



# 2021 ANNUAL REPORT ON RECYCLABLES RECOVERED & UPDATED COMPREHENSIVE RECYCLING ANALYSIS

This report is submitted pursuant to:

- NYSDEC Permit Number 7-3142-00028/00011  
**Certificate to Operate Onondaga County Resource Recovery Facility**
- NYSDEC Permit Number 7 3156 00047/00001-0  
**Permit to Construct and Operate the OCRRA Landfill**
- NYSDEC Permit Number 7-3148-00048/00001-0  
**Solid Waste Transfer Station-Ley Creek**

**Period reported:** January 1, 2021, through December 31, 2021

**Date:** March 1, 2022

**Planning Unit:** County of Onondaga including the City of Syracuse,  
Excluding the Town and Village of Skaneateles

**Contact Person:** Mr. Kevin Spillane, Executive Director, OCRRA  
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## 2021 Recycling Data

Onondaga County Resource Recovery Agency (OCRRA) is a non-profit public benefit corporation created by the New York State Legislature, which delivers a comprehensive solid waste management and resource recovery system to Onondaga County residents. Since beginning operations in 1990, OCRRA has overseen the recycling of more than 12 million tons of material.

OCRRA inventories and records tonnages of all material recycled through the agency's curbside program. In 2021, **32,986 tons of materials were collected from households through the curbside recycling program.** The OCRRA service area has a population of approximately 457,000 people, with roughly 185,000 households.

In 2021, **395,663 tons of materials were recycled through mandatory and voluntary residential and commercial recycling programs** in Onondaga County. **Recycled material made up 51.24% of the total recycling and solid waste.** (Table 1).

Data provided in this report was collected from private commercial entities, as well as public and private institutions and was provided on a voluntary basis. Data was not audited by OCRRA. Reported data was adjusted to eliminate known double counting. Waste recovery data is summarized and presented in the tables in this report.

Table 1 shows the total recycling and trash generation for 2021 in OCRRA’s service area, including the total solid waste percentages and the actual percentages / tonnages of recyclables removed from the waste stream. In addition to the mandatory recycling materials (see Table 4), this total also includes voluntary recycling materials such as batteries, food waste, electronic waste, hazardous waste, yard waste, sludge and construction debris.

<b>Table 1 - 2021 Recycling and Solid Waste Totals</b>			
		<b>Tons</b>	<b>Percent of Total Waste</b>
<b>Recycling</b>			
Curbside Recycling (Primarily Residential)		32,986	
Commercial Recycling (Primarily Business) <sup>1</sup>		362,677	
	<b>Total Recycling</b>	<b>395,663</b>	<b>51.24%</b>
<b>Solid Waste</b>			
OCRRA Municipal Solid Waste (MSW)		293,737	
MSW Ferrous & Nonferrous Recycling <sup>2</sup>		-12,748	
OCRRA Construction & Demolition Debris (C&D)		58,269	
Other Waste <sup>3</sup>		37,300	
	<b>Total Solid Waste</b>	<b>376,558</b>	<b>48.76%</b>
<b>Total Recycling and Solid Waste</b>		<b>772,221</b>	

<sup>1</sup>Sources for these data include recycling companies, industries, institutions, governmental organizations, retail locations and commercial firms which voluntarily report to OCRRA, and internal OCRRA reports. Reported data have been adjusted to eliminate known double counting. Data reporting is voluntary and is not audited by OCRRA.

<sup>2</sup>Ferrous and nonferrous metals that are recovered from MSW at the Onondaga County Resource Recovery Facility and recycled are subtracted to avoid double counting.

<sup>3</sup>Includes biosolids currently being sent to a landfill.

NYSDEC Permit Number 7-3142-00028/00011 issued to OCRRA to operate the Onondaga County Resource Recovery Facility states that a recycling goal of at least 40% processible waste should be set each year. The processible recycling rate, as defined by NYSDEC, considers only those materials recycled that could have otherwise been disposed of at the Onondaga County Resource Recovery Facility. For example, it does not include yard waste, which is an unacceptable waste at the Onondaga County Resource Recovery Facility. **The processible recycling rate in 2021 was 50.26%.** As such, OCRRA maintained the recycling goal of at least 40% processible waste, consistent with the NYSDEC Comprehensive Recycling Analysis (CRA) requirements.

OCRRA projected that in 2021, the tonnage of projected mandatory recycling material would be 190,000 tons. In 2021, 283,947 actual tons of material were processible recycling. As compared to the projected recovery rates contained in the NYSDEC approved CRA, the original projected recovery rates have been met. The schedule progress for implementation status and targets were defined in OCRRA’s Comprehensive Solid Waste Management Plan Update for 2021 (Table 7). Table 2 shows 2021 totals for processible recycling and municipal solid waste. Table 3 shows 2021 recycling totals by material type.

<b>Table 2 - 2021 Processible Recycling and Municipal Solid Waste</b>			
		<b>Tons</b>	<b>Percent of Total Waste</b>
<b>Processible<sup>1</sup> Recycling</b>			
Curbside Recycling (Primarily Residential)		32,986	
Processible Commercial (Primarily Business) <sup>2</sup>		250,961	
	<b>Total Processible Recycling</b>	<b>283,947</b>	<b>50.26%</b>
<b>Municipal Solid Waste (MSW)</b>			
Incoming Municipal Solid Waste		293,737	
	MSW Ferrous & Nonferrous Recycling <sup>3</sup>	-12,748	
	<b>Total MSW</b>	<b>280,989</b>	<b>49.74%</b>
<b>Total Processible Recycling and Solid Waste</b>		<b>564,936</b>	

<sup>1</sup>Processible materials are those which could have been disposed of at the Onondaga County Resource Recovery Facility, including Non-Ferrous Metals, Ferrous Metals, Glass, Wood, Office Paper, Newspapers, Magazines, Corrugated Cardboard and Paperboard, Textiles, Plastics, Construction and Demolition Debris.

<sup>2</sup>Sources for these data include recycling companies, industries, institutions, governmental organizations, retail locations and commercial firms which voluntarily report to OCRRA, and internal OCRRA reports. Reported data have been adjusted to eliminate known double counting. Data reporting is voluntary and is not audited by OCRRA.

<sup>3</sup>When calculating recycling rates, ferrous and nonferrous metals recovered from MSW at the Onondaga County Resource Recovery Facility are subtracted to avoid double counting

**Table 3 - 2021 Recycling By Material<sup>1</sup>**

<b>Material Type</b>	<b>Tons</b>	<b>Percent of Total<sup>2</sup></b>
<i>Organic Wastes (excluding Paper)</i>		
Food	89,487	
Yard Waste	7,810	
Wood	2,797	
Textiles	3,398	
<b>Total Organic Wastes</b>	<b>103,492</b>	<b>26%</b>
<i>Plastics</i>		
	<b>8,851</b>	<b>2%</b>
<i>Metal</i>		
Non-Ferrous Metals	12,098	
Ferrous Metals	118,956	
<b>Total Metal</b>	<b>131,054</b>	<b>33%</b>
<i>Paper</i>		
Corrugated Cardboard & Paperboard	99,708	
Office Paper, Newspapers and Magazines	13,868	
Books	399	
<b>Total Paper</b>	<b>113,975</b>	<b>29%</b>
<i>Other</i>		
Glass	8,259	
Hazardous Wastes	748	
Electronics/Computers	1,371	
Batteries	2,785	
Sludge/Waste Water	940	
Miscellaneous	21,715	
<b>Total Other</b>	<b>35,818</b>	<b>9%</b>
<b>Total Material Recycled<sup>3</sup></b>	<b>393,189</b>	

<sup>1</sup>Sources for these data include recycling companies, governmental organizations, retail and commercial firms, which voluntarily report to OCRRA. Reported data have been adjusted to eliminate known double counting. Data reporting is voluntary and is not audited by OCRRA.

<sup>2</sup>Data may not equal 100% due to rounding.

<sup>3</sup> Total Material Recycled does not include curbside recycling resulting from processing at the material recovery facility from residential curbside collection.

## Required Recycling

The original Onondaga County Source Separation Law, which mandated recycling of certain materials by all waste generators, was passed by the County Legislature in 1989. The law was updated in 2011 and went into effect January 1, 2012.

The 2011 update clarified requirements by simplifying language and spelling out specifics for businesses. It requires haulers to provide a recycling service to their customers and requires that labeled recycling containers must be as easily accessible as trash containers. The update also reinforced multi-tenant housing unit recycling requirements. Table 4 lists mandatory recyclables.

### Table 4 - OCRRA Mandated Recyclables

- Office Paper and Discarded Mail
- Newspapers and Magazines
- Corrugated Cardboard, Brown Paper Bags, Paperboard, Pizza Boxes
- Milk and Juice Cartons, Gable-Top Cartons, Aseptic Cartons
- Glass Food and Beverage Containers
- Metal Food and Beverage Containers
- Aluminum Foil
- Aerosol Cans
- #1 and #2 Plastic Bottles
- #5 Plastic Dairy Containers
- Soft Cover Books

## Markets and Material Recovery

### *MRF Contract*

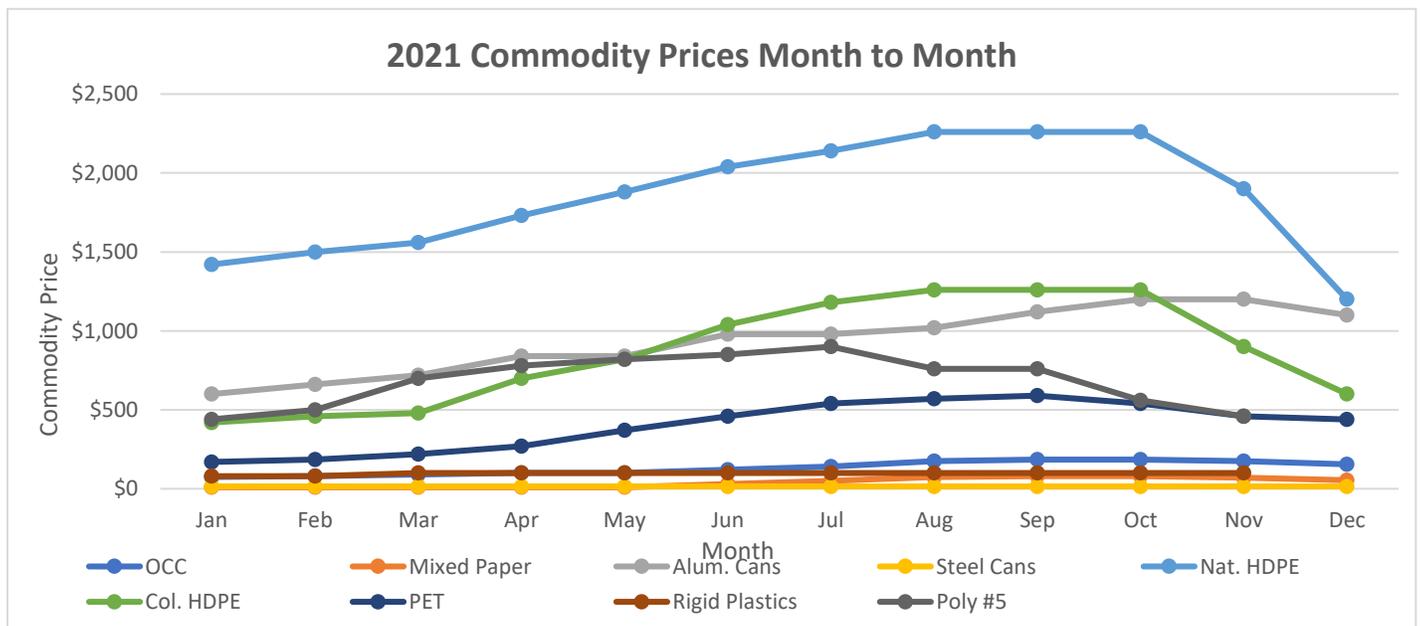
For nearly 30 years, OCRRA has contracted with a local material recovery facility (MRF) that is owned and operated by Waste Management Recycle America (WM-RA). WM-RA is responsible for sorting, baling and marketing the curbside residential recycling material collected by private haulers, municipal haulers and municipalities with private hauling contracts. There is no contract arrangement between OCRRA and WM-RA for commercial materials generated in Onondaga County, only for residential materials. The contract states that OCRRA pays a fee to WM-RA to perform the sorting, baling, marketing and transport of the recycled materials and shares in revenues from sold materials (if any). Depending on market conditions, the contract results in either a cost to or revenue generated to OCRRA. Haulers may bring commercial recycling materials to WM-RA but must make arrangements through WM-RA separately.

## Recycling Markets

Like other communities across New York State and the country, OCRRA struggled financially from the introduction of China's 2017 National Sword Policy. China ceased to accept a wide variety of recyclable materials for reprocessing and remanufacture, particularly mixed paper grades and plastic. In the wake of China's exit from the market, in 2018, material values plummeted and OCRRA paid more than \$667,000 to the MRF to process residential recyclables. In 2019, OCRRA paid \$1.8 million to the MRF and in 2020 OCRRA paid almost \$2 million to sort approximately 34,500 tons of residential recyclables.

The rise and fall of the market price of recyclable material affects the average blended value (ABV) of curbside recycling commodities. In 2021, market prices for recycled Aluminum cans saw a large increase. Many recycled plastics including Natural and Colored High-Density Polyethylene (HDPE), Polyethylene terephthalate (PET), and Polypropylene (Poly #5) increased in market price from January to October 2021. The costs of processing and marketing materials are generally constant, independent of market conditions, but they increased over time due to inflation from rising labor costs and capital investments. Figure 1 below shows commodity prices for materials processed at the MRF in 2021 by month.

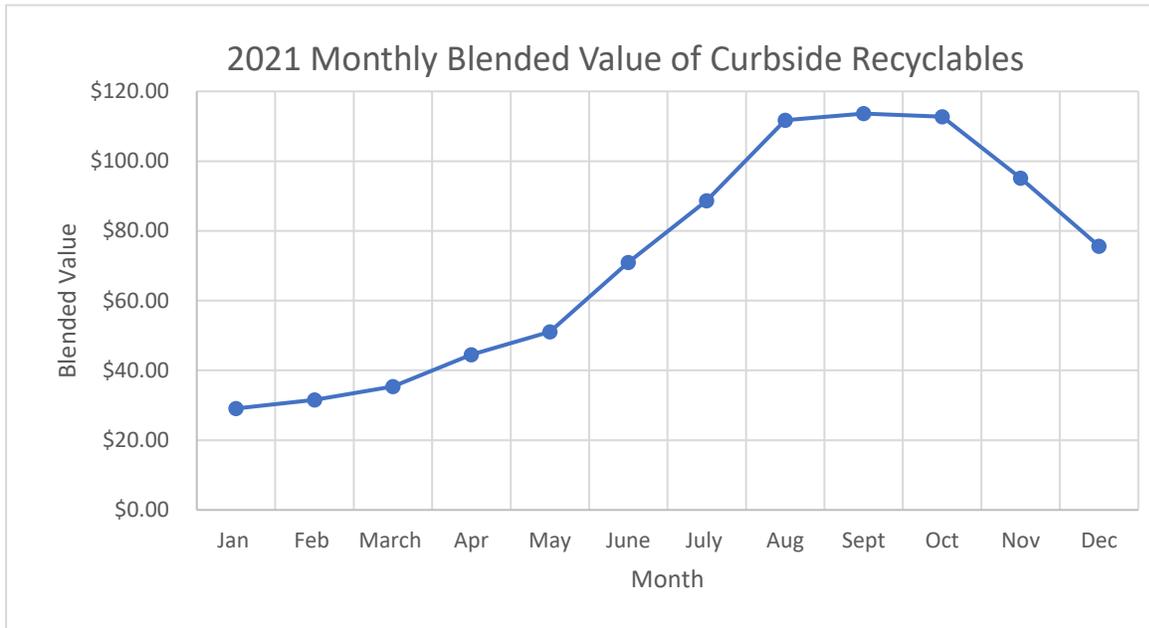
**Figure 1. 2021 Commodity Prices Month to Month**



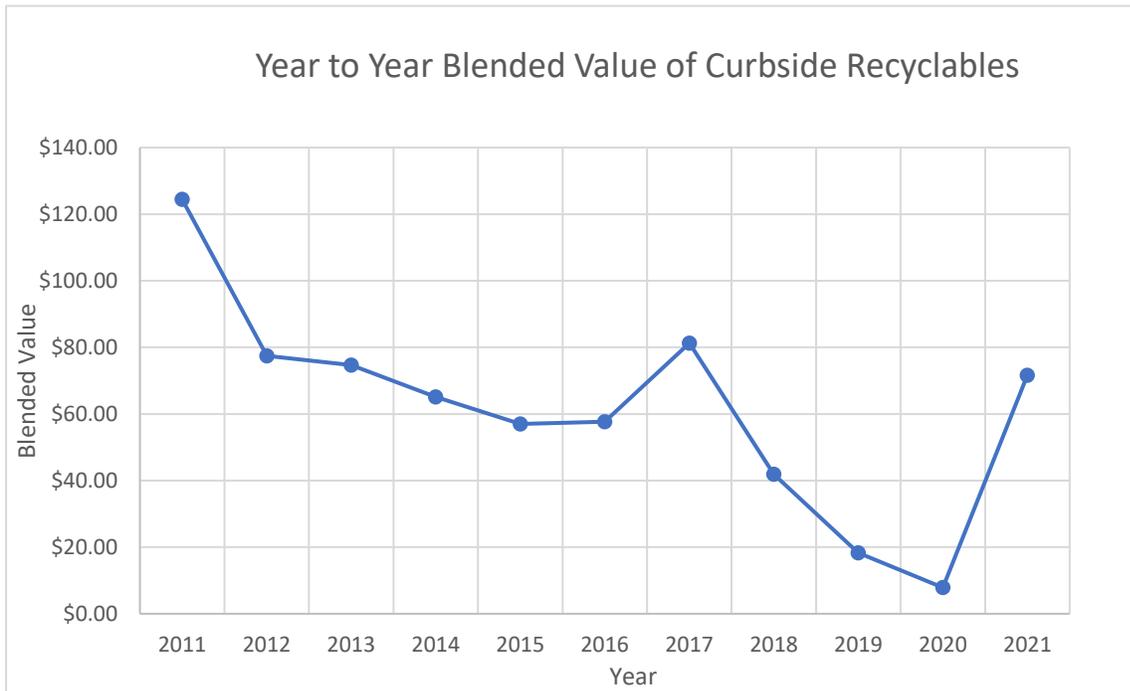
The ABV helps track the performance of the recyclable commodity market. From January to May 2021, the ABV did not exceed \$67.25, meaning OCRRA continued to pay the MRF to process recyclables per the OCRRA / WM-RA Contract (total = \$396,345.65). In June 2021, the ABV of the material exceeded \$67.25 for the first time since September 2017, triggering payment from WM-RA to OCRRA. From June 2021 to December 2021, the MRF paid OCRRA

\$266,170.12 for the processed recyclables at their facility. Figure 2 shows the monthly ABV of curbside recyclables processed at the MRF in 2021 by month. Figure 3 shows the ABV of curbside recyclables processed at the MRF from 2011 to 2021.

**Figure 2. 2021 Monthly Blended Value of Curbside Recyclables**



**Figure 3. Year to Year Blended Value of Curbside Recyclables**



## 2021 Recycling Program

OCRRA provides residents of Onondaga County a strong recycling and composting program; a foundation for waste disposal at the local Onondaga County Resource Recovery Facility; a robust public outreach and education service; and award-winning programs for disposing of hard to manage materials. OCRRA's work is not funded by taxes. Tipping fees charged to haulers for disposing of solid waste at our transfer station and Onondaga County Resource Recovery Facility and revenue from electricity generated by the Onondaga County Resource Recovery Facility provide the funds to operate OCRRA's Recycling Program. In 2021 OCRRA also introduced a recycling tipping fee, equivalent to approximately half of the current costs to process and market materials.

OCRRA's recycling department is responsible for educating the public about mandatory recycling rules and brings technical assistance to residents, schools and businesses in Onondaga County. In 2021, OCRRA demonstrated that aggressive steps are being taken to maximize the recycling of all waste streams, including continued reduction through maximum feasible recycling.

OCRRA's enforcement officer augments the educational efforts of the team's recycling specialists.



The enforcement officer:

- visits businesses and apartment complexes,
- Inspects loads of solid waste at Onondaga County Resource Recovery Facility and issues warnings and/or notices of violations for loads that contain recycling.

The enforcement officer and recycling specialists work together to assist waste generators in designing a recycling program that will capture the mandated recyclables.

In-person community outreach efforts, including recycling visits to businesses, schools, and apartment complexes, were curtailed in 2021 to protect public health amidst the challenges of the COVID-19 health crisis. Despite limiting in-person visits, OCRRA continued to devote significant funding to targeted online and traditional media advertisements to keep recycling top-of-mind for residents and businesses.

Direct program costs for 2021 recycling services are presented in Table 5.

<b>Table 5 - 2021 Recycling Program Costs</b>	
<b>Program</b>	<b>Expenses</b>
Recycling Personnel <sup>1</sup>	\$675,661
Material Recovery Facility (MRF) Fees	\$396,046
Public Education	\$334,209
Composting <sup>2</sup>	\$326,789
Household Hazardous Waste (HHW) Collection	\$109,365
Blue Bin Expense	\$36,955
Other Recycling Programs <sup>3</sup>	\$173,785
<b>Total Cost</b>	<b>\$2,052,810</b>

<sup>1</sup>Includes all permanent compost personnel.

<sup>2</sup>Includes all temporary personnel.

<sup>3</sup>Includes equipment maintenance, hauling and disposal expenses, postage, memberships, and misc. expenses.

### *2021 Efforts to Improve Recycling Rate*

In 2021, OCRRA's award-winning recycling programs delivered environmental solutions, excellent public education and quality disposal and recycling services to the residents of Onondaga County. Examples of this year's measures taken to improve recycling include the following:

- \$1,198,551 in state grants received in 2021 for reimbursement of Household Hazardous Waste collection expenses, compost equipment, and curbside blue bin purchases.
- More than 4,000 volunteers from 295 groups participated in OCRRA's annual Earth Day Litter Cleanup. 56,000 pounds of litter was collected from many neighborhoods across Onondaga County.



- 100 residents of Onondaga County attended OCRRA and Covanta's Mercury Collection Event in September. 140 mercury thermometers and 110 mercury thermostats were collected, diverting 580 grams of mercury from the waste stream.
- Over 2,500 tons of food scraps and food process waste were composted at OCRRA's state-of-the-art compost site. Food scraps were combined with yard waste from commercial and residential customers to generate over 6,100 yards of compost at OCRRA's Amboy Compost Site.
- 8,450 bags of OCRRA's premium 1/4-inch compost were sold through a network of 30+ lawn and garden retail outlets, helping to return valuable nutrients to local soils.
- More than 2,100 residents took advantage of OCRRA's free Household Hazardous Waste program in concert with Miller Environmental Group.
- 11,200 pounds of rechargeable batteries were recycled in 2021, at no cost to residents, through OCRRA's partnership with Call2Recycle. OCRRA's battery recycling program provides residents with nine convenient drop off locations to dispose of rechargeable, alkaline and button batteries.
- Over 14,200 fluorescent bulbs were sent to American Lamp Recycling through OCRRA's free bulb recycling program, keeping over 51,300 mmHg of mercury out of the environment and waste stream. OCRRA partners with local hardware stores to provide residents convenient locations to drop off old fluorescent bulbs for recycling.
- The "End Food Waste" partnership with the Northeast Waste Management Officials' Association (NEWMOA) has made progress on NYSDEC grant requirements. OCRRA engaged New Americans at public forums and through charity organization giveaways with cards translated into 5 languages that share tips for reducing food waste / saving money on one side, and easy recipes with Food Bank staples on the other. Short educational videos are in production, and further outreach is scheduled for the spring.
- OCRRA employees shared their expertise by presenting at various industry conferences in 2021, including the annual New York State Association for Reduction, Reuse and Recycling Conference.



- OCRRA's partnership with six TOMRA and three independent bottle redemption centers to better recycle non-deposit glass created a lot of enthusiasm from the community. As a result, in 2021, 17,210 more pounds of non-deposit glass were collected at participating redemption centers in Onondaga County. This glass will be recycled into new glass, instead of being processed through the MRF (which sends glass to landfills to be beneficially reused as alternative operating cover).
- More than 220 tons of recycling was collected at OCRRA's Ley Creek Transfer Station from residents without curbside recycling collection.
- More than 1,500 tons of metal were separated and recycled at OCRRA's Rock Cut Road Transfer Station. Almost 338 tons of metal was separated and recycled at OCRRA's Ley Creek Transfer Station. 12,747 tons of metals was separated and recycled at OCRRA's Onondaga County Resource Recovery Facility.
- OCRRA advocated for expansion of the New York State Bottle Bill and supported Extended Producer Responsibility by serving on committees of the New York Product Stewardship Council and New York State Association for Reduction, Reuse and Recycling.