Status Report: Framework for Advancing the U.S. Recycling System

July 2019

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EPA

Introduction

Following the 2018 America Recycles Summit, EPA worked with the 45 organizations that signed the America Recycles Pledge to form four workgroups that aligned with four critical action areas:

1. Promote Education and Outreach
2. Enhance Materials Management Infrastructure
3. Strengthen Secondary Material Markets
4. Enhance Measurement

The workgroups initiated their meetings in January 2019. Over the subsequent few months, each workgroup identified a vision statement, as well as challenges, opportunities and potential actions within each action area. The workgroups then selected a priority action and grouped the additional ideas into potential near- and long-term activities for further consideration. During the summer of 2019, the workgroups will focus on initiating implementation of the priority actions identified and evaluating the potential additional ideas for action.

In its coordination and facilitation role, EPA developed this status report, which represents the collective thinking and ideas of the America Recycles Workgroup members through June 2019. Also included as an appendix are the actions EPA intends to take to support the action areas, as of June 2019. EPA will update the status of the America Recycles Workgroup activities, as well as any additional activities the Agency plans to undertake in support of the effort, as new information becomes available.

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Action Area 1: Promote Education and Outreach

Most Americans believe recycling provides an opportunity for them to protect our environment. However, it can be difficult for consumers to understand what materials can be recycled, how materials can be recycled, and where to recycle different materials. This confusion often leads to placing recyclables in the trash, or trash in the recycling bin or cart, contaminating recyclable streams and contributing to the disposal of valuable materials. In addition, the growing number of new materials in the form of products and packaging means that the landscape of recyclable materials is constantly changing. Finally, there needs to be an increased awareness of the importance of buying products containing recycled content and recycling them at their end-of-life. The development of effective, adaptive and coordinated outreach and education strategies for consumers is critical to promoting consistent behaviors that will improve the quality and quantity of materials that Americans recycle. It also will result in stronger markets for recyclable materials and an increase in demand for products with recycled content.

Vision

Clear, consistent messages about proper materials management activities enable consumers to recognize the value of reusing, recovering and recycling materials, as well as the value of buying products with recycled content.

Challenges

Workgroup members identified three key challenges: inconsistent messaging on how to recycle due to localized differences, lack of information on contamination, and increasing public awareness of the value of recycling.

Inconsistent messaging

- Messaging on how to recycle is inconsistent and not nationalized, allowing for regional and local differences in collection and recycling programs, and the loss of valuable materials from the recycling system.

Contamination

- Contamination from recyclable products occurs when products are labeled as recyclable but are not supported by infrastructure and/or secondary markets in a specific location. It also occurs when materials are not accepted for recycling at a specific location.
- Materials must continuously be sorted regardless of available markets. The costs versus benefits of managing these sorted materials while waiting for new markets to emerge needs to be better articulated and understood.

Priority Action

Collaborate to develop consistent messages for key recycling issues as a key priority action. Build upon ongoing work and success stories. Include the benefits of recycling, the importance of buying products with recycled content, and preventing the contamination of recycling streams.

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Public awareness

- Limited awareness about the role of the commodities market in developing better recycling programs, creating industry connections, and educating customers is potentially contributing to the more than $9 billion in lost revenue when valuable materials are disposed in landfills.
- Similarly, limited public awareness on the social and economic benefits of recycling is also contributing to the loss in revenue when these valuable materials are disposed in landfills.

Workgroup Priority Action

Develop consistent messages for key recycling issues. Key issues include: articulating the benefits of recycling, the importance of buying products with recycled content, and preventing the contamination of recycling streams.

Potential Additional Actions

Near-term Actions

- Establish clear and consistent terminology related to recycling;
- Outline the range of benefits for recycling to reinforce its importance;
- Develop public messaging stating that recycled materials have value, are of good quality, and are not diminished because the materials had a prior life;
- Create programs and publicly available information to highlight recyclables as valuable commodities (rather than waste), including sustainable materials management and life-cycle analysis; and
- Perform an analysis of the successes and failures of various communication and outreach efforts and summarize the results to inform future activities.

Long-term Actions

- Launch a national public relations campaign to lay the foundation for common messaging;
- Explore the legislative options for requiring the use of recycling labels on products and packaging sold in the United States; and
- Conduct education and awareness campaigns, including materials directed at engaging youth.

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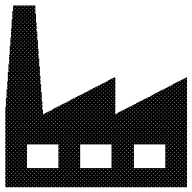

Action Area 2: Enhance Materials Management Infrastructure

America's existing recycling infrastructure has not kept pace with today's changing recyclables stream. Manufacturers of new materials and products may not always consider end-of-life management, which impacts the ability of the recycling industry to prepare for and optimally manage the recycling of collected materials. Contamination in the recyclables stream can cause equipment failures and halt production lines in order to remove unwanted materials. The increased cost of processing, combined with lower market prices, is leading to the increased landfilling of recyclables, the loss of revenue for jurisdictions, and decreased recycling rates. New investments in infrastructure are needed to help meet the nation's materials management needs and foster a more resilient solid waste system that is capable of withstanding pressures from disruptions.

Vision

A holistic, modern and adaptable national recycling infrastructure that embraces innovation and is resilient to changes in material streams, markets and consumer expectations.

Challenges

Workgroup members identified three key challenges: resiliency, pricing, and localized differences in managing materials across the country.

Resiliency

- Lack of resilient recycling infrastructure that is nimble, adaptable and efficient;
- Insufficient investment to improve, enhance and expand solid waste management infrastructure capacity and improve recycling technology;
- Communication among stakeholders across the manufacturing and recycling system value chain needs to be improved to allow for more flexible design and planning of recycling infrastructure investments to better handle today's evolving materials; and
- Funding is not readily available for innovative state, territorial, tribal, local and private sector pilot programs to promote innovation in recycling and materials management.

Priority Action

Create a clearinghouse for information that is publicly available. Information could include: identifying effective ways to upgrade recycling infrastructure, identifying and linking to grant information, access to resources for governments, and opportunities to fund and promote local pilot projects.

Pricing

- In some parts of the country, recycling can be more expensive than landfilling, and recycled material can be expensive relative to virgin material.
- Methods to reduce the cost of recycling and recycled materials relative to landfilling and virgin materials need to be identified and advanced to help recycled materials become more cost-competitive.

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Localized differences

- Different approaches to collecting and managing materials can pose challenges, especially for consumers. For example, differences in what can be collected and processed varies across the country, adding to consumer confusion on what can be recycled in their communities. This confusion can increase the contamination rate and negatively impacts local, regional and national markets for recycled materials.
- Differences in the materials accepted or collected within the same geographic area can result in a lack of access to recycling for some communities.
- Research is needed to identify strategies to manage and/or address issues, such as contamination and collection rates, related to single-stream recycling.

Workgroup Priority Action

Workgroup Priority Action

Create a clearinghouse for information that is publicly available. Information could include: identifying effective ways to upgrade recycling infrastructure, identifying and linking to grant information, access to resources for governments, and opportunities to fund and promote local pilot projects.

Potential Additional Actions

Near-term Actions

- Conduct and compile research on successful infrastructure investments and potential investment opportunities;
- Explore the creation of incentives to encourage investment in recycling or find existing tax incentives that organizations could leverage to help materials recovery facilities (MRFs) evolve to meet the challenges posed by the evolving materials stream; and
- Develop a toolkit for governments, MRFs and associated facilities that includes guidance on how to conduct cost versus benefit analysis for investments, incremental and major enhancements, planning for future materials, and best practices to ensure the capability to meet current and future needs.

Long-term Actions

- Promote the design of "MRFs of the future" that can manage evolving challenges like flexible packaging; and
- Provide information on away-from-home-recycling, public recycling, paying attention to labeling on bins, collection spots while traveling, and similar topics to reduce contamination.

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Action Area 3: Strengthen Secondary Materials Markets

Recent policy changes regarding the importation of recycled materials has accelerated the need to improve domestic markets for recyclable materials and recyclable products, as well as to better integrate recycled materials and end-of-life management into product and packaging designs. The loss of available foreign markets for recyclable materials has impacted the economics of recycling both within the United States and worldwide. Encouraging communication and collaboration across different sectors of the economy, including private enterprise and government entities, will support innovation as well as the development, manufacture and reuse of high-quality recyclable materials. A stronger domestic recycling market will support local communities by creating more jobs and providing the U.S. economy with greater resilience to market disruptions. Municipalities will achieve cost savings when the markets for recycled materials are improved and more robust.

Vision

High-quality recycled materials are produced that can be incorporated easily into products, driving demand and creating an integrated, robust and sustainable domestic recycling market.

Priority Action

Explore opportunities to spur regional and local market development activities.

Challenges

Workgroup members identified two key challenges: supporting existing end-markets and developing new end-markets.

Support existing end-markets:

- The dialogue among materials recovery facilities (MRFs), recyclers, product designers, governments, etc., to inform the design and production of new products, including packaging, can be improved.
- Established end-markets and MRF technologies are not always being utilized with maximum effectiveness to identify recyclables that can be included in recycling programs.
- Contracts between municipalities and MRFs are not currently structured in a manner that can help insulate them from market fluctuations.
- There is a need to increase the dissemination of comprehensive information on commodity markets to MRFs.

Develop new end-markets:

- Well-crafted policies to encourage robust recycling markets need to be created and implemented.
- Market-, technology-, and material-based incentives that encourage manufacturers to use post-consumer content in a wide range of product and packaging designs are needed.
- Environmentally preferential purchasing policies are being created and implemented. These policies should be identified, reviewed, developed and/or revised.
- There is a need to better highlight the value of recycling to stimulate investment.

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Workgroup Priority Action

Explore opportunities to spur regional and local market development activities.

Potential Additional Actions

Near-term Actions

- Connect sellers of recycled/recyclable materials with potential buyers to create a virtual or web-based marketplace;
- Continue to promote government programs to purchase recycled materials such as EPA's Comprehensive Procurement Guidelines (CPGs); and
- Acknowledge that there are different business models in the recycling sector, and to provide information and guidance on how to select the model most appropriate for their situation.

Long-term Actions

- Work with companies that are designing packaging and products to encourage the use of recycled content and the improved recyclability of goods; and
- Explore economic models to create robust and sustainable domestic secondary markets, including possible incentives to drive demand and create more end users. Consider the unintended consequences and market impacts that such incentives could create;
- Build and articulate a better business case for using recycled materials that identifies the full value proposition;
- Create and promote consistent standards for packaging materials and recycled commodities; and
- Create a consistent, cost-effective and reliable supply of recycled material to be used as feedstock.

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Action Area 4: Enhance Measurement

Different definitions and recycling rate methodologies across the country create challenges to setting goals and tracking progress. Stakeholders across the recycling system agree that more consistent measurement methodologies are needed for waste management. Standardizing and aligning measurement, as well as tracking recyclable materials, will help better inform policy decisions and investments, and help us determine whether we are making progress in improving recyclable materials management in the United States. It will also help promote cross-jurisdictional learning by providing more transparent and comparable data sets.

Vision

Establish standardized recycling metrics that are supported by consistent terminology and methodology.

Challenges

Workgroup members identified two key challenges: new ways of measuring and the diversity/variety of measurement approaches.

New ways of measuring

- Varying measurement definitions can cause confusion and limit the understanding of recycling system performance.
- Because different materials have different economic and environmental impacts, it is unclear if the disposal of all materials should be considered equal.

Diversity and variety of measurements

- Consideration of only one metric does not adequately convey progress on sustainable materials management. Multiple variables and metrics must be considered simultaneously for a complete picture of progress.
- Few methodologies are available to classify some municipal solid waste management materials and activities (e.g., beneficial use of tires or abandoned vehicles).

Priority Action

Compile information on a range of metrics and measures, including definitions, what types of analyses these metrics and measures support, where in the recycling process these measures/metrics apply, data available, data gaps/needs, quality of data, and pros and cons of the various measures.

Workgroup Priority Action

- Compile information on a range of metrics and measures. This information will include definitions, what types of analyses these metrics and measures support, where in the recycling process these measures/metrics apply, data available, data gaps/needs, quality of data, and pros and cons of the various measures.

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Potential Additional Actions

Near-term Actions

- Develop a central compilation of metrics on tonnage and conversions that could include a calculation tool (e.g. EPA's Waste Reduction Model (WARM));
- Work with states to understand different methodologies for measuring diversion rates;
- Work together to update and encourage the broader use of EPA's 1997 document, *Measuring Recycling: A Guide for State and Local Governments*); and
- Clarify connections between Sustainable Materials Management, EPA's *Facts and Figures*, and other EPA tools and guidance.

Long-term Actions

- Encourage governments to adopt transparent reporting procedures and include definitions and methodologies when publishing information on recycling (e.g., using EPA's 1997 document, *Measuring Recycling: A Guide for State and Local Governments*);
- Foster common measurement approaches and definitions (e.g., diversion versus disposal reduction) of recycling and recovery across the country;
- Consider setting national goals for recycling activities, similar to the goal of 50 percent reduction of food waste; and
- Identify ways to use per capita participation in addition to or instead of recycling rates as a measure of progress for recycling programs.

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Appendix: Potential EPA Actions to Advance the U.S. Recycling System

EPA's Sustainable Materials Management program is implementing a variety of activities that support progress across the four action areas. In addition to continuing its facilitation and coordination role for the America Recycles Workgroups, EPA has identified the following actions it intends to take to advance the U.S. recycling system. The below list is current as of June 2019. It will be updated as the America Recycles work progresses.

- Develop a concept for a limited pilot to test an educational campaign on how to decrease the amount of plastic film entering *curbside* collection programs by encouraging recycling through *retail* collection programs (e.g. bins at retail outlets and grocery stores);
- Explore opportunities with America Recycles workgroup members to host regional and state market development workshops to help bridge connections with economic development organizations;
- Update EPA's tool to calculate emissions reductions associated with the use of recycled content material;
- Develop a federal register notice to solicit public comments on the current requirements for recycled content products purchased by federal agencies; and
- Update EPA's *Measuring Recycling: A Guide for State and Local Governments*.

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