

SNEP Watershed Grants

Final Progress Report

11/2/23

Project Name: Tiverton Fogland Beach and Conservation Area Phase 1 Resiliency Project

Subaward Number: SNEPWG21-8-TIV

Subaward Period: December 1, 2021- December 31, 2023

Subawardee Organization: Town of Tiverton

Contact Person: Brian Janes, 401.624.7636, bajanes77@gmail.com

Reporting Period: July 1, 2023- October 31, 2023

Progress Report #5 (#1 Not needed; no work completed) Final Report

2. Project Report Narrative:

This project comprised a design process to bring a completed 60% design to 100% and create all necessary documentation for the Town of Tiverton to solicit competitive bids to implement the work. All permitting activities for the project were also included in this task.

The project area is the 30 acre Fogland Beach and Conservation Area, an estuarine complex of recreational beach, dunes, saltwater marsh and coastal wetlands. It is bisected by Three Rod Way which runs west off of Fogland Road in the southern part of Tiverton. The project area borders the Sakonnet River to the north and south and provides a link to Fogland Point, an area comprised of about 20 summer and year-round homes.

The project area is highly vulnerable to storm surges as further complicated by rising sea level. Storm water runoff from neighboring streets and properties regularly floods the entry point to the area and creates standing pools of fresh water, complete with bacteria, sediment and increased nutrient levels. A large area of impounded fresh water has led to a significant stand of Phragmites that outcompetes native flora.

The project goals were to complete designs that would help control and mitigate local storm water runoff to reduce the fresh water inflow to the project area. Additionally, the project seeks to control and redirect impounded and accumulated fresh water that would reduce roadway flooding, restore salt marsh health and restore natural conditions to help control invasive plant encroachment. A related element of the project is the creation and planting of additional dunes along the beach to help stabilize the area during storm events and flood tides.

2A. Results and Progress to Date:

Following endorsement of the Standard Operating Procedures Approval Plan for Fogland Beach Improvements on January 5, 2022 work began on due diligence, including wetland delineation, completion of test pits, and confirmation of elevations. GZA Engineering, the Tiverton Town Administrator, Tiverton Director of Public Works, members of the Tiverton Open Space Commission and

Tiverton Recreation Commission, neighbors of the project site and staff from Save The Bay reviewed and contributed to the design process. Much discussion and exploration of alternatives was devoted to the best method of achieving drainage of the roadway as well as providing an outlet for impounded water on the south side of the road. Ultimately, all parties agreed that an open “trench drain” would serve the purpose best, while also allowing a hydrologic connection between the wetlands on either side of the road. Designs for the various infiltration swales and BMPs were reviewed and refined to insure maximum impact along with ease of maintenance. The final design was completed and submitted for CRMC review and approval on May 31, 2022. CRMC issued an Assent for the project on December 5, 2022. GZA completed the Technical Specifications package early in 2023 following which Tiverton developed bid documents and requested proposals. Simultaneously, the town applied for an implementation grant through Rhode Island Infrastructure Bank’s Municipal Resiliency Program. In late July 2023 the grant was approved to fund 75% of the total budget of approximately \$300,000.

Tiverton received two bids from contractors in early summer and began discussion of funding strategies as both bids were in excess of budgeted funds. In September Tiverton requested an amended grant award from RIIB to reflect the increased costs of the bids received. During the same time Tiverton was permitted to utilize \$3900 of unexpended funds from the SNEP grant to purchase materials to be used during the upcoming construction phase.

This final report period consisted of finalizing the RFP to prepare for a competitive construction bidding process, negotiations and request for an amended construction grant, and the aforementioned purchase of construction materials (straw wattles and stakes).

2B. Next Steps & Recommendations

As both bids for project implementation came back above budget, the Town of Tiverton requested that Rhode Island Infrastructure Bank amend the grant award to increase funding to help offset the approximate \$20,000 shortfall. This request has been approved and the town expects to receive amended grant agreements shortly, with construction beginning by December 2023. The goal is to complete construction before the 2024 beach season. Following construction activities, Save The Bay will conduct further marsh restoration work to restore the natural hydrology to the area and improve the health of the salt marsh.

2C. Compliance

The SOP/QAPP package was approved on January 5, 2022. The field portion of the project as contained therein has been completed. CRMC permitting was submitted and is now approved.

2D. Project Partners

Town of Tiverton: Provided employee time for design consultation, field work during due diligence period, and supervision, labor and equipment for additional sand dune creation. Numerous residents contributed to design discussion as well as volunteered for “dune grass planting parties” each spring.

Save The Bay: Staff and volunteer time to review stormwater design elements and plans. Also, provided oversight of dune creation plans and installation and participated in outreach.

CRMC: Provided funds for the completed 60% design process. Have committed additional grant funds for salt marsh restoration work following construction of Stormwater Management Infrastructure.

Tiverton Open Space and Recreation Commissions: Volunteer town commissions whose members have provided on site, logistical and design review services as needed to support the process.

RI Infrastructure Bank: Has awarded the Town of Tiverton a grant to fund 75% of the approximate \$300,000 construction work. Subsequently, they have approved amending the grant to increase the award by approximately \$20,000.

2E. Volunteer and Community Involvement

Concurrent with the design work, Tiverton employees, local volunteers and Save The Bay staff worked together each spring to create new, and expand existing, dunes along the south side of Three Rod Way on the beach portion of the premises. A major storm in January 2022 demonstrated the effectiveness of the newer dunes—where they did not exist the storm surge flooded and crossed Three Rod Way but the areas protected by these low dunes restricted the surge to the lowest portions of the beach.

Approximately 130 feet of additional dunes were created using sand cleared from the roadway by Tiverton DPW. In both 2022 and 2023 volunteers planted about 50 bundles of beach grass plugs to stabilize the new dunes. They also staked and roped the newly planted areas and have monitored that area since.

Additional new dune areas were created and planted in March 2023 with the help of approximately 40 volunteers. A happy note is that as additional dunes have been created, the volume of sand on the roadway available for new dunes is diminishing.

2F. Outreach and Communications

In March 2022 Wenley Ferguson (Save The Bay) and Brian Janes (Tiverton Open Space Commission) offered an on-line presentation as part of the Clean Ocean Access speakers series entitled “Improving Climate Resilience at Fogland Beach. This talk described current status, work completed to date, and future plans for the area. Approximately 65 people participated including a number of administrators from other RI towns, interested members of the general public, and a number of neighbors of the project area. The latter group enthusiastically endorsed the project and also volunteered for the subsequent beach grass planting of the new dunes.

The local newspaper (Sakonnet Times) carried an article reporting on the dune creation project as well as the overall goals of building future climate resilience at Fogland.

3. Project Budget Report

3A.

Summary Budget Table 1: Expenditures by Federal Cost Category

Budget Category	Total Budgeted Funds	Total Budgeted Match	Grant Funds Expended This Period	Grant Funds Expended Cumulative	Match Funds Expended This Period	Match Funds Expended Cumulative	Match Source
Personnel	2891	2891	0	0	0	2934	In Kind
Fringe	1630	1630	0	0	0	1655	In Kind

Travel	0	0	0	0	0	0	
Equipment	0	0	0	0	0	0	
Supplies	600	600	0	0	0	312	Cash
Contracts	34700	0	3900	34700	0	0	
Other	7040	7040	0	0	0	7312	In Kind
Total Direct	46861	12161	3900	34700	0	12213	
Indirect	0	0	0	0	0	0	
Total	46681	12161	3900	34700	0	12213	

Budget Narrative: The “contracts” line differs between Budgeted Funds and Actual Funds for two reasons: First, GZA required fewer project meetings than anticipated resulting in a \$2400 savings over budget. Second, the Wetland Delineation work (\$1500) was removed from the GZA contract and completed by staff at Save The Bay. Grantee neglected to submit a request for reimbursement in a timely manner so it is not shown in the project expenditures but was paid by the Town of Tiverton.

Summary Budget Table 2: Expenditures by Project Task (Grant Funds Only)

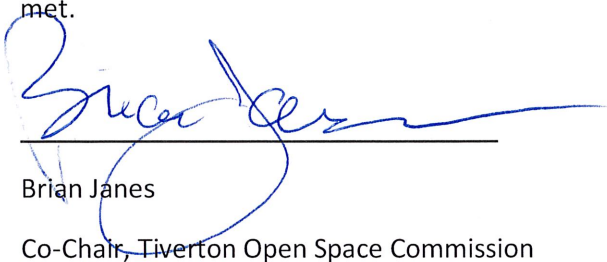
Budget Category	Budgeted Grant Funds	Expended Progress Report Period 1	Expended Progress Report Period 2	Expended Progress Report Period 3	Expended Progress Report Period 4	Expended Progress Report Period 5	Actual Expended to Date
Task 1 – Project Management							
Task 2 - Engineering	34700	0	19300	9000	2500		30800
Task 3 - Construction						3900	3900
Etc.							
Total	34700	0	19300	9000	2500	3900	34700

4. Supporting Materials

- a. Final Reimbursement Invoice from Town with Winnwater Invoice & Tiverton Treasurer payment check stub. (separate pdf)
- b. CRMC Assent Application Package including Final Design Drawings (separate pdf)
- c. Technical Specifications Package (separate pdf)
- d. Photos of site showing storm water flooding, storm damage and dune grass planting.
- e. Clean Ocean Access announcement
- f. Sakonnet Times article on dune building activity

5. Certification

The undersigned verifies that the descriptions of activities and expenditures in this progress report are accurate to the best of my knowledge; and that the activities were conducted in agreement with the grant contract. I also understand that matching fund levels established in the grant contract must be met.

A handwritten signature in blue ink, appearing to read "Brian Janes", is written over a horizontal line. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Brian Janes

Co-Chair, Tiverton Open Space Commission

November 2, 2023

Town of Tiverton

Volunteers Planting Beach Grass Plugs in New Dunes on Fogland Beach April 2022



Aftermath of Storm January 17, 2022 Fogland Beach



Flooding at beginning of Three Rod Way



Storm Debris across road where no dunes exist



Showing how dunes prevented wash over of road



More evidence of protection offered by dunes



LAND^{to}SEA

SPEAKER SERIES



VIRTUAL ZOOM EVENT

IMPROVING CLIMATE RESILIENCE AT FOGLAND BEACH

MARCH 8, 6:30 - 7:30 PM EST



with
WENLEY FERGUSON
of Save the Bay



with
BRIAN JANES
of Tiverton Open Space Commission

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BY TED HAYES

Building a beach in Tiverton

Fogland Beach restoration effort underway; larger project will follow



(<https://epsilon.creativecirclecdn.com/eastbayri/original/20220422-150430-fogland%20beach%20planting-1.jpg>)

Wenley Ferguson of Save the Bay (middle) oversees beach grass planting at Fogland Beach last Friday.

ICHARD W. DIONNE JR.



Posted Friday, April 22, 2022 3:06 pm

One blade of sea grass at a time, Fogland Beach's sand dunes are growing.

A group of about 30 volunteers spent a sunny afternoon last Thursday plugging native grasses into sand berms deposited on the beach by the Department of Public Works. The goal of the piles, scraped up from along sandy Three Rod Way, is to reduce erosion caused by wind, storms and sea level rise, which could otherwise strip vulnerable portions of the beach and potentially cut the far west end off from the mainland.

For years, the popular barrier beach was nearly flat, its natural dunes stripped by the steady winds that buffet it year-round. First put in about four years ago by the town's DPW, Open Space and Land Preservation Commission, Recreation Department and Save The Bay, the berms have been taking well and here and there, large clumps of established grasses are thriving.

The commission's Brian Janes said it's clear that over the three years he's been involved with the project, the efforts are working. He said the dunes appear to be preventing sand intrusion onto Three Rod Way and salt marshes to the north, which are also vulnerable.

"The reason we only did more (berm) was there was less sand on the road, and there's less sand on the road because of the dunes, he said. "Every place where there was a break in the dunes," the beach was scoured, he said.

With any luck, he said, the grasses will continue to take and over time, the dunes will grow.

Big plans ahead

As they work to reshape Fogland, town officials are looking toward a major new project that they hope will further protect the fragile areas from erosion and other impacts from the surrounding area.

Tiverton recently received a \$245,000 grant from the Rhode Island Infrastructure Bank to establish a municipal resilience program in Tiverton. It is currently in the design phase and must still earn approval from the Coastal Resources Management Council, but Janes is optimistic that the work will commence after the busy summer beach season.

The project seeks to mitigate stormwater runoff along Fogland Road and Three Rod Way, restore natural hydrology to seven-plus acres of Fogland marsh, relocate infrastructure, and continue the dune-building.

"Tiverton is blessed with over 10 miles of tidal shoreline along the Sakonnet River and hosts two significant salt marsh ecosystems" at Sapowet and Fogland marshes," Tiverton Town Council president Denise DeMedeiros wrote in the town's grant application. "This project addresses a number of long-standing problems associated with Fogland Beach.

Among the planned work:

Tiverton will create natural collection structures to collect and direct fresh water runoff from Fogland Road, which leads to the beginning of Three Rod Way.

"This water carries road pollution, as well as elevated levels of nutrients from surrounding agricultural fields. These interventions will reduce the runoff ... entering the sensitive salt marsh area. Filtration structures will reduce the runoff volume and allow for natural filtration of the water collected," and swales will also divert runoff.

In addition, the abandoned "skating pond" to the south of Three Rod Way, built in the 1960s, will be cleared of invasive phragmites stands. Those stands of invasive grasses are prime habitat for breeding mosquitoes, and the plan is to grub and regrade the area to encourage standing water to drain to the north and into the salt marsh via a trench drain across Three Rod Way.

"This drain will also capture any storm water that may still accumulate on the road," DeMedeiros wrote.

Dune building will continue. And finally, the existing ticket shack at the beach entrance, currently located in the most flood-prone section of the road, will be relocated.

The project will be carried out by the town's recreation and open space commissions, with assistance from Save The Bay and the DPW.

Though the town is required to match 25 percent of the total project cost, the "DPW will provide in-kind services wherever possible," and Save The Bay has applied to the CRMC for additional funding.

"Nearly all of the proposed interventions are nature-based solutions that utilize green infrastructure and natural processes to achieve results," DeMedeiros wrote. "All of the work will improve the area's resiliency for the future and help ameliorate the near-term effects of sea level rise."

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