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Massachusetts

Community Planning

TOWN CLERK  
NORTH READING, MA

### MINUTES

Thursday, May 21, 2018

Mr. Michael Prisco, Chairperson called the Thursday, May 21, 2018 meeting of the Board of Selectmen to order at 6:30p.m. in Room 14 of the North Reading Town Hall, 235 North Street, North Reading, MA.

#### MEMBERS

PRESENT: Warren Pearce, Chairperson  
William Bellavance, Vice Chairperson  
Christopher Hayden

#### STAFF

PRESENT: Danielle McKnight, AICP  
Town Planner/Community Planning Administrator

#### BOARD OF

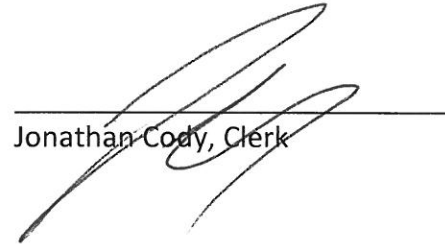
SELECTMEN: Michael Prisco, Chairperson  
Kathryn Manupelli, Vice Chairperson  
Stephen O'Leary, Clerk  
Andrew Schultz  
Robert Mauceri

The Community Planning Commission members attended the Board of Selectmen meeting for the following items:

- Municipal Vulnerability Preparedness draft plan. the plan was presented by consultant Peter Richardson of Green International ( see attached presentation). The Board of Selectmen voted 5-0 to approve the plan.
- Swan Pond Road hearing – Citizen's Petition to fund paving
- Informational hearings on June Town Meeting Warrant Articles
- Metro North Regional Housing Services – renewal of Inter-municipal Agreement (Reading, Saugus, Wilmington and North Reading). The Board of Selectmen voted 5-0 to endorse the Intermunicipal Agreement for the Housing Services Office.

Adjournment at 8:45PM

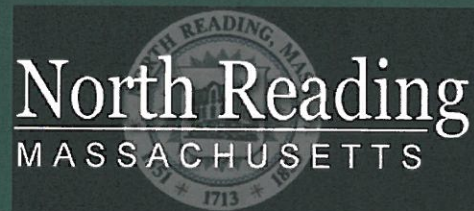
Respectfully submitted,

  
Jonathan Cody, Clerk

# North Reading Municipal Vulnerability Preparedness (MVP) Plan

Peter A. Richardson, P.E., CFM  
(Certified MVP Provider)

May 21, 2018



*Building Strong Client Relationships Through Engineering Excellence*



# Agenda

- Overview of MVP Program
- Climate Change Projections
- Development of the MVP Plan
- Previous Mitigation Planning Efforts
- Questions



## Overview of MVP Program

- Governor Baker's E.O. No. 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (2016) created the Municipal Vulnerability Preparedness (MVP) Program.
- MA EOEA offered grants to Municipalities to develop climate change resiliency (MVP) plans following the Community Resilience Building Framework
- Approved MVP Plans will allow municipalities to be eligible for future MVP (action step) grants



# Overview of MVP Program

## MVP plans:

- Consider the top four natural hazards in light of climate change based on UMASS Climate Research Center projections
- Identify a community's vulnerabilities and strengths
- Develop action steps to make a community more resilient to climate change



# Temperature Change Projections

Ipswich Basin		Observed Baseline 1971-2000 (Days)	Projected Change in 2030s (Days)		Mid-Century Projected Change in 2050s (Days)		Projected Change in 2070s (Days)		End of Century Projected Change in 2090s (Days)	
Days with Maximum Temperature Over 90°F	Annual	6.88	+5.55	to +17.30	+8.48	to +30.62	+10.21	to +50.12	+11.88	to +68.93
	Winter	0.00	+0.00	to +0.00	+0.00	to +0.00	+0.00	to +0.00	+0.00	to +0.00
	Spring	0.34	+0.23	to +0.75	+0.35	to +1.37	+0.40	to +2.25	+0.24	to +3.83
	Summer	6.23	+4.81	to +15.24	+6.99	to +24.93	+8.69	to +40.55	+10.55	to +54.68
	Fall	0.31	+0.34	to +1.88	+0.70	to +4.75	+0.67	to +8.59	+1.14	to +11.81
Days with Maximum Temperature Over 95°F	Annual	0.62	+1.61	to +6.48	+2.29	to +12.74	+3.01	to +26.29	+4.58	to +40.81
	Winter	0.00	+0.00	to +0.00	+0.00	to +0.00	+0.00	to +0.00	+0.00	to +0.00
	Spring	0.00	+0.02	to +0.19	+0.03	to +0.38	+0.06	to +0.67	+0.06	to +1.37
	Summer	0.62	+1.51	to +5.95	+2.02	to +11.16	+2.85	to +22.65	+4.24	to +35.46
	Fall	0.00	+0.03	to +0.50	+0.05	to +1.41	+0.08	to +3.44	+0.15	to +4.77
Days with Maximum Temperature Over 100°F	Annual	0.05	+0.10	to +1.30	+0.22	to +3.34	+0.31	to +7.52	+0.24	to +14.18
	Winter	0.00	+0.00	to +0.00	+0.00	to +0.00	+0.00	to +0.00	+0.00	to +0.00
	Spring	0.00	+0.00	to +0.01	+0.00	to +0.03	+0.00	to +0.10	+0.00	to +0.36
	Summer	0.05	+0.10	to +1.25	+0.20	to +3.21	+0.28	to +7.16	+0.24	to +13.11
	Fall	0.00	+0.00	to +0.06	+0.00	to +0.18	+0.00	to +0.51	+0.00	to +1.00



# Rainfall Change Projections

Ipswich Basin		Observed Baseline 1971-2000 (Days)	Projected Change in 2030s (Days)			Mid-Century Projected Change in 2050s (Days)			Projected Change in 2070s (Days)			End of Century Projected Change in 2090s (Days)		
Days with Precipitation Over 1"	Annual	7.87	+0.10	to	+1.81	+0.43	to	+2.57	+0.94	to	+2.45	+1.06	to	+3.20
	Winter	1.96	+0.02	to	+0.63	+0.15	to	+1.09	+0.20	to	+1.45	+0.29	to	+1.60
	Spring	1.78	-0.19	to	+0.73	-0.03	to	+0.89	+0.10	to	+1.16	+0.06	to	+1.13
	Summer	1.69	-0.16	to	+0.45	-0.11	to	+0.51	-0.11	to	+0.55	-0.13	to	+0.51
	Fall	2.45	-0.27	to	+0.58	-0.18	to	+0.76	-0.42	to	+0.60	-0.42	to	+0.75
Days with Precipitation Over 2"	Annual	1.05	+0.02	to	+0.45	-0.01	to	+0.60	+0.09	to	+0.69	+0.14	to	+0.82
	Winter	0.19	-0.04	to	+0.13	+0.00	to	+0.15	+0.00	to	+0.22	+0.04	to	+0.29
	Spring	0.22	-0.06	to	+0.18	-0.05	to	+0.21	-0.06	to	+0.27	+0.00	to	+0.33
	Summer	0.27	-0.09	to	+0.12	-0.06	to	+0.14	-0.04	to	+0.14	-0.05	to	+0.16
	Fall	0.38	-0.04	to	+0.23	-0.02	to	+0.22	+0.02	to	+0.20	-0.06	to	+0.28
Days with Precipitation Over 4"	Annual	0.05	-0.01	to	+0.14	+0.00	to	+0.15	-0.01	to	+0.12	-0.01	to	+0.20
	Winter	0.00	+0.00	to	+0.00	+0.00	to	+0.00	+0.00	to	+0.01	+0.00	to	+0.02
	Spring	0.00	-0.02	to	+0.04	+0.00	to	+0.04	-0.01	to	+0.05	-0.01	to	+0.08
	Summer	0.00	-0.01	to	+0.04	-0.01	to	+0.04	-0.02	to	+0.04	-0.02	to	+0.05
	Fall	0.00	-0.02	to	+0.08	-0.02	to	+0.08	-0.02	to	+0.09	-0.04	to	+0.12



# Rainfall/Dry Days Change Projections

Ipswich Basin		Observed Baseline 1971-2000 (Inches)	Projected Change in 2030s (Inches)		Mid-Century Projected Change in 2050s (Inches)		Projected Change in 2070s (Inches)		End of Century Projected Change in 2090s (Inches)	
Total Precipitation	Annual	45.59	-0.11	to +4.29	+0.04	to +5.35	+0.54	to +6.61	+0.73	to +7.00
	Winter	11.56	-0.33	to +1.69	+0.14	to +2.27	+0.20	to +2.96	+0.51	to +3.96
	Spring	11.63	-0.36	to +2.25	-0.05	to +2.12	+0.12	to +2.57	+0.12	to +2.57
	Summer	10.22	-0.36	to +1.26	-0.55	to +1.93	-0.81	to +2.01	-1.64	to +1.80
	Fall	12.24	-1.04	to +0.91	-1.10	to +1.44	-1.80	to +1.60	-1.61	to +1.33

Ipswich Basin		Observed Baseline 1971-2000 (Days)	Projected Change in 2030s (Days)		Mid-Century Projected Change in 2050s (Days)		Projected Change in 2070s (Days)		End of Century Projected Change in 2090s (Days)	
Consecutive Dry Days	Annual	16.79	-0.27	to +1.72	-0.05	to +2.50	-0.74	to +2.82	-0.15	to +3.09
	Winter	11.72	-0.77	to +1.27	-0.84	to +1.20	-0.96	to +2.25	-1.17	to +2.02
	Spring	11.18	-0.76	to +1.15	-1.20	to +1.17	-1.28	to +1.10	-1.28	to +1.04
	Summer	12.99	-0.65	to +1.83	-0.73	to +1.63	-0.94	to +2.94	-1.12	to +2.34
	Fall	12.3	+0.21	to +1.96	+0.15	to +2.86	-0.10	to +3.51	-0.06	to +3.19



# Development of Town's MVP Plan

## Scope of Work:

- Establish MVP Core Team & Set Goals of MVP Plan
- Conduct (2) 4 hour Workshops to:
  - Characterize hazards
  - Identify Community Vulnerabilities/Strengths
  - Develop Action Steps to become more resilient to Climate Change
- Prepare a Final Report with Mitigation Actions
- Hold a public listening session by June 23, 2018



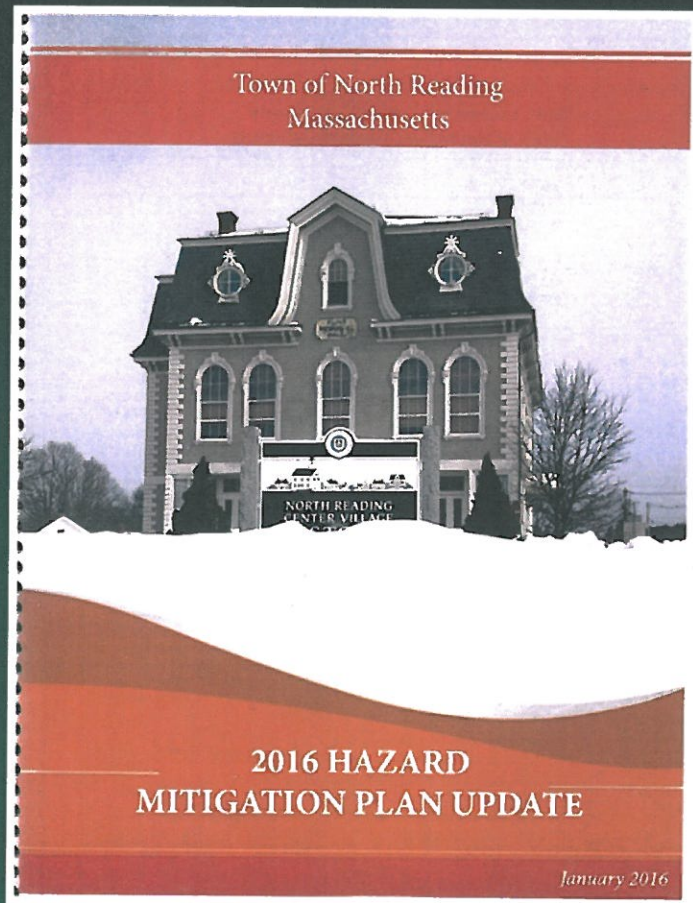
# MVP Workshops



- Workshop #1 (3/21/18):  
Characterized hazards and  
Identified Vulnerabilities/Strengths
- Identified Top Four Hazards:  
Floods, Winter Storms, Wind, and  
extreme temperatures
- Identified vulnerabilities and  
strengths based on Infrastructural,  
Societal and Environmental factors  
per the CRB




# MVP Workshops



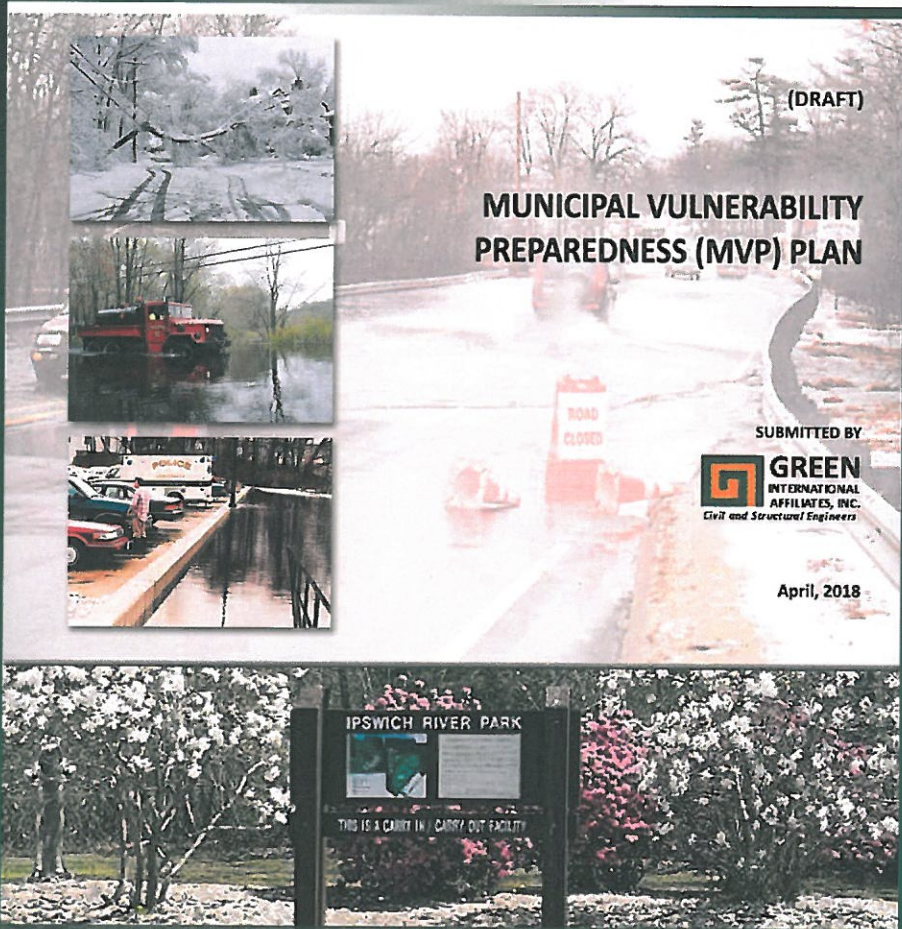
Workshop #2 (3/27/18):  
Develop Action Steps,  
Considering 2016 Hazard  
Mitigation Plan Action  
Steps



# MVP Plan Report




North Reading  
MASSACHUSETTS



(DRAFT)

**MUNICIPAL VULNERABILITY  
PREPAREDNESS (MVP) PLAN**

SUBMITTED BY  
 **GREEN**  
INTERNATIONAL  
AFFILIATES, INC.  
*Civil and Structural Engineers*

April, 2018

IPSWICH RIVER PARK  
THIS IS A CARRY IN / CARRY OUT FACILITY

Building Strong Client Relationships Through Engineering Excellence



# MVP Plan Report

## Prioritized Action Steps in North Reading's MVP Plan

The action steps have been prioritized in Table 3 as follows:

Completed
Applicable to FEMA Hazard Mitigation Plan, but not MVP Plan
High MVP Priority
Medium MVP Priority
Low MVP Priority

Municipal Vulnerability Preparedness (MVP) Plan North Reading, Massachusetts					April 2018
PROJECT NO.	MITIGATION ACTION	TIMEFRAME	RESPONSIBLE ORGANIZATION	POTENTIAL FUNDING SOURCE	ESTIMATED COST
1	Establish a Floodplain and Stormwater Management Public Education Program.	2018	DPW	Town	\$10,000
2	Develop a Town Community Emergency Response Team (CERT).	2018	Emergency Management	Town	\$5,000
3	Adopt the Operation and Maintenance Plan for Martins Brook.	2018	Martin's Pond Association	Town	\$5,000
4	Collect data to be used toward future benefit-cost analysis.	2018-2019	DPW	Town	Minimal Town Funds
5	Updates to the Stormwater Bylaw so all projects exceeding the 1-acre threshold comply with the bylaw.	2018-2019	Community Planning Commission, Town Planner	Flood	Minimal Town Funds
6	Coordinate with USGS and Ipswich River Watershed to access flow monitoring information along Ipswich River. Install monitors at key locations on Martins Brook.	2016-2017	DPW & Martin's Pond Association	Grants	\$40,000
7	Expand the Town's GIS with pre-designed maps and the updated base map for asset management during disaster events.	2018	DPW	Town	Minimal Town Funds
8	Support upgrade of the Benevento Culvert along Martins Brook.	2018-2020	Martin's Pond Association	Private	\$500,000
9	Implement channel clearing and maintenance between Benevento and the pond.	2018-2019	Martin's Pond Association	Town	\$20,000
10	Renovate DPW garage with facilities to accommodate Town employees during severe weather events and disasters. Create Emergency Action Plan for access through flooded access roads.	2018-2020	DPW	Town/ FEMA	\$150,000



# MVP Plan Report

Municipal Vulnerability Preparedness (MVP) Plan  
North Reading, Massachusetts April 2018

PROJECT NO.	MITIGATION ACTION	TIMEFRAME	RESPONSIBLE ORGANIZATION	POTENTIAL FUNDING SOURCE	ESTIMATED COST
11	Review current operation/maintenance procedures within the Town relative to cleaning storm drain systems. Consider creating a stormwater utility for funding for maintenance and capital improvements.	2018-2019	DPW	Town	\$25,000
12	Rehabilitate Three salt storage shed for a season's supply of rock salt.	2018-2020	DPW	Town/ MassDOT	\$200,000
13	Develop a public education campaign under the leadership of Reading Municipal Light Department regarding tree care on private property relative to electric wires.	2018	DPW	Town/ RMLD	\$10,000
14	Develop a comprehensive debris management response plan for post extreme weather events.	2018	DPW	Town	\$25,000
15	Update the Ipswich River FEMA Flood Mapping Study. Develop H&H Models for both Ipswich River and Martins Brook Watersheds that consider Climate Change Projections	2018	Building Inspector & Town Engineer	FEMA	\$100,000
16	Replace the Chestnut Street Culvert over the Ipswich River and raise existing road grade to prevent overtopping.	2018-2020	DPW	Town/ FEMA	\$750,000
17	Replace the Haverhill Street Culvert and raise the Haverhill Street roadway.	2018-2020	DPW	Town/ FEMA	\$500,000
18	Purchase a permanent generator for the senior center.	2018	Elder Services	Town/ FEMA	\$20,000
19	Evaluate the structural capacity of flat roofs on critical and public facilities. Install strain gauges to monitor snow loads.	2018	DPW	Town/ FEMA	\$35,000

Municipal Vulnerability Preparedness (MVP) Plan  
North Reading, Massachusetts April 2018

PROJECT NO.	MITIGATION ACTION	TIMEFRAME	RESPONSIBLE ORGANIZATION	POTENTIAL FUNDING SOURCE	ESTIMATED COST
20	Flood-proof the Town's water supply facilities up to the 500-year flood elevation, especially the Central Street well field pumping facility.	2018-2019	DPW & Utility Department	Town/ FEMA	\$100,000
21	Move all critical equipment, debris, etc., out of the 100-year floodplain near the DPW garage.	2016-2017	DPW	Town	\$50,000
22	Raise Profile of Burroughs Road to reduce overtopping and maintain access to west side of pond.	2018-2022	DPW	Town/ FEMA	\$1,000,000
23	Detain stormwater upstream of Lindor Road by installing control weirs at three locations per Green International study.	2018-2019	DPW	Town	\$25,000

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# Questions

