

Recycling Market Development Action Plan



Massachusetts Department of Environmental Protection
Bureau of Air and Waste

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Background

The Massachusetts Department of Environmental Protection's (MassDEP) 2030 Solid Waste Master Plan establishes a goal to reduce disposal statewide by 30 percent by 2030 (from 5.7 million tons in 2018 to 4 million tons in 2030). It also sets a long-term goal of achieving a 90 percent reduction in disposal to 570,000 tons by 2050. To help meet those goals, the Solid Waste Master Plan committed the Department to establishing a Recycling Market Development Workgroup and to develop a comprehensive Recycling Market Development Action Plan (Action Plan) to guide our market development programs and strategies. The Action Plan prioritizes potential investments to address specific material market deficiencies and, where possible, advance opportunities for Environmental Justice populations.

The Action Plan strategies are divided into three categories:

- Grant and assistance programs that provide direct support to Massachusetts recycling and reuse businesses, including launching a new Waste Reduction Innovations Grant program
- Education, outreach, and funding to encourage increased purchases of recycled products by state and local government, businesses, and the general public
- Research and development initiatives to support the development and use of new products, equipment and technologies, including working with state colleges and universities

MassDEP first convened the Recycling Market Development Workgroup in January 2022 to engage a broad and diverse set of stakeholders and receive input on the development of the Action Plan. Over the course of six meetings, participants exchanged information about successful market development initiatives, discussed barriers to recycling market expansion, and suggested potential solutions to those barriers.

MassDEP then prepared a Draft Action Plan and sought input from stakeholders on that Draft. A summary of the comments received and MassDEP's responses to those comments is posted along with this Action Plan.

While some recycling markets are regional, national, or even international, the Action Plan is focused on increasing in-state recycling market development opportunities that will support efforts to reduce disposal, while keeping these economic development and job creation benefits within the Commonwealth. MassDEP will focus the action items in this Plan on those materials for which the in-state market development opportunities are the most significant.

In this context, the Action Plan takes a broad view of recycling. The term "recycling" in this Plan, unless indicated otherwise, encompasses many activities –including reuse, recycling, composting, and other methods to divert materials from disposal. MassDEP will work with the Recycling Market Development Workgroup to review and assess this Plan on a regular basis and update and revise the Plan as needed.

Current MassDEP Market Development Programs

Funding & Financing

Recycling & Reuse Business Development Grants and Reuse Micro Grants: MassDEP administers the Recycling and Reuse Business Development Grant (RBDG) program to help meet the capital infrastructure needs of Massachusetts businesses and institutions. RBDG recipients include businesses and non-profit organizations that will use funds to advance reuse and recycling infrastructure in Massachusetts for selected targeted materials. These grants can be used to pay for equipment costs to expand existing recycling operations or to help pay for costs to build a new facility. MassDEP also offers Reuse Micro Grants, which provide small grants to help businesses, non-profits, or municipalities start new reuse initiatives.

Recycling Loan Fund: The Recycling Loan Fund is funded by MassDEP and administered under contract to MassDEP by BDC Capital. The Recycling Loan Fund helps existing or new Massachusetts businesses finance investments to advance reuse, recycling, and composting infrastructure. Eligibility for the Loan Fund is broad and qualifying projects may include collection, sorting, processing, recycling, conversion, manufacturing, and wholesale and retail activities related to recycled feedstocks and products. Loans from the Recycling Loan Fund can be used to help grow in-state recycling infrastructure and markets for any recyclable material.

Municipal Grants, Buy Recycled Commitments: Municipal recycling and waste reduction programs are bolstered by MassDEP's Sustainable Materials Recovery Program Grants and Recycling Dividends Program. These programs require a municipal Buy Recycled Policy as part of minimum program requirements, helping to drive demand for purchasing recycled content products.

Policy & Technical Assistance

Waste Disposal Bans: The MassDEP Waste Disposal Ban regulations prohibit the disposal or transfer for disposal of specified recyclable, compostable and toxic materials. Waste bans boost recycling and support the recycling industry, which contributes thousands of jobs and millions of dollars to the Massachusetts economy. By cutting down on disposal, the waste bans also help us capture valuable resources, save energy, reduce greenhouse gas emissions, and lessen our reliance on landfills and incinerators. MassDEP develops and implements waste disposal bans as part of a comprehensive approach to reduce waste and increase recycling, ensuring a reliable supply of the banned material driving investment and capacity growth in Massachusetts by reuse, recycling, and composting businesses. The list of waste ban regulations can be found on MassDEP's website: <https://www.mass.gov/guides/massdep-waste-disposal-bans>.

State Agency Recycling Market Development Council: The Executive Office of Energy and Environmental Affairs first convened a State Agency Recycling Market Development Council in January 2022. Bringing together Secretariats, including Administration and Finance, Education, Housing and Economic Development, and Transportation, the group is focused on increasing the use of recycled materials in state building, construction, and renovation projects and increasing state purchasing of recycled content products.

RecycleSmart MA: RecycleSmart MA provides guidance via a program website, social media, and partner organizations to help guide residents and businesses on what materials should and should not

be placed in recycling containers. RecycleSmart MA helps to improve the quality and value of our recyclables by reducing contamination and improving quality and value of the recyclables collected.

RecyclingWorks in Massachusetts: RecyclingWorks in Massachusetts (RecyclingWorks) is a statewide commercial waste reduction assistance program fully funded by MassDEP and delivered under contract by the Center for EcoTechnology. While RecyclingWorks is not specifically a market development program, it works to connect Massachusetts businesses with outlets to best meet their reuse, recycling, and organics management needs, helping drive valuable materials to Massachusetts facilities.

Other MassDEP Plans: In many cases, this Action Plan connects and overlaps with other MassDEP Action Plans developed under the Solid Waste Master Plan, including the Reduce and Reuse Action Plan, the Construction and Demolition Materials Action Plan, and the Organics Action Plan.

State and Regional Market Development Programs outside of MassDEP

Operational Services Division Environmentally Preferable Purchasing Program

The Operational Services Division (OSD) administers the procurement process for the Commonwealth's executive agencies by establishing statewide contracts for commonly purchased goods and services. As part of their programs, OSD implements an environmentally preferable products (EPP) purchasing program that establishes specifications and contracts for recycled content and other environmentally preferable products by state agencies and political subdivisions, including municipalities.

MassDevelopment

MassDevelopment is the state's development finance agency and land bank, working with businesses, nonprofits, banks, and communities to stimulate economic growth. MassDevelopment promotes capital investment in Massachusetts by providing integrated financing and development solutions for projects in the Massachusetts economy. MassDevelopment programs include bond financing, loans and guarantee programs, and tax credits.

Massachusetts Office of Business Development

The Massachusetts Office of Business Development (MOBD) assists existing and relocating-to-Massachusetts businesses looking to expand their current operations with specific attention paid to jobs created, jobs retained, and capital invested. MOBD provides a highly responsive, central point of contact that facilitates access to resources, expertise, and incentive programs.

MassHire Department of Career Services

MassHire Career Centers help Massachusetts businesses find qualified workers and provides job seekers with career guidance as well as referrals to jobs and training. These programs can help companies in the recycling industry more effectively fill their workforce needs where they have gaps.

Massachusetts Technology Collaborative

Massachusetts Technology Collaborative (MassTech) is a public agency that supports business formation and growth in the state’s technology sector. MassTech strengthens the competitiveness of the tech and innovation economy by driving strategic investments, partnerships, and insights that harness the talent of Massachusetts.

Northeast Recycling Council

The Northeast Recycling Council, Inc. (NERC) is a multi-state non-profit organization committed to environmental and economic sustainability through responsible solid waste management. Its programs emphasize source reduction, reuse, recycling, composting, environmentally preferable purchasing (EPP), and decreasing the toxicity of the solid waste stream in Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey New York, Pennsylvania, Rhode Island, and Vermont. The NERC Board is composed of state agency representatives, who are voting members, as well as non-voting Ex Officio Board members who represent recycling businesses and trade associations. NERC also has advisory members from recycling businesses, trade associations, and non-profit organizations.

Northeast Waste Management Officials Association

The Northeast Waste Management Officials Association, Inc. (NEWMOA) is a non-profit, nonpartisan interstate association whose membership is composed of the state environmental agency directors of the hazardous waste, solid waste, waste site cleanup, emergency response, pollution prevention, and underground storage tank programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

Given the synergies between NERC and NEWMOA’s interests, memberships, and activities, the two organizations collaborate extensively.

Plan Structure

The recommended action items in this Plan are divided into three sections:

- 1. Business Support and Economic Development Strategies to Expand Recycling Market Infrastructure**
- 2. Strategies to Build Demand for Recycled Products**
- 3. Research and Development Strategies for Products, Equipment, and Technologies**

Each section below includes an introduction explaining the set of strategies, followed by a table listing MassDEP’s proposed action items for that section of the Plan. The table includes columns for Status and Time Frame. These two columns are defined as follows:

Status –described as either “currently implementing”, “initiate in year 1”, or “future program commitment.” Where there is a specific one-time action item, that will be marked as “complete” where appropriate.

Time Frame – Action items in the Plan are assigned a time frame for when they will be implemented, as follows:

- Short term – 1-2 years (if the action item is an ongoing program, it will continue beyond the 1-2 year time frame.)

- Medium term – 3-4 years
- Long Term – 5 years or more

These time frames are established to ensure MassDEP has adequate staffing and financial resources to support and develop each action item, recognizing that the Department will not be able to implement all of these action items at one time.

Section 1. Business Support and Economic Development Strategies to Expand Recycling Market Infrastructure

Problem Statement: Many businesses in the reuse, recycling, and composting sector are small businesses with limited access to capital funding. Providing grant and loan programs can help fill this gap. These business owners may also need assistance and guidance with business planning and financial strategies, including development and submission of high quality grant applications. Minority-owned businesses or business owners who have limited English proficiency may particularly benefit from more assistance in these areas. Businesses in this sector also face challenges in hiring necessary staff, particularly for technical and mechanical positions. Recycling businesses sometimes face challenges with high levels of contamination in the recycling streams that they receive.

Section Summary: This section is focused on supporting the growth of existing recycling businesses development of new businesses. Proposed action items focus on the concerns mentioned above, including:

- Delivering grant and loan funding to help businesses meet capital funding needs;
- Connecting business owners and managers with business planning guidance and assistance;
- Ensuring the opportunities in this Plan are marketed and communicated to minority-owned businesses and businesses near Environmental Justice populations;
- Partnering with state workforce development and job training programs to help expand the workforce for recycling businesses;
- And implementing initiatives to reduce or better manage contaminants in incoming streams.

Evaluation and Assessment: Evaluation metrics for this section include:

- Recycling infrastructure and jobs created through grant and loan programs
- Number of businesses supported through training programs and assistance
- Grant applications from minority-owned and other certified businesses through the state’s Supplier Diversity Office
- Reductions in residual levels at materials recovery facilities accepting single-stream recycling

Action Item	Status	Time Frame	Notes
Continue to provide Recycling & Reuse Business Development Grants and access to Recycling Loan Fund to grow in-state infrastructure for targeted materials	Currently Implementing	Short term	Ongoing - Limited to capital equipment

Launch Waste Reduction Innovations Grant program to supplement RBDG program	Future Program Commitment	Medium term	Provide funding for investments that may not fit RBDG program structure such as startups, research, and product testing
Connect recycling businesses to webinars/workshops on business planning, grant writing and financial analysis	Initiate in Year 1	Short term	Focus on resources offered by Massachusetts and regional agencies
Provide guidance on how to start a recycling business in Massachusetts	Initiate in Year 1	Short term	Include grants, loans, and applicable permit requirements
Connect recycling businesses with financial and technical assistance offered through State and Regional Economic Development Organizations	Initiate in Year 1	Short term	Funnel businesses to economic development centers and educate Centers why/how they should work with these businesses. Identify potential tax credits, bond financing, etc.
Emphasize program outreach and marketing to minority-owned businesses and businesses near EJ populations and connect these businesses with assistance resources	Currently Implementing	Short term	Ongoing - Partner with the Supplier Diversity Office and business organizations representing and supporting these businesses. Examples: MA Small Business Development Center, Center for Women and Enterprise, Veterans Business Outreach Center, etc.
Connect recycling businesses to MassHire Career Centers and	Initiate in Year 1	Short term	Current need for skilled equipment

other state Workforce Development programs to help recruit applicants			maintenance and drivers
Continue to deliver messages on how to properly separate materials for recycling through the RecycleSmart MA program to reduce contamination in recycling streams	Currently Implementing	Short term	Ongoing - Expand growth of partner organizations (including municipalities, non-profit organizations, recycling companies, and recycling haulers) for high contamination generator sectors
Connect with Reduce & Reuse Action Plan to grow reuse infrastructure	Currently Implementing	Short term	Ongoing -Currently supported through RBDG reuse grants and Reuse Micro Grants
Continue to monitor recycling market development programs in other states to refine and add strategies in the future	Currently Implementing	Long term	Ongoing -Including conferences, webinars, and participation in regional forums like NERC

Section 2. Strategies to Build Demand for Recycled Products

Problem Statement: Building demand for recycled products involves both demand and supply issues. In conversations with state agency purchasing officials, there is interest in purchasing recycled content products if those products can meet three tests – consistent quality, competitive price, and adequate and reliable supply. Once a product and product supplier can meet those standards, it is easier to focus on building demand. To further grow markets, it is also important to leverage purchasing by local governments, the private sector, and individual consumers. In some cases, building demand may require the ability to try or test a product before committing to purchasing it for the long run and at a large scale. Businesses that manufacture recycled content products may need assistance to verify product performance and quality or to test products for specific applications. Certain policy and legislative drivers may also help to build demand for recycled products.

Section Summary: This section is focused on building demand for recycled products by increasing use of recycled content feedstocks in production and packaging and driving increased purchasing of recycled content products. Building demand is closely tied to and dependent on collecting and providing a consistent, high volume of supply to support investments in producing recycled content products and

packaging. This section also references some critical initiatives to increase supply and improve the quality of recycled content feedstocks. While legislative approaches may take longer to develop, this section also highlights several legislative approaches that could help build demand for recycled products and packaging.

Evaluation and Assessment: Evaluation metrics for this section include:

- Amount of recycled content products purchased through state contracts;
- Measures of engagement through outreach activities and workshops;
- And results of pilot purchasing projects.

Action Item	Status	Time Frame	Notes
Engage other state agencies on purchasing recycled products through State Agency Recycling Market Development Workgroup	Currently Implementing	Short-term	Ongoing
Use the RecycleSmart MA program as an outreach channel to promote purchasing of recycled content products and packaging	Future Program Commitment	Medium term	Increasing purchase of recycled content products will help support recycling businesses
Hold workshops to provide guidance to businesses on opportunities to purchase recycled content products and connect business purchasers with recycled product manufacturers and retailers	Future Program Commitment	Medium term	Develop improved web page and resources for Business Buy Recycled initiatives
Initiate conversations with recycling processors and manufacturers about barriers to using recycled feedstock and needs for quality, volume and price	Currently Implementing	Medium term	Ongoing Examples: Industry associations, Sustainable Purchasing Leadership Council
Provide funding for pilot projects utilizing recycled materials. Focus on construction-related materials, including used building materials.	Future Program Commitment	Medium term	Focus on state agencies and municipalities, work with OSD and DCAMM
Engage the state legislature in potential strategies to build demand	Future Program Commitment	Long term	Including Joint Committee on Environment and Natural Resources, Joint Committee on

			Telecomms., Utilities and Energy
Connect with MassDEP’s Deconstruction Workgroup to build demand for used building materials	Currently Implementing	Short term	Ongoing - Support building reuse infrastructure
Continue meetings of the Recycling Market Development Workgroup to identify specific opportunities to build demand for recycled content products	Currently Implementing	Short term	Ongoing
Explore regional partnerships, i.e. working with neighboring New England states to identify opportunities to build demand on regional scale	Currently Implementing	Short term	Ongoing - Utilize NERC, NEWMOA, Economic Development Centers

Section 3. Research and Development Strategies for Products, Equipment, and Technologies

Problem Statement: Some markets and applications for recycled feedstocks are well established and do not require significant research and development work. In other cases, further research and development work may be needed to help build stronger markets. Companies developing new products, applications or technologies may lack the experience, capability, or funding to conduct this research and development work. Massachusetts colleges and universities, particularly state higher education facilities, are underutilized in this area.

Section Summary: This section focuses on how research and development work can help to advance recycling market development. The work in this section focuses on several different aspects of recycling market development, including:

- Improvements in sorting and processing equipment and technologies to separate higher quality feedstocks;
- Developing the ability to produce products that have proven successful at “lab scale” at a commercial scale;
- Testing recycled content feedstocks to verify they meet applicable industry specifications;
- Developing new and previously untested applications for recycled content feedstocks;
- And encouraging design of products/packaging for reuse or recyclability.

Evaluation and Assessment: Evaluation metrics for this section include:

- Development of in-state network of research program capabilities and areas of expertise
- Results of supported research projects, including new product applications, development of improved processes and technologies, and verified product or process performance

Action Item	Status	Time Frame	Notes
Discuss potential partnership for collaborative project funding with the Massachusetts Technology Collaborative	Future Program Commitment	Medium term	Begin discussions in short term – potentially implement initiative in medium term
Utilize Massachusetts' college and university system to kickstart research and development on material recycling processes, applications, and design for reuse or recyclability	Future Program Commitment	Medium term	Focus: how to increase efficiency, economic viability
Work with OSD and other state agencies to pilot and test performance of recycled content products	Future Program Commitment	Medium term	Focus on products new to marketplace
Testing new recycled content products/applications/ technologies through Innovations Grant program	Future Program Commitment	Medium term	Could fund assistance through state higher education system or other contracted service providers
Support business incubator programs through Innovation Grants	Future Program Commitment	Medium Term	Leverage other funding and investment opportunities, such as foundation funding
Connect/target research and development projects with other MassDEP action plans, including Reduce & Reuse, Construction and Demolition Materials, and Organics	Initiate in Year 1	Short term	Assess plan connections on regular basis going forward