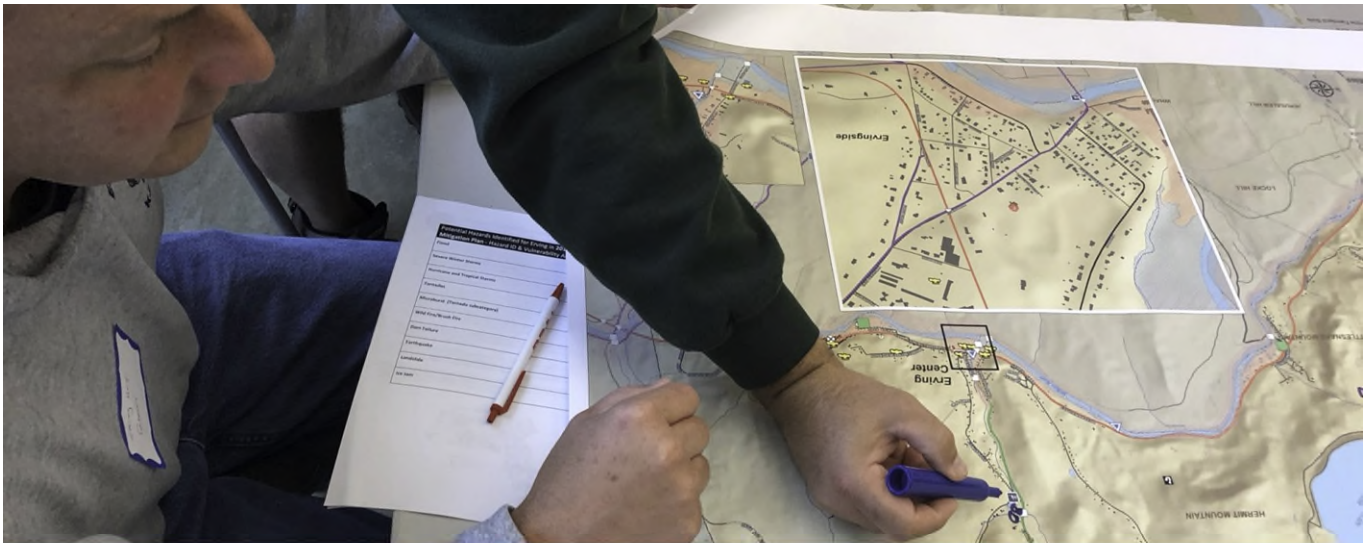




TOWN of ERVING



Municipal Vulnerability Preparedness (MVP) Program

MVP RESILIENCY PLAN

May 2019

Facilitated by the Franklin Regional Council of Governments

A State-Certified MVP Provider



Photo credits:

Cover (top)	Erving Paper Mill Fire, 2015	Matt Burkhart/The Recorder
Cover (bottom)	Erving CRB Workshop, 2018	FRCOG
Page 6	Buckland train derailment, 2016	The Recorder
Page 9	Erving Paper Mill Fire, 2015	Matt Burkhart/The Recorder
Page 11	Ice Jams in Millers River, Athol	Dominic Poli/The Recorder

All other photographs are courtesy of the Franklin Regional Council of Governments.

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TOWN OF ERVING



FY2018 Municipal Vulnerability Preparedness Program

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TOWN of ERVING

MVP RESILIENCY PLAN

Including the Summary of Findings from the Community Resilience Building Workshop held in October 2018

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TOWN of ERVING COMMUNITY RESILIENCE BUILDING WORKSHOP

Overview:

Throughout Franklin County, Massachusetts, communities are experiencing more extreme weather events – especially heavy rains and flooding – along with higher temperatures and other climate-related conditions. These types of conditions are predicted to increase as a result of climate change.

In the face of these changes, municipalities have more of a sense of urgency to increase their resilience by adapting to extreme weather events and mounting natural hazards. Relatively recent events such as Tropical Storm Irene and “Snow-tober,” both in 2011, have reinforced this urgency and compelled communities like the Town of Erving to proactively plan and mitigate potential risks. This type of planning will reduce the vulnerability of Erving's people, infrastructure, and natural resources, and will empower Erving's officials and citizens alike, to take steps to protect themselves and their community.

In the fall of 2018, the Town of Erving was awarded an MVP Planning Grant from the Massachusetts Executive Office of Energy and Environmental Affairs. The Franklin Regional Council of Governments (FRCOG) offered the Town of Erving technical assistance in completing their Community Resilience Building Workshop, in order to achieve designation as a Municipal Vulnerability Preparedness Community, or “MVP Community.” As a state-certified MVP provider, the FRCOG helped Erving engage in a community-driven process that brought together regionally specific climate change information and local knowledge, in order to inform and guide the workshop, whose central objectives were to:

- Define the top natural and climate-related hazards of local concern;
- Identify existing and future strengths and vulnerabilities;
- Develop prioritized actions for the community; and
- Identify immediate opportunities to collaboratively advance actions to increase resilience.

This report summarizes the findings of the Town of Erving's Community Resilience Building Workshop.

COMMUNITY RESILIENCE BUILDING WORKSHOP

Summary of Findings

The Town of Erving has conducted a number of planning projects in previous years, including its 2013 Multi-Hazard Mitigation Plan, which enabled the Town to identify infrastructure and populations vulnerable to a variety of hazards as well as Action Items to reduce the town's vulnerability to future natural hazards. Other recent Erving plans include the 2018 Erving Open Space & Recreation Plan (FRCOG), the 2013 Economic Development Chapter (FRCOG), the 2010 Design Alternatives for the Reuse of Usher Mills (Conway School of Landscape Design), the 2003 Erving Community Development Plan (UMass Donahue Institute), the 2003 Usher Mill Complex & Housing Plan (UMass Donahue Institute), and the 2002 Erving Master Plan (FRCOG).

In spite of Erving's diligence in completing these planning efforts, there was still a need for the community to conduct an assessment across scales – from individual buildings and bridges to rivers and landscapes, and across sectors – infrastructure, society, and environment – looking specifically through the lens of climate change and its likely impacts.

Workshop participants considered climate change impacts most likely to affect Erving, including flooding, rising temperatures, drought, storms and extreme weather events, and increases in the amount and intensity of precipitation events.

The workshop was critical to enabling participants to think about and engage across different sectors. The Fire Chief/Emergency Management Director, Water Superintendent, Highway Foreman, Town Administrative Coordinator, a Planning Board member, and two employees of FirstLight Power Resources hydroelectric company, all came together to determine the most threatening hazards to the Town of Erving and to agree upon high priorities and actions to address them.

Top Hazards

Workshop participants discussed a number of hazards that impact Erving, deliberating on how frequent, how intense, and how widespread each hazard has been, and could potentially be in the future. Hazards discussed included: dam failures, flooding, severe winter storms, ice jams, hurricanes, wind storms/microbursts/tornados, wildfires, landslides, droughts, manmade hazards including train derailments, tractor-trailer accidents, and factory fires, as well as extreme temperatures. Top hazards identified by the participants are as follows:



Areas of Concern

The following list contains general areas that are of concern to Erving as well as specific concerns within each area.

Railroad/Route 2: Both the Pan Am freight railway line (runs east-west) and Route 2 pass through Erving Center. Train derailments occur at times, and hazardous materials are often on board. Route 2 is a heavily traveled state highway, and accidents on the road can cut off the Town from nearby hospitals and other communities. The NE Central Railroad operates a north-south freight line that runs through Ervingside in close proximity to the Erving Police Station, Weatherhead Apartments and Convenience Store, Erving Elementary School, Erving Senior and Community Center, new Erving Library (under construction) and the proposed site for Senior Housing. This rail line also runs near houses on River Road and Northfield Road, and crosses through the town's Groundwater Protection Overlay District, which includes the Zone II recharge area for the town's public water supply. Freight, including hazardous materials, is transported on this line.

Wastewater Treatment Facility: Located in the FEMA-mapped 100-year floodplain of the Millers River; facility could benefit from diking/flood proofing.

Millers and Connecticut Rivers: Ice jams are frequent; Farley Flats has sustained damage over the past year.

Town Hall: No redundancy or digital backup for public records. If building were flooded or somehow compromised, all records would be lost.

Public Water Supply: A generator is needed for the pump house in order for it to function during power outages.

Erving Paper Mill: Compressed natural gas storage and on-site power generation; high risk of fire and explosion. Natural gas shipped in by truck: one of only two "virtual pipelines" in the county.

FirstLight Northfield Mountain Pumped Storage Hydroelectric Facility: Per FirstLight's analysis, as required by their FERC license, the leading edge of a theoretical reservoir breach would occur in the Briggs Brook area. Should a breach occur, downstream residents in this area would have an estimated six (6) minutes notice to begin evacuation. Note that this notification time represents an extreme and catastrophic failure of the Project's Upper Reservoir Main Dam. It is more likely that a breach of the dam, if it were to occur, would develop slowly over the course of hours to days. FirstLight monitors the Upper Reservoir on a 24 hour/7 day basis and maintains a monitoring system of several culverts, weirs, leak detection equipment and cameras. FirstLight responds immediately to any alarm from the leak detection equipment and assesses each situation.

Beaver Dams: Swamp Road, North and Church Streets, as well as Jacks Brook, are all affected by localized flooding due to beaver activity.

Current Concerns & Challenges Presented by Hazards

Participants in the workshop discussed a number of hazards, both natural and manmade, which have impacted the community in recent years. The two rail lines, whose tracks run east-west and north-south through Erving, emerged as the top concern. Participants recalled recent derailments and spillages of hazardous materials in Town. This is an ongoing risk, especially as the regional impacts of climate change include rising temperatures and increased flooding, both of which may make washouts and buckling of tracks more common.

Flooding and extreme weather events were also a concern, particularly how these events can delay emergency responders and affect the community during moments of emergency. The Town of Erving is



Train derailments, such as this 2016 incident in Buckland, are a concern for Erving, leading workshop participants to identify railroad/roadway hazardous spills as their top hazard. Photograph courtesy The Recorder.

divided into three villages – Ervingside, Farley, and Erving Center – each of which is located along Route 2, with the distance of 6.5 miles between Ervingside and Erving Center being the furthest separation of the three. Travel between the three villages can be disrupted by accidents along Route 2 and the Pan Am railway line, which runs parallel to Route 2. Extreme weather can also disrupt transport and communication between the three villages, and cell/radio coverage is lacking in some parts of Town, including North Street. The fact that the Town's DPW stores all of its fuel in Ervingside, in a facility that appears to be within the 100-year floodplain as well as the inundation zone of the Moore Dam on the Connecticut River, and does not have a backup supply elsewhere, was noted as one

of the Town's top challenges. In addition, the fact that Town Hall, located in Erving Center, has no redundancy or digital backup of sensitive and crucial public files, was noted. It was also mentioned that the Town's Public Water Supply pump house was without a generator or alternative power source to function during outages. Finally, the question of where to house Erving's residents, as well as those from

neighboring communities, during emergencies was discussed at length, as the Town does not have a formal public shelter with adequate installations, such as showers. In the past, residents have been encouraged to shelter in place, or to go to shelters in the nearby communities of Greenfield, Turner's Falls, or Orange.



The Town of Erving's reliance on Route 2 as a means of connectivity between its three villages, and the susceptibility of Route 2 to closures due to traffic accidents and its proximity to a freight railroad line, was highlighted by workshop participants as a primary vulnerability for the Town.

Specific Categories of Concerns and Challenges

Vulnerability of Town Infrastructure & Resources: As discussed earlier, no redundancy or digital backup exists for Town Hall documents. If anything were to happen to the building, all public records and sensitive GIS data would be destroyed. While most town-owned buildings in Erving have generators, the old library and well house do not. Additionally, the well house is located close to the Millers River in the 100-year floodplain. The three wastewater treatment plants in Erving are all located within the 100-year floodplain as well, and the Town processes sludge not only from Erving and surrounding communities, but from the Erving Paper Mill as well. Dams and flood control measures upstream on both the Millers and Connecticut Rivers, especially the Army Corps of Engineers' flood control projects on the Millers River, provide some level of protection to the town during high flow events.

In the event of a storm or emergency, the DPW highway garage and fuel supply, as well as the DPW's vehicles, are stored in Ervingside. No backup fuel or equipment supplies exist for Farley or Erving Center, and if Route 2 is blocked due to a train derailment or accident, getting support to other parts of town can be difficult.

Sheltering of Erving and Neighboring Residents: Although Erving's Senior & Community Center is a designated shelter, the Town prefers to send people to regional shelters in the event of a storm or emergency, as there are no personnel to staff the shelter. The Fire Department has been expected to staff the shelter in the past, but this is not a practical option going forward. Currently, some residents go east to Orange, and others go west to Turner's Falls or Greenfield, but there is no consistency in this approach so it is difficult for the town to track where residents might have gone during a hazard event.

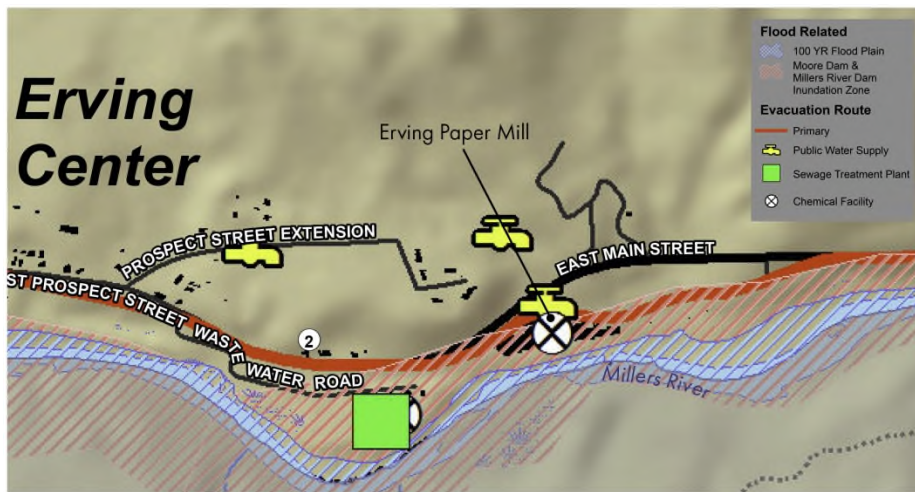
Isolation of Other Residents: The Town of Erving participates in the TRIAD Program of the Franklin County Sheriff's Office, a crime-prevention and wellness initiative aimed at protecting the safety and welfare of senior citizens throughout the county. Even so, the elderly and disabled are still vulnerable in the event of an emergency, particularly due to the geographic separation of Erving's three villages and potential vulnerability of Route 2. Occasionally, there are reports of homeless and transient people in town as well as on FirstLight's property around the Northfield Mountain Pumped Storage reservoir. While currently not a problem, it may be difficult to notify these people in the event of an emergency.

Some residents are without landlines, and poor or no cell phone coverage exists in several parts of Erving, including the North Street area.

High Fire Risk at Erving Paper Mill: The Erving Paper Mill uses compressed natural gas delivered by truck to generate its own power supply, with a 5-megawatt generator on site. Large quantities of methane gas are stored there, and the mill is within the mapped inundation zones for the Moore Dam (Connecticut River) and the Millers River Dams, and possibly, the 100-year floodplain. There is a limited water supply in Erving Center, where the paper mill is located. In the event of a fire, which has happened as recently as 2015, the paper mill has a 200,000-gallon water storage tank and a 100,000 gallon tank on site for fire protection. The Fire Department has a 100,000-gallon storage tank at the Riverside Park, plus 12 dry hydrants. Workshop participants noted, however, "that it only takes about 20 minutes to go through 300,000 gallons." Water would subsequently have to be pumped out of the Millers River. During drought conditions, if water levels in the Millers River were low, the ability of the Fire Department to pump adequate water could be compromised.



In 2015, a three-alarm fire at the Erving Paper Mill required 16 local fire departments and about 100 firefighters in order to be extinguished. Photograph courtesy Matt Burkhardt/The Recorder.



This detail from a map used at the Community Resilience Building Workshop shows how close the Erving Paper Mill and the Sewage Treatment Plant are to the Millers River. FEMA 100-year floodplain maps have not been updated since 1980 for Franklin County.

Vulnerability of Residents to Flooding from Northfield Mountain Reservoir: FirstLight's Northfield Mountain Pumped Storage Hydroelectric Facility is directly uphill from the Briggs Brook area in the Farley section of Erving. In the rare event that a catastrophic failure of the facility's dam should occur, residents would have six (6) minutes to start evacuating their homes. FirstLight currently has a "one call system" in place for the residents of Farley as well as other residents adjacent to the Millers River. Representatives from FirstLight participating in the MVP workshop also noted that the existing Emergency Action Plan (EAP) inundation map data for the Northfield Mountain Reservoir needs to be updated on the base maps used in the MVP workshop, to reflect areas in Erving that would be subject to flooding.

Drought: As previously mentioned, a significant portion of Erving's residents are dependent on private wells for all their water needs, as the only section of the Town that is on public water is Erving'side. Periods of prolonged drought can affect residents, as wells have run dry in the past. At the workshop, Water Superintendent Peter Sanders expressed a concern regarding the water quality of residential wells, in the event that aquifers are running dry.

Vulnerability of Roads, Bridges and Culverts: Erosion and culvert issues are an ongoing problem at the intersection of Church and North Streets. The streambanks around and near the bridge are highly eroded. On Keyup Brook, erosion is causing the riprap supporting the bank to break down. On Jacks Brook, a beaver dam is causing flooding on North Street. Culvert maintenance is continuously needed on Mountain Road, and is done so on an annual basis. Highway Foreman Glenn McCrory spoke of the need to map all of the Town's culverts.

Vulnerability of Town Residents to Railroad Accidents: As discussed earlier, the commercial freight lines that pass through Erving are high on participants' list of concerns. Given the history of train derailments in Town, there are concerns about the proximity of homes and structures to the rail lines, as well as Route 2, the Town's main artery and physical connection between its three villages. Workshop participants discussed "banding together" with neighboring towns that are affected by the Pan Am and New England Central railway lines and communicating with state legislators about the frequency of derailments and accidents and the need for better communication between the railroad owners and the towns.

Uncertainty of Water Supplies During Hazards or Outages: Many of Erving's residents rely upon private wells for their drinking water. In the event of a prolonged power outage, these residents would be without water, unless an emergency water supply or backup power system was established. Only residents in the village of Ervingside have access to public water, and currently the public water supply does not presently have a generator back up. During the October 29, 2011 snowstorm for example, the water department in Ervingside experienced a power outage. In anticipation of the storm, they had filled their 600,000-gallon water storage tank, but after about five days, tank levels were getting low enough that the Erving Water Department was becoming concerned about their fire protection capabilities. Ervingside then connected to the Montague Water Department's water supply in neighboring Millers Falls, per their Emergency Response Plan (ERP). Because Montague has a generator backup, this allowed Ervingside to maintain the continuity of drinking water service until their power supply was back up. This is a major point of strength for both towns, as Erving can also provide water to Millers Falls if their supply were to become compromised.

Ice Jams on Millers River: Workshop participants observed that the water temperature of rivers appears to be changing as a result of climate change, and ice jams on the Millers River were recognized as a major hazard for Erving's residents. Ice jams have caused damage to riverbanks and trees in Farley Flats, and between the Millers River and Route 2. Tree scarring is apparent in these areas, where blocks of ice have gouged and damaged riparian trees, which could have effects on riverbank stability and riparian habitat if ice jams become a more frequent occurrence. Ice Jams upstream in the Town of Athol in 2018 caused flooding in Athol and were closely monitored by town staff as the ice jams made their way downstream to Erving. Ice jams also threaten Erving's wastewater treatment plant.

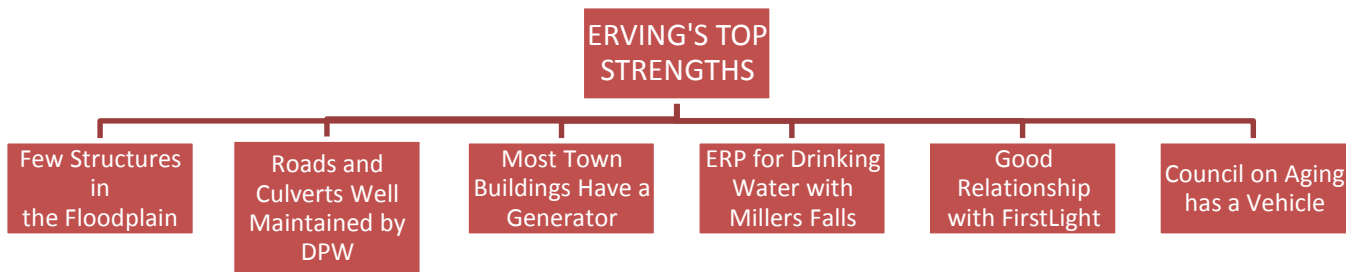


The proximity of the Millers River to the Town of Erving makes residents, riparian trees and infrastructure vulnerable to ice jams, and possibly, future flooding. Photograph courtesy Dominic Poli/The Recorder.

Current Strengths and Assets

Erving residents, for the most part, know how to take care of themselves during routine snowstorms and power outages. Participants expressed pride that people who have lived in Erving for a long time are accustomed to weathering storms, “sheltering in place,” and helping neighbors. Many families in town know each other and know the first responders and Town staff who help run the Town. Because the Town of Erving’s electrical service is provided by two companies (half the town is serviced by National Grid and the other half is serviced by Eversource, and the split occurs on Old State Road), some residents may have power while others do not. This can be strength to the Town during extensive power outages. Participants cited several strengths and assets that help keep their community resilient in the face of climate change and other challenges.

Workshop participants identified the top strengths as follows:



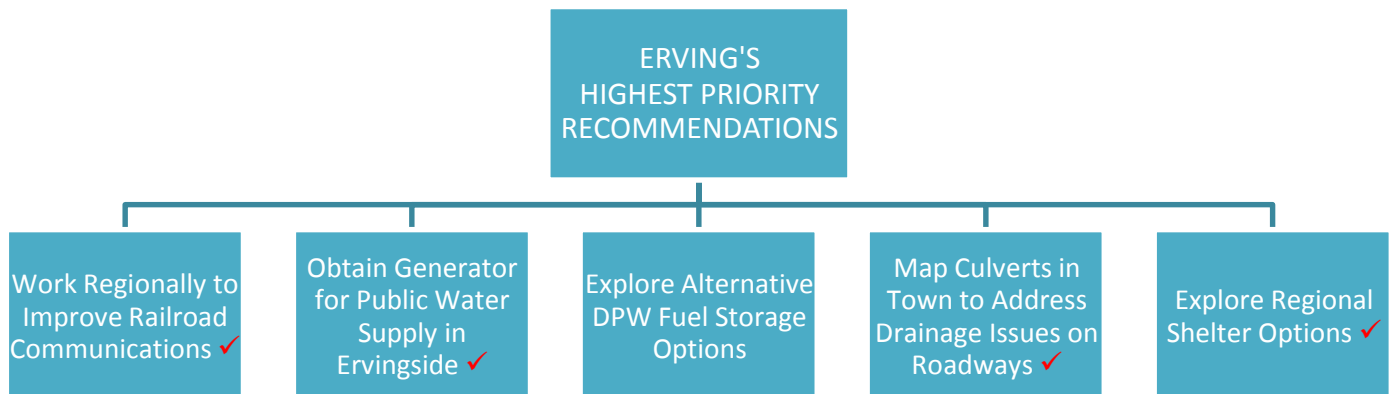
- *On High Ground:* Few structures in Erving are in the 100-year floodplain.
- *Roads and Culverts Well Maintained:* The Town's roads, bridges and culverts are well maintained by the DPW.
- *Most Town Buildings Have Backup:* Although the Pump House and Old Library do not have generators, all other town buildings do have back-up power.
- *Millers Falls Can Provide Water:* As previously mentioned, residents in Erving who have municipal water are more resilient during a power outage or other hazard event that might disrupt supply because the Emergency Response Plan (ERP) Erving has in place to connect to the Montague Water Department's water supply in neighboring Millers Falls.
- *Good Relationship with FirstLight:* The Town of Erving maintains good relationship with FirstLight Power Resources and routinely communicates about potential hazards and participates in drills.
- *Council of Aging Has a Van:* The Town's Council on Aging has their own van, which could be used to transport the elderly or other vulnerable populations in the event of a hazard or emergency.

Top Recommendations to Improve Resilience

The railroad was a common topic of conversation during the Community Resilience Building (CRB) workshop. Participants rated the rail lines as a top hazard to the town. Addressing concerns about a railroad derailment or other disasters led the workshop participants to determine that enlisting State Representatives and neighboring towns to develop a regional plan for communication among towns that are affected by the Pan Am and New England Central freight lines is the Town's highest priority. Participants acknowledged significant challenges working with the private railroad entities, but are determined to improve communication with the railroad.

Erving's Public Listening Session was held on March 25, 2019. Participants discussed several updates to the status of the Highest Priority Recommendations. These updates are described below and recommendations that have been implemented are tagged with a ✓. The list of highest priority recommendations was updated and is presented on page 17.

Update: The Town has contacted their State legislators and requested help in convening a meeting with the railroad companies to discuss vulnerabilities and emergency response.



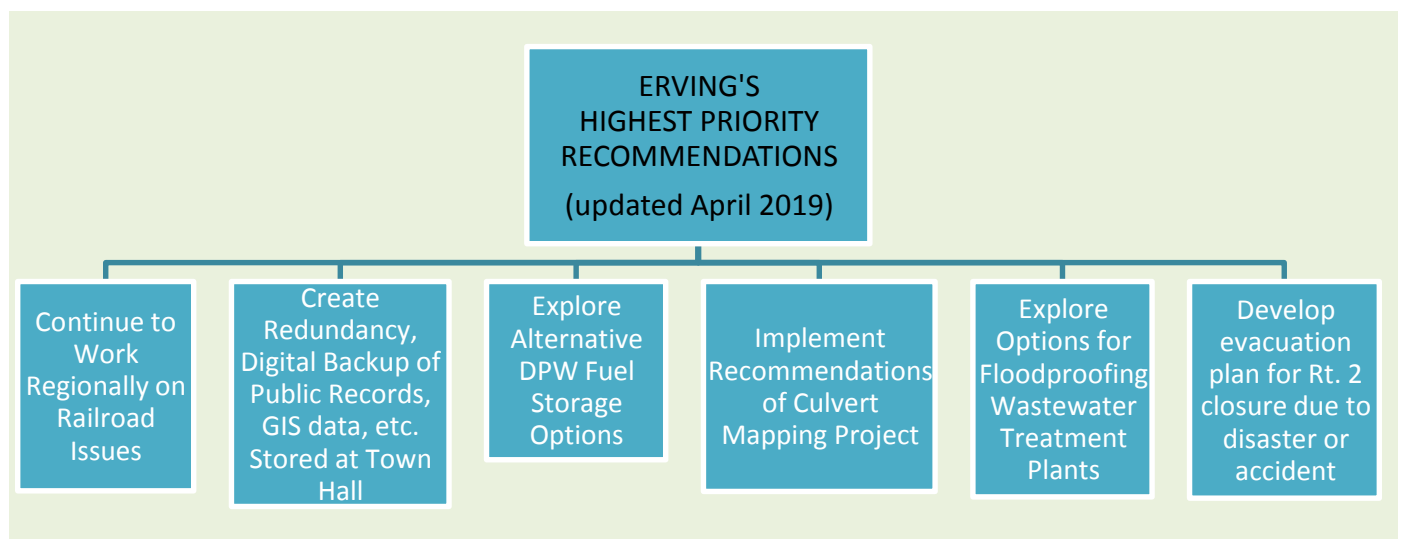
Tied for second highest priority were: a) obtaining a generator for the pump house, which provides the public water supply for the village of Ervingside, and b) finding an alternative place for the DPW to store their fuel, both outside of the 100-year floodplain and strategically located throughout town so that there would not be disruptions of supply if Route 2 is not passable.

Update: Erving's 2019 Annual Town Meeting has a warrant article to fund the generator for the pump house.

Tied for third highest priority were: a) Map the Town's culverts as a digital GIS layer, and b) explore regional shelter options so that residents of Erving and neighboring towns know exactly where to go to find shelter, in the event of a storm, natural hazard, or emergency.

Updates: The town received FY19 Community Compact funding and hired the FRCOG to develop an inventory and preventative maintenance program for municipally owned culverts and bridges by December 30, 2019 (with findings presented to the Town by November 1, 2019). To do this, the FRCOG will inventory, evaluate, and prioritize the Town's culverts. The FRCOG staff will also use MassDOT bridge inspection reports to assess and rank the condition of bridges under Town jurisdiction. The compiled information will be used to create a final report that details the existing conditions of the infrastructure and prioritizes them in terms of condition. The data will be compatible with the Town's asset maintenance software so that Erving can improve its planning for future capital improvements.

The town is participating in the Regional Sheltering project coordinated by the Franklin County Regional Emergency Planning Committee (REPC).



A number of other recommendations emerged during the October 2018 CRB workshop, which are captured in the prioritized list of recommendations offered by the workshop participants. These recommendations were further refined by public input and discussion, and summarized in the Community Resilience Building Risk Matrix for Erving.

Highest Priority Recommendations

- Improve communication with the railroad company by organizing with other communities on the freight line and talking to state representatives.
- Develop town-wide communication and evacuation plan in the event that Route 2 is closed due to disaster/accident. Leverage opportunities to incorporate resiliency strategies into the current Rt.2 Safety Improvements project via Task Force.
- Protect wastewater facility from flooding by exploring flood-proofing options; obtain generator for pump house in the event of a power outage.
- Create redundancy/digital backup of important documents, public records, and GIS data.
- Create alternative site for fuel storage in one of Erving's other villages, and out of the floodplain.
- Secure a public drinking water supply in Erving Center, in the event that wells dry up or groundwater supplies are somehow compromised.
- Obtain help from state in developing a regional sheltering plan so that residents know where to go in the event of a disaster, and adequate staff is on hand.
- Improve outreach out to transient populations to ensure that they are notified in the event of an emergency.
- Flood proof town-owned structures, including the three wastewater treatment plants, that are vulnerable to flooding and/or have a backup supply located elsewhere
- Learn more about the Army Corps of Engineers' system for managing dams on the Millers and Connecticut Rivers, in order to ensure that future flooding of Erving does not occur.


Moderate Priority Recommendations

- Identify areas in Town where there are gaps in communications systems if landlines do not work (i.e., where are there holes in broadband and cell coverage).
- Improve communication with residents in the inundation zone for the Northfield Mountain Pumped Storage facility (EAP zone); ensure that homeless/transient people are able to be reached in the event of a disaster.
- Determine if fuel storage at the Paper Mill warrants more protection in the event of a fire, flood or accident.
- Continue outreach to elders and vulnerable populations to ensure that they are signed up for Reverse 911 program.
- Repair retaining wall riprap on Keyup Brook and improve resiliency of stream banks to future erosion.
- Investigate resources, funding and information for Town and landowners to prevent future bank, road and tree damage from ice jams.
- Investigate resources, funding and information for Town and landowners to reduce the flooding threat from beaver dams.
- Map town culverts and load into a GIS database.

Lower Priority Recommendations

- Ensure that Town is not liable in the event that COA van is used to transport residents during an emergency. Investigate insurance options.

Erving
Community
Resilience
Building Matrix

Community Resilience Building Risk Matrix						ERVING CRB WORKSHOP		www.CommunityResilienceBuilding.org		
				OCTOBER 3 2018						
H-M-L priority for action over the Short or Long term (and Ongoing) V = Vulnerability S = Strength				Recommendations		Top Priority Hazards			Priority	Time
						Railroad Derailments /Hazardous Materials	Flooding/ Dam Failure	Ice Jams	H - M - L	Short Long Ongoing
Features	Location	Ownership	V or S							
Infrastructural										
Railroads	Town-wide	Private	V	Improve communication with the railroad companies by organizing with other communities on the freight lines and talking to state representatives.	X	X	X	H	O	
Route 2	Town-wide	MassDOT	V/S	Develop town-wide communication and evacuation plan in the event that Route 2 is closed due to disaster/accident. Leverage opportunities to incorporate resiliency strategies into the current Rt.2 Safety Improvments project via Task Force.	X	X	X	H	O	
Wastewater Treatment Plants & Pumping Station	Town-wide	Town	V	Protect wastewater treatment facilities from flooding by exploring floodproofing options; obtain generator for pump house in the event of a power outage.		X	X	H	L	
Town Hall	Erving Center	Town	V	Create redundancy/digital backup of important documents, public records, and GIS data.		X	X	H	S	
DPW Highway Garage	Erving side	Town	V	Create alternative site for fuel storage in one of Erving's other villages, and out of the floodplain.	X	X	X	H	S	
Drinking Water Infrastructure	Erving side	Town	V/S	Obtain generator for pump house in the event of a power outage, so that public water supply is not interrupted. Emergency Response Plan in place with Montague Water Dept. to receive water from Millers Falls.	X	X	X	H	S	
	Erving Center	Town	V	Secure a public drinking water supply in Erving Center, in the event that wells dry up or groundwater supplies are somehow compromised.				H	S	
Communication System	Town-wide	Private	V	Identify areas in Town where there are gaps in communications systems if landlines do not work (i.e., where are there holes in broadband and cell coverage).	X	X	X	M	S	
FirstLight	Town-wide	Firstlight	V/S	Improve communication with residents in the EAP zone; Continue to participate in scheduled drills with FirstLight; secure updated inundation mapping and request that FRCOG update MVP maps; monitor for presence of homeless/transient people and develop procedures to reach them in the event of a disaster.		X		M	O	
Erving Paper Mill	Erving Center	Private	V	Determine if fuel storage at the Paper Mill warrants more protection in the event of a fire, flood or accident.	X	X	X	M	S	
Culvert Maps	Town-wide	Town	S	Map culverts in town to address drainage issues on roads.		X	X	M	S	
Societal										
Regional Sheltering Plan	Town-wide	Regional	V	Obtain help from state in developing a regional sheltering plan so that residents know where to go in the event of a disaster, and adequate staff is on hand.	X	X	X	H	O	
Homeless/Transient Camps	Town-wide	Town/Firstlight	V	Continue to monitor for transient populations to ensure that they are notified in the event of an emergency.	X	X	X	H	O	
TRIAD List of Vulnerable Population	Town-wide	Town	V/S	Continue outreach out to elders and vulnerable, to ensure that they are signed up for Reverse 911 program.	X	X	X	M	S	

Council on Aging Van	Town-wide	Town	V/S	Town has van that can transport elderly and vulnerable populations. Ensure that town is not liable in the event that COA van is used to transport residents during an emergency.	X	X	X	L	S
Environmental									
Millers River Floodplain	Town-wide	Town/Private	V/S	While few structures exist in the floodplain, those that are vulnerable to flooding (WW Treatment Plant, DPW Highway Garage, Erving Paper Mill) should be floodproofed/have a backup supply elsewhere.		X	X	H	S-L
Keyup Brook	Erving Center	Town/Private	V	Repair retaining wall rip rap and improve resiliency of stream banks from future erosion.		X	X	M	S
Beaver Dams	Town-wide	Town/Private	V	Investigate resources, funding, info for town and landowners.		X		M	L
Ice Jams	Farley	Town/State/Private	V	Investigate resources, funding, info for town and landowners to prevent future bank, road and tree damage from ice jams.		X	X	M	O

Appendices

Maps

CRB Workshop Documentation

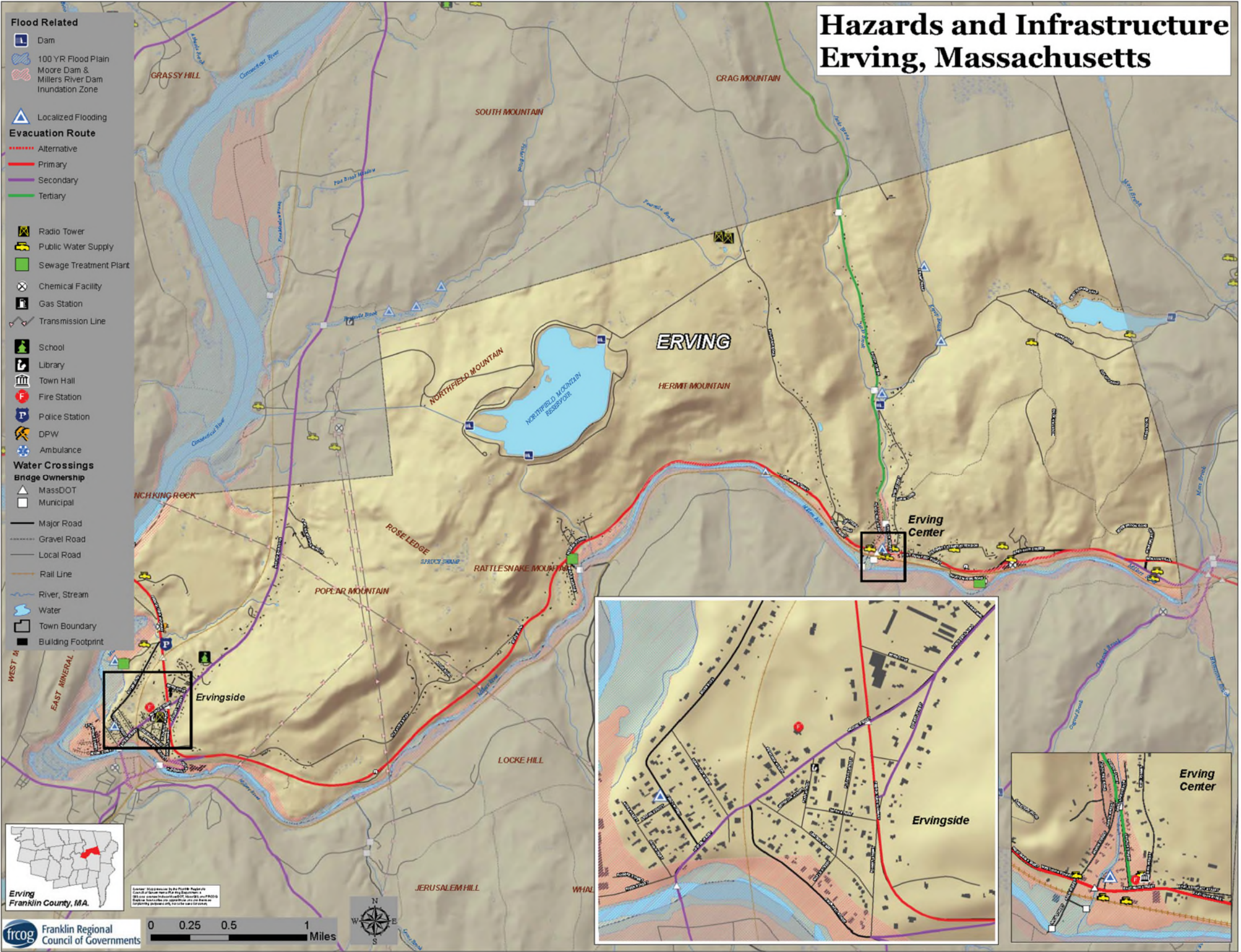
CRB Workshop Presentation

Public Input Documentation

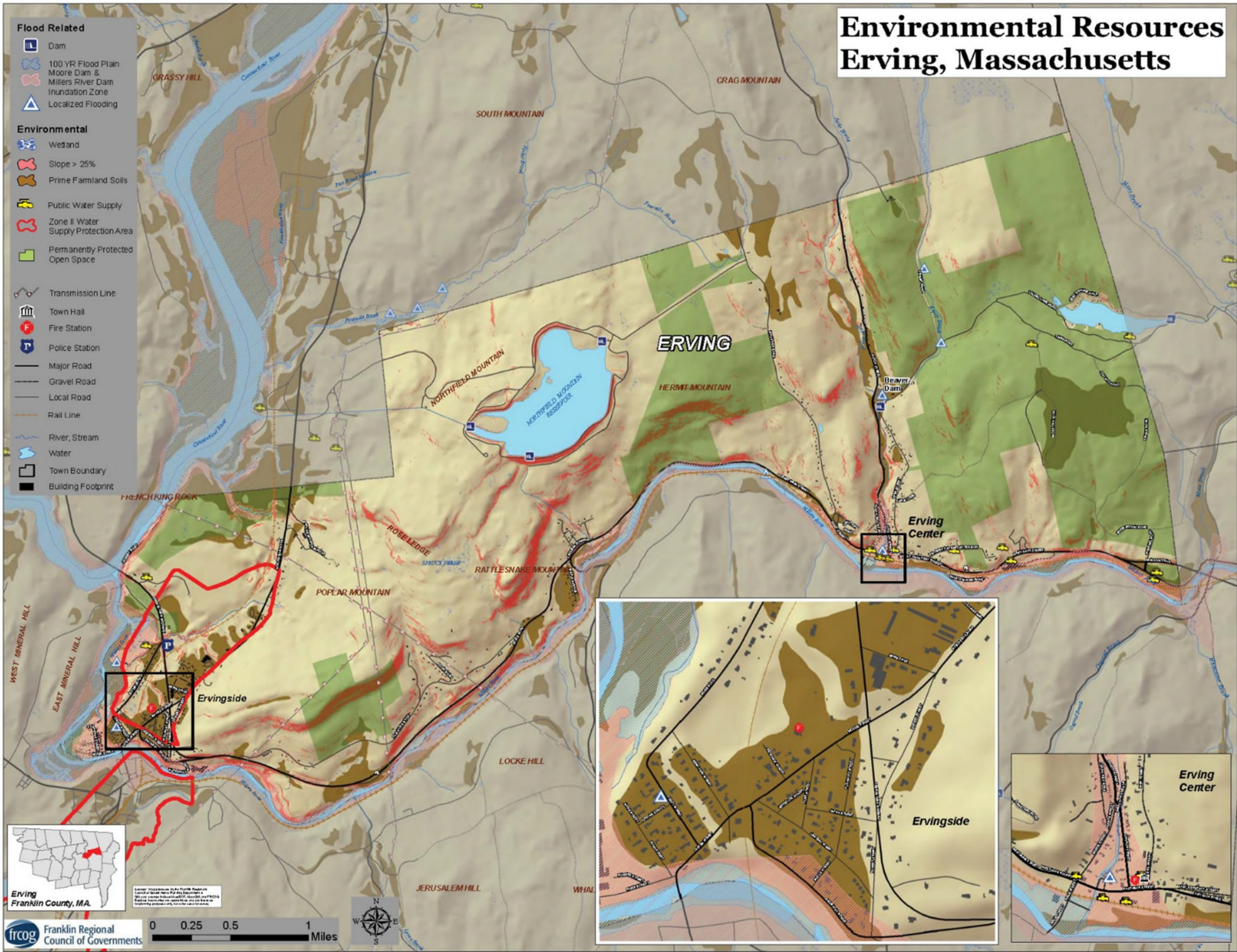
Public Input Presentation

Certificate of Adoption

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Environmental Resources Erving, Massachusetts



CRB Workshop Documentation

CRB Workshop Flyer

October 3rd 8:30am-1:30pm

Erving Senior & Community Center
1 Care Drive, Erving

ERVING
CLIMATE
CHANGE
RESILIENCE
WORKSHOP

The Town of Erving and the Franklin Regional Council of Governments invite town officials and members of the public to discuss:

- Connections between natural hazards and local/regional planning and mitigation efforts
- Strengths and vulnerabilities of residents, infrastructure, and natural resources
- Specific actions that can reduce the impact of hazards and increase Erving's resilience

RSVP to Bryan Smith at (413) 422-2800 x102 or admin@erving-ma.org

Lunch will be provided

CRB Workshop Sign In Sheet

Erving Community Resilience Building Workshop

Wednesday, October 3, 2018

Erving Senior & Community Center

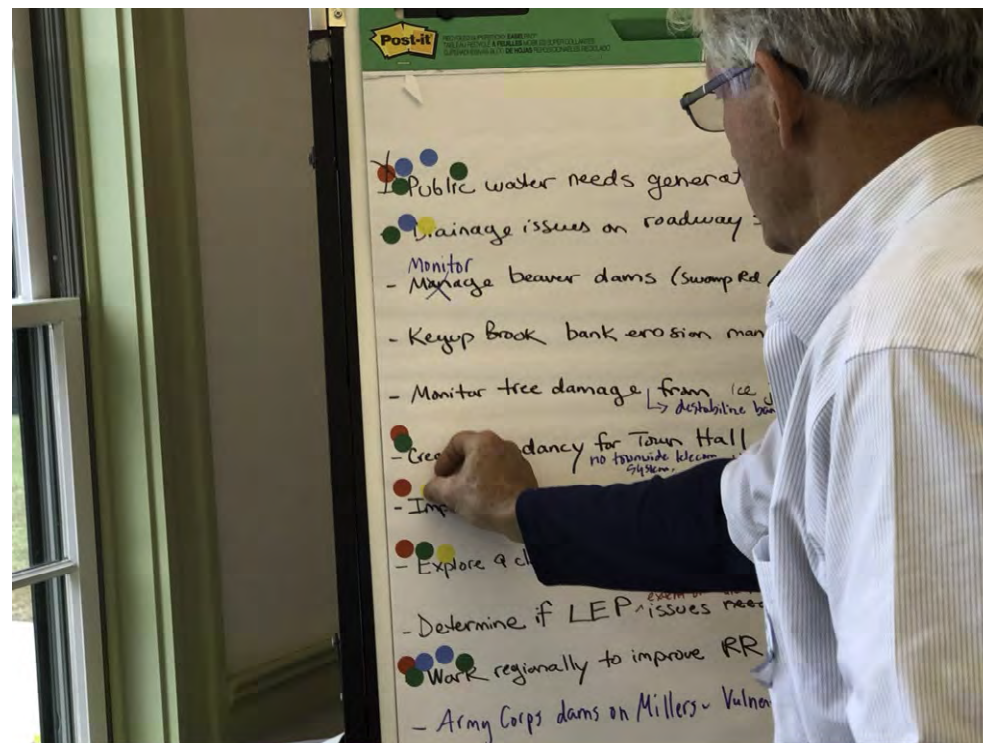
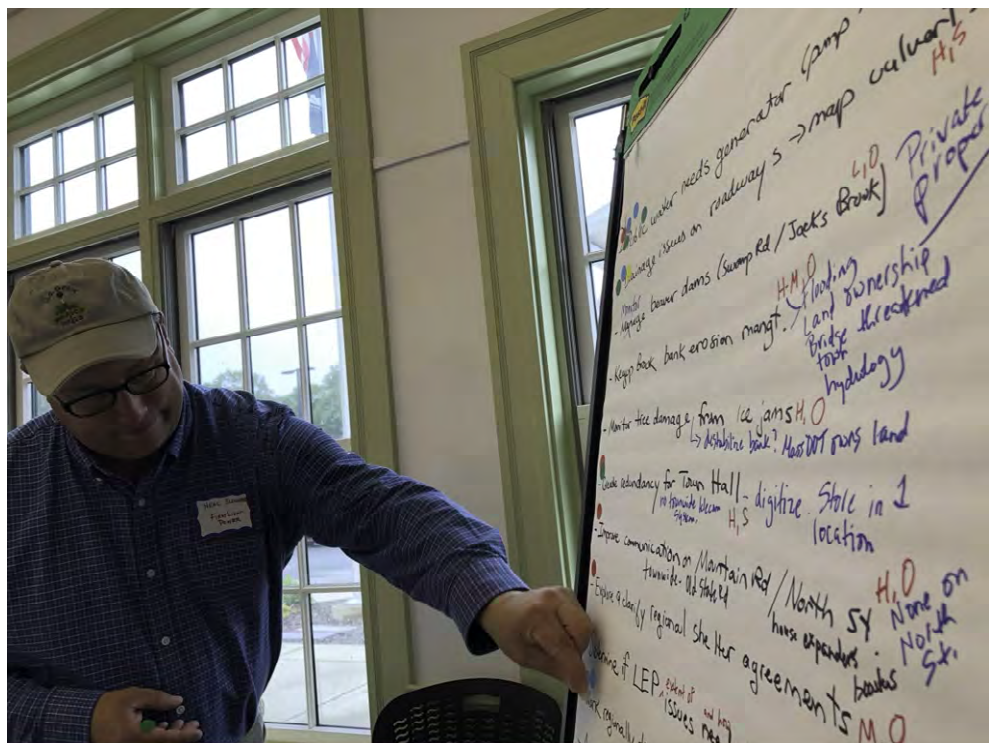
Name	Affiliation	Position	Contact
Bryan Smith	Town of Erving	Administrative Coordinator	admin@erving-ma.org
Glenn McCroff	Town of Erving Hwy	Hwy Foreman	hwy.Glenn.McCroff@erving-ma.org
Peter Sanders	Town of Erving	Water Supt. / Con Com	water.peter.sanders@erving-ma.org
Mike Shaffer	Planning Board / REC		QECSHAFFER@AOL.COM
Neal Slocumbe	FIRST LIGHT POWER	Operations Manager	neal.slocumbe@firstlightpower.com
Douglas Bennett	FIRST LIGHT POWER	Director of MA Hydro	douglas.bennett@firstlightpower.com
Philip Winkler	EMD / Fire	Fire chief / EMD	Firechief@Erving-ma.org
Kimberly MacPhee	FRCOG	Land Use + Nat Res Program Manager	kmacphee@frcog.org
Megan Rhodes	FRCOG	Transp. + LU planner	mrhodes@frcog.org
Evan Abramson	FRCOG	Land Use + Nat Res planner	eabramson@frcog.org

- Compressed Natural Gas @ Erving Paper Mill
- ✓ - railroad / roadway (hazmat)
- ✓ - ice jams on Millers / CT
- ✓ - Flooding (small storms - Drainage) general
- Dam Failure (manmade + natural)
- Tornadoes

- 2 Public water needs generator (pump House) H, S
- 1 Drainage issues on roadway → map culverts H, S
- 3 Monitor Manage beaver dams (Swamp Rd / Jacks Brook) Private Property L, D
- Keyup Brook bank erosion mangt. H, M, D flooding Land ownership Bridge threatened town hydrology
- Monitor tree damage from ice jams H, O destabilize bank? MassDOT owns land
- Create redundancy for Town Hall - digitize. Store in 1 location no townwide telecom H, S
- Improve communication on Mountain Rd / North St. H, O None on North St. house expands borders
- 3 Explore & clarify regional shelter agreements M, O
- Determine if LEP issues need to be addressed H, S extent of and how
- 1 Work regionally to improve RR communications H, O M, L
- Army Corps dams on Millers - vulnerability of infrastr. in floodpln gather info
- 2 Fuel storage options outside floodpln H, S

CRB Workshop Photos







CRB Workshop Presentation (FRCOG)


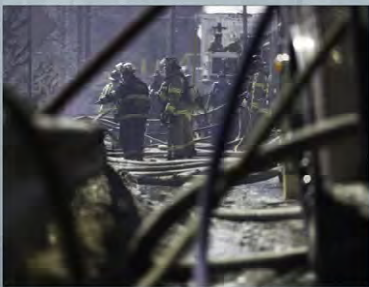



Photo courtesy The Recorder, Matt Burkhart

Community Resilience Building Workshop

Town of Erving

October 3, 2018

Agenda

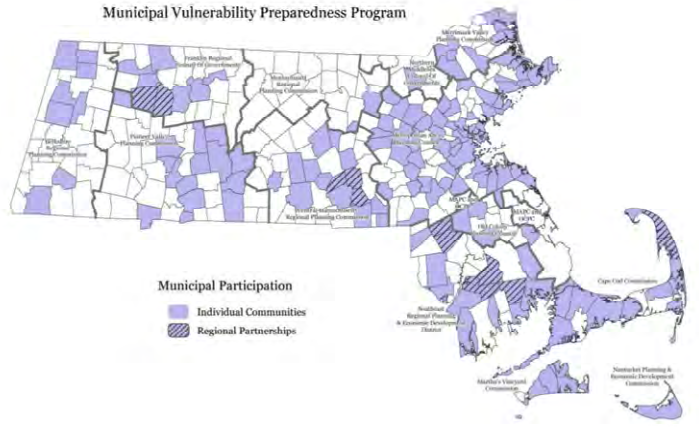


- Welcome and Introductions
- Municipal Vulnerability Preparedness Grant Program
- Discuss Impacts of a Changing Climate
- Workshop Agenda (see hand-out)
- Next Steps

MVP Program Launched 2017

\$1.1M Awarded

Municipal Vulnerability Preparedness Program



Municipal Participation
 Individual Communities
 Regional Partnerships

Workshop Process and Outcomes

- Review natural hazard background information to provide context for all participants
- Identify and map vulnerabilities and strengths:
 - Infrastructure
 - Societal
 - Natural resources
- Develop and prioritize actions and clearly delineated next steps

Build Resilience and Preparedness

to more frequent and intense weather events.

Improve pre-event planning, response & recovery, and long-term actions.

A prepared and resilient town will be able to maintain functions, protect its residents and emerge stronger and better prepared for future storm events and a changing climate.


Massachusetts' Changing Climate

- Changing weather**
 - Higher temperatures
 - Shorter winters
 - More frequent & intense storms
 - Droughts
- Amplifies existing risks**
 - Community and regional infrastructure
 - Local and regional economies
 - Public health
 - Natural resources and our environment

Goal for Building Resilience to a Changing Climate:

Protect life, property, natural resources and the economy

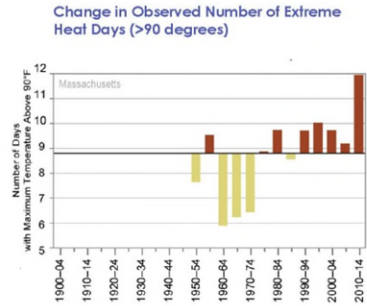
Higher Temperatures




Heat Waves

- Number of days >90° are predicted to increase.
- By 2050 - 6 to 25 more days
- By 2100 - 9 to 60 more days

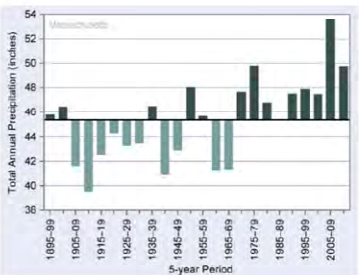
Change in Observed Number of Extreme Heat Days (>90 degrees)



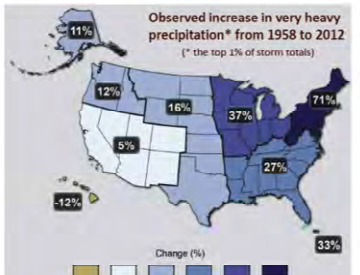
Heavy Precipitation




Observed Annual Precipitation



Observed Increase in Heavy Precipitation

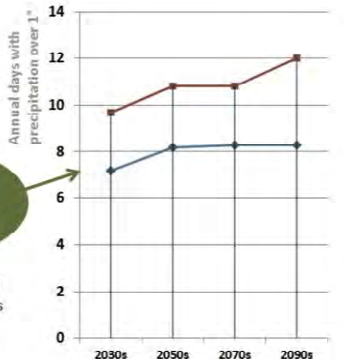


Heavy Precipitation



Predictions

- By the end of the century, our area could have 5 additional days of rainstorms that dump over 1 inch of rain.



Annual observed days with precipitation over 1" 1971-2000


Lower Emissions

Higher Emissions

Extreme Weather Events

- Tropical storms
- Tornadoes
- Thunderstorms
- Snow storms
- Drought

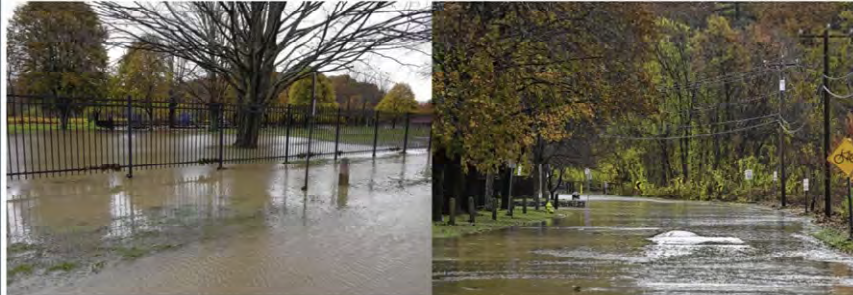
The frequency, intensity, duration and geographic extent of these extreme storms is likely to increase.



Greenfield: 2.59"
Orange: 2.78"

News Flash! October 30, 2017

Heavy rains bring flash flood warnings and high winds knock out power to thousands. Roads flood



Pictures by Recorder Staff/Paul Franz

Recent Severe Storms 2008 Whately Microburst



Recent Severe Storms 2008 Ice Storm



2017 Conway Tornado



Recent Severe Storms 2011 Tropical Storm Irene



Snowtober!!! 2011 Historic Nor'easter



TOWN OF ERVING LOCAL NATURAL HAZARD MITIGATION PLAN 2012

- Inventoried *historic* hazard events – frequency, magnitude and damages
- Vulnerability assessment for flooding was prepared based on damages from *past* events and location in 100 year floodplain
- Prioritized all hazards and included action items for each hazard

2012 Natural Hazard Mitigation Plan Hazard ID & Vulnerability Assessment



Potential Hazards Identified for Erving

Flood
Severe Winter Storms
Hurricane and Tropical Storms
Tornadoes

**A changing climate is
exposing us to greater risk**

Earthquakes
Ice Jam

Action Items for most of these hazards were also developed

Workshop Agenda

- **Identify Past, Current and Future Hazards**
- **Determine Top Priority Hazards**
 - Which 4 hazards pose the greatest threat to the town currently and in the future?
- **Brainstorm resiliency actions for Infrastructure, Societal and Environmental vulnerabilities.**
 - Examples:
 - Upgrade culverts, flood-proof drinking water supplies
 - Evacuation drills and extreme weather communications protocols to protect vulnerable populations
 - Protect wetlands and floodplains to improve flood resiliency
- **Determine top priority Resiliency Actions for Erving**

Infrastructure



A changing climate is exposing us to greater risk.

What is it?

- Roads
- Power grid
- Drinking Water
- Wastewater Treatment
- Communications
- Housing
- Emergency Response
- Schools

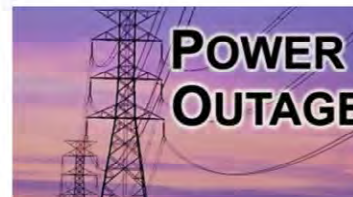
Vulnerabilities

- Increase in Precipitation and Extreme Storm Events
- Damages from Flooding, Wind Storms, Snow/Ice Storms

Expected Impacts from Higher Temperatures

Infrastructure

- Energy
 - Increased demand will strain energy infrastructure
 - Disrupt service (potential for widespread brownouts or blackouts)
- Transportation
 - More frequent maintenance required to address:
 - deterioration of asphalt roads
 - buckle railroad tracks
 - thermal expansion of bridges



Societal (Erving Residents)



A changing climate is exposing us to greater risk.

What is it?

- Availability of health care services
- Access to lifelines (food/water, emergency response personnel, etc.)
- Support networks that connect and maintain the supply of goods and services to vulnerable populations.

Vulnerabilities

- Vulnerable populations
 - Elderly
 - Low/moderate income
 - Special needs
 - Languages spoken

Effects of Climate Change on Town Residents (societal)

A changing climate is exposing us to greater risk.

- Heat-Related Illness and Death
- Danger from Storms & Flooding
- Insect-Borne Diseases
- Allergies & Pollen
- Waterborne Disease & Algal Blooms
- Vulnerable populations
- Shelters & services

Health Impacts from a changing climate are magnified by individual health issues and circumstances of vulnerable populations



Environment

A changing climate is exposing us to greater risk.



Natural Resources

- Millers River
- Coldwater streams
- Forests
- Floodplains
- Habitat
- Wetlands
- Aquifers

Vulnerabilities?

- Flooding
- Erosion
- Impacts to water quality and quantity
- Loss of species diversity
- Invasive pests and plants
- Wetland soils become less absorptive
- More stormwater runoff, less groundwater recharge

Let's Get Started!

- Complete Workshop
- Compile Information in a Summary Report
- Follow-up Meeting with the Town
- Use MVP work to update Erving's Hazard Mitigation Plan

Let's Get Started!

Identify past, current, and future hazards

- What hazards have impacted your community?
- Where and how often have the hazards occurred?
- What effects will these hazards have on your community in the future (5, 10, 25 years)?
- What is exposed to hazards and climate threats within your community? For example, roads, elderly, natural resources.
- What have been the impacts to the town's operations and budgets, planning and mitigation efforts?
- Other concerns?

Public Input Documentation

Public Listening Session and Public Comment Period

The Town of Erving provided a public listening session and public comment period to ensure adequate opportunities were available to Erving residents, town officials and other stakeholders to review and comment upon the draft Erving MVP Resiliency Plan. The public listening session and public comment period were advertised on the Town of Erving's website as well as on the FRCOG's website.

The public listening session was held on March 25, 2019. Staff from the FRCOG provided a presentation on the MVP program as well as findings from the CRB workshop. The PowerPoint slides are included at the end of this section. The minutes from the meeting are included, below.

The public comment period was open from March 18 – April 1, 2019, during which the public was invited to submit comments via email or regular mail. All stakeholders listed for the project received notice of the public comment period and a copy of the draft MVP Resiliency Plan.

Public Listening Session Outreach

Erving

Municipal Vulnerability Preparedness (MVP) Public Meeting



*The Town of Erving and the Franklin Regional Council of Governments
invite Erving residents to hear about and comment on the Draft MVP Plan:*

- ✓ Attend the public meeting: March 25th at 6:35 pm at Erving Town Hall
- ✓ Provide public comment March 18th – April 1st: MVP Plan and instructions can be found at www.erving-ma.gov/emergency-management/pages/municipal-vulnerability-preparedness or in person at Erving Town Hall

WE WANT YOUR FEEDBACK!

**Monday, March 25th, 6:35 pm
Erving Town Hall, 12 East Main Street, Erving**

For more information contact Evan Abramson, Franklin Regional Council of Governments
eabramson@frcog.org | 413-774-3167 x131



FY2018 Municipal Vulnerability Preparedness Program

Town of Erving Team Members

Philip Wonkka Emergency Management Director & Fire Chief Phone: (413) 423-3866 Email: firedept.philip.wonkka@erving-ma.org	Glenn McCrory Highway Foreman Phone: (413) 423-3500 Email: hwv.glenn.mccrory@erving-ma.org
Christopher Blair Police Chief Phone: (413) 423-3310 Email: police.christopher.blair@erving-ma.org	Peter Sanders Chief Wastewater Operator & Water Superintendent Phone: (413) 423-3354 Email: potw.peter.sanders@erving-ma.org
Bryan Smith Administrative Coordinator Phone: (413) 422-2800 ext. 102 Email: admin@erving-ma.org	

Stakeholders

Erving Conservation Commission

David Brule, Chair

Phone: (413)

Address: 12 East Main Street, Erving, MA 01344

Email: dpbrule@hotmail.com

Erving Industries, Inc.

Morris Housen, President

Address: 97 East Main Street, Erving, MA 01344

Phone: (413) 422-2700

First Light Power Resources

Address: 99 Millers Falls Road, Northfield, MA 01360

Phone: (413) 659-4508

Millers Falls River Watershed Council

Ivan Ussach

Address: 100 Main Street, Athol, MA 01331

Phone: (978) 248-9491

Pan Am Railways

Tim Mosher, Environmental Coordinator

Phone: (978) 505-4669

Gynesee Wyoming for New England Central Railroad

Jeffrey Castle, General Manager

Address: 2 Federal Street, Suite 201, St. Albans, VT 05478



March 13, 2019

Dear Stakeholder:

Increasingly, we find ourselves responding to more unpredictable and severe weather events that damage the Town of Erving's infrastructure, natural resources, and local economy, and threaten the health and welfare of residents. The costs and impacts to the Town remind us that we need to continue working to reduce our risk and increase our resilience to these extreme storm events. In order to be proactive in preparing and protecting its residents, the Town of Erving is partnering with the Franklin Regional Council of Governments (FRCOG) to create a Municipal Vulnerability Preparedness (MVP) Plan, **a draft version of which is included for your review.**

Additionally, the Town of Erving and the FRCOG will be convening a public meeting to help:

- Understand connections between natural hazards and local/regional planning/mitigation efforts, including work to update Erving's Multi-Hazard Mitigation Plan;
- Evaluate strengths and vulnerabilities of residents, infrastructure, and natural resources;
- Develop and prioritize resilient actions for the town, residents and our local organizations and businesses; and
- Identify actions that can reduce the impact of hazards and increase climate resilience.

On behalf of the Town of Erving, we hope you or a designee can join us at this important public meeting.

Erving's MVP Public Meeting
Monday, March 25, 2019 at 6:35pm
Erving Town Hall, 12 East Main Street, Erving

Public Comment Period to run from March 18th through April 1st

Comments can be submitted through the Erving Town Administrator or online at:

www.erving-ma.gov/emergency-management/pages/municipal-vulnerability-preparedness

Sincerely,

Kimberly Noake MacPhee
Land Use & Natural Resources Program Manager
Franklin Regional Council of Governments

File Edit View History Bookmarks Tools Help

WBP - View Sources X StreamStats: Streamflow Stati... X Stream Crossing Explorer (SC... X Search results | Farm Hack X 1 676 Foster Synonyms - Oth... X Municipal Vulnerability Preparedness

https://www.erving-ma.gov/emergency-management/pages/municipal-vulnerability-preparedness

Most Visited Northeast Habitat Map Dataset Gallery | NOAA Citation Machine: APA... Climate Change Vulne... The USGS Land Cover... CONNECTExplorer™ Nature's Unifying Patt... Strategies - Naturally...

Town of Erving
MASSACHUSETTS

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Fire Department
Municipal Vulnerability Preparedness
Police Department
Virtual Vendors Emergency Preparedness
Calendar

Contact Info

Phone:
Ext. Office: (413) 422-2800 Ext. 100
Cell: (413) 824-4078

Fax:
(413) 422-2811

Address:
12 East Main Street
Erving, MA 01344
United States
See map: [Google Maps](#)

Key Contacts

Philip Workika
(413) 824-4078

Home » Government » Departments » Emergency Management

Municipal Vulnerability Preparedness

MVP & Local Hazard Mitigation Planning

In July 2018, the Commonwealth's Executive Office of Energy & Environmental Affairs has awarded the Town of Erving a planning grant for the Municipal Vulnerability Preparedness program. The program will allow the Town to work with local and regional stakeholders to:

- Understand how the community is impacted by climate change
- Identify existing and future vulnerabilities and strengths
- Develop and prioritize actions for the community
- Identify opportunities to act to reduce risk and build resilience

Erving has identified storm water management and culvert maintenance as a priority concern as part of this process as residents report quick moving storms with increasing water runoff.

Additionally, the planning process will allow the Town to work on the update to the Local Hazard Mitigation plan that expires in 2018.

Philip Workika, Fire Chief and Emergency Management Director, will serve as the lead on this project and the Franklin Regional Council of Governments has been contracted to provide technical expertise as a state certified MVP planner.

For more information: <https://www.mass.gov/service-details/mp-program-information>

Draft Plan Available for Public Review and Comment

- Erving Municipal Vulnerability Preparedness Plan Draft (PDF)

File Edit View History Bookmarks Tools Help

WBP - View Sources X StreamStats: Streamflow Stati... X Stream Crossing Explorer (SC... X Search results | Farm Hack X 1 676 Foster Synonyms - Oth... X Municipal Vulnerability Preparedness

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(413) 824-4078

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Municipal Vulnerability Preparedness

MVP & Local Hazard Mitigation Planning

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Draft Plan Available for Public Review and Comment

- Erving Municipal Vulnerability Preparedness Plan Draft (PDF)

The town of Erving's draft Municipal Vulnerability Preparedness (MVP) Resiliency Plan is available for public review and comment. Click on the link above to read the MVP Plan and/or attend the Erving MVP public meeting, held in conjunction with the Erving select board meeting on March 29, 2019 at 9:30 pm, located at the Erving Town Hall, 12 East Main Street, Erving, MA 01344

Public Comments

Public comments will be accepted during the meeting as well as during a public comment period from March 18th through April 1st. There are 4 ways to submit comments:

- You may hand in your comments at the public meeting; or
- Email comments to esabramson@frcog.org; or
- Use the [online comment submission form](#); or
- Mail comments to:

Franklin Regional Council of Governments
12 Olive Street, Suite 2
Greenfield, MA 01301
Attention: Evan Abramson

Workshop Process

- Workshop 1 Tier (PDF)
- Stakeholder Informational Filter (PDF)

Town Offices
12 East Main Street
Erving, MA 01344
(413) 422-2800
[Website](#) [Disclaimer](#)

Town Office Hours
Mon - Thu 9:00 am - 12:30 pm, 1:00 pm - 5:00 pm
Monday Evening 5:30 pm - 8:30 pm
Friday 9:00 am - 1:00 pm
[Government Websites by LibGuides](#)
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The image is a composite of two screenshots from a web browser. The top screenshot shows the 'MVP Plan Comment Form' on the Town of Erving website. The page includes a navigation menu with links like 'About Us', 'Town Government', 'Tourism', 'Businesses', and 'How Do It?'. A sidebar on the left lists departments: Fire, Police, and Vermont Yankee Emergency Preparedness. The main content area is titled 'MVP Plan Comment Form' and includes a link to the 'Erving Municipal Vulnerability Preparedness Plan Draft (PDF)'. It also features a 'Public Comments' section with a form for submitting comments, including fields for First Name, Last Name, Address, Email, and a large text area for feedback. The bottom screenshot shows a collage of three photos from planning meetings. The first photo shows two people looking at a map. The second photo shows a man pointing at a whiteboard with handwritten notes. The third photo shows two men looking at a map. Below the photos is a large text block titled 'Municipal Vulnerability Preparedness (MVP) & Hazard Mitigation Planning'. The text states: 'The Town has successfully been awarded \$29,000 in planning grants from the Massachusetts Executive Office of Energy & Environmental Affairs and FEMA. The funding has allowed the Town to contract with the FRCOG Planning Department to work alongside the Town throughout the process. Planning work began October 3, 2018 and will continue through June 2019. Philip Wonkka, Fire Chief & EMD Director, is leading this effort.' To the right of the text is the Town of Erving seal, which includes the text 'THE TOWN OF ERVING', 'INCORPORATED 1838', and 'MASSACHUSETTS'.

Municipal Vulnerability Preparedness (MVP) & Hazard Mitigation Planning

The Town has successfully been awarded \$29,000 in planning grants from the Massachusetts Executive Office of Energy & Environmental Affairs and FEMA. The funding has allowed the Town to contract with the FRCOG Planning Department to work alongside the Town throughout the process. Planning work began October 3, 2018 and will continue through June 2019. Philip Wonkka, Fire Chief & EMD Director, is leading this effort.

The following comments were received and incorporated into the plan as was appropriate:

From: [Douglas Bennett](#)
To: [Kimberly Noake MacPhee](#)
Cc: [Philip Wonka](#); Admin.bryan.smith@erving-ma.org; [Evan Abramson](#); [Leonard Greene](#)
Subject: RE: Revisions to Draft Erving MVP Plan
Date: Wednesday, March 20, 2019 9:44:46 AM
Attachments: [image002.png](#)

Good morning Kimberly,

Thank you for the opportunity to review your text edits. I offer my edits below. I reworded the entire paragraph on page 6. For the text on page 10, my edits are highlighted in yellow and sentences I have either replaced or removed are struck in red..

Please let me know if these meet your expectations or if you have any questions.

- NEW TEXT on page 6

FirstLight Northfield Mountain Pumped Storage Hydroelectric

Facility: Per FirstLight's analysis, as required by their FERC license, the leading edge of a theoretical reservoir breach would occur in the Briggs Brook area. Should a breach occur, downstream residents in this area would have an estimated 6:00 minutes notice to begin evacuation. Note that this notification time represents an extreme and catastrophic failure of the Project's Upper Reservoir Main Dam. It is more likely that a breach of the dam, if it were to occur, would develop slowly over the course of hours to days. FirstLight monitors the Upper Reservoir on a 24 hour/7 day basis and maintains a monitoring system of several culverts, weirs, leak detection equipment and cameras. FirstLight responds immediately to any alarm from the leak detection equipment and assesses each situation.

- TEXT EDIT on page 10

Vulnerability of Residents to Flooding from Northfield Mountain

Reservoir: Firstlight's Northfield Mountain Pumped Storage Hydroelectric Facility is directly uphill from the Briggs Brook area in the Farley section of Erving. In the rare event that a catastrophic failure of

the facility's dam should occur, residents would have 6 minutes to start evacuating their homes. ~~In the rare event that a compromise of the facility's dam should occur, residents would have 37 seconds warning time to evacuate their homes.~~ Firstlight currently has a "one call system" in place for the residents of Farley as well as other residents adjacent to the Millers River. Representatives from Firstlight participating in the MVP workshop also noted that the existing Emergency Action Plan (EAP) inundation map data for the Northfield Mountain Reservoir needs to be updated on the basemaps used in the MVP workshop, to reflect areas in Erving that would be subject to flooding. ~~The Town can coordinate with FirstLight to get this data and FRCOG can update the maps.~~

Doug Bennett
Director MA Hydro Operations
Northfield Mountain/ Turners Falls Projects
FirstLight Power Resources, Inc.
1-413-659-4489
Douglas.Bennett@firstlightpower.com



 Please consider the environment before printing this document

From: Kimberly Noake MacPhee [mailto:KMacPhee@frcog.org]
Sent: Tuesday, March 19, 2019 1:52 PM
To: Douglas Bennett
Cc: Philip Wonkka; Admin.bryan.smith@erving-ma.org; Evan Abramson
Subject: Revisions to Draft Erving MVP Plan

Hello Doug – Thank you for your phone call this morning with corrections to the draft MVP plan. As I understand from our conversation, the response time for Farley residents to evacuate in the event of a catastrophic breach of the dam at the NMtn reservoir is **6 minutes not 37 seconds** as written in the draft report. We will make the following revision to the draft plan and I will mention this at the Public Meeting as well. I apologize for the error. Please review the revised text and let me know if you have additional comments/concerns.

- Replace 37 seconds with 6 minutes on pages 6 and 10.
- NEW TEXT on page 6 - *Residents would have 6 minutes to evacuate if the dam were to experience the most extreme, catastrophic failure that can be modeled, which is a complete failure of the dam. This hypothetical extreme situation is the condition that FirstLight is required by FERC to model and plan for to protect human life. It is somewhat more likely that a breach of the dam, if it were to occur, would develop slowly (cracks, leaks) and cameras and alarms are in place to monitor the integrity of the dam. FirstLight responds immediately to any alarm from the leak detection equipment and assesses the situation.*
- NEW TEXT on page 10 - *In the rare event that a catastrophic failure of the facility's dam should occur, residents would have 6 minutes to evacuate their homes.*

Kimberly

Kimberly Noake MacPhee, P.G., CFM

Land Use & Natural Resources Planning Program Manager

Franklin Regional Council of Governments

12 Olive Street, Suite 2

Greenfield, MA 01301

Phone: 413-774-3167 x130

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Email: KMacPhee@frcog.org

Web: www.frcog.org

Connect with us here: 

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From: [Bryan Smith](#)
To: [Evan Abramson](#)
Subject: FW: Erving MVP Plan Feedback Received
Date: Tuesday, March 19, 2019 3:16:28 PM

FYI

-----Original Message-----

From: cmsmailer@civicplus.com <cmsmailer@civicplus.com>

Sent: Tuesday, March 19, 2019 2:56 PM

To: admin@erving-ma.org

Subject: Erving MVP Plan Feedback Received

Submitted on Tuesday, March 19, 2019 - 2:55pm Submitted by anonymous user:

75.144.190.62 Submitted values are:

First Name: Jacquelyn

Last Name: Boyden

Address: 12 East Main Street

Email : planning@erving-ma.org

Feedback: I think we should be aware of the railroad tracks that run through Erving side that include close proximity to the Police Station, Weatherhead Apartments and Convenience Store, Elementary School, Senior Community Center, new library and proposed senior housing. They are close to houses along River Road and Northfield Road. The tracks are also located in our groundwater overlay district and could be with zoning two of the recharge area. They transport freight on that line.

The results of this submission may be viewed at:

https://linkprotect.eudasy.com?url?a=https%3a%2f%2fwww.erving-ma.gov%2fnode%2f9943%2fsubmission%2f743&c=E.1.7aU1clodsfqhrHJ5u2-b6QdDIEDHJ_1XTpylgBrtxDkPaydmrEK-gs6W8qgObqrUJ32Ff744Rz3IeaZDZGvlfE7lxgWCJOcHE9kq4YCFFD681w...&typo=1

Public Listening Session Presentation (FRCOG)

MVP Community Resilience Building Workshop Findings, Priority Recommendations and Projects



frcog Facilitated by the Franklin Regional Council of Governments

Town of Erving

Municipal Vulnerability Preparedness (MVP)



- ✓ Provides support for MA municipalities to plan for climate change resiliency and implement priority projects.
- ✓ Provides a simple, straightforward process
- ✓ Certifies municipalities as MVP communities
- ✓ Awards communities with funding to complete vulnerability assessments and implement resilience projects



Municipal Vulnerability Preparedness (MVP)



Community Resilience Building Workshop

- ✓ Define top local natural and climate-related hazards of concern;
- ✓ Identify existing and future strengths and vulnerabilities;
- ✓ Develop prioritized actions for the Community; and
- ✓ Identify immediate opportunities to collaboratively advance actions to increase resilience.

Workshop Participants



Benefits of diverse group of participants

- Local knowledge and experience
- Working across departments / sectors
- Reaching consensus

Changing Climate Variables



Amplify existing risks:

- Community and regional infrastructure & economies
- Public health and well being
- Natural resources and our environment

Goal for Building Resilience to a Changing Climate: Protect life, property, natural resources and the economy



ERVING'S TOP HAZARDS

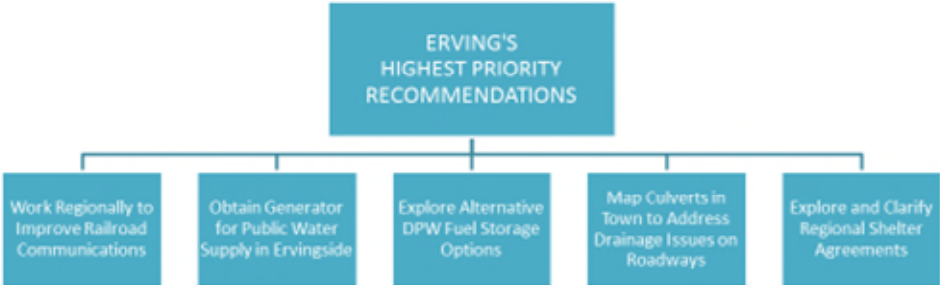
Areas of Concern

- **Railroad/Route 2:** Both the Pan Am freight railway line and Route 2 pass through the center of Erving. Train derailments occur at times, and hazardous materials are often on board. Accidents on Route 2 can cut off the Town from nearby hospitals and other communities.
- **Wastewater Treatment Facility:** Located in the floodplain of the Millers River; could benefit from diking/floodproofing.
- **Millers and Connecticut Rivers:** Ice jams are frequent; Farley Flats sustained damage in the past year.
- **Town Hall:** No redundancy or digital backup for public records. If building was flooded or somehow compromised, all records would be lost.
- **Public Water Supply:** Could benefit from a generator in order to function during power outages.
- **Erving Paper Mill:** Compressed natural gas storage and on-site power generation; high risk of fire and explosion. Methane gas shipped in by truck: one of only two "virtual pipelines" in the county.
- **Firstlight Northfield Mountain Pumped Storage Hydroelectric Facility:** While the chance is low, the potential risk of devastating floods to many parts of Erving, including the entire village of Farley, is high. **Residents would have only 6 minutes of warning if the dam were to break.**
- **Beaver Dams:** Swamp Road, North and Church Streets, as well as Jacks Brook, all affected by localized flooding due to beaver activity.



Areas of Strength

- **On High Ground:** Few structures in Erving are in the 100-year floodplain.
- **Roads and Culverts Maintained:** The Town's DPW has ample resources to keep roads, bridges and culverts clear and well-maintained in the event of a storm or accident.
- **Town Buildings Have Backup:** Although the Pump House and Old Library do not have generators, all other town buildings do. In the event of a storm, power outage or heat wave, the Town of Erving has the necessary facilities to shelter residents and keep them out of harm's way.
- **Millers Falls Can Provide Water:** During times of power outage, the neighboring village of Millers Falls in Montague allows Erving to tap into their public water supply.
- **Good Relationship with FirstLight:** The Town of Erving maintains good communication with FirstLight and are in constant communication about potential hazards.
- **Council on Aging Has Van:** The Town's Council on Aging has their own van to transport the elderly in the event of a hazard or emergency.



Municipal Vulnerability Preparedness: NEXT STEPS

1. Endorse your MVP Plan
2. Apply for MVP Grants which can include:

- a) Detailed Vulnerability and Risk Assessment
- b) Public Education and Communication
- c) Local Bylaws, Ordinances, Plans, & Other Management Measures
- d) Redesigns and Retrofits
- e) Nature-Based Storm-Damage Protection, Drought Prevention, Water Quality, & Water Infiltration Techniques
- f) Nature-Based, Infrastructure and Technology Solutions to Reduce Vulnerability to Extreme Heat and Poor Air Quality
- g) Nature-Based Solutions to Reduce Vulnerability to other Climate Impacts
- h) Ecological Restoration and Habitat Management to Increase Resiliency

Municipal Vulnerability Preparedness (MVP)

Q & A



Municipal Vulnerability Preparedness (MVP)

Public Comment Period:
March 18 through April 1, 2019

Please hand in your comments to FRCOG staff.
You may also email comments to eabramson@frcog.org or mail them to:

Franklin Regional Council of Governments
12 Olive Street, Suite 2
Greenfield, MA 01301
Attention: Evan Abramson



Copy of Approved Meeting Minutes
Meeting Minutes

Board: Board of Selectmen/ Water Commissioner's Meeting
Date: Monday, March 25, 2019
Location: Town Hall, 12 East Main Street, Erving, MA 01344

Selectmen Present: Scott Bastarache, William Bembury
Also, Present: Bryan Smith, Kimberly MacPhee, Philip Wonkka, Douglas Bennett
Press: Katie Nolan, Montague Reporter;

At 6:31 PM Chairman Bastarache called the meeting to order.

Review of Meeting Minutes of March 18, 2019

The Board reviewed meeting minutes of Monday, March 18, 2019. Chairman Bastarache made a motion to approve the meeting minutes of March 18, 2019 as written. Selectman Bembury seconded. Unanimously approved.

Review of Financial Management Policies- 1st Read

The Board conducted the first reading of financial management policies regarding debt management and financial reserves. Chairman Bastarache thanked Deborah Mero, Town Accountant, for taking the lead on drafting these policies. The Board discussed the need to work with the Finance Committee, the Treasurer, and the Accountant to establish financial goals for the Town. The draft policies will be forwarded to the Finance Committee for review. The Board will conduct a second reading on April 01, 2019.

Review of Structured Tax Agreement for Erving Poplar Mountain 1 LLC

Bryan Smith, Administrative Coordinator, provided the Board with an update on the status of the draft structured tax agreement. The project developer's counsel and the Town's consultant have reviewed the document and have made agreed upon amendments. Town Counsel is reviewing the agreement and it is anticipated that a revised draft will be ready for Board review on April 01, 2019.

Review of Municipal Vulnerability Preparedness Plan Draft

At 6:35 PM Chairman Bastarache opened the meeting to a presentation on the draft Municipal Vulnerability Preparedness planning project. Kimberly MacPhee, Land Use /Natural Resources Program Manager from FRCOG, and Philip Wonkka, Fire Chief & Emergency Management Director, joined the Board to present key findings that have resulted from the MVP process and to review draft recommendations. The Town is accepting public feedback on the draft plan through April 1, 2019. Kimberly provided an overview of the State MVP program. The Town conducted a community workshop with Town officials and community stakeholders in Fall 2018. Kimberly noted a high rate of Town and stakeholder participation in the planning process. Kimberly explained that the purpose of the program is to consider the impacts of changing climate variables, noting the stress created on municipal infrastructure and the necessary responses to these impacts. The planning process has identified the following:

Top hazards:

- 1) Railroad/roadway hazardous spills
- 2) Ice jams on Millers River
- 3) Flooding (small storm and larger events)

Areas of focus for vulnerabilities:

Board of Selectmen

Monday, March 25, 2019

Page 1 of 5

Copy of Approved Meeting Minutes

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Meeting Minutes

- Railroad/ Route 2
- Wastewater treatment facility
- Millers & Connecticut Rivers
- Town Hall
- Public Water Supply
- Erving Paper Mill
- FirstLight Northfield Mountain Pumped Storage
- Beaver Dams

Identified areas of strengths:

- Most important facilities are on high ground
- Roads & culverts are maintained
- Town buildings have generators
- Mills Falls can provide potable water
- Good relationship with FirstLight
- Council on Aging has access to a transportation van

Reviewed Highest Priority Recommendations:

- Work regionally to improve Railroad communications
- Obtain emergency generator for the public water supply in Erving side
- Explore alternatives for DPW fuel storage locations
- Map culverts to address road infrastructure concerns
- Explore regional shelter agreements

Chief Wonkka explained that the Town has already begun working on several of the priority issues that were identified. Kimberly noted that the progress will be noted in the plan to the State and should serve the Town well when it comes to applying for implementation grants. Chief highlighted the need for the Town to explore fuel storage location options. Bryan suggested that there may be alignment between the Town's MVP planning and the efforts of Route 2 safety improvements being address by the Route 2 Taskforce and MassDOT. Selectman Bembury asked to have the draft plan updated to list the location of Keyup Brook to be in Erving Center.

Discussion: Selectman Bembury asked for information of the dry hydrants in Erving Center. Chief explained the dry hydrant system and the challenges presented during periods of drought or when the lines fill with sediment. Regarding the Northfield Mountain Pumped Storage facility and the earthen dam in the village of Farley, Selectman Bembury asked how emergency drill training is provided for residents. Doug Bennett, FirstLight, explained the company's annual process of meeting with residents and the testing of the One Call notification system. Doug explained that representatives from the company will visit residents by going door-to-door to obtain feedback. Doug added that every five (5) years a table top exercise is conducted with emergency responders. Doug explained that FirstLight designs and plans for the worst-case scenario that would be an event that was worse than the flood experienced in Town in 1938. Chairman Bastarache reminded those in attendance that public comments will be accepted through April 01, 2019.

Review of Hazard Mitigation Plan Proposal Amendment- FRCOG

The Board reviewed a proposed amendment from FRCOG regarding the planning efforts related to the local hazard mitigation plan. Bryan Smith, Administrative Coordinator, explained that the project has

Board of Selectmen

Monday, March 25, 2019

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Copy of Approved Meeting Minutes

Certificate of Adoption



**CERTIFICATE OF ADOPTION
TOWN OF ERVING SELECT BOARD
A RESOLUTION ADOPTING THE TOWN OF ERVING
MUNICIPAL VULNERABILITY PREPAREDNESS (MVP) PROGRAM
MVP RESILIENCY PLAN**

WHEREAS, the Town of Erving participated in the MVP Community Resilience Building Workshop; and

WHEREAS, the Town of Erving MVP Resiliency Plan contains several potential future projects to mitigate potential impacts from climate change in the Town of Erving, and

WHEREAS, a duly-noticed public meeting was held by the Select Board on March 25, 2019, and

WHEREAS, the Town of Erving authorizes responsible departments and/or agencies to execute their responsibilities demonstrated in the plan, and

NOW, THEREFORE BE IT RESOLVED that the Town of Erving Select Board, adopts the Erving MVP Resiliency Plan, in accordance with M.G.L. c. 40.

ADOPTED AND SIGNED this **May 08, 2019**.

Handwritten signature of Jacob A. Smith in blue ink.

Jacob A. Smith, Chair

Handwritten signature of Scott Bastarache in blue ink.

Scott Bastarache

Handwritten signature of William A. Bembury in blue ink.

William A. Bembury