



## Shore and Harbor Planning Grants

### Town of Chebeague Island

#### *Chebeague Stone Wharf Resiliency Planning and Design Project (Fiscal Year 2023, project awarded 2022)*

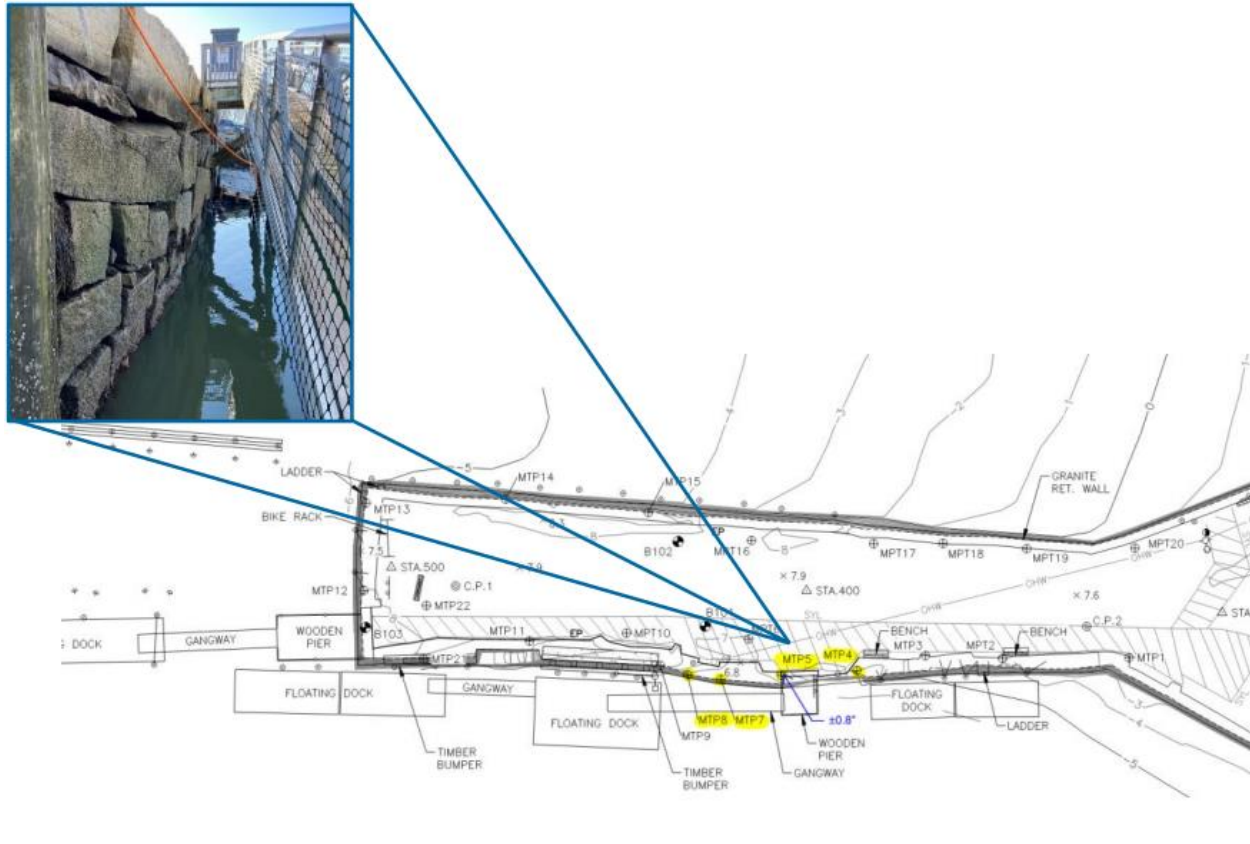
*“This project helped us understand the overall cost of resilience adaptations and gave us a plan for short- and long-term actions we can take.” - Viktoria Wood, Chebeague Island Town Administrator*



*Flooding at the Chebeague Island Stone Wharf 2024 as seen in Chebeague Island’s Selectboard presentation October 2024.*

#### Project Description

Chebeague Island used Shore and Harbor Planning Grant funding to develop an understanding of the total cost and a process for raising and increasing the resilience of the Stone Wharf, which is the primary ferry landing for the town. The existing wharf is vulnerable to flooding, and the town’s main concern is how to adapt it to endure the effects of sea level rise. The town partnered with the engineering firms Woods Hole Group and Weston & Sampson to integrate the three crucial aspects of the project: the wharf, the access road, and nearby land for a potential parking lot and/or new wharf.



*Post Storm Visualization of the Stone Wharf 2024 as seen in Chebeague Island's Selectboard presentation October 2024.*

## Project Results

The town developed flood inundation models for the Stone Wharf area and calculated the impacts of storm conditions and wave patterns. Three designs were created for the wharf improvements, reflecting the three-phased approach of the project. Phase A includes improvements that could be implemented in the near term with special attention on decreasing use conflicts at the wharf. Phase B includes the addition of a dedicated parking lot. Phase C includes the addition of a new pier that extends from the Phase B parking lot. Surveying, land acquisition, and permitting will occur throughout the entire process.

By collecting and analyzing data related to wave patterns and impacts, the town got a clear understanding of what is needed to increase the resilience of the wharf to sea level rise and future storm surge conditions. The project resulted in detailed wave impact analyses and a plan for a phased approach for long-term adaptation. The town is now working to get the wharf resilience design to 30% completion and address some short-term road safety concerns while planning and fundraising for additional future improvements in Phases B & C.



*The existing Stone Wharf and visualizations of the redesigned structure as seen in Chebeague Island's Selectboard presentation October 2024.*



*Phases A-C of the Stone Wharf Improvement Plan as seen in Chebeague Island's Selectboard presentation October 2024.*

## Future Plans

Chebeague Island is looking for funding to hire an engineering firm to take the results of this project and work towards reaching 30% of the final design for the wharf improvements. At the same time, the town will be working on Phase A of the improvement plan by pursuing funding and accomplishing short-term goals related to parking, traffic flow, and pedestrian safety.

## Lessons Learned

To avoid strain on taxpayers, the town is breaking the wharf improvement process into three phases. The amount of work involved in achieving the full project will require time and additional funding. The town is continuing to work with on moving the project forward and identifying funding for future phases. This project helped the town realize that they can successfully compete for and manage grants.

***Thanks to Viktoria Wood for helping to prepare this summary.***

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