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Nation's Environmental Stewardship Since 1974

ASTSWMO Recycling Position Paper

INTRODUCTION

The current recycling system in the United States is at a crossroads. Several challenges have highlighted the need for significant, substantial change in order for the recycling system to survive and be sustainable.

For many years, the U.S. recycling system was highly reliant on global markets, which have significantly reduced or halted imports of recyclable materials over the past few years. China was the largest consumer of North American recyclables before it adopted its National Sword policy in 2017, which was implemented in 2018. One-third of all scrap material collected in the U.S. was shipped overseas, with the large majority going to China. The loss of these export markets has created a major disruption in established recycling programs in the U.S. This has brought to light existing problems, such as recycling contamination, and insufficient domestic markets for U.S. recycled materials. Absent significant investments in recycling technology or policies focused on upstream solutions to develop and sustain markets, the U.S. could see large increases of historically recyclable materials landfilled.

With the past reliance on global markets for managing U.S. recycled materials, there was no incentive for Materials Recovery Facilities (MRFs) to meet specifications to qualify as inputs in U.S. manufacturing. For example, a mixed paper bale with contaminants could still be sold overseas where it perhaps could be further processed even though it may not meet standards for immediate use domestically. Investments to improve our recycling system are needed to meet the input specifications of domestic manufacturers to help build a circular economy.

In addition, recyclable materials generated revenue that businesses and governments relied on. With the collapse of markets for recycled material, this is no longer the case and recycling programs are becoming costlier to operate. Absent significant changes to the way materials are managed, recycling as a revenue stream is not likely to occur again.

Furthermore, recyclable materials sent to export markets, such as certain types of plastics, may not have been actually recycled. This could have been due to contamination or the lack of markets for manufacturing certain types of plastics into new products. There will likely be additional negative impacts on the plastics recycling markets when the Basel Convention's importation restrictions on plastics go into effect January 2021.¹ Meanwhile, the amount of single-use products and packaging sold on the market continues to increase, adding to the demand of an already stressed recycling system.

The cost for recycling has greatly increased over the past two years and, in some regions, the MRF tip fee has exceeded \$100/ton. Surveys of MRFs located in U.S. Environmental Protection Agency (EPA) Regions

¹ <http://www.basel.int/Implementation/Plasticwaste/PlasticWasteAmendments/Overview/tabid/8426/Default.aspx>

1, 2 and 3 indicate the average MRF cost to process material is \$96 per ton while the revenue from the sale of the recyclables is less than half.² Such costs are not sustainable and consumers and municipalities are questioning the value of recycling.

These circumstances have led to changes, including local governments deciding to drop certain materials from their recycling programs or the loss of recycling programs completely in some areas. Some recyclables are being landfilled due to increased costs or lack of available markets. Additionally, the public is losing confidence in the recycling system. Below is an overview of the benefits of recycling and more detailed information about the current challenges for State and local governments.

Benefits of Recycling

There are both environmental and economic benefits to recycling materials for use in the production of new products. EPA includes a list of such benefits.³

- **Environmental Benefits of Recycling**

Recycling saves energy. It takes far more energy to manufacture products from raw materials than from recycled materials, thus reducing associated greenhouse gas emissions. Using recycled materials also conserves natural resources and prevents pollution by reducing the need to harvest raw materials. Finally, recycling reduces the amount of waste that has to be disposed at landfills and incinerators, thereby reducing the need for additional disposal facilities.

- **Economic Benefits of Recycling**

Recycling creates jobs and has a positive economic impact. EPA's national Recycling Economic Information (REI) study attributes substantial jobs, wages, and tax revenues to recycling⁴. The 2016 report indicates the annual benefits of reuse and recycling are responsible for 757,000 jobs, \$36.6 billion in wages, and \$6.7 billion in tax revenues in the U.S. This is equivalent to 1.57 jobs, \$76,000 in wages, and \$14,101 in tax revenues for every 1,000 tons of recycled materials.⁵ Recycling also increases the availability of input materials for domestic markets, thus spurring economic growth.

CHALLENGES

In response to recent issues with the country's recycling system, EPA began hosting America Recycles Day (ARD) conversations with stakeholder workgroups in 2018 to identify and find solutions for key problems. The workgroups are focused on four areas:

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

2 <https://nerc.org/news-and-updates/press-releases/?article=1866>

3 <https://www.epa.gov/recycle/recycling-basics#Benefits>

4 EPA: Recycling Economic Information (REI) Report: <https://www.epa.gov/smm/2016-recycling-economic-information-rei-report-and-methodology>

5 EPA website at <https://www.epa.gov/recycle/recycling-basics#Benefits>

EPA issued the [Status Report: Framework for Advancing the U.S. Recycling System in July 2019](#), with proposed actions for the first year and beyond. While this initiative is a start and these actions can be further built upon, much remains to be done to address the problems in our recycling system.

ASTSWMO has identified some of the major issues the recycling system faces, which are outlined below and organized by the categories EPA uses for the ARD groups.

1. Enhance Materials Management Infrastructure: Improvements are needed. Who will make such investments?

A. Improvements are needed to existing infrastructure to manage recyclable materials in the U.S.

- MRFs need to be upgraded to use newer sorting technologies, such as optical sorting for plastics.
- Changes to collection systems may need to be considered and implemented to address cross-contamination issues that occur when managing various material types together.
- Any proposed MRF upgrades, whether public or private, would be passed on to municipal and consumer users, adding to the already increasing cost of recycling. Publicly operated facilities will be challenged to develop funding to make such investments.

B. Additional infrastructure is needed to meet quality standards for domestic manufacturing.

- Additional processing will be needed for MRF materials to meet the quality specifications of the domestic manufacturing industry (such as mixed recycled paper to be used by a paper mill). Additional infrastructure investments to clean up recyclables and/or collection systems changes are needed in order to use and promote domestic markets.
- Additional processing infrastructure, such as secondary MRFs or Plastics Recovery Facilities (PRFs), could be helpful. Finding investors can be challenging, including those for post-consumer plastic resins.

C. Upstream solutions need to be explored to ensure products in the marketplace can be recycled within existing systems

- Manufacturers continue to introduce new products and packaging in the marketplace that, though technically recyclable, are not actually recyclable within existing recycling systems. For example, packaging with multiple layers that are difficult to separate are not compatible with existing recycling systems. Manufactures, brand owners, and producers of these products need to design products and packaging that can be managed within the existing recycling system and/or play a larger role in the end-of-life management of their products.

2. Strengthen Secondary Materials Markets: Domestic markets need to be developed. What is the plan to develop domestic capacity to use U.S. generated recyclables and create demand for recyclable commodities?

- The loss of export recycling markets, which started when China implemented the National Sword policy in 2018, has presented immediate and potential long-term negative impacts on U.S. recycling systems. India recently changed their policy for mixed recycled paper imports, similar to China, adding to the negative impacts on recycling markets.
- The U.S. can no longer depend on exportation as a means to manage recyclables. Domestic markets need to be developed. Manufacturers using post-consumer recycled content is one way to help develop markets for recyclable material. Managing material domestically can help ensure environmental and labor laws are met and provide much needed transparency to materials management. There will likely be global markets for recyclable commodities that are further processed domestically, such as paper pulp or plastic flakes. Supporting this production domestically ensures that curbside materials have a ready outlet should the global market for these items expand in the future.
- Recycled materials compete with virgin materials. Virgin materials are often subsidized and therefore have an economic advantage over recycled materials. Because of this uneven playing field, there needs to be more incentives for manufacturers to use recycled materials.
- Assessment of existing/proposed mills and other plants that can use recycled materials is needed. This assessment can be paired with an analysis of regions that lack capacity to manage the amount of recycled materials produced to help map out domestic markets. Utilizing existing facilities is generally less costly than building new ones.
- Market development activities have included State and local government financial support to organizations that are either initiating or expanding recycling operations that intend to expand the domestic options available to absorb recyclable feedstock. The Northeast Recycling Council (NERC) has compiled a list of North American paper mills and an analysis on capacity.⁶

3. Promote Education and Outreach: Additional, consistent, and ongoing outreach is needed. This is costly and more than governments are able to fund.

- There is public confusion about what is recyclable. This is in part due to the fact that recycling varies by jurisdiction. This inconsistency adds to public confusion and frustration and leads to contamination in the recycling system. Additionally, labeling on products and packaging can be misleading and cause further confusion. In some cases, the material indicates it is recyclable when in fact there are no markets for it. In addition, products and packaging are frequently changing, with new material types being added. Even seasoned recycling professionals can be uncertain about what really belongs in the blue bin. All this confusion has led to a growing lack of public trust in recycling, which can further exacerbate contamination issues and lead to valuable material being landfilled or incinerated.

⁶ <https://nerc.org/documents/Recycled%20Paper%20Market%20Expansion%20-%20Updated%20June%202020,%202019.pdf>

- Some States, Territories and local governments have done outreach campaigns to promote better recycling (such as “recycling right”), by emphasizing what materials should and should not be placed in the recycle bin in order to reduce contamination. More outreach is needed; however, it is costly for governments to fund even limited outreach.

4. Enhance Measurement: Better measurement/data are needed and will assist with improvements in the management of recyclable materials.

- There is a need to better assess the magnitude and types of materials generated regionally. EPA has been promoting this through the State Measurement Program that includes voluntary data submission from States and Territories (States). Many, but not all, States are participating. These data could be used for such regional assessments.
- Better management of material streams and recycling programs from all States can be developed from better measurement.
- Reporting requirements and definitions vary by State. This makes it hard to measure, track and fully understand what and how much is being recycled in the U.S. It would be advantageous for all States to measure and report recyclables in a consistent manner.
- There are few reporting requirements designed to track where recycled commodities are sent for use in manufacturing. This is especially true for material that is exported out of the country. There is no mechanism in place to track how much of the materials collected in the U.S. are really being made into new products or ending up improperly disposed.

STRATEGIES CONSIDERED BY STATES

The stresses on the U.S. recycling system are severe, and as such, the status quo is not sustainable. Significant changes and a different approach are needed for real, sustainable, long-term solutions. States and municipalities are questioning why they need to continue to provide services to collect materials, generated by industries, that are not recyclable within current systems or have little to no value at end-of-life. Some States are considering upstream solutions, including:

- Passing bans, where certain single-use plastic products are no longer allowed to be sold, resulting in a reduction of waste generated or a switch to other materials;
- Mandating the use of certain percentages of post-consumer recycled content in specified products and packaging. This would increase the value of recycled materials and assist in developing domestic markets, in which industries would invest in order to secure the material needed to meet the recycled content requirements for their products and packaging;
- Expanding existing “bottle bill” deposit systems to capture more beverage containers and manage them outside the blue bin recycling system, resulting in reduced contamination and higher value materials; and

- Studying or introducing legislation for Extended Producer Responsibility models where manufacturers of products and packaging would share in the cost/responsibility of managing these materials, providing relief to municipalities.

States are more likely to take action if they view the national recycling strategy as ineffective or not significant enough to lead to a more sustainable system. If multiple States adopt different policies, it could result in a variety of State programs, similar to that for managing used electronics. This lack of consistency is challenging for industry, governments, and the public.

POSITION

ASTSWMO recommends EPA consider promoting substantial changes to the country's recycling system as EPA develops a national strategy for recycling.

The national recycling strategy should address challenges described in this paper, and at a minimum, include the following:

- An outline of infrastructure improvements needed for U.S. recycled materials to meet domestic market specifications, and a plan for who will make such needed investments;
- A plan to develop the needed capacity and improvement of domestic markets to use recycled materials generated in the U.S.;
- A plan to assist State and local governments on how to reduce contamination of recyclables caused by incorrect materials being placed in recycling containers; and
- A plan for more consistent tracking and reporting of recycling activities on a regional and national scale.

The national strategy for recycling should also clearly articulate how the economics of recycling will be sustainable for the future, addressing the current high costs to municipalities/taxpayers and the current low market value of recycled materials. ASTSWMO is committed to working with EPA and other stakeholders to develop and implement solutions that can improve the U.S. recycling system and achieve the environmental and economic benefits of recycling.

Approved by the ASTSWMO Board of Directors on July 21, 2020.