TOWN OF YARMOUTH

MUNICIPAL VULNERABILITY PREPAREDNESS

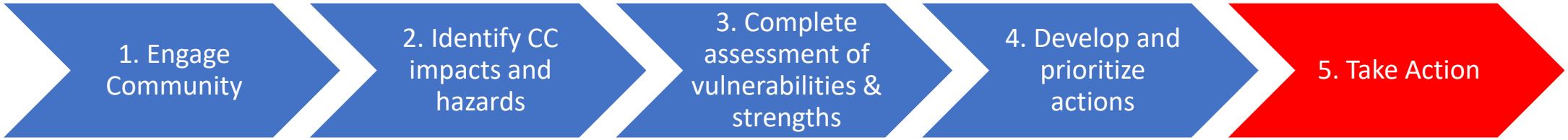
COMMUNITY UPDATE

June 30, 2020

Municipal Vulnerability Preparedness (MVP)

- Yarmouth completed its assessment in June 2019
- Planning for better ways to prepare & protect the Town from natural and climate related hazards.
- Final report summarizing results can be found here:

  https://www.yarmouth.ma.us/1752/Municipal-Vulnerability-Preparedness-MVP



Hazards Identified from Planning Process

Highly Likely	Coastal Erosion and Shoreline Change	Yes
	Urban Fires	Yes
	Flood	Yes
	High Winds	Yes
	Hurricanes and Tropical Storms	Yes
	Nor'easters	Yes
	Sea Level Rise	Yes
	Severe Winter Weather: Snow, Blizzards, and Ice Storms	Yes
	Thunderstorms	Yes
Likely	Drought	Yes
	Extreme Temperatures	Yes
	Wildland Fires	Yes
Possible	Dam and Culvert Failure	
	Landslides	
	Tornadoes	Yes
	Earthquake	

Most identified hazards involve prolonged power outages and communication interruptions. Causing significant impacts to core & critical local and regional community services.

Cape Cod Tornado – July 2019

MVP Action Grant: Objectives

- Energy Resiliency for critical facilities, infrastructure and services
- Strengthen emergency communications
- Improve community-wide response to increasing storm intensity and volume

Can we utilize solar PV and battery technology to address these objectives?

MVP Action Grant: Objectives

YES! And provide the following benefits:

- Up to 10 days of independent operation for mission – critical facilities during storm-driven utility outages
- Greenhouse gas emissions reduction year-round
- Operational cost savings: 10% or greater annual savings without an upfront cost to the Town
- Reduce system wide peak by participating in CLC's demand response program

Our Resiliency Concept

- Create Town-wide energy resiliency infrastructure to:
  - Provide self-sufficient energy independence across all critical infrastructure
  - Ensure reliable communications and access to internet
  - Reduce emissions
  - Provide operational cost savings to the town
  - Piggy-back on this infrastructure to improve service delivery of all town services and to all residents

MVP PILOT PROJECTS: Fire Station 3

- Parking lot solar canopy system
- 264kW Solar PV system
- 180kWh Battery Storage system
- 150 kW Stationary Backup Generator
- Energy Management System – system controls and management to connect resources.
- Partner with Cape Light Compact's "Connected Solutions" Program to reduce peak demand during summer and winter peak periods.
- Reduce stormwater run-off flowing offsite into nearby waterways.
    - Increase use of permeable soils on site
    - Use of bio-swales to capture water running from canopy gutters
    - Serve as a model for future low-impact development throughout the cape.

MVP PILOT PROJECTS: Transfer Station Facility

- 1,200 kW ground mount solar pv array
- 919 kWh battery storage system
- Energy Management System – system controls and management to connect resources
- Partner with Cape Light Compact for the “Connected Solutions” Program to reduce peak demand during summer and winter peak periods.
- Future integrations with Cape Cod Energy Park concept?

Next Steps

- FY 2021 MVP Action Grant proposal
  - Complete 100% design of proposed facilities
  - Permitting and utility interconnection planning
- RFP for developer proposals for installation
- Addition/connection of new DPW facility to campus energy system
- Municipal fiber/communications strategy
- Ongoing development of the Cape Cod Energy Park concept
- Integration with Yarmouth Energy Committee Strategic Plan