



Multi-Hazard Mitigation Plan Annual Evaluation

Town of Marshfield, MA

Presented by the Town of Marshfield PPI/CRS and LHMPD Committee

2020 | Adopted on January 25th 2021



Table of Contents

About the MHMP and Update.....	3
PPI and LHMPC Committee Members.....	5
Meeting Dates and Attendees.....	5
Update of Mitigation Activities and Action Items.....	7
Plan for Approval and Implementation.....	19
Table A: Typed Minutes.....	20

About the MHMP and Update

In 2017, the Town of Marshfield embarked on the third iteration of Hazard Mitigation Plan for the Town of Marshfield; previous plans were approved by FEMA in 2005 and 2013. The Local Hazard Mitigation Planning Committee (LHMPC), which had a large role in the development of this Multi-Hazard Mitigation Plan Update, consists of various Town officials and was able to provide critical local knowledge of the community to facilitate update of this Plan.

The LHMPC was formed by the Town Administrator, and includes the Chiefs of the Police and Fire Departments, the Town Engineer and other members of the Department of Public Works, the Town Planner, the Conservation Agent, and the Harbor Master. Members of the Program for Public Information (PPI) Committee also attended all LHMPC working meetings and actively participated in the hazard mitigation planning process.

What is a Multi-Hazard Mitigation Plan

The Federal Emergency Management Agency (FEMA) defines hazard mitigation as “any sustained action taken to reduce or eliminate the long-term risk to human life and property from (natural) hazards”, such as floods, hurricanes, winter storms, tornadoes, earthquakes, etc. Hazard mitigation may include both structural measures, such as flood control structures, and nonstructural measures, such as regulations and bylaws, to prevent flooding. Local planning and mitigation efforts allow communities to reduce or eliminate the loss of life and property damage resulting from natural hazards. The Town of Marshfield produced this Updated Multi-Hazard Mitigation Plan for the entire Town with the goal of providing sustained actions to reduce or eliminate risk to human life and property damage from a natural hazard event. Objectives of this plan are as follows:

- Describe the planning process;
- Identify relevant background information about the Town, including geography, climate, land use, and infrastructure;
- Identify natural hazard risks and areas in Town most likely to be impacted;
- Complete a risk assessment to profile hazard events, inventory assets, and estimate potential losses;
- Identify existing disaster mitigation measures already in place;
- Develop proposed mitigation measures and a mitigation strategy based on the risk assessment; and
- Design a mechanism to keep the plan updated to reflect current conditions and establish a schedule for monitoring, evaluating, and updating the plan.

Preparation of the Multi-Hazard Mitigation Plan Update before a major disaster occurs helps the community prevent property damage and loss of life associated with natural hazards, save money by instituting mitigation measures to protect against natural hazards, allow funding through FEMA for post-disaster remediation, and expedite disaster recovery. The Plan will also help to reduce or eliminate repetitive flood losses.

Updating the Multi-Hazard Mitigation Plan

According to the Hazard Mitigation Plan, the written plan will be evaluated and updated at least once every five years by relevant Town departments, boards, and agencies, as required by FEMA. In the interim, select members of the LHMPC will conduct quarterly reviews of the progress of mitigation actions and update as necessary. If a major disaster occurs in the interim, the plan may be evaluated or updated if Town personnel feel that the plan failed in some way, or imminent changes are required to better respond to future disasters. As necessary, LHMPC members and/or

departments may be added or removed from the LHMPC to obtain the most accurate and applicable information possible.

A decision was made by between the Plan for Public Information Committee, who was charged to organize the continuation of the LHMPC, and the Town Administrator, to have the PPI Committee meet quarterly with the Town of Marshfield Department Head Meeting. This quarterly meeting is for all the Town department heads and is the same make up (with several additions) as the LHMPC.

Because the Town of Marshfield is continuing with their effort and commitment to the Community Rating System (CRS) program, the Town is also following “Step 10” of CRS activity 510- Floodplain Management Planning. In step 10, the CRS Manual states, “To be useful, planning must be ongoing and plans must be dynamic. The plan should not sit on a shelf gathering dust once it is completed. Therefore, the community must have an evaluation and update process.

For CRS credit, plans must be implemented. No plan is perfect. As implementation proceeds, flaws will be discovered and changes will be needed. Not only can hazard conditions change but also goals and objectives may change. If a community is hit by a tornado, for example, the short-term action items may be changed to focus attention on the newly damaged areas in the SFHA.

Changes should be made in the action plan when opportunities arise to add new activities or complete some items ahead of schedule. The plan should also be revised if it is found that some activities cannot be completed on the original timetable. At a minimum, these types of changes must be made at the required 5-year update”.

The PPI Committee completed this annual update to be submitted to the Board of Selectman for approval, disseminated to the public through radio and newspaper publications, and posted on the Town of Marshfield PPI/CRS webpage.

PPI and LHMPC Committee

PPI Committee

Joe Rossi <i>Chair</i>	Rogers and Gray Insurance
Tim Williams <i>Vice Chair</i>	Flaherty Insurance, Floodplain Resident
Doris Crary <i>Stakeholder</i>	Floodplain Resident
Jeremy Devaney	Fairway Independent Mortgage Corp., Town Resident
Greg Guimond	Town Planner, Town Resident
Nanci Porreca	CRS Coordinator, Floodplain Resident
Andrew Stewart	Town Building Commissioner, Floodplain Manager

LHMPC Committee

Michael Maresco	Town Administrator
Philip Tavares	Police Chief
Arthur Shaw	Administrative E.O.C.
William Hocking	Fire Chief
Thomas Reynolds	DPW Superintendent
Shawn Patterson	Deputy Superintendent
Greg Guimond	Town Planner
Roderic Procaccino	Engineering
Andrew Stewart	Town Building Commissioner, Floodplain Manager
Bill Grafton	Conservation Commissioner
Michael DiMeo	Harbormaster

Meeting Dates

The Multi-Hazard Mitigation plan was adopted by the Town in March of 2018. Therefore, the first joint quarterly meeting between the PPI Committee and LHMPC was in November of that year.

The Committee has met once a quarter since then, below are the meeting dates for 2018 and 2019

February 18 th , 2020	Hazard Mitigation Update Meeting
Digital Q2	Hazard Mitigation Update Meeting
Digital Q3	Hazard Mitigation Update Meeting
Digital Q4	Hazard Mitigation Update Meeting

Attendees

Below is a record of who attended each quarterly Hazard Mitigation Plan update quarterly meeting:

Meeting Date	Attendees
2/18/2020	PPI Committee, Michael Maresco, Philip Tavares, Arthur Shaw, William Hocking, Thomas Reynolds, Shawn Patterson, Greg Guimond, Roderic Procaccino, Jim Folkard, Bill Grafton, Michael DiMeo
Digital	See comment below*
Digital	See comment below*
Digital	See comment below*

*Only one in person update happened in 2020 due to COVID-19. All the other updates were done digitally, where the update form was sent to the team via email, then responses were solicited and added to the update form.

Update of Mitigation Activities and Action Items

At each update, under the direction of the PPI Committee, each department gave an update of their respective mitigation activities and action items where progress was made or required modification. What follows are the tables of mitigation activities and action items, with notes on the current actions taken (if any in red) and notes on modifications to activities or action items (if any in red).

5.1 MITIGATION GOALS AND OBJECTIVES

During planning team meetings for this update of the plan, the Local Hazard Mitigation Planning Committee (LHMPC) reviewed the 2010 hazard mitigation goals. No changes were made to the goals. These goals are meant to reduce impacts and losses due to hazards associated with natural disasters, and to minimize the impacts of natural disasters on residents, businesses and infrastructure. The following 10 goals were endorsed by the LHMPC to remain in this version of the Multi-Hazard Mitigation Plan:

- 1) Ensure that critical infrastructure sites are protected from natural hazards;
- 2) Protect existing residential and business areas from flooding;
- 3) Maintain existing mitigation infrastructure in good condition;
- 4) Continue to enforce existing zoning and building regulations;
- 5) Educate the public about zoning and building regulations, particularly with regard to changes in regulations that may affect tear-downs and new construction;
- 6) Work with surrounding communities to ensure regional cooperation and solutions for hazards affecting multiple communities, such as coastal erosion;
- 7) Encourage future development in areas that are not prone to natural hazards;
- 8) Educate the public about natural hazards and mitigation measures;
- 9) Make efficient use of public funds for hazard mitigation; and
- 10) Protect the Town's ability to respond to various natural hazard events.

5.2 EXISTING CAPABILITIES

Marshfield has a unique set of capabilities, including Town plans, policies, staff, funding, and other resources available to accomplish mitigation and reduce short- and long-term vulnerability. These capabilities are summarized here.

TOWN PLANS AND POLICIES

Marshfield has a series of planning documents that address natural hazards. These documents include measures associated with the Town's mitigation strategy, and could be useful when implementing mitigation actions. Through the implementation of these plans, Marshfield can guide and manage growth and development within the Town, with the goal of reducing hazard vulnerability. These plans include:

1. Master Plan (updated 2015); with includes topics such as economic development, transportation and climate change planning.
2. Marshfield Harbor, Rivers, and Waterways Management Plan (2014)
3. Sea Level Rise Study – Towns of Marshfield, Duxbury, and Scituate (2013)
4. Beach Management Plan (2017) Many of the existing Town policies and ordinances also provide an effective means of mitigating hazards. Marshfield has Zoning, Subdivision, and Floodplain ordinances.

TOWN STAFF

The Town of Marshfield has a very capable staff that includes an Emergency Manager, a Town Planner, and a Chief Engineer. Together these staff allow the Town to effectively plan for and implement specific mitigation actions. In addition, the Town has a Local Emergency Management Agency and a Local Planning Board, which are instrumental in developing and coordinating mitigation actions.

FINANCIAL CAPABILITIES

Financial capabilities are the resources that a Town has to fund mitigation actions. The costs to implement mitigation activities vary from relatively low cost to relatively high cost activities. Low cost actions include building assessment or outreach efforts, which require little to no costs other than staff time and existing operating budgets. Alternatively, higher cost actions, such as the acquisition of flood-prone properties, could require a substantial monetary commitment from local, state, and federal funding sources. The Town's annual revenue from taxes can be used to fund some mitigation actions, but other larger actions may need additional outside funding, such as from state and federal grant programs.

EXISTING MITIGATION MEASURES

The following are existing and ongoing mitigation measure performed by the Town of Marshfield:

1. Comprehensive Emergency Management Plan (CEMP): Every community in Massachusetts is required to have a Comprehensive Emergency Management Plan. These plans address mitigation, preparedness, response and recovery from a variety of natural and man-made emergencies. These plans contain important information regarding flooding, hurricanes, tornadoes, dam failures, earthquakes, and winter storms. Therefore, the CEMP is relevant to all of the hazards discussed in this plan.
2. Communications System: The Town has an array of communications equipment that would assist public safety efforts during a natural hazard event. The Town has recently upgraded this system, which multiple communications towers. Marshfield also participates in the CodeRED emergency alert system.
3. Emergency Power Generators: Emergency power generators can be found in a number of Town buildings. These generators serve to protect government functionality during and immediately after a natural hazard event and also serve the operation of emergency shelters. Locations include: Town Hall, Police/EOC, Central Fire Station, Council on Aging Building, DPW Building, Governor Winslow School, Furnace Brook School, South River School, Daniel Webster School, High School, Martinson School, Eames Way School, and the School Administration Building.
4. Massachusetts State Building Code: The Massachusetts State Building Code contains many detailed regulations regarding wind loads, earthquake resistant design, flood-proofing, and snow loads.
5. Regional Emergency Management Planning Committee (REPC): Marshfield is a member of a regional emergency planning committee together with Kingston, Duxbury, and Plymouth. **(Police Chief Tavares- 2/19/2019: Marshfield is now participating in a local LEPC)**
6. Public Information & Outreach: The Town provides information to residents and business owners relating to a range of potential natural hazards, most especially with regard to flooding, hurricanes, and northeasters.
7. Public Works Operations/Maintenance Activities: The Public Works Department actively maintains the Town's storm drain system. The following specific activities serve to maintain the capability of the drainage system through the reduction of sediment and litter build up and proper maintenance and repair:
 - a. Street Sweeping: Conducted twice annually.
 - b. Catch Basin Cleaning: 3013 catch basins cleaned annually (some biannually as needed).
 - c. Roadway Treatments: Calcium chloride is used for snow/ice treatment.
8. Tree Trimming Program: The electric and telephone utilities trim branches near the electric lines while Town staff maintain trees in other areas.
9. Snow Disposal: The town conducts general snow removal operations with its own equipment and has adequate space for snow storage as needed.
10. Water Restrictions: During a drought, or other periods of high demand (typically occurring in the summer months), restrictions are placed on those connected to the Town's public water system and include odd/even day outdoor watering, limited outdoor watering hours, outdoor watering bans, prohibitions on filling swimming pools, and the use of automatic irrigation sprinkler systems (Town Article 82).
11. Floodplain Zoning District: Zoning is intended to protect the public health and safety through the regulation of land use. The Marshfield Zoning Bylaw includes a Floodplain District (Article XV). The purposes of this district are: **(6/18/2019- Bill Grafton, Conservation Administrator: Language should be changed to codified chapter)**
 - a. Protect human life and health and minimize danger to emergency response officials in the event of flooding;
 - b. Minimize expenditure of public money for flood control projects and emergency response and clean up;
 - c. Reduce damage to public and private property and utilities resulting from flooding waters and debris; and

- d. Ensure that the Town of Marshfield qualifies for participation in the National Flood Insurance Program. The Floodplain District is an overlay district, defined by the 100-year floodplain as designated by FEMA.
12. Subdivision Rules and Regulations: The Marshfield Subdivision Rules and Regulations contain provisions intended to reduce the impacts of floods and erosion. Through its design and layout standards, the bylaws contribute to the Town's overall efforts to mitigate the risks for damage through flooding.
13. Wetlands Protection Bylaw: The purpose of the Wetlands Protection By-Law (Article 37) (6/18/2019- Bill Grafton, Conservation Administrator: Language should be changed to codified chapter 234) is to further protect the Town's shores, ponds, rivers, and wetlands for, among other reasons, flood control, erosion and sedimentation control, and public safety. The by-law builds on the State Wetlands Protection Act offering more stringent controls over dredging and filling activities. Any activity that might fill or otherwise alter these resource areas requires a permit from the Marshfield Conservation Commission.
14. Coastal Wetlands Zoning District: The Coastal Wetlands District (section 13.02) (6/18/2019- Bill Grafton, Conservation Administrator: Language should be changed to codified chapter) is an overlay district established for the following purposes: protecting the health and safety of residents whose lands are subject to seasonal or periodic tidal flooding; preservation of salt marshes and tidal flats (thereby maintaining their functions of drainage and flood control, as well as filtration of contaminants); and, maintaining the purity of water and the safe operation of utilities subject to damage in floods.
15. Inland Wetlands Zoning District: In terms of general purpose and intent, The Inland Wetlands District (section 13.01) is similar to the Coastal Wetlands District. In addition to its goals of preserving streams and rivers and conserving sensitive watershed areas, this wetlands district overlay is intended to "protect the health and safety of persons and property against the hazards of flooding and contamination." The district includes principally areas containing soils that drain poorly. The district regulations are less restrictive than those in the coastal areas are. Key development requirements are as follows: special permit for structures intended for human occupancy or use on a permanent basis, and having water and sewage facilities; special permit for dumping, filling, and excavating of earth material; and, special permit for creation of ponds or pools and for changes to watercourses.
16. Stormwater Management Overlay District: The Stormwater Management Overlay District is intended to limit impervious surfaces and stormwater run-off in a designated area north of the South River. By promoting infiltration of storm water where it lands, the potential for flooding can be reduced.
17. DCR Dam Safety Regulations: The state has enacted dam safety regulations mandating inspections and emergency action plans. All new dams are subject to state permitting.
18. Seawalls, Jetties and Dikes: The Town of Marshfield coastline is protected by a series of seawalls, jetties and dikes. Repairs have recently been made following a study of this protection system that indicated repairs were necessary.
19. Plymouth County Mutual Aid System: The Marshfield Fire Department is part of the Plymouth County mutual aid system (6/18/2019- Police Chief Tavares, Harbor Master Mike DiMeo: *Plymouth County mutual aid system should be struck and replaced with: 1. Old Colony Police Anti Crime Task Force; 2. South Eastern MA mutual aid agreement; 3. Metrolec Mutual Aid Agreement; 4. US Coast Guard*). This system is run by the Plymouth County Control, which can supply as little as a single ambulance to as much as an entire taskforce.

PARTICIPATION IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

Marshfield currently participates in FEMA's NFIP. Per FEMA's Local Multi-Hazard Mitigation Planning Guidance document, the NFIP has three basic aspects:

- 1) Floodplain identification and mapping – adopt flood maps depicting hazards;
- 2) Floodplain management – adopt and enforce floodplain management regulations; and
- 3) Flood insurance – require property owners to purchase insurance in exchange for floodplain management regulations that reduce future flood damages. Flood Hazard Boundary Maps (FHBMs) were first established in 1979, with flood insurance rate maps (FIRMs) following in 1981. The most recent FEMA Flood Insurance Study became effective on November 4, 2016. Loss statistics for January 1, 1978 through November 30, 2017 include 1,582 total losses. 1,316 cases were closed and 1 remains open, however, 265 cases were closed without payment. Of the 1,316 cases that did receive payment, the total payments amounted to \$18,479,963.44. As part of ongoing NFIP requirements, Marshfield regulates new development within the Special Flood Hazard Area (SFHA). The Town follows NFIP regulations and guidelines for all new construction, as well as substantial improvements to existing structures, within the flood plain. Marshfield also works with nearby communities to establish mutual aid agreements to address administration of the NFIP following a major storm.

The NFIP also has a Community Rating System (CRS), which recognizes community efforts beyond those minimum standards by reducing flood insurance premiums for the community's property owners. CRS discounts on flood insurance premiums range from 5% (for a rate class of 9) up to 45% (for a rate class of 1) (FEMA 2015). The Town of Marshfield is currently part of the CRS program, and has a rate class of 9, which affords a 5% insurance discount.

5.3 EXISTING/ONGOING MITIGATION MEASURES

Recent natural disaster response has been adequate, with generally good communication and cooperation between various Town departments. Communication efforts have been improved over the years to better prioritize problem areas and expedite responses. Marshfield has implemented almost all of the mitigation actions proposed in previous versions of the Hazard Mitigation Plan. This section will discuss the existing mitigation measures.

Mitigation Measures	Status	Effectiveness	Improvements/ Changes Needed
ACTIONS FOR MULTIPLE HAZARDS			
Comprehensive Emergency Management Plan (CEMP)	Developed	Emphasis is on emergency response	None
Communications equipment	Recently updated the phone system, antenna tower, etc.	Effective	None
Massachusetts State Building Code	In place	Effective for new construction	Will need to update to January 2018 code
Emergency power generators	Furnace Brook School (Evacuation center) has one; 3 new generators at wastewater treatment plant; fuel station has auxiliary power.	Effective	Other schools would benefit from a generator (Collective input 11/20/2018- Marshfield High School, Town Hall, Senior Center and Harbor Master Building all have generators)
Regional Emergency Planning Committee (REPC)	Ongoing	Effective	None
Public information and outreach	Ongoing; tabling at fairs; website	Effective	None

ACTIONS FOR FLOOD HAZARDS			
Participation in the National Flood Insurance Program (NFIP)	Ongoing	Effective	Encourage all eligible homeowners to obtain insurance
CRS Program Participation	Ongoing	Marshfield is currently a Class 9	Seek more CRS points
Floodplain Management	Ongoing; establishing detours for flooded roads, cleaning catch basins, and culvert repair as necessary	Effective	Develop detailed Flood Management Plan
Master Plan (2015)	In place; includes Harbor Plan update	Effective	Updated to include Open Space and Beach Man. Plan (11/20/2018- Town Planner Greg Guimond: this has been completed)
Open Space Plan	In place	Effective	None

Zoning – Floodplain District	In place		None
Subdivision Rules and Regulations	In place; updated in 2014	Effective	Consider requiring all new roads to be built above BFE
Wetlands Protection By-Law	In place	Effective	Guidance on elevation min. for buildings once FEMA maps finalized; vertical datum issue
Coastal Wetlands Zoning District	In place	Effective	None
Inland Wetlands Zoning District	In place	Effective	None
Stormwater Man. Overlay District	In place	Effective	None
DCR Dam Safety Regulations	In place	Effective	Magoun Pond dam is currently under administrative orders to be repaired
Elevating Repetitive Loss Properties	Program has lapsed; some properties have qualified for grant funding in the past	Effective	Apply for funding to reinstate this program
Coastal protection structures (seawalls, jetties, dikes)	In place; repairs completed as necessary (Fieldston and Brant Rock area recently repaired)	Effective	Major improvements needed to seawall south of Green Harbor; apply annually for dams and seawall grants (11/20/2018- Town Engineer Rod Procaccino: Dredging was completed, Jetty has been repaired)

ACTIONS FOR WIND HAZARDS			
Wind Code supplement to MA Building Code	In place	Effective for new construction	None
Tree trimming program	Ongoing	Effective	None

5.4 PROGRESS DETERMINATION ON MITIGATION ACTIONS SINCE 2013

Before identifying new Mitigation Actions for the 2018 Hazard Plan, the LHMPC discussed the status of the mitigation actions identified in the 2013 Marshfield Hazard Mitigation Plan. One of the following status determinations was given to each mitigation action identified from the 2013 plan:

- Complete: The project was implemented and completed in 2013-2018
- Existing Capability: The project was implemented and completed in 2013-2018, and it will continue to be implemented on an annual basis (these action items are also identified in Section 5.3).
- In Progress: the project was started in the 2013-2018 timeframe and is still in progress.
- Deferred: The project is important, but it was deferred because there was no funding available or it was not feasible to complete the project in this timeframe.
- Deleted: The project is no longer relevant to the community.

In 2013, the LHMPC identified 17 new actions. During this plan update, the LHMPC assessed the Town's progress on all 17 actions.

Hazard(s) to	Action Item and Description	Status (Explanation)
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Mitigate		
Flooding	A. Sea Wall Repair, Maintenance & Upgrade: Create a strategy for annual predictable funding for on-going sea wall repair and maintenance. Establish a documentation system for repair and maintenance activities. Seek opportunities to fund individual sea wall upgrades that will address potential for rising sea levels and increased storm intensity. The Board of Selectmen is forming a Shore Front Protection Committee to guide this process.	In Progress. The seawall between lower Rexhame and Ocean Bluff has recently been repaired, and raised an additional 2 feet in elevation. Additional sections of the seawall, specifically in the Brant Rock area, still need to be repaired and upgraded. (11/20/2018- Town Engineer Rod Procaccino: Major seawall work has been completed)
Flooding	B. Elevate Repetitive Loss Structures: Re-constitute the grant program to assist property owners with repetitive loss structures in elevating their homes. In the previous program the homeowner was responsible for 25% of the cost of the work. Consider applying this program to commercial structures as well.	In Progress (11/20/2018- Town Planner Greg Guimond: Acquisition from 2015 has been removed; elevation projects to begin in the spring)
Flooding	C. Dyke Road Bridge: Serves both to connect the villages of Brant Rock and Green Harbor and as a flood control structure, protecting the Green Harbor marsh from tide driven flooding. The bridge also serves as an important emergency evacuation route for Brant Rock residents. Tides and flooding are undermining the bridge, which is 70 to 80 years old. This mitigation measure would include both an engineering study of the bridge and steps necessary to structurally enhance the bridge and its flood control capabilities.	In Progress. The engineering study of the bridge was completed. The plan included recommendations to pursue feasibility studies and preliminary plans to replace and/or add a separate structure. The Town is also considering appropriate elevations for the dike but is waiting for FEMA flood zones to be finalized.
Flooding	D. Stormwater Drainage System – Cleaning and Repairs: Continue to clean all catch basins, manholes, and drop-inlets; clean/snake all clogged lines; rebuild defective and broken drainage structures.	Existing Capability. These activities are performed regularly.
Flooding	E. Stormwater Drainage System Improvements: Continue to implement improvements in targeted areas prone to flooding such as the Rexhame area, Brant Rock, Peregrine, White Drive, Rugani Avenue, Forest Street, South River Street, Snow Road, and other areas identified as local areas of concern for flooding. Install new catch basins as needed.	Existing Capability. Improvements were implemented at all areas listed to the left, except the Esplanade area of Brant Rock, which still needs to be improved. Forest Street had some improvements implemented, but there are still some ongoing stormwater drainage system improvements in that location.
Flooding	F. Bass Creek Drainage Area: Continue to implement drainage system improvements to more effectively move drainage into Bass Creek from the Fieldston Area. Increase the capacity of drain pipes and catch basins in the area.	Complete. Drainage system improvements were implemented in the Bass Creek area.
Flooding	G. Saltmarsh Restoration: Continue to restore salt marshes in the Polder area to their original condition by addressing the Phragmites invasion and creating additional natural flood storage areas. This work is primarily carried out as part of mitigation for other projects impacting wetland in the area. The Town will continue to look for opportunities to advance wetland restoration in this area.	In Progress. The Town is currently addressing the Phragmites in front of the dike in the Harbor Park area.
Flooding	H. Well Head Protection: Install new stormwater management infrastructure to protect against storm water pollution of the wellheads of the town's public	In Progress. New stormwater management infrastructure was installed in the Forest Street Area.

	water supply in the Forest Street and Ferry Street area.	Ferry Street received a new detention basin and is currently a proposed 40B project.
Flooding	I. Acquisition of Repetitive Loss Properties: Consider acquisition of repetitive loss properties.	Complete. The Town purchased one repetitive loss property.
Flooding	J. Master Plan Update: Include a section on Climate Change and its potential impacts on Marshfield in the next update of the Master Plan.	Complete. The Master Plan now includes a section on Climate Change.
Flooding	K. Update WWTF Procedures / I&I: Continue updating operating procedures of the wastewater treatment facility to address and mitigate Inflow and Infiltration.	Existing Capability. There is an I&I article that is included annually for funding.
Compliance with NFIP	L. Floodplain Management: Continue to enforce the Floodplain District (Article XV) and associated building regulations for floodplain areas. Update this district to remain consistent with FEMA guidelines and floodplain mapping.	Existing Capability.
Compliance with NFIP	M. Floodplain Mapping: Maintain up to date maps of local FEMA identified floodplains.	Existing Capability.
Compliance with NFIP	N. Acquisition of Vacant Flood Prone Lands: Acquire priority open space parcels in floodplain areas in order to maintain flood storage and water infiltration capacity. These parcels may also be used for general conservation and recreation purposes.	Deferred. Town was looking at Ranch House, but as this plan was being finalized the property owner built a new single family home on the site.
Geologic Hazards	O. Public Building Assessments: Assess the earthquake vulnerability of all public buildings.	Complete. Conducted a Town-wide building study.
Multi-Hazard	P. Emergency Power Generators: Upgrade all emergency power generators in emergency shelters and critical facilities as needed; provide alternative fuel sources and generator power source flexibility.	Complete. Emergency power generators were upgraded. Four additional generators were added to the wastewater treatment facility.
Multi-Hazard	Q. Public Education: Continue efforts at public education on natural hazards. Leverage existing State and Federal public information materials. Continue to reach out to residents and businesses in flood prone areas and provide them with information on steps they can take to reduce their vulnerabilities. Use public education to build support for implementation of hazard mitigation measures.	Existing Capability.

5.4 PROPOSED MITIGATION

5.4.1 PLANNING PROCESS

To identify, evaluate and prioritize specific mitigation actions and projects to reduce the effects of a natural disaster, the LHMPC used a prioritization method focusing on four key themes as follows, and as provided in Appendix C:

- Benefits: Determine whether the proposed mitigation measure will improve property protection, natural resource protection, technical capacity, public awareness, or posthazard emergency response;
- Feasibility: Determine whether the proposed mitigation measure is feasible in terms of Town staffing, public and Town support, and whether it is technically feasible;
- Economic: Evaluate each mitigation measure in terms of estimated cost and potential funding sources; and
- Regulatory: Evaluate each mitigation measure for consistency with local, state and federal permitting/regulatory requirements and goals.

Each proposed mitigation action presented in Section 5.4.2 was given a score based on 13 subcategories within these four larger categories documented above (i.e. Benefits, Feasibility, Economic, Regulatory). Foreach of these subcategories, the proposed action was given a score of 3 if the action was thought to be a “good” fit with a particular category (likely to provide the benefit under consideration, required little additional training or funding,

feasible, etc.), 2 if it was “average”, or 1 if it was “poor” (did not provide the benefit under consideration, difficult to permit, costly, etc.). For a detailed overview of how each action was scored, please see Appendix C. During the planning meetings where potential mitigation measures were discussed and prioritized, a number of proposed actions were dismissed from the final Plan. These actions are documented in Appendix C, along with an explanation for dismissal.

5.4.2 PROPOSED MITIGATION ACTIONS

The final proposed mitigation actions developed during the planning process are summarized in this section. A total of 42 actions were developed. These actions address risks due to flooding, coastal erosion, sea-level rise, wind, nor'easters and other winter weather, fire, and dam and culvert failure, as well as more general public outreach actions. Specific actions range from Town administrative or regulatory actions that influence the way land and buildings are developed and built, to actions that involve the modifications of existing buildings or infrastructure to protect them from a hazard or removal from the hazard area, to actions developed to increase public education and awareness.

For each action identified below, a brief description is provided, as well as the responsible department(s), potential funding sources, priority, and anticipated timeline. To help tie the recommended actions to the Town’s hazard mitigation goals listed in Section 5.1, the numbers associated with the goal(s) each action addresses are also listed. Finally, each action is classified as one of the CRS categories of floodplain management activities.

Mitigation Action #1: Evaluate the creation of a dike around the WWTP	
PURPOSE	To protect the WWTP from flooding, ensure uninterrupted operation of the plant, and avoid contamination to the surrounding salt marsh.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	DPW Budget; Town Meeting Article
PRIORITY	Medium
TIMELINE	Start within 2 yrs.
GOAL(S) ADDRESSED	1,9
CRS CATEGORY	Structural Flood Control Project
Meeting Notes	

Mitigation Action #2: Review WWTP operations and maintenance plan	
PURPOSE	To ensure plan is up-to-date, and has protocols for how to keep the plant safely operational during storm events (which may include contingencies for staff to remain on site).
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	DPW Budget; Town Meeting Article
PRIORITY	Medium
TIMELINE	Start within 2 yrs.
GOAL(S) ADDRESSED	1,3,10
CRS CATEGORY	Preventative Measure
Meeting Notes	

Mitigation Action #3: Add batter boards at Old Rexhame Road to close opening	
PURPOSE	The seaward end of Old Rexhame Road is in a low lying area between two seawalls. Adding batter boards would reduce the flooding that affects nearby properties.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	DPW Budget; Town Meeting Article
PRIORITY	High
TIMELINE	Start within 4 yrs.

GOAL(S) ADDRESSED	2,9
CRS CATEGORY	Structural Flood Control Project
Meeting Notes	

Mitigation Action #4: Continue to restrict additional uses at the airport due to flood prone elevations	
PURPOSE	The business community has proposed additional uses (e.g., restaurants) on the airport property, but Town will continue to restrict use due to low lying flood prone elevations.
RESPONSIBILITY	Planning Board
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	ongoing
GOAL(S) ADDRESSED	4,5,7
CRS CATEGORY	Preventative Measure
Meeting Notes	

Mitigation Action #5: Ditch cleaning and maintenance of the Bass Creek headwaters	
PURPOSE	Cleaning ditches and maintaining adequate flow in the Bass Creek Headwaters (north of Monitor Rd) reduces the flood risk to the surrounding areas by facilitating drainage.
RESPONSIBILITY	DPW, Conservation Commission
POTENTIAL FUNDING SOURCES	DPW Budget; Town Meeting Article
PRIORITY	Medium
TIMELINE	Start within 4 yrs.
GOAL(S) ADDRESSED	2,9
CRS CATEGORY	Property Protection
Meeting Notes	

Mitigation Action #6: Raise the elevation of the Dyke Road bridge and its approaches	
PURPOSE	Raising the bridge out of the flood plain would improve evacuation routes and emergency access during flood hazard events.
RESPONSIBILITY	DPW, Conservation Commission
POTENTIAL FUNDING SOURCES	Town Meeting Article; Grants
PRIORITY	Low
TIMELINE	Start within 4 yrs.
GOAL(S) ADDRESSED	1,2,9,10
CRS CATEGORY	Property Protection
Meeting Notes	

Mitigation Action #7: Implement recommended tide gate upgrades at Dyke Road	
PURPOSE	The Green Harbor Tide Gate Study recommended upgrading the tide gate system to control flooding and improve the tidal wetland habitat upstream.
RESPONSIBILITY	DPW, Harbormaster
POTENTIAL FUNDING SOURCES	Town Meeting Article; Grants
PRIORITY	Medium
TIMELINE	Start within 4 yrs.
GOAL(S) ADDRESSED	1,2,9,10
CRS CATEGORY	Structural Flood Control Project
Meeting Notes	11/20/2019- Bill Grafton, Conservation Administrator: Under responsibility, add

	Conservation
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Mitigation Action #8: Raise elevation of the Brant Rock seawall	
PURPOSE	Increasing the elevation of the seawall would reduce the risk from waves and storm surge associated with coastal flooding.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Meeting Article; Grants
PRIORITY	Medium
TIMELINE	Start within 1 yr; entire project will be phased over time
GOAL(S) ADDRESSED	1,2,3,10
CRS CATEGORY	Structural Flood Control Project
Meeting Notes	11/20/2019- Bill Grafton, Conservation Administrator: Under responsibility, add Conservation

Mitigation Action #9: Develop an evacuation plan for Housing Authority units	
PURPOSE	No evacuation plan currently exists. At least one Housing Authority Unit (Pence Grant) can become inaccessible during a flood event. Development of an evacuation plan would improve public safety.
RESPONSIBILITY	Emergency Operations Center
POTENTIAL FUNDING SOURCES	EOC Budget
PRIORITY	High
TIMELINE	Start within 2 yrs.
GOAL(S) ADDRESSED	8,10
CRS CATEGORY	Emergency Service
Meeting Notes	

Mitigation Action #10: Move and rebuild the DPW Barn in a less vulnerable location	
PURPOSE	The current DPW Barn is located in the flood zone, which prohibits access and hinders emergency response during a flood event.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Meeting Article; Grants
PRIORITY	Low
TIMELINE	Start within 3 yrs.; then 1 year to design; 1 year to build
GOAL(S) ADDRESSED	1,3,7,10
CRS CATEGORY	Property Protection
Meeting Notes	

Mitigation Action #11: Purchase wetlands and other flood prone lands for conservation	
PURPOSE	Purchasing wetlands and other flood prone lands for conservation protects and enhances the environment, and improves flood retention.
RESPONSIBILITY	Conservation Commission
POTENTIAL FUNDING SOURCES	Town Meeting Article; CPC; Grants
PRIORITY	Low
TIMELINE	Start within 2 yrs.
GOAL(S) ADDRESSED	2,7
CRS CATEGORY	Natural Resources Protection
Meeting Notes	

Mitigation Action #12: Evaluate the need for enhanced drainage for Mt. Skirgo wellhead protection	
PURPOSE	Enhancing drainage could reduce flooding and ponding at the Mt. Skirgo wellhead site, and would help protect the public drinking water supply.
RESPONSIBILITY	DPW; Conservation Commission
POTENTIAL FUNDING SOURCES	Town Meeting Article; CPC; Grants
PRIORITY	High
TIMELINE	Start within 3 yrs.
GOAL(S) ADDRESSED	1,3
CRS CATEGORY	Structural Flood Control Project
Meeting Notes	

Mitigation Action #13: Confirm the properties on the Repetitive Loss list and refine if necessary	
PURPOSE	Some properties are misidentified, or have been mitigated and should be removed from the list.
RESPONSIBILITY	CRS Coordinator, PPI, Planning Department
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	ongoing
GOAL(S) ADDRESSED	5,7,8
CRS CATEGORY	Public Information
Meeting Notes	

Mitigation Action #14: Develop specific recommendations for each Repetitive Loss Area	
PURPOSE	13 Repetitive Loss Areas were identified in Town. Each may have a slightly different reason for flooding. Developing targeted mitigation actions for each area can help reduce the flood risk.
RESPONSIBILITY	CRS Coordinator, PPI, Planning Department
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	ongoing
GOAL(S) ADDRESSED	2,4,5,7,8
CRS CATEGORY	Preventative Measure
Meeting Notes	

Mitigation Action #15: Inform Repetitive Loss property owners annually about financial assistance options	
PURPOSE	Conducting outreach activities to Repetitive Loss property owners to inform them about available financial assistance could reduce the number of Repetitive Loss properties in Town.
RESPONSIBILITY	CRS Coordinator, PPI, Planning Department
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	ongoing
GOAL(S) ADDRESSED	2,5
CRS CATEGORY	Public Information
Meeting Notes	

Mitigation Action #16: COMPLETED

Hire a Community Rating System (CRS) Coordinator	
PURPOSE	A dedicated CRS coordinator could work towards improving the Town's CRS score, improve public awareness about flood risks, and support the PPI.
RESPONSIBILITY	Board of Selectmen
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	Start within 1 yr
GOAL(S) ADDRESSED	2,4,5,6,8
CRS CATEGORY	Public Information
Meeting Notes	6/18/2019- Town Administrator Mike Maresco: Nancy Porreca has been hired as the CRS coordinator

Mitigation Action #17: Discuss the possibility of elevating flood prone NSTAR substation	
PURPOSE	Open communication with NSTAR about the flood risk to its substations and other utilities will help ensure continued power generation during flood events.
RESPONSIBILITY	Board of Selectmen
POTENTIAL FUNDING SOURCES	N/A
PRIORITY	High
TIMELINE	Start within 1 yr
GOAL(S) ADDRESSED	1,10
CRS CATEGORY	Property Protection
Meeting Notes	

Mitigation Action #18: Develop a pre-storm checklist for the installation of seawall batter boards	
PURPOSE	Developing a prestorm checklist will ensure that adequate steps are taken to install the batter boards in a timely fashion.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	High
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	2,3,9,10
CRS CATEGORY	Emergency Response
Meeting Notes	

Mitigation Action #19: Rebuild Willow Street bridge (to a higher elevation)	
PURPOSE	Raising the elevation of Willow Street bridge would reduce traffic interruptions during flood events and increase the flow capacity beneath the bridge.
RESPONSIBILITY	DPW, Conservation Commission
POTENTIAL FUNDING SOURCES	Town Meeting Article (state funding match)
PRIORITY	Medium
TIMELINE	Within 5 yrs
GOAL(S) ADDRESSED	1,3,9,10
CRS CATEGORY	Property Protection
Meeting Notes	

Mitigation Action #20: COMPLETED Rebuild the Canal and Beach Street bridges (to a higher elevation)	
PURPOSE	Raising the elevation of Canal and Beach Street bridges would reduce traffic interruptions

	during flood events and increase the flow capacity beneath the bridges.
RESPONSIBILITY	DPW, Conservation Commission
POTENTIAL FUNDING SOURCES	Town Meeting Article (state funding match)
PRIORITY	Medium
TIMELINE	Within 5 yrs
GOAL(S) ADDRESSED	1,3,9,10
CRS CATEGORY	Property Protection
Meeting Notes	11/20/2018- Town Engineer Rod Procaccino: Canal to be completed 12/10/2018, with Beach St to start in 2019 6/18/2019- Town Planner Greg Guimond: Canal street bridge was rebuilt but not raised- same project will begin in fall for Beach St. 9/17/2019- Town Administrator Mike Maresco: State is currently doing Beach St now- State elevated the bridge 3 feet 11/19/2019- Tom Reynolds- Canal St bridge completed- bridge st has started 12/2020- Town Planner Greg Guimond: Bridge st bridge completed

Mitigation Action #21: Raise intersection of Town Pier Road and Route 139	
PURPOSE	Raising the intersection of Town Pier Road and Route 139 would reduce interruptions to vehicle access during flood events
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Meeting Article (as a match to state funding)
PRIORITY	Medium
TIMELINE	Within 5 yrs
GOAL(S) ADDRESSED	1,3,9,10
CRS CATEGORY	Property Protection
Meeting Notes	

Mitigation Action #22: Conduct an analysis of engineering alternatives to reduce flooding and improve drainage in the Esplanade	
PURPOSE	The Esplanade is an important business center, but regularly floods inhibiting traffic and damaging buildings. Reducing the flood risk would improve the economic potential of the area.
RESPONSIBILITY	DPW, Planning Dept., Conservation Com.
POTENTIAL FUNDING SOURCES	Town Meeting Article (as a match to state funding)
PRIORITY	Low
TIMELINE	Within 5 yrs
GOAL(S) ADDRESSED	1,2,10
CRS CATEGORY	Preventative Measure
Meeting Notes	

Mitigation Action #23: Review and upgrade the Master Plan for Seawalls	
PURPOSE	The existing Master Plan for Seawalls was last updated in 2006. The plan should be reviewed and updated to ensure it covers repair, monitoring, and maintenance.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Low
TIMELINE	Within 2 yrs
GOAL(S) ADDRESSED	3,10

CRS CATEGORY	Preventative Measure
Meeting Notes	6/18/2019- Town Engineer Rod Procaccino: Planning has been completed for the Bay Ave area seawall 11/19/2019- Town Engineer Rod Procaccino: Ocean bluff revetment study ongoing

Mitigation Action #24: Complete the Green Harbor beneficial reuse study	
PURPOSE	Green Harbor is dredged almost every year, and sediment has traditionally been placed in a nearshore area. This study would evaluate the potential benefits of alternative placement options.
RESPONSIBILITY	Beach Administrator, DPW, Con Com
POTENTIAL FUNDING SOURCES	Town Budget, CZM Grant
PRIORITY	Medium
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	3,6,9
CRS CATEGORY	Natural Resource Protection
Meeting Notes	11/20/2018- Town Engineer Rod Procaccino: In progress

Mitigation Action #25: Maintain Rexhame dunes	
PURPOSE	Begin an annual program of beach grass planting. Focus on fencing and pedestrian management. Consider using volunteers or starting a beach grass nursery.
RESPONSIBILITY	Beach Administrator, DPW, Con Com
POTENTIAL FUNDING SOURCES	Town Budget, Grant
PRIORITY	Low
TIMELINE	Within 3 yrs
GOAL(S) ADDRESSED	3
CRS CATEGORY	Natural Resource Protection
Meeting Notes	

Mitigation Action #26: Develop a large-scale town-wide beach nourishment program	
PURPOSE	Erosion has left many beaches with little to no high tide beach. To improve recreational value, as well as protect the seawalls, a large beach nourishment project would be required.
RESPONSIBILITY	Beach Administrator, DPW, Con Com
POTENTIAL FUNDING SOURCES	Town Budget, CZM Grant
PRIORITY	Medium
TIMELINE	Within 3 yrs
GOAL(S) ADDRESSED	3,6,9
CRS CATEGORY	Natural Resource Protection
Meeting Notes	11/20/2018- Town Planner Greg Guimond: In progress, 7 houses in Green Harbor have signed easements, but a few have not 6/18/2019- Town Planner Greg Guimond: Town has been awarded a CZM grant to study town wide beach nourishment

Mitigation Action #27: Create special conditions for Orders of Conditions to require beneficial reuse	
PURPOSE	Develop pre-set special conditions for the Conservation Commission to apply to OOC requiring any dredging project in town to employ a beneficial re-use strategy.
RESPONSIBILITY	Conservation Com
POTENTIAL FUNDING SOURCES	Town Budget

PRIORITY	Medium
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	3,8
CRS CATEGORY	Natural Resource Protection
Meeting Notes	

Mitigation Action #28: Evaluate the potential risk to the Webster Wells from sea-level rise	
PURPOSE	These drinking water wells are at a low elevation and may be vulnerable to sea-level rise, flooding and salt water intrusion.
RESPONSIBILITY	DPW, Planning Dept, Conservation Com
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Low
TIMELINE	Within 2 yrs
GOAL(S) ADDRESSED	1
CRS CATEGORY	Preventive Measure
Meeting Notes	

Mitigation Action #29: COMPLETED Evaluate the vulnerability of the radio antenna to wind hazards	
PURPOSE	The radio antenna is vital for communication before, during, and after a hazard, but is in a high wind area. Its vulnerability should be specifically evaluated and necessary actions implemented.
RESPONSIBILITY	Fire, Police, EOC
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Low
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	1,10
CRS CATEGORY	Preventive Measure
Meeting Notes	6/18/2019- Police Chief Tavares: Grove st is not protected; Pleasant St. is a new antenna; 4 locations have been addressed in operations plan

Mitigation Action #30: Consider acquiring larger snow removal machinery	
PURPOSE	Consider whether a larger double-blade truck, front end loader, or other similar equipment is necessary for efficient removal of snow. Consider cost-sharing w/neighborhood towns.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Low
TIMELINE	Within 5 yrs
GOAL(S) ADDRESSED	3,6,10
CRS CATEGORY	Preventive Measure
Meeting Notes	2/19/2018- Town Administrator Mike Maresco: purchased 3 new pieces of snow moving equipment

Mitigation Action #31: Evaluate additional snow storage needs within the Town	
PURPOSE	Snow accumulations used to be disposed of in the ocean. Recently, snow is stored behind the DPW barn and in the Rexhame lot. Evaluate whether this is adequate.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Budget

PRIORITY	High
TIMELINE	ongoing
GOAL(S) ADDRESSED	10
CRS CATEGORY	Preventive Measure
Meeting Notes	

Mitigation Action #32: Consider fire prevention vegetation clearing at Marcia Thomas house	
PURPOSE	Marcia Thomas house, a historical property, is located in one of the high risk wildfire areas. Preemptively pruning and clearing vegetation around the building would reduce its vulnerability in the event of a nearby fire.
RESPONSIBILITY	Fire Dept, Historical Commission
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	High
TIMELINE	Within 2 yrs
GOAL(S) ADDRESSED	1,10
CRS CATEGORY	Preventive Measure
Meeting Notes	

Mitigation Action #33: Develop a fire/forest management plan for select properties and woodlots	
PURPOSE	A plan for regular management, as well as emergency response for specific woodlots in Town could reduce fire risk and improve fire response.
RESPONSIBILITY	Fire Dept
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	Within 2 yrs
GOAL(S) ADDRESSED	1,8,10
CRS CATEGORY	Emergency Service
Meeting Notes	

Mitigation Action #34: Repair emergency spillway at Mill Pond Lane (Magoun Pond) Dam	
PURPOSE	The dam is designated as “non-compliant” and must be repaired. The road crossing the dam is the only access to Mill Pond Lane. Maintenance, such as tree removal on the embankment is also required.
RESPONSIBILITY	DPW, Conservation Commission
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Low
TIMELINE	Within 3 yrs
GOAL(S) ADDRESSED	2,9,10
CRS CATEGORY	Property Protection
Meeting Notes	

Mitigation Action #35: Evaluate potential alternatives to improve the Veterans Park Dam	
PURPOSE	The spillway is undersized and regularly overtops. Renovations could improve fish passage and flood control. State may provide financial assistance when they widen the road.
RESPONSIBILITY	DPW, Conservation Commission, Veterans Park
POTENTIAL FUNDING	Town Budget

SOURCES	
PRIORITY	Low
TIMELINE	Within 2 yrs
GOAL(S) ADDRESSED	2,3,9,10
CRS CATEGORY	Preventive Measure
Meeting Notes	2/19/2019- Collective input from Town Administrator, DPW, Town Planner: CPC approved funding- Engineering design completed 9/17/2019- Conservation Commissioner Bill Grafton: Recommends elevating the priority to medium; add Mass DER/North and South River Watershed to funding sources

Mitigation Action #36 Discuss potential repairs to Duxbury dams with the Town of Duxbury	
PURPOSE	Failure of nearby dams in Duxbury would impact Marshfield properties. Discussing options to address this issue is an important first step in mitigating the risk from dam failure.
RESPONSIBILITY	Planning Department
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	6,10
CRS CATEGORY	Preventive Measure
Meeting Notes	11/20/2018- Town Engineer Rod Procaccino: Met with Duxbury, and started discussions about repairs to dams.

Mitigation Action #37: Conduct outreach to owners/managers of privately held critical facilities	
PURPOSE	Many critical facilities are privately owned, but have known risks from particular hazards. Informing owners of these risks may encourage them to conduct mitigation actions of their own.
RESPONSIBILITY	CRS Coordinator, PPI, Planning Department
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	Start within 1 yr, Ongoing
GOAL(S) ADDRESSED	1,8,10
CRS CATEGORY	Public Information
Meeting Notes	

Mitigation Action #38: COMPLETED Develop cable TV programming to increase public outreach	
PURPOSE	A regular program for MCTV would increase public awareness about certain hazards, hazard mitigation and emergency response.
RESPONSIBILITY	CRS Coordinator, PPI, Planning Department, Town Administrator
POTENTIAL FUNDING SOURCES	MCTV
PRIORITY	Low
TIMELINE	Start within 1 yr, Ongoing
GOAL(S) ADDRESSED	8
CRS CATEGORY	Public Information
Meeting Notes	2/19/2019- Joe Rossi, Chairman of the PPI Committee: Included action in PPI 6/1/2020- Outreach completed and implemented

Mitigation Action #39: COMPLETED Develop a Public Plan for Information (PPI) website	
PURPOSE	PPI websites traditionally focus on flood risk and flood hazard mitigation, but the Town

	could develop a PPI website that also incorporates information about all hazards covered in this plan.
RESPONSIBILITY	CRS Coordinator, PPI
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Low
TIMELINE	Start within 1 yr, Ongoing
GOAL(S) ADDRESSED	8
CRS CATEGORY	Public Information
Meeting Notes	11/20/2018- PPI Chairman Joe Rossi: PPI has been started, website has no progress 2/19/2019- PPI Chairman Joe Rossi: PPI website is mostly complete 6/18/2019- PPI Chairman Joe Rossi : Website development is ongoing and almost complete 9/17/2019- PPI Chairman Joe Rossi: PPI approved by Selectman on 8/26/2019

Mitigation Action #40: COMPLETED Develop a summary brochure with this Multi-Hazard Mitigation Plan is complete	
PURPOSE	A summary brochure could provide a more accessible summary of the important parts of this plan for residents and visitors.
RESPONSIBILITY	CRS Coordinator, PPI
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	Start within 1 yr
GOAL(S) ADDRESSED	8
CRS CATEGORY	Public Information
Meeting Notes	11/20/2018- PPI Chairman Joe Rossi: PPI has been started, in outreach development phase 2/19/2019- PPI Chairman Joe Rossi: Brochure is in final draft and almost complete 9/17/2019- PPI Chairman Joe Rossi: Brochure is complete

Mitigation Action #41: COMPLETED Apply to be a Municipal Vulnerability Preparedness (MVP) Community	
PURPOSE	The state-run MVP program provides resiliency planning support. Certified MVP communities are eligible for follow-up grant funding and other opportunities.
RESPONSIBILITY	Planning Department
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	Medium
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	9,10
CRS CATEGORY	Preventative Measure
Meeting Notes	6/18/2019- Town Planner Greg Guimond : Approved for the MVP grant- next steps are a public outreach and plan 2/1/2020- MVP public outreach held and MVP draft plan completed

Mitigation Action #42: Conduct community outreach about the Code Red program	
PURPOSE	Inform residents of Marshfield that they need to sign up for the Code Red program. Enrollment is not automatic for cell phone numbers.
RESPONSIBILITY	EOC
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	High
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	8,10
CRS CATEGORY	Public Information

Meeting Notes	11/20/2018- Police Chief Tavares: Gave update at Senior Center on Code Red 6/18/2019- Police Chief Tavares: complete and ongoing; to add PPI to incorporate coordinated outreach effort 9/17/2019- Police Chief Tavares: Sherriff coming to the senior center on 11/18 to help people sign up
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Mitigation Action #43: Stock pile steel sheet panels and boulders	
PURPOSE	Ensure necessary materials are available to immediate poststorm response actions.
RESPONSIBILITY	Board of Selectmen, DPW
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	High
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	2,10
CRS CATEGORY	Preventative Measure
Meeting Notes	

Mitigation Action #44: Create an emergency repair money account	
PURPOSE	Post-storm response can be expensive, and can draw funding previously allocated to other Town programs. A designated emergency repair account would ensure necessary funds were available.
RESPONSIBILITY	Board of Selectmen, DPW
POTENTIAL FUNDING SOURCES	Town Budget
PRIORITY	High
TIMELINE	Within 1 yr
GOAL(S) ADDRESSED	9,10
CRS CATEGORY	Preventative Measure
Meeting Notes	

Mitigation Action #45: Investigate installing a drainage system under Bay Street	
PURPOSE	Kentucky Street on the Duxbury Town line is in an elevational depression. Overtopping from the nearby seawall pools here and can remain flooded for days.
RESPONSIBILITY	Board of Selectmen, DPW
POTENTIAL FUNDING SOURCES	Town Budget; Town of Duxbury cost-share
PRIORITY	Medium
TIMELINE	Within 2 yrs
GOAL(S) ADDRESSED	2,6
CRS CATEGORY	Preventative Measure
Meeting Notes	

Mitigation Action #46 Repair revetment along Foster Ave and Ocean St (added 2/2020)	
PURPOSE	The revetment in this area is in major disrepair, and will require resetting and repairs, along with reengineering.
RESPONSIBILITY	DPW
POTENTIAL FUNDING SOURCES	Town Budget/PDM or BRIC grants/State grants
PRIORITY	Medium
TIMELINE	ongoing
GOAL(S) ADDRESSED	3

CRS CATEGORY	Structural Flood Control Project
Meeting Notes	Engineering study approved by town meeting on November 18 th 12/2020= Town Planner Greg Guimond- Revetment repair work ongoing

Plan for Approval and Adoption

This document will not be in effect until it is approved by the Town of Marshfield Board of Selectman. The Committee will continue to meet quarterly on an annual basis to monitor and update and implement the Hazard Mitigation Plan, its activities and action items.

Board approval date: XXXXXXXX