
Annual Report of the Recycling Public Advisory Council

Twenty First Edition

**Presented to the Honorable John Carney, Governor of Delaware and
the 151st Delaware General Assembly**

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Executive Summary

The General Assembly enacted Delaware’s Universal Recycling Law (UR Law) on June 8, 2010 and established ambitious recycling goals for the State. The goals were to recycle 50% of the municipal solid waste (MSW) disposed of by CY2015 and 60% by CY2020. These goals included recyclables diverted from both residential and commercial waste and utilized EPA’s guidelines for calculating the recycling percentage. The following report reflects what was accomplished during calendar year 2021.

The CY2021 recycling rate for Delaware was 37.2%

The State has been successful at diverting recyclable materials from the landfill, but the goals set forth in the UR Law have not been achieved. The State recycled 37.2% of its municipal solid waste in CY2021. Even though Delaware has not achieved the goals established in the legislation, a comprehensive statewide system has been developed to reduce the burden on our landfills and provide raw materials to the market through our diversion activities.

CY2021 Recycling Rate Summary in Tons

Diverted Recyclables	MSW Disposed	Total Municipal Solid Waste	Percent Diverted Recyclables
473,798	798,571	1,272,369	37.2%

For the full report visit: [Assessment of Municipal Solid Waste Recycling CY2021](#)

As illustrated in the charts below, Delaware has made significant strides in the diversion of waste to new uses and in the reduction in the amount of waste sent to Delaware’s landfills since 2006. Not surprisingly, due to COVID, the recycling rate for 2021 was still less than the 2019 pre-COVID rate. This is mainly due to a drop in the commercial recycling sector, as many people continue to work from home. There were also a few issues with haulers not having enough staff to collect yard waste. The amount of material sent to the landfills also increased for the tenth year in a row. Much of the increase in waste can be attributed to growth in population and economic development within the State.

Figure 1 - Recycling Rates in Delaware

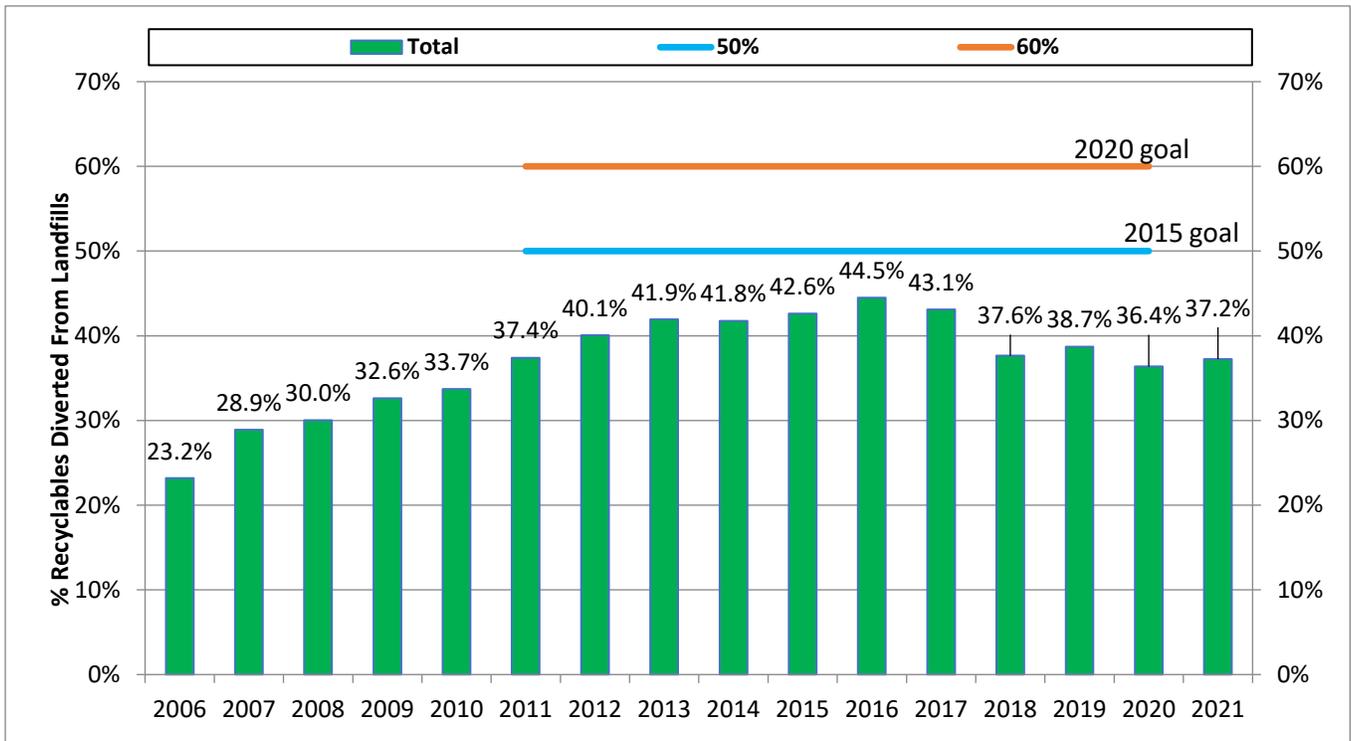
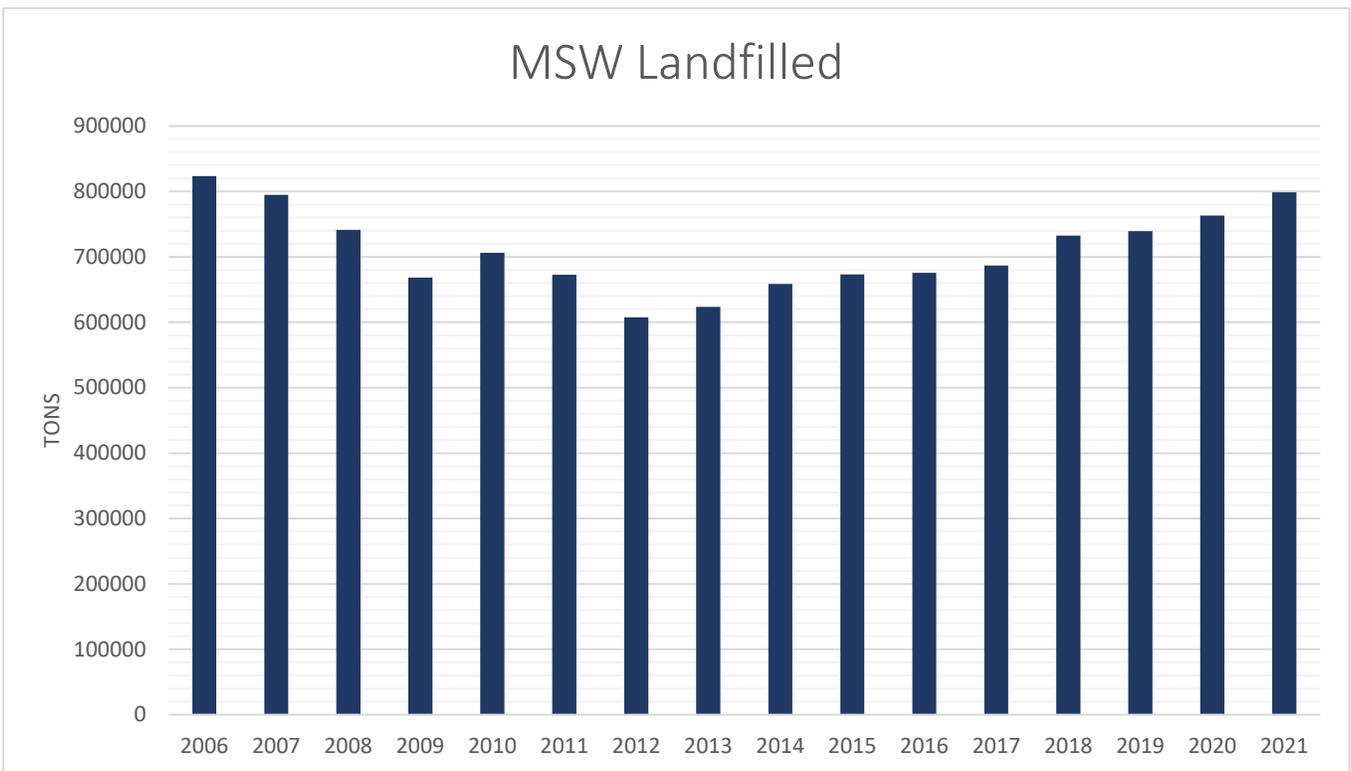
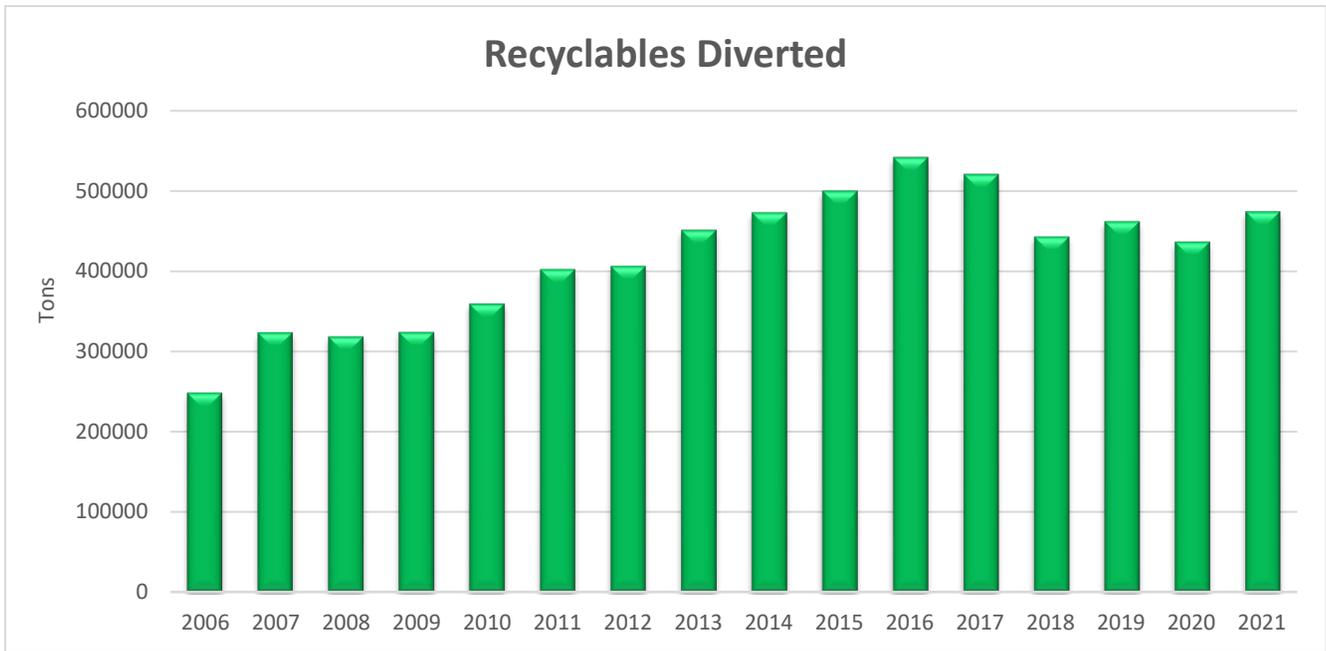


Figure 2 – Municipal Solid Waste (MSW) Landfilled in Delaware



11,365,969 tons of material have been landfilled since 2006.

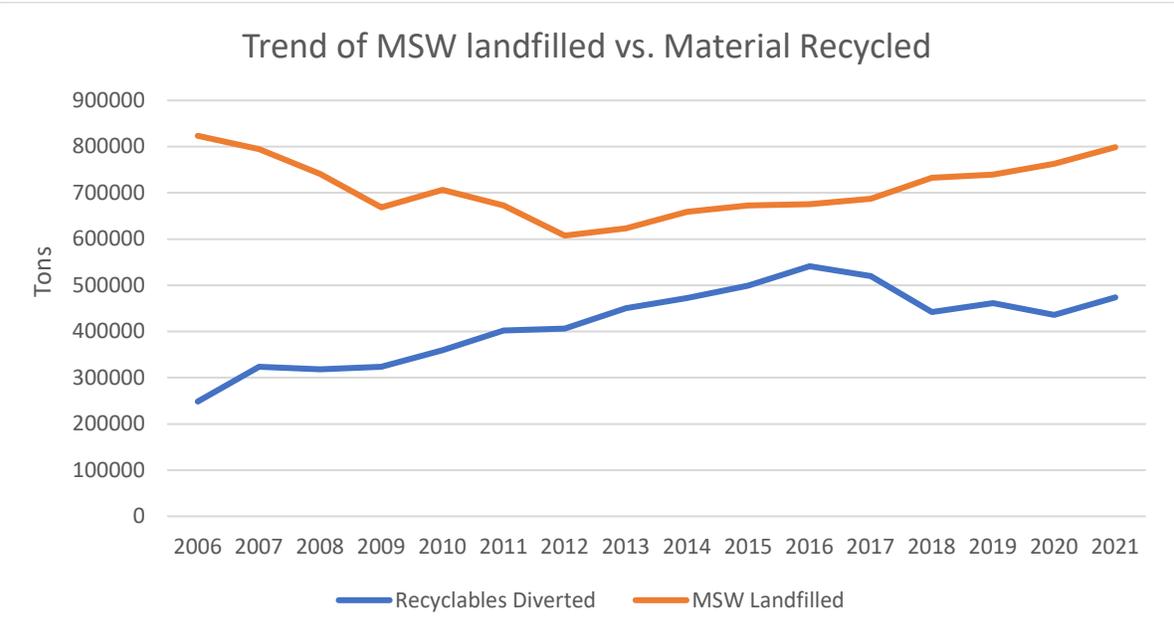
Figure 3 – Recyclables Diverted from Landfills in Delaware



6,677,048 tons of recyclables have been diverted from landfills since 2006.

Delaware has three landfills. One in each County. Delaware also has one Material Recovery Facility (MRF) where the majority of residential recyclables go to be sorted and sold to manufactures to be made into new items. This facility processes 115,346 tons of recyclables per year. It is very important that only acceptable recyclable materials end up at the facility. However, there are often large amounts of trash sent to the MRF that contaminates the recyclable materials and makes them less marketable, and also, less valuable. Outreach and education still need to continue so that all Delaware residents and businesses know what is acceptable to put in their recycling cart whether they are at home, work, or school.

Figure 4 – Trend of MSW landfilled vs. Recyclables diverted from the landfills



Environmental Value of Delaware's Recycling and Diversion Activities for 2021



Recycling in Delaware Conserves Natural Resources and Strengthens Our Economy

Recycling Saves **445,166** Tons of Waste From Landfills

Processing recyclable items into new inputs for manufacturing as well as the collection, sorting and processing of those items uses less energy and generates fewer emissions than mining, drilling or extracting non-recycled materials for the same purposes.

Recycling in Delaware reduces greenhouse gas (GHG) emissions by **227,049** metric tons of carbon equivalent (MTCE).



This reduction is equal to the emissions produced by **176,754** vehicles.



or

by **34.6** million cylinders of propane for home barbeques.

Recycling in Delaware reduces energy use by **5.34** million British thermal units (Btu).



This reduction is equal to **44.4** million gallons of gasoline.



or

the energy used to power nearly **58,378** homes every year.



Recycling in Delaware supports more than **\$67 million** in wages.

Note. EPA's Waste Reduction Model (WARM) Calculator was used to generate these statistics.



COLLECTION EVENT OVERVIEW

FISCAL YEAR 2022



423 TONS OF
HOUSEHOLD HAZARDOUS WASTE
COLLECTED

224

HOUSEHOLD HAZARDOUS
WASTE COLLECTION EVENTS



269 TONS OF DOCUMENTS SHREDDED



64 DOCUMENT
SHREDDING EVENTS

1,275 TONS OF
ELECTRONICS RECYCLED



328 DAYS OF
ELECTRONICS
RECYCLING



Recommendations of the Recycling Public Advisory Council (RPAC) to the Governor and General Assembly:

- 1. Support DNREC's General Fund Appropriation Request for the Recycling Program.** DNREC does not have any specific funding currently allocated to help support education and outreach as well as research to expand recycling efforts within the State. RPAC encourages the Legislature to support an annual budget appropriation to allow consistent and targeted messaging for diversion throughout the State. This will allow Delaware to move closer to achieving the diversion goals outlined in the Universal Recycling Law.
- 2. Support DNREC accessing federal funds to reinstate the Universal Recycling Grant & Low Interest Loan Program.** RPAC believes grants and loans to support recycling activities and businesses in our State is one of the most important steps in reaching the recycling goals set in the Universal Recycling law. The Recycling Fund, which provided monies to support the Universal Recycling Grant and Low Interest Loan program, has been exhausted. The EPA will be announcing two different grant opportunities that DNREC can apply for to work on infrastructure needs for recycling in DE. These grants and loans will help expand diversion and recycling efforts which can generate good paying local jobs, economic stimulation, and support climate change reduction efforts, leaving Delaware better for future generations.
- 3. Support appropriation of annual funding to cover the transportation fees for one grade level in each school district in Delaware to attend a DSWA Environmental Education Program Field Trip.** DSWA currently operates an Education Building within the Delaware Recycling Center in New Castle. A second Education Center in Kent County will be open in 2023. The DSWA Environmental Education Program provides a hands-on opportunity for students to see and understand the recycling process. Providing students access to this program reinforces why recycling and diversion are important and supports education efforts on behavior change.
- 4. Request OMB work with DNREC to review recycling practices in State buildings.** State office buildings are not exempt from the Universal Recycling law and there needs to be an annual review and assessment of State office building participation in the program. This is to ensure containers and service contracts are optimized to maximize diversion from State office buildings. It will also help to identify and correct contamination issues which might be occurring due to incorrect recycling practices. This could potentially save the state money and increase the recycling rate.
- 5. Promote legislation that reinforces waste reduction and increased recycling in Delaware so that the goals of the UR Law can be achieved.** Support businesses in Delaware that utilize reuse and repair services that help lessen the amount of waste being sent to our landfills.
- 6. Expand your own recycling knowledge and inform your constituency.** Follow Delaware Recycles on social media and share valuable content with constituents. Encourage all State employees to take the training module about Recycling in Delaware on the Delaware Learning Center website.
- 7. Continue to explore new technologies and outreach strategies that promotes recycling in Delaware.** This includes working collaboratively with DNREC, DSWA, RPAC, and other public or private entities.

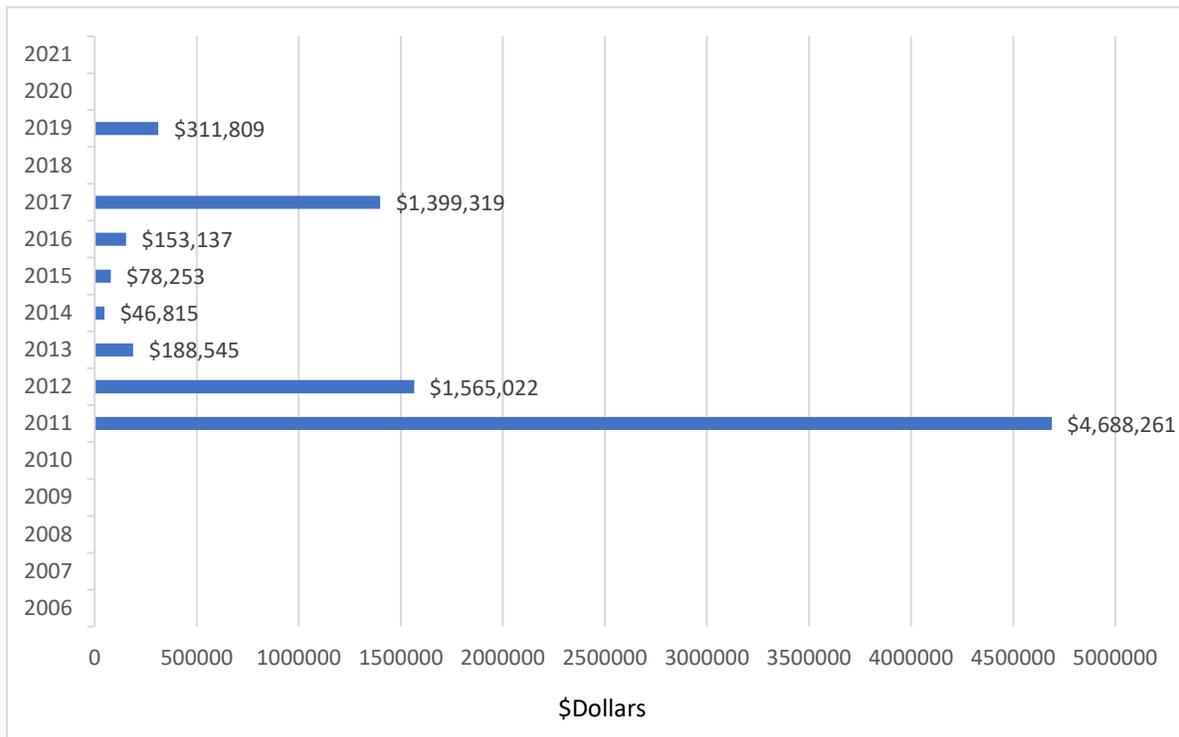
Background

In September of 2000, former Governor Thomas Carper established the Delaware Recycling Public Advisory Council (RPAC) with Executive Order No. 82. On June 8, 2010, the General Assembly formally recognized RPAC when Delaware's Universal Recycling Law (UR Law) was enacted. Members of RPAC are volunteers appointed by the Governor. RPAC was tasked with offering advice to

DNREC and the DSWA on all aspects of recycling, setting funding categories/priorities for the Recycling Grants Program, providing guidance on projects that are eligible to receive funding, providing recommendations on recycling outreach by DNREC and DSWA, and submitting an annual status report to the Governor and General Assembly. RPAC holds periodic meetings throughout the year to discuss opportunities to engage the public. The annual report continues to follow the methodology established by the Council when it was created. This methodology follows EPA's measurement protocol so that it is comparable to other state and federal measures.

The 2010 UR Law created the single-stream curbside recycling program we have today and also implemented a short-term beverage container fee that initially funded the Universal Recycling Grant and Low Interest Loan Program. The program awarded over 100 grants, totaling more than \$8.4 million to increase recycling activity and decrease waste production in the State. The funding ended in December 2014 and unfortunately the remaining funds were reallocated in 2016 by the legislature. The remaining interest and unawarded funds are all the Grant Program have used the last 6 years.

Figure 5 – Grant and Low Interest Loan Program Expenditures



Recent Recycling Efforts in Delaware

DNREC Activities

Recycling Grants Program – The remaining balance of the Universal Recycling Grant and Low Interest Loan Program funding has been spent. The program is no longer available unless a new funding source is found. No funding was appropriated in the FY2023 budget, so the program will remain suspended until funding is allocated during an upcoming budget cycle. DNREC monitored and administered the remaining grant projects that extended their performance period into CY2021.

Plastic Carryout Bag Ban and At-Store Recycling Program – The single-use plastic bag ban went into effect on January 1, 2021. At the time of implementation, the ban only applied to certain stores within the State. An enhanced plastic bag ban went into effect on July 1, 2022, banning all retail stores (except restaurants) from utilizing plastic film bags at checkout. Both bans also required stores to have an at-store drop off bin for plastic bags and plastic film wrap. This is the only way residents can recycle this type of material since it is not accepted by the single stream recycling program. When plastic bags and film get to the Material Recovery Facility (MRF) it wraps around and jams the equipment at the sorting facility, causing significant issues. DNREC performs compliance and enforcement activities that support this legislation.

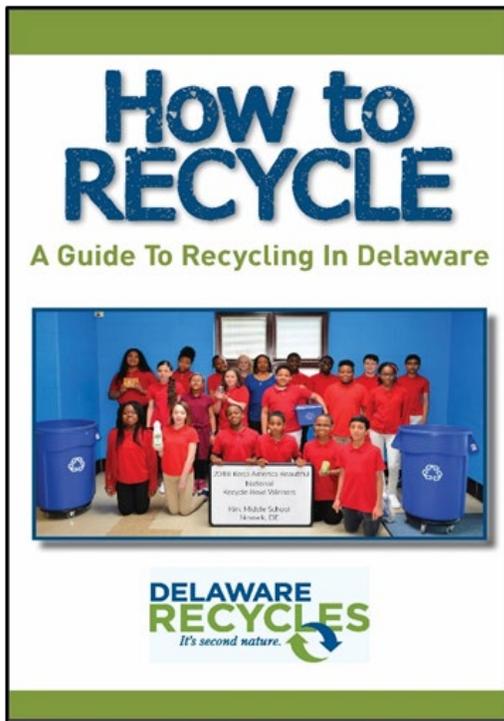
Organics Diversion – DNREC’s Division of Waste & Hazardous Substances is working towards a pre-order Compost Bin and Rain Barrel sale in the spring of 2023. Backyard composting reduces the amount of food waste that needlessly ends up in Delaware’s landfills. Food waste is one of the largest waste streams that end up in our landfills. Combining food waste with yard waste in a compost bin produces nutrient rich soil that can be used as a natural soil amendment on gardens, flower beds, or lawns.

Public Education and Outreach

COVID-19 continued to restrict the number of in-person events that were conducted in 2021. DNREC successfully utilized social media and virtual presentations to spread the recycling and waste reduction message to residents.

The Marketing Campaign Graphics section on page 12 shows some of the examples of the current outreach material and marketing campaigns that should be the only resources Delaware residents use when determining what to put in their curbside recycling.

How to Recycle Guidebook



Recycling in Delaware poster



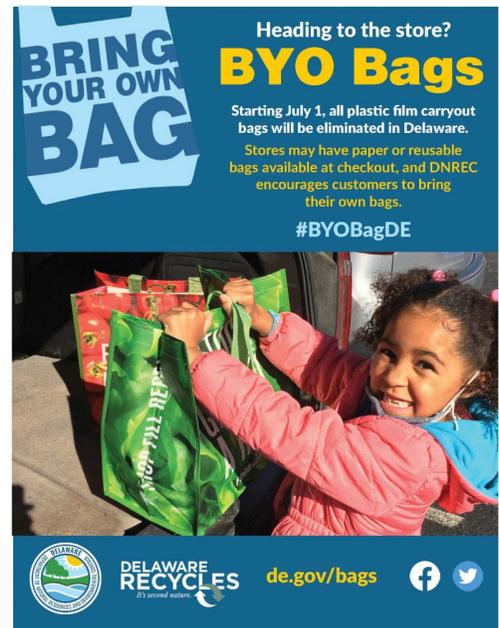
Social Media Graphic



Visit Recycling.Delaware.gov



BYOBag campaign



Resource Recycling Systems (RRS) conducted research in 2020-2021 on over 3,200 recycling programs in the U.S. It found that only 9% of programs are using either an app or search tool. Delaware is part of that 9%. In 2020, DNREC contracted to develop a new search tool – Recyclopedia. In 2021, DNREC continued to develop and refine Recyclopedia to fit the needs of all Delawareans. This search tool is located on [Delaware's Recyclopedia website](#). The tool allows residents of Delaware to know exactly where and how to dispose of over 325 items that they may no longer have a use for.



Delaware Solid Waste Authority (DSWA) Activities

Recycling Drop-off Centers - DSWA's recycling drop-off centers are staffed centers designed to reduce contamination of recyclables and assist Delaware residents while dropping off material. Residents can drop off single-stream recycling as well as used motor oil, oil filters, household batteries, and corrugated cardboard at every center in the State.

Electronics Recycling Program - DSWA offers electronics recycling 6 days a week at its 4 staffed Recycling Drop-Off Centers as well as collection during its Special Saturday Collection Events throughout the year. In Fiscal Year 2022(FY22), 1,275 tons of electronic goods were collected and recycled.

Household Hazardous Waste (HHW) Program - 16 Saturday Events were held statewide in addition to the weekly collections held at DSWA Recycling Drop-Off Centers year-round. At these events, Delaware residents dropped off 423 tons of Household Hazardous Waste (HHW).

Oil Filter and Waste Oil Recycling Program - 420 tons of used motor oil were recycled and 19 tons of used oil filters were collected and recycled.

Polystyrene Foam Recycling Program - Collected and recycled 27 tons of polystyrene (#6 foam).

Household Battery Recycling - Collected and recycled 57 tons of household batteries.

Document Shredding Program - Through monthly Document Shredding events at its 4 Staffed Recycling Centers and 16 Special Saturday Collection Events, DSWA collected 269 tons of personal documents to be securely shredded.

Public Education and Outreach

DSWA's Education Program continued to offer flexible presentation options to schools during the 2021-2022 school year. Schools that were able were welcomed back to the DSWA Education Building while virtual field trips and in-school presentations were still available for those schools not permitted to take out-of-school trips.

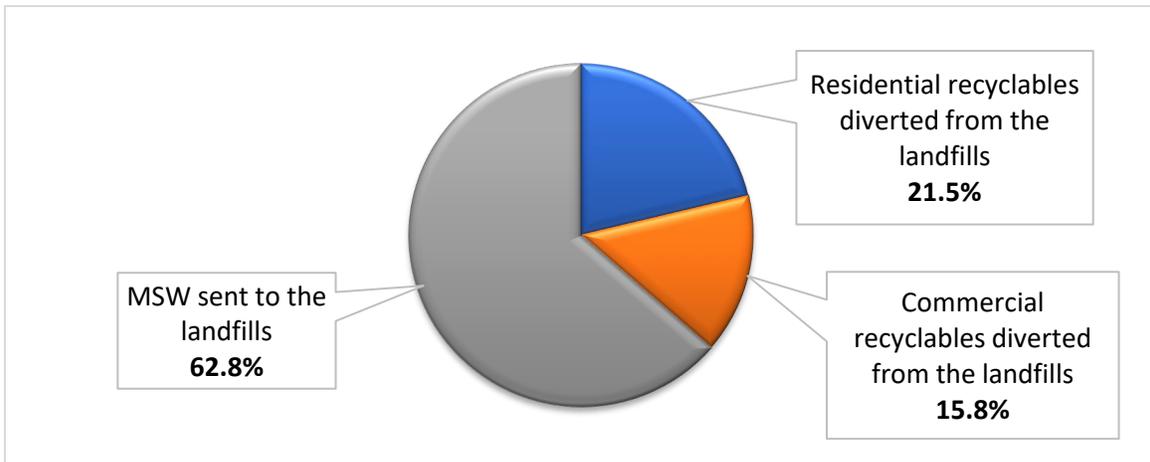
DSWA's Education Coordinator provided field trips and presentations to 3,651 students in grades K-12.

DSWA encourages citizens of Delaware to contact them if they are in need of environmental information concerning any DSWA program or facility. DSWA provides a Citizens' Response Line (800-404-7080). In addition, DSWA's website, www.dswa.com, provides even more information for Delaware residents. These resources provide valuable information and keep the personal touch that has helped to establish the Authority as a leader in the environmental community.

Measurement and Reporting

RPAC utilizes statistically acceptable and comparable methodology for measuring recycling diversion rates based upon EPA guidelines. This methodology provides an objective and auditable approach to recycling measurement which is relevant and repeatable. RPAC and DNREC have developed guidelines for the recycling industry to report information as directed by the Universal Recycling Law ([7 Del. C., §6056](#)). To help protect proprietary business information, this process continues to use a consultant, DSM Environmental Services, Inc., to collect recycling data, which has allowed us to achieve better and more accurate results since 2011, with 2021 being the eleventh year of industry reporting. This data includes residential and commercial recycling information including yard waste. In CY2021 the residential recycling rate increased by 0.2% and the commercial recycling rate increased 0.7% from the 2020 rates. For the full report visit: [Assessment of Municipal Solid Waste Recycling for CY2021](#). EPA's calculation for a national average recycling rate was 32.1% in 2018. In November of 2020, they also announced a national recycling goal to increase the U.S. recycling rate to 50% by 2030.

Figure 6 – CY2021 Total Municipal Solid Waste Breakdown



Breakdown of diverted recyclables into residential and commercial.

Closing Statement

We owe it to ourselves and to future generations to manage our State's waste efficiently and responsibly. With several competing uses for land and the desire to maintain Delaware's natural beauty, recycling is an attractive, logical, and responsible alternative to landfilling recyclable materials made from a finite supply of natural resources. We have a responsibility to future generations to conserve non-renewable natural resources. Successful implementation of the program requires the leadership, support, and active participation of the Governor's Office and the General Assembly.

RPAC Members in CY2021

- Julie Miro Wenger, Acting RPAC Chairperson - Representing the Delaware Food Industry Council.
- Michael D. Parkowski - representing the Delaware Solid Waste Authority (DSWA).
- Timothy Ratsep - representing the Department of Natural Resources and Environmental Control (DNREC).
- Steve Tigani - representing the alcohol beverage industry.
- Rustyn Stoops – representing the Delaware Chamber of Commerce.
- Dee Durham - representing the Delaware Association of Counties.
- Sewell McCabe - representing the soft drink industry.
- Gerald Morris – representing the Delaware League of Local Governments.
- Paul Beane - representing the waste hauling industry.
- Todd Klawinski – representing a community-based or public-interest group.
- Vikram Krishnamurthy - representing a community-based or public-interest group.
- Brigid Gregory - representing a community-based or public-interest group.
- Babita Jagnaman – representing a community-based or public-interest group.
- Brian Loy – representing a community-based or public interest group.
- Vacant- one recycling industry seat.
- Vacant – one Delaware Restaurant Association representative