
Annual Report of the Recycling Public Advisory Council

Twenty-Second Edition

**Presented to the Honorable John Carney, Governor of Delaware and
the 152nd 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 2022 (CY2022).

The CY2022 recycling rate for Delaware was 37.3%

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 yet. The State recycled 37.3% of its municipal solid waste in CY2022. 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.

CY2022 Recycling Rate Summary in Tons

Diverted Recyclables	MSW Disposed	Total Municipal Solid Waste	Percent Diverted Recyclables
473,519	794,883	1,268,401	37.3%

For the full report visit: [Assessment of Municipal Solid Waste Recycling CY2022](#)

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. The CY2022 data shows the residential recycling amount dropped 26,488 tons, but the commercial recycling amount increased 26,239 tons when comparing CY2021 to CY2022. This resulted in the diversion rate remaining essentially the same from 2021 to 2022 (37.2% to 37.3%). The amount of waste landfilled decreased (year over year) for the first time since 2012 (see Figure 2). The diversion rate is calculated only on those materials recycled from MSW sources using EPA's methodology. All other materials (such as construction and demolition waste, industrial wastes, and land clearing debris) are excluded. Materials that are sent directly for energy recovery are also excluded (such as tires sent for tire-derived fuel). Most scrap metals except for appliances, lead-acid batteries, and aluminum cans are not counted as MSW. This results in a slightly lower recycling rate than what was achieved.

Figure 1 - Recycling Rates in Delaware

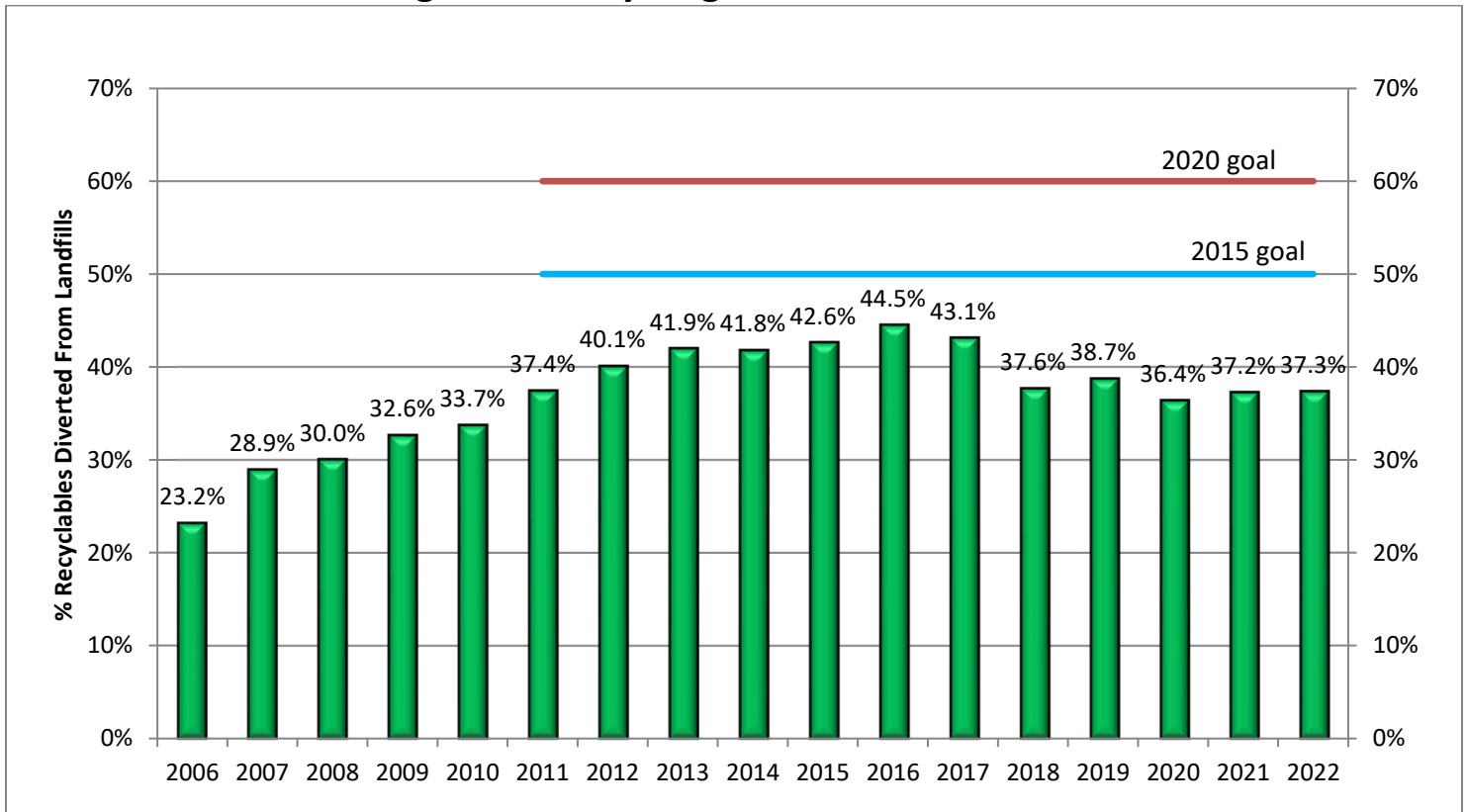
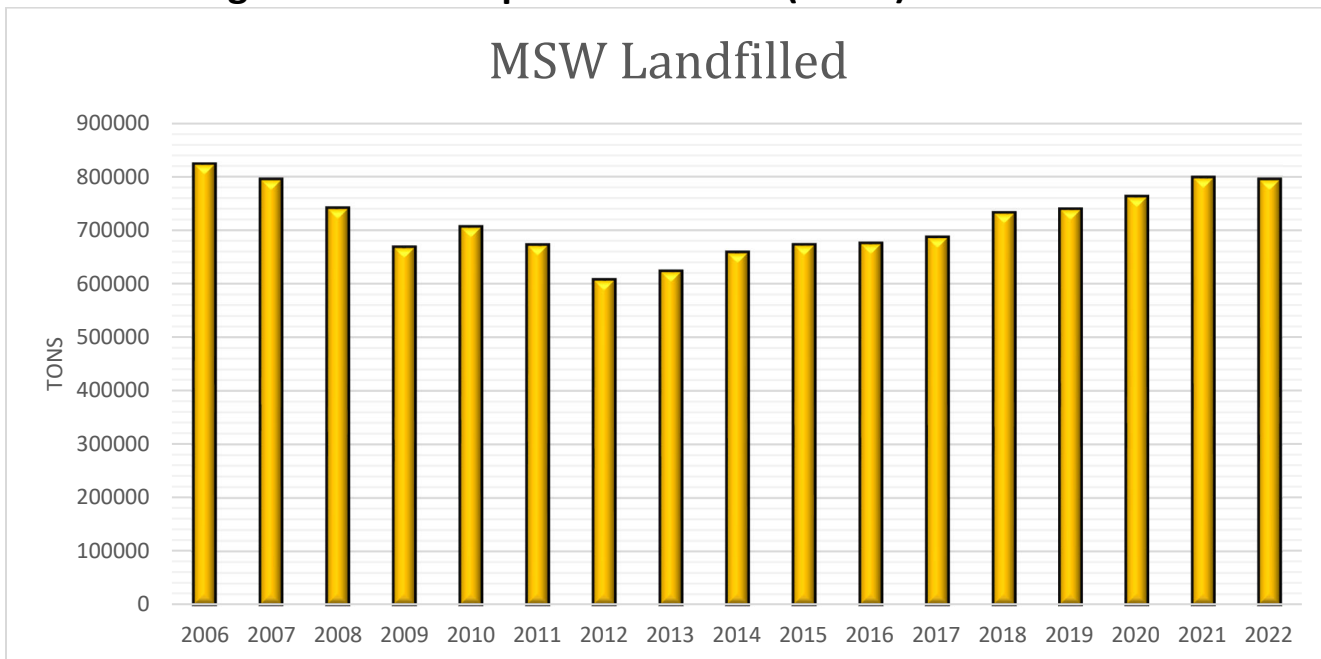
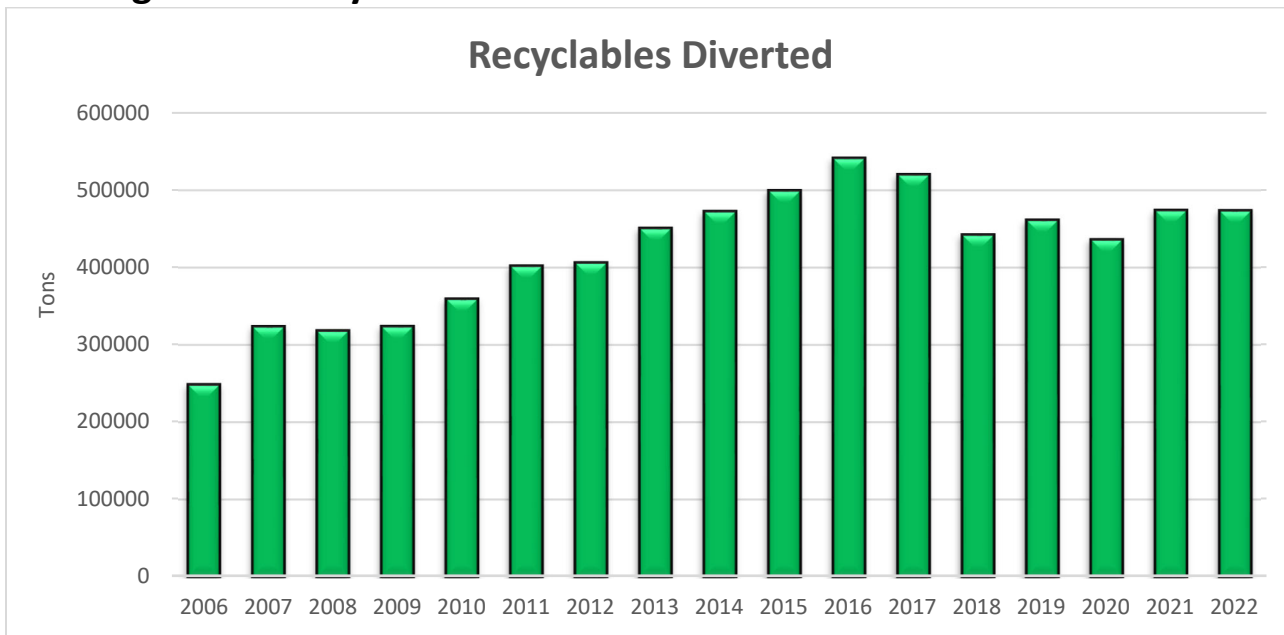


Figure 2 – Municipal Solid Waste (MSW) Landfilled in Delaware



12,160,851 tons of material have been landfilled since 2006.

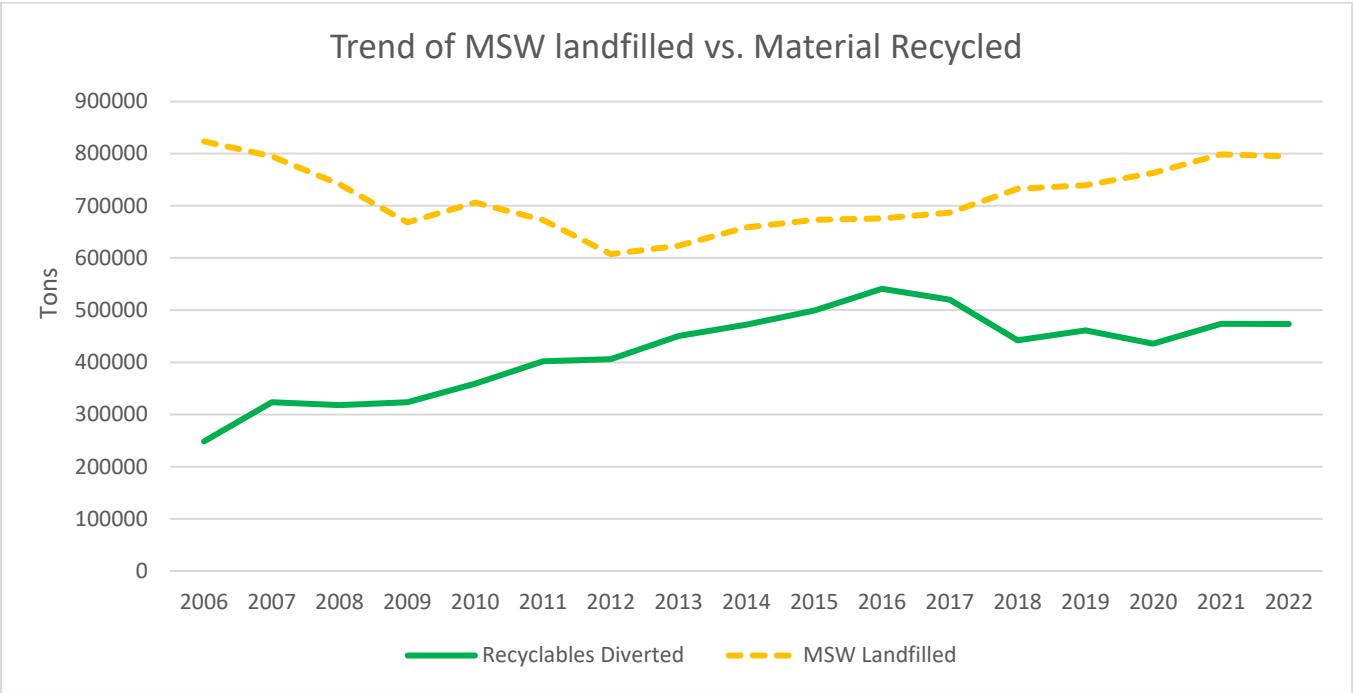
Figure 3 – Recyclables Diverted from Landfills in Delaware



7,150,567 tons of recyclables have been diverted from landfills since 2006.

Delaware has three municipal solid waste 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 manufacturers to be made into new items. This facility processes an average of 115,000 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 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



794,882 tons of MSW were landfilled and 473,519 tons of recyclables were diverted in 2022.

One of the challenges in achieving a reduction in MSW landfilled is that Delaware’s population has steadily increased from ~859,000 in 2006 to ~1,018,000 in 2022.

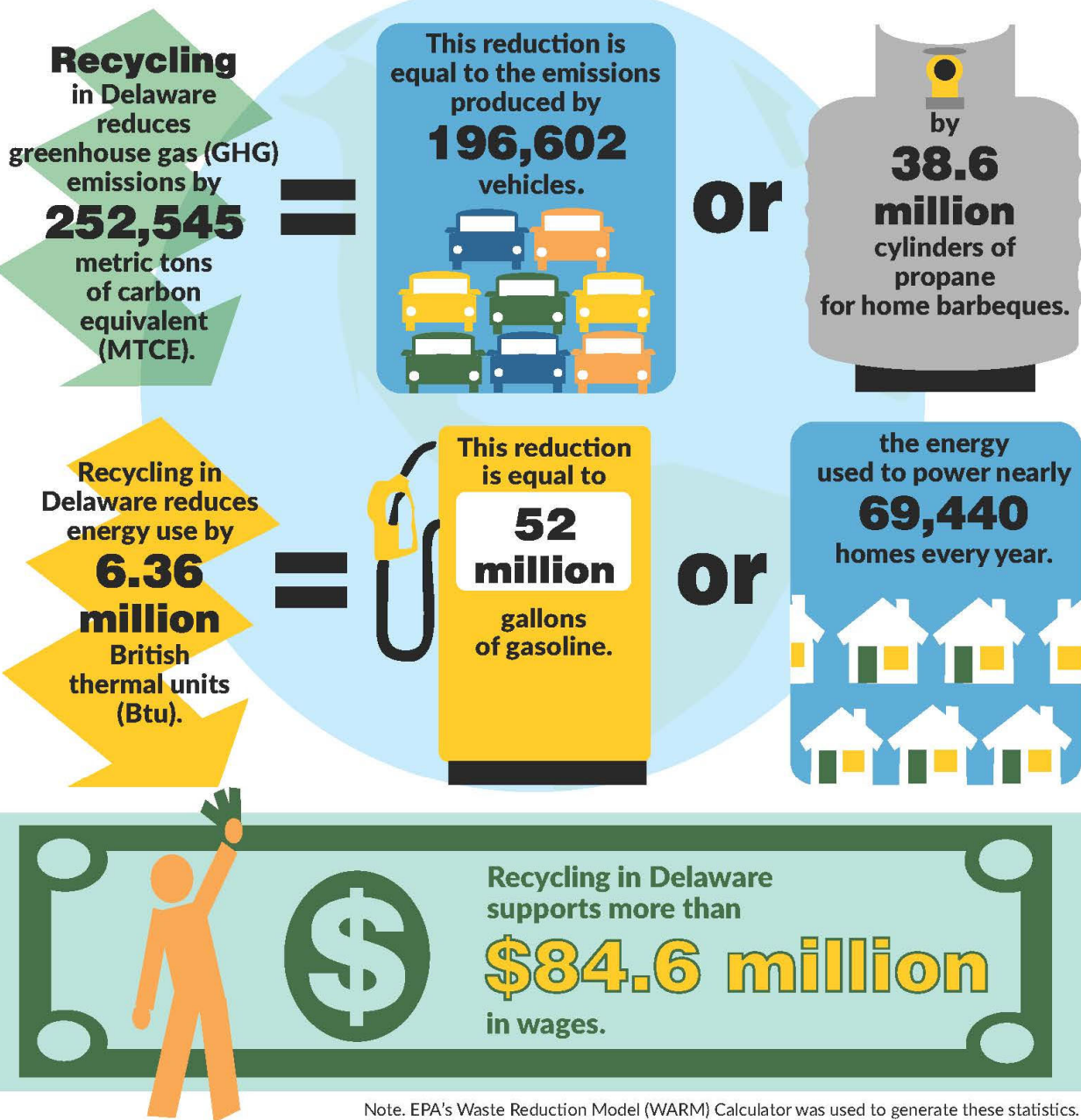
Environmental Value of Delaware's Recycling and Diversion Activities for 2022



Recycling in Delaware Conserves Natural Resources and Strengthens Our Economy

Recycling Saves **454,131** 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.



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

TOTAL COLLECTION EVENTS 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

COLLECTION POINTS



Collection
Events
86 Tons



EPEAT
Recycling Centers
811 Tons



Schools
282 Tons



Non-Profits
17 Tons



Government
79 Tons



1,275 TONS OF
ELECTRONICS RECYCLED



Printers
3,284 Items



Televisions
21,176 Items



Computers
46,158 Items



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

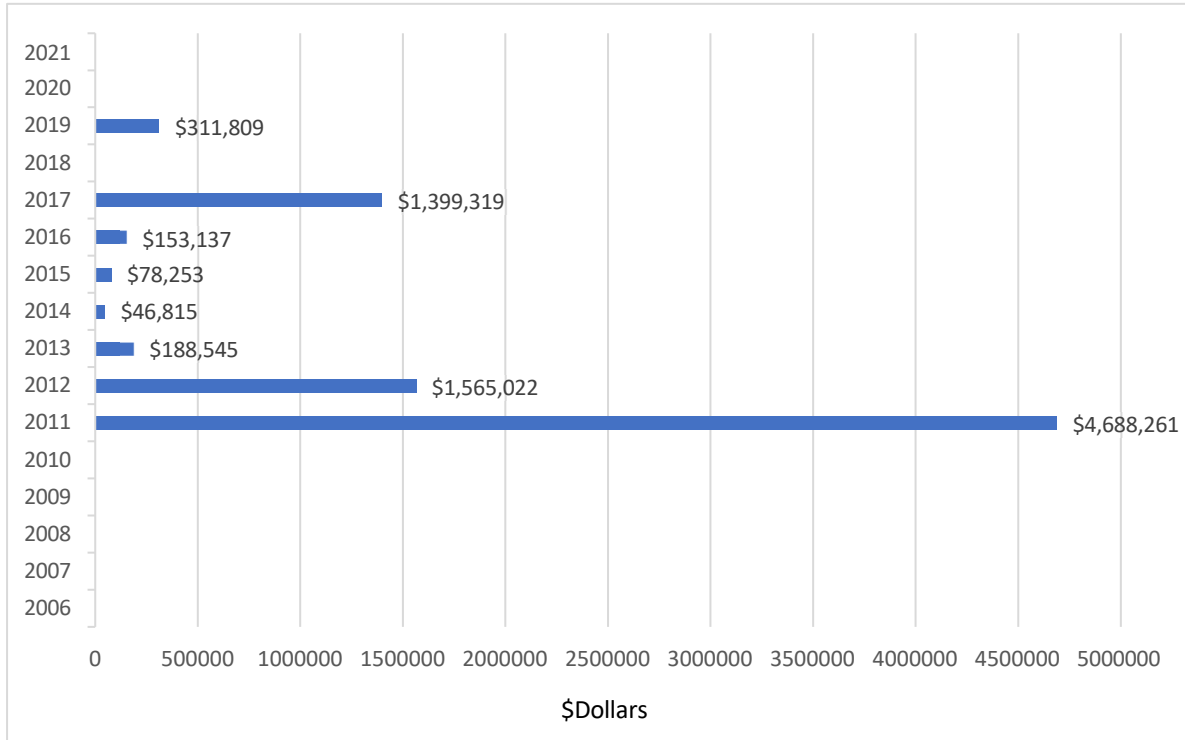
- 1. Promote Legislation that reinforces waste reduction and increased recycling in Delaware so that the goals of the Universal Recycling Law can be achieved.** Support businesses in Delaware that utilize reuse and repair services that help lessen the amount of waste being sent to our landfills.
- 2. Expand your own recycling knowledge and inform your constituency.** Follow DNREC on social media and share valuable content with constituents. Share Delaware's Recyclopeda (<https://de.gov/recyclopeda>) as a resource for learning. Encourage all State employees to take the training module about Recycling in Delaware on the Delaware Learning Center website.
- 3. 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.
- 4. 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 continue to offer grant opportunities that DNREC can apply for to work on infrastructure needs for recycling in DE. These grants and loans will help to 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.
- 5. 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. 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.
- 6. 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.
- 7. Request a status update from the Government Support Services Division of the Office of Management and Budget regarding 7 Del. Admin Code §4106 Environmentally Preferable Purchasing Policy.** Section 12.0 of the above referenced regulations discusses OMB creating a workgroup to coordinate, facilitate and make recommendations under these regulations regarding environmentally preferable procurement opportunities.

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 were allocated by the Grant Program in 2019.

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 FY2024 budget, so the program will remain suspended until funding is allocated during an upcoming budget cycle.

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 plastic 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 2024. 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

DNREC successfully utilized outreach events, social media, and 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.

Marketing Campaign Graphics

Recycling in Delaware poster

RECYCLING IN DELAWARE

ACCEPTABLE

Place only these materials loose, empty, clean and dry in your recycling cart or dumpster:

PAPER
Magazines, junk mail, paper bags, office paper, newspaper, etc.

PLASTIC CONTAINERS
Leave lids on.

CANS, BOTTLES, JARS
Remove jar lids and recycle separately.

KEEP YOUR RECYCLING OUT OF BAGS. PLACE ITEMS LOOSE IN THE CART.

CARTONS, PAPERBOARD, CORRUGATED CARDBOARD

NOT ACCEPTABLE

Keep these items out of your recycling cart or dumpster:

SHREDDED PAPER

FROZEN FOOD PACKAGING

FOOD WASTE

COFFEE CUPS

BATTERIES

STYROFOAM

Visit our website to learn how to recycle these items:

PLASTIC BAGS
Return to retail store.

ELECTRONICS

YARD WASTE

GARBAGE

MIRRORS AND WINDOW GLASS

TANGLERS
Garden hoses, string lights, nylon rope, etc.

SCRAP METAL

DELAWARE RECYCLES
It's second nature.

www.de.gov/recycling

Recyclopeda flyer

The Solution to all Your Recycling Questions

Recyclopeda

Can this be recycled? Or what should I do with it?

DNREC's Recyclopeda search tool can help you find out what can be recycled or how you can properly dispose of unwanted items.

de.gov/recyclopeda

DELAWARE RECYCLES
It's second nature.

At-store drop-off flyer

DROP OFF BAGS HERE

DO NOT put plastic bags or film in your recycling cart at home.

Place items pictured below in the recycling drop-off box provided by this store.

Make sure that all bags are completely empty by removing receipts and other trash.

CHECKOUT OR STORE-BOUGHT PLASTIC BAGS/FILM

Checkout bags

Produce bags

Ice bags

Case overwrap

Bread bags

BAGS AROUND YOUR HOUSE

Zipper sandwich bags

Newspaper sleeves

Dry cleaning bags

Bubble wrap

Air pillows

REMEMBER: Empty, dry plastic bags and film must only be recycled at retail stores and NOT in your curbside recycling cart or dumpster.

DELAWARE RECYCLES
It's second nature.

de.gov/recycling

Social Media sample

Keep recyclables loose

DELAWARE RECYCLES
It's second nature.

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 2022, DNREC continued to develop and refine Recyclopedia to fit the needs of all Delawareans. This search tool is located on de.gov/Recyclopedia. The tool allows residents of Delaware to know exactly where and how to dispose of over 425 common household 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. This included 3,284 printers, 21,176 televisions and 46,158 computers. The program was utilized by not only residents using DSWA Drop-Off Centers but by schools, non-profit organizations, and government agencies.

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 - Through a partnership with DART Container, DSWA collected and recycled 27 tons of polystyrene (#6 foam).

Household Battery Recycling – DSWA collected and recycled 57 tons of household batteries through a

partnership with Call2Recycle.

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 - During FY2022 DSWA excitedly began welcoming back more and more school groups for field trips to the DSWA Environmental Education Building in New Castle. DSWA welcomed 2,186 students to the center and provided environmental education outreach to thousands of other students and adults through in-school presentations and other community events.

At the heart of the program lies a profound commitment to saving natural resources and safeguarding the environment through recycling and reliable solid waste management practices. With a vision to instill a sense of environmental stewardship among students, DSWA combines classroom learning with interactive and hands-on activities, creating a holistic educational experience.

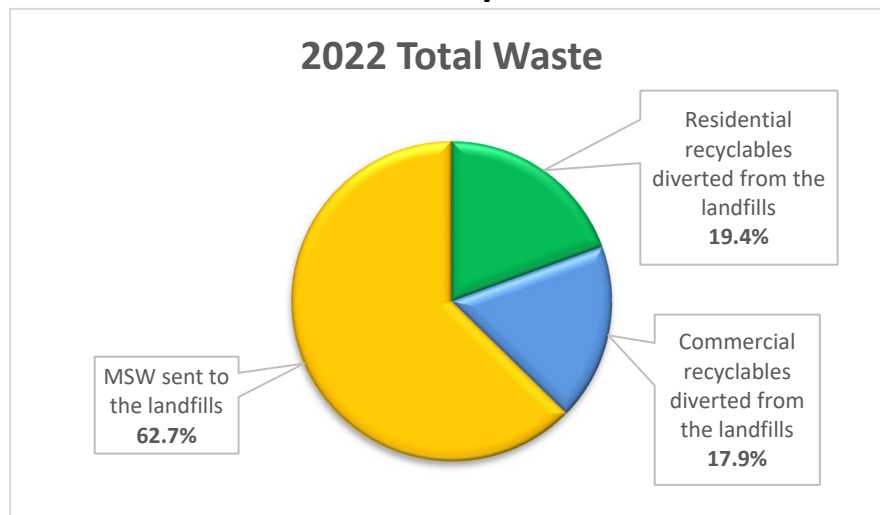
The success of DSWA's Environmental Education Building has paved the way for the expansion of its program. The forthcoming Environmental Education Center in Dover aims to replicate the interactive and classroom learning experience of the original center while making it more accessible to schools in Kent and Sussex County.

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 2022 being the twelfth year of industry reporting. This data includes residential and commercial recycling information including yard waste. In CY2022 the residential recycling rate decreased by 2.1% and the commercial recycling rate increased 2.1% from the 2021 rates. For the full report visit: [Assessment of Municipal Solid Waste Recycling for CY2022](#). 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 – CY2022 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 CY2022

- 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 alcoholic 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.
- 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 – representing a community-based or public-interest group.
- Vacant- one recycling industry seat.
- Vacant – one Delaware Restaurant Association representative