



Town of Damariscotta Downtown Damariscotta Coastal Hazards & Flood Resiliency Planning

A community process moves from data, public planning, and preliminary engineering, to implementation

“Prior to the County’s 2012 flood hazard report and last year’s downtown flood resiliency report, most downtown business and most of the community at large were unaware of the vulnerability of our village business district due to sea level rise and storm surge. As a result of these two studies and the subsequent community outreach efforts, there is widespread awareness of this issue and a growing consensus for action to implement flood protection measures.”



PARTNERS

Town of Damariscotta, Lincoln County Regional Planning Commission, Maine Geological Survey, Maine Department of Agriculture, Conservation and Forestry, NOAA, and Midcoast Economic Development District.

ISSUE AREA

Assist municipalities to define Sea Level Rise Project— Main Street Damariscotta

1. The Lincoln County Regional Planning Commission was awarded a Coastal Community Grant to work with Maine Geological Survey in a study of 450 miles of coastline in Maine's mid-coast region, including Damariscotta, to evaluate the effect of various sea level rise scenarios. The 2013 study suggested that Main Street in Damariscotta and the town's municipal parking lot may be inundated under future conditions. As the primary commercial area of the town, the routine inundation of Main Street could have devastating effects on quality of life and may reduce the town's tax base.

2. The Town of Damariscotta, through its Waterfront Planning Committee, secured a 2014 Coastal Community Grant and subsequently contracted with Milone & MacBroom, Inc. to study the effects of sea level rise and develop options for protecting the town. This Flood Resiliency Project essentially picked up where the Coastal Hazard Study left off by addressing historic downtown area's vulnerability to flooding.

The study was intended to answer the following question:

Are there adaptation techniques that can be implemented to make downtown buildings and public infrastructure more resilient in the face of existing flooding hazards and potential future hazards created by rising sea levels?

2014 – 2015 APPROACH

The goals of the 2014 CCG project were to determine the location and elevation of structures that are vulnerable to coastal flooding, including windows, doors, and other openings in existing buildings that may allow for intrusion of floodwaters; establish a sea level rise scenario and elevation for the town's use in planning improvements; and identify opportunities and recommend improvements for protecting structures as well as the town's parking lot from flooding.

The Town's Waterfront Committee and the CCG Oversight Committee in 2014 and 2015 addressed a range of topics including the reconstruction of the parking lot to incorporate protection from sea level rise and storm surge, celebration of the rich maritime history of this region and the construction of amenities that will benefit residents and visitors alike. The Waterfront Committee's work spanned more than a year and a half and included multiple public meetings including two open houses, a citizen/business survey, meetings with several State and Federal agencies and considerable research and review of previous planning studies and other resources.

2015 RESULTS

Among many recommendations, the Waterfront Committee in August 2015 recommended to the Board of Selectmen that the downtown be protected from an increase of three feet in sea level during a storm equivalent to the February 1978 storm of record through the creation of a seawall sufficient to allow FEMA to remove the downtown from the mapped special flood hazard area (aka "100 year floodplain").

NEXT STEPS AND OPPORTUNITIES

Over the past few years, Town staff pursued several grant funding opportunities to help move forward on the initial phases of this project.

In 2019, the Town contracted with Wright-Pierce Engineers to evaluate the parking lot, underground utility and storm drainage conditions, and complete a geotechnical investigation. Due to limited availability of funds, the Town decided to pursue all aspects of the project except flood protection and commissioned WP to prepare required construction drawings and specifications based on maintaining the approximate existing elevation of the parking lot.

Prior to bidding out the above project, the Town received a Financial Assistance Award from the U.S. Economic Development Administration (EDA) for funding the construction of the proposed improvements, including flood damage repairs and mitigation. The award was funded under EDA's FY 2018 Disaster Supplemental through the Supplemental Appropriations for Disaster Relief Act, FY2018. The Town subsequently decided to expand the project to include the flood resiliency component (the public restroom is currently out to bid and will be constructed separately though partly funded by EDA).

This 2020 project has multiple objectives. The Town seeks to construct new flood protection facilities that consider the current 100-year tidal floodplain and potential Sea Level Rise scenarios over a 50-year period. In addition, the project will include a reconstructed parking lot, above- and below-ground infrastructure including coordination with utilities and installation of Wi-Fi or broadband service, pedestrian access, redeveloped waterfront park, an informational kiosk and wayfinding signs.

Damariscotta's preferred flood resiliency approach consists of four components:

1. Design and install passive flood protection for the parking lot, the boat ramp and a substantial portion of the downtown. The design should account for the existing 100-year floodplain in addition to a selected sea level rise scenario over the next 50 years with the goal of providing flood protection to elevation 12 feet or 13 feet NAVD88 depending on the results of the Phase I work. Consideration should be given for the incorporation of green infrastructure into any potential flood protection design.
2. Design flood protection along the river north of Courtyard Street while accommodating carry-in canoe access.
3. Procure a Conditional Letter of Map Revision (CLOMR) to remove the area protected by components 1, 2 and 3 from the FEMA AE Flood Zone.
4. Design and install pedestrian and recreational amenities in the area occupied by the riverfront park.

Also in 2020, the Maine Silver Jackets Team has initiated a project to provide Damariscotta with future dynamic floodplain maps that include sea level rise. The Town intends to work with the Team to ensure that, where possible, the Maine Silver Jackets modeling effort informs the engineering consulting activities (or vice versa) depending on the respective projects' timelines (for example, interpreting model outcomes and integrating outcomes into local planning efforts).

The Silver Jackets project will result in a much more detailed coastal flood model of Damariscotta which incorporates sea level rise and potential changes to floodplains. The model will be utilized to produce future floodplain maps to be overlain with building and infrastructure footprints to facilitate climate-resilient planning in Damariscotta.

As of October 2020, the Town is finalizing contracts for planning, design and environmental review services for the flood protection and parking lot improvements to include: 1) evaluation, geotechnical investigations, and feasibility studies, as necessary, and 2) design and regulatory permitting.



LESSONS LEARNED

There was significant support throughout the community to protect the downtown from flooding and sea level rise. It is apparent that the public understands the risks associated with changing sea levels and increasing severity of storms, and is supportive of the plans presented to date.

Engaged public committees, creative municipal leadership, and regular public communications has contributed to success in fund-raising and real progress toward the protection of Damariscotta's downtown and harbor.

APPLICABILITY FOR OTHER MUNICIPALITIES

Do not underestimate the intelligence of the public regarding changing climate. Present as much solid information as possible in a convincing fashion and let the public weigh in. If there is not sufficient support at the present time, it is very likely that support will grow in the near future. Develop alternative project solutions and maintain diverse set of local, state and federal partners.

ADDITIONAL INFORMATION

<https://www.lcrpc.org/coastal-projects-planning/damariscotta-waterfront-planning>

<https://www.damariscottame.com/waterfront%C2%A0committee/pages/waterfront-project-documents>

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