kayak leading a collaborative measuring of offshore plant growth that was compared to site conditions.
 4. Minus landowner permission, MIFD funded a buried revetment wall on abutting MIPOA land beside the threatened road – an unexpected outcome. This would not have happened if the MIFD Shoreline Road

Protection Task Force hadn't presented the ongoing threat to the community's road at the past five annual MIFD meetings. As the community became aware of MICO's uncertain commitment to allow a living shoreline installation on their land, our project's momentum was paired to fund this potential protection measure. By putting some rocks unground shoreward of the road, the MIFD & MIPOA community did what they could on their own land.

3. Lessons Learned. Describe the key lessons learned from this project, such as what worked and what did not, what were the least and most effective activities implemented during the grant, and/or what were notable aspects of the project's methods, monitoring, or results.

What worked:

- We, as a community through the Shoreline Protection Task Force, undertook to meet with experts to educate ourselves about the erosion dynamics at the site to learn about possible solutions.
- We worked from the start to educate our community about the severity of the dangers to our habitat and roadway.
- How important it was to tie what we educated our community about with decisions they had to make, as a community, approving funds for implementation of the project's design.
- Design plans were made. MICO, MIFD & MIPOA had agreed on a design.
- Design plans received favorable review from the State – CT DEEP.
- A USACE general permit was issued based on the design plans.
- The monitoring, done by the MIFD Shoreline Task Force, of the erosion of the remaining lawn/land between the marsh and the road was very useful data to document the significant collective losses, especially post storms. This project site data was used by the engineering firm, GZA Environmental, Inc., when submitting the project permit applications to the regulatory agencies. It was shared with the MIFD and MIPOA residents and was a very powerful tool to show there is real reason to be concerned about the longevity of our community's road. See photo 7 – Post storm 29' remains between the road and the shore.

What did not work:

- Working with MICO, the landowner, was difficult to predict.
- This project cannot move to construction or implementation of the partially permitted design plans, and this is despite the "No-Fill" design plans being conceived by the landowner, MICO.

Key lesson learned:

- The Masons Island Company was an unreliable community partner granting permission several times for the project and thereafter withdrawing it several times.

Least effective activities:

- Trying to rely on MICO. In person MICO permission was granted as well as signed MICO permission in official documents, only then later withdrawn by MICO via email.

4. Dissemination & Next Steps

- Dissemination and Transferability: Briefly identify any dissemination of project results and/or lessons learned to external audiences. Describe the direct impacts of any capacity building activities. Specifically outline any uptake or actions resulting from the project that will result in transferability of the approach to other areas.

Dissemination:

- Project results were shared with the MIFD and MIPOA residents who then became increasingly aware of the community's sole egress road's vulnerability. As a result of yearly community education sessions and seasonal project updates, disseminated via

emailed newsletters and MIPOA website, postings have led to an informed community. Following these community presentations were votes supporting funding the project's next step. See uploaded examples of these presentations listed below.

- The collaborative efforts with the NSF funded Emerald Tutu team helped gain news cover for their novel project and thereby gaining regional attention for the MIFD Shoreline Protection Task Force's efforts to pursue shoreline resilience efforts on Masons Island as well. See news releases listed below published in regional newspaper, The Day, in New London, CT.

- Transferability:

- The MIFD "NO-FILL" living shoreline design now approved by the United States Army Corps of Engineers could very well be a transferable design. Without any fill/added sand, it would be less expensive than the traditional living shoreline designs. It may well be best suited for other coastal areas with high wave activity where the likelihood of fill/sand washout is great.

- Next Steps: Outline what steps, if any, will be taken in the future to sustain and/or build on the results of this project. Include information about future funding you are pursuing or have secured for the next steps of this project (e.g., coming back to NCRC or ECRF as a pipeline project, secured state funding for next phase of project, etc.).
 - Next steps will certainly be annual calls for MIPO & MIFD resident plant maintenance volunteers. See Photo 5 - Willing workers digging in 12 new bushes.
 - Some members of the original MIFD Shoreline Road Protection Task Force have continued to track and record the coastal erosion between the community's threatened road and the shoreline. This data will be shared with the MIFD Board post coastal storms and high tidal activity events. See photo 8 – Erosion evidence is seen in the growing gap between the lawn and a pipe set by MICO on their land.
 - At this time, because of MICO's refusal to give permission to access the project site, there are no plans to pursue funding to finish the permitting or seek grants for implementation of the design plans.

5. Project Documents and Data. Include in your final programmatic report, via the Uploads section of this task, the following documentation, where applicable:

Photos: Provide 2-10 representative photos from the project. Photos need to have a minimum resolution of 300 dpi; **For each uploaded photo, provide the file name, a photo credit, and suggested caption. Example — Photo1_ErodedShore, John Smith, NFWF. Photo of the current eroded area to be addressed by plantings.**

- *Photo 1_Switchgrass Volunteer Planters, Tommy Thomason, MIPOA Board Member and MIFD resident. MIPOA & MIFD residents plant 30 initial bushes on project site upland on October 22, 2021.*
- *Photo 2_Collaborate, Kristin Foster, Project Chair. 7.26.23 Cate Moffet, MIFD & Williams Mystic Intern Jenna measure offshore spartina grasses in floating bio-mat.*
- *Photo3_Plant Volunteers, Hong Xu, MIFD Task Force, Weeding work!*
- *Photo4_Visualizing Erosion, Kit Hartford, MIFD Task Force, Rod Cook, MIFD Task Force shows erosion line in sand, 9.9.23*
- *Photo5_Willing workers, Hong Xu, MIFD Task Force, Digging in 12 new MIFD bushes, 9.30.25*
- *Photo6_Planting Day, Ricardo Kleinbaum, MIFD resident, Donated 12 transplants, 4.12.23*
- *Photo7_Post Storm, Kristin Foster, Chair, 29' remain between road & shore, 1.13.24*
- *Photo8_Erosion evidence, Rod Cook's Marsh Protection signs above MICO's pipe show widening gap at lawn's edge, 7.5.25*

- Report Publications and Deliverables: Please upload any publications, Power Point (or other) presentations, brochures, videos, outreach documents press releases, media coverage, and any project deliverables per the terms of your grant agreement.

- Presentations:
- UCONN Climate Corps Project for Our Site: <https://climate.uconn.edu/climate-corps/projects/town-projects/Stonington/> "Shoreline Restoration Solutions for Mason's Island", by UCONN Engineering student Mia Jordon, 2021
- Emerald Tutu Coastal Resilience Project link to Masons Island Project Sister Test Site. <https://emerald-tutu.com/floating-wetland-deployment-locations/mason'sisland>
- Shoreline Road Protection Task Force Report, Tom Cooke, MIFD Secretary, May 2022
- MIFD Annual Members Meeting Shoreline Road Protection Task Force Report, May 2024
- MIFD Shoreline Community Q & A by GZA, Rob Christian & Christie Williams, MIFD Task Force, 5.22.24
- MIFD Annual Members Meeting Shoreline Road Protection Task Force Report, May 2025

Press Releases: All were published in the regional newspaper, The Day, in New London, CT:

- The DAY article: 11.30.22 Small Steps can mean big results for climate
- The DAY article: 4.9.2023 FLOODING THREATS ARE INCREASING
- The Day article: 11.8.2022 Can a tutu save Masons Island from flooding?
- The Day article: 11.10.2023 Project aims at protecting Masons Island
- The Day article 10.28.2023 Emerald Tutus
- The Day article 6.9.2022 Stonington Gets Federal Coastal Resiliency Grant

Outreach Documents Emailed to MIPOA members:

- Request Volunteers to plant more bushes, Kristin Foster, Chair, 9.30.25
- MIPOA Update post two storms, Bill Pryor, MIPOA President, 1.16.2024
- MIPOA News of Tutu #2 & NFWF Grant Increase, Christie Williams & Kristin Foster, MIFD T.Force, 8.4.2023
- Announcement: Community Ed Session, Rob Christian & Christie Williams, MIFD T. Force, 5.13.2023
- Shoreline Protection Project Wins ECRF Grant, 6.6.2022

- Monitoring Data and Project Documentation (Restoration Implementation projects ONLY): Please confirm that you have uploaded monitoring data and supporting documentation (e.g., update design plans and/or as built designs, monitoring plans, project footprint files, GIS data, baseline/post-construction monitoring data) to NFWF's [Coastal Resilience Open Data Platform](#), per the requirements of data sharing provisions in your grant agreement with NFWF

Yes, I certify that I have uploaded all monitoring data and project documentation to the Open Data Platform
 N/A, this requirement is not applicable to my grant and please include brief explanation.
 No, I have not uploaded all monitoring data and project documentation and include a brief explanation.

NA: This grant was for design plans and amended to include permitting of those plans. This was not a restoration or implementation project.

POSTING OF FINAL REPORT: *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as "PROTECTED" and provide an explanation and complete citation to the statutory or regulatory source for such protection.*

NFWF Subrecipient certifies that:

- The project has been completed successfully per the requirements of the grant agreement and as reflected in the final programmatic report submitted to NFWF.
- All financial and programmatic deliverables including the required spatial data (if applicable) have been delivered to NFWF.
- All matching/cost-share contributions relating to this grant have been achieved (if applicable).
- NFWF Subrecipient charged NFWF only for actual expenditures, including their final and applicable indirect costs. Documentation of any changes in NICRA rates have been provided in a timely manner and will be subject to reconciliation before approval of Final Financial Report.
- All costs incurred for this project have been paid in full.
- NFWF is under no obligation to make any payment to the NFWF Subrecipient in excess of the amount identified in the grant agreement.
- During the administration of this grant, no fraud, waste, or mismanagement has occurred in carrying out the terms of the grant agreement.

NFWF Subrecipient acknowledges:

- NFWF Subrecipient keeps all financial, programmatic records including supporting documentation, records for non-expendable property, real property/acquisition, National Environmental Policy Act (NEPA) records, and audits for the record retention period set forth in the NFWF grant agreement or the Subrecipient's record retention policy, whichever is longer.
- NFWF, the funding source(s), the relevant federal agency's Inspector General, and/or the Comptroller General of the United States have the right to audit the project after the end of the grant in accordance with the terms and conditions of the grant agreement.
- NFWF Subrecipient understands that the closure of the grant does not suspend any of the NFWF Subrecipient's obligations set forth in the grant agreement.