



Dalton

Community Resilience Building Workshop
Summary of Findings

Dalton

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Overview

Introduction

The need for municipalities to increase resilience and adapt to extreme weather events and natural hazards is becoming more evident among the 32 municipalities in Berkshire County, Massachusetts. Responding to this need, the Town of Dalton pursued the Municipal Vulnerability Preparedness program to build upon findings and proposed projects of their hazard mitigation plan.

The Town of Dalton is in central Berkshire County, Massachusetts. Settled in 1755, Dalton is bordered by the City of Pittsfield and Town of Lanesborough to the west, the Town of Cheshire to the northwest, Towns of Windsor and Hinsdale to the east, and Washington to the south. The Town is located along the East Branch of the Housatonic River, which bisects the Town at its center. The Town is characterized by a forested, mountainous landscape historically suited to the development of water-powered mill industries, along the swift-moving Housatonic River and its tributaries. The well drained, glacial soils provide rich farmland to the Town's interior, and the many tributaries, flood plains, reservoirs and wetland areas provide the Town with natural beauty, recreational opportunities and access to ample water resources. These same positive attributes also provide increased risk for flooding hazards, property damage and increased vulnerability in the more heavily populated areas, if not properly assessed, monitored and mitigated. Dalton is historically known for its many mills and dams enabled by the Town's water resources. Today Dalton needs to find new ways to adapt to its water assets with the decline in manufacturing and the increase in rain.



The Town of Dalton has an estimated population of 6,657¹. The City's population is slightly older than the rest of Berkshire County, with a median age of 49 versus the 46.5 median for the County. Dalton is proud of the Senior Center constructed in 2010. The Center serves as a community hub and doubles as shelter, an important asset as cooling centers are needed with increasing temperatures in a region not accustomed to needing an air conditioner in every home.

According to the Town's Master Plan, Dalton has approximately 50 miles of roads, of which 2.5 miles are unpaved roads. Of the paved roads, MassDOT maintains approximately 6.6 miles, involving the major transportation corridors that are known as Routes 8 & 9. Evacuation plans and routes were a significant topic of discussion during Dalton's MVP Workshop, as described later in this document.

¹ 2017 ACS Demographic and Housing 5-year Estimates accessed on June 20, 2019 from <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

Community Resilience Building Workshop

The town of Dalton completed their multi-hazard mitigation planning process in 2018 and received a final approval for their adopted plan in January of 2019. While their Hazard Mitigation Plan included climate change considerations as they relate to hazards, Dalton decided they needed to further research and plan for the impacts of climate change on their community. Dalton formed the Municipal Vulnerability Preparedness (MVP) committee and held the kickoff meeting on December 20th, 2018. The committee was charged with planning a MVP Workshop to identify a cohesive path forward to climate change resilience. The process was made possible by funding from the Massachusetts Executive Office of Energy and Environmental Affairs.

Members of the Committee include municipal department heads and representatives from various town boards and committees from several disciplines, along with representatives of key community stakeholders. The Town retained the Berkshire Regional Planning Commission, a MVP Provider, to aid them in developing the MVP Plan. The goal of the Committee's work was to develop a set of Actions for addressing Priority Hazards, using the Community Resilience Building (CRB) Workshop process and methodology as a key stakeholder tool. Approval of the plan by EOEEA will enable the Town to become eligible to apply for funding to implement the various preparedness measures identified through the CRB process.

The Committee held a series of meetings to assemble data on the Town's infrastructure, identify known hazards to residents, including seasonal visitors, and review existing plans, procedures, bylaws and protections already in place.

The committee members, as well as other municipal department staff and board members, completed the detailed Community Resilience-Building Survey, describing hazardous or potentially hazardous conditions from their perspectives. In addition, the MVP Project Coordinators held one-on-one interviews with the Council on Aging Board of Directors and major land or business owners in Dalton. The survey and interview responses were used to augment MVP Committee discussions, mapping activities and best-practice research.

On April 25th, 2019 an all-day Community Resilience-Building Workshop, attended by 30 town officials, residents and other stakeholders, was held at the Stationary Factory in Dalton.

The central objective of the workshop was to first review regional weather events from the past and climate change data and projections, then collect local data from attendees, and create a climate-related Natural Hazard Risk Matrix for the Town, including a written Summary Report that:

1. Defined top local natural and climate-related hazards of concern;
2. Identified existing and future strengths and vulnerabilities;
3. Developed prioritized actions for the Community;
4. Identified immediate opportunities to collaboratively advance actions to increase resilience.

In order to give other community members the opportunity to learn more about Municipal Vulnerability Preparedness and to present workshop results to the Dalton Select Board two public listening sessions

were held. The Emergency Management Director and MVP Project Coordinator presented climate change data and spoke with residents at Town Election on May 13th, 2019 and workshop results were presented again for comment at a televised Select Board meeting on June 17th, 2019. Posters with workshop results were available for viewing before the meeting, and members of the community were encouraged to vote and make additions to the completed Community Resilience Building matrices.

Methods and Materials

In order to identify vulnerable infrastructure and assets, features within the City were categorized by Infrastructural, Societal, and Environmental. Infrastructural includes municipal infrastructure, housing, utilities, commercial buildings, municipal buildings, and operations. Societal is the collective ability to respond – first responders, health services, goods and services. Environmental includes the natural systems that protect, provide services or pose risk.



Once the community features were identified along with location, ownership, and if they were a Vulnerability (V) or Strength (S), the City stakeholders at the workshop could develop initial methods and solutions to improve resiliency. These methods and solutions were then prioritized as High (H), Medium (M), or Low (L) and a time for completion was estimated as Short (S), Long (L), or Ongoing (O). The tool used for action prioritization can be seen in the appendix of this plan.

Findings

Top Hazards

There were five hazards that MVP workshop participants highlighted above the rest - flood, ice/snow, wind, change in temperature, and pests.



These top hazards are the adverse conditions the residents of Dalton have experienced. Dalton residents either have been negatively affected by these hazards within their lifetimes or predict that they or near future generations will be due to climate change.

Flooding results from precipitation in the form of prolonged rain, intense rain events, or as a result of snow and ice melt. Flooding is not the only issue with ice and snow, another priority hazard for Dalton

residents, ice and snow can also pull-down power lines and trees, it can cave in roofs, and can cause dangerous road conditions. Residents of Dalton have started to see changes in the patterns of snow, rain and ice in recent years, causing conditions of ice jams, flooding over frozen ground and other hazardous conditions. Wind is also a concern, whether in forceful gusts, tropical storms, or tornadoes, wind has had a significant impact on Dalton in the past. The change in temperature plays into all of the hazards discussed. Fueling large storms, changing weather patterns, and expanding the ranges and reproductive window for pests including ticks and mosquitos that carry diseases.

Specific Categories of Concerns and Challenges

Flooding & Green Infrastructure

The need to address flooding at Walker Brook was a major focus in committee meetings, the MVP Workshop, and the Public Listening Session. Walker Brook is a priority highlighted in the Dalton Multi-Hazard Mitigation Plan completed in December 2018 and approved by FEMA in January 2019.

As stated in the Dalton Multi-Hazard Mitigation Plan, “Walker Brook flooding remains a major concern for the town officials and residents. There are a few engineering options to address the issue. Some are straightforward and feasible, but the high cost of implementation remains a key barrier.”

While no major damaging event have occurred yet, flooding at Walker Brook affects the newly constructed Senior Center property, which is proposed to serve as shelter and a cooling center as temperatures rise. The public space around the Senior Center presents an excellent opportunity for rain gardens along a newly daylighted Walker Brook. Daylighting is the process of uncovering and restoring streams and rivers as community and environmental assets that were historically piped underground. Nearby a recently demolished school property provide an opportunity for a public park that also serves as a stormwater retention.

Pomeroy Manor flooding from Center Pond was another major concern in terms of flooding, along with other housing occupied by the Town’s elderly population. Overall, Dalton needs to update infrastructure to handle more water du to climate change.



Pomeroy Manor during Tropical Storm Irene Flooding from Center Pond

Energy

Dalton is making strides in reducing energy use through actions such as conversion to LED lights for both the Town Hall and for the streetlights. Through the MVP process, Dalton took a closer look at energy from the perspective of resiliency, or adaptation to climate change in addition to their mitigation efforts.

The impact that a loss of energy for the population needing powered medical equipment or heating and cooling centers, generator needs, and power for their major industrial uses and economic drivers were major concerns. Several ideas we proposed as discussed later in the document.

Aging Infrastructure

Dalton is due for new sewer, drinking water, and stormwater systems. The existing systems are old and under capacity. Dalton has a great opportunity to integrate new technology into replacements is properly planned.

Undersized culverts and bridges not only interrupt stream continuity for aquatic species passage, they are a major infrastructure vulnerability in intense precipitation events and ice jams. The area around culverts tend to flood when the passage is not large enough for the flow of water, or where they are perched and slow down the velocity of flow. Bridges can also constrict the flow of water. Both culverts and dams are prone to clogging with debris, especially in areas with a heavy beaver population and forested floodplains. Clogging can lead to significant scour and erosion, and even blowouts of the culverts and the roads above them causing major disturbances in transportation and accessibility.

Dams are categorized with culverts and bridges because they are also in water structures that manipulate the flow of water. Dalton is home to several reservoirs with dams that supply water to Dalton and Pittsfield, as well as dams created for the mills and industries such as paper production.

Emergency Preparedness

Emergency preparedness in the MVP conversation encompassed evacuation planning and drills, particularly for the elderly and vulnerable, education on what residents should do to prepare for disaster, emergency communication, infrastructure resilience, and sheltering needs. Emergency preparedness for the purposes of this plan focuses on the actions the community can take to ensure that everyone is as ready as they can be for a disaster, which will ease the process of recovery.

Agriculture, Forestry & Environmental Management

Dalton residents wanted to include the stabilization of the bee population in their MVP plan, discussing the ban of neonicotinoids in town and on private land. Neonicotinoids are insecticides used on farms and in landscaping. Lab studies have found that neonicotinoids cause increased mortality, impaired feeding and locomotion, reduced immunity, altered learning and memory in honeybees². The common use of neonicotinoids could play a role in colony collapse and have devastating impacts on agricultural production.

Other concerns centered of forest management in Dalton. Dalton is 76% forested, and thus its management is important to the resilience of Dalton. Dalton's forests provide carbon capture, air purification and other services for the region, but they can also be a vulnerable. Anytime development occurs near forest the risk of forest fire impacting people is greater. Additionally, residents are more likely to be affected by ticks and the diseases they potentially carry.

² <https://pollinator.cals.cornell.edu/threats-wild-and-managed-bees/pesticides/neonicotinoids/>

Current Strengths and Assets

Dalton has a number of strengths and assets that better prepare the Town for climate change. Dalton is a generally cooperative and tight knit community. Residents are engaged, as seen in their Green Committee efforts. Dalton is fortunate to have a highly engaged Emergency Management Director, a Town Planner, and Town Manager amongst other vital Town staff members. Dalton residents want their Town to be a leader in energy efficiency and environmental conservation, they prioritize looking after vulnerable populations, and are open to new ideas and innovations, possibly in part due to the value of education in Dalton. The following is summary of Dalton's strengths and assets as identified by the MVP Workshop participants.

- Dalton's schools are an asset for the community, providing education close to home for children and young adults. The fact that the regional schools are located in Dalton gives Dalton the opportunity to exercise some control over their resilience.
- While the electric grid is of course a strength for any community, powerlines are vulnerable to hazards.
- The dams that hold water in reservoirs in Dalton are an asset in that they provide water to Dalton and Pittsfield, however they are not without their risk. A dam breach would flood significant areas of development in Dalton. The Windsor Reservoir dam was recently rebuilt and was highlighted as a strength during the MVP workshop.
- The Dalton schools have an agreement with the Stationary Factory, an old mill that serves as an event venue and small business incubator, to serve as a reunification center in case of emergency. MVP participants pointed out that there was room to strengthen this community asset such as having an elevated generator.
- The senior and aging population in Dalton is an asset in terms of their community involvement and many other benefits of the long-term residents and retirees, but this population is inherently more vulnerable to disaster.
- While the Senior Center is a major asset in Dalton, providing ongoing activities for seniors as well as serving as shelter on hot days, it is located in an area prone to flooding.
- CodeRED is a strength for Dalton's emergency preparedness. CodeRED allows for quick mass emergency notifications to residents.
- Nursing Homes / Assisted Living plans in place at Craneville & Sugar Hill
- The fire departments ability to access forested lands through Eversource property is a strength in the case of forest fire.
- Opportunities to create community assets lie in future green corridor and conservation zoning and a daylighted Walker Brook.

Areas of Concern

Specific areas of concern for hazardous conditions focused in on Walker Brook, Center Pond, and housing primarily occupied by vulnerable populations at Pomeroy Manor and River Run. There was also discussion on an area known as The Boulders. Stormwater runs from neighborhood streets through a culvert and funnels out causing erosion adjacent to a trail.

The following is summary of specific areas discussed during the MVP Workshop.

Agriculture, Forestry & Environmental Management

- o Forest management is needed to the north and south of downtown Dalton. MVP Workshop participants specifically pointed out North Mountain Road, in the northeast part of Dalton.
- o Dealing with invasive species and pests is a need town wide.
- o Steep slopes and erosion concerns were identified at Grange Hall, Sleepy Hollow, and the Boulders.

Emergency Preparedness

- o The evacuation route and need for redundancy or alternatives at Route 9 and Housatonic Street.
- o The gas regulator pit is currently being elevated above ground at the only evacuation route for Dalton at Route 9 and Housatonic Street. Gas regulator pits are for natural gas distribution and control of pressure.
- o Emergency planning and evacuation drills are needed at Dalton public and affordable housing including Pomeroy Manor, River Run, Pine Grove, Craneville, and Sugar Hill.

Aging Infrastructure

- o Undersized culverts were identified at South Street and Walker Brook.
- o Undersized bridges were identified at Housatonic Street and East Main Street near Wahconah Falls. These bridges are vulnerable to clogging with debris and ice jams.
- o The Cleveland Brook Reservoir dam in neighboring Hinsdale, MA was an area of concern because of its vulnerability and proximity to a chlorine station.
- o MVP participants asked if dams along the East Branch of the Housatonic still needed.
- o Concerns were raised over the overall condition and maintenance of dams that could flood Dalton if breached.
- o Aging sewer, stormwater, and drinking water systems including culverts and drains town wide are of concern.

Flooding & Green Infrastructure

- o Dalton houses the regional schools. The schools are located on the edge of the mapped floodplain on Windsor Road and Fox Road.

Current Concerns and Challenges Due to Hazards

Major events that have occurred in Dalton and could become more frequent due to climate change include the EF1 tornado that touched down in Dalton in July 2014, and two more F2 tornadoes in 1973 and 1975. The tornadoes downed trees, power lines, caused road closures, and damaged homes.

Tropical Storm Irene in 2011 caused memorable flooding in Dalton, inundating Pomeroy Manor, affordable housing primarily occupied by the elderly. Flooding came from Center Pond, which residents say does not have the same capacity to hold water as it historically has due to sedimentation. This diminished capacity with increased intense rain events makes repetitive flooding of Pomeroy Manor and the surrounding areas a major concern.

The elementary school property in central Dalton, recently demolished, became a lake passible only by boat during and after Tropical Storm Irene as pictured below. Select Board members reported that the



school was known to hold stormwater in the basement for the last 50 years, and where this stormwater will go after demolition is still unknown. This property was slated for subdivision and residential development, however after the MVP process the Town wishes to explore a stormwater retention park.

Dalton is home to the regional schools of students from seven towns in the district - Dalton, Becket, Cummington, Hinsdale, Peru, Washington and Windsor. The schools are located on

the edge of the mapped floodplain, which has not been updated since 1982.

High flood waters are an ongoing concern at the bridge on Main Street crossing Center Pond, at the Bryon Wesson dam. This bridge carries the town's major water supply from Cleveland Reservoir, the main sewer pipe from Hinsdale and parts of Dalton, and a natural gas line. The bridge was flooded and overtopped during Tropical Storm Irene.

Dalton prioritizes addressing invasive species and growing insect populations because they know the potential damages first-hand. Dalton was the first place the emerald ash borer was discovered in Massachusetts in 2012. The emerald ash borer is native to Asia, leaving ash trees in the United States without natural defenses. Entire neighborhoods and cities lost their street trees due to the emerald ash borer as it spread across the state and the U.S. As is the case for the tick population, emerald ash borer mortality is dependent on temperature³. The Northeast United States depends on temperatures dropping low enough to kill off insects and check their population numbers.

³ <https://www.sciencedaily.com/releases/2018/05/180517113751.htm>

Top Recommendations to Improve Resilience

The participants in the Dalton MVP Workshop discussed at length flooding hazards, their aging infrastructure, and how informed and ready community residents are. By the end of the workshop they had agreed on the following Top Recommendations to Improve Resilience:

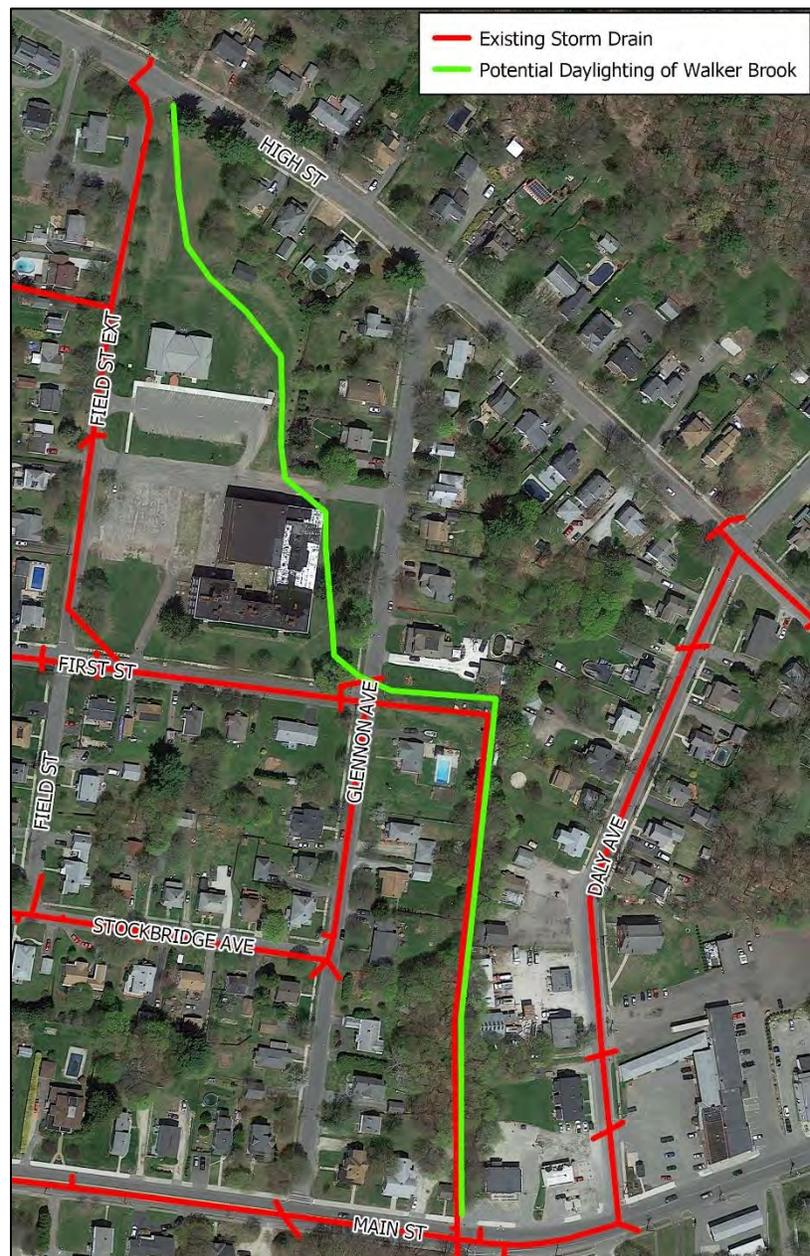
1. Mitigate flooding at Walker Brook with daylighting and integrating green infrastructure.
2. Replace aging stormwater and sewer infrastructure throughout town.
3. Address the flooding that impacts Pomeroy Manor, a public housing facility.
4. Initiate public education on emergency preparedness for the whole community.

The following are all the recommendations to improve resilience from highest to lowest priority:

Highest Priority

Flooding & Green Infrastructure

- Conduct a Hydrology and Hydraulics (H&H) study for Walker Brook.
- Consider alternative routes such as the one privately-owned route that is fenced off, but could be accessed.
- Implement Drills to simulate the closure of the road due address the vulnerability of Dalton only having 1 evacuation point to the west on Route 9/ Housatonic St.
- Increase capacity of the aging stormwater systems with green infrastructure (rain gardens), Increase infiltration for point source pollution with green infrastructure.
- Review zoning to reduce runoff.



- Sewer system evaluation and repair, retrofitting, and replacement implementation.
- Plan and time sewer upgrade with road projects.
- Create green infrastructure requirements for new or renovated municipal and private development - Town should be leader and take initiative, push state on green infrastructure options for regular projects like sidewalks, etc.
- Design competition for the area where the school was.
- Naturalize and daylight Walker Brook.



- Plant slopes, deep rooted plants. Zoning for runoff/ cascading discharge similar to a waterfall
- Plan and implement I&I study to address the Stormwater infiltrating into sewer system
- FEMA Hydrologic Study w "Green" solutions. Replace/enlarge culverts and stream crossing structures.
- Increase public awareness of flooding.
- Dredge Center Pond to protect Pomeroy Manor.
- Provide cooling centers to protect the Elderly population and aging population in Central Dalton, including Pomeroy Manor.
- Natural infrastructure for infiltration, permeable pavement, and rain gardens H+H study to address flooding on Field Street extension where the Senior Center is located.
- Integrate flood proofing into Wahconah High design i.e. Elevation based on +2ft bfe
- Provide climate change education at schools.

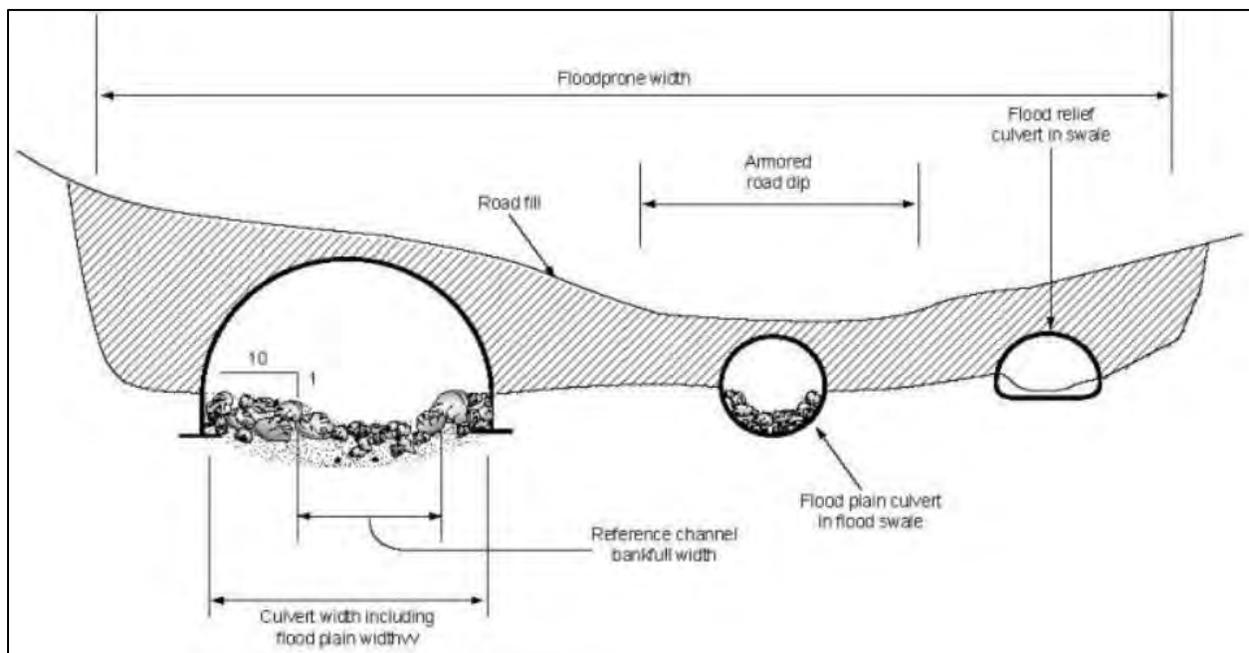
Energy

- Minimize tree removal to reduce cooling costs.
- Encourage self-identification for those who use life supporting equipment.
- Have generators ready at shelters.
- Explore micro grids for the Town to prevent the entire region from losing power at once.
- Bury powerlines to mitigate against ice/snow or wind damage.
- Evaluate potential for power generation at dams such as at Wahconah Falls as well as wind and solar opportunities.
- Evaluate the potential to use methane from Hinsdale Granville Cows as an energy source.

- Encourage alternatives to air conditioners such as passive house design.
- Explore “Pass the Peak” app or similar user-friendly energy use monitoring tools
- Evaluate use of air source heat pumps.
- Plan and require solar where feasible at the landfill behind High Street, at the old substation, on all new buildings.
- Public education on energy efficiency and alternatives (i.e. brochures with electric bills).

Aging Infrastructure

- Right size culverts using stream crossing standards "plus" for resilience and animal passage.
- Replace sewer infrastructure where needed.
- Assess pipelines carrying gas to prevent property damage.
- Maintain culverts.



Source: Forest Service Stream Simulation Working Group, 2008, Stream Simulation

Emergency Preparedness

- Work with River Run on emergency planning and evacuation planning.
- Conduct drills with the fire department and provide emergency kits to tenants in the floodplain.
- Annual Outreach and updates on MVP progress to keep the community involved.
- Include sign up tables for CodeRED at town events.
- Coordinate between the Police Department, Fire Department, Council on Aging, Eversource, telephone company, and Dalton Housing Authority to be prepared for addressing the needs of the medically vulnerable in an emergency.
- Use online resources to obtain bi-lingual materials on emergency preparedness, Code Red, and other relevant information to prepare for increased hazardous conditions.

- Bolster the School Reunification Plan working with Stationary Factory by organizing exercises and drills. Purchase additional with more supplies needed for reunification i.e.: AED machine, medical supplies, basic food and water.
- Evaluate the need to purchase a trailer for life support and other shelter equipment.
- Install 110 generators compatible hookups for the buildings utilized for sheltering.

Agriculture, Forestry & Environmental Management

- Ban neonicotinoids in town and on private land, promote planting of beneficial plants and shrubs for bees, and provide education on the use of insecticides and on colony collapse.
- Promote permaculture and sustainable solutions, evaluate use in public spaces.
- Implement agricultural education including chickens.

Moderate Priority

Flooding & Green Infrastructure

- Build retention with bioswales and rain gardens and use the garden for educational opportunities.
- Implement tree planting projects.
- Perform hydraulic study.
- Consider natural solutions aside from piping.
- Consider permeable pavements for parking lot for Walker Brook to address flooding the Senior Center and River Run.

Aging Infrastructure

- Cleveland Brook Reservoir dam should be evaluated and repairs/replacement as needed.
- Engineering assessment needed for South Street undersized culverts followed by culvert replacement.
- Manage trees along river to prevent debris and preserve the Main Street/Depot Street dam.
- Reevaluate how useful dams are along the river.
- Replace undersized culverts for resilience and stream continuity.
- Incorporate pervious pavement, raingardens, retention basins to keep water out of the system.

Emergency Preparedness

- Plan a town wide shelter.
- Support existing evacuation plan for the schools to gather at the Stationary Factory.
- Elevate generators.
- Drill CodeRED quarterly. Educate members of the community about signing up for codeRED, potentially through regular mailings (such as tax assessments).
- Distribute preparedness kits, develop educational mailings, information sheets, and town emergency information such as sheltering/community outreach programs.
- Use CodeRED to get people to cooling centers and to check on neighbors.

- Discuss emergency access with Berkshire Money Management and Crane to increase evacuation and access routes.
- Have police update contact information of seniors.

Agriculture, Forestry and Environmental Management

- Develop fire prevention and response plans that involved mapping, checking, and maintaining access roads regularly and conducting controlled burns to minimize potential kindling or fuel.
- More trail maintenance to address ticks.
- Identify trees affected by or vulnerable to emerald ash borer due to infestation in neighboring trees and utilize wood from trees, such as for biomass fuel.
- Implement plan and tree planting program with native and resilient trees such as willows, maples, oaks, birch and hickory. The plan should include planting saplings near old trees.
- Develop Forest Stewardship plans.
- Implement public education on moving wood.
- Prevent standing water in or around buildings to prevent mosquito larvae habitat.
- Provide education on preventing and detecting West Nile, Lyme's and other tick or mosquito borne diseases.
- Allow and promote chickens in residential areas to combat the tick population.
- Promote bat boxes; building them through school programs and installing them on downtown and public buildings to address mosquito population.
- Encourage young hunters in order to maintain deer population.
- Plan and implement nature-based infrastructure that provide habitat ecosystem services.
- Plant milkweed in bioswales for monarch habitat.
- Work with regulatory authorities to develop a plan to deal with sedimentation in Center Pond.
- Assess and create a plan for beaver control and invasive plant impacts on recreation areas.
- Consider Conservation overlay or other protective zoning to provide a green corridor through town.



Energy

- Determine how water-resistant gas station tanks are, including the height of vents.
- Determine which homes in the floodplain contain oil tanks.

Lower Priority

Aging Infrastructure

- Reestablish and build permanent water crossings to access forest for management and wildfire response.
- Continue maintenance program for new Windsor Reservoir dam.

- Address overflow of dam at Center Pond.
- Acquire dam status list and ensure Pittsfield list has "Good" ratings for condition.

Flooding & Green Infrastructure

- Move residents from Pomeroy Manor
- Dredge Center Pond
- Conduct a Hydrology and Hydraulics (H&H) study to find a solution to flooding at Orchard Road
- Ensure CSX tracks are maintained and resilient.
- Engineering study at Center Pond, including dredging and stormwater reduction
- Restrict and mitigate golf course fertilizers that cause algae growth.



● Apartments that flood

Energy

- Build relationship with Eversource; and improve communications to address vulnerabilities in the electric grid.

Emergency Preparedness

- Map septic system locations & oil storage tanks.
- Bury the power and communication cables.
- Install boosters and Fios to increase dependability for access and emergencies.
- Work with MEMA to be better prepared with water and food for emergency situations.
- Continue to publicize CodeRED.
- Continue to work with the nursing homes and assisted living facilities to prepare for emergencies.

Agriculture, Forestry and Environmental Management

- In order to stop the spread of zebra mussels and other aquatic invasive species, provide Information about boat cleaning requirements at any boat launch site, possibly require certificates of boat cleaning. Educate people on why and how fishing gear should be cleaned.
- Plant and protect climate resilient trees.
- In order to avoid a complete loss of trees due to a monoculture being targeted by a pest, require biodiversity in tree planting.
- Work with state to develop forest management plans.

- Proactively remove old or diseased street trees and plant new trees.
- Engage with CSX formally on hazardous materials transport and bank erosion near the tracks.
- Provide public education on invasive and the impact on tree cover via community cable, newspaper, and flyers.
- Provide public education on ticks and mosquitos via community cable, newspaper, and flyers.
- Prevent growth of mold and mildew in public housing where there is a high-water table with regular inspection and public reports. In the long term solve the flooding issues based on a H&H study findings.
- Address erosion issues, including that caused by ATV use and large-scale landslides through mapping and problem area identification working with HVA, BNRC, Town, Farmers and other landowners.
- Coordinate with relevant agencies - USACE, Mass Wildlife, DEP and Con Comm - to address water Quality issues including siltation, turbidity, bacteria, algae at Center Pond and other waterbodies.
- Work with BNRC and homeowners on knotweed and other invasive plant education and organize volunteer events to invasive removal.



CRB Workshop Participants

CRB Workshop Invitees/Attendees*

Name	Affiliation
Alison Dixon*	Housatonic Valley Association
Alison Peters	CRA Director
Bob Benlein*	Water Department
Dan Filiault*	Emergency Manager
Caroline Massa	BRPC Facilitator
Rebecca Slick*	Town Planner
Kenneth Walto*	Town Manager
Chief Jeffrey Coe*	Dalton Police Department
Gerry Cahalan*	Fire Department
John Roughley*	Highway Superintendent
Patrick Pettit*	Building and Grounds Superintendent
Judy Wagner*	Select Board Admin Asst.
John Bartels	Select Board
John Boyle*	Select Board
Edward Holub	Select Board
Robert Bishop*	Select Board
Kelly Pizzi	COA Director
Brian Duval*	Building Commissioner
Ed Fahey*	Board of Health
Sandra Albano*	Accountant
Marc Strout	Select Board
Lauren Gaherty*	Resident
Gabby Taglieri	Dalton Communications
Sue Gregory*	Dalton Housing
Lysander Bone	Crane Currancy Director of Security
James Scolforo	Action Ambulance / Emergency Commission
William Chabot	General Dynamics
David Wasielewski	Green Committee
Stephen Sears*	Business Owner
Jason Dion*	Central Berkshire Regional School District
Dom Sacco*	Con Com
Elia del Molino*	Berkshire Environmental Action Team
Eric Payson	Community Recreation Assoc.
Melissa Hancock	Eversource
Paul Knauth	Crane Currancy Environmental
Richard Hall*	Green Committee
Leslie Drager	Green Committee

Jennie Gitlitz	Green Committee
Amy Mu	Green Committee
Cheryl Rose	Green Committee
Wendy Brown*	Green Committee/Architect
Cam Cachet	Water District / Traffic Commission
Al Nadeau	Resident / Traffic Commission
Paul Mark	State Rep
Paige Dolinski	State Rep Office
Adam Hines	State Senator
All	Dalton Water Commisioners
Tony Doyle	Planning Board
Daniel Esko	ZBA
Tom Callahan	Dalton Housing / COA
Bob Tetlow	Berkshire Gas
Jim Barry	DOER
Isa Ali	Development Com
Karen Schmidt	Development Com
Sue Vigeant	Development Com
Kathy Burke	Dalton Housing Authority
Tony Talis	COA/Citizen rep
McKensie Greer	Berkshire Natural Resources Council
Andrew Madden	Mass Wildlife
Mary Buden*	River Run Apartments
Fran Markham	COA/ retired cable company employee
Ron Pero	COA/ retired WMECO
Richard E Neal (US Rep)	US Representative
Elizabeth Warren (SEN)	Senate
Edward Markey (SEN)	Senate
Francisca Heming	MasDOT District 1 Highway Director
Dicken Crane	Holiday Farm
Ed Gero*	ZBA and BOH
Wayne Cronnell	Resident
Peter and Judy Giftos*	Resident
Fred and Carol Sears	Resident
Patrice Hayes	Resident
Frank Maher*	Berkshire Gas

Citation

Berkshire Regional Planning Commission (2019, June). *Dalton Community Resilience Building Workshop Summary of Findings*.

CRB Workshop Project Team

Municipal Vulnerability Preparedness Committee

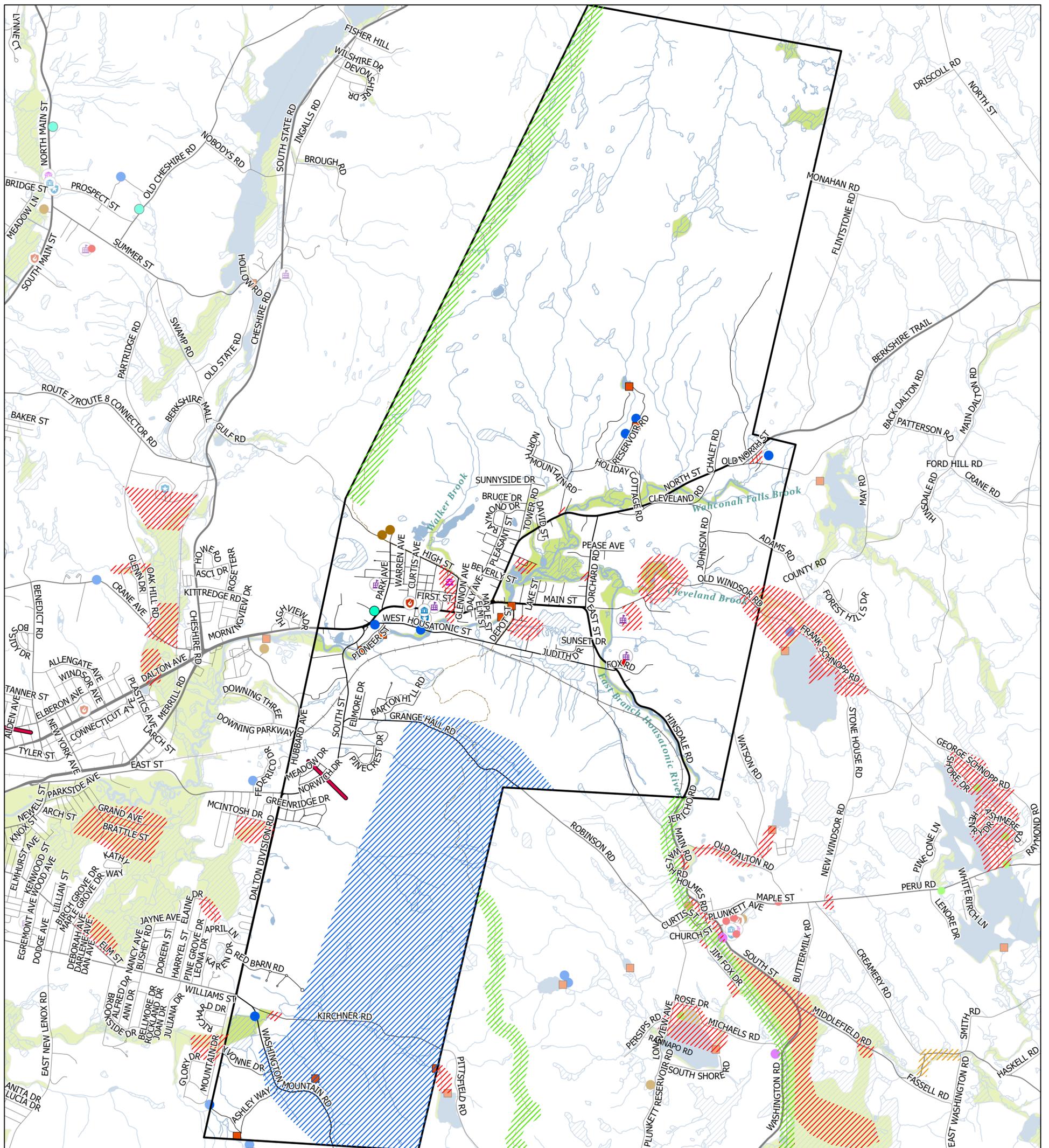
Name	Affiliation	Role
Bob Benlein	Water Department	Core Team Member
Dan Filiault	Emergency Manager	Project Coordinator
Caroline Massa	BRPC Facilitator	Lead Facilitator
Rebecca Slick	Town Planner	Project Coordinator
Kenneth Walto	Town Manager	Core Team Member
Chief Jeffrey Coe	Dalton Police Department	Core Team Member
Gerry Cahalan	Fire Department	Core Team Member
John Roughley	Highway Superintendent	Core Team Member
Patrick Pettit	Building and Grounds Superintendent	Core Team Member
Kelly Pizzi	COA Director	Core Team Member
Brian Duval	Building Commissioner	Core Team Member
Sandra Albano	Accountant	Core Team Member
Stephen Sears	Business Owner	CTM/Sponsor
Jason Dion	Central Berkshire Regional School District	Core Team Member
Eric Payson	Community Recreation Association	Core Team Member
Richard Hall	Green Committee	Core Team Member
Egan, Allison	BRPC	Facilitator
Maloy, Mark	BRPC	Facilitator
McDonough, Peg	BRPC	Facilitator

Acknowledgements

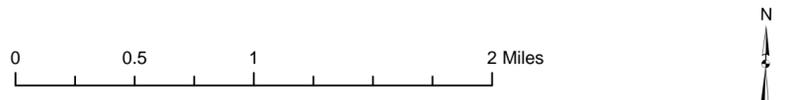
A special thank you to Steve Sears for contributing to the planning process and providing the space and assistance at the Stationary Factory for the MVP Workshop. This process would not be possible without the hard work on the part of all committee members, particularly Dan Filiault and Becky Slick who worked tirelessly to make the MVP planning process meaningful and impactful for the Town of Dalton.

Appendix A: Base Maps Used for Participatory Mapping Exercise

Town of Dalton - Critical Facilities

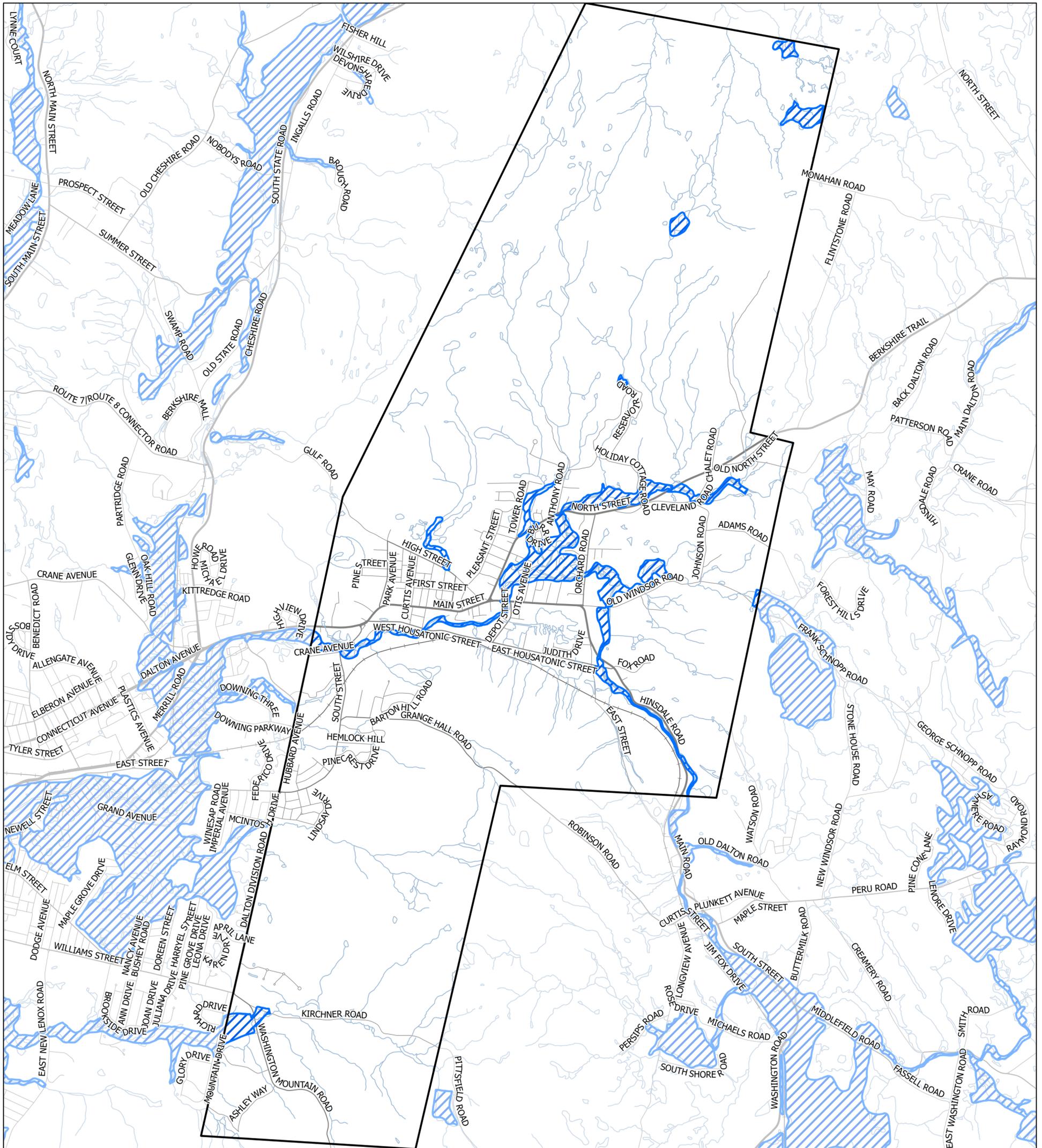


- Flooding
- Landslide/Erosion
- Fire
- Wind
- FEMA 100yr Floodplain
- Tornado
- Town Hall
- Fire Station
- Police Station
- DPW
- Shelter
- Senior Center
- Nursing Homes
- School
- Wastewater System
- Water System
- Communications Facility
- Dam
- Interstate
- Major Road
- Minor Road
- Local Road
- Railroad
- Stream
- Wetland
- Open Water
- Appalachian Trail

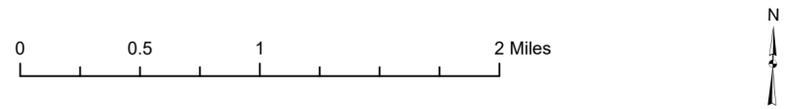


This map was created by the Berkshire Regional Planning Commission and is intended for general planning purposes only. This map shall not be used for engineering, survey, legal, or regulatory purposes. MassGIS, MassDOT, BRPC or the municipality may have supplied portions of this data.

Town of Dalton- Floodplain

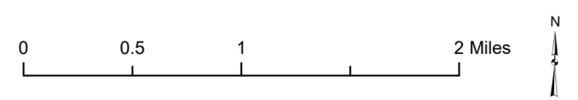
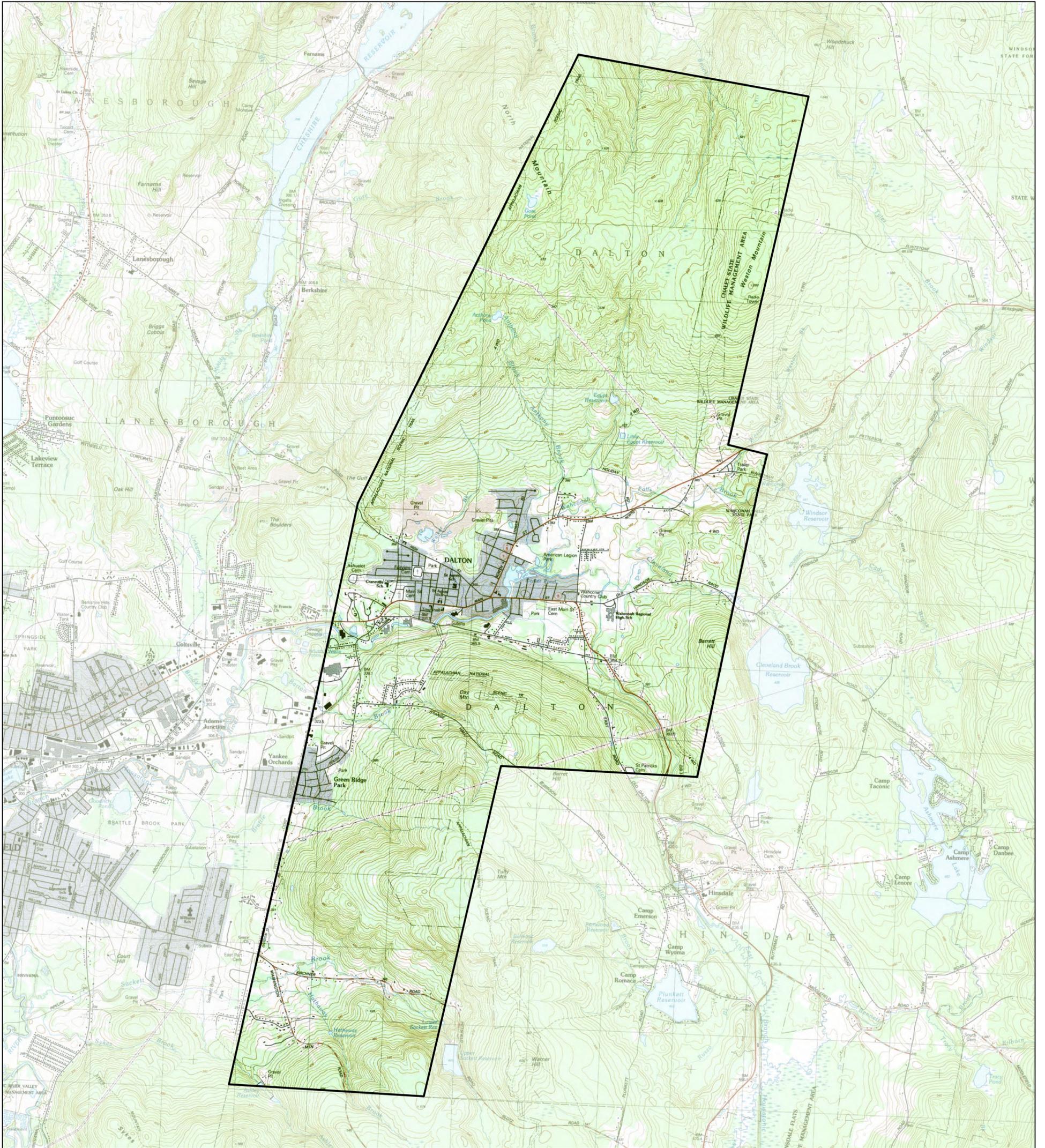


- FEMA 100yr Floodplain
- Stream
- Railroad
- Wetland
- Interstate
- Open Water
- Major Road
- Minor Road
- Local Road



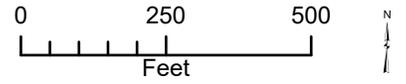
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Town of Dalton - Topographic Map

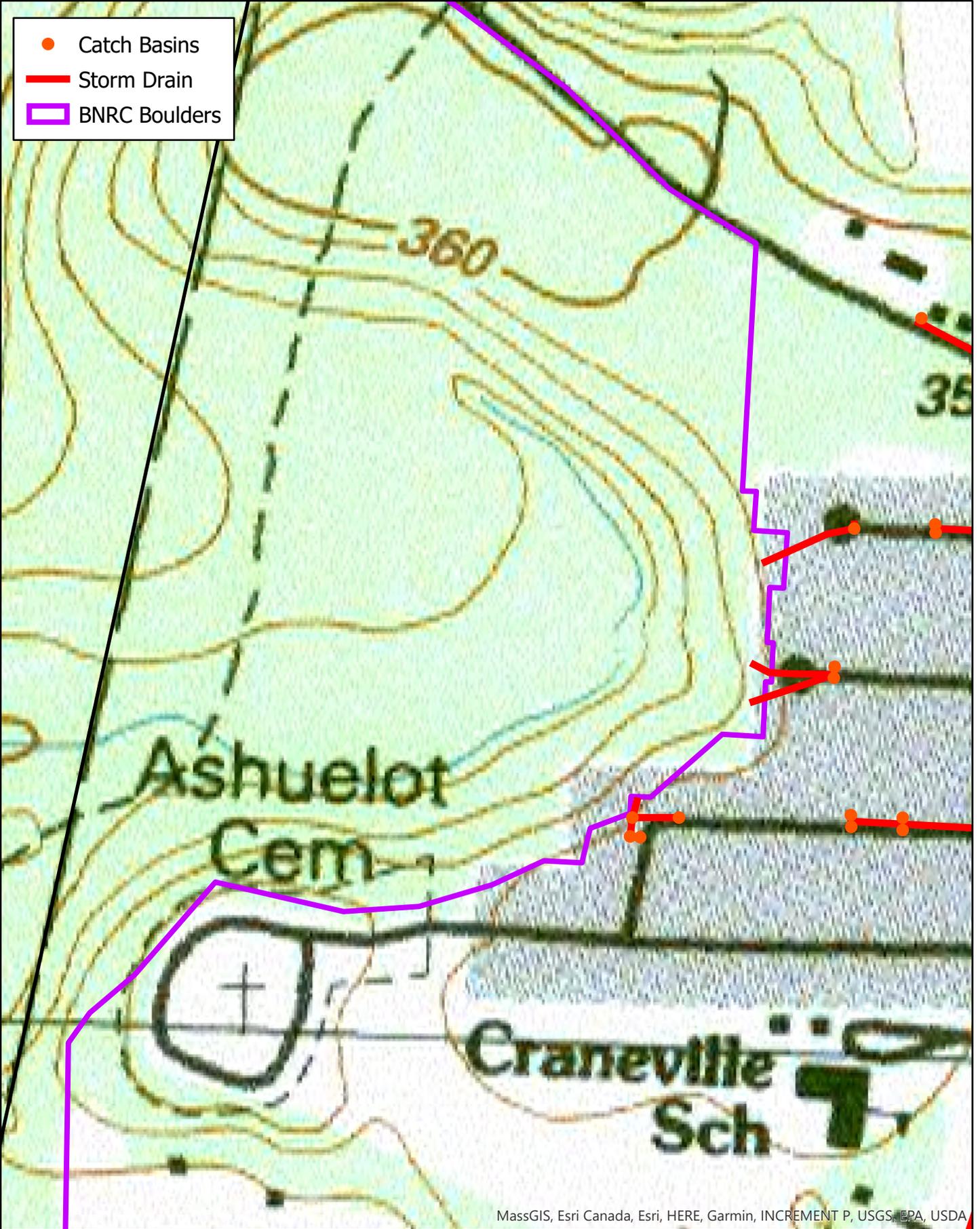


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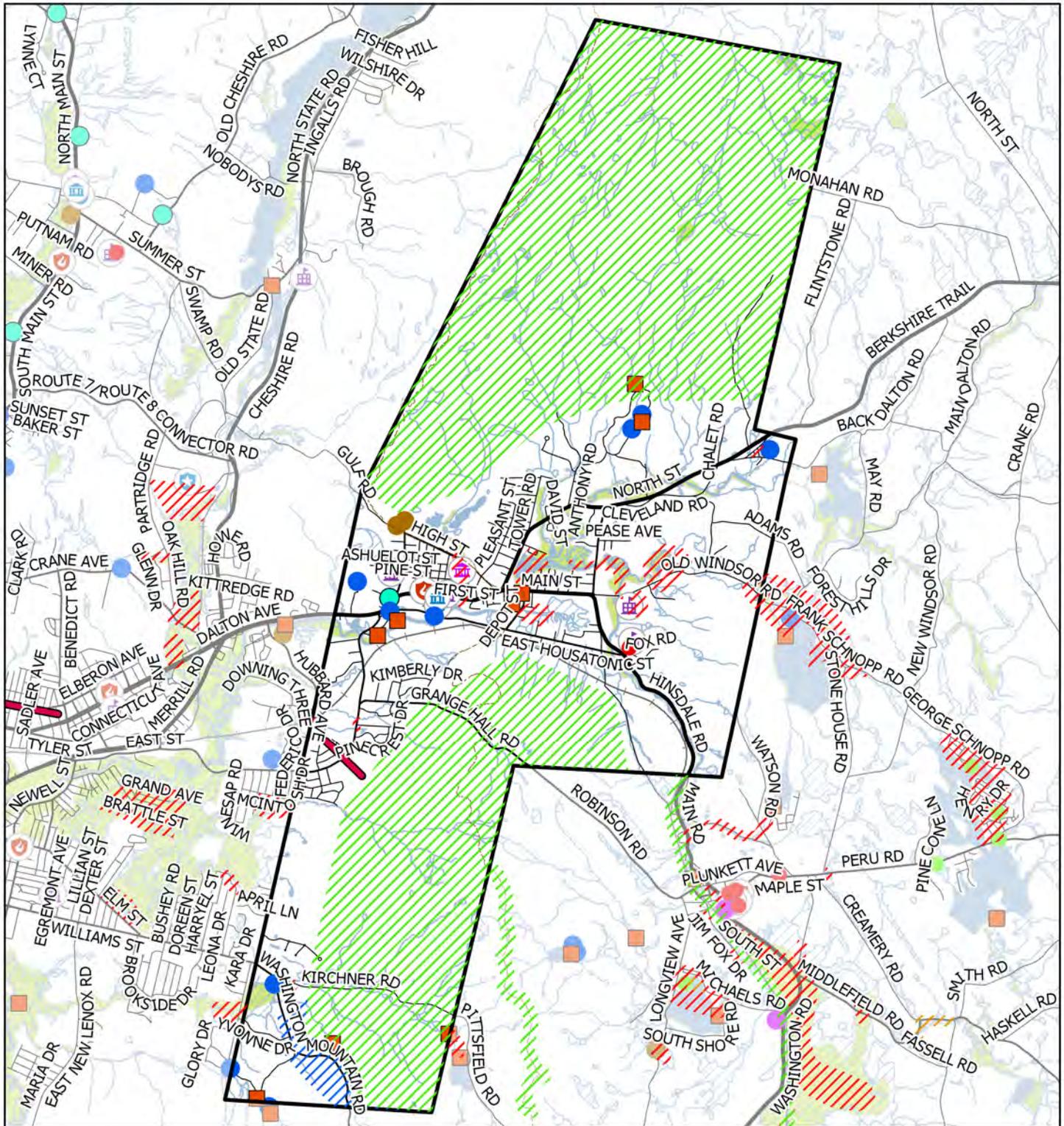
BNRC BOULDERS AND STORM WATER



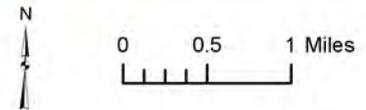
- Catch Basins
- Storm Drain
- ▭ BNRC Boulders



Town of Dalton - Critical Facilities

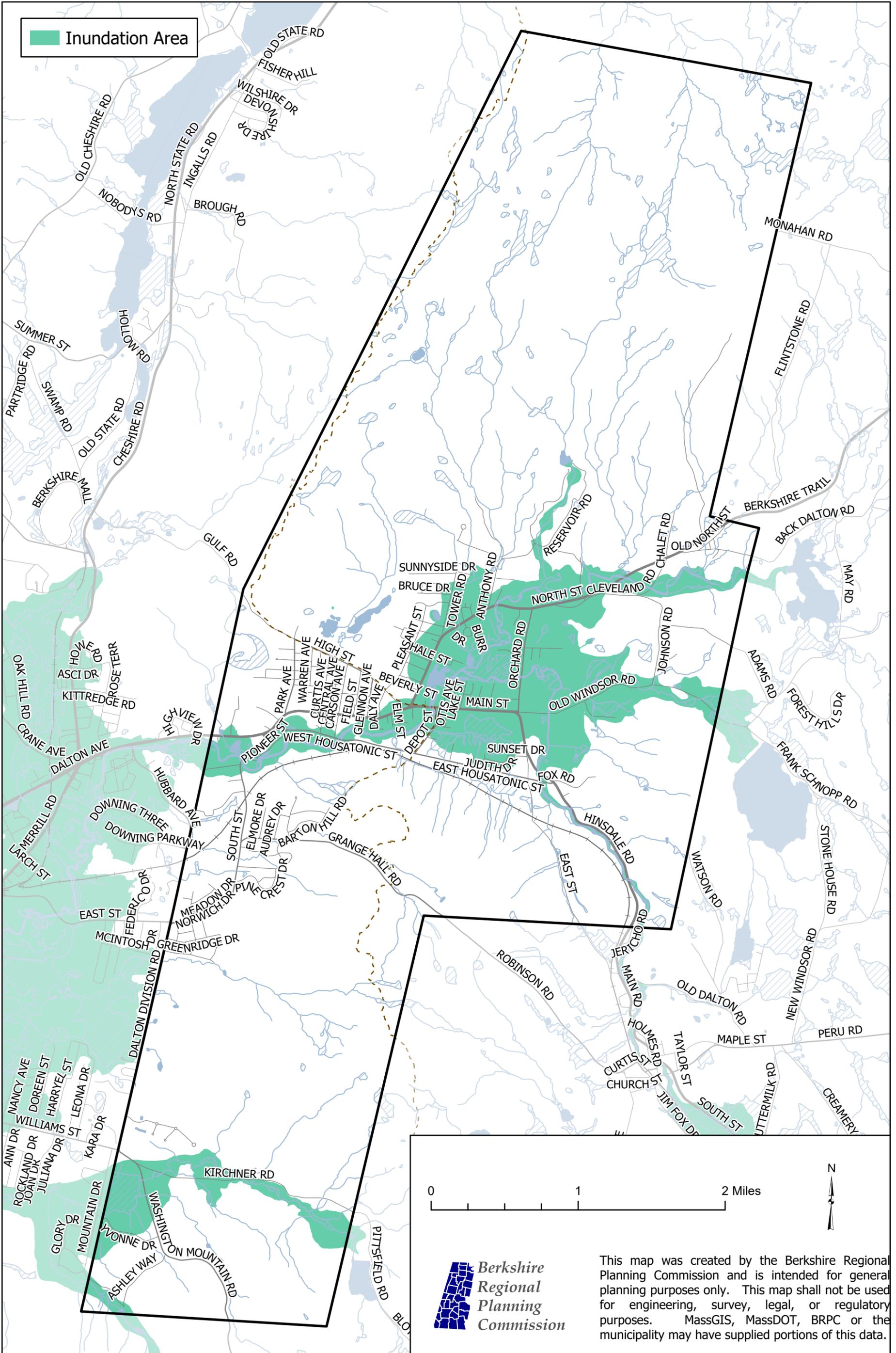


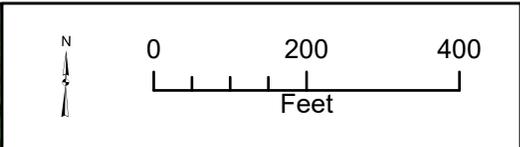
- | | | | |
|-----------------------|----------------|-------------------------|------------|
| Flooding | Fire Station | School | Minor Road |
| Landslide/Erosion | Police Station | Water System | Local Road |
| Fire | DPW | Communications Facility | Railroad |
| Wind | Shelter | Dam | Stream |
| FEMA 100yr Floodplain | Senior Center | Interstate | Wetland |
| Town Hall | Nursing Homes | Major Road | Open Water |



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Town of Dalton- Dam Inundation





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix B: PowerPoint Presentation

MUNICIPAL VULNERABILITY PREPAREDNESS FOR DALTON

APRIL 25TH 2019



Understand connections between ongoing community issues, climate change and natural hazards, and local planning and actions in the municipality;



Understand how climate change will exacerbate or lead to new community issues, hazards and other challenges the municipality faces;



Identify infrastructural, societal, and environmental vulnerabilities and evaluate strengths that help make the community more resilient to climate change and natural hazards;

GOALS OF TODAY



EXPLORE NATURE-BASED SOLUTIONS TO BUILD RESILIENCY IN THE MUNICIPALITY;



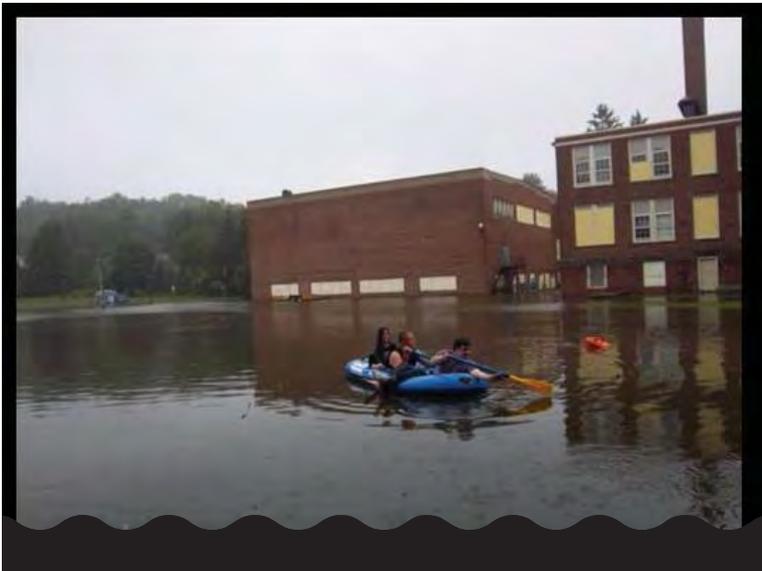
DEVELOP AND PRIORITIZE ACTIONS AND CLEARLY DELINEATE NEXT STEPS FOR THE MUNICIPALITY, LOCAL ORGANIZATIONS, BUSINESSES, PRIVATE CITIZENS, NEIGHBORHOODS, AND COMMUNITY GROUPS;



IDENTIFY OPPORTUNITIES FOR THE MUNICIPALITY TO ADVANCE ACTIONS THAT FURTHER REDUCE RISKS AND IMPACTS OF CLIMATE CHANGE AND NATURAL HAZARDS AND INCREASE LOCAL AND REGIONAL RESILIENCY.

GOALS OF TODAY (CONTINUED)

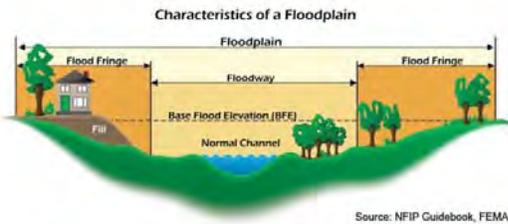
CLIMATE CHANGE





The Spruces
After
Hurricane Irene
in 2011

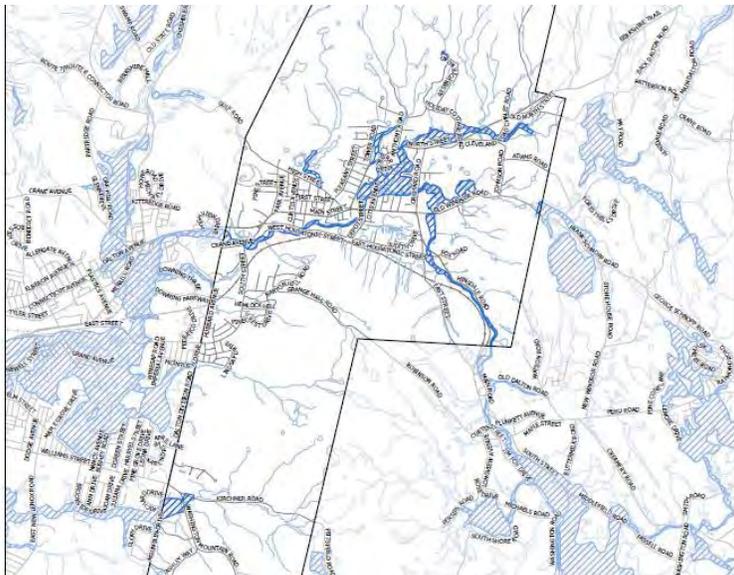
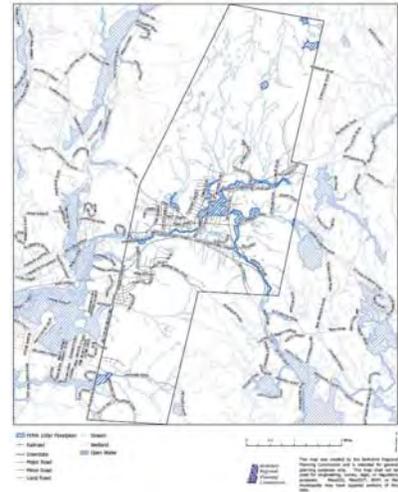
The Berkshire Eagle



Source: NFIP Guidebook, FEMA

WE BUILT IN THE FLOODPLAIN

Town of Dalton- Floodplain



- | | | |
|---------------------------|---------------------|---------------------------|
| Flood (Including Ice jam) | Dam Failure | Hurricane/ Tropical Storm |
| Nor-easter | Snow & Blizzard | Ice Storm |
| Thunderstorm | High Winds | Tornado |
| Drought | Extreme Temperature | Wildland Fire |
| Major Urban Fire | Earthquake | Landslide |

YOUR HAZARD MITIGATION PLAN

HAZARD MITIGATION PLANNING



IDENTIFY AND PRIORITIZE NATURAL HAZARDS



EXAMINE THE POTENTIAL IMPACTS ON PEOPLE, ENVIRONMENT, AND BUILT INFRASTRUCTURE



DEVELOP STRATEGIES TO PREVENT OR MINIMIZE THOSE IMPACTS

WHAT IS HAPPENING NOW?

CHANGES IN PRECIPITATION AND TEMPERATURE

IN DALTON



Temperature:

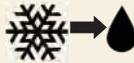


2.8°F since 1895 (7-10°F by 2100)
Berkshire temp. up 1.7°F since 1960

Growing Season:



10 Days
Since 1950



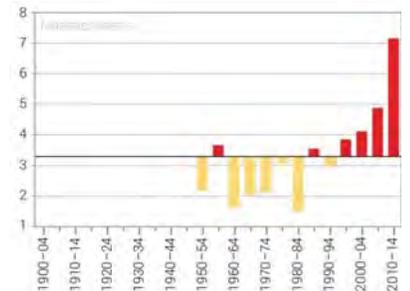
Strong Storms:
(heaviest 1% of annual)



71%
Since 1958



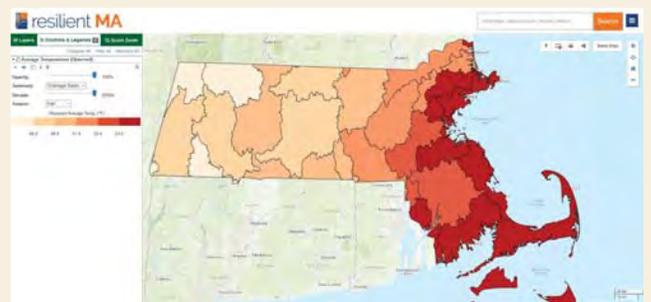
OF NIGHTS WHERE MINIMUM TEMPERATURE GREATER THAN 70°F



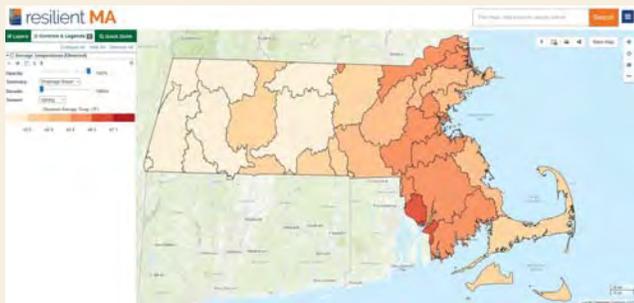
OBSERVED AVERAGE TEMPERATURE FALL 1960S



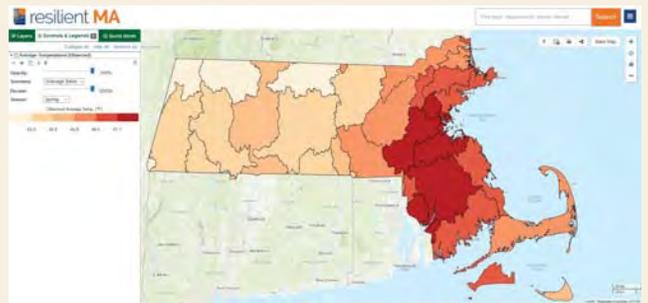
OBSERVED AVERAGE TEMPERATURE FALL 2000S



OBSERVED AVERAGE TEMPERATURE SPRING 1960S



OBSERVED AVERAGE TEMPERATURE SPRING 2000S



IT IS MORE THAN FLOODING

CLIMATE CHANGE INCREASES THE NUMBER AND GEOGRAPHIC RANGE OF DISEASE-CARRYING INSECTS AND TICKS

Climate change poses many risks to human health. Some health impacts of climate change are already being felt in the United States. We need to safeguard our communities by protecting people's health, well-being, and quality of life from climate change impacts. Many communities are already taking steps to address these public health issues and reduce the risk of harm.

BACKGROUND

When we burn fossil fuels, such as coal and gas, we release carbon dioxide (CO₂). CO₂ builds up in the atmosphere and causes Earth's temperature to rise, much like a blanket traps in heat. This extra trapped heat disrupts many of the interconnected systems in our environment.

One way climate change might affect human health is by increasing the risk of vector-borne diseases. A vector is any organism – such as fleas, ticks, or mosquitoes – that can transmit a pathogen, or infectious agent, from one host to another. Because warmer average temperatures can mean longer warm seasons, earlier spring seasons, shorter and milder winters, and hotter summers, conditions might become more hospitable for many carriers of vector-borne diseases.

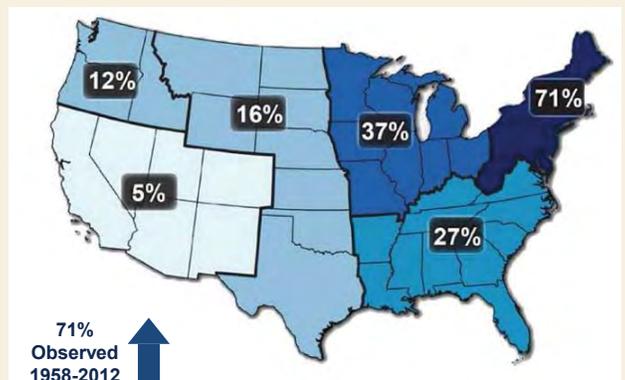


Invasive and Pest Insects in Berkshire County Threatening Forest Health

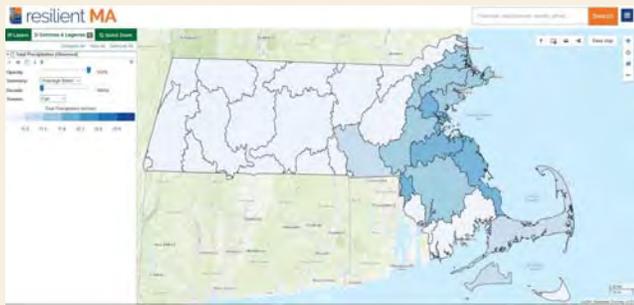
Insect	Origin	Host Trees	DCR-Management Approach
Gypsy Moth	Introduced (Invasive)	Oaks, other deciduous species	Discovered in 1869, the current management approach relies on natural population controls- naturally abundant virus and fungus populations regulate gypsy moth population cycles.
Hemlock Woolly Adelgid	Introduced (Invasive)	Eastern hemlock	Discovered in 1989, two biocontrol species, <i>Pseudotsugomyces tsugae</i> and <i>Laricobius nigrinus</i> , have been released in MA to limited establishment success.
Southern Pine Beetle	Native	Pitch pine	Population densities are being monitored through annual trapping. The impacts of climate change could significantly alter southern pine beetle generation periods and devastate pitch pine stands.
Emerald Ash Borer	Introduced (Invasive)	All ash species	Discovered in 2012, three biocontrol species, <i>Tetrastichus planipennis</i> , <i>Spathius galinae</i> , and <i>Oobius agrili</i> , have successfully been released in MA. Continued releases are planned.
White Pine Needlecast	Native	Eastern white pines	White pine defoliation is being monitored across the state. Needlecast has been identified to be caused by multiple fungal pathogens; the most prevalent agent in Massachusetts is <i>Lecanosticta acicola</i> .

INCREASED INSECT SURVIVAL

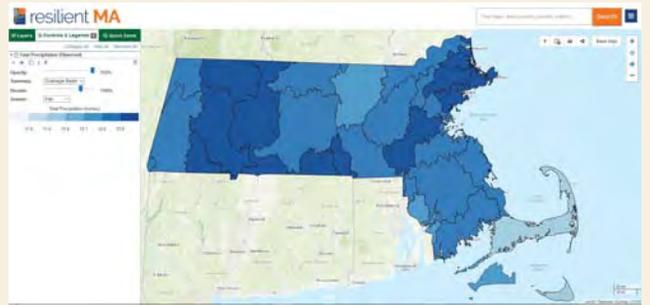
INCREASE IN EXTREME PRECIPITATION



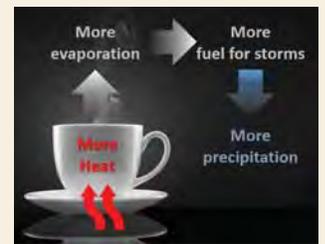
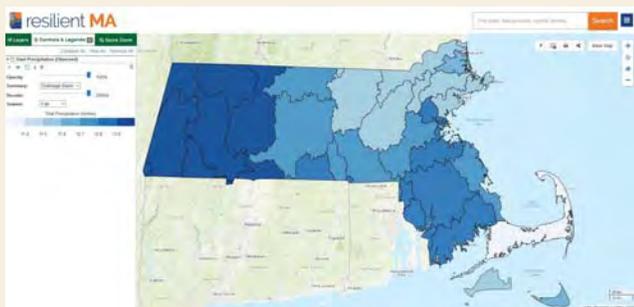
OBSERVED TOTAL PRECIPITATION FALL 1960S



OBSERVED TOTAL PRECIPITATION FALL 1990S



OBSERVED TOTAL PRECIPITATION FALL 2000S



**DESPITE THE
INCREASED
PRECIPITATION, IT
IS DRIER DUE TO
INCREASED
TEMPERATURE AND
EVAPORATION**

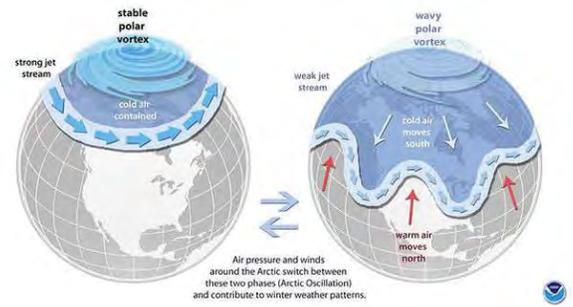


**DROUGHT & DRY
CONDITIONS
CAN LEAD TO
FOREST FIRE &
WATER
SHORTAGE**



WINTER WEATHER CHANGES

- Ice Jams
- Rain on snow = flooding
- Rain on frozen ground = flooding
- Warmer ground temperatures allow ticks to survive the winter
- Decreased snow pack for gradual groundwater recharge
- Rain followed by freezing temperatures leading to dangerous road conditions



SNOW IN APRIL?



CYCLES OF COLD AND WARM WILL INCREASE & ALTER RISKS

iBerkshires.com

- 12 Severe Storm(s)
- 10 Hurricanes
- 7 Snow
- 7 Flood
- 3 Fire
- 2 Coastal Storm
- 2 Tornado
- 1 Fishing Losses
- 1 Other
- 1 Severe Ice Storm
- 1 Trenchfall



49 DECLARED DISASTERS IN MASSACHUSETTS SINCE 1953



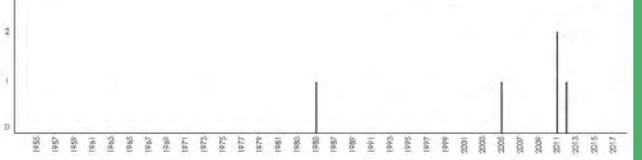
20 DECLARED DISASTERS IN BERKSHIRE COUNTY SINCE 1953

HURRICANES IN BERKSHIRE COUNTY

Time of Year (Month) and Reoccurrence



Year of Occurrence

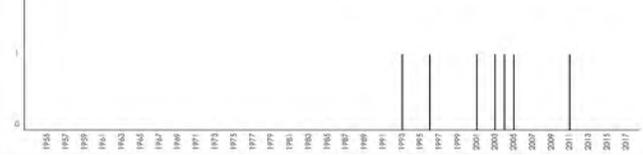


SNOW DECLARATIONS IN BERKSHIRE COUNTY

Time of Year (Month) and Reoccurrence



Year of Occurrence

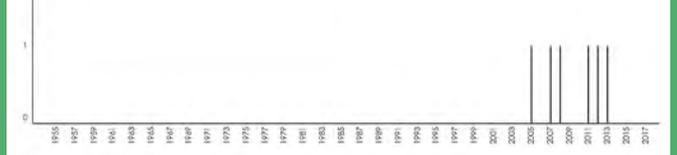


SEVERE STORM DECLARATIONS IN BERKSHIRE COUNTY

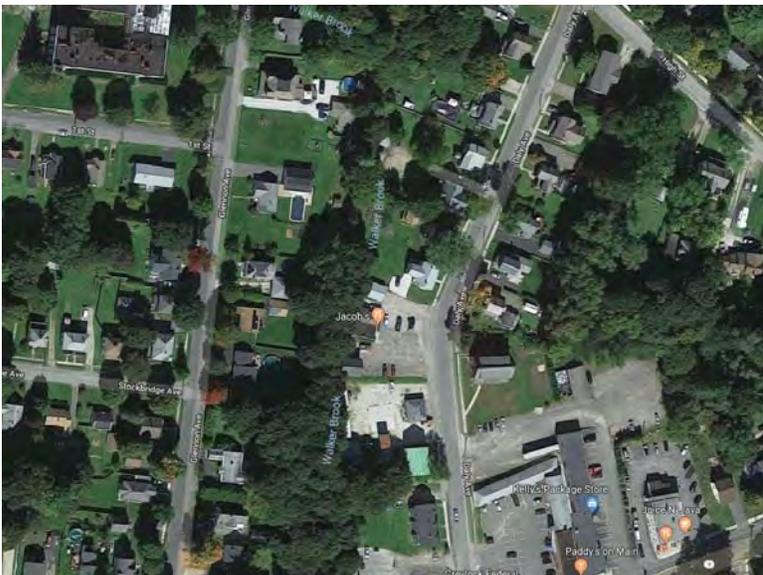
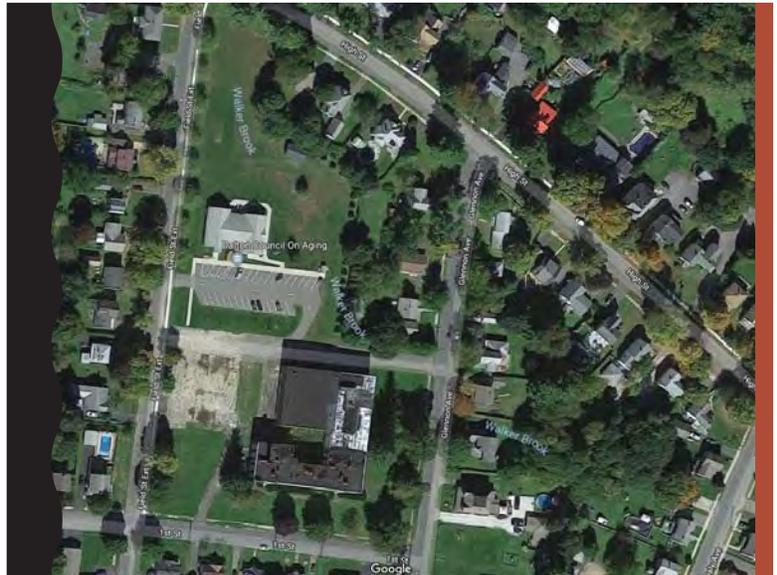
Time of Year (Month) and Reoccurrence



Year of Occurrence



**BEEN
THERE
DONE
THAT**

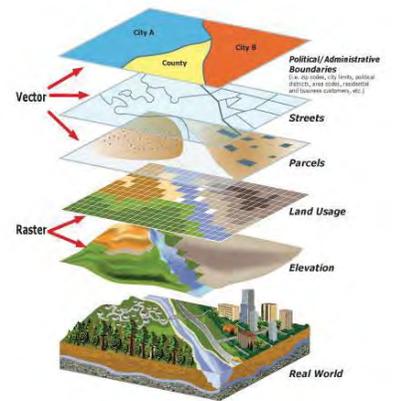




Outfalls/culverts at The Boulders (BNRC)

WHAT ARE OUR OPTIONS?

ZONING TO GUIDE SMART DEVELOPMENT



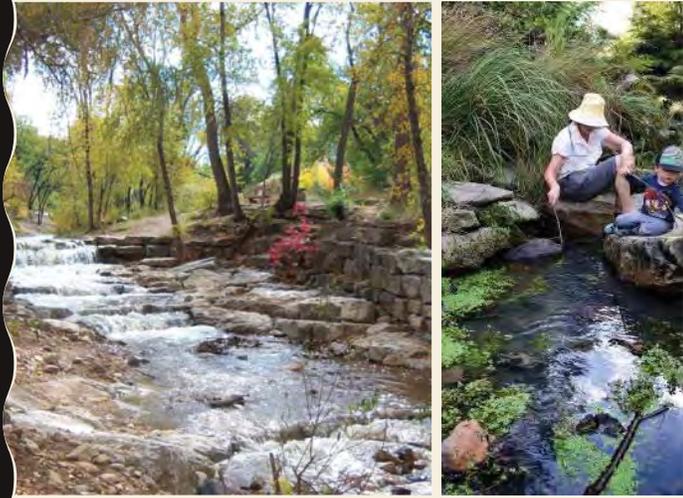
Examples of Porous Pavements



PERMEABLE PAVEMENT

STREAM DAYLIGHTING





The Tujunga Wash Greenway recreates a historic streambed in Los Angeles. The concrete flood channel (left, beyond the trail) remains in place to handle water from large storms.



STORMWATER RETENTION PARKS





THIS PARK CAN HOLD TWO MILLION GALLONS OF STORMWATER



BIOSWALES... THEY CAN GO ANYWHERE



LET'S NOT FORGET THE OTHER HAZARDS

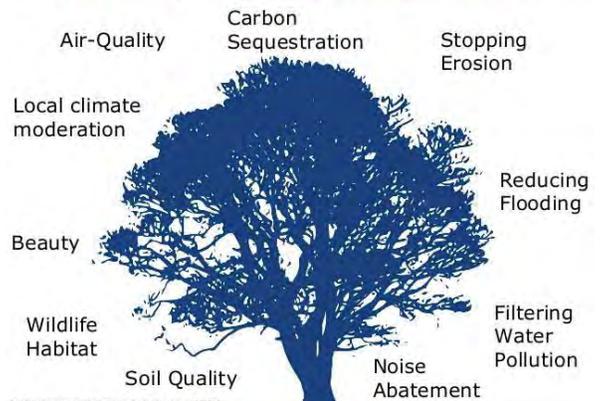


LIVING FENCES TO MITIGATE WIND AND DRIFTING SNOW

BURY THE POWERLINES



Trees provide a range of benefits not featured in the accounts



<http://www.bay.com/en/ask-green-brands/ask-green-33285/>

FEMA TOOLS FOR EVALUATING ECOSYSTEM SERVICES

[Benefit-Cost Analysis Tools for Drought, Ecosystem Services, and Post-Wildfire Mitigation for Hazard Mitigation Assistance](#)

[Ecosystem Service Benefits Calculator](#)

[Aquifer Storage and Recovery Benefit Cost Analysis Calculator Tool](#)

[Supplemental Guidance for Conducting a Benefit Cost Analysis for Floodplain and Stream Restoration Projects](#)



COMMUNITY NETWORKS ARE KEY TO RESILIENCE

COMMUNICATION

How can we inform community members on hazards and ways to stay safe?

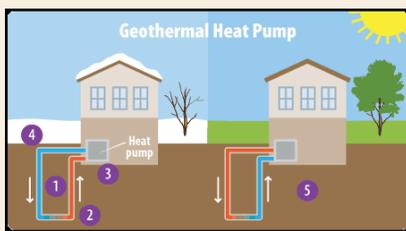
How will we check on our most vulnerable populations in hazardous conditions?

How will we come together to recover from a disaster event to be stronger for next time?

SIMPLE ACTIONS FOR YOUR HOME OR BUSINESS



GEOTHERMAL – OFF THE GRID OPTION



INSECT AND TICK CONTROL



YOUR LOCAL KNOWLEDGE, PRIORITIES, AND IDEAS

Each group's top 4 hazards

Community Resilience Building Risk Matrix

1. Priority for action over the short or long term (and ongoing)
 2. Vulnerability & Strength

Top Priority Hazards (tornado, floods, wildfires, hurricanes, etc.)

Features	Location	Ownership (V or S)			
Infrastructural					
Societal					
Environmental					

"FEATURES"



Infrastructural: municipal infrastructure, housing, utilities, commercial bldgs., municipal bldgs. and operations

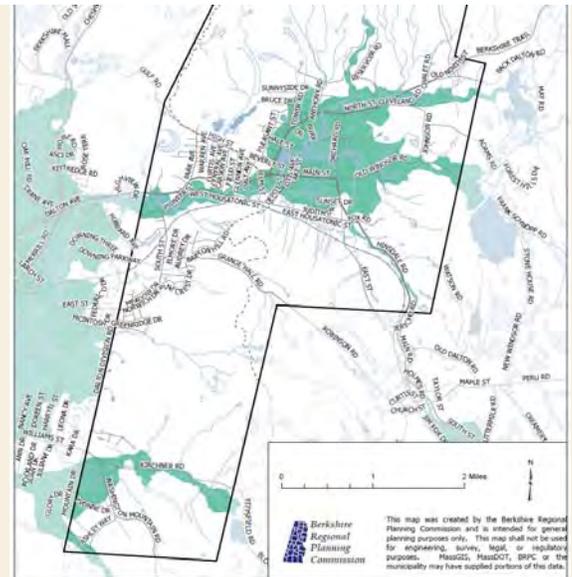
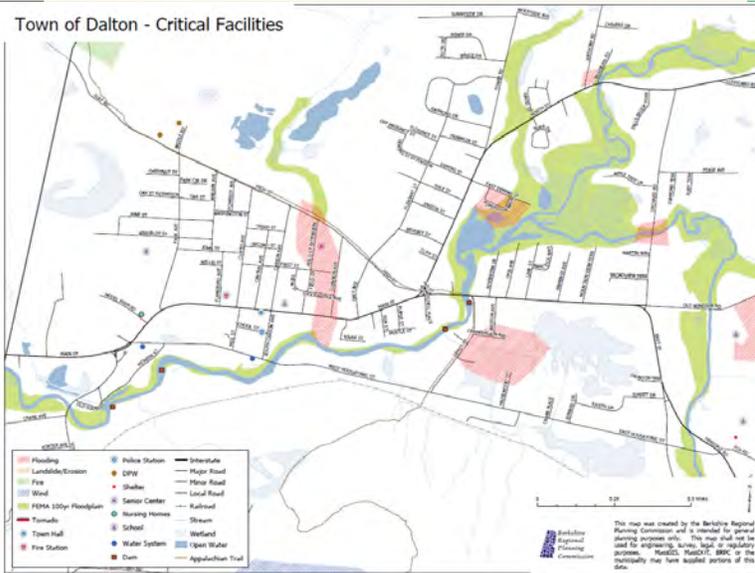


Societal: collective ability to respond – first responders, health services, goods and services



Environmental: natural systems that protect, provide services or pose risk

Town of Dalton - Critical Facilities



ACTIONABLE SOLUTIONS FOR THE MVP PLAN

1

Develop Your Actions

2

Prioritize them H-M-L and Time

3

Choose the Top 4 Priorities that you think are the greatest risks and should be addressed

4

Bring your Top 4 to the Full Group

Appendix C: Completed CRB Matrices

Community Resilience Building Risk Matrix

www.CommunityResilienceBuilding.org

H-M-L priority for action over the Short or Long term (and Ongoing)
 V = Vulnerability S = Strength

Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Features	Location	Ownership	V or S	FLOOD	ICE/SNOW	WIND	CHANGE IN TEMPERATURE	PESTS	Priority	Time		
									H-M-L	Short Long Ongoing		
Environmental												
Forest Management needs to increase, questionable access roads	North Mountain	Private and Public	V		Need fire prevention and response plan, map/check/maintain access roads regularly, conduct controlled burns				M	O		
Fire Dept. has access to cross Eversource access gates into forest + has portable pumps	Town wide	Private and Public	S	Reestablish and build permanent water crossings							L	S
Tick and mosquito populations are increasing	Town wide		V	Install bat boxes in downtown/public areas, conduct controlled burns, promote chicken ownership, provide tick education and demos in schools, more trail maintenance.							M	O
Falling bee populations	Town wide	all	V	Ban neonicotinoids in town and on private land, promote planting of beneficial plants and shrubs for bees, EDUCATION							H	O
Pesticide and herbicide overuse (bees, land erosion, water contamination)	Townwide	all	V	Promote permaculture and sustainable solutions, evaluate use in public spaces							H	O
Increased emerald ash borer	Townwide		V			Identify what trees are at risk and use wood from trees for something useful, such as biomass fuel. There are state restrictions on this.				M	L	
Boat Cleaning/zebra mussels	Townwide		V				Information about boat cleaning requirements should be posted at any boat launch site, require certificates of boat cleaning. Fishing gear should be cleaned as well.				L	L
Create green infrastructure requirements for new or renovated municipal and private development	Townwide	all	V	Town should be leader and take initiative, push state on green infrastructure options for regular projects like sidewalks, etc.							H	O
Old trees	Townwide	Private and Public	V and S	Tree planting program with native trees	Plan to plant saplings near old trees		Resilient trees (willow, maples, oaks, birch, hickory)	Forest Stewardship plans. Public education on moving wood.		M	O	
Lymes Disease and West Nile	Townwide	N/A	V	Prevent standing water in/around buildings			Education	Chickens, Bat boxes, encourage young hunters		M	O	
Tree pests	Townwide	N/A	V	Climate resilient trees					Encourage Biodiversity		L	O
Walker Brook	Walker Brook	Town	V/S	Design competition for the area where the school was. Naturalize and daylight Walker Brook			H+H study			H	S	
Steep Slopes, Severe runoff, erosion	Grange Hall, Sleepy Hollow, the boulders	Town, Private, MA	V	Plant slopes, deep rooted plants. Zoning for runoff/ cascading discharge like waterfall (greylock)/ flow forms						H	O	
Bats and other wildlife	Hubbard Ave and Barton Brook	N/A		Nature-based infrastructure			Plant milkweed in bioswales	Bat Box Program		M	O	
Center pond sedimentation	Center Pond	Town	V	Work with regulatory authorities to develop a plan to deal with sedimentation							M	O
No forest management planning	North and South part of town	DCR/F&W	V	Work with state to develop forest management plans							L	L
Ticks and mosquitos	Townwide	Town	V	Educate residents on risks and preparation							M	O
Older street trees	Townwide	Private / Town	V	Proactively remove old/diseased street trees and plant new trees							L	L

Environmental continued...

H-M-L priority for action over the Short or Long term (and Ongoing)
 V = Vulnerability S = Strength

Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Features	Location	Ownership	V or S	FLOOD	ICE/SNOW	WIND	CHANGE IN TEMPERATURE	PESTS	Priority	Time		
									H-M-L	Short Long Ongoing		
Gas stations and oil tanks if dams break	Main Street	Private	V	Determine how water resistant tanks are including height of vents Determine which homes in the floodplain contain oil tanks					M	L		
Railroad Carrying Hazmat	Housatonic River	CSX	V	Engage with CSX "formally" on haz mat transport, bank erosion					L	O		
Tree Cover impacted - Infestations, Damage	Townwide	Public & Pvt	V	Public Ed via Community Cable, Newspaper, flyers on ID and remedies; Forestry Plan update							L	O
Ticks & Mosquitos On Rise	Townwide	Public & Pvt	V	Public Ed via Community Cable, Newspaper, flyers on ID and remedies; Forestry Plan update							L	O
Mold/Mildew - High Water Table	Pom Manor & Other Places	Public & Pvt	V	Hydrologic study; Encourage regular inspections/reports							L	O
Erosion - Landslides & ATV Damage	Various	Public & Pvt	V	ID and map sites w/help from HVA, BNRC, Town, Farmers and other owners							L	O
Water Quality impacts - Siltation, Turbidity, Bacteria, Algae	Ctr Pond & Others	Public & Pvt	V	Multi-Agcy control: Army Corps, MA Wildlife, DEP, ConComm - Coordination/Discussion							L	O
Recreation Areas impacted	Boulders, Barton Brook	Public	V	Beaver Control, invasive plants -- Assess and create Plan priority							M	O
Knot Weed & Other Invasive Plants	Chamberlain	Public & Pvt	V	Work with BNRC & H.O. on education and see removal by volunteers							L	O
Green Corridor For Wildlife (Planning)	Throughout	Town	S	Consider Conservation Overlay or other protective zoning							M	L

Community Resilience Building Risk Matrix

H, M, L priority for action over the Short or Long term (and Ongoing)
 V = Vulnerability S = Strength

Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Features:	Location	Ownership	V or S	Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)					Priority	Time
				FLOOD	ICE/SNOW	CHANGE IN TEMPERATURE	WIND	PESTS	H-M-L	Short Long Ongoing
Societal										
Area around Senior Center (Walker Brook) floods regularly into grass and parking lot. Undersized pipes, hydraulic study needed.	Walker Brook	Town	V	(1.) Perform hydraulic study. (2.) Consider natural solutions aside from piping. (3.) Consider permeable pavements for parking lot.					M	L
Senior Housing (River Run) at risk of flooding from Walker Brook	River St/ Main Street	Town	V	Same solutions as stated with nearby Senior Center.					M	L
School Reunification Plan, working with Stationary Factory, exercises and drills	Stationary Factory	Town/Private	V & S	More supplies needed for reunification i.e.: AED machine, medical supplies, basic food and water, explore purchase of trailer for support equipment/shelter equipment. Hookups need to be installed for 110 generator for building.					H	S/L
More clear messaging needed for CodeRed system		Town	V	Drill CodeRED quarterly. Educate members of the community about signing up for code red, potentially through regular mailings (such as tax assessments)					M	S
West side evacuation point is only access for town to groceries and medical care for Dalton residents.	Route 9/ Housatonic Street	Town+State	V	Recruit medical volunteers in town for emergencies (+volunteer management system), figure out food/water access solutions when access is cut off					M	S
Personal Preparedness, get Seniors to sign up for Code Red	Town wide	Town	V	Distribute preparedness kits, develop educational mailings, information sheets, and town emergency information such as sheltering/community outreach programs					M	S
Elderly population/ aging population	Central Dalton and Pomeroy Manor	Individuals, Housing Auth. + COA	V & S	(1.) Increase Public Awareness (2.) Dredge Center Pond (H) to protect Pomeroy Manor (3.) Provide cooling centers					H	O
Cellphone reception not great	Town wide	Verizon and AT&T	V	Bury cables					L	L
WiFi/Internet access not dependable	Town wide	Verizon, spectrum, and Mass Broadband	V	Boosters and Fios to increase dependability for access and emergencies					L	L
Senior Center in Floodplain	Field street extension	Town	V & S	Natural infrastructure for infiltration, permeable pavement, and rain gardens H+H study					H	S
Public Housing in Floodplain	East Deming Street	Dalton Housing Authority	V	H+H study at Walker Brook for Pomeroy					H	S
Code Red	Regional	Dalton, Hinsdale, Windsor	S	Use Code Red to get people to cooling centers					M	O
Lack of exits from town during emergency	Main & South	Town	V	Discuss emergency access with Berkshire Money Management and Crane					M	S
Lack of access to water and food during emergency	Town wide	Town	V	Work with MEMA					L	O
Code Red and Mutual Aid agreements	Town wide	Town	S	Continue to publicize					L	O
River Run apartments has no emergency plans	Main and River	Private	V	Work with River Run on emergency planning and evacuation planning					H	S