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TO: 495/MetroWest Partnership Stakeholders

FROM: 495/MetroWest Partnership

RE: **Climate Mitigation Strategies**

As part of Year 4 of the 495/MetroWest Partnership's Strategic Plan, the 495/MetroWest Partnership aims to curate and publish a list of summaries of existing state and regional climate mitigation strategies, providing a centralized resource that informs stakeholders about state and regional climate mitigation strategies across key areas such as Water, Waste, Pollution, and Energy standards. This document serves as a comprehensive overview of strategies and programs available to stakeholders within the 495/MetroWest region and beyond, supporting informed decision-making and fostering collaboration to advance sustainable practices.

State Sources

Municipal Vulnerability Preparedness (MVP) Program

Organization: Executive Office of Energy and Environmental Affairs (EEA)

The Municipal Vulnerability Preparedness (MVP) program, managed by the Massachusetts Executive Office of Energy and Environmental Affairs, supports cities and towns in preparing for climate change impacts. It provides grants to help communities conduct vulnerability assessments and develop actionable resiliency plans. Once a municipality completes the MVP planning process, it becomes certified as an MVP community, unlocking eligibility for additional funding through MVP Action Grants. These grants fund priority projects addressing issues like flooding, extreme heat, and sea-level rise. Launched in 2017, the program has engaged nearly every Massachusetts municipality and continues to evolve—most recently with MVP 2.0, which emphasizes equity, community engagement, and nature-based solutions to build broader climate resilience. Overall, the MVP program offers critical resources and tools to help communities adapt and thrive amid changing environmental conditions.

MA Decarbonization Roadmap

Organization: Executive Office of Energy and Environmental Affairs

The Massachusetts Decarbonization Roadmap, developed by the Executive Office of Energy and Environmental Affairs (EEA), outlines strategies to achieve at least an 85% reduction in greenhouse gas (GHG) emissions by 2050, aiming for net-zero emissions. Released in December 2020, the roadmap provides a comprehensive analysis of various pathways to decarbonization across multiple sectors, including transportation, buildings, and energy systems. It serves as a foundational document for the state's climate policy, informing the development of the Clean

Energy and Climate Plan for 2025 and 2030, which sets interim emissions limits and outlines specific actions to meet these targets. The roadmap emphasizes the importance of equity and cost-effectiveness in implementing climate strategies, ensuring that all communities benefit from the transition to a low-carbon economy.

Climate Resilience Playbook

Organization: Metropolitan Area Planning Council (MAPC)

The Climate Resilience Playbook is an online interactive tool designed to assist municipal staff in identifying and prioritizing climate resilience actions for their communities. The tool includes three main elements: an online Playbook Actions Tool featuring a searchable database of municipal project ideas filterable by climate threat, project type, climate resilience theme, and other factors; Implementation Blueprints for actions that provide detailed roadmaps outlining steps and information needed to start implementation, such as funding sources and case studies; and downloadable planning resources offering guidance and resources on climate resilience planning topics. The Playbook was developed based on input from communities, community partners, state agencies, technical assistance providers, a youth focus group, and through surveys, focus groups, and one-on-one conversations.

Massachusetts State Hazard Mitigation & Climate Adaptation Program (MA SHMCAP)

Organization: ResilientMass

The Massachusetts State Hazard Mitigation and Climate Adaptation Plan (SHMCAP), also known as the ResilientMass Plan, serves as a proactive strategy to address climate change and natural hazards. The plan is designed to reduce risks and enhance resilience through a comprehensive approach that includes identifying and evaluating potential threats to the state's infrastructure, populations, and ecosystems. A central focus of SHMCAP is enhancing adaptive capacity, particularly for vulnerable communities, to ensure they are better prepared for climate impacts. The plan aims to improve the state’s response capabilities by prioritizing urgent climate risks and embedding solutions that offer the greatest benefit to at-risk populations. To achieve these goals, it emphasizes collaboration between state agencies, municipalities, and federal partners. The plan was implemented in 2023 and will be regularly updated and monitored to ensure its continued effectiveness. Its development involved a multi-step process: setting a mission and goals, conducting assessments of state capabilities, vulnerabilities, and risks, and engaging stakeholders through surveys, interviews, and workshops. This iterative process helped refine and prioritize actions.

MassDOT’s Massachusetts Priority Climate Action Plan

Organization: MassDOT

The Massachusetts Department of Transportation (MassDOT), in partnership with the Office of Climate Innovation and Resilience, has released a straw proposal for the Priority Climate Action Plan (PCAP) to guide the state’s efforts in reducing greenhouse gas emissions and achieving climate goals. The plan focuses on high-priority, implementation-ready measures across key sectors, including transportation, buildings, power, natural lands, and workforce development. In transportation, the plan aims to promote the adoption of zero or low-emission vehicles and expand alternatives to personal vehicle use. For buildings, measures include retrofitting existing structures for energy efficiency and adopting heat pumps and renewable energy solutions. The power sector will focus on accelerating renewable energy projects like offshore wind and solar development. Additionally, the plan emphasizes nature-based solutions, such as restorative planting, to reduce emissions from natural and working lands. To support these initiatives, the state plans to address workforce shortages by expanding climate-critical training

and collaborating with labor unions. This comprehensive approach aims to secure federal funding and put Massachusetts on track to meet its 2050 net-zero emissions goal.

Massachusetts 2030 Solid Waste MasterPlan

Organization: Massachusetts Department of Environmental Protection (MassDEP)

The 2030 Solid Waste Master Plan, developed by MassDEP, aims to reduce waste disposal by 30%, from 5.7 million tons in 2018 to 4 million tons by 2030. Key strategies include expanding food waste bans, improving recycling, and enhancing producer responsibility. The plan also focuses on increasing waste management capacity, advancing diversion technologies, and addressing environmental justice concerns. By 2050, MassDEP's goal is to have a 90% reduction in waste disposal, down to 570,000 tons. Achieving the 2030 target could prevent over 1.7 million metric tons of CO2 equivalent emissions, equivalent to removing emissions from 370,000 cars or conserving nearly 200 million gallons of gasoline. The plan aligns with Massachusetts' broader climate goals, including reducing CO2 emissions from waste combustors and eliminating plastic waste. It envisions a zero-waste future, requiring systemic changes in production, use, and disposal of materials. Achieving this vision will require significant policy action and cultural change toward sustainability.

Watershed Planning Program (WPP)

Organization: Massachusetts Department of Environmental Protection

The Massachusetts Department of Environmental Protection's (MassDEP) Watershed Planning Program (WPP) is a statewide program with a mission to protect, enhance and restore the quality and value of the waters of the Commonwealth. Operating under the federal Clean Water Act, the program develops and enforces Surface Water Quality Standards, monitors water quality across rivers, lakes, and estuaries, and assesses whether water bodies meet designated uses such as aquatic life support and recreation. WPP also creates Total Maximum Daily Loads (TMDLs) to address impaired waters and administers grants to reduce nonpoint source pollution. The program encourages public participation by accepting external water quality data and conducting stakeholder workshops to inform its long-term planning strategies.

Regional Greenhouse Gas Initiative (RGGI)

Organization: Massachusetts Department of Environmental Protection

The Regional Greenhouse Gas Initiative (RGGI) is a collaborative, market-driven program involving Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Its goal is to limit and decrease CO_2 emissions from the power sector through a regional cap-and-trade system. Under this system, a regional cap is set on total emissions from electricity generators, and power plants must purchase allowances for each ton of CO_2 they emit. Companies that reduce their emissions can sell excess allowances, creating a financial incentive for cleaner operations. Massachusetts was authorized to join RGGI through the Green Communities Act of 2008, with the Department of Environmental Protection (MassDEP) overseeing the program's implementation and enforcement. As of mid-2025, Massachusetts remains a fully active member of the Regional Greenhouse Gas Initiative (RGGI), playing a key role in driving emissions reductions through a progressively tightening cap-and-trade program.

Massachusetts Low Emission Vehicle (LEV) Program

Organization: Massachusetts Department of Environmental Protection

The Massachusetts Low Emission Vehicle (LEV) Program, administered by the Massachusetts Department of Environmental Protection (MassDEP), mandates that most new vehicles with 7,500 or fewer miles must be equipped with California-certified advanced emission control

systems to be sold and registered in the state. This requirement applies to various vehicle types, including passenger cars, light-duty trucks, and sport utility vehicles, with specific weight classifications. Additionally, Massachusetts has adopted California's Zero-Emission Vehicle (ZEV) standards, requiring large and intermediate volume automobile manufacturers to deliver and place in service within the state a certain percentage of ZEVs, such as battery electric and plug-in hybrid vehicles. These initiatives aim to reduce air pollution, improve public health, and advance the state's climate goals by promoting cleaner vehicle technologies.

Sustainable Water Management Initiative

Organization: Massachusetts Department of Environmental Protection & Executive Office of Energy and Environmental Affairs

The Massachusetts Sustainable Water Management Initiative (SWMI), launched in 2010, aims to balance the state's water needs with ecological preservation. Developed through extensive stakeholder collaboration, the 2012 SWMI Framework introduced methodologies like "Safe Yield" calculations and seasonal streamflow criteria to guide water withdrawals. These principles were integrated into the revised 2014 Water Management Act regulations, ensuring that water use permits consider both human demand and environmental impact. SWMI's approach emphasizes sustainable water allocation, protecting aquatic ecosystems while supporting community water needs.

Mapping and Protecting Vulnerable Wetlands and Stormwater Management Planning Project

Organization: Massachusetts Department of Environmental Protection

MassDEP launched the "Mapping and Protecting Vulnerable Wetlands and Stormwater Management Planning Project" to identify and safeguard sensitive wetlands in the Upper Charles and Upper Neponset River communities. Funded by an EPA Wetland Program Development Grant, the initiative produced GIS-based maps highlighting vulnerable wetlands, stormwater outfalls, and impaired waters within developed areas. These resources assist municipalities in complying with the Municipal Separate Storm Sewer System (MS4) General Permit by facilitating informed stormwater management planning. By pinpointing areas susceptible to stormwater pollution, the project supports targeted interventions to reduce phosphorus loading and protect aquatic ecosystems.

Embodied Carbon Reduction Guidelines

Organization: Devens Enterprise Commission

The Devens Enterprise Commission has established Embodied Carbon Reduction Guidelines as part of its Unified Permitting Process to address greenhouse gas emissions associated with building materials throughout their lifecycle. These guidelines include a checklist covering four strategic areas: building less and reusing more, designing lighter and smarter, using low-carbon alternatives, and procuring lower-carbon products. It outlines specifications for reducing carbon in materials, including concrete, structural steel, insulation, refrigerants, wood, gypsum board, carpet, resilient flooring, acoustic wall and ceiling panels, and ceiling systems. The guidelines also identify analysis and planning tools to quantify embodied carbon and compare product alternatives, as well as guidance on how to select and direct design teams. By integrating these requirements into the permitting process at both schematic design and construction completion phases, Devens outlines a systematic approach to reducing embodied carbon in new development.

Biodiversity Conservation Goals for the Commonwealth

Organization: Executive Office of Energy and Environmental Affairs

The Biodiversity Conservation Goals for the Commonwealth, released in August 2025, establishes a 25-year plan to protect and restore nature across Massachusetts through 2030, 2040, and 2050 targets. The plan is organized around four main goals: protecting the most important habitats by preserving 40% of lands and waters by 2050, creating wildlife migration corridors and implementing community-driven pollution initiatives; restoring ecological health by bringing 75% of critical habitats back to health by 2050, removing 10% of dams while upgrading 10% of culverts, and accelerating nature-based solutions; sustaining farms, working forests, and fisheries through regenerative practices, habitat restoration, and local food system support; and connecting people to nature through community gardens, nature-based school curricula, and workforce development programs. The plan calls for increased environmental bond funding, dedicated biodiversity funding sources, incorporation of biodiversity criteria into existing state grant programs, a public-private Massachusetts Biodiversity Partnership, an Inter-Agency Biodiversity Task Force, and a new Office of Biodiversity within the Department of Fish and Game to coordinate statewide implementation and provide grants/technical assistance to municipalities, nonprofits, Tribes, and Environmental Justice communities.

Greater Boston Priority Climate Action Plan

Organization: Metropolitan Area Planning Council

In March 2024, the Metropolitan Area Planning Council (MAPC) released the Greater Boston Priority Climate Action Plan (PCAP) as part of the region-wide Greater Boston Climate Action Plan. The PCAP is a near-term plan to address climate change, serving as a precursor to the more detailed Comprehensive Climate Action Plan which was set to be released in December 2025. The plan establishes greenhouse gas (GHG) emissions reduction targets for 2030 and 2050, outlines a regional workforce development analysis, and includes additional measures from the Industry, Agriculture, and Working Lands sectors. Specifically, the report establishes 11 priority GHG reduction measures across the four largest emitting sectors (buildings, transportation, electricity generation, and waste), and highlights strategies that municipalities in partnership with regional planning organizations, state agencies, community-based organizations, and the private sector can take to implement these measures.

Non-Profit/Municipal Sources

Acadia Center

Acadia Center is a nonprofit organization dedicated to advancing clean energy and climate justice in Massachusetts. It has been a driving force behind Massachusetts' ambitious climate and clean energy goals, helping shape policies that position the state as a national leader in energy efficiency and emissions reduction. Their advocacy contributed to the 2021 Next Generation Climate Roadmap, which set a legally binding net-zero emissions target by 2050 and advanced offshore wind procurement. Acadia Center works to electrify buildings and transportation, reducing reliance on fossil fuels that currently dominate Massachusetts' energy use. They also push for reforms to the natural gas system, aiming to phase out this major source of greenhouse gas emissions and improve safety. Through partnerships and regulatory engagement, Acadia Center promotes equitable climate policies that prioritize vulnerable communities. Their efforts continue to influence clean energy expansion, utility modernization, and comprehensive climate mitigation across the state.

Mass Climate Action Network (MCAN)

The Massachusetts Climate Action Network (MCAN) is a nonprofit organization dedicated to combating climate change through grassroots community action. By empowering local chapters across the state, MCAN facilitates the transition from fossil fuels to clean, renewable energy

sources via building decarbonization and electrification efforts. The organization emphasizes inclusivity, ensuring that historically marginalized communities are actively engaged in climate solutions. MCAN supports its network through education, training, research, and advocacy, aiming to influence both local and state-level policies for equitable climate action. Additionally, MCAN promotes knowledge-sharing among municipalities to replicate successful programs and advance climate justice. Their initiatives include campaigns like the Zero Carbon Renovation Fund and efforts to improve energy efficiency standards.

Federal Sources

Climate Partnership Programs

Organization: United States Environmental Protection Agency (EPA)

The EPA's Climate Partnership Programs are voluntary initiatives that collaborate with businesses, governments, and communities to reduce greenhouse gas emissions and enhance climate resilience. Key programs include ENERGY STAR, promoting energy efficiency in buildings and products; the Green Power Partnership, encouraging the use of renewable energy sources; and AgSTAR, which supports methane recovery from agricultural operations. These partnerships offer technical assistance, recognition, and resources to help participants achieve environmental goals. By leveraging these programs, organizations can improve sustainability, reduce operational costs, and contribute to national climate objectives. The programs cover diverse sectors including energy, industry, agriculture, transportation, buildings, and waste management.