

## Municipal Vulnerability Preparedness Program Action Grant Case Study

**Municipality:** Edgartown  
**Project Title:** Edgartown Climate Change Vulnerability Assessment and Adaptation Plan  
**Award Year (FY):** 2019  
**Grant Award: \$** \$90,035  
**Match: \$** \$31,300  
**Match Source:** In-Kind + Cash  
**One or Two Year Project:** One (plus COVID-19 extension)  
**Municipal Department Leading Project:** Planning  
**Project Website URL:**

### Community Overview:

- What is the population size of your community and where is it located?
- Do you have any [Environmental Justice](#) or other Climate Vulnerable communities? (Think about both those who live and work in your town.)
- Other unique traits of your municipality like who the top employers are, geography, history, etc.

### Project Description and Goals:

- Where was the project located? [Edgartown, MA](#)
- What climate change impacts did the project address? [Sea level rise and coastal storms](#)
- What were the specific goals and tasks of the project as stated in your application?
  - [conduct a detailed vulnerability and risk assessment of municipal infrastructure, and natural resources](#)
  - [develop targeted strategies aimed at reducing risks from flooding, increased storm intensity, sea level rise and storm surge](#)
- Did your project meet the goals set forth in your application in terms of:
  - Employing nature-based solutions
    - [Yes, roadway adaptations on Chappaquiddick side of Chappy Ferry included green infrastructure side-slope treatments and the report provided recommendations to support beach and dune nourishment as well as wetlands migration. Some district level recommendations for the downtown waterfront area incorporated nature based solutions such as landscaped berms, terraced wetlands transition areas.](#)
  - Improving equitable outcomes for and fostering strong partnerships with EJ and other Climate Vulnerable Populations
    - [EDG TO COMPLETE](#)
  - Providing regional benefits
    - [Yes, the vulnerability study and adaptation recommendations are a model for municipal and quasi-private \(Chappy Ferry is privately leased from town\) assessment and collaboration, as well as an example of](#)

planning for other downtown waterfront areas. Specific focus on vulnerable downtown waterfront district has implications for other Cape and Islands commercial waterfront districts.

- Implementing the public involvement and community engagement plan set forth in your application
  - Public involvement and community engagement was achieved through a series of remote committee and public meetings. Further significant outreach and engagement specific to the Chappy Ferry included direct presentations to the Town’s Memorial Wharf Committee and the Chappaquiddick Island Association.
- Finishing the project on time
  - The project was completed within the COVID-19 Amended Extension for FY19 grants.

**Results and Deliverables:**

- Describe, and quantify (where possible) project results (e.g. square footage of habitat restored or created, increase in tree canopy coverage, etc.). Report out on the metrics outlined in your application.

Potential vulnerability and exposure of structures and roadways in Edgartown	Present Day		2030		2050		2070	
	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent
<b>Structures (Total 7329)</b>								
Nuisance Flooding (MHHW)	4	0.1%	23	0.3%	76	1.0%	173	2.4%
Storm Surge (10% Chance)	336	4.6%	486	6.6%	757	10.3%	1001	13.7%
Storm Surge (1% Chance)	587	8.0%	811	11.1%	1107	15.1%	1491	20.3%
<b>Roadways (Total 282 miles)</b>								
Nuisance Flooding (MHHW)	3.07	1.1%	6.34	2.2%	10.93	3.9%	17.97	6.4%
Storm Surge (10% Chance)	24.9	8.8%	33.1	11.7%	49.4	17.5%	63.8	22.6%
Storm Surge (1% Chance)	38.3	13.6%	51.1	18.1%	70.7	25.1%	85.3	30.2%

- Overall, Edgartown benefits from significant elevation, such that much of the Town’s infrastructure, including emergency services, Town Hall, the school, the library, the Water Department, and the multi-departmental complex on Meetinghouse Way are not vulnerable to storm surge even through 2070. The above screening level assessment summary and the detailed vulnerability assessment does indicate increasing vulnerability, especially for low-lying roads and the downtown waterfront area. The detailed vulnerability assessment also confirmed that the Chappy Ferry and other downtown waterfront assets are especially vulnerable. Although some sewer pump stations are located in vulnerable areas, the Town’s initiatives to seal, waterproof and relocate pump control systems to higher ground have proven effective at reducing vulnerability in this system.

- Potential solutions ranged from general strategies for assets and natural resources, to recommended changes to local regulations in order to increase community resilience, to specific recommendations for Town assets (downtown waterfront parking area, Chappy Ferry, Harbormaster Facility), to planning/vision level district solutions for Snug Harbor. Low lying roads are also a top priority for the Town.
- Provide a brief summary of project deliverables with web links, if available.
  - The primary deliverable is the Edgartown Climate Change Vulnerability Assessment and Adaptation Plan report, which summarizes the vulnerability assessment and recommended adaptation actions. Other project deliverables include an asset geodatabase with vulnerability and risk assessment results.

### **Lessons Learned:**

- What lessons were learned as a result of the project? Focus on both the technical matter of the project and process-oriented lessons learned.
  - EDG TO COMPLETE
- What is the best way for other communities to learn from your project/process?
  - EDG TO COMPLETE

### **Partners and Other Support:**

- Include a list of all project partners and describe their role in supporting/assisting in the project.
  - Chappy Ferry – private stakeholder

### **Project Photos:**

- In your electronic submission of this report, please attach (as .jpg or .png) a few high-resolution (at least 300 pixels per inch) representative photos of the project. Photos should not show persons who can be easily identified, and avoid inclusion of any copyrighted, trademarked, or branded logos in the images. MVP may use these images on its website or other promotional purposes, so please also let us know if there is someone who should receive credit for taking the photo.
  - See attached