Berkshire Wind in Hancock is an example of a clean energy project helping Massachusetts make progress on greenhouse gas reduction goals.

(photo courtesy Executive Office of Energy and Environmental Affairs)

By David Ismay

Preparing the Commonwealth's Communities for Climate Change

cross Massachusetts, from the Cape and Islands to the Berkshires and every place in between, we are increasingly facing climate change impacts like extreme temperatures, intense rain and snow events, storm surges and coastal flooding, high winds, droughts, and inland

David Ismay is Undersecretary of Climate Change at the Executive Office of Energy and Environmental Affairs. flooding. These events have real-world impacts. Residents and businesses face significant property damage, loss of critical infrastructure, gaps in public services, safety risks, and, ultimately, lost economic value.

The Baker-Polito Administration is committed to combating climate change in a number of different ways, and a key strategy is providing tools to communities to address concerns on the front line. One of those tools is the Municipal Vulnerability Preparedness program, which provides grants and technical assistance to support municipalities in preparing their residents, businesses and infrastructure for future conditions that are different and more extreme than those they were built to handle.

The MVP program is a community-led process that makes local knowledgesharing and collaboration its cornerstone. By providing funds for municipalities or



regional partnerships to conduct their own process, the result is a plan that is tailored to the cities and towns and their values, and has the local buy-in needed to make it work.

The town of Mattapoisett-a small municipality on the South Coast that is vulnerable to sea level rise, coastal flooding and extreme weather-is one of the communities leading the way with proactive climate action through the MVP program. Town officials have been assessing ways to increase their community's climate resiliency. Partnering with the Mattapoisett Land Trust and the Buzzards Bay Coalition, Mattapoisett was awarded a planning grant through the MVP program in 2017. After going through its planning process, the group identified a need to protect particularly vulnerable land from development, and proposed to purchase 120 acres of forest, streams, freshwater wetlands and coastal salt marsh in the Pine Island Pond area.

The group leveraged its planning grant work to apply for an action grant in 2019. The MVP program provided a \$960,000 grant to help pay for a conservation restriction to acquire and protect vulnerable land, safeguarding wildlife and more than thirty acres of salt marsh, which will provide protection from storm surges.

Community Partners

The Mattapoisett project is just one example of climate action happening across the state. This past September, the administration announced an additional \$11.1 million in funding from the MVP program to support more than sixty cities and towns in planning for climate change and implementing priority resilience projects. The most recent funding round brought total state spending on climate change resilience to more than \$40 million to date. The administration recognizes that climate change is here, and it's time to proactively respond, and strengthen our communities in the process.

Municipalities across the state are stepping up to the challenge of proactively planning for climate change, and 89 percent of Massachusetts communities are now partnering with the Commonwealth through the MVP program. Many are leading the way in implementing innovative and regional projects that are building stronger and more resilient communities year-round.

- In the northwestern part of the state, the Mohawk Trail Woodlands Partnership's Forest Stewardship, Resilience and Climate Adaptation Project was awarded a \$165,000 MVP action grant. with the town of Williamstown in the lead, to advance emerging ideas from some of the nation's leading experts on climate forestry adaptation and soil carbon sequestration methods. The project team will synthesize these strategies, fill in the gaps, and make a simple program for private landowners, town forest owners, consultant foresters and harvesters to implement. This project bridges the divide between climate mitigation and adaptation to achieve multiple goals.
- In the Greater Boston area, the town of Natick, working with fourteen area communities that are part of the Charles River Climate Compact, will conduct a regional project to develop a Charles River watershed model. The initiative will produce much-needed technical information about where and when precipitation-driven flood-risk in the watershed is expected to be exacerbated by climate change. The project will also

bring consistency across watershed communities in regards to how they are planning and governing for expected climate impacts. The municipalities received an MVP action grant of \$264,000 to conduct this effort.

• In the southeast. Lakeville. Middleborough, Freetown, Rochester, Taunton and New Bedford, supported by an MVP action grant of \$93,000, are developing a comprehensive management plan with actionable strategies for coping with floodwater issues throughout the Assawompset Pond Complex, while also addressing water supply and drought potential, water quality, preservation of critical habitat, and recreational access. The project will include a robust public engagement effort to reach populations in each of the six participating communities.

Regional partnership projects such as these, grounded in cross-sector collaboration and forward-thinking innovation, are leading the way in advancing local resilience planning and action across the state.



Governor Charlie Baker and Lieutenant Governor Karyn Polito visit the Assawompset Pond Complex, which received a \$93,236 MVP grant—to the towns of Lakeville, Middleborough, Freetown and Rochester and the cities of Taunton and New Bedford—for a Watershed Management and Climate Plan.

(photo courtesy Executive Office of Energy and Environmental Affairs)

2022 (or June 30, 2023, for two-year grants). The MVP program website has a list of regional coordinators available to assist cities and towns.

In addition, the Massachusetts Office of Coastal Zone Management's Coastal

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While the MVP grant application process is currently closed, the Executive Office of Energy and Environmental Affairs anticipates releasing another round of MVP funding next spring to allow additional municipalities to undertake the planning process and enable designated MVP communities to initiate implementation projects between July 1, 2021, and June 30,

Resilience Grant Program offers financial and technical assistance to coastal communities and nonprofit organizations to address impacts from storms and climate change along our coastline. Awards advance local efforts to increase awareness of climate impacts, identify specific vulnerabilities, and implement on-theground measures to increase long-term resilience, including natural approaches to minimize erosion and flooding problems.

In 2020, the program awarded nearly \$4 million to twenty-nine projects, bringing the total investment in Coastal Resilience Grants made under the Baker-Polito Administration to more than \$18.9 million. The interactive CZM Grant Viewer map shows information about grants from CZM and the Buzzards Bay and the Massachusetts Bays National Estuary programs.

More Work Ahead

Reducing greenhouse gas emissions is the first line of defense to reduce risks from climate change. Governor Charlie Baker committed the Commonwealth to net-zero emissions by 2050, a level the Intergovernmental Panel on Climate Change has determined is needed to avoid the worst impacts of climate change. After a period of public comment last March, Energy and Environmental Affairs Secretary Kathleen Theoharides formally set the 2050 emissions limit at net-zero, which will be achieved by reducing statewide greenhouse gas emissions by at least 85 percent by 2050 and offsetting remaining emissions by using carbon sequestration.

To help the Commonwealth meet the ambitious emissions limit, Energy and Environmental Affairs undertook a large research effort, analyzing pathways to cost effectively and equitably achieve net-zero in the next thirty years. agency's long-range The 2050 Decarbonization Roadmap Study, begun in July of 2019, focuses on the transformations that are needed in how we heat our buildings, transport people and goods, and generate and supply electricity in order to significantly reduce emissions. The study also assessed the level of emissions that could be potentially removed by 2050 from other sources, such as the Commonwealth's working landscapes. Finally, the study analyzed the economic and health impacts of achieving net-zero emissions.

The 2050 Roadmap Study wrapped up at the end of December with a report synthesizing the vast findings in a way that can guide climate policy development for the next thirty years. It is accompanied by several sector-specific technical reports that will catalogue the methodology, assumptions and rationale, detailed findings, and information critical for decarbonizing each major sector of our economy.

In addition to the 2050 Roadmap and the companion technical reports, in December, Secretary Theoharides set the emissions limit for 2030 and the Executive Office of Energy and Environmental Affairs released a draft of the Clean Energy and Climate Plan for 2030 to achieve that limit. The 2030 emissions limit and 2030 CECP are both informed by the 2050 Roadmap analyses and will help keep the Commonwealth on track to meet the 2050 emissions limit. The draft 2030 CECP provides details on the necessary strategies, policies and actions to reduce emissions in the next ten years and is available for public comment for two months before finalization in the spring of 2021.

These reports, along with the implementation of the 2030 CECP and the active planning for a net-zero emissions future, further demonstrate the Commonwealth's commitment to addressing climate change. While adapting to the impacts of climate change for today and tomorrow, we're also working to curb the long-term climate impacts. Together, these efforts are building a resilient and sustainable Massachusetts.



Springfield Mayor Domenic Sarno and Energy and Environmental Affairs Secretary Kathleen Theoharides (center) tour Springfield's Forest Park Tree Nursery after the city received a \$315,000 MVP grant to perform an environmental assessment of its trees and develop a climate resiliency plan. Also pictured are Sen. James Welch (right) and City Forester Alex Sherman (left).

(photo courtesy Springfield Mayor's Office of Communications)



Williamstown and the Mohawk Trail Woodland Partnership received a \$164,575 MVP Action Grant in September to support the partnership's Forest Stewardship, Resilience and Climate Adaptation project.

(photo by Leslie Reed-Evans)