Municipal Vulnerability Preparedness Program Action Grant Case Study

Municipality: Town Of Sandwich
Project Title: Communicating the Local Benefits of a Resilient Coast
Grant Award: $ 46,795
Match: $ 17,425

Community Overview:

The Town will develop outreach and educational materials, including an ArcGIS StoryMap, printed materials and a 7th-8th grade STEM curriculum unit to communicate climate change vulnerabilities and the benefits that the Town's ongoing coastal resilience initiatives provide to the community as a whole.

Description of Climate Impact:

The entire coastal area of Sandwich, which is approximately 1-2miles from Cape Cod Bay, is vulnerable to flooding, storm surge and coastal erosion due to increased frequency and ferocity of coastal storms (nor'easters and hurricanes) and sea level rise. Larger rain events (4" and higher) have become more frequent as well as larger and longer high tides. These perils have increased in frequency and duration in the past 25 years and are expected to increase exponentially in the next 50 & 100 years. A significant amount of municipal infrastructure, roads, buildings, etc. currently exist within this coastal area; not to mention many private homes and roadways.

Project Goals:

The project goals were divided into individual tasks. Task #1) Coordination with Town Staff and Woods Hole Group (WHG) Internal Meetings. Task #2) Modified Coastal Modeling. Task #3) Coastal Features Economic Analysis. Task #4) Development of an ESRI ArcGIS Story Map. Task #5) Development of a curriculum unit for Sandwich Public Schools. Task #6) Create Materials for Education and Public Outreach.

Approach and Result:

The project team met frequently (at least twice a month) both in person and later on virtually due to the COVID-19 Pandemic on multiple tasks until the work was completed. As a result, all task deliverable were completed by June 30, 2020. The deliverables include: 1.) A record of all meetings. 2.) Technical Memo of a new modified flood risk model. 3.) Technical memo on coastal features economic analysis. 4.) A new ArcGIS Story Map. 5.) A new 7th & 8th grade STEM curriculum unit for Sandwich High School. 6.) Materials for education and public outreach including a tri-fold brochure. All these items may be accessed by way of the Town of Sandwich's website. www.sandwichmass.org and go to the Natural Resources Dept. webpages where we

have created a new section entitled Climate Change and Coastal Resiliency which will be where the public can access all information regarding the Town's Coastal Resiliency Efforts and links to various climate change websites and information.

Lessons Learned:
This was our 2nd MVP Action Grant project so the lessons learned from this project were mainly the reinforcement of lessons learned in the previous MVP Grants. They include: 1.) How important it is to pick the correct MVP provider for your project. WHG is known for its professionalism as well as technical expertise but they also have worked with the Town on many coastal projects and have intimate knowledge of the town which makes it much easier to communicate with them in general. 2.) How important it is to pick the correct members of your 'team'. The team we picked for this project are all very good at working independently as well as in a group and meeting deadlines. This became particularly important as the COVID-19 pandemic hit and we were all working remotely. 3.) The monthly reports were very helpful to document our Team's progress, keep us 'on track' and we also used the document to clarify the next month's work that was needed throughout the project.

Partners and Other Support:
Woods Hole Group: Joe Famely- lead engineer/scientist; Brittany Hoffnagle- curriculum and Story Map developer.
Town of Sandwich Staff: David DeConto-Natural Resources Director-team leader; Josh Wrigley-Asst. Director-Conservation Agent; Maribeth -Engineering Dept.-GIS Tech.-Analyst
Sandwich High School: Betty Hyde-McGuire- 7th/8th Grade-Science Curriculum Director; Amy Ferreira- 7th/8th Grade Science Teacher