

# Municipal Vulnerability Preparedness (MVP) Program

## 2018 Town of Charlemont Report Summary

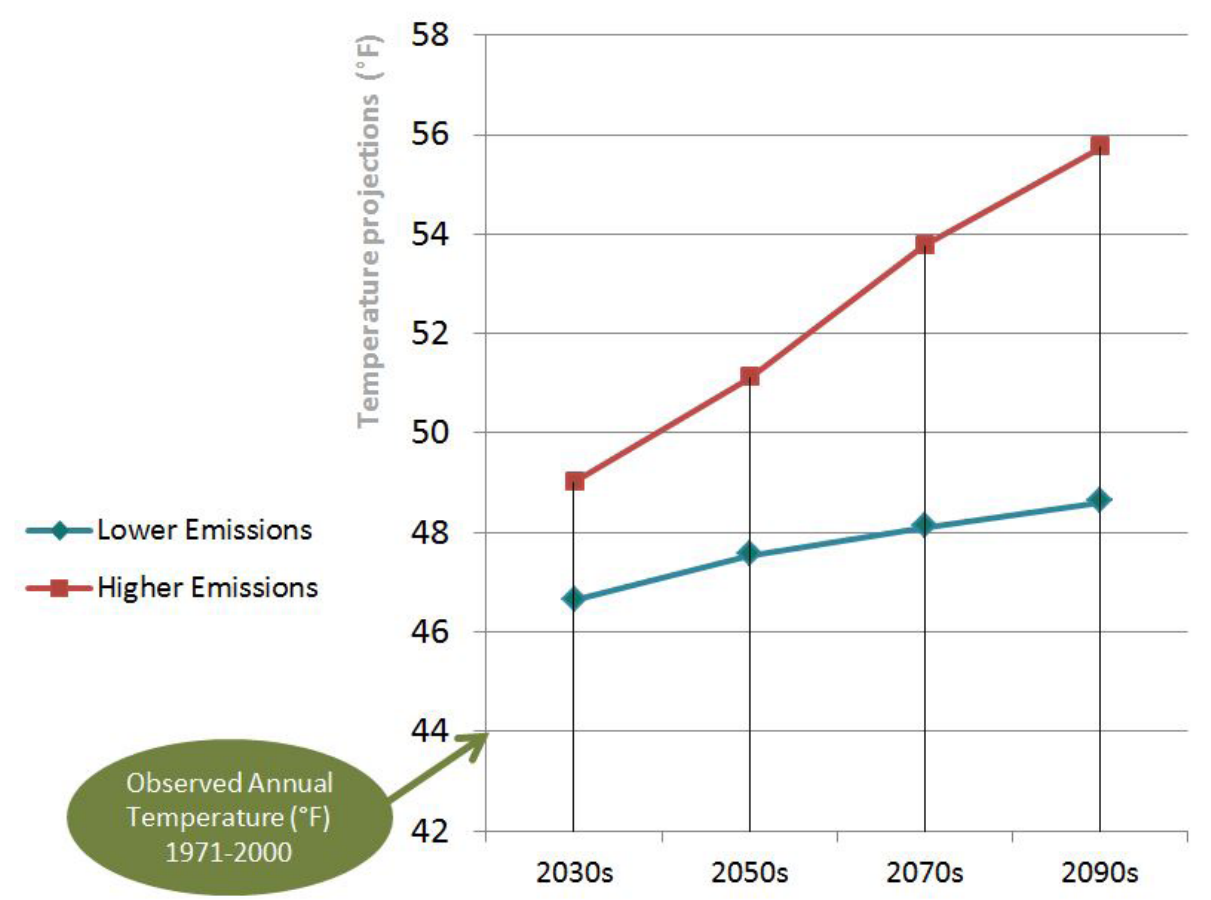


### Climate Change Impacts

The Municipal Vulnerability Preparedness grant program (MVP) provides support for cities and towns in Massachusetts to begin the process of planning for climate change resiliency and implementing priority projects. Here in Franklin County, communities are experiencing more extreme weather events – especially heavy rains and flooding – along with higher temperatures and other climate-related conditions, increasing the urgency to address resilience and adaptation.

#### Increased Temperatures

Average Annual Temperature Projections: Deerfield River Watershed

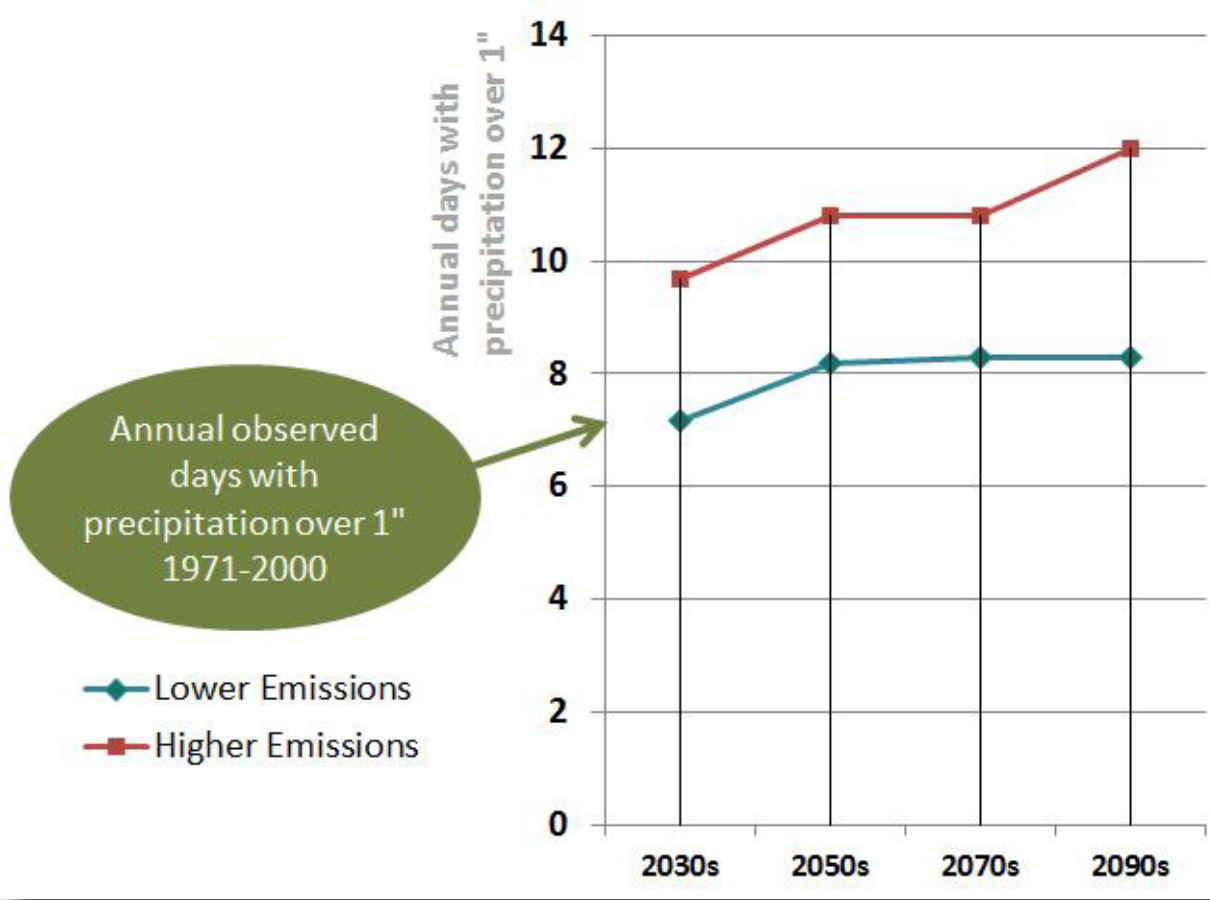


Decade	Lower Emissions (°F)	Higher Emissions (°F)
2030s	46.5	49.0
2050s	47.5	51.0
2070s	48.0	54.0
2090s	48.5	56.0

Observed Annual Temperature (°F) 1971-2000: ~44.5

#### Increased Precipitation

Projected Annual Days Over 1" Precipitation: Deerfield River Watershed



Decade	Lower Emissions (days)	Higher Emissions (days)
2030s	8.5	9.5
2050s	8.5	10.5
2070s	8.5	10.5
2090s	8.5	12.0

Annual observed days with precipitation over 1" 1971-2000: ~8.5

Data source: Northeast Climate Science Center

**2) Identify**

Workshop participants discussed a number of hazards that impact Charlemont, deliberating on how frequent, how intense and how widespread each hazard has been and could potentially be in the future. The top hazards identified for Charlemont:

### Charlemont's Top Hazards

#### Flooding




#### Severe Winter Storms

#### Hazardous Materials

#### Wildfires and Village Firefighting




### Breakdown of Charlemont's Top Vulnerabilities:




Infrastructural

Key Town infrastructure is located in the 100-year floodplain. The Town lacks a municipal drinking water source and private wells are subject to flooding and failure during power outages. Transport of hazardous materials on the railroad and on Route 2 brings potential for derailments, spills, and fires threatening the Town's main evacuation route (Route 2). Culverts and bridges in town are in need of repair.



Societal

Isolated, hard-to-reach populations are located in areas of Town, particularly in East Charlemont. The list of vulnerable people in Town is not up to date. Transportation for vulnerable people is needed in the event an evacuation is ordered. Lack of complete coverage for broadband and cell phone service impacts residents, tourists, and emergency responders.



Environmental

Charlemont's large expanses of forest are vulnerable to drought and wildfires; farm fields are subject to flooding, erosion, and debris deposits. Sedimentation causes significant changes to the flow of the rivers in Town.

### 1) Engage

Facilitated by FRCOG in Spring 2018, the Community Resilience Building Workshop and Public Listening Session helped the town to:

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

#### Participants:

Town Administrator

Fire Department

Public Health

Planning Board

Faith Community

Residents

EMD

Engineering Consultants

Conservation Commission

FRCOG (Facilitator)





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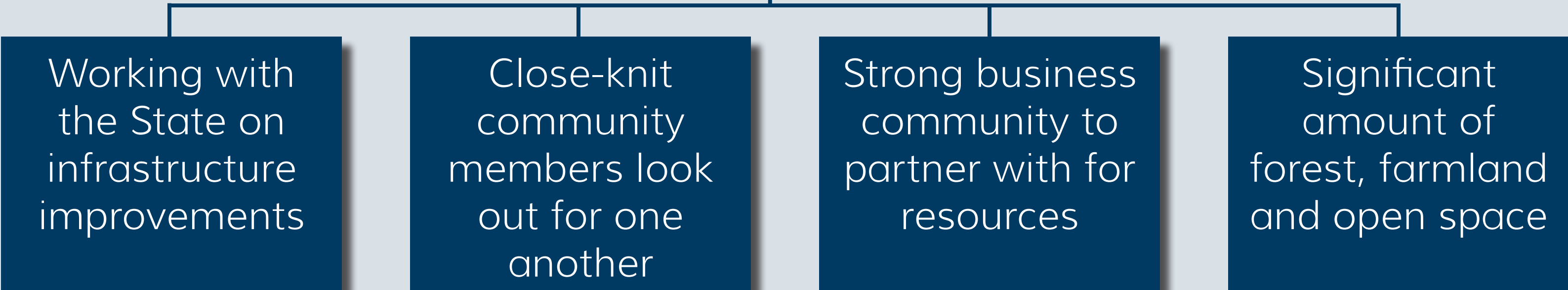
## 2018 Town of Charlemont Report Summary



### 3) Assess

Charlemont has a number of strengths and assets, as identified by workshop participants. These include strong social, physical, and environmental infrastructure that increases the resilience of the community in the face of climate change.

#### Charlemont's Top Strengths



### Breakdown of Charlemont's Top Strengths:



Several bridges and culverts have been or are slated for repair or replacement, and the Town is pursuing additional funding for more repairs. Traffic calming plans to be instituted on Route 2 by MassDOT should reduce speeds through Town. A siren may be available for re-installation to warn residents and visitors in an emergency.



People in Charlemont are a close-knit community and look out for one another. The Federated Church runs the Good Neighbor Program and a food pantry and also served as a shelter during Tropical Storm Irene. In East Charlemont, residents have resources for self-sufficiency, including generators and a defibrillator. Local recreation businesses have buses and other resources that could be useful in an emergency.

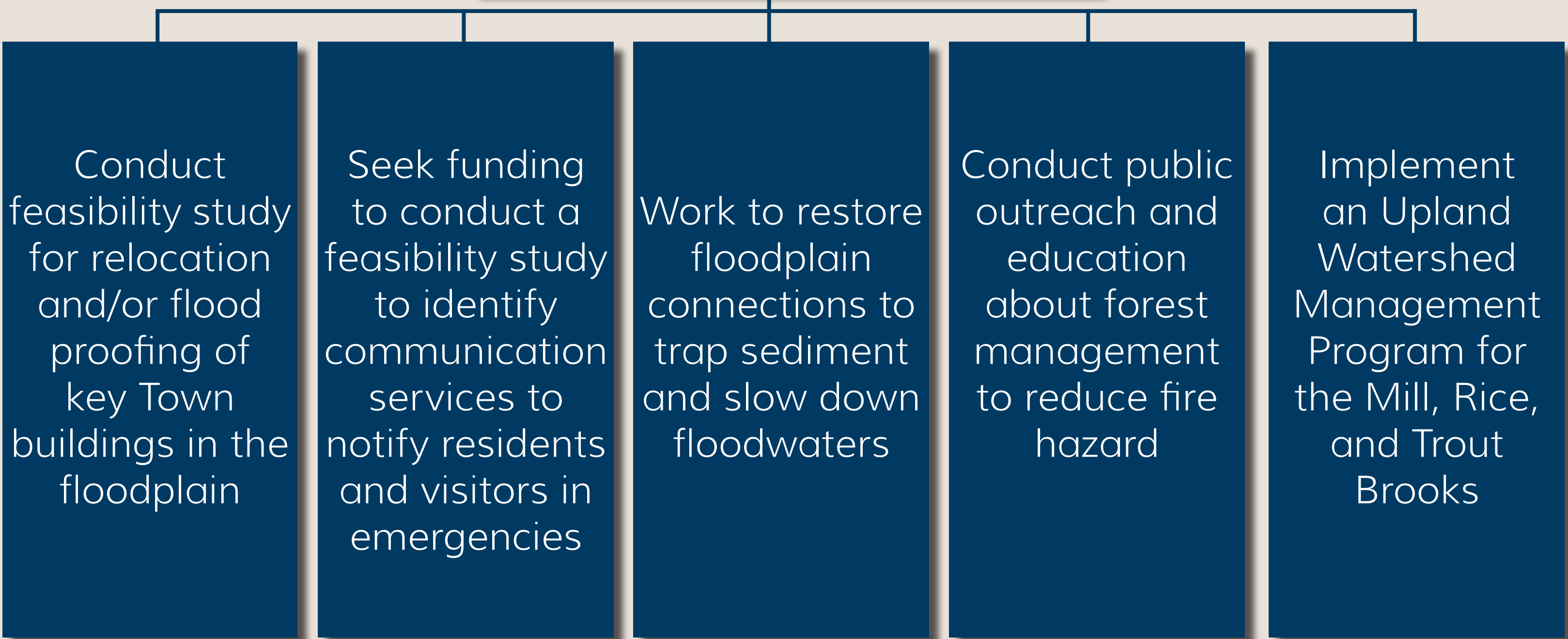


The Town has many natural resources that serve as economic drivers, including the Deerfield River and Mohawk Trail State Forest.

### 4) Develop

Communication, infrastructure and facilities were common themes in many of the recommendations to emerge from the workshop, all aimed at increasing resilience and reducing vulnerability to the impacts of climate change. The top five highest priorities are shown below.

#### Charlemont's Highest Priority Recommendations



### 5) ACTION!

- ☐ Integrate MVP findings into the Hazard Mitigation Plan and Silver Jacket updates.
- ☐ Endorse MVP Plan to become an MVP Community
- ☐ Apply for MVP Action Grants

#### Eligible Projects include:

- Vulnerability and Risk Assessment
- Education and Communication
- Local Bylaws and Ordinances
- Redesigns and Retrofits
- Nature-Based Solutions
- Ecological Restoration and Habitat Management



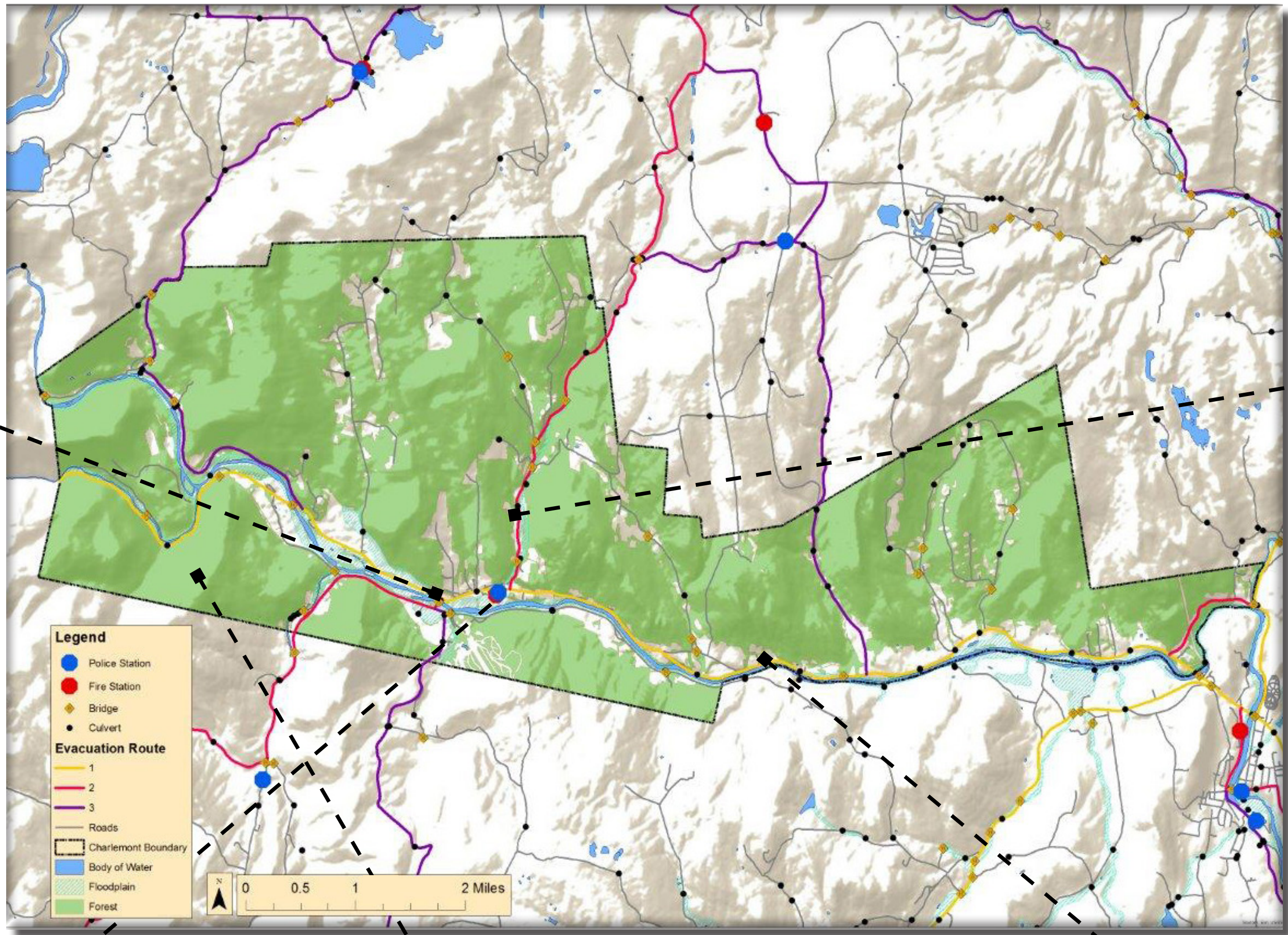
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## 2018 Town of Charlemont Report Map

Facilitated by the  
Franklin Regional Council of Governments  
A State-Certified MVP Provider



Traffic calming measures to be instituted by MassDOT in the coming year should result in reduced speeds on Rte 2. Trucks coming down the hill on Rte 2 through town are often traveling at high rates of speed and accidents can occur, posing a significant hazard to residents.



Workshop participants recommended implementing an Upland Watershed Management Program for the Mill, River, and Trout Brooks in Charlemont to address issues of flooding and erosion. Shown here is the Mill Brook where it crosses under Mountain Road following Tropical Storm Irene.



Key Town infrastructure, such as the Fire Department, is located in the floodplain. The Fire Station was identified as the first priority for replacement as this is the oldest facility in the floodplain and is unable to accommodate modern sized fire trucks.



Charlemont is susceptible to wild fires and brush fires, given that 84 percent of land is wooded. Mohawk Trail State Forest is particularly vulnerable because it is difficult to access given the lack of maintenance on the surrounding roads.



Local institutions (The Academy at Charlemont, Crab Apple Whitewater, Zoar Outdoors, Berkshire East) could potentially provide short-term sheltering and/or bus service in the event of an emergency. A recommendation of this plan is to engage these businesses in discussion about this kind of cooperation.