


TOWN OF LUDLOW
MUNICIPAL VULNERABILITY
PREPAREDNESS PLANNING AND
HAZARD MITIGATION PLAN UPDATE

Community Resilience Building Workshop #2
March 31, 2022



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Welcome & Introductions



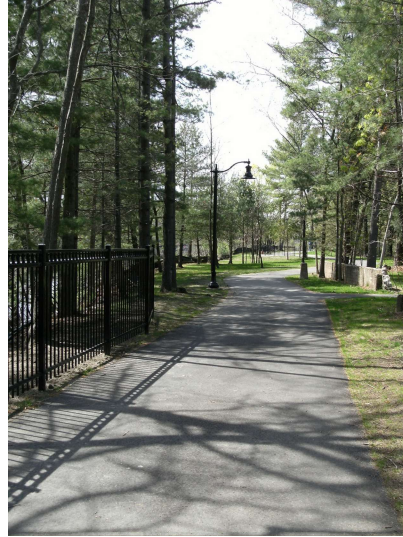
HOMER R. DUBOIS
FIRE DIVISION

LUDLOW POLICE & FIRE
Headquarters

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Thank You to Ludlow's MVP/HMP Core Team

- Ellie Villano
- Marc Strange
- Doug Stefancik
- Penny Lebel
- Andrea Crete
- Paulina Matusik
- Brian Shameklis
- Jim Goodreau
- Jocelyn Zepke
- Seth Falconer



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Today's Agenda



Overview presentation on workshop goals, MVP program, natural hazards, Workshop #1 strengths & vulnerabilities



Small group exercise to brainstorm mitigation actions



Small group report-out, discussion of mitigation actions



Workshop #3 schedule and agenda

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Why Are We Here?

- Help the Town of Ludlow improve preparedness for and resilience to natural hazard events
 - Understand community strengths and vulnerabilities
 - Plan for more frequent and intense weather events
 - Engage multiple stakeholders in the planning process
 - Identify short and long-term mitigation actions
 - Improve access to funding for mitigation and adaptation

**SMART INVESTING
MITIGATION SAVES**

**EVERY \$1
SPENT ON
MITIGATION,
SAVES \$6
ON FUTURE
DISASTER
LOSSES**

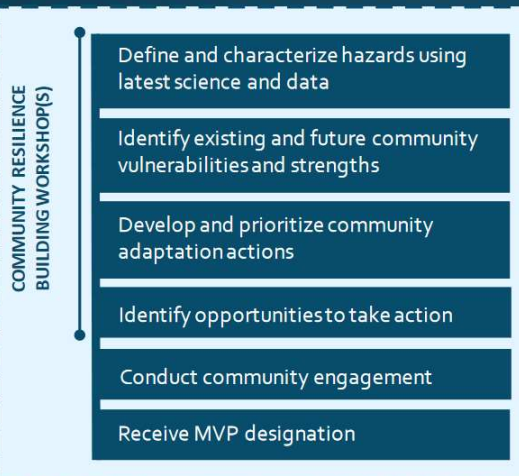
Natural Hazard Mitigation Saves: 2017 Interim Report
nhis.org/mitigationsaves

National Institute of
STATISTICS FEMA

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MVP Process

MVP Planning Grant



MVP Action Grant

Implement priority adaptation actions identified through planning process

From MVP Program Municipal Staff Training for Planning Grants: <https://www.mvss.gov/doc/mvp-planning-grant-municipal-staff-training-slides-january-2020/download>

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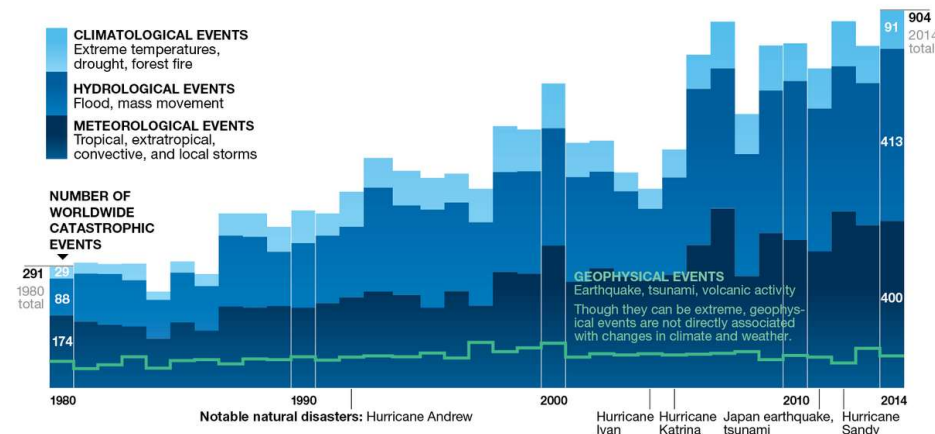
MVP Program

MVP CORE PRINCIPLES



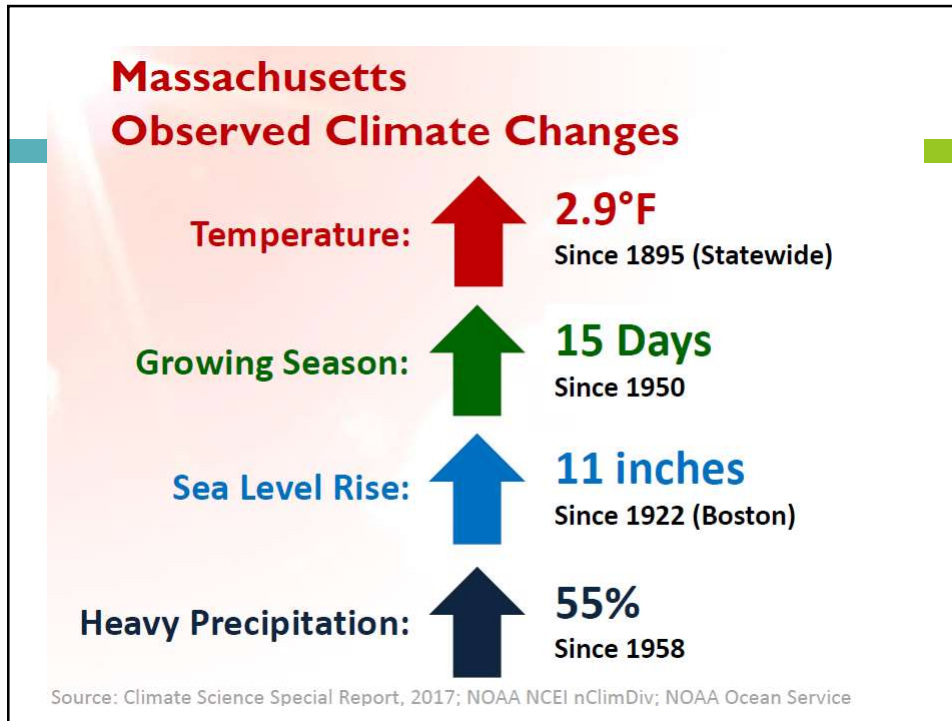
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The Future of Natural Hazards

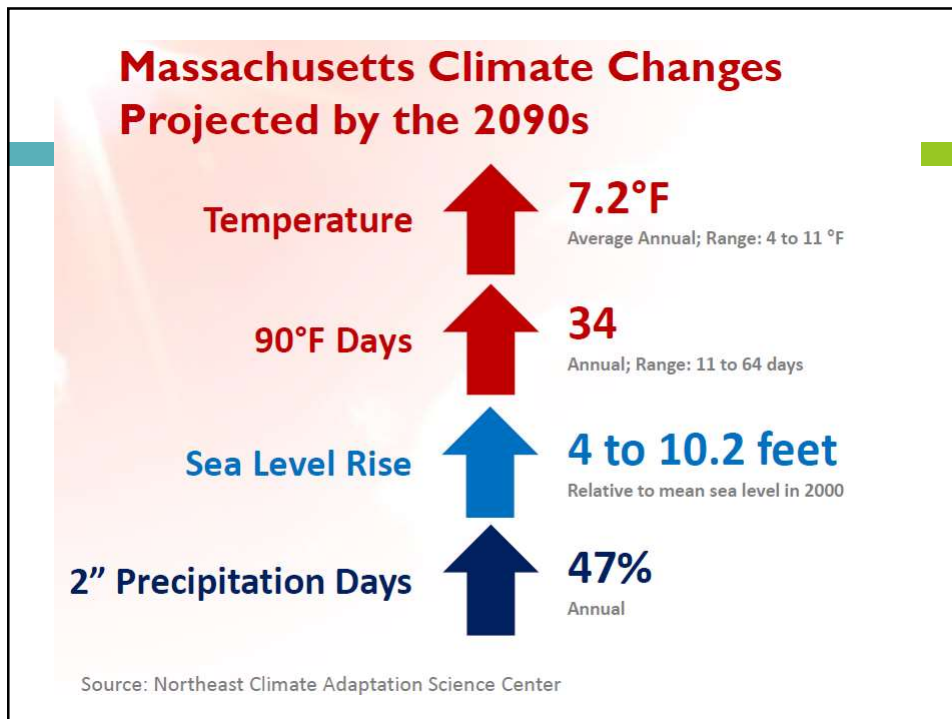


<https://www.nationalgeographic.com/climate-change/how-to-live-with-it/weather.html>

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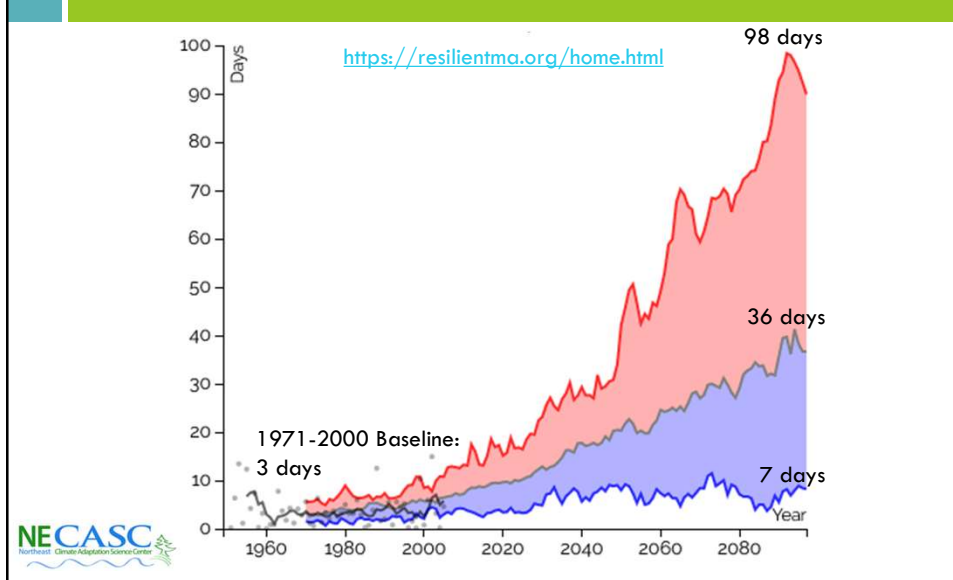


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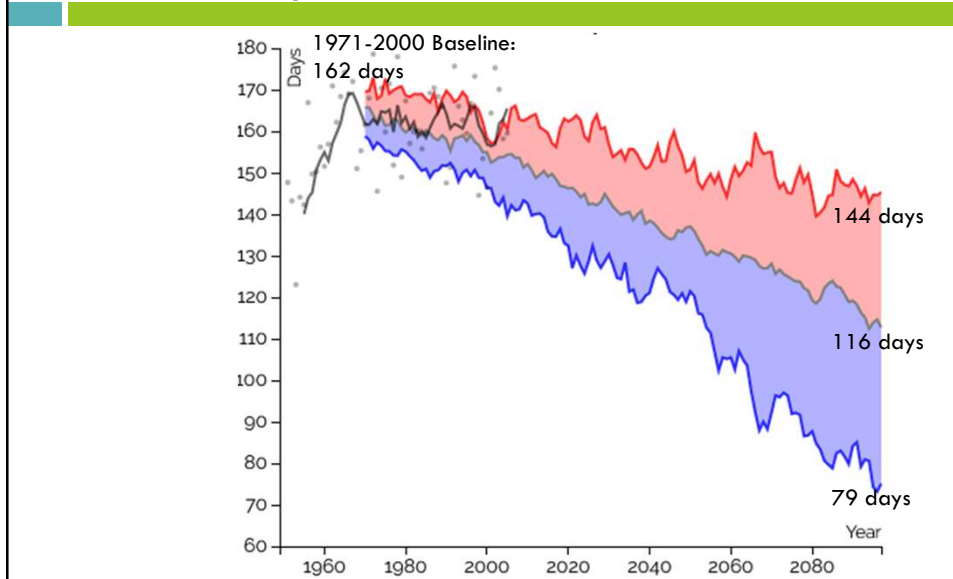
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Climate Change – Chicopee River Basin, Annual Days Over 90° F



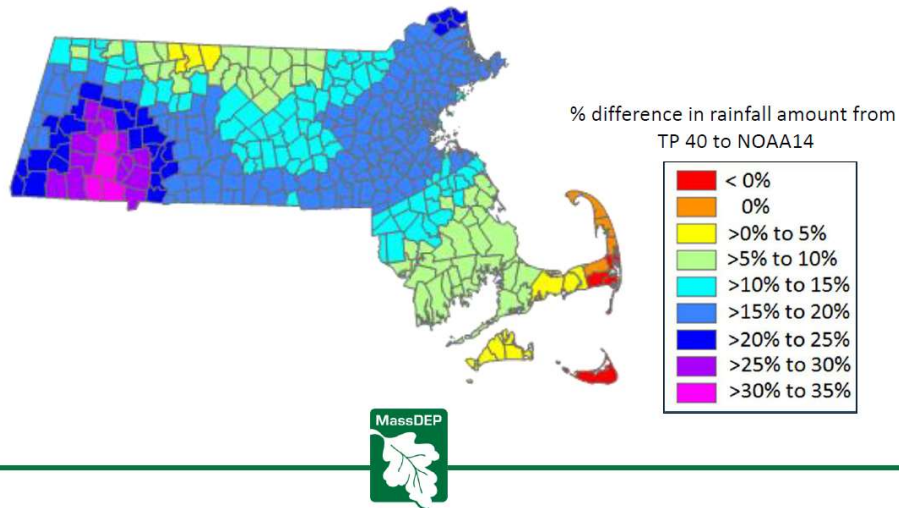
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Climate Change – Chicopee River Basin, Annual Days Below 32° F



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100-Year Storm Rainfall Model Changes



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Top Natural Hazards in Ludlow

Hurricane /
Tropical Storm

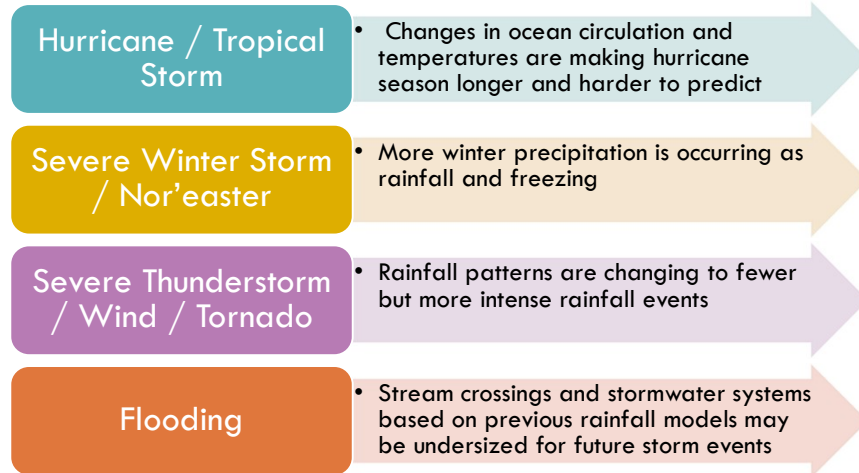
Severe Winter
Storm /
Nor'easter

Severe
Thunderstorm /
Wind / Tornado

Flooding

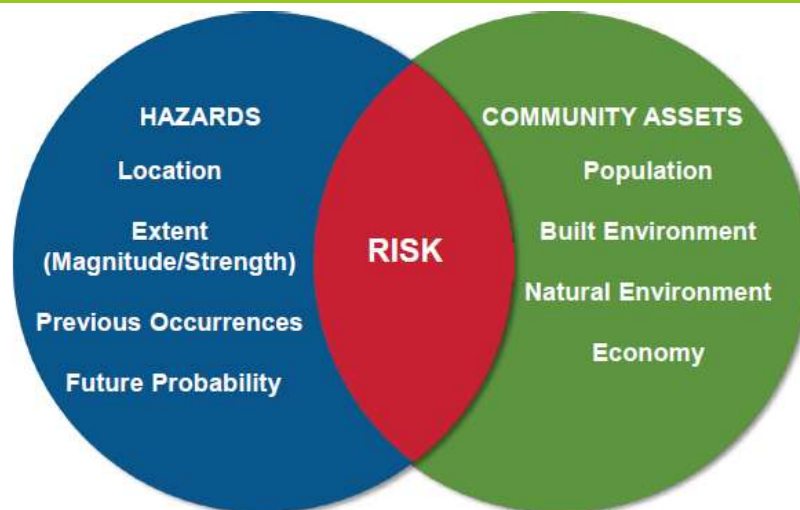
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Changing Risk of Top Natural Hazards

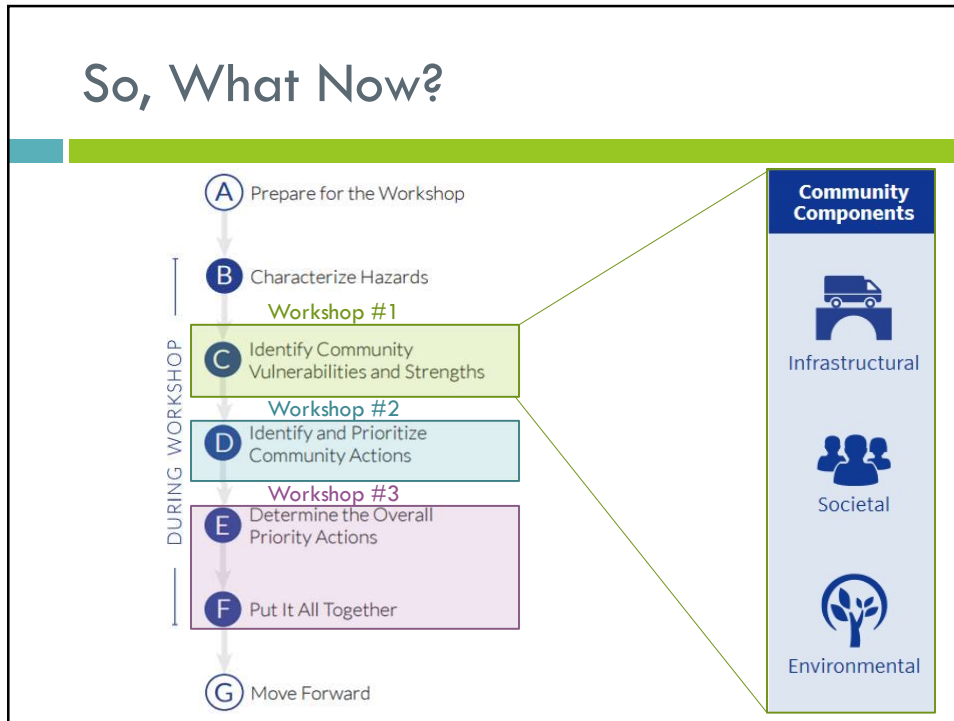


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Community Risk from Hazards



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Results from Workshop #1 – Infrastructural Assets

Feature	Location	Vulnerability or Strength
Dams – Town-owned	Harris Brook Dam, Collins Pond Dam	V – most dams in Town high or significant hazard
Dams – privately-owned	Ludlow Reservoir Dam, Ludlow Manufacturing Association Dam	V / S – SWSC inspects and maintains regularly
Bridges and culverts, underpasses	West St / Brook St; East St; Poole St near Red Bridge; Center St under Mass Pike; Circuit Ave area around Electric Park; Broad Brook Canal Rd	V – undersized SW systems, aging and deteriorating culverts and bridges, underpass areas prone to flooding
Natural gas plant & pipelines	Plant: SE corner near Wilbraham line Pipeline: along Mass Pike 50% of Town on natural gas	V - Pipeline crosses through Town, possible fire hazard
Gas stations, dynamite storage, jet fuel storage	Shell, Pride, Cumberland Farms, Mobil Dynamite storage near jail and golf course	V - Gas storage at some of the stations – toxic, fire hazard; jet fuel storage close to dynamite storage and MWRA water lines

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Results from Workshop #1 – Infrastructural Assets

Feature	Location	Vulnerability or Strength
Wastewater pump stations	3 pump stations – 1 in SE corner of Town, 1 downtown, 1 just over Chicopee line	S / V
MMWEC	Moody St – Stony Brook Energy Center	
Drinking water	50% of Town on private wells, most of remainder on SWSC, some Wilbraham	S / V
Nash Hill covered reservoir	Nash Hill Rd, MWRA drinking water storage prior to distribution	S / V
Large scale solar facilities	Fuller St area, proposed solar development near Mass Pike / East St	V – potential for erosion and runoff into waterbodies, may need additional zoning regs
Electric utility	Overhead electrical distribution lines throughout Town (Eversource)	S / V – Eversource has tree trimming program, good coordination with DPW
Transfer station	Route 21	

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Results from Workshop #1 – Societal Assets

Feature	Location	Vulnerability or Strength
Limited or non-English speaking populations	Primarily downtown Ludlow	S / V – likely to see population growth in the future
Ludlow Schools		S – outreach and communications, 18 languages
Senior and special needs housing / facilities	Senior Housing – Miller St, Mill 10 Disabled, traumatic injury and high needs care – Nashville Rd, Lyons St, Holyoke St Rehabilitation – Encompass Health	V – populations sensitive to high temperatures, low air quality; transportation challenges
Churches and religious organizations	Downtown and surrounding areas	S – outreach and communication to immigrant and non-English speaking populations, emergency shelter
Neighboring communities	Chicopee, Granby, Belchertown, Wilbraham, Springfield	Communication, mutual aid, and less formal cross-community relationships

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Results from Workshop #1 – Environmental Assets

Feature	Location	Vulnerability or Strength
Ponds	Haviland Pond, Pickerel Pond, Wood Pond	S / V – houses near Haviland Pond are prone to flooding
Public open spaces and passive recreation areas	Trail along Ludlow Reservoir, Riverwalk along Chicopee River, Westover Recreation Area, Facing Rock Wildlife Management Area, small parks	Heavy use of areas, need more recreation areas, could enhance utilization of Chicopee River
Agriculture	Randall’s Farm, Community Garden behind Baird Middle School	S – Right-to-Farm community; loss of farmland over time
Ticks, invasive species, nuisance wildlife		V – population is increasing, public health risk
Shade trees		S / V – DPW maintains but does not replant
Wetlands	Throughout Town	S / V – active ConCom, 25-ft No Disturb Zone for wetlands

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Mitigation Actions - Definitions

RESILIENCE

The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner.

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MITIGATION

aims to reduce the causes of climate change

+

ADAPTATION

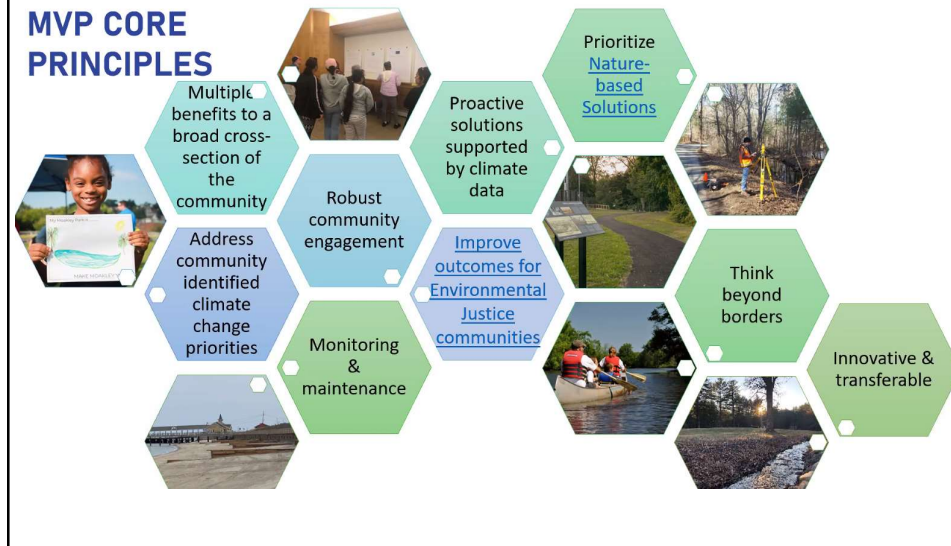
involves modifying our decisions, activities and ways of thinking to adjust to a changing climate



Definitions taken from the Massachusetts 2018 State Hazard Mitigation and Climate Adaptation Plan and Corollary in a Changing Climate report (Adaptation.NRCa.gov)

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Mitigation Actions - Considerations



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MVP Action Grant Project Types

- Vulnerability and Risk Assessment
 - Community Outreach and Education
 - Local Bylaws, Ordinances, Plans, and Other Management Measures
 - Redesigns and Retrofits
 - Nature-Based Flood Protection, Drought Mitigation, Water Quality, and Water Infiltration Techniques
 - Nature-Based Infrastructure and Technology Solutions to Reduce Vulnerability to Extreme Heat and Poor Air Quality
 - Nature-Based Solutions to Reduce Vulnerability to Other Climate Change Impacts
 - Ecological Restoration and Habitat Management to Increase Resiliency
- Energy Resilience
 - Chemical Safety
 - Land Acquisition for Resilience
 - Subsidized Low-Income Housing Resilience Strategies
 - Mosquito Control Districts

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Mitigation Actions – Nature-Based Solutions

- Nature-Based Solutions are projects that:
 - ▣ Address hazards like flooding, erosion, drought, and heat islands
 - ▣ Restore, protect, or manage natural systems
 - ▣ Mimic natural processes
 - ▣ Are cost-effective, low maintenance, and have co-benefits for public health, safety, and quality of life



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Mitigation Actions

Projects that are NOT MVP-competitive:

- Maintenance
- Diesel generators
- Tree removal
- Emergency preparedness
- Hard infrastructure without core MVP components/priorities

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Small Group Exercise

Break out into small groups to identify mitigation actions to enhance strengths and minimize vulnerabilities in the Town of Ludlow

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Small Group Exercise – Report Out

- Designated reporter from each group will share group's top recommendations for mitigation actions



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Next Steps – Workshop #3 Agenda

Review and finalize list of mitigation actions and strategies

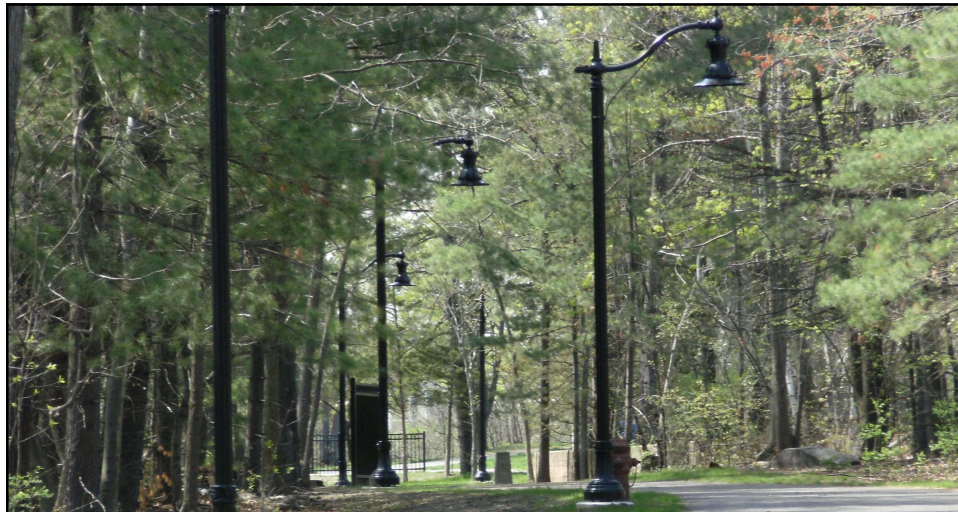


Determine mitigation action priorities



Mitigation actions can be turned into MVP Action Grant or FEMA HMA Grant applications!

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THANK YOU!

<https://www.ludlow.ma.us/html/mvp/index.htm>

Emily Tully, Senior Planner, PVPC
etully@pvpc.org/ (802) 829-0341

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