



TOWN OF BELMONT



Hazard Mitigation Plan Update

Municipal Vulnerability Preparedness (MVP) Planning Grant

Municipal Vulnerability Preparedness (MVP) Program

Community Resilience Building

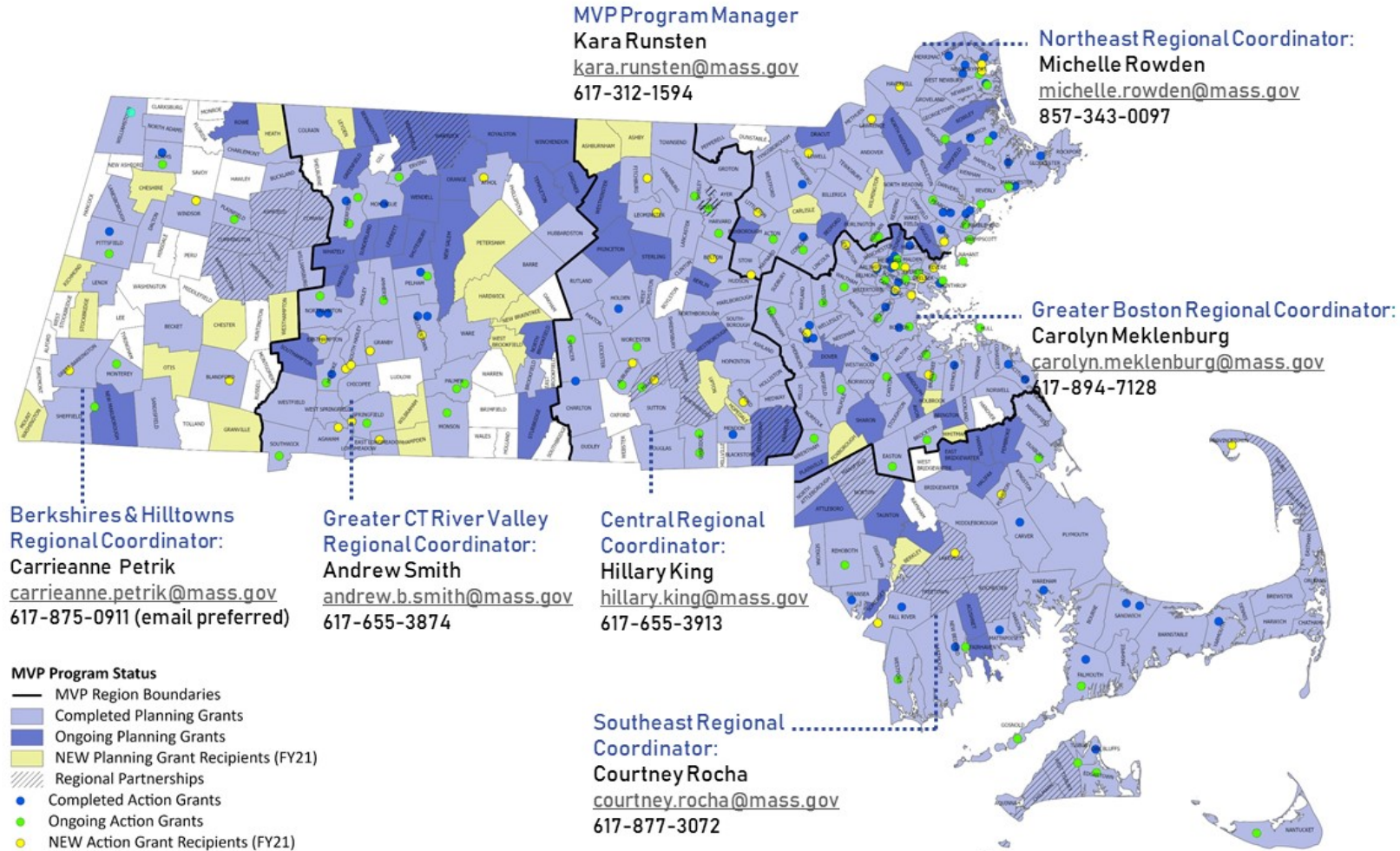
(CRB) Process:

89% participation
312 communities

Action Grant Projects:

FY 18: 37
FY 19: 36
FY20: 53
FY21: 41

Total Awards:
\$44M to date



MVP Website: www.mass.gov/mvp



Massachusetts Executive Office of
Energy & Environmental Affairs (EOEEA)

Municipal Vulnerability
Preparedness (MVP)



community
resilience building
workshop



abbreviated
time frame



less competitive
grants

Overlap



municipal leadership



regional collaboration



community engagement



review existing information



hazard impacts and vulnerability



existing policies/programs



identify strengths, vulnerabilities,
and potential actions



report



grant funding

United States Federal Emergency
Management Agency (FEMA)

Hazard Mitigation Planning
(HMP)

planning committee



provide updates
on development
changes



document NFIP
participation and
compliance



define the future
update process



address repetitively
damaged
structures



document formal
plan adoption

core team

listening session

climate change
hazards and
projections

opportunities to
improve

risk matrix

prioritize climate
adaptation actions

summary of findings

state action grants

public input events

natural hazards
and in-depth
hazard profile

document
existing

background research

implementation
plan for hazard
mitigation

hazard mitigation plan

federal grants



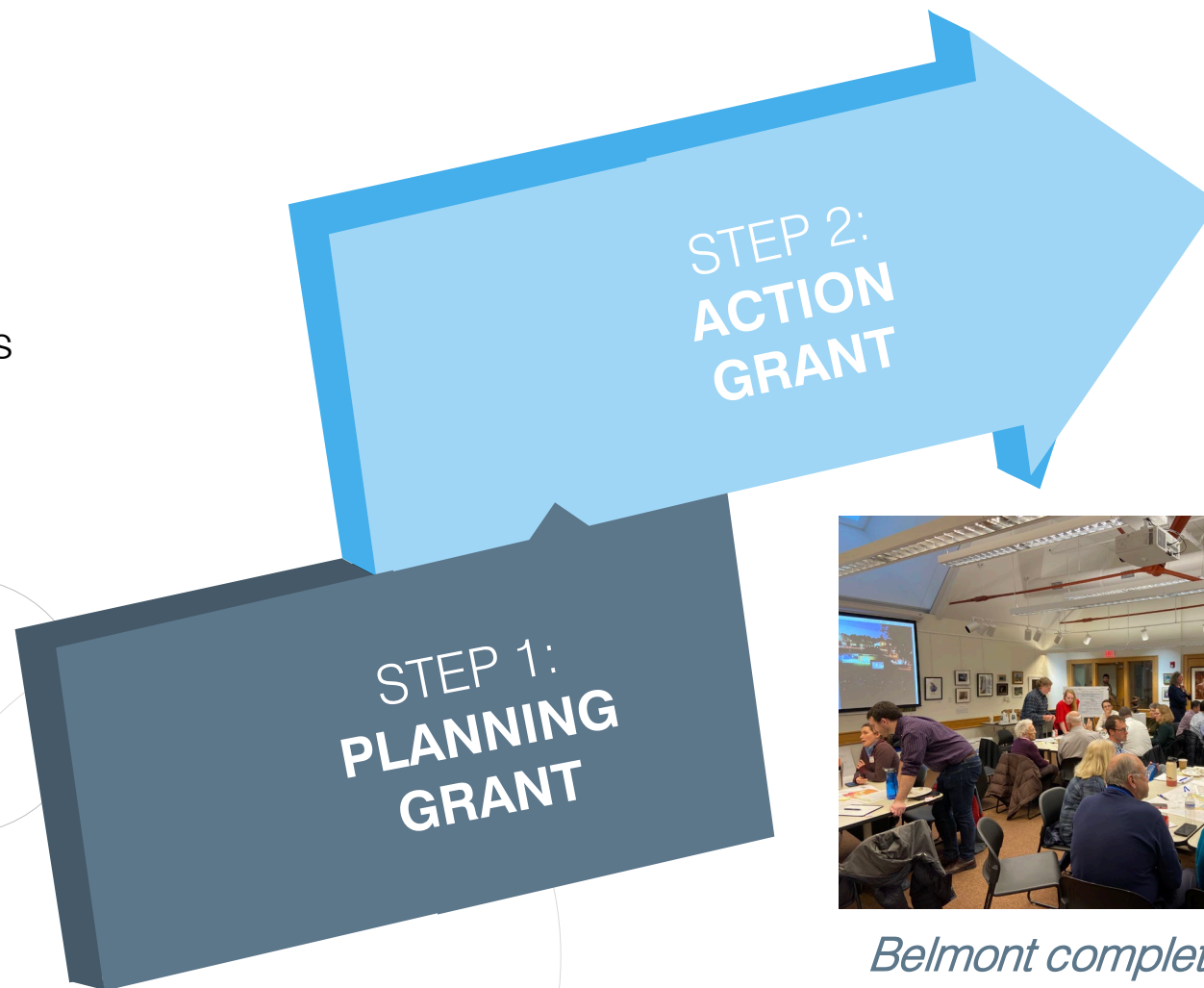
MVP PROGRAM

1. MVP Planning Grant

- Define climate hazards
- Identify community vulnerabilities and strengths
- Develop and prioritize adaptation actions
- Receive MVP designation

2. MVP Action Grant

- Implement priority adaptation actions identified during the planning process



*Belmont completed its
Planning Grant!*



What Can the MVP Action Grant Fund?



Outreach & Education



Assessments



Redesign & Retrofit



Nature-Based
Solutions



Water Quality &
Infiltration



Flood Protection



Extreme Heat
Mitigation



Drought Mitigation



Ecological
Restoration



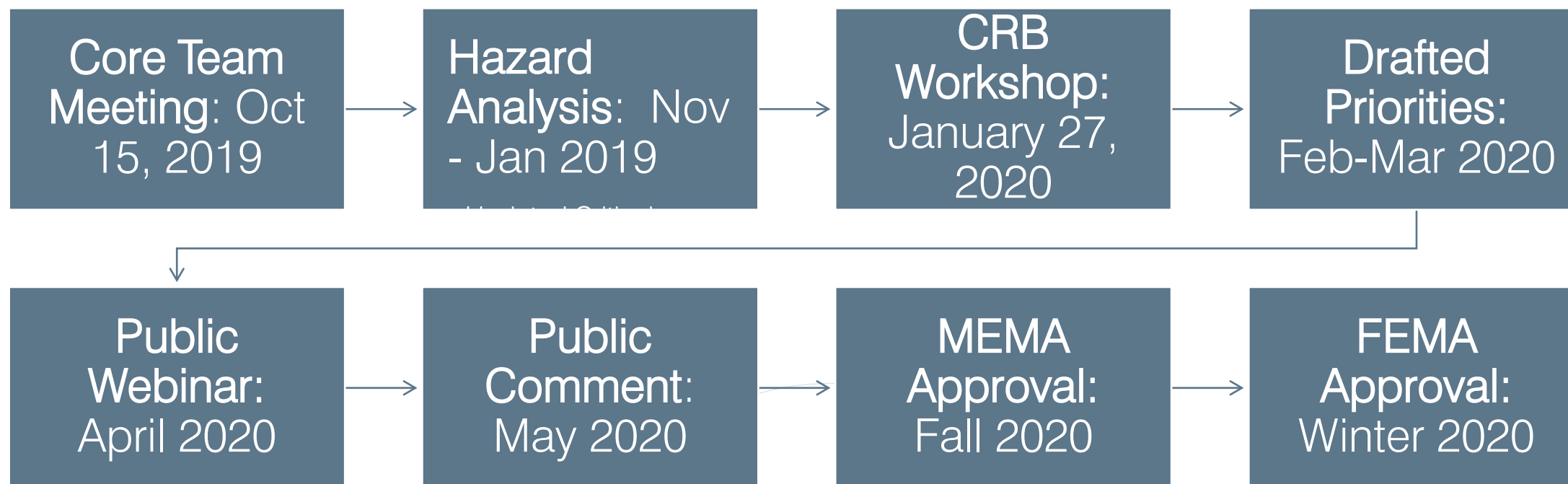
Land Acquisition



Subsidized Low
Income Housing
Resilience Strategies



SCOPE OF WORK





COMMUNITY ENGAGEMENT

- Community Resilience Building Workshop
- Video recording and online survey
- Virtual Public Listening Session
- Interview with Belmont Journal





MA CLIMATE PROJECTIONS

By end of century:

Changes in precipitation

- 18% increase in consecutive dry days
- 57% increase in days with > 1 in. rainfall
- 7.3 inches additional annual rainfall
- Increase in flooding

Rising temperatures

- 10.8°F increase in average annual temperature
- 42% decrease in days/year with min. temperatures < 32° F
- 1,280% increase in 90-degree days/year

Winter weather

- Overall a decrease in annual snowfall
- Likely to have fewer events with a lot of snow
- Freeze –thaw cycle to change

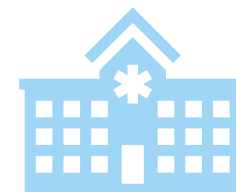
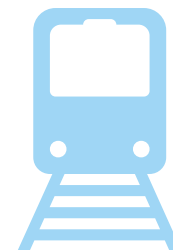
Regional changes

- Increase in frequency and magnitude of hurricanes and nor'easters
- 4-10.5 feet of sea level rise



EXAMPLE STRENGTHS

- Mobility options - commuter rail, buses, and bike path
- Emergency communication
- MWRA has adequate water supply
- Locally managed electric infrastructure
- Multiple business centers
- Emergency shelters
- Senior Center
- access to open space and recreation
- Tree canopy and street trees





EXAMPLE VULNERABILITIES

- Sanitary sewer system and pollutant loading
- Occasional brownouts during high temperature events
- Aging and undersized stormwater infrastructure
- At-risk of isolation or need of additional support (possibly youth, seniors, people with disabilities)
- Barriers to building personal resilience (income or homelessness)
- Vector borne diseases (from mosquitos and ticks)
- Invasive species and pests (rats, coyotes, geese)



Photo: Routine pole and transformer replacement on Beech Street. Photo by Belmont Light, 2018, via Twitter.



HIGH PRIORITY EXAMPLES

- Perform a culvert right-sizing study and upgrade culvert sizes to accommodate more stormwater runoff
- Model existing drainage system utilizing updated rainfall data to evaluate flooding conditions under projected climate change conditions
- Cost-benefit analysis of flood management projects
- Replace the Trapelo Road Culvert
- Develop an Emergency Response Plan, include a wellness check for elderly populations
- Education on Reverse 911 system
- Place cap on incinerator site and implement Select Board approved post closure uses
- Improve electrical resiliency of the Town and critical facilities through new generators or renewable microgrids



ACTION GRANT PROPOSAL

- Stormwater Flood Reduction and Capital Improvement Plan
- Model existing and future conditions
- Identify and evaluate resilient interventions
- Prioritize nature-based solutions with benefits for environmental justice and climate vulnerable neighborhoods
- Equitable, inclusive, and accessible community engagement



THANK YOU



Weston & SampsonSM

