

Coastal Advisory Committee
Established February 2013

Problem Statement

Marshfield is a coastal community that currently experiences chronic flooding in several locations. One way to document the flooding problem is to examine the FEMA Flood Insurance payouts. Since the national flood insurance program was established in the 1970's:

Flood Insurance Claims

- 156 flood damage claims in Town of Marshfield
- 87 have been repetitive losses
- 37 have had flood insurance claims at least 3 times
- 11 claims have been for over \$100,000 in damage

Total flood insurance claims up to 2010 in Marshfield is over \$72M.

Seawalls

Marshfield has 2.4 miles of seawalls. Most of the seawalls are old, built in the 1930s and have exceeded their design life. The seawalls cost approximately \$3,000 per linear foot to replace. The Town is facing a substantial financial cost to replace the aging seawalls. To date, the seawalls have been one of the only things Marshfield has done to minimize flooding. That has been traditionally a problem that the Board of Public Works and the Dept. of Public Works have managed. The seawalls are intended to break up the energy of waves and protect the properties behind them but they were never intended to completely stop flooding.

Our consultants are projecting a 1' rise in sea level in the next 25 years. Areas that have flooded in the past will flood more frequently, and the depth of the water will be increasing. New areas that never flooded before will flood in the future. Climatologists are predicting more frequent and intense storm events. The single solution for preventing flooding in the past—seawalls—will not be as effective in the future. Other coastal management practices such as beach nourishment should be considered in the future.

Summary

The problem that the new Coastal Advisory Committee is being asked to address is the management of the Town's coastal resources in an effort to minimize loss of private property, protect the public safety, protect the public and private infrastructure, and minimize adverse impacts to the environment. This will involve adaptation measures to minimize the impacts of sea level rise, and advising Town officials on the most appropriate mitigation and adaptation strategies.

Mission Statement

The Marshfield Coastal Advisory Committee will advise the Town on sea level rise adaptation strategies that include but are not limited to protection, accommodation or retreat so as to enable sustainable living in our coastal community.

1. Proactively promote a research-based approach to making local decisions about various sea level rise adaptation strategies that include but not be limited to: flood-proofing, beach nourishment, armoring sea walls, tactical retreat and land acquisition.
2. Educate citizens on sea level rise predictions, adaptation strategies, impacts to natural resources and the potential costs associated with taking no action. This should include establishing and maintaining a web site, organizing seminars and presentations by outside experts.
3. Develop policies that will help to minimize the Town's exposure to coastal storms in an effort to protect public safety, infrastructure, natural resources and private property.
4. Evaluate the costs and benefits of various adaptation measures.
5. Perform a cost benefit analysis that analyzes the cost of new seawalls with revetments vs flood proofing structures.
6. Develop various bench mark indicators to measure sea level rise, coastal storm frequency and intensity.
7. Work with Planning, Conservation and DPW staff on long range planning for the coastal zone in an effort to obtain projections on sea level rise; to determine what areas in the coastal zone will be subject to inundation of flood waters.
8. Identify Federal, State and privately funded grant opportunities to study and plan for adaptation to sea level rise.
9. Work with neighboring South Shore communities on regional solutions for coastal infrastructure management.
10. Promote communication and collaboration among various Town boards, committees and departments on coastal management issues.
11. Meet with the Board of Selectmen twice a year to discuss progress made on meeting the committee's objectives listed above and to solicit feedback on coastal management alternatives and recommendations.

12. Meet with town staff from Planning, Conservation and DPW twice a year to discuss progress made on meeting the committee's objectives and to coordinate and communicate efforts in managing the Town's coastal zone.
13. Advise the Capital Budget Committee and Advisory Board on coastal infrastructure management expenditures recommended by the Board of Public Works.
14. Work with State legislators to support new legislation that will: (a) Provide funding sources for coastal infrastructure management and (b) provide flexibility in spending money for repairs/replacements, when needed, such as a revolving fund.