



Cuyahoga County
SOLID WASTE DISTRICT

2026-2040
SOLID WASTE
MANAGEMENT PLAN

Ratified Plan
October 2025

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GLOSSARY

Access – For purposes of this document, access is associated with the availability of waste reduction and recycling services to waste generation within a solid waste management district. In most cases, access is used as the presence or absence of waste reduction and/or recycling opportunities, and as a component of measuring compliance with Goal 1 of the 2020 State Solid Waste Management Plan (2020 State Plan).

Annual District Report – This is a report that Ohio Administrative Code Rule 3745-27-90, requires each solid waste management district to submit to Ohio EPA by June 1 each year. Ohio EPA prescribes the form. Information in the report shall be based on the previous calendar year. This report will evaluate the solid waste management district's implementation of the strategies, programs, and activities listed in the implementation schedule of its approved solid waste management plan and the progress made toward the waste reduction and recycling requirements established in paragraphs (E)(1) and (E)(2) of this rule.

Annual District Report Review Form – A document published by Ohio EPA. The document combines the data reported by a solid waste management district in its annual district report, data reported to Ohio EPA by owners/operators of solid waste facilities in their facility annual reports, and data from adjacent states regarding imports of waste from Ohio. The document provides disposal, recycling, and generation data. Ohio EPA publishes a separate form for each of the 52 solid waste management districts.

Board of County Commissioners – Consists of the County Commissioners for a single county solid waste management district. The Board of County Commissioners is responsible for implementing the **solid waste management district's solid waste management plan (as prepared by the policy committee and ratified by political jurisdictions)**.

Board of Directors – Consists of the county commissioners from all of the counties that comprise a joint solid waste management district. The board of directors is responsible for implementing the **solid waste management district's solid waste management plan (as prepared by the policy committee and ratified by political jurisdictions)**.

Board of Trustees – The governing body for a regional solid waste management authority. The board of trustees consists of the same members as a policy committee. The board of trustees performs all of the functions assigned to a policy committee and board of county commissioners/board of directors for a solid waste management district. Thus, the board of trustees is responsible for preparing, ratifying, and implementing the solid waste management plan.

Broker/Recycling Broker – A business that accepts recyclable materials from collection or processing activities, may or may not pay a fee for the materials, and finds an end-user or another processor to purchase the materials. A broker can also be a processor of recyclable materials that also finds end-users for the processed materials.

Captive Landfill Facility refers to a privately-owned industrial or residual solid waste landfill that is used to dispose of solid waste generated exclusively by the owner of the landfill facility.

Clean Materials Recovery Facility (MRF) – A facility where source separated, recyclables are processed.

Commingled – **Single stream (also known as “fully commingled” or “single-sort”)** recycling refers to a system in which all paper fibers, cardboard, plastics, metals, and other containers are mixed for collection.

Commercial Solid Waste refers to solid waste generated at non-residential buildings, non-industrial businesses, and institutions. This category includes businesses such as shopping centers, retail stores, grocery stores, theaters, gas stations, business offices, hotels, restaurants, and similar service establishments. Institutions include government and non-profit offices, schools, prisons, churches, parks, and similar organizations.

Composting – As defined in Ohio Administrative Code Rule 3734-27-01(C)(3), the process of biological decomposition of solid wastes under controlled conditions resulting in compost. Controlled conditions include but are not limited to grinding, shredding, piling, physical turning, aerating, adding moisture, or other processing of solid wastes.

Composting Facility – As defined in Ohio Administrative Code Rule 3734-27-01(C)(4), a site, location, tract of land, installation, or building used for composting of solid waste in accordance with Chapter 3734 of the Revised Code and rules adopted thereunder.

There are four types of regulated compost facilities:

- Class I Compost Facilities - These facilities can be used to compost the greatest variety of solid wastes including mixed solid waste (glass, food, plastics, pesticides, household cleaners, etc.), food waste, yard waste and other industrial wastes. Class I facilities must have a permit, license and financial assurance.
- Class II Compost Facilities - These facilities can be used to compost only source-separated yard waste, food scraps, animal wastes, specified agricultural wastes, authorized bulking agents and additives, and other alternative materials. Alternative materials (feed stocks, bulking agents and additives) may be used in the compost process only if prior approval is obtained from the Director. Except in limited circumstances, Class II facilities must have a license, financial assurance and registration.
- Class III Compost Facilities - These facilities can be used to compost only source-separated yard waste, animal wastes, specified agricultural wastes, authorized bulking agents and additives. Class III facilities must be registered with Ohio EPA.
- Class IV Compost Facilities - These facilities can be used to compost only source-separated yard waste, authorized bulking agents, and the following additives: urea and bacteria or fungal inoculum. Class IV facilities must be registered with Ohio EPA.

Construction and Demolition Debris (C&DD) is defined in Ohio Administrative Code Rule 3745-400-01(F) as those materials resulting from the alteration, construction, destruction, rehabilitation, or repair

of any manmade physical structure, including, without limitation, houses, buildings, industrial or commercial facilities, or roadways.

"Construction and demolition debris" does not include materials identified or listed as solid wastes, infectious wastes, or hazardous wastes pursuant to Chapter 3734. of the Revised Code and rules adopted under it; or materials from mining operations, nontoxic fly ash, spent nontoxic foundry sand, and slag; or reinforced or non-reinforced concrete, asphalt, building or paving brick, or building or paving stone that is stored for a period of less than two years for recycling into a usable construction material.

Current approved plan – **Used when referring to a solid waste management district's effective solid waste plan.** The current approved plan is the solid waste management plan being updated using this format.

Curbside Recycling Program – A type of recycling opportunity through which source-separated, residential recyclables are collected at the place of residence. Curbside collection typically involves **collecting recyclables in designated containers or in "blue bags" that are collected with regular trash and separated from the trash later.** Curbside recycling programs are divided into two categories - **"Subscription" and "Non-Subscription" services.**

Daily Processing Capacity – This should be the amount of materials or waste, which can be processed during a normal operating day for a facility or activity. If the facility normally operates eight hours per day, the daily processing capacity would be based upon eight hours. If the facility normally operates ten hours per day, the daily processing capacity should be based upon ten hours.

Designated Solid Waste Facility – Those solid waste facilities designated in the initial or amended plan or as are designated pursuant to Ohio Revised Code Sections 343.013, 343.014, or 343.015.

Direct Haul – Waste that is transported from the point of collection to a landfill facility (i.e. the waste is not delivered to a transfer facility).

Dirty Materials Recovery Facility (Dirty MRF) (also known as a mixed solid waste materials recovery facility) – A type of facility where the owner/operator of the facility recovers recyclables from mixed solid waste. Residents are not required to separate recyclable materials from trash because the separation is done at the MRF.

District – The term used in examples in this document to indicate that the text is for a specific solid waste management district (instead of SWMD which is used to refer to solid waste management districts in general).

Diversion – The term used in this document when referring to waste that is reused, recycled, or reduced **instead of being disposed in a landfill. Ohio's waste reduction and recycling rates measure diversion from landfills, not just recycling and reuse.** So, volume reduction due to composting or incinerating waste is included in the reduction and recycling rate.

Drop-Off Recycling – Refers to a type of recycling opportunity that serves as a collection location for recyclable materials. Drop-off recycling locations are typically used by the residential population but may

also be used by businesses and institutions. People who use drop-offs voluntarily transport recyclable materials to the host site.

A drop-off site typically consists of trailers, roll-off containers, or other types of collection containers where people place their recyclable materials. Drop-offs can be manned or unmanned, can collect recyclables as single or multiple streams, can be available on public or private property, can be available to the general public or serve a specific population, and can be provided by public entities, private companies, non-profit organizations or other providers. The drop-off does not have to be provided by the SWMD to be considered part of the recycling infrastructure.

A drop-off is categorized by the number of hours the drop-off is available for use and the population of the jurisdiction in which the drop-off is located. Accordingly, drop-offs are defined as being located in either urban or rural areas and as being available either full-time or part-time.

- An urban area is a political jurisdiction with a residential population of 5,000 or more.
- A rural area is a political jurisdiction with a residential population of less than 5,000.
- Full-time refers to a drop-off that available for at least 40 hours per week
- Part-time refers to drop-off that is available for use less than 40 hours per week but is available at a regularly-scheduled time at least once a month.

There are four potential types of drop-offs:

- An urban, full-time drop-off is located in a political jurisdiction with a residential population of 5,000 or more and is available at least 40 hours per week.
- A rural, full-time drop-off is located in a political jurisdiction with a residential population of less than 5,000 and is available at least 40 hours per week.
- An urban, part-time drop-off is located in a political jurisdiction with a residential population of 5,000 or more and is available for use less than 40 hours per week but is available at a regularly-scheduled time at least once a month.

A part-time, rural drop-off is located in a political jurisdiction with a residential population of less than 5,000 and is available for use less than 40 hours per week but is available at a regularly scheduled time at least once a month.

To be creditable recycling opportunity for achieving Goal 1, a drop-off must meet the criteria for one of the four types of drop-offs above and the general criteria below:

1. The drop-off must collect at least five of the materials designated as highly amendable to recycling in the 2020 State Plan. Those materials are listed in the following table:

Materials Designated to Demonstrate Compliance with Goal #1

Residential Sector	Commercial Sector
Corrugated cardboard	Corrugated cardboard
Newspaper	Office paper
Mixed paper	Mixed paper
Glass containers	Glass containers
Steel containers	Steel containers
Aluminum containers	Plastic containers

Plastic containers	Wood pallets and packaging
	Food waste

2. The drop-off is available to the public and the public can easily find and access the site.
3. The drop-off meets the following minimum standards (unless the SWMD can demonstrate that smaller capacity is adequate):
 - a. Rural drop-offs must provide a minimum of six cubic yards of capacity, and
 - b. Urban drop-offs must provide a minimum of 10 cubic yards of capacity.
4. There are signs that are adequate to, at a minimum:
 - a. Direct the public to the site or provide the location of the site,
 - b. List the materials that are accepted, and
 - c. Provide days and hours of operation (particularly important if the site is available less than 24 hours per day, seven days per week).
5. The drop-off meets the demand of the population for use of the drop-off site (e.g., provides collection containers with adequate capacity to handle the use of the site, is serviced frequently enough given the use of the site, etc.).

Dual stream collection – A recycling system in which fiber (paper and cardboard) is collected in one receptacle and all containers (glass, plastic, metal) are collected in another receptacle.

Electronic Waste or e-waste – Refers to discarded end-of-life and obsolete electrical devices or their parts. Televisions, computers, and cell phones are all common examples of electronic waste.

Excluded Waste (Exempt Waste) – Refers to those wastes that the definition of solid waste [see Ohio Administrative Code Rule 3734-27-01(S)(23)] specifically calls out (i.e. excludes) as not being solid waste. These wastes include slag, uncontaminated earth, non-toxic fly ash, spent, non-toxic foundry sand, material from mining, and construction and demolition debris. Please note that non-toxic fly ash and non-toxic foundry sand and spent foundry sand determined to be non-toxic in accordance with Ohio EPA Division of Surface Water Policy 0400.007.

Facility Data Report – A report published by Ohio EPA annually. The report summarizes data reported to Ohio EPA by owners/operators of solid waste landfills and transfer facilities in facility annual reports.

Fee Exempt Waste – refers to those wastes that Ohio Revised Code Section 3734.57 specifically excludes from being subject to solid waste fees. The fee exempt wastes are listed in ORC Section 3734.57 paragraphs (D)(1) through (D)(7).

Ferrous Metals – Metals that contain iron. Examples include steel, stainless steel, cast Iron, and wrought iron.

Flue Gas Desulfurization (FGD) Waste – Waste generated as a result removing sulfur dioxide (SO₂) from combustion gases generated at coal-fired power plants. As used in this document, the term usually refers to waste generated by wet scrubbers that remove sulfur dioxide (SO₂) emissions using lime.

Generation - This term refers to the amount (weight, volume, or percentage of the overall waste stream) of materials and products as they enter the waste stream and before materials recovery, composting, or combustion takes place.

Generation Fee – A fee established pursuant to Ohio Revised Code Section 3734.573 (A) and assessed on each ton of solid waste generated within the District.

Household Hazardous Waste (HHW) – refers to hazardous waste that is generated in households. Ohio's regulations define household as including all of the following:

1. Single and multiple unit residences
2. Hotels and motels
3. Bunkhouses
4. Ranger stations
5. Crew Quarters
6. Dormitories
7. Campgrounds
8. Picnic grounds
9. Day-use recreation areas

In Ohio, hazardous waste generated at a household is not regulated under the hazardous waste regulations. Thus, homeowners can dispose of HHW in their garbage.

Materials used in the home/apartment such as cleaners, paints, solvents, pesticides, used oil, batteries, and other automotive products that potentially can cause injuries to refuse workers, damage to equipment, and/or harm to the environment if disposed in the solid waste stream. HHW typically exhibits one or more characteristics of hazardous wastes but is exempted from regulation as a hazardous waste because of generation by households.

Incineration – The controlled process by which solid wastes are burned and changed into gases and ash.

Industrial Solid Waste – is defined in OAC Rule 3745-29-01 as a type of solid waste generated by manufacturing or industrial operations and includes, but is not limited to, solid waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and food-related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay and concrete products; textile manufacturing; and transportation equipment.

Materials Recovery Facility (MRF) – A type of facility used for separating, sorting, or processing waste in order to segregate materials with value (e.g. aluminum, glass, plastics) from trash. The type of processing conducted at a MRF can range widely from buildings in which recyclables are sorted primarily by hand to mechanical facilities that recover recyclables from mixed solid waste. There are two types of MRFs – clean MRFs and dirty MRFs. See the definitions of those terms.

Municipal Solid Waste (also referred to as Residential/Commercial Waste) – is defined in Ohio Administrative Code Rule 3745-27-01(M)(5) as a type of solid waste generated from community, commercial, and agricultural operations, including, but not limited to, the following:

1. Solid waste generated by community operations, i.e. wastes derived from households (including single and multiple household residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).
2. Solid waste generated by commercial operations (including stores, offices, restaurants, warehouses, and other non-manufacturing activities).
3. Solid waste generated from agricultural operations (including single-family and commercial farms, greenhouses, and nurseries).
4. Sludge from municipal, commercial or industrial wastewater treatment plants, water treatment plants, and air pollution control facilities that is co-disposed with wastes specified in 1, 2, 3, and 5 in a sanitary landfill facility.
5. Fly and bottom ashes generated from the incineration of municipal solid waste provided the fly ash and bottom ash are not regulated as hazardous wastes.

Non-ferrous – Metals that do not contain iron. Non-ferrous metals include aluminum, brass, copper, nickel, tin, lead, and zinc, as well as precious metals like gold and silver. Non-ferrous metals exhibit properties such as low weight, higher conductivity non-magnetic and resistance to corrosion.

Non-Subscription Curbside Recycling Program – Refers to a type of curbside recycling program that is available to residents automatically within a defined area. To qualify as a non-subscription curbside recycling program for purposes of achieving Goal 1 of the 2020 State Plan, the curbside recycling service must meet all of the following criteria:

- All residents living in at least single-family homes within a jurisdiction (i.e. a city, village, or township) receive the service;
- **Homeowners don't decide whether they receive curbside recycling** – they receive the service whether they want it or not;
- Homeowners may or may not be billed for the service;
- A homeowner can choose not to participate in the curbside service but cannot opt out of paying for the service.
- To be a creditable for purposes of achieving Goal 1, the curbside service must also:
 - be available on a regular basis, at least once every two weeks;
 - collect at least five of the materials designated at highly amendable to recycling in the 2020 State Plan. Those materials are listed in the following table:

Materials Designated to Demonstrate Compliance with Goal #1

Residential Sector	Commercial Sector
Corrugated cardboard	Corrugated cardboard
Newspaper	Office paper
Mixed paper	Mixed paper
Glass containers	Glass containers
Steel containers	Steel containers
Aluminum containers	Plastic containers
Plastic containers	Wood pallets and packaging
	Food waste

North American Industrial Classification System (NAICS) - - NAICS was developed and adopted in 1997 to replace the Standard Industrial Classification (SIC) system. The NAICS is the standard used

to classify business establishments in the United States, Canada, and Mexico to facilitate collecting, analyzing, and publishing data related to the business economy.

Ohio Administrative Code (OAC) – The compilation of rules governing the actions of all state agencies. The OAC is based upon authorities granted in the Ohio Revised Code.

Ohio Revised Code (ORC) – Contains all current statutes of the Ohio General Assembly consolidated into provisions, titles, chapters and sections.

Open dumping – Depositing solid waste into a body of water or onto the ground at a site that is not licensed as a solid waste facility under section 3734.05 of the Ohio Revised Code. For the purpose of a solid waste management plan, open dumps are considered as areas off the road or adjacent to the road or right-of-way on where solid waste is dumped. Road right-of-ways with occasional litter or debris are not considered to be open dumps.

Other Waste – This term, refers to materials disposed in sanitary landfills, which were not classified as **solid wastes**. **In this document, the term “exempt wastes” is used to refer to these materials disposed** in sanitary landfills, which are not classified as solid wastes.

Participation Rate – As defined by the National Recycling Coalition, a participation rate is the number of households that separate out materials for recycling, divided by the total number of households serviced by the recycling program at least once over an established time period or number of collection events. In the case of a curbside recycling program, the participation rate is commonly measured by tracking whether a particular household (by address), sets out materials during the time period examined. In contrast, the **set-out rate is defined as a count of the “set-outs” on the observed collection day, as a percent of the total number of households or entities serviced.**

Pay-As-You-Throw (PAYT) – (see definition for Volume-Based Billing)

Plan – **A term used to refer to a solid waste management district’s solid waste management plan.**

PPD – The acronym for pounds per person per day.

Policy committee – The group that is responsible for preparing and ratifying a solid waste management plan for a solid waste management district. As prescribed in Ohio Revised Code Section 3734.54(B), a policy committee consists of the following members, one from each of the counties in the solid waste management district:

- The president of the board of county commissioners or his designee
- The chief executive officer (or his designee) of the municipal corporation with the largest population in the county
- A member representing townships
- The health commissioner (or his designee) of the health district with the largest territory within the county
- A member representing industrial, commercial, or institutional generators
- A member representing the general interest of citizens
- One member representing the public.

If there is an even number of counties in the solid waste management district, then the policy committee must have an additional member representing the public.

The policy committee for a single county solid waste management district has seven members. The policy committee for a four-county solid waste management has 29 members (seven per county plus one additional public representative).

Processing Capacity – For purposes of this document, processing capacity refers to the design capacity of the facility (or the maximum amount of materials which could be processed), and not the actual amount of materials processed during a given time period.

Quarterly Fee Report – The report solid waste management districts submit to Ohio EPA to account for revenues and expenditures during the previous three months. A solid waste management districts submits four reports annually using a form prescribed by Ohio EPA (see Ohio Revised Code Section 3734.575).

Recycling - The systematic collection, sorting, decontaminating and returning of waste materials to commerce as commodities for use or exchange. Recycling also means to use, reuse or reclaim a material. It does not include incineration.

Reference Year – The calendar year selected by the policy committee/board of trustees as the year for collecting data that will serve as baseline data for a solid waste management plan.

The reference year is usually the calendar year prior to the calendar year the policy committee is required to begin updating a solid waste management plan. For example, if the policy committee is required to begin preparing its update in 2021, then the policy committee would select 2020as the reference year.

Regional Solid Waste Management Authority - One of two structures a county/counties can form for purposes of complying with Ohio Revised Code Section 3734.52. The other structure is a solid waste management district.

A regional solid waste management authority is governed by one group – the board of trustees.

Residential Solid Wastes – Solid wastes generated at residential dwellings, such as single-family homes, apartment complexes, condominiums, mobile homes. Domiciles such as nursing homes, campgrounds, and other types of group quarters and institutions are considered to generate commercial waste.

Residential/Commercial Solid Waste – Refers to the combination of waste generated by the residential and commercial sectors. Residential/commercial solid waste is the same as municipal solid waste.

Reuse –Taking an object or material that would otherwise be disposed and using it for its original purpose or a different purpose, without converting the object or material. "Reuse" does not include using an object or material as fill. Reuse differs from recycling which is the breaking down of the material into raw materials which are used to make a new item.

Resource Recovery – This term refers to the conversion of solid waste into energy, or some material, which can be used to create energy at any stage before ultimate disposal. As used in this document, resource recovery does not include the recovery of materials through mechanical and advanced technology methods.

Salvage dealer/motor vehicle salvage dealer –Any person whose primary business is selling recovered motor vehicle parts.

Scrap dealer - The owner or operator of a business that purchases or receives scrap metal for the purpose of sorting, grading, and shipping metals to third parties for direct or indirect melting into new products.

Set-out Rate – The National Recycling Coalition defines a set-out rate as the number of households that set out materials on their assigned collection day, divided by the total number of households served. A set-out rate is a measurement commonly used in assessing curbside collection programs.

Single Stream Recycling – Refers to a recycling system in which all recyclable materials are collected in one container (i.e. commingled) instead of separated into individual commodities (such as newspaper, corrugated cardboard, plastics, glass, etc.).

Solid Waste Management District, SWMD, or District – One of two structures a county/counties can form for purposes of complying with Ohio Revised Code Section 3734.52. The other structure is a regional solid waste management authority.

A solid waste management district is a county which has established a resolution, or joint counties which have entered into an agreement for the purposes of preparing, adopting, submitting, and implementing a solid waste management plan for the county or joint counties and for the purposes of providing for, or causing to be provided for, the safe and sanitary management of solid waste within all of the incorporated and unincorporated territory of the county or joint counties and in compliance with Chapters 343. and 3734. of the Revised Code.

A solid waste management district is governed by two groups – a policy committee and a board of county commissioners/board of directors.

Solid Waste – Unwanted residual solid or semi-solid materials resulting from industrial, commercial, agricultural, and community operations, but excluding earth or material from construction, mining, or demolition operations, or other waste materials of the type that would normally be included in demolition debris, non-toxic foundry sand, slag, and other substances that are not harmful to public health. It includes, but is not limited to, garbage, tires, combustible and non-combustible material, street dirt, and debris. Solid waste does not include any material that is an infectious waste or a hazardous waste.

Source Reduction – Any effort to reduce, at the source, the quantity of waste generated, toxic chemical use, or any release to the environment. Source reduction in generation of commercial or industrial wastes could result from process modifications, improvement in feedstock purity, better operating and management practices, and increases in the efficiency of machinery. It includes reducing the amount of materials entering the waste stream by voluntary or mandatory programs to eliminate the initial generation of waste.

Source separated recyclables - Materials that have been separated from trash at either the point of generation or the point of collection for the purpose of recycling the materials.

Standard Industrial Classification (SIC) Codes – Refers to the system established by the U.S. government to classify business establishment. A SIC code consists of a four-digit numerical code that the government assigned to a business establishment to identify the primary business of the establishment. In 1997, the SIC system was replaced with the NAICS system. Standard Industrial Classification used to categorize industries, institutions, and businesses according to the product manufactured or services offered.

State Solid Waste Management Plan (also referred to as State Plan) – Ohio Revised Code Section 3750 requires the Ohio Environmental Protection Agency with the advice of the solid waste management advisory council, to prepare the state solid waste management plan. The law prescribes eight purposes for the state plan. The **main purpose of the state plan is to reduce Ohio’s reliance on** using solid waste landfill facilities to manage solid waste. To do this, the state plan establishes the waste reduction and **recycling goals for both the State and Ohio’s 52 solid waste management districts (SWMDs).**

Subscription Curbside Recycling Program – Refers to a type of curbside recycling service through which residents must take a voluntary action to sign up for and agree to pay for the service. To qualify as a subscription curbside recycling program for purposes of achieving Goal 1 of the 2020 State Plan, the curbside recycling service must meet all of the following criteria:

- The service is offered to all residents living in at least single-family homes within the jurisdiction (i.e. a city, village, or township);
- **Homeowner’s decide whether to receive curbside recycling service. The only homeowners that** have the ability to use a curbside program are those that contact a service provider to sign-up for the curbside program.
- The only homeowners that can participate in the service are those that pay for the service.
- The curbside recycling service must be available on a regular basis, at least once every two weeks.

The program must collect at least five of the materials designated as highly amendable to recycling in the 2020 State Plan. Those materials are listed in the table below:

Materials Designated to Demonstrate Compliance with Goal #1

Residential Sector	Commercial Sector
Corrugated cardboard	Corrugated cardboard
Newspaper	Office paper
Mixed paper	Mixed paper
Glass containers	Glass containers
Steel containers	Steel containers
Aluminum containers	Plastic containers
Plastic containers	Wood pallets and packaging
	Food waste

SWMD – The acronym for Solid Waste Management District.

TPD – The acronym for Tons Per Day.

TPY – The acronym for Tons Per Year.

Transfer Station/Transfer Facility – A facility, which receives deliveries of solid waste by local collection vehicles and provides for transfer to larger vehicles, which deliver wastes more economically to resource recovery or landfill facilities. As defined in Ohio Administrative Code Rule 3745-27-01(T)(28), any site, location, tract of land, installation, or building that is used or intended to be used primarily for the purpose of transferring solid wastes that are generated off the premises of the facility from vehicles or containers into other vehicles or containers for transportation to a solid waste disposal facility. The term does not include any facility that consists solely of portable containers that have an aggregate volume of fifty cubic yard or less nor any facility where legitimate recycling activities are conducted. The term does not include any facility that accepts scrap tires other than scrap tires which are accepted incidental to a mixed solid waste shipment.

Volume-Based Billing – A trash collection service where the amount a household pays for trash collection depends on the amount of trash the household disposes. The more waste the household throws away, the more the household pays for trash service. Volume-based billing treats trash collection like a utility, such as electricity or natural gas.

Volume Reduction – Activities such as incineration, which reduce the volume of waste to be disposed.

Waste Generation – This term refers to the amount (weight, volume, or percentage of the overall waste stream) of materials and products as they enter the waste stream and before materials recovery, composting, or combustion takes place.

Waste Minimization – Any effort to reduce or recycle the quantity of hazardous waste generated, and where feasible, to reduce or eliminate toxicity. Treatment of hazardous waste is not waste minimization, unless such treatment is part of a recycling process. (Please note that the definition of this term as used in this document does not include solid wastes.)

Waste Reduction – Refers to activities that decrease the quantities of waste disposed in landfills and includes recycling, volume reduction due to composting waste and volume reduction due to incinerating waste.

Waste Stream – The amount of materials that are destined for disposal. The waste stream may refer to specific, homogenous material or numerous materials mixed together.

White Goods – Discarded large appliances (such as refrigerators, ovens, dish washers, washing machines, clothes driers, hot water heaters, etc.).

SECTION I. SOLID WASTE MANAGEMENT DISTRICT INFORMATION

A. DISTRICT INFORMATION

Table i-1. Solid Waste Management District Information

SWMD Name	Cuyahoga County Solid Waste District
Member Counties	Cuyahoga County
Coordinator's Name (main contact)	Elizabeth Biggins-Ramer
Job Title	Executive Director
Street Address	4750 East 131 Street
City, State, Zip Code	Garfield Heights, OH 44105
Phone	216-443-3749
Fax	216-478-0014
E-mail address	ebiggins-ramer@cuyahogacounty.us
Webpage	www.CuyahogaRecycles.org

Table i-2. Members of the Policy Committee/Board of Trustees

Member Name	Representing
<i>Cuyahoga County</i>	
Yvonne Conwell, Cuyahoga County Council District 7	County Representative
Nicole Daily Jones, Mayor, City of North Olmsted	West Shore Region Representative
Michael Dever, Director, Cuyahoga County Public Works	County Representative
David Weiss, Mayor, City of Shaker Heights	Heights Region Representative
Marie Gallo, Mayor, City of Parma Heights	South Central Region Representative
Tim Weber, MetroHealth	Private Sector Representative
Edward Orcutt, Mayor, City of Brook Park	Southwest Region Representative
Mayor Bibb - Joyce Pan Huang, Director, Cleveland City Planning Commission	Cleveland Region Representative
Matthew Burke, Mayor, City of Garfield Heights	Chagrin / Southeast Region Representative
Sunny Simon, Cuyahoga County Council District 11	County Representative
Gregory Kurtz, Mayor, City of Independence	Cuyahoga Region Representative
Georgine Welo, Mayor, City of South Euclid	Hillcrest Region Representative
Michelle Wilhelm	Citizen Representative

As of May 2025

Table i-3 Chairperson of the Policy Committee or Board of Trustees

Name	Michael Dever
Street Address	2079 East Ninth Street
City, State, Zip Code	Cleveland, OH 44115
Phone	216-348-3800
Fax	N/A
E-mail address	mdever@cuyahogacounty.us

Table i-4 Board of County Commissioners/Board of Directors

Director Name	Representing	Chairperson/President
Sunny Simon	Cuyahoga County Council	X
Valerie Katz	Cuyahoga County Office of Sustainability (for Cuyahoga County Executive)	
Michael Dever	Cuyahoga County Office of Public Works	

B. TECHNICAL ADVISORY COMMITTEE

The District did not establish a technical advisory committee (TAC) for the preparation of this Plan Update.

C. PLAN PREPARED BY



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CHAPTER 1: INTRODUCTION

A. BRIEF INTRODUCTION TO SOLID WASTE PLANNING IN OHIO

In 1988, Ohio faced a combination of solid waste management problems, including rapidly declining disposal capacity at existing landfills, increasing quantities of waste being generated and disposed, environmental problems at many existing solid waste disposal facilities, and increasing quantities of waste **being imported into Ohio from other states. These issues combined with Ohio’s outdated and incomplete solid waste regulations caused Ohio’s General Assembly to** pass House Bill (H.B.) 592. H.B. 592 dramatically revised Ohio’s outdated solid waste regulatory program and established a comprehensive solid waste planning process.

There are three overriding purposes of this planning process: to reduce the amount of waste Ohioans generate and dispose of; to ensure that Ohio has adequate, protective capacity at landfills to dispose of **its waste; and to reduce Ohio’s reliance on landfills.**

B. REQUIREMENTS OF COUNTY AND JOINT SOLID WASTE MANAGEMENT DISTRICTS

1. Structure

As a result of H.B. 592, each of the 88 counties in Ohio must be a member of a solid waste management district (SWMD). A SWMD is formed by county commissioners through a resolution. A board of county commissioners has the option of forming a single county SWMD or joining with the board(s) of county commissioners from one or more other counties to form a multi county SWMD. Ohio currently has 52 SWMDs. Of these, 37 are single county SWMDs and 15 are multi county SWMDs.¹

A SWMD is governed by two bodies. The first is the board of directors which consists of the county commissioners from all counties in the SWMD. The second is a policy committee. The policy committee is responsible for developing a solid waste management plan for the SWMD. The board of directors is **responsible for implementing the policy committee’s solid waste management plan.**²

The Cuyahoga County Solid Waste District was formed as a single county district on August 29, 1988, by the Board of Commissioners of Cuyahoga County.

Solid Waste District Governance

Solid waste districts are governed by two bodies – a board of directors and a policy committee. The policy committee is responsible for developing the solid waste management plan while the board of directors is responsible for implementing the plan. The Cuyahoga County Solid Waste District Board of Directors and Policy Committee are uniquely structured.

¹Counties have the option of forming either a SWMD or a regional solid waste management authority (Authority). The majority **of planning districts in Ohio are SWMDs, and Ohio EPA generally uses “solid waste management district”, or “SWMD”, to refer to both SWMDs and Authorities.**

²In the case of an Authority, it is a board of trustees that prepares, adopts, and submits the solid waste management plan. Whereas a SWMD has two governing bodies, a policy committee and board of directors, an Authority has one governing body, **the board of trustees. The board of trustees performs all of the duties of a SWMD’s board of directors and policy committee.**

The Cuyahoga County Solid Waste Policy Committee consists of the 11-member Cuyahoga County Planning Commission plus two public representatives. This structure differs from that specified in Ohio Revised Code Section 3734.54 due to a waiver granted by Ohio EPA that provides more municipal input into the solid waste planning process.

The Cuyahoga County Solid Waste District Board of Directors differs from other districts that are governed by county commissioners. When Cuyahoga County became a charter county in 2011, its county commissioner governance structure was replaced with that of a county executive and county council. As a result, the Solid Waste District Board was changed.

2. Solid Waste Management Plan

In its solid waste management plan, the policy committee must, among other things, demonstrate that the SWMD will have access to sufficient landfill capacity for the first 8 years of the planning period to **manage all of the SWMD's solid wastes that will be disposed. The solid waste management plan must also show how the SWMD will meet the waste reduction and recycling goals established in Ohio's state solid waste management plan and present a budget for implementing the solid waste management plan.**

Solid waste management plans must contain the information and data prescribed in Ohio Revised Code (ORC) 3734.53, Ohio Administrative Code (OAC) Rule 3745-27-90. Ohio EPA prescribes the format that details the information that is provided and the manner in which that information is presented. This format is very similar in concept to a permit application for a solid waste landfill.

The policy committee begins by preparing a draft of the solid waste management plan. After completing the draft version, the policy committee submits the draft to Ohio EPA. Ohio EPA reviews the draft and provides the policy committee with comments. After **revising the draft to address Ohio EPA's comments**, the policy committee makes the plan available to the public for comment, holds a public hearing, and **revises the plan as necessary to address the public's comments.**

Next, the policy committee ratifies the plan. Ratification is the process that the policy committee must **follow to give the SWMD's communities the opportunity to approve or reject the draft plan.** Once the plan is ratified, the policy committee submits the ratified plan to Ohio EPA for review and approval or disapproval. From start to finish, preparing a solid waste management plan can take up to 33 months.

The policy committee is required to submit periodic updates to its solid waste management plan to Ohio EPA. How often the policy committee must update its plan depends upon the number of years in the planning period. For an approved plan that covers a planning period of between 10 and 14 years, the policy committee must submit a revised plan to Ohio EPA within three years of the date the plan was approved. For an approved plan that covers a planning period of 15 or more years, the policy committee must submit a revised plan to Ohio EPA within five years of the date the plan was approved.

Cuyahoga County's initial Solid Waste Management Plan was approved by the Director of the Ohio Environmental Protection Agency on July 8, 1994. Subsequent Plan Updates were approved on October 6, 2000, November 8, 2006, May 1, 2013, and August 23, 2019. This plan update is the fifth.

C. DISTRICT OVERVIEW

The Cuyahoga County Solid Waste District (CCSWD) is responsible for implementing the solid waste management plan through programs and services offered to the public. The District is funded by a **"generation fee" which is a fee of \$2.00 levied on each ton of waste produced in Cuyahoga County and**

landfilled in Ohio. The generation fee is approved by communities each time it ratifies the plan. Cuyahoga County's fee is one of the lowest in Ohio and has only increased two times since the District was created. That was in 2007 when the fee was increased from \$1.00 per ton to \$1.50 and in 2023 was increased to \$2.00 per ton which is still \$2.75 less than the state average of \$4.75.

The CCSWD strives to operate efficiently so it may keep its fee low while still funding all plan elements. It benefits from having a large infrastructure of private solid waste management and recycling service providers. This means that the District can focus on providing technical assistance and educational services and only become a service provider in cases where there is no private sector company offering the service such as with its household hazardous waste collection.

The CCSWD employs a staff of seven. Our vision is for Cuyahoga County to be a national leader in the movement toward a world without waste and our mission is to educate, empower and enable people across Cuyahoga County to reduce, reuse and recycle. We practice the following core values daily.

Responsibility

We advocate for policies and legislation that reduce waste and support best practices in solid waste management.

Integrity

We act in an honest, ethical, professional, and respectful manner with each other and our community, taking personal responsibility and being accountable for achieving results.

Financial Stewardship

We strive to be wise and responsible caretakers of the financial resources entrusted to us.

Collaboration

We work in partnership with individuals, communities, businesses and institutions to develop and implement effective waste management practices.

Education

We continually educate ourselves and our community regarding recycling and best practices regarding sustainable materials management.

D. WASTE REDUCTION AND RECYCLING GOALS

As explained earlier, a SWMD (refers to both SWMDs and Authorities) must achieve goals established in the state solid waste management plan. The current state solid waste management plan is the *2020 Solid Waste Management Plan*. The 2020 State Plan established ten goals as follows:

1. The SWMD shall provide its residents and commercial businesses with access to opportunities to recycle solid waste. At a minimum, the SWMD must provide access to recycling opportunities to 80% of its residential population in each county and ensure that commercial generators have access to adequate recycling opportunities.
2. The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector.

3. The SWMD shall provide the following required programs: a website; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.
4. The SWMD shall provide education, outreach, marketing and technical assistance regarding reduction, recycling, composting, reuse and other alternative waste management methods to identified target audiences using best practices.
5. The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.
6. The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.
7. The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.
8. **The SWMD will use U.S. EPA's Waste Reduction Model (WARM) (or an equivalent model) to evaluate the impact of recycling programs on reducing greenhouse gas emissions.**
9. The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.
10. The SWMD shall report annually to **Ohio EPA regarding implementation of the SWMD's solid waste management plan.**

All ten SWMD goals in this state plan are crucial to furthering solid waste reduction and recycling in Ohio. However, by virtue of the challenges posed by Goals 1 and 2, SWMDs typically have to devote more resources to achieving those two goals than to the remaining goals. Thus, Goals 1 and 2 are considered to be the primary goals of the state plan.

Each SWMD is encouraged to devote resources to achieving both goals. However, each of the 52 SWMDs varies in its ability to achieve both goals. Thus, a SWMD is not required to demonstrate that it will achieve both goals. Instead, SWMDs have the option of choosing either Goal 1 or Goal 2 for their solid waste management plans. This affords SWMDs with two methods of demonstrating compliance with the **State's solid waste reduction and** recycling goals. Many of the programs and services that a SWMD uses to achieve Goal 1 help the SWMD make progress toward achieving Goal 2 and vice versa.

A SWMD's solid waste management plan will provide programs to meet up to eight of the goals. Goal 9 (market development) is an optional goal. Goal 10 requires submitting annual reports to Ohio EPA, and no demonstration of achieving that goal is needed for the solid waste management plan.

See Chapter 5 and Appendix I for descriptions of the programs the SWMD will use to achieve the nine goals.

CHAPTER 2: DISTRICT PROFILE

Chapter Purpose

This chapter provides context for District's solid waste management plan by providing an overview of general characteristics of the District including:

- its communities and political jurisdictions;
- its population and population trends;
- its available infrastructure for managing waste and recyclable materials;
- its commercial businesses and institutional entities;
- its industrial businesses; and
- any other unique characteristics that may affect waste management within the District.

Understanding these characteristics helps the District make decisions about the types of programs that will most effectively address the needs of its residents, businesses and other waste generators. For instance, population distribution, density, and trends affect the types of recycling opportunities that make sense for a particular community and the county.

The make-up of the commercial and industrial sectors within the county influences the types of wastes generated and the types of programs the District provides to assist those sectors with their recycling and waste reduction efforts.

Unique circumstances, such as having high numbers of multi-family properties, or hosting a large university, sports venue, or health care institution can impact waste generation and present challenges and opportunities for implementing waste reduction and recycling programs.

The District must consider all these characteristics when developing its overall waste management strategy.

A. PROFILE OF POLITICAL JURISDICTIONS

Counties in the Solid Waste Management District

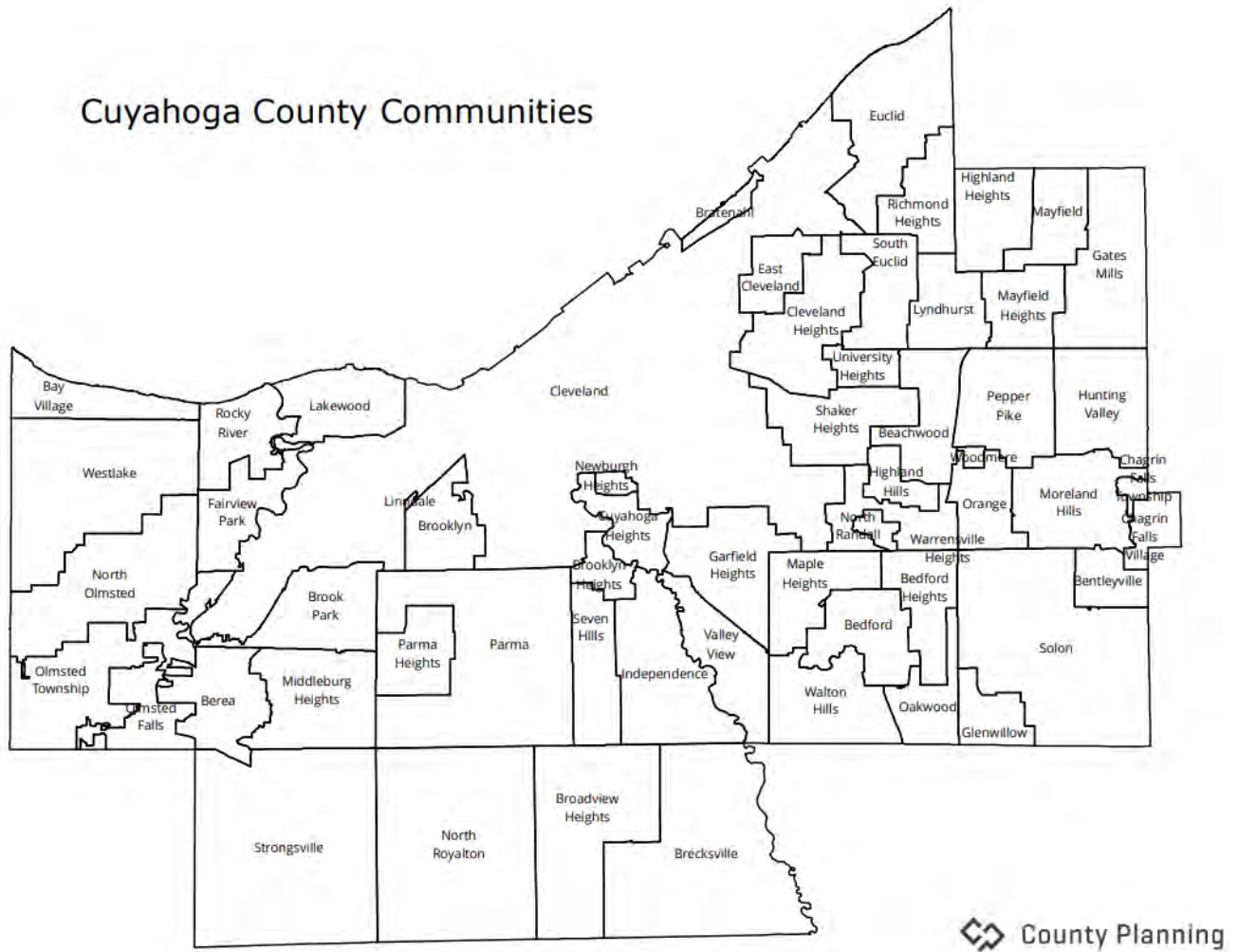
The Cuyahoga County Solid Waste District is a single-county district established on August 29, 1988, by the Board of Commissioners of Cuyahoga County. The Cuyahoga County Solid Waste Management District (referred to herein as the "District" or "Cuyahoga County") includes all incorporated and unincorporated territory in Cuyahoga County and a small portion of neighboring Geauga County (Village of Hunting Valley). There have been no changes in the configuration of the District since the District's original solid waste management plan was approved.

Cuyahoga County is an urban county in Northeast Ohio encompassing 458.3 square miles with 78.29% of its land area currently covered with high intensity and low intensity development according to the Ohio DSA, Office of Research.

County Overview

Cuyahoga County is divided into 59 communities - 38 municipalities, 19 villages and 2 townships. The largest (by population) is the City of Cleveland, followed by the cities of Parma, Lakewood, Euclid and Strongsville. There are 616,424 housing units county-wide. 58.2% are owner occupied, 41.8% are renter occupied and 10.6% are vacant according to the Ohio DSA.

Figure 2-1: Cuyahoga County Communities



B. POPULATION

Reference Year Population

The population of Cuyahoga County in the Plan reference year of 2022 was 1,236,174 (after adjusting upwards to include the 133 residents in the Geauga County portion of Hunting Valley). In 2022, Cuyahoga County ranked 2nd in **terms of population out of Ohio’s 88 total counties**¹. Ohio law requires that the entire population of a municipality located in more than one solid waste management district be added to the solid waste management district containing the largest portion of the jurisdiction’s population.

Table 2-1 shows the largest community in the county and the size of the community relative to the total population of the county. The largest community in Cuyahoga County accounts for 29% of the SWMD’s population.

¹ Ohio Development Services Agency Census 2020, https://devresearch.ohio.gov/reports_census2020.htm

Table 2-1 Population Distribution in the Reference Year

County		Largest Policial Jurisdiction		
Name	Population	Community Name	Population	Percent of Total County Population
Cuyahoga County	1,236,174	Cleveland city	361,607	29%

Population Distribution

Table 2-2 shows the percentages that people living in the Cities, Villages, and Unincorporated Townships comprise of the total county population.

Table 2-2 Population Distribution

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Cuyahoga County	96%	3%	1%

Population Change

According to the United States Census Bureau between the years 2020 and 2022, population for **Cuyahoga County declined by 2.3 percent, or an average of 0.76% per year. The District’s jurisdiction** is projected to continue that population trend, reflecting a 9.8% decline over the 2026-2040 planning period, or an average of 0.7% per year (7,775 persons).

Implications for Solid Waste Management

The profile of the District can provide key insights into solid waste management planning. Factors such as population density, housing characteristics, and poverty rates apply when assessing which programs and program structure are needed to meet residential needs for solid waste management.

Based on the population projections, the District does not foresee any major implications related to managing solid waste and providing recycling programs during the planning period. Population is projected to decrease through the planning period, but per capita waste generation is projected to increase.

Population affects waste generation rates but factors of population growth such as household income, people per household, and economic activity also contribute. Economic activity and population growth affect household income and household income impacts per capita waste generation; and higher income households tend to produce higher amounts of waste. But it is believed that higher income households tend to achieve higher participation rates of recycling. Not to mention the demographic make-up of households **in today’s society. These complex factors are all simultaneously involved and affect each other** because they dynamically occur over time.

C. PROFILE OF COMMERCIAL AND INSTITUTIONAL SECTOR

There are approximately 32,427 commercial businesses and institutions in Cuyahoga County. The top employers include the health care, insurance and financial industries, along with universities and the public sector. Table 2.3 lists the largest employers in the commercial and institutional sector.

Table 2-3 Top Employers by Employment in Commercial and Institutional Sectors

Company Name	NAICS	Employees
Cleveland Clinic	62	44,665
University Hospitals	62	24,636
Minute Men Cos	56	21,802
U.S. Office of Personnel Management	92	15,342
Progressive Corp.	52	12,849
Walmart	45	12,400
Giant Eagle	44	9,806
State of Ohio	92	7,734
Cuyahoga County	92	7,336
City of Cleveland	92	7,244

Source: **Crain's List | 100 Largest Northeast Ohio Employers, 2022**

Table 2.4 shows the number of commercial/institutional establishments within each North American Industry Classification System (NAICS) category.

Table 2-4: Commercial/Institutional Establishments

NAICS	NAICS Description	Number of Commercial/Institutional Establishments
42	Wholesale Trade	1,405
44-45	Retail Trade	4,109
48-49	Transportation and Warehousing	781
51	Information	884
52	Finance and Insurance	1,935
53	Real Estate and Rental and Leasing	1,857
54	Professional, Scientific, and Technical Services	3,740
55	Management of Companies and Enterprises	89
56	Administrative and Support and Waste Management and Remediation Services	1,302
61	Educational Services	1,069
62	Health Care and Social Assistance	6,408
71	Arts, Entertainment, and Recreation	790
72	Accommodation/Food Service	3,176
81	Other Services (Except Public Administration)	3,883
92	Public Administration	999

Source: U.S. Business Database. Rep. Reference USA. Web. 29 Feb. 24 and Ohio Department of Development Cuyahoga County Profile, 2023 Edition

D. PROFILE OF INDUSTRIAL SECTOR

There are approximately 4,078 industrial businesses operating in Cuyahoga County.

Table 2-5: 2022 Cuyahoga County Industrial Statistics

NAICS Code	NAICS Description	Number of Industrial Businesses
22	Utilities	79
31	Manufacturing: Food and Apparel	632
32	Manufacturing: Wood, Paper, Printing, Chemical, and Plastics	880
33	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.	2,487

Source: U.S. Business Database. Rep. Reference USA. Web. 29 Feb. 24 and Ohio Department of Development Cuyahoga County Profile, 2023 Edition

E. OTHER CHARACTERISTICS

Cuyahoga County is known nationally for its Rock and Roll Hall of Fame, renowned arts and culture scene and its sports teams. It is home to many colleges and universities and is a center for healthcare services and innovation. It is also an advanced manufacturing hub and a center for transportation, distribution and logistics. This vital commercial activity results in significant waste generation. This waste is managed by a complex and well-established infrastructure of collection, transfer, disposal, recycling and composting services. This infrastructure is documented in Chapter 4 and further detailed in Appendices B and H.

CHAPTER 3: WASTE GENERATION

Chapter Purpose

This chapter summarizes Cuyahoga County's historical and projected solid waste generation. Understanding waste generation is an important first step in making solid waste management decisions. Thus, the District analyzed the amounts and types of waste that were generated within Cuyahoga County in the past and projected those that could be generated in the future.

The District calculated waste generation for two sectors: Residential/Commercial and Industrial. Residential/Commercial solid waste is municipal solid waste generated by and within a typical community. This includes waste generated by residents, schools, institutions and commercial establishments like restaurants, retail stores and offices. Industrial solid waste is generated by manufacturing operations.

The District calculated how much waste each sector generated by combining the quantities of solid waste disposed in landfills with the quantities of materials that were recycled or composted. The District obtained recycling data by surveying communities, commercial and industrial businesses and recycling **and composting facilities. Since responding to a survey is voluntary, the District relies on an entity's ability** and willingness to provide recycling data. When entities do not respond to surveys, the District only sees a partial picture of recycling activity. The amount of survey data that is obtained each year has a direct **effect on the District's recycling and waste generation rates.**

The District obtained disposal data from Ohio EPA. Owners/operators of solid waste facilities submit annual reports to Ohio EPA. In these reports, owners/operators summarize the types, origins, and amounts of waste that were accepted at their facilities. Ohio EPA adjusts the reported disposal data by adding in waste disposed in out-of-state landfills.

The District analyzed historic quantities of waste generated to project future waste generation. The details of this analysis are presented in Appendix G. The District then used the projections to make **decisions on how best to manage Cuyahoga County's waste** and ensure there will be adequate waste management capacity through landfills, compost facilities and recycling facilities.

A. SOLID WASTE GENERATED IN REFERENCE YEAR

Waste generation refers to the volume of materials that enter the waste stream before recycling, composting, landfilling or other waste management. To estimate waste generation, Cuyahoga County SWMD collected data from several sources including:

- Ohio EPA Facility Data – some facilities are required to submit annual reports to Ohio EPA.
- Ohio EPA MRF Reports – **Ohio EPA collects data from commercial “big box stores” and material recovery facilities.**
- Ohio EPA Compost Facility Data – composter facilities and food haulers/grocer data reported to Ohio EPA.
- District surveys of commercial and industrial businesses, recyclers, buybacks, brokers, and scrap dealers – these surveys are voluntary and rely on the willingness of any company to provide the data.
- **District's annual Residential Recycling Report, which is compiled by each community and outlines that community's** reduction activities.

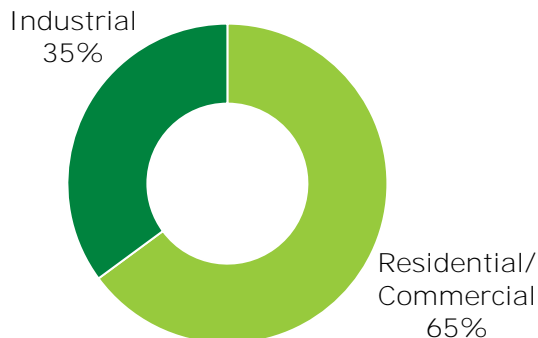
Waste Generation = Wastes Disposed + Wastes Diverted

In 2022, Cuyahoga County generated 2,467,527 tons of material, as shown in Table 3-1, with the percentages by sector shown in Figure 3-1a.

Table 3-1a Solid Waste Generated in the Reference Year

Type of Waste	Quantity Generated (tons)
Residential/ Commercial	1,601,597
Industrial	865,930
Excluded	0
Total	2,467,527

Figure 3-1 Total Waste Generated



1. Residential/Commercial Waste Generated in the Reference Year

Cuyahoga County generated 1,601,597 tons of waste in the residential/commercial sector. This estimated generation indicates each person generates approximately 7.1 pounds per day. **Benchmarking Cuyahoga County's per capita generation shows the County's average is slightly less than that of Ohio's statewide average and higher compared to the U.S.'s national average in 2018.**

Comparing the District to other surrounding and single county SWMDs, Cuyahoga County has a per capita generation rate below the average of the six compared counties, and state, shown in Table 3-1b.

The challenge facing the SWMD is to increase the proportion of recycled residential and commercial waste, while identifying materials that are currently landfilled that could be diverted. This would ultimately lower the disposal rate.

Table 3-1.b Benchmark Per Capita Residential/Commercial Solid Waste

Type of Waste	Lbs. / Capita / Day
Cuyahoga County	7.1
Hamilton County	8.9
Lorain County	6.0
Lucas County	7.0
Montgomery County	8.2
Summit County	6.3
SWACO	9.4
Ohio Statewide	7.3
U.S. Nationwide (2018)	4.9

2. Industrial Waste Generated in the Reference Year

The industrial sector generated 865,930 tons of waste, accounting for approximately 35.1% of total waste generated in the County. However, most of the waste generated by the industrial sector, 62.7%, is diverted, with 322,695 tons of the industrial waste generated that was disposed. The County should strive to continue to work with the industrial sector, especially manufacturers, to ensure that these companies have the resources necessary to maintain a high level of diversion.

3. Excluded Waste Generated in the Reference Year

Excluded waste is waste material exempt from the definition of solid waste in ORC 3734.01. All exempt waste is also fee exempt. Ohio EPA Format 4.1 adds a threshold for exempt waste which excludes exempt waste from calculations if it is less than 10% of total waste generated. Exempt waste for the District accounts for 0.7% of the waste generated and is not considered in the analysis of this plan.

B. HISTORICAL WASTE GENERATED

1. Historical Residential/Commercial Waste Generated

Residential/commercial waste generation has fluctuated between 1,571,000 and 1,634,000 tons over the past five years and population has remained fairly flat, as shown in Figure 3-2. Overall, the waste generation has decreased 0.2% from 2018 to 2022 while population decreased by 0.6%.

Generation was greatest in 2019, at 1.6% more than the average tons for 2018-2022. Disposal and recycling for the residential/commercial sector appeared to dip following the COVID-19 pandemic lockdowns. As the economy has recovered, residential and commercial disposal has rebounded to pre-pandemic levels, but recycling tonnages have remained low.

2. Historical Industrial Waste Generated

Industrial generation was high in 2018 and 2019 but decreased in 2020 due to the COVID-19 pandemic (shown in Figure 3-3). Industrial recycling and disposal began to increase as the economy recovered in 2022, but industrial generation has not yet returned to pre-pandemic levels. The generation rate is driven primarily by **the industry's recycling tons. The industrial recycling tonnage reported accounts for 64% of the District's industrial waste generated in 2022.** The primary material recycled is ferrous metal from the manufacturing sector.

Figure 3-2 Historical Residential/Commercial Waste Generation

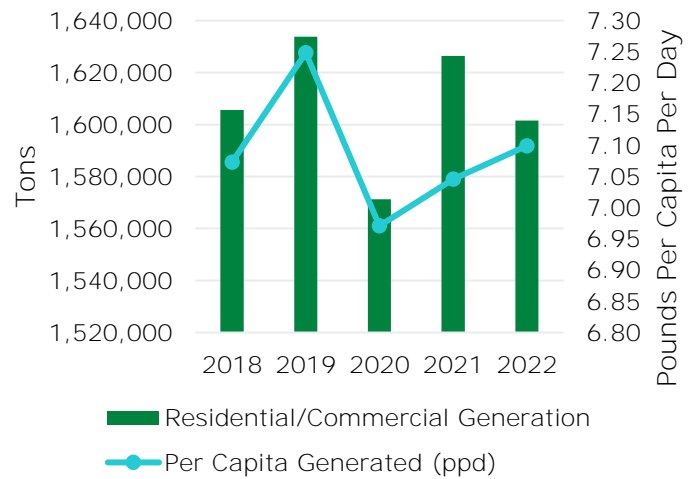
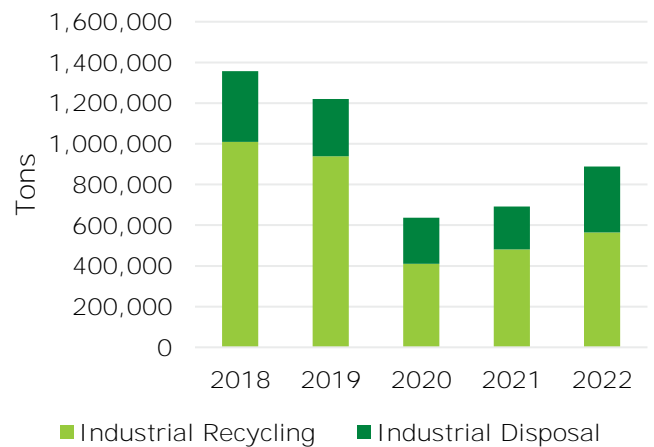


Figure 3-3 Historical Industrial Waste Generation



C. WASTE GENERATION PROJECTIONS

In the residential/commercial sector, the historical and reference year data assists in forecasting waste generation. Residential and commercial waste generation is anticipated to slowly decrease throughout the planning period. This projection is mainly attributed to the slow decline in the projected population. Diversion is projected to begin to increase because of an increased effort to engage residents in the **District's recycling programs that will begin during the planning period.**

To project the industrial sector generation, the District looked to economic indicators and anticipate generation decreasing at a slow rate throughout the planning period at an average of 0.23% annually.

Excluded waste has fluctuated between a high of 37,594 tons in 2018 to a low of 16,148 tons in 2020. The average of the past five years was 24,845 tons and totaled 18,729 tons in 2020 which was 0.7% of total disposal. The District did not project excluded waste through the planning period.

Estimation and forecasting explanations are provided in more detail in Appendices D, E, F and G.

Table 3-2 presents projected waste generation for the first 6 years of the planning period.

Table 3-2 Waste Generation Projections

Year	Residential Commercial Waste (tons)	Industrial Waste (tons)	Total (tons)
2026	1,630,380	1,053,986	2,684,365
2027	1,628,833	1,057,270	2,686,103
2028	1,627,371	1,060,587	2,687,958
2029	1,625,997	1,063,936	2,689,933
2030	1,624,712	1,067,318	2,692,030
2031	1,616,973	1,070,733	2,687,706

Source: Appendices G and K

Sample Calculation:

Generation = Disposal + Recycle

Total = Residential/Commercial Generation + Industrial Generation

Per Capita Generation = ((Generation x 2000) / 365) / Population

Residential/Commercial Waste Projections

Residential/commercial sector disposal tonnages are projected to decline throughout the planning period **based on the District’s population projections, which are discussed in Appendix C. To project the total tons of residential/commercial sector disposal from 2023 to 2040, the average per capita disposal rate from 2018 to 2022 (5.32 PPD) was multiplied by 365 days/year and the annual estimated population from Table C-2, then divided by 2,000 to convert from pounds to tons. Table D-6 in Appendix D presents the residential/commercial waste disposal projections.**

Residential/commercial sector recycling is projected to increase from 431,877 tons in 2026 to 449,376 tons in 2040, or 4.1% over the planning period. Overall tonnage is anticipated to increase over the planning period with per capita recycling rates anticipated to increase from 1.71 pounds per person per day (PPD) in 2021 to 2.1 PPD in 2035. Table E-8 in Appendix E presents the residential/commercial sector recycling statistics and projections from 2018 to 2040.

Multiple methodologies were used to project the District’s residential/commercial sector recycling, which were based on the assumptions made after the completion of a historical analysis for different programs and data sources. With the exception of residential curbside and drop-off recycling programs, historical averages were used to determine projected tonnages. The averages taken from past commercial recycling surveys and data from other recycling facilities were used to project that there will be a 4.02% increase in commercial recycling during the first year of the planning period, followed by a 2.01% increase annually between 2027 and 2030. Averages were also used when projecting organics and scrap tire recycling, although tonnages for both remained flat since there were no identifiable trends or anticipated program changes that would impact tonnages for either. Special collection event tonnages similarly remain steady throughout the planning period. As the District’s population declines, residential recycling has decreased annually. It is assumed that through a planned increase in the District’s education campaign, communities and residents will increase recycling tonnages through the course of the planning period.

Industrial Waste Projections

Industrial sector disposal saw a large decrease during the five-year period ranging from 2018 to 2022, with a low of 210,837 tons in 2021 and a high of 346,851 tons in 2018. The District is not aware of any major changes to the industrial landscape, such as new industries beginning operations or existing industries ceasing operations. The large decrease in industrial disposal is largely attributed to the COVID-19 pandemic, with disposal reaching its lowest levels in 2021 and returning to normal levels in 2022. Therefore, disposal tonnage is projected as a slowly increasing rate for the remainder of the planning period based on annual changes in tonnage between 2018 and 2022.

According to Ohio EPA's Plan Format v4.1, if recycling tonnage identified through surveys in the reference year was similar to quantities identified historically, then the quantity attributed to surveys should be held constant at the reference year quantity. All the District's industrial sector recycling data is derived from generator survey data.

Industrial sector recycling tonnage nearly halved over the five-year period from 2018 to 2022. Totals during this period ranged from a low of 410,864 in 2020 to a high of 1,009,952 tons in 2018. Annual industrial recycling tonnages in the District faced significant declines in 2020 during the COVID-19 **pandemic's impact on the industrial sector. They have since begun to increase towards pre-pandemic levels.** There have not been any announcements made about industries planning to begin operations in Cuyahoga County, nor is there any information available about industries planning to cease operations in the District that could impact recycling totals in the near future. Therefore, tonnage is projected to increase in 2023 and 2024 and then remain at a constant level for the remainder of the planning period based on average tonnage changes between 2018 and 2022. Table F-7 in Appendix F presents the industrial sector recovery statistics and projections from 2022 to 2040.

CHAPTER 4: WASTE MANAGEMENT

Chapter Purpose

This chapter summarizes the District’s strategy for managing the solid waste that Cuyahoga County is estimated to generate during the planning period - approximately 2.7 million tons per year. This is based on current and estimated waste generation summarized in Chapter 3 and detailed in Appendix G.

This waste can be managed by various facilities including landfills, transfer facilities, compost facilities and recycling facilities. A solid waste management district is not required to own or operate these facilities. In fact, most solid waste facilities in Ohio are owned and operated by private companies. Furthermore, facilities can be located within and outside the District.

This solid waste management plan identifies the public and private facilities that are available to accept **Cuyahoga County’s trash, compostables and recyclables.**

A solid waste management plan must ensure that the number and capacity of the facilities is adequate **to manage all the District’s solid waste, particularly landfilled waste. The District must demonstrate that** there will be access to enough landfill capacity for all the waste that will need to be disposed.

Ohio has more than 40 years of remaining landfill capacity. That is more than enough capacity to dispose **of all of Ohio’s waste. However, landfills are not distributed equally around the state. Therefore, there is** still the potential for a regional shortage of available landfill capacity, particularly if an existing landfill closes. If that happens, then the solid waste management district in that region would likely rely on transfer facilities to consolidate waste before trucking to an existing landfill.

Finally, solid waste management districts have the ability to control which landfill and transfer facilities can and cannot accept waste generated. This is accomplished through designation and flow control explained in more detail later in this chapter.

A. WASTE MANAGEMENT OVERVIEW

In 2022, Cuyahoga County generated 2,486,256 total tons of solid waste. Of this amount, over a third (38%) was diverted from landfills through recycling and composting. Table 4-1 shows how Cuyahoga County’s waste is projected to be managed during the first 6 years of the planning period.

Table 4-1: Waste Management Methods (Tons)

Year	Total Waste	Recycle	Compost	Transfer	Landfill
2026	2,806,515	1,150,345	122,150	1,044,902	489,119
2027	2,808,253	1,154,590	122,150	1,043,194	488,319
2028	2,810,109	1,158,921	122,150	1,041,508	487,530
2029	2,812,083	1,163,338	122,150	1,039,844	486,751
2030	2,814,180	1,167,844	122,150	1,038,203	485,983
2031	2,809,856	1,167,844	122,150	1,035,257	484,604

B. PROFILE OF WASTE MANAGEMENT INFRASTRUCTURE INCLUDING REFERENCE YEAR FACILITIES

Cuyahoga County benefits from an ample solid waste management infrastructure that provides many opportunities to manage waste cost-effectively and efficiently including many opportunities to recycle and compost. The following describes this infrastructure, the facilities used and their role in the overall solid waste management system.

Facilities Used in the Reference Year

Landfill Facilities

Landfills are the last stop for any waste that is not diverted through waste reduction, recycling and **composting**. While Cuyahoga County’s communities and businesses are effective at recycling, landfills still manage approximately one half of all its waste – nearly 1.5 million tons annually. All this waste must be exported to other counties in Ohio for disposal because no operating solid waste landfills remain in Cuyahoga County. In 2022, waste was exported to seventeen landfills located in fourteen other Ohio counties for disposal. These landfills are identified in Table 4-2.

Table 4-2: Landfills Receiving Cuyahoga County Waste in the Reference Year

Facility Name	Location		Waste Accepted from SWMD (tons)	Percent of all SWMD Waste Disposed	Remaining Capacity (years)
	County	State			
In-District					
None				0%	
Out-of-District					
American Landfill, Inc.	Stark	Ohio	55,279	17%	92
Athens-Hocking Landfill	Athens	Ohio	17	0%	47
Carbon Limestone Landfill LLC	Mahoning	Ohio	362	0%	37
County Environmental of Wyandot	Wyandot	Ohio	11	0%	170
Countywide RDF - Republic Services	Stark	Ohio	9,242	3%	82
Crawford County Landfill	Crawford	Ohio	6	0%	21
Erie County Sanitary Landfill	Erie	Ohio	2	0%	19
Evergreen Recycling & Disposal	Wood	Ohio	3	0%	37
Geneva Landfill	Ashtabula	Ohio	1,062	0%	74
Kimble Sanitary Landfill	Tuscarawas	Ohio	27,474	8%	18
Lake County Solid Waste Facility	Lake	Ohio	5,746	2%	26
Lorain County II Landfill LLC	Lorain	Ohio	203,889	61%	17
Mahoning Landfill Inc	Mahoning	Ohio	7	0%	65
Port Clinton Landfill Inc	Ottawa	Ohio	73	0%	93
Rumpke of Northern Ohio Inc Noble Road Landfill	Richland	Ohio	29,319	9%	14
Suburban Landfill Inc	Perry	Ohio	3	0%	140
Wood County Landfill	Wood	Ohio	8	0%	2
Out-of-State					
Advanced Disposal Services Blue Ridge Landfill Inc		Kentucky	79	0%	22
Total			332,580	100%	976

Transfer Facilities

Solid waste transfer facilities are used to consolidate trash before being trucked to distant landfills for disposal to save money on trucking costs. Transfer stations are an important part of the solid waste management infrastructure in Cuyahoga County because there is only one landfill close enough to direct haul waste - the Lorain County Landfill in Oberlin. The other landfills are located at least 80 miles from Cleveland and are too far to directly haul trash. As a result, approximately **68% of Cuyahoga County's waste is taken to a transfer station** before being taken to a landfill.

Figure 4-1 Transfer vs. Direct Haul

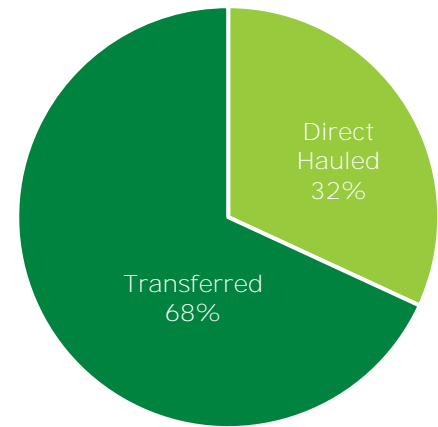


Table 4-3 identifies the 17 transfer stations used in the reference year. These managed 1,056,345 tons of waste. Five are owned by municipalities, the remaining are privately-owned. Figure 4-1 illustrates the percentage of waste that was shipped through transfer stations versus the percentage hauled directly to landfills.

Table 4-3: **Transfer Facilities Receiving Cuyahoga County's Waste (2022)**

Facility Name	Location		Waste Accepted from District (tons)	Percent of all District Waste Transferred
	County	State		
In-District				
Browning Ferris Industries of Ohio, Inc-Glenwillow	Cuyahoga	Ohio	106,521	10%
City of Cleveland, Ridge Rd. Transfer Station	Cuyahoga	Ohio	208,854	20%
Cleveland Heights Transfer Facility	Cuyahoga	Ohio	14,274	1%
Cleveland Transfer/Recycling Station	Cuyahoga	Ohio	183,938	17%
Harvard Road Transfer Station	Cuyahoga	Ohio	202,003	19%
Rocky River Transfer Facility	Cuyahoga	Ohio	1,776	0%
Rumpke Waste Inc Broadview Heights Transfer Facility	Cuyahoga	Ohio	138,837	13%
Shaker Heights Transfer Facility	Cuyahoga	Ohio	8,361	1%
Strongsville Transfer Facility	Cuyahoga	Ohio	60,665	6%
Out-of-District				
Huron County Solid Waste Facility	Huron	Ohio	2	0%
Medina County Central Processing Facility	Medina	Ohio	11	0%
Rumpke Waste Inc Richland County Transfer Facility	Richland	Ohio	1	0%
Kimble Transfer & Recycling - Canton	Stark	Ohio	33	0%
Kimble Transfer & Recycling - Twinsburg	Summit	Ohio	131,023	12%
Republic Services of Ohio LLC Akron Transfer Facility	Summit	Ohio	7	0%
Girard Transfer Station	Trumbull	Ohio	1	0%
Ohio Valley Waste Warren	Trumbull	Ohio	38	0%
Out-of-State				
None				0%
Total			1,056,345	100%

Compost Facilities

Composting facilities are used to manage organic waste such as leaves and brush from municipalities, tree trimmings and grass from landscapers and food waste from restaurants and institutions. Composting is the most cost-effective and environmentally beneficial way to manage organic waste because it eliminates landfill disposal fees and produces a soil amendment that benefits gardens and landscapes. It also reduces greenhouse gas emissions. Organic waste disposed in landfills produces methane, a potent greenhouse gas. Especially promising is the opportunity to compost food waste as the local infrastructure to collect and compost this material expands.

Approximately 6% of Cuyahoga County's waste was managed through composting in the reference year. Table 4-4 identifies the 23 Ohio EPA registered compost facilities that managed the material. Some facilities managed organic waste they generated themselves and some processed material for customers such as municipalities and landscapers.

Table 4-4: Compost Facilities Receiving Cuyahoga County's Waste (2022)

Facility Name	Location (County)	Material Composted (tons)	Percent of all Material Composted
In District			
Cloverleaf Facility	Cuyahoga	1,113	1%
Rid-All Green Partnership	Cuyahoga	59	0%
Independence Composting Facility	Cuyahoga	3,056	3%
Boyas Recycling	Cuyahoga	8,931	9%
Orange Village Compost	Cuyahoga	943	1%
Kurtz Bros Inc - Bridgeview Production Facility	Cuyahoga	14,476	15%
Solon Road Midwest Recycled Landscape Materials	Cuyahoga	6,510	7%
Savarino Brothers	Cuyahoga	1,346	1%
Mayfield Village Composting Facility	Cuyahoga	1,741	2%
Cleveland Metroparks Compost	Cuyahoga	526	1%
City of Solon Service Dept.	Cuyahoga	5,686	6%
City of Westlake, Compost Facility	Cuyahoga	15,330	16%
City of Brooklyn Service Department	Cuyahoga	1,016	1%
Out-of-District			
Paradise Composting Class II	Wayne	184	0%
Sagamore Soils Twinsburg Rd Compost Facility	Summit	964	1%
Number One Landscape	Medina	648	1%
Zollinger Sand & Gravel Co	Wayne	3	0%
Midwest Mulch	Geauga	5,500	6%
City of Wickliffe Composting Facility	Lake	18,397	19%
Abate Landscaping	Geauga	257	0%
Sagamore Soils Compost	Summit	43	0%
Sand Road Ent Inc	Huron	2	0%
Smith Bros Inc	Medina	8,192	9%
Total		94,924	

Recycling Processing Facilities

Processing facilities refer to facilities that receive and process recyclables such as scrap metal, cans, paper, cardboard, glass, plastics, electronics, organics and more. These facilities typically sort and bale recyclable materials for shipment to various companies that recycle them into new products. Table 4-5 identifies 59 processors that handled 316,731 tons of recyclable materials from Cuyahoga County residential, commercial and industrial generators during the reference year. More details can be found in Appendix B.

Table 4-5: Processing Facilities Receiving Cuyahoga County Recyclables (2022)

Name of Facility	Location		Facility Type	Recyclables Accepted from District (tons)
	County	State		
In-District				
Able Alloy Inc.	Cuyahoga	OH	Scrap Yard, Processor	
Aetna Metal Recycling	Cuyahoga	OH	Scrap Yard	
All Scrap Salvage	Cuyahoga	OH	Scrap Yard, Processor	18,521
American Metal Recycling	Cuyahoga	OH	Scrap Yard, Processor	
American Scrap Mart	Cuyahoga	OH	Scrap Yard	
Bedford Metal Recycling	Cuyahoga	OH	Scrap Yard	
Blue Ocean Plastics	Cuyahoga	OH	Broker	
Broadway Scrap Metals, Inc.	Cuyahoga	OH	Scrap Yard	7,026
Cleveland Furniture Bank	Cuyahoga	OH	Other - Reuse	1,100
Container Compliance Corporation	Cuyahoga	OH	Other - Reuse/Recondition (drums)	5,066
East Side Metals	Cuyahoga	OH	Scrap Yard, Processor	
Ferrous Processing & Trading	Cuyahoga	OH	Broker, Processor	174,380
Gateway Products Recycling	Cuyahoga	OH	Broker, Processor	
Greater Cleveland Habitat for Humanity	Cuyahoga	OH	Other - Reuse	
I. Schumann Co.	Cuyahoga	OH	Processor	
JBI Scrap Processors	Cuyahoga	OH	Scrap Yard, Processor	
Keep It Green Recycling	Cuyahoga	OH	Broker	
Kurtz Bros. Bridgeview Composting Facility	Cuyahoga	OH	Processor (pallets)	33,714
Lakeside Metals	Cuyahoga	OH	Scrap Yard, Processor	
Lakeside Scrap Metals	Cuyahoga	OH	Scrap Yard, Processor	
Medwish International	Cuyahoga	OH	Other - Reuse/Recondition (drums)	
Planet Aid Cleveland	Cuyahoga	OH	Other - Reuse	
PSC Metals	Cuyahoga	OH	Broker, Processor, Scrap Yard	
Quasar Energy Group	Cuyahoga	OH	Other - Biomass	
Recycle-it LLC	Cuyahoga	OH	Broker, Processor	3,000
Royal Oak Recycling	Cuyahoga	OH	Broker, Processor, Buy-Back, Drop-Off	403
Rumpke Waste & Recycling	Cuyahoga	OH	Transfer Facility	

Name of Facility	Location		Facility Type	Recyclables Accepted from District (tons)
	County	State		
Rust Belt Riders	Cuyahoga	OH	Other - Organics	
Salvation Army	Cuyahoga	OH	Processor, Other - Reuse	
Shred-it Brecksville	Cuyahoga	OH	Processor	5,373
Southeast Metals	Cuyahoga	OH	Scrap Yard	
Stein, Inc.	Cuyahoga	OH	Processor	
Tyroler Scrap Metals, Inc.	Cuyahoga	OH	Processor	
Waste Management	Cuyahoga	OH	Transfer Facility	12,929
Wilkoff & Sons Co.	Cuyahoga	OH	Processor	1,932
Out-of-District				
All Ohio Secure Shred	Summit	OH	Other- Recycling	
Associated Paper Stock	Mahoning	OH	Broker	210
Bulldog Battery	Lake	OH	Buy-Back, Drop-Off	
Goodwill Industries of Greater Cleveland & East Central Ohio	Stark	OH	Processor, Other - Reuse	
Horwitz & Pintis Co.	Lucas	OH	Processor	
IFCO	Medina	OH	Processor	
Kimble Transfer & Recycling	Summit	OH	MRF	
Medina Paper Recycling	Medina	OH	Processor	
Metallic Resources	Summit	OH	Processor	24
Middlefield Pallet Inc.	Geauga	OH	Processor (pallets)	
Niles Iron & Metal	Trumbull	OH	Scrap Yard, Processor	
Northcoast Inc. Recycling Specialists	Lake	OH	Processor	2,841
Painesville Recycling	Lake	OH	Processor, Scrap Yard, Buy-Back, Drop-Off	
Regency Technology	Summit	OH	Processor	
Republic Services	Lorain	OH	MRF	18,802
River Valley Paper Co. dba Integrity Fiber	Summit	OH	Broker, Processor	5,396
Rumpke Waste & Recycling	Franklin	OH	MRF	9,529
Rumpke Waste & Recycling	Hamilton	OH	MRF	19
Rumpke Waste & Recycling	Medina	OH	MRF	
S. Slesnick Co, Inc.	Stark	OH	Broker, Processor, Drop-Off	537
Victor Metals Inc.	Lake	OH	Broker, Processor, Scrap Yard	
WM (fka Waste Management)	Summit	OH	MRF	15,832
Out-of-State				
Alloy Exchange	Kent	MI	Processor	96
KJ Plastics	Montgomery	PA	Broker	
Total				316,731

Among the processing facilities are Material Recovery Facilities known as MRF’s that process commingled recyclables collected through community curbside and drop-off recycling programs. These privately owned and operated facilities contracted with 58 communities to process cans, cartons, glass, paper and cardboard and plastic collected from residents.

Waste Collection

Solid waste collection in Cuyahoga County is provided by municipal public and private haulers. Service is widely available through Cuyahoga County and competitive. Residential waste is collected by the community or by one of four private haulers under contract. The residential haulers included Kimble Companies, Republic Services, Rumpke Waste & Recycling Services, and WM (fka Waste Management). Table 4-5 shows the waste collection provider for each community in 2022. In all, 19 communities operated their own waste collection program, and 40 communities contracted with private haulers for waste collection services. There were no subscription-based waste collection programs. Most communities paid the entire cost of residential waste collection using general fund monies. However, some communities have begun charging residents a monthly fee to recover some or all the cost of providing the service. Nineteen out of the 59 communities have some type of waste collection charge. Commercial, institutional, and industrial waste is collected by numerous private haulers. These haulers contract with apartment owners, retail stores, hospitals and other commercial and industrial establishments. The District has identified twelve commercial solid waste haulers operating within Cuyahoga County while dozens more are in the business of hauling construction and demolition debris, and waste from house cleanouts, etc. The largest haulers, Kimble Companies, Republic Services, Rumpke Waste & Recycling Services, and WM (fka Waste Management) own their own systems of transfer stations and landfills.

Table 4-5: Residential Waste Collection Providers

Name of Provider	Counties Served	Curbside Trash Services	Curbside Recycling Services
Beachwood city	Cuyahoga	X	X
Brecksville city	Cuyahoga	X	X
Brook Park city	Cuyahoga	X	X
Brooklyn city	Cuyahoga	X	X
Cleveland city	Cuyahoga	X	X
Cleveland Heights city	Cuyahoga	X	X
Cuyahoga Heights village	Cuyahoga	X	X
Highland Hills village	Cuyahoga	X	X
Independence city	Cuyahoga	X	X
Lakewood city	Cuyahoga	X	X
Lyndhurst city	Cuyahoga	X	X
Moreland Hills village	Cuyahoga	X	X
Pepper Pike city	Cuyahoga	X	X
Rocky River city	Cuyahoga	X	X
Shaker Heights city	Cuyahoga	X	X
Solon city	Cuyahoga	X	X
University Heights city	Cuyahoga	X	X
Valley View village	Cuyahoga	X	
Woodmere village	Cuyahoga	X	X

Name of Provider	Counties Served	Curbside Trash Services	Curbside Recycling Services
1-2-3 Disposal	Cuyahoga		
Cleveland Metropolitan Housing Authority	Cuyahoga	X	
Cooper Disposal	Cuyahoga		
Descenzo Rubbish	Cuyahoga		
Dumpster Bandits	Cuyahoga		
Kimble Company	Cuyahoga	X	X
Major Waste	Cuyahoga		
Miles Waste Disposal	Cuyahoga		
Pete and Pete	Cuyahoga		
Republic Services	Cuyahoga	X	X
Rumpke Waste and Recycling	Cuyahoga	X	X
WM (fka Waste Management)	Cuyahoga	X	X

C. USE OF SOLID WASTE FACILITIES DURING THE PLANNING PERIOD

The District is not expecting any major changes in the management of waste through the planning period. In general, the District anticipates that facilities which were used to manage District-generated waste during the reference year will continue to be available throughout the planning period, and in aggregate, **will continue to provide more than adequate capacity for the District’s needs.**

Landfills

Landfills will continue to be the primary waste management method used to manage solid waste after recycling and composting. This amounts to approximately 1.2 million tons of residential and commercial waste and 320,000 tons of industrial waste during the planning period for a total of approximately 1.5 million tons annually. The District has determined that the primary landfills relied upon to manage **Cuyahoga County’s waste have ample disposal capacity** – an average of 54 years under current permits and will **adequately meet the District’s needs, see Table 4-2.**

Transfer Facilities

The 17 transfer stations identified in Table 4-3 are expected to continue to operate during the planning period to consolidate solid waste before being trucked to out-of-District landfills.

Composting Facilities

The twenty-three composting facilities identified in Table 4-4 are expected to continue to operate during the planning period, offering a less expensive and beneficial alternative to landfill disposal. In addition, there is increasing private sector interest in expanding composting opportunities for organics including food waste which will help to increase the level of composting within Cuyahoga County from the current 6%.

Recycling Processing Facilities

The recycling processors identified in Table 4-5 are expected to continue to operate during the planning period, offering residents and businesses ample opportunities to recycle household recyclables, office paper, scrap metal, electronics and more. The District is working to combat contamination through its county-wide public education program to provide clean materials to the four MRF systems that serve

Cuyahoga County. The District does not anticipate the closure of any MRFs but the market changes may have an impact on the pricing. Other recyclers including scrap metal recyclers and office paper recyclers may be impacted less due to the availability of domestic markets.

Other Waste Management Facilities

The District is not aware of any new waste management methods being proposed that may bring waste to energy or waste conversion technologies to Cuyahoga County during the planning period. The District is not proposing any such facility at this time but is open to reviewing the applicability of alternative technologies to recover more materials and reduce landfilling.

D. SITING STRATEGY

The solid waste management plan must demonstrate that the District will have access to enough capacity at landfill facilities to accept all the waste it will need to dispose during the planning period. If existing facilities cannot provide that capacity, then the District and its solid waste policy committee must develop a plan for obtaining additional disposal capacity. In the event that would require constructing a solid waste landfill facility to secure disposal capacity, Ohio law would require the policy committee to develop a siting strategy for identifying a suitable location per Ohio Revised Code Section 3734.53(A)(8).

Since the District has concluded that ample landfill disposal capacity exists, it has not developed a siting strategy for the construction of a new landfill within Cuyahoga County. Furthermore, the undeveloped land needed to develop a new landfill no longer exists within Cuyahoga County.

While no new landfills are expected to be constructed within Cuyahoga County, there is the potential for other solid waste facilities such as a waste to energy facility to be proposed or existing solid waste facilities to be modified. In these instances, there is the potential need for a siting strategy for projects that would negatively impact a community or the District.

The Board of Directors of the Cuyahoga County Solid Waste Management District is authorized by Revised Code section 343.01(G)(2) to adopt a rule requiring the submission of general plans and specifications to the Board for a determination by the Board that any proposed new solid waste facility or major existing facility modification complies with the District Plan. This Plan Update authorizes the Board to adopt the rule authorized in Revised Code section 343.01(G)(2). In the event that the Board adopts a rule to implement the Siting Strategy, that strategy is presented in full in Appendix S.

E. DESIGNATION

The Board of Directors of the Cuyahoga County Solid Waste Management District is authorized to establish facility designations in accordance with Section 343.014 of the Ohio Revised Code after its solid waste plan has been approved by the Ohio Environmental Protection Agency. This authority is called flow control and is typically used to direct waste to public facilities to retire debt.

Since the District supports an open market for the collection, transport and disposal of solid waste and currently has no such facilities with public debt, it does not currently designate facilities authorized to receive Cuyahoga County waste.

The District is not designating any facilities in this Plan Update and is therefore identifying all Ohio licensed and permitted solid waste landfill, and transfer, and resource recovery facilities or recycling activities as well as permitted out-of-state landfill, transfer, and resource recovery facilities or recycling activities to receive solid waste generated within the District.

The District does reserve the right to designate one or more solid waste facilities to receive solid waste generated within the District in the future if deemed necessary by its Board of Directors. If designation were to occur, the facility designation will be established and governed by applicable District rules and the designation process outlined in Ohio Revised Code and Appendix P herein.

CHAPTER 5: WASTE REDUCTION AND RECYCLING

Chapter Purpose

This chapter identifies the District’s priorities for the upcoming planning period and the programs it will offer. As was explained in Chapter 1, solid waste management districts must provide programs and services to achieve the waste reduction and recycling goals established in the state solid waste management plan and ensure that there are programs and services available to meet local needs. A solid waste district may provide some of these programs and services directly or rely on private sector and non-profit service providers.

Between achieving the goals of the state plan and meeting local needs, the District must help ensure that a wide variety of stakeholders have access to reduction and recycling programs. These stakeholders include residents, businesses, institutions, schools and community leaders. These programs and services **collectively represent the District’s strategy for furthering reduction and recycling.**

Before deciding upon the programs and services to offer within this Plan Update, the District performed a strategic analysis of all its existing programs and services, operations and finances and an analysis of existing waste management and recycling infrastructure and recovery rates. This review consisted of a series of 13 analyses that allowed the District and the Policy Committee to obtain a holistic understanding of the District by answering questions such as:

- Is the District adequately serving all sectors – residential, commercial and industrial?
- Are high volume wastes like organic wastes and cardboard effectively being recycled?
- Are available recycling opportunities being fully used? Is recycling performing?
- **What is the District’s overall financial situation and ability to fund its programs?**

Using what it learned, the District drew conclusions from the strengths, challenges and opportunities identified in its strategic analysis. It then compiled a list of actions it could take, programs it could implement and other things it could do address its conclusions. The District and the Policy Committee used that list to make decisions about the programs and services that will be available during the planning period, make recycling projections and prepare the plan budget.

A. SOLID WASTE MANAGEMENT DISTRICT PRIORITIES

In order to determine its solid waste management priorities for the planning period, the District hired **consultants to complete Appendix H which was a comprehensive analysis of the District’s existing recycling infrastructure and all its programs and services.** The analysis covered thirteen topics and identified strengths, challenges and opportunities for each.

The analysis revealed that the District has a well-established and mature recycling infrastructure that is already serving the county well. This features county-wide curbside recycling and multiple drop-off opportunities, a robust network of recycling and reuse facilities, long standing and well utilized District programs for special wastes and model recycling education and outreach programs. Detailed findings can be found in Appendix H.

With this in mind, the District’s priority for the planning period is to build on this recycling framework. The programs and services to be implemented by the District and/or available in the planning period are designed to improve efficiency, maximize staff resources, increase landfill diversion, address

infrastructure gaps and reduce costs. They are organized into the following program areas and presented in this chapter. Additional details can be found in Appendix I.

- Residential Waste Reduction and Recycling Programs (curbside, drop-off and multi-family)
- Commercial, Institutional and Industrial Waste Reduction and Recycling Programs
- Restricted and Difficult to Manage Wastes (HHW, scrap tires, and e-waste)
- Programs for Organic Wastes and Hard to Recycle Wastes
- Economic Incentives (Grants and PAYT)
- Special Program Needs (health department funding, illegal dumping and litter collection)
- Market Development Programs and Actions
- Data Collection Programs and Actions
- Education and Outreach Programs and Actions

Priority areas to focus efforts in the 2026 Plan include:

Priority Program
Technical Assistance/education for communities for programming and contracts
Grant Funding
Facilitate Environmental Crimes Task Force
Promote the Ohio Materials Marketplace (aka Rheaply)
Business education, technical assistance, and program development
Year-Round HHW Collection Program
Website – CuyahogaRecycles.org
Recycling Education Toolkit
Health Department Code Enforcement Funding
Litter collection and tire collection programming
Restructuring the District’s Grant Program
Expand Research on hard-to-manage/recycle materials (food waste, glass, textiles)
Promote Drop-offs for same hard-to-manage/recycle materials
Recycle Right & New Recyclable Materials Outreach Campaign
Regional harmonization through electronic and printed collateral
Education campaign after a community switches to a new hauler/MRF shed
Scheduled public official facility tours and education
Cuyahoga recycling economic impact education
Promoting use of Share Tables as a low-cost way to reduce food waste in cafeterias
Textile recycle analysis

Strategies/programs being implemented currently address these priority areas. However, based on the evaluation, the programs can adapt specific actions to continue to progress towards the broad goal.

B. PROGRAM DESCRIPTIONS

This section briefly describes major programs and services available during the planning period. Appendix I contains complete descriptions.

Residential Sector Reduction and Recycling Programs

Curbside Programs

Curbside Recycling Services

Curbside recycling will continue to be offered by communities during the planning period and provide collection of cans, glass, paper and cardboard, and plastic containers. As of 2024, curbside recycling is now available to residents in all but one community.

Table 5-1 Curbside Recycling Services

ID#	Name of Curbside Service/Community Served	Service Provider
NCS1	Bay Village city	Republic
NCS2	Beachwood city	City
NCS3	Bedford city	Kimble
NCS4	Bedford Heights city	Kimble
NCS5	Bentleyville village	WM
NCS6	Berea city	Kimble
NCS7	Bratenahl village	Republic
NCS8	Brecksville city	City
NCS9	Broadview Heights city	Rumpke
NCS10	Brook Park city	City
NCS11	Brooklyn city	City
NCS12	Brooklyn Heights village	Kimble
NCS13	Chagrin Falls township	Kimble
NCS14	Chagrin Falls village	Kimble
NCS15	Cleveland city	City
NCS16	Cleveland Heights city	City
NCS17	Cuyahoga Heights village	Village
NCS18	Euclid city	Kimble
NCS19	Fairview Park city	Republic
NCS20	Garfield Heights city	Kimble
NCS21	Gates Mills village	Rumpke
NCS22	Glenwillow village	Republic
NCS23	Highland Heights city	Kimble
NCS24	Highland Hills village	Village
NCS25	Hunting Valley village	WM
NCS26	Independence city	City
NCS27	Lakewood city	City
NCS28	Linndale village	Rumpke
NCS29	Lyndhurst city	City
NCS30	Maple Heights city	WM
NCS31	Mayfield village	Kimble
NCS32	Mayfield Heights city	Kimble
NCS33	Middleburg Heights city	Republic

ID#	Name of Curbside Service/Community Served	Service Provider
NCS34	Moreland Hills village	Village
NCS35	Newburgh Heights village	Kimble
NCS36	North Olmsted city	Republic
NCS37	North Randall village	Rumpke
NCS38	North Royalton city	Rumpke
NCS39	Oakwood village	WM
NCS40	Olmsted Falls city	Republic
NCS41	Olmsted township	Republic
NCS42	Orange village	Kimble
NCS43	Parma city	Rumpke
NCS44	Parma Heights city	Republic
NCS45	Pepper Pike city	City
NCS46	Rocky River city	City
NCS47	Seven Hills city	WM
NCS48	Shaker Heights city	City
NCS49	Solon city	City
NCS50	South Euclid city	Kimble
NCS51	Strongsville city	Republic
NCS52	University Heights city	City
NCS53	Walton Hills village	Kimble
NCS54	Warrensville Heights city	Kimble
NCS55	Westlake city	Rumpke
NCS56	Woodmere village	Village

Curbside Recycling Technical Assistance and Contracting Services

The District will continue to provide communities with technical assistance to help with contracting for solid waste and recycling services and to implement best practices for collection. The District has helped many communities contract for curbside recycling and switch to cart-based collection which has increased recycling and reduced costs. These services will continue with emphasis on encouraging the switch from recycling collection using blue bags to recycling collection using carts as well as increasing recycling participation and reducing contamination.

Municipal Contracting Consortia

The District will continue to manage two municipal contracting consortia – solid waste transfer and disposal consortium (8 members) and recycling processing consortium (9 members). These consortia have helped the participating cities, who collect their own waste and recyclables, obtain favorable and competitive pricing for solid waste services.

Special Assistance for Low Performing Communities

The District will provide special assistance to communities with curbside recycling rates lower than the national average of 300 pounds per household per year. The assistance may include conducting focus groups to identify reasons for the low recycling rate, focusing education in those communities and additional resources intended to help the community improve.

Drop-Off Recycling

Recycling Drop-offs

Drop-off recycling opportunities will continue to be offered by many communities during the planning period. Currently, multi-material drop-offs are offered by 15 communities and accept cans, glass, plastic containers, mixed paper and cardboard. In addition, limited-material drop-offs are offered by 23 communities and typically accept cans, paper and cardboard.

The District may obtain data on drop-off site users by surveying participants at certain community drop-off sites to ascertain why they use the site, how they learned about the site, how far they traveled and other recycling habits. This information could be used to help develop the fiber drop-off program described below or help with education to reduce contamination and illegal dumping.

Table 5-2 Drop-off Recycling Locations

ID#	Name of Drop-off/Community Served	Service Provider
FTU1	Beachwood Community Center, 25225 Fairmount Blvd. Beachwood, OH 44122	City
FTU2	Brook Park Service Department, 19065 Holland Rd. Brook Park, OH 44142	City
FTU3	Cleveland Division of Waste Collection, 5600 Carnegie Ave., Cleveland, OH 44103	City
FTU4	Cleveland Ridge Road Transfer Station, 3727 Ridge Rd., Cleveland, OH 44144	City
FTU5	East Cleveland Service Department, 1610 Eddy Rd., OH 44112	Rumpke
FTU6	Lakewood Service Department, 12920 Berea Rd. Lakewood, OH 44111	City
FTU7	Mayfield Heights Service Department, 6154 Mayfield Road, Mayfield Heights, OH 44124	Kimble
FTU8	North Olmsted Service Garage, 5200 Dover Center Rd. North Olmsted, OH 44070	Republic
FTU9	Pepper Pike City Hall Complex, 28000 Shaker Blvd., Pepper Pike, OH 44124	City
FTU10	Rocky River Service Department / Transfer Station, 22401 Lake Rd. Rocky River, OH 44116	City
FTU11	Solon Service Department, 6600 Cochran Rd., Solon, OH 44139	City
FTU12	Strongsville Food Bank, 13213 Pearl Rd. Strongsville, OH 44136	Republic
FTU13	University Heights Service Department, 2300 Warrensville Center Rd. University Heights, OH 44118	City
FTU14	Westlake Clague Park Cabin, 1500 Clague Rd., Westlake, OH 44145	Rumpke
FTU15	Westlake Meadowood Golf Course, 29800 Center Ridge Rd., Westlake, OH 44145	Rumpke
FTU16	Westlake Police Station, 27300 Hilliard Blvd., Westlake, OH 44145	Rumpke
PTU1	Brecksville Service Garage 9023 Brecksville Rd. Brecksville, OH 44141	City
PTU2	North Royalton Service Garage 10789 Royalton Rd. North Royalton, OH 44133	Rumpke

ID#	Name of Drop-off/Community Served	Service Provider
PTU3	Olmsted Township Service Garage 7900 Fitch Rd. Olmsted Twp., OH 44138	Republic
PTU4	Shaker Heights Service Department 15600 Chagrin Blvd. Shaker Heights, OH 44120	City
FTR1	Highland Hills Shaker House Complex 3700 Northfield Rd. Highland Hills, OH 44122	Kimble
FTR2	Valley View Village Hall 6895 Hathaway Rd. Valley View, OH 44125	Rumpke

Multi-Family Recycling

Technical Assistance to Support Multi-Family Housing Recycling Programs and Consortiums
The District will continue to offer technical assistance to property owners and managers to establish recycling in apartment buildings. Residents living in multi-family housing typically have limited recycling **opportunities. The District’s Business Recycling Specialist** has assisted many properties identify recycling opportunity, potential cost savings, and assists with program implementation, troubleshooting and tenant education.

Commercial/Institutional Sector Reduction and Recycling Programs

Waste Audits

The District will continue to offer waste assessments for commercial businesses, institutions, schools and manufacturing facilities as requested to identify opportunities for waste reduction, recycling and education. This assistance will be provided by the Businesses Recycling Specialist.

Technical Assistance, Presentations and Zero Waste Planning Services

The District will provide technical assistance and offer presentations for commercial businesses, institutions, schools and manufacturing facilities to facilitate waste reduction and recycling program implementation, improvements and employee education. The District will also assist with contracting for recycling services and developing zero waste plans upon request.

Recycling Sense for Your Business Workshops

The District will host periodic workshops for business and industry to focus on program implementation, contracting for recycling services and employee education.

Targeted Assistance for High Waste Generators.

In addition, to help maximize its assistance efforts, the District will target companies with the greatest opportunity to recycle such as large companies, institutions or public venues or high fiber generators such as retail establishments.

Contracting Assistance

The District will help commercial businesses, institutions, schools and manufacturing facilities procure solid waste collection and recycling services as needed and will review existing solid waste contracts to identify opportunities for savings that could be used to help pay for recycling services.

Collaborations with Local Economic Development Partners

The District will work with local economic development directors and commercial trade associations to promote waste reduction and recycling and District Services.

Industrial Sector Reduction and Recycling Programs

Waste Audits

The District will continue to offer waste assessments for commercial businesses, institutions, schools and manufacturing facilities as requested to identify opportunities for waste reduction, recycling and education. This assistance will be provided by the Businesses Recycling Specialist.

Promote The Ohio Materials Marketplace (aka Rheaply)

The District will work with Ohio EPA to promote the exchange of used materials through The Ohio Materials Marketplace (aka Rheaply). The District will promote the marketplace on its website, arrange speaking opportunities for Ohio EPA and distribute information to its businesses and manufacturers.

Target Small Industries

The District will focus on providing assistance to small manufacturing facilities such as creating green teams, developing waste stream recommendations and educating employees. Smaller industries are more likely not to have an existing waste reduction program in place and may be more in need of the **District's assistance**.

The District will also partner with local industrial retention organizations to learn more about the industrial sector and its waste reduction and recycling needs. Support programs will be developed from that information. These organizations include WIRE-NET, MAGNET and CIRI (The Cleveland Industrial Retention Initiative)

Restricted & Difficult to Manage Wastes, Special Collection Events

Household Hazardous Waste

Year-Round HHW Collection Program

The District will continue to operate its year-round HHW collection program at its Special Waste Convenience Center that allows communities to dispose of the HHW they collect from their residents. The District will pay for all costs associated with HHW management once it is delivered by the **communities. This program manages approximately 325,000 pounds of HHW annually and is the District's signature service.**

Education to Promote HHW Reuse, Reduction and Green Alternatives

The District will work to educate residents about ways it can minimize the creation of HHW through an education campaign using social media and community outreach. The campaign will focus on green cleaning and buying and using household products smartly to reduce waste and save money.

Obtain HHW Participation Data

The District may work with communities to survey participants to better understand how and why they use the HHW program and to educate residents about HHW reuse and reduction.

Evaluate Feasibility of Offering a Conditionally Exempt Small Quantity Generator (CESQG) and Universal Waste Program

The District may conduct a market assessment to determine the regulatory and operational aspects of developing a CESQG and/or Universal Waste Collection program for small businesses, institutions, and governments generating hazardous waste and universal waste.

Scrap Tires

Education of Residents and Businesses – Proper Tire Disposal

The District will promote the proper management of scrap tires by educating residents and businesses about illegal dumping laws and encourage them to dispose of scrap tires at the point of purchase. The goal is to reduce the number of tires that communities and the District must pay to manage, as well as those illegally dumped.

Scrap Tire Round Up

The District will conduct its annual Scrap Tire Round-Up while it works to reduce reliance on the program through the education initiatives described above. This program may be gradually phased out if the District determines it is no longer necessary to subsidize scrap tire disposal.

Scrap Tire Dumping Enforcement

The District will (1) continue to facilitate the Cleveland-Cuyahoga County Environmental Crimes Task Force to investigate and prosecute illegal dumping cases and other environmental crimes, and (2) continue to provide an annual subsidy to the Cuyahoga County Board of Health and the Cleveland Department of Public Health to inspect licensed solid waste facilities, inspect tire generators, and respond to nuisance complaints.

Computers/E-Waste

Computer Round-Up Events

The District will continue to promote local Recycle Your Computer Round-Ups held by communities as well as other e-waste recycling opportunities offered by local e-waste recyclers and retail stores.

Other Wastes

Promote Local Pharmaceutical Collections

The District will promote existing pharmaceutical collections offered by the Cuyahoga County Sheriff and the Northeast Ohio Regional Sewer District.

Promote Battery Recycling Locations

The District will continue to promote proper disposal of rechargeable batteries using retail drop-offs.

Hard To Recycle Material Drop-Off

The District will continue to provide a public drop-off for hard to recycle materials at its Special Waste Convenience Center. Items currently accepted include election signs, and small electronics. This list is subject to change due to market availability.

Organics - Yard Waste and Food Waste

Evaluate Municipal Yard Waste Contracting

The District will continue to encourage municipal yard waste programming. The District will evaluate whether there is interest in establishing municipal yard waste collection programs and contracts to help communities manage leaves and brush and obtain stable programming and pricing. **These programs and contracts could be for curbside collection or part of a “super drop-off center.”** If communities express

interest, the District would facilitate the development of a consortium and handle the bid in the same way it developed its disposal and recycling consortiums. Part of the evaluation would include a capacity analysis of existing compost facilities to determine if there are gaps or threats to the composting infrastructure. **Composting technologies (anaerobic digesters, in-vessel technologies, etc.) are available options to manage yard trimmings.**

Evaluate Municipal Food Waste Contracting

The District will work with communities and haulers on food waste collection programs. Efforts will continue to encourage food waste programming. These programs and contracts could be for curbside collection or part of a “super drop-off center.”

Compost Bin Sales and Composting Workshops

The District will continue to offer backyard composting bins and food waste digesters for sale to the public at its office and through composting seminars.

Engage Stakeholders to Expand Food Rescue Programs and Local Composting Infrastructure

The District will continue to engage stakeholders to increase food rescue and food waste composting infrastructure.

Education/Outreach

Outreach - General Public and Residents

Website – CuyahogaRecycles.org

The District’s will continue to use its upgraded website as a key means of providing recycling information to the public. CuyahogaRecycles.org is a comprehensive resource for residents, businesses, communities, educators, elected officials and the general public. The website lists specific recycling information for each community in Cuyahoga County, contains a “What Do I Do With” (WDIDW) search engine where people can learn how to recycle or dispose over 100 items, provides information about the District’s programs and services and has numerous resources for educators.

Comprehensive Resource Guides

The District will continue to offer various ways that residents can find recycling locations and reuse opportunities in Cuyahoga County. This includes calling the District’s office and speaking with staff or using the following resources:

- **“What Do I Do With” (WDIDW) search feature on CuyahogaRecycles.org, inclusive of a geo-locator feature**
- Pass It On: A Resource-Full Guide to Donating Usable Stuff
- Business Recycling Directory (now hosted within WDIDW web pages on CuyahogaRecycles.org)

Speakers and Presenters

The District will continue to conduct recycling presentations for all audiences through its Education Specialist, Business Recycling Specialist and other District staff as described below.

- Youth presentations – classroom, library, camp, scouts and other group activities and lessons
- Adult presentations – public officials, trade and civic groups, clubs, colleges, community events
- Backyard composting seminars
- Business recycling seminars - and presentations, staff lunch and learns

Residential Recycling Outreach

The District will continue its comprehensive program to conduct outreach to its 1.2 million residents to **help them understand how to recycle more and how to recycle right. The District's Recycle Right campaign established the foundation for the District's** expanded outreach efforts to teach people how to properly recycle across Cuyahoga County and to increase participation and reduce contamination. The District will use the following tools to conduct residential recycling outreach during the planning period: See Appendix L for detailed descriptions.

- Marketing, media relations and advertising
- Talking Trash e-newsletter
- Printed materials – brochures, etc.
- Presentations and tabling events
- Recycling hotline

Outreach - Children, Educators and Schools

Children's Education Program

The District will continue to have an education specialist available for student outreach. Programs may include classroom presentations and activities, contests, summer camp and scout programs. In addition, the District will consider piloting an outsourced presentation format upon demand to gauge interest and evaluate for further consideration.

School Administrators and Support Staff

The District will use LinkedIn to reach school administrators with programming about starting a recycling program at school and will offer waste audits and assistance with implementing a recycling or composting **program. Schools can also apply for the District's Recycling Container Grant** to purchase recycling containers.

Outreach - Commercial/Institutional Sector Outreach and Education

The District will continue to have a Business Recycling Specialist dedicated to providing waste reduction and recycling assistance to the commercial and institutional sectors. This includes nonprofit organizations, institutions and government offices; commercial business and multi-family property owners; non-residential quarters; special event/sports venues, and transportation centers. Programming includes presentations, workshops, marketing, LinkedIn page and blog.

Outreach – Public Officials and Municipalities

The District will continue its outreach to local officials and city service departments through its Annual Report, Residential Recycling Report, Trash Talk Lunch seminars, and Trash Heap newsletter. In addition, the District may conduct solid waste facility **tours such as MRF's and landfill tours.**

Outreach Priority

Program	Start Date	End Date	Goal
Recycle Right and New Recyclable Materials Outreach Campaign	2024	2025	3 & 4

Goal/Purpose: The District will focus on correct materials in the recycling stream campaign.

Targeted Audience: Residents and Community Leaders

Strategy: The District will use the website and social media to share and remind residents of the correct materials which go into the recycling programs. A local recycling processor, Rumpke, has recently introduced new recyclable materials such as plastic cups, plastic tubs, and metal cups accepted at the MRF in Cincinnati. The District will assist in reaching out to communities to ensure their community website is updated and shares the correct materials accepted list.

Milestones:

- Collaborate with local MRFs to ensure the District is sharing consistent messaging
- Consistent signage for correct materials and new materials education on all drop-off sites
- Outreach to all community leaders for website and consistent messaging
- Advertisements and consistent messaging about recycling right
- Increase in recycling tonnage reported by businesses on surveys
- Increase in relationships built with businesses, schools, and community officials

Implementation Responsibility: The District will be responsible for collaborating with the local MRFs and sharing content on the District website and social media page. Communities will be responsible for updating their websites to the latest accepted materials list by their MRF.

The Measure of Success: The District will look at recycling rates and request from haulers a summary of material quality overall once per year per community. The District can quantify the posts and views on social media over time.

Grants, Economic Incentives, Market Development

Revamp the three existing grant categories: Community Recycling Awareness Grant, Waste Reduction, Recycling Container, and Composting Equipment Grant, and Special Project Grants
Adjust funding levels, establish maximum individual grant awards, grant cycles to run from August 1 of year one through closeout of grant on November 2 of year two. The Community Recycling Awareness Grant allowable funding categories shall include collection events, equipment, containers, education and awareness, and other activities as approved by the District. The Waste Reduction, Recycling Container, and Composting Equipment Grant shall be retitled the Waste Reduction Grant for Businesses, with allowable funding categories to include equipment, containers, awareness and outreach, and collection programs. The Special Project Grants shall be available to communities, governmental agencies, and non-profit organizations only

Community Recycling Awareness Grant

The District will continue to offer its annual Community Recycling Awareness Grant to assist communities with producing recycling awareness materials, collection activities, and purchasing public space recycling containers. The District may also offer additional funding for select communities with low curbside recycling rates to help those communities improve.

Waste Reduction, Recycling and Compost Equipment Grant

This Grant shall be retitled the Waste Reduction Grant for Businesses with allowable funding categories to include equipment, containers, awareness and outreach, and collection programs.

Ohio EPA Market Development Support and Administration

The District will assist local recyclers and end markets by applying for grant funding through the Ohio EPA Market Development Grant to expand local processing capacity and markets for materials. Assist

with the development of the application and the application process. Administer the grant upon award and track progress.

Recycling and Sustainable Business Assistance

The District will continue to work with local recycling and reuse companies to develop local markets, expand local recycling infrastructure and increase local manufacture of recycled products.

Create new Waste Reduction Grant for Schools and Universities

Establish funding level, establish maximum individual grant award, available to schools and universities only, grant cycle to run from January 1 of year one through closeout of grant on May 1 of year two, allowable funding categories to include equipment, containers, awareness and outreach, and collection programs.

Enforcement & Clean-up

Health Department Funding

The District will continue to provide an annual subsidy to the Cuyahoga County Board of Health and the Cleveland Department of Public Health to inspect solid waste facilities, inspect tire generators, respond to nuisance complaints and participate on the Environmental Crimes Task Force.

Facilitate Environmental Crimes Task Force

The District will continue to facilitate the Cleveland-Cuyahoga County Environmental Crimes Task Force which investigates and prosecutes open dumping and other environmental crimes cases. Partners include the Cuyahoga County Prosecutor, Sheriff, Cleveland Police and Law departments and local health departments.

Litter Collection Program

The District will expand its litter collection program provided through Court Community Service as part of this Plan Update. The program includes two full time litter crews to clean up roadways and public areas throughout Cuyahoga County, with the District considering the addition of a third full time litter crew. This program serves 55 participating communities and provides over 98,000-man hours of services annually.

Other Programs

The District will continue to work within the region regarding solid waste issues, disposal impacts, and recycling impacts as the largest contributor to the regional waste shed. The District will continue to strengthen relationships, build resources, and to broadly share information to provide access to opportunities for recycling and to increase the volume of material recycled within the District on an annual basis.

Implement joint use agreements

The District will promote joint use agreements to highlight mutually beneficial partnerships and to hold parties accountable to the terms of their agreements.

Continue partnership development, engagement, collaboration, and communication
 The District will continue to explore all available opportunities to grow partnerships, increase community engagement, encourage collaboration, and provide harmonized communications to reach all sectors of the community.

Reevaluate minimum fund balance to ensure sound fiscal management (8 months operations) with year 2023 increase in generation fee

With the increase in generation fee implemented in 2023, the District will reevaluate its minimum fund balance to ensure a minimum reserve to cover 8 months of operations as a means of sound fiscal management.

Design a database software program for unique solid waste conditions and reporting requirements in both Cuyahoga County and Ohio

The District may hire a software developer to create a database software program to help organize and utilize District data and streamline data management.

C. WASTE REDUCTION AND RECYCLING RATES

In this Plan Update, the District demonstrates compliance with Goal 2 of the State Solid Waste Management Plan, which states that the SWMD shall reduce and recycle at least 25% of the solid waste generated by the residential/commercial sector.

Through the implementation of waste reduction and recycling programs and conducting annual surveying to gather waste generation data, the District has been able to demonstrate that it has consistently exceeded the 25% residential/commercial and 66% industrial waste reduction and recycling rates and will continue to achieve Goal 2 throughout the 2026-2040 planning period.

Residential/Commercial Recycling Rates

During the reference year (2022), approximately 24.4 **percent of Cuyahoga County’s residential and commercial sector waste stream** was either recycled or composted. This is close to the state goal of 25%.

Projections presented in Table 5-3 **show that the District anticipates continuing to exceed Ohio’s 25% recycling goal** throughout the planning period. The programs and activities presented in this Chapter and in Appendix I outline how the District will continue to achieve the state goal throughout the planning period.

Table 5-3 Residential/Commercial Waste Reduction and Recycling Rate

Year	Projected Quantity Collected (tons)	Residential/ Commercial WRR ¹ (%)
2026	431,877	26%
2027	436,122	27%
2028	440,453	27%
2029	444,870	27%
2030	449,376	28%
2031	449,376	28%

Notes: WRR = Waste Reduction Rate

Source: Appendix K, Table K-1

Sample Calculation: Waste Reduction Rate = Recycled / Total Generated

Industrial Recycling Rates

During the reference year (2022), 62.7% of Cuyahoga County's industrial sector waste stream was either recycled or composted. There is no state goal for the industrial sector in the 2020 Plan Format 4.1.

Industrial recycling consist of materials collected through recycling and composting programs in **Cuyahoga County's manufacturing facilities**. Projections presented in Table 5-4 show that the District anticipates industrial recycling during the first 6 years of the planning period.

Table 5-4 Industrial Waste Reduction and Recycling Rate

Year	Projected Quantity Collected (tons)	Industrial WRR ¹ (%)
2026	718,468	68%
2027	718,468	68%
2028	718,468	68%
2029	718,468	68%
2030	718,468	67%
2031	718,468	67%

Notes: WRR = Waste Reduction Rate

Source: Appendix K, Table K-2

Sample Calculation: Waste Reduction Rate = Recycled / Total Generated

CHAPTER 6: BUDGET

Chapter Purpose

This chapter provides an overview of the District’s budget for implementing this solid waste management plan. Detailed information about the budget is provided in Appendix O.

Background: Ohio Revised Code Section 3734.53(B) requires solid waste management plans to present a budget. This budget must account for how a solid waste district will obtain money to pay for its operations and programs and how it will spend that money. For revenue, the solid waste management plan identifies the sources of funding the solid waste district will use to implement its approved solid waste management plan. The plan also provides estimates of how much revenue the district expects to receive from each source. For expenses, the solid waste management plan identifies the programs the district intends to fund during the planning period and estimates how much will be spent on each program. The plan must also demonstrate that planned expenses will be made in accordance with ten allowable uses that are prescribed in ORC Section 3734.57(G).

Ultimately, the solid waste management plan must demonstrate that the district will have adequate money to implement the approved solid waste management plan. The plan does this by providing annual projections for revenues, expenses and cash balances.

If projections show that the solid waste district will not have enough money to pay for all planned expenses or if the district has reason to believe that uncertain circumstances could change its future financial position, then the plan must demonstrate how the district will balance its budget. This can be done by increasing revenues, decreasing expenses, or some combination of both.

A. OVERVIEW OF SWMD’S BUDGET

The Cuyahoga County Solid Waste District is self-funded primarily through its “generation fee”. The District will continue to use this funding mechanism throughout the planning period. The fee is levied on each ton of solid waste generated in Cuyahoga County and disposed of in a landfill in Ohio. **The District’s generation fee is \$2.00 per ton and is among the lowest in the State of Ohio where the average generation fee is \$4.74 per ton.** Since its inception, the District has strived to impose the lowest fee possible while still funding all plan elements.

Figure 6-1 shows the District’s projected revenue and expenses from 2026 through 2031. The budget projections show the generation fee will remain constant at \$2.00 per ton for the planning period to demonstrate a positive fund balance.

The activities and services described in Chapter 5 are supported through three main sources of revenue is the generation fee. The District projects to receive an annual average of \$2,674,000 in revenues over the first six years of the planning period (2026-2031). The first six years of District expenses are projected to average an annual of \$2,761,000.

Maintaining the generation fee at the current \$2.00 per ton level would require an annual drawdown of **the District’s fund balance to make up the difference between revenues and expenditures** – on average, approximately \$100,000. This is projected to draw the balance down to \$3 million by year 2040.

B. REVENUE

Overview of How Solid Waste Management Districts Earn Revenue

There are a number of mechanisms SWMDs can use to raise the revenue necessary to finance their solid waste management plans. Two of the most commonly used mechanisms are disposal fees and generation fees.

Before a SWMD can collect a generation or disposal fee it must first obtain approval from local communities through a ratification process. Ratification allows communities in the SWMD to vote on whether they support levying the proposed fee.

Disposal Fees (See Ohio Revised Code Section 3734.57(B))

Disposal fees are collected on each ton of solid waste disposed at landfills in the levying SWMD. There are three components, or tiers, to the fee. The tiers correspond to where waste came from – in- district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the SWMD and disposed at landfills in that SWMD. Out-of-district waste is solid waste generated in Ohio counties that are not part of the SWMD and disposed at landfills in the SWMD. Out-of-state waste is solid waste generated in other states and disposed at landfills in the SWMD.

Ohio’s law prescribes the following limits on disposal fees:

- The in-district fee must be at least \$1.00 and no more than \$2.00;
- The out-of-district fee must be at least \$2.00 and no more than \$4.00; and
- The out-of-state fee must be equal to the in-district fee.

Generation Fees (see Ohio Revised Code Section 3734.573)

Generation Fees are collected on each ton of solid waste generated within the levying SWMD and accepted at a transfer facility or landfill in Ohio. The fee is collected at the first facility that accepts the **SWMD’s waste**. **There are no minimum or maximum** limits on the per ton amount for generation fees.

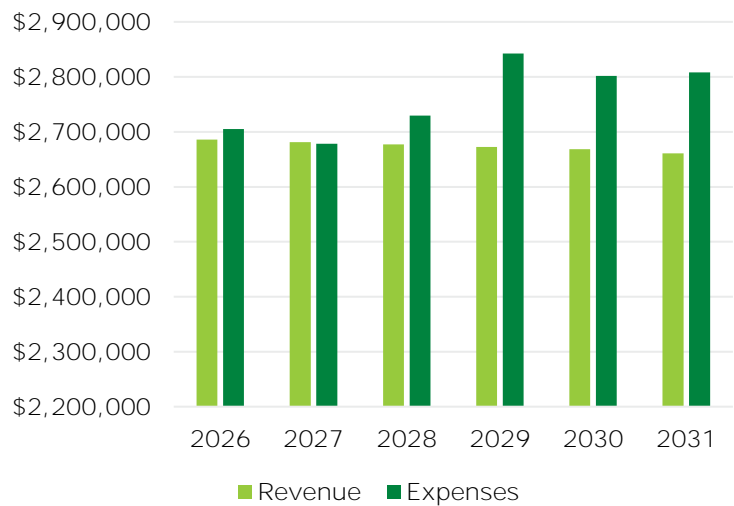
Rates and Charges (see Ohio Revised Code Section 343.08)

The board of directors can collect money for a SWMD through what are called rates and charges. The board can require anyone that receives solid waste services from the SWMD to pay for those services.

Contracts (see Ohio Revised Code Sections 343.02 and 343.03)

The board of directors can enter into contracts with owners/operators of solid waste facilities or transporters of solid waste to collect generation or disposal fees on behalf of a SWMD.

Figure 6-1 Projected Revenues and Expenses



Other Sources of Revenue

There are a variety of other sources that SWMDs can use to earn revenue. Some of these sources include:

- Revenue from the sale of recyclable materials;
- User fees (such as fees charged to participate in scrap tire and appliance collections);
- County contributions (such as from the general revenue fund or revenues from publicly-operated solid waste facilities (i.e., landfills, transfer facilities));
- Interest earned on cash balances;
- Grants;
- Debt; and
- Bonds.

District Revenue for the Plan Period

The Cuyahoga County SWMD funds its operations and plan implementation using a generation fee. The generation fee is currently \$2.00 per ton and currently provides approximately \$2.5 million in annual revenue.

Supplemental revenue comes from five sources – grants, compost bin sales, illegal dumping fines, C&DD fees and other miscellaneous sources. Supplemental revenue will decline during the planning period because a major source of funding the District received from 2011 to 2019 has ended. This was \$1 million in funding from the Northeast Ohio Regional Sewer District.

The District plans to maintain its generation fee at the current \$2.00 per ton level until the end of the planning period.

Table 6-1 shows the projected revenues for the first six years of the planning period.

Table 6-1 Summary of Revenue

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue			Total Revenue
				Sewer District Grant	Pass-Through Grants	C&DD Landfill Fees & Other	
Reference Year							
2022	\$0	\$2,045,524	\$0	\$75,000	\$0	\$14,697	\$2,135,220
Planning Period							
2026	\$0	\$2,685,605	\$0	\$0	\$0	\$16,000	\$2,701,605
2027	\$0	\$2,681,242	\$0	\$0	\$0	\$16,000	\$2,697,242
2028	\$0	\$2,676,935	\$0	\$0	\$0	\$16,000	\$2,692,935
2029	\$0	\$2,672,684	\$0	\$0	\$0	\$16,000	\$2,688,684
2030	\$0	\$2,668,490	\$0	\$0	\$0	\$16,000	\$2,684,490
2031	\$0	\$2,660,966	\$0	\$0	\$0	\$16,000	\$2,676,966

Source(s) of Information:

Year 2022 sourced from Quarterly Fee Reports

Planning period years sourced from Appendix O

Sample Calculations: Total Revenue = Generation Fes + Other Revenue

C. EXPENSES

Overview of How Solid Waste Management Districts Spend Money

Ohio law authorizes SWMDs to spend revenue on 10 specified purposes (often referred to as the 10 allowable uses). All the uses are directly related to managing solid waste or for dealing with the effects of hosting a solid waste facility. The 10 uses are as follows:

1. Preparing, monitoring, and reviewing implementation of a solid waste management plan.
2. Implementing the approved solid waste management plan.
3. **Financial assistance to approved boards of health to enforce Ohio's solid waste laws and regulations.**
4. Financial assistance to counties for the added costs of hosting a solid waste facility.
5. Sampling public or private wells on properties adjacent to a solid waste facility.
6. Inspecting solid wastes generated outside of Ohio and disposed within the SWMD.
7. Financial assistance to boards of health for enforcing open burning and open dumping laws, and to law enforcement agencies for enforcing anti-littering laws and ordinances.
8. Financial assistance to approved boards of health for operator certification training.
9. Financial assistance to municipal corporations and townships for the added costs of hosting a solid waste facility that is not a landfill.
10. Financial assistance to communities adjacent to and affected by a publicly owned landfill when those communities are not located within the SWMD or do not host the landfill.

In most cases, the majority of a SWMD's budget is used to implement the approved solid waste management plan (allowable use 2). There are many types of expenses that a solid waste management district incurs to implement a solid waste management plan. Examples include:

- salaries and benefits;
- purchasing and operating equipment (such as collection vehicles and drop-off containers);
- operating facilities (such as recycling centers, solid waste transfer facilities, and HHW convenience centers);
- offering collection programs (such as for yard waste and scrap tires);
- providing outreach and education;
- providing enforcement services; and
- paying for community clean-up programs.

District Expenses for the Plan Period

Throughout the first six years of the planning period, the District projects expenses at approximately \$3 million per year. Table 6-2 summarizes expenses by program type. The complete detailed budget and budget explanation can be found in Appendix O.

The budget will remain relatively constant throughout this period. The District does not anticipate any large expenses throughout the planning period.

Table 6-2 summarizes the types of expenses the District expects for implementation of this Plan Update. Detailed information regarding expenses is provided in Appendix O.

Table 6-2 Summary of Expenses

Expense Category	Planning Period						
	Reference	Planning Period					
	2022	2026	2027	2028	2029	2030	2031
Plan Monitoring/Prep.	\$7,320	\$12,000	\$12,240	\$21,232	\$91,484	\$28,612	\$12,990
District Administration	\$961,238	\$917,472	\$915,821	\$934,138	\$952,820	\$962,349	\$971,972
Recycling Collection	\$13,483	\$50,100	\$51,102	\$52,124	\$53,167	\$53,698	\$54,235
Special Collections	\$275,758	\$501,488	\$511,517	\$521,748	\$532,183	\$537,504	\$542,880
Education/Awareness	\$344,355	\$603,750	\$606,825	\$609,962	\$613,161	\$614,792	\$616,440
Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Litter Collection/Education	\$117,100	\$185,835	\$189,551	\$193,342	\$197,209	\$199,181	\$201,173
Loan Payment	\$0*	\$104,629	\$104,629	\$104,629	\$104,629	\$104,629	\$104,629
Health Dept. Enforcement	\$207,392	\$241,644	\$246,477	\$251,406	\$256,434	\$258,999	\$261,589
Open Dump, Litter Law Enforcement	\$7,013	\$74,600	\$26,092	\$26,614	\$27,146	\$27,418	\$27,692
Total Expenses	\$1,943,346	\$2,930,676	\$2,920,077	\$2,987,960	\$3,118,578	\$3,105,282	\$3,140,230

Source(s) of Information:

Year 2022 sourced from Quarterly Fee Reports

Planning period years sourced from Appendix O

Sample Calculations:

Total Expenses = sum of expenses category

*Included in District Administration

D. BUDGET SUMMARY

Table 6-3 presents a summary of the budget for the 2022 reference year and the first six years of the planning period (2026 to 2031). The summary includes revenue, expenditures, net balance, and year-end fund balance. Funding should be available to operate the programs outlined throughout this Plan.

Table 6-3 Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2022	\$2,135,220	\$1,943,346	\$191,874	\$3,240,040
Planning Period				
2026	\$2,685,605	\$2,705,175	(\$19,570)	\$4,566,698
2027	\$2,681,242	\$2,678,186	\$3,056	\$4,569,754
2028	\$2,676,935	\$2,729,405	(\$52,470)	\$4,517,284
2029	\$2,672,684	\$2,842,728	(\$170,044)	\$4,347,240
2030	\$2,668,490	\$2,801,821	(\$133,331)	\$4,213,908
2031	\$2,660,966	\$2,808,386	(\$147,420)	\$4,066,488

Source(s) of Information:

Year 2022 sourced from Quarterly Fee Reports

Planning period years sourced from Appendix O

Sample Calculations:

Net Difference = Revenue – Expenses

Ending Balance = Net Difference + Previous Year Ending Balance

Additional revenues are not expected; however, revenues could increase beyond what is projected. In the event additional revenues are received, and projected expenses remain within budgeted allowances, additional revenues will be added to the carryover balance.

APPENDIX A: MISCELLANEOUS INFORMATION

Appendix A establishes the reference year used for this plan update, planning period, goal statement, material change in circumstances and explanations of differences in data.

A. REFERENCE YEAR

The reference year for this solid waste management plan is 2022. Since the plan is being drafted in 2023 and 2024, some information may also reflect activities that occurred in 2023, but it will be noted if this is the case.

B. PLANNING PERIOD

The planning period for this solid waste management plan is 2026 to 2040.

C. GOAL STATEMENT

The Solid Waste Management District (SWMD or District) will achieve the following Goal:

Goal 1: The SWMD shall provide its residents and commercial businesses with access to opportunities to recycle solid waste. At a minimum, the SWMD must provide access to recycling opportunities to 80 percent of its residential population in each county and ensure that commercial generators have access to adequate recycling opportunities.

Goal 2: The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector.

The Cuyahoga County Solid Waste District will achieve Goal 2.

D. EXPLANATIONS OF DIFFERENCES BETWEEN DATA PREVIOUSLY REPORTED AND DATA USED IN THE SOLID WASTE MANAGEMENT PLAN

Differences in quantities of materials recovered between the annual district report and the solid waste management plan.

- Data does not differ

Differences in financial information reported in quarterly fee reports and the financial data used in the solid waste management plan.

- Data does not differ

E. MATERIAL CHANGE IN CIRCUMSTANCES/CONTINGENCIES

Section 3734.56(D) of the Revised Code states that the Plan Update must be revised if the Board has **determined that "circumstances materially changed from those addressed in the approved initial or amended plan of the District."** A material change in circumstances shall be defined as a change that significantly interferes with the ability of the Board to: (1) assure waste disposal capacity during the planning period; (2) maintain compliance with applicable waste reduction or access goals; or (3) adequately finance implementation of the Plan Update.

If the Board determines that a material change in circumstances has occurred (i.e., a change that materially and adversely affects the implementation of the District Plan), the Executive Director shall **notify the Director of Ohio EPA of the Board's conclusion that a material change in circumstances has**

occurred. The Board will direct the Policy Committee to revise, within ninety (90) days, all relevant sections of the Plan Update to address the cause and effect of the material change in circumstances.

The Board shall make the determination of whether a material change in circumstances has occurred according to the following guidelines:

Assurance of Waste Disposal Capacity

Change in facility designations/flow control

The District reserves the right to designate facilities and thereby direct all or a portion of the solid waste generated within the District to designated solid waste facilities, commonly referred to as flow control (see Section 6). If the Board implements or subsequently changes the designation of any public or private solid waste facility, any such designation or change does not constitute a material change in circumstances requiring an amendment to the Plan. Designation of private and public solid waste facilities is authorized in sections 343.013 and 343.014 of the Revised Code.

Change in Available Capacity

The Board may determine that a material change in circumstances exists if there is a twenty-five percent (25%) decrease in the solid waste disposal capacity necessary for the disposal of solid waste generated within the District. District staff shall monitor the availability of solid waste disposal capacity and shall provide information to the Board and Policy Committee when closures and/or reductions (in any combination) of designated or Plan-identified solid waste facilities adversely affect the ability of the Board to assure sufficient capacity to process or dispose of District generated solid waste. A material change in circumstances has not occurred if the Board identifies alternate solid waste disposal capacity to meet the Plan-forecasted requirements for solid waste disposal.

Compliance with Applicable Waste Reduction or Access Goals

The District's ADR and the Executive Director's annual report of District activities evaluates the District's progress in implementing the District Plan. In the event that circumstances change such that the District is no longer able to maintain compliance with the State's waste reduction goals for whatever reason, the Board will consider whether such changes constitute a material change in circumstances (i.e., a change that materially and adversely affects the implementation of the District Plan). A material change in circumstances has not occurred, however, when changes do not affect the ability of the District to maintain compliance with Goal 2 or when the Board is able to implement new programs or modify existing programs to meet the current goal or utilize the alternate goal available to the District as provided in the State Solid Waste Management Plan.

Financing of Plan Implementation

District staff will monitor the total tons of solid waste accepted at facilities remitting generation fees to **the District. On a monthly basis, the District's Executive Director will review the cumulative total revenue** collected to determine whether revenues are adequate to finance implementation of the District Plan. The Executive Director will review operations and the cost of financing implementation of the District Plan and prepare reports to the Board and the Policy Committee that reflect the financial condition of the District and the ability of the Board to finance implementation of the District Plan.

The Board will evaluate whether a material change in circumstances (after line-item adjustments considering prior year carryover, revenues and expenditures) has occurred when revenues are more than twenty-five percent (25%) below the projections in this Plan Update (See Section VIII). The Board may

determine that no material change in circumstances has occurred if the Board is able to maintain funding for programs identified in the implementation schedule of this Plan Update through: (1) the re- allocation of District funds, (2) an increase in the District generation fee or (3) generating additional revenues by designating solid waste facilities and collecting a designation or contract fee as consideration for the designation of those facilities.

Procedures where Material Change in Circumstances has Occurred

If, at any time, the Board determines that a material change in circumstances has occurred and an update to the Plan is necessary, the Board shall prepare a Draft Amended Plan. The Board shall proceed to adopt and obtain approval of the Amended Plan in accordance with divisions (A) to (C) of Section 3734.55 of the Ohio Revised Code.

APPENDIX B: RECYCLING INFRASTRUCTURE INVENTORY

Appendix B provides an inventory of the recycling infrastructure that existed in the reference year. This inventory covers residential curbside collection services, drop-off recycling sites, mixed waste materials recovery facilities, waste companies providing recycling collection and trash collection services and composting facilities and yard waste management programs.

A. CURBSIDE RECYCLING SERVICES, DROP-OFF RECYCLING LOCATIONS, AND MIXED SOLID WASTE MATERIALS RECOVERY FACILITIES

Curbside Recycling Services

Table B-1 identifies all curbside recycling programs available in the reference year and the total tonnage (including drop-off tonnages) collected in each community. The table does not include tonnages for yard waste or special waste. In all, there were 56 non-subscription curbside recycling programs available in 2022. These programs were either funded and operated by the community or operated by a private hauler under contract with the community. In communities with private contracts, municipalities take proposals/quotes from private sector service providers to deliver the specified services. Some contracting approaches still leave the billing of customers up to the service providers while others do their own billing and pay the hauler independently. Public-private contracts determine collection frequency, materials collected, size of containers, and type of collection. There were no subscription curbside recycling services available during the reference year. In the reference year, the City of Cleveland initiated their new opt-in recycling program, financed by the city.

Table B-1a: Inventory of Non-Subscription Curbside Recycling Services Available in the Reference Year

ID #	Name of Curbside Service	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Collected Tons
NCS1	Bay Village City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	1,252
NCS2	Beachwood City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	777
NCS3	Bedford City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	420
NCS4	Bedford Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	614
NCS5	Bentleyville Village	Contract between the Village and the private hauler	Biweekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	69
NCS6	Berea City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	1,329
NCS7	Bratenahl Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	113
NCS8	Brecksville City	City Service Department	Biweekly	OCC, MxP, AI, Sc, GI, PI*	Dual-stream, manual	N	965
NCS9	Broadview Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, manual	N	1,346

ID #	Name of Curbside Service	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Collected Tons
NCS10	Brook Park City	City Service Department	Biweekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	1,099
NCS11	Brooklyn City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	639
NCS12	Brooklyn Heights Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	106
NCS13	Chagrin Falls Township	Contract between the Township and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	15
NCS14	Chagrin Falls Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	363
NCS15	Cleveland City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	2,977
NCS16	Cleveland Heights City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, manual	N	2,390
NCS17	Cuyahoga Heights Village	Village Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	54
NCS18	Euclid City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	2,044
NCS19	Fairview Park City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	1,297
NCS20	Garfield Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	753
NCS21	Gates Mills Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Dual-stream, manual	N	178
NCS22	Glenwillow Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	142
NCS23	Highland Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	604
NCS24	Highland Hills Village	Village Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, manual	N	59
NCS25	Hunting Valley Village	Contract between the Village and the private hauler	Biweekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	80
NCS26	Independence City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	711
NCS27	Lakewood City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	2,950
NCS28	Linndale Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, manual	N	8

ID #	Name of Curbside Service	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Collected Tons
NCS29	Lyndhurst City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	1,094
NCS30	Maple Heights City	Contract between the City and the private hauler	Biweekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	908
NCS31	Mayfield Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	207
NCS32	Mayfield Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	923
NCS33	Middleburg Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, manual	N	741
NCS34	Moreland Hills Village	Village Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	446
NCS35	Newburgh Heights Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	139
NCS36	North Olmsted City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	2,177
NCS37	North Randall Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	31
NCS38	North Royalton City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	2,407
NCS39	Oakwood Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Dual-stream, manual	N	176
NCS40	Olmsted Falls City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	994
NCS41	Olmsted Township	Contract between the Township and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	750
NCS42	Orange Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	262
NCS43	Parma City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	6,632
NCS44	Parma Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	864
NCS45	Pepper Pike City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, manual	N	292
NCS46	Rocky River City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, manual	N	891
NCS47	Seven Hills City	Contract between the City and the private hauler	Weekly	OCC, MxP, AI, Sc, GI, PI*	Single-stream, automated	N	996
NCS48	Shaker Heights City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI*	Dual-stream, manual	N	1,247
NCS49	Solon City	City Service Department	Weekly	OCC, MxP, AI, Sc, GI, PI**	Single-stream, automated	N	1,840

ID #	Name of Curbside Service	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Collected Tons
NCS50	South Euclid City	Contract between the City and the private hauler	Weekly	OCC, MxP, Al, Sc, Gl, PI**	Single-stream, automated	N	1,165
NCS51	Strongsville City	Contract between the City and the private hauler	Weekly	OCC, MxP, Al, Sc, Gl, PI*	Single-stream, manual	N	1,703
NCS52	University Heights City	City Service Department	Weekly	OCC, MxP, Al, Sc, Gl, PI**	Dual-stream, manual	N	339
NCS53	Walton Hills Village	Contract between the Village and the private hauler	Weekly	OCC, MxP, Al, Sc, Gl, PI**	Single-stream, automated	N	173
NCS54	Warrensville Heights City	Contract between the City and the private hauler	Weekly	OCC, MxP, Al, Sc, Gl, PI**	Single-stream, automated	N	515
NCS55	Westlake City	Contract between the City and the private hauler	Weekly	OCC, MxP, Al, Sc, Gl, PI*	Single-stream, automated	N	2,306
NCS56	Woodmere Village	Village Service Department	Twice per week	OCC, MxP, Al, Sc, Gl, PI**	Single-stream, manual	N	20
Total							53,593

*PI includes plastic bottles, jugs, and tubs.

**PI includes plastic bottles and jugs.

Source: 2022 District data

Notes: Al = aluminum cans, Sc = steel cans, Gl = glass, PI = plastics, MxP = mixed paper, OCC = old corrugated cardboard

Drop-off tonnages are included in curbside tonnages. Tonnage does not include yard waste or special Waste.

Table B-1b: Inventory of Subscription Curbside Recycling Services Available in the Reference Year

ID #	Name of Curbside Service	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT (Y/N)	Collected Tons
None							
Total							0

There were no subscription curbside recycling services available during the reference year.

Drop-Off Recycling Locations

Table B-2a and Table B-2b identify the public recycling drop-off sites available during the reference year. **Total tonnages for these locations are included in each community's curbside recycling tons listed in Table B-1.**

There were 22 locations of recycling drop-off sites available to the public in 2022, which met the general criteria for achieving Goal 1. The District anticipates service to continue at all the locations.

The majority of residents mix all recyclables (single stream) in bins or carts for curb collection. However, some municipalities separate their fiber from commingled recycling (dual stream).

Table B-2a: Inventory of Full Time, Urban Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets Min. Standards (Y/N)	Collected Tons
FTU1	Beachwood Community Center, 25225 Fairmount Blvd. Beachwood, OH 44122	City	24/7	OCC, MxP, Al, Sc, GI, PI**		
FTU2	Brook Park Service Department, 19065 Holland Rd. Brook Park, OH 44142	City	M-F 8:00am-7:00pm; Sat 9:00am-1:00pm	OCC, MxP, Al, Sc, GI, PI*		
FTU3	Cleveland Division of Waste Collection, 5600 Carnegie Ave., Cleveland, OH 44103	City	M-Sat 9:00am-3:00pm	OCC, MxP, Al, Sc, GI, PI*		
FTU4	Cleveland Ridge Road Transfer Station, 3727 Ridge Rd., Cleveland, OH 44144	City	M-Sat 9:00am-3:00pm	OCC, MxP, Al, Sc, GI, PI*		
FTU5	East Cleveland Service Department, 1610 Eddy Rd., OH 44112	Contract between the City and the private hauler	M-F 8:00am-5:00pm	OCC, MxP, Al, Sc, GI, PI*		
FTU6	Lakewood Service Department, 12920 Berea Rd. Lakewood, OH 44111	City	M-F 8:00am-2:00pm; Sat 8:00am-12:00pm	OCC, MxP, Al, Sc, GI, PI*		
FTU7	Mayfield Heights Service Department, 6154 Mayfield Road, Mayfield Heights, OH 44124	Contract between the City and the private hauler	M, W 6:00am-9:00am; Sat 6:00am-11:00am	OCC, MxP, Al, Sc, GI, PI**		
FTU8	North Olmsted Service Garage, 5200 Dover Center Rd. North Olmsted, OH 44070	Contract between the City and the private hauler	24/7	OCC, MxP, Al, Sc, GI, PI*		
FTU9	Pepper Pike City Hall Complex, 28000 Shaker Blvd., Pepper Pike, OH 44124	City	M-F 7:00am-2pm	OCC, MxP, Al, Sc, GI, PI**		
FTU10	Rocky River Service Department / Transfer Station, 22401 Lake Rd. Rocky River, OH 44116	City	M,T,Th,F 8:00am-2:30pm; Sat 8:00am-12:00pm	OCC, MxP, Al, Sc, GI, PI*		
FTU11	Solon Service Department, 6600 Cochran Rd., Solon, OH 44139	City	M-F 8:00am-11:00am, 12:00pm-3:00pm	OCC, MxP, Al, Sc, GI, PI**		
FTU12	Strongsville Food Bank, 13213 Pearl Rd. Strongsville, OH 44136	Contract between the City and the private hauler	24/7	OCC, MxP, Al, Sc, GI, PI*		
FTU13	University Heights Service Department, 2300 Warrensville Center Rd. University Heights, OH 44118	City	24/7	OCC, MxP, Al, Sc, GI, PI**		
FTU14	Westlake Clague Park Cabin, 1500 Clague Rd., Westlake, OH 44145	Contract between the City and the private hauler	24/7	OCC, MxP, Al, Sc, GI, PI*		

ID#	Name of Drop-off Site	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets Min. Standards (Y/N)	Collected Tons
FTU15	Westlake Meadowood Golf Course, 29800 Center Ridge Rd., Westlake, OH 44145	Contract between the City and the private hauler	24/7	OCC, MxP, Al, Sc, Gl, PI*		
FTU16	Westlake Police Station, 27300 Hilliard Blvd., Westlake, OH 44145	Contract between the City and the private hauler	24/7	OCC, MxP, Al, Sc, Gl, PI*		
Total						0

¹Paper includes: Newspaper, Cardboard, Other Paper, Paper, & Junk Mail; Plastic includes: any plastic container shaped like a bottle or jug; Metals includes: Aluminum containers, Steel Cans, & Tin Cans; Glass includes: Brown Glass, Clear Glass, & Green Glass
Source: 2022 District data

Table B-2b: Inventory of Part-Time, Urban Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets Min. Standards (Y/N)	Collected Tons
PTU1	Brecksville Service Garage 9023 Brecksville Rd. Brecksville, OH 44141	City	Sat 8:00am-12:00pm	OCC, MxP, Al, Sc, Gl, PI*		
PTU2	North Royalton Service Garage 10789 Royalton Rd. North Royalton, OH 44133	Contract between the City and the private hauler	Sat 8:00am-3:00pm	OCC, MxP, Al, Sc, Gl, PI*		
PTU3	Olmsted Township Service Garage 7900 Fitch Rd. Olmsted Twp., OH 44138	Contract between the Township and the private hauler	24/7	OCC, MxP, Al, Sc, Gl, PI*		
PTU4	Shaker Heights Service Department 15600 Chagrin Blvd. Shaker Heights, OH 44120	City	Sat-Sun 8:00am-4:00pm	OCC, MxP, Al, Sc, Gl, PI*		
Total						0

Table B-2c: Inventory of Full-Time, Rural Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets Min. Standards (Y/N)	Collected Tons
FTR1	Highland Hills Shaker House Complex 3700 Northfield Rd. Highland Hills, OH 44122	Contract between the Village and the private hauler	24/7	OCC, MxP, Al, Sc, Gl, PI**		
FTR2	Valley View Village Hall 6895 Hathaway Rd. Valley View, OH 44125	Contract between the Village and the private hauler	24/7	OCC, MxP, Al, Sc, Gl, PI*		
Total						0

Table B-2d: Inventory of Part-Time, Rural Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets Min. Standards (Y/N)	Collected Tons
None						
Total						0

Mixed Municipal Solid Waste Material Recovery Facility

Table B-3: Mixed Municipal Solid Waste Material Recovery Facility

Name of Material Recovery Facility	Location (County, City)	Communities Served	Types of Materials Recovered ⁽¹⁾	Weight of Materials Recovered (tons)	Waste Processed (tons)	Bypass Waste (tons)	Total Waste (tons)	Recovery Rate in Reference Year (percent)
None								0%
Total				0	0	0	0	0%

A mixed solid waste materials recovery facility provides residents with access to recycling opportunities by removing recyclables from the trash for the residents. The District does not use a mixed waste material recovery facility (aka dirty MRF) to separate recyclables from trash.

B. CURBSIDE RECYCLING AND TRASH COLLECTION SERVICE PROVIDERS

Table B-4 identifies the municipal and commercial haulers that provided curbside recycling and trash collection services in 2022.

Table B-4: Inventory Curbside Recycling and Trash Collection Service Providers in the Reference Year

Name of Provider	Counties Served	Trash Collection Services			Curbside Recycling Services			
		PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
Beachwood City	Cuyahoga	N	X			X		
Brecksville City	Cuyahoga	N	X			X		
Brook Park City	Cuyahoga	N	X			X		
Brooklyn City	Cuyahoga	N	X			X		
Cleveland City	Cuyahoga	N	X			X		
Cleveland Heights City	Cuyahoga	N	X			X		
Cuyahoga Heights Village	Cuyahoga	N	X			X		
Highland Hills Village	Cuyahoga	N	X			X		
Independence City	Cuyahoga	N	X			X		
Lakewood City	Cuyahoga	N	X			X		
Lyndhurst City	Cuyahoga	N	X			X		
Moreland Hills Village	Cuyahoga	N	X			X		
Pepper Pike City	Cuyahoga	N	X			X		
Rocky River City	Cuyahoga	N	X			X		
Shaker Heights City	Cuyahoga	N	X			X		
Solon City	Cuyahoga	N	X			X		
University Heights City	Cuyahoga	N	X			X		
Valley View Village	Cuyahoga	N	X					
Woodmere Village	Cuyahoga	N	X			X		
1-2-3 Disposal	Cuyahoga			X				
Cleveland Metropolitan Housing Authority	Cuyahoga		X					
Cooper Disposal	Cuyahoga			X				
Descenzo Rubbish	Cuyahoga			X	X			
Dumpster Bandits	Cuyahoga			X				
Kimble Company	Cuyahoga	N	X	X	X	X	X	X
Major Waste	Cuyahoga			X				
Miles Waste Disposal	Cuyahoga			X	X			
Pete and Pete	Cuyahoga			X	X			
Republic Services	Cuyahoga	N	X	X	X	X	X	X
Rumpke Waste and Recycling	Cuyahoga	N	X	X	X	X	X	X
Waste Management	Cuyahoga	N	X	X	X	X	X	X

Source: Generation Fee Submittal Form (2022)

Tons collected from District for each drop-off are included in curbside tonnage (Table B-1a) for the corresponding political subdivision.

C. COMPOSTING FACILITIES

Table B-5 identifies the yard waste management activities and facilities operating in the reference year. This table includes the facilities and programs that managed food waste, leaves, brush, trees, grass clippings and logs. It also includes grass-cycling & backyard composting activities. **Other Food Waste**

Management Activities” includes tonnages recycled and/or donated by survey respondents that were not processed by compost facilities listed in Table B-5.

Table B-5: Inventory of Compost Facilities Used in the Reference Year

Facility Name	Compost Facility Class.	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
Paradise Composting Class II	II		4300 Mechanicsburg Road Wooster, OH	184	0	184
Cloverleaf Facility	II		Old Brecksville Road Independence, OH	1,113	0	1,113
Rid-All Green Partnership	II		8129 Otter Avenue Cleveland, OH	29	30	59
Independence Composting Facility	IV		7423 Old Rockside Road Independence, OH	0	3,056	3,056
Boyas Recycling	IV		11311 Rockside Road Valley View, OH	0	8,931	8,931
Sagamore Soils Twinsburg Rd Compost Facility	IV		1361 Twinsburg Road Macedonia, OH	0	964	964
Orange Village Compost	IV		Pike Drive Park Orange Village, OH	0	943	943
Kurtz Bros Inc - Bridgeview Production Facility	IV		5603 Canal Road Valley View, OH	0	14,476	14,476
Number One Landscape	IV		3775 Ridge Rd Medina, OH	0	648	648
Solon Road Midwest Recycled Landscape Materials	IV		600 Solon Road Bedford Heights, OH	0	6,510	6,510
Zollinger Sand & Gravel Co	IV		11687 Wadsworth Road Rittman, OH	0	3	3
Midwest Mulch	IV		10555 Kinsman Road Newbury, OH	0	5,500	5,500
City of Wickliffe Composting Facility	IV		1290 East 289th Street Wickliffe, OH	0	18,397	18,397
Savarino Brothers	IV		24670 Broadway Avenue Bedford, OH	0	1,346	1,346
Abate Landscaping	IV		7080 Mulberry Road Chesterland, OH	0	257	257
Mayfield Village Composting Facility	IV		610 Som Center Road Mayfield, OH	0	1,741	1,741
Sagamore Soils Compost	IV		2001 Barlow Road Hudson, OH	0	43	43
Sand Road Ent Inc	IV		4352 Sand Road Norwalk, OH	0	2	2
Cleveland Metroparks Compost	III		3900 Brookside Park Dr Cleveland, OH	0	526	526
City of Solon Service Dept.	IV		6600 Cochran Road Solon, OH	0	5,686	5,686
City of Westlake, Compost Facility	IV		741 Bassett Road Westlake, OH	0	15,330	15,330
Smith Bros Inc	IV		3087 Marks Road Medina, OH	0	8,192	8,192
City of Brooklyn Service Department	IV		9400 Memphis Avenue Brooklyn, OH	0	1,016	1,016
Urban Organics	III		2934 Sleepy Hollow Road Brunswick, OH	0	0	0
Pro Tree Service	IV		8753 Overlook Drive Kirtland, OH	0	0	0
Total				1,326	93,597	94,924

Source: 2022 Ohio EPA Compost Facility Planning Analytical Report

- Compost Facilities = Facilities and tonnages as reported in OEPA Compost Facility Report.

- Community Yard Waste Programs tonnages include all yard waste activities reported by communities in 2016 Residential Recycling Report (leaves, brush, Christmas trees, grass clippings, logs, grasscycling & backyard composting).
- Business Survey Yard Waste Composting = Commercial and industrial businesses that reported yard waste composting tonnages in Commercial and Institutional Solid Waste Survey and Industrial Solid Waste Survey.
- Other Food Waste Management Activities include food waste tonnages recycled and/or donated by grocery stores, institutional facilities and industrial businesses that were not processed by compost facilities listed in Table B-5.

Note: The District did not use yard waste tonnages provided in OEPA Compost Facility Report to calculate total yard waste diversion for the base year.

D. OTHER FOOD WASTE AND YARD WASTE MANAGEMENT PROGRAMS

Table B-6: Inventory of Other Food and Yard Waste Management Activities Used in the Reference Year

Facility or Activity Name	Activity Type	Location	Food Waste (tons)	Yard Waste (tons)
HAULER/GROCER FOOD WASTE DATA			1,479	0
Total			1,479	0

Source: 2022 Ohio EPA Compost Facility Planning Analytical Report

Hauler/Grocer food waste diverted was obtained from Ohio EPA.

E. MATERIAL HANDLING FACILITIES USED BY THE DISTRICT IN THE REFERENCE YEAR

Table B-7 includes the **known facilities that were available and/or handled the District's recyclables in the reference year**. There was a total of 59 facilities identified, 5 of which are single-stream Material Recovery **Facilities that were used to process the District's residential curbside recyclables**.

Table B-7: Inventory of Material Handling Facilities Used in the Reference Year

Facility Name	County	State	Type of Facility	Tons from District
Able Alloy Inc.	Cuyahoga	OH	Scrap Yard, Processor	
Aetna Metal Recycling	Cuyahoga	OH	Scrap Yard	
All Ohio Secure Shred	Summit	OH	Other- Recycling	
All Scrap Salvage	Cuyahoga	OH	Scrap Yard, Processor	18,521
Alloy Exchange	Kent	MI	Processor	96
American Metal Recycling	Cuyahoga	OH	Scrap Yard, Processor	
American Scrap Mart	Cuyahoga	OH	Scrap Yard	
Associated Paper Stock	Mahoning	OH	Broker	210
Bedford Metal Recycling	Cuyahoga	OH	Scrap Yard	
Blue Ocean Plastics	Cuyahoga	OH	Broker	
Broadway Scrap Metals, Inc.	Cuyahoga	OH	Scrap Yard	7,026
Bulldog Battery	Lake	OH	Buy-Back, Drop-Off	
Cleveland Furniture Bank	Cuyahoga	OH	Other - Reuse	1,100
Container Compliance Corporation	Cuyahoga	OH	Other - Reuse/Recondition (drums)	5,066
East Side Metals	Cuyahoga	OH	Scrap Yard, Processor	
Ferrous Processing & Trading	Cuyahoga	OH	Broker, Processor	174,380
Gateway Products Recycling	Cuyahoga	OH	Broker, Processor	
Goodwill Industries of Greater Cleveland & East Central Ohio	Stark	OH	Processor, Other - Reuse	
Greater Cleveland Habitat for Humanity	Cuyahoga	OH	Other - Reuse	
Horwitz & Pintis Co.	Lucas	OH	Processor	

Facility Name	County	State	Type of Facility	Tons from District
I. Schumann Co.	Cuyahoga	OH	Processor	
IFCO	Medina	OH	Processor	
JB I Scrap Processors	Cuyahoga	OH	Scrap Yard, Processor	
Keep It Green Recycling	Cuyahoga	OH	Broker	
Kimble Transfer & Recycling	Summit	OH	MRF	
KJ Plastics	Montgomery	PA	Broker	
Kurtz Bros. Bridgeview Composting Facility	Cuyahoga	OH	Processor (pallets)	33,714
Lakeside Metals	Cuyahoga	OH	Scrap Yard, Processor	
Lakeside Scrap Metals	Cuyahoga	OH	Scrap Yard, Processor	
Medina Paper Recycling	Medina	OH	Processor	
Medwish International	Cuyahoga	OH	Other - Reuse/Recondition (drums)	
Metallic Resources	Summit	OH	Processor	24
Middlefield Pallet Inc.	Geauga	OH	Processor (pallets)	
Niles Iron & Metal	Trumbull	OH	Scrap Yard, Processor	
Northcoast Inc. Recycling Specialists	Lake	OH	Processor	2,841
Painesville Recycling	Lake	OH	Processor, Scrap Yard, Buy-Back, Drop-Off	
Planet Aid Cleveland	Cuyahoga	OH	Other - Reuse	
PSC Metals	Cuyahoga	OH	Broker, Processor, Scrap Yard	
Quasar Energy Group	Cuyahoga	OH	Other - Biomass	
Recycle-it LLC	Cuyahoga	OH	Broker, Processor	3,000
Regency Technology	Summit	OH	Processor	
Republic Services	Lorain	OH	MRF	18,802
River Valley Paper Co. dba Integrity Fiber	Summit	OH	Broker, Processor	5,396
Royal Oak Recycling	Cuyahoga	OH	Broker, Processor, Buy-Back, Drop-Off	403
Rumpke Waste & Recycling	Cuyahoga	OH	Transfer Facility	
Rumpke Waste & Recycling	Franklin	OH	MRF	9,529
Rumpke Waste & Recycling	Hamilton	OH	MRF	19
Rumpke Waste & Recycling	Medina	OH	MRF	
Rust Belt Riders	Cuyahoga	OH	Other - Organics	
S. Slesnick Co, Inc.	Stark	OH	Broker, Processor, Drop-Off	537
Salvation Army	Cuyahoga	OH	Processor, Other - Reuse	
Shred-it Brecksville	Cuyahoga	OH	Processor	5,373
Southeast Metals	Cuyahoga	OH	Scrap Yard	
Stein, Inc.	Cuyahoga	OH	Processor	
Tyroler Scrap Metals, Inc.	Cuyahoga	OH	Processor	
Victor Metals Inc.	Lake	OH	Broker, Processor, Scrap Yard	
Waste Management	Cuyahoga	OH	Transfer Facility	12,929
Waste Management	Summit	OH	MRF	15,832
Wilkoff & Sons Co.	Cuyahoga	OH	Processor	1,932
Total				316,731

Source: Material Recovery Facility and Commercial Recycling Data", Ohio EPA, 2022; Recycling Activities Survey (2022).

Note: MRF = material recovery facility

Note: Tons accepted include totals reported by each facility for all sectors combined and includes double counting of materials.

APPENDIX C: POPULATION DATA

The population of Cuyahoga County as of July 1, 2022, was estimated to be 1,236,041. The community populations were added or subtracted to the Cuyahoga County total to obtain the total District population for the reference year (2022) are shown in Table C-1. As indicated in the table, the population for Hunting Valley Village (where more than 50% resides in Cuyahoga County) have been added from the total, and populations for all the other communities, have been added to the Cuyahoga County population to determine the total District population of 1,236,174.

A. REFERENCE YEAR POPULATION

Table C-1a: Reference Year Population Adjustments

Cuyahoga County	
Before Adjustment	1,236,041
Additions	
Hunting Valley village	133
Subtractions	
None	
After Adjustment	1,236,174

Source: "2022 Ohio County Population Estimates" prepared by Ohio Development Services Agency, Office of Research

Calculations / Assumptions:

The adjusted population for the reference year includes the addition of 133 Hunting Valley residents in Geauga County.

The following table summarizes the unadjusted versus adjusted population.

Table C-1b: Total Reference Year Population

Unadjusted Population	Adjusted Population
1,236,041	1,236,174

B. POPULATION PROJECTIONS

Population projections for Cuyahoga County, five-year projections provided in the ODD, OSR publication, "2010 to 2040 Projected Population for Ohio Counties - Summary 2010 to 2040 Projected" have been used, with straight-line calculations applied to the years between the five-year projections. Projections for each community included as a population adjustment have been made based upon the growth rate of Cuyahoga County since a majority of the population is linked to this area. These projections are captured in Table C-2.

Figure C-1 depicts the historical and projected population for the District demonstrating a consistent **population decrease. The District's jurisdiction is anticipated to decline 9.8% during the planning period** or an average of 0.7% per year (7,775 persons).

Table C-2: Population Projections

Year	Cuyahoga
2022	1,236,174
2023	1,250,516
2024	1,245,704
2025	1,240,893
2026	1,234,925
2027	1,228,957
2028	1,222,990
2029	1,217,022
2030	1,211,054
2031	1,203,080
2032	1,195,106
2033	1,187,132
2034	1,179,158
2035	1,171,184
2036	1,161,666
2037	1,152,282
2038	1,142,897
2039	1,133,513
2040	1,124,261

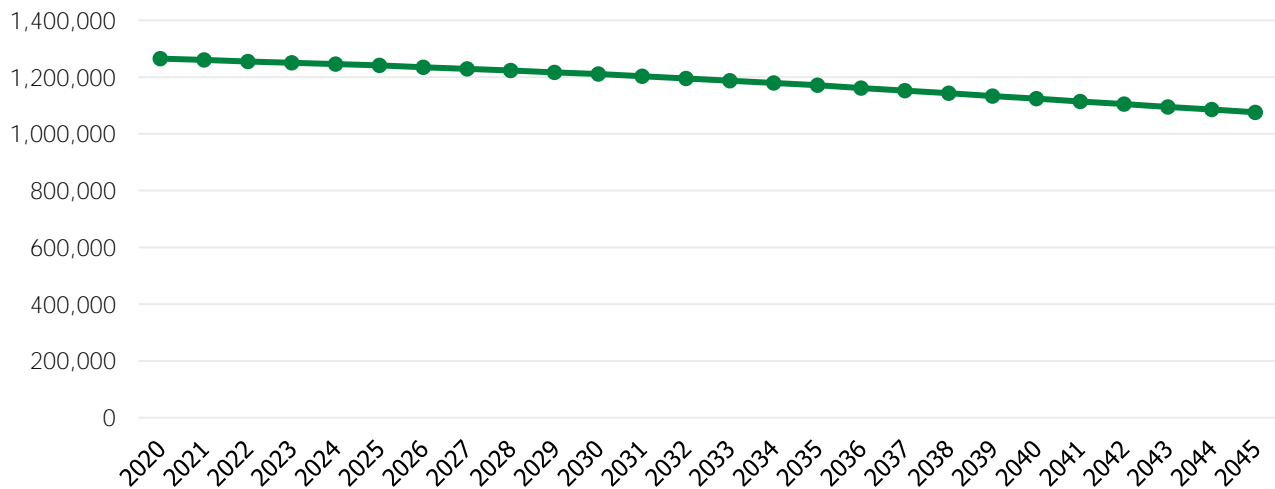
Source: Ohio Department of Development
 Projection: Ohio Development Services
 Agency, "Population Projections: County
 Totals" April 2022.

Reference year population is taken from Ohio Department of Development's Office of Strategic Research (ODD, OSR). OSR provided estimate populations for 2022 based on the 2020 census data by governmental unit. Note: Ohio law requires that the entire population of a municipality located in more than one solid waste management district be added to the solid waste management district containing the largest portion of the jurisdiction's population. The District has one community that is located in more than one solid waste management District: the Village of Hunting Valley. The majority of Hunting Valley resides in Cuyahoga County. Adjustments were made to add the portion of Hunting Valley in Geauga County to the Cuyahoga County population.

Figure C-1 depicts the historical and projected population for Cuyahoga County demonstrating a moderately declining population.

Projections of population through the planning period are based on the latest population projections from the Ohio Development Services Agency (ODSA), Office of Statistical Research. The ODSA Planning Research and Strategic Planning Office provided year 2020 census data and projected estimates for 2020, 2025, 2030, 2035, and 2040. To determine population estimates between these years, straight-line interpolation was used.

Figure C-1 Historical and Projected Population



Population projections can gauge future demand for services, but in projection calculations there is room for errors because of the difficulty associated with forecasting. As projected by ODSA, population is expected to decrease. When compared to historical population decline, the projected decline is comparable. According to the United States Census Bureau between the years 2020 and 2022, population for Cuyahoga County declined by 2.3 percent, averaging a 0.76 percent annual decrease.

APPENDIX D: DISPOSAL DATA

A. REFERENCE YEAR WASTE DISPOSED

The District landfilled 1,552,918 tons of waste in the reference year. The amount of waste that was incinerated or burned for energy recovery plus excluded wastes represent less than 10 percent of total **disposal and is not included in the District’s total** waste disposed for the reference year. Since there were no publicly available solid waste landfills operating in the District, 29 percent of the waste was direct hauled to 18 landfills located outside the District for disposal and 62 percent of the waste was sent to 20 transfer stations prior to disposal. Ten of these transfer stations were located in the district and 10 were located outside the District. There is 1 operating captive landfill in the district that only accepts industrial waste from ArcelorMittal Cleveland, Inc.

Note: the source of information in this section was the OEPA Solid Waste Management District Waste Flows for 2022

Table D-1a: Waste Disposed in Reference Year – Publicly Available Landfills (Direct Haul)¹

Facility Name	Location		Waste Accepted from the District			
	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
In-District Waste						
None						0
Out-of-District Waste						
American Landfill, Inc.	Stark	OH	847	50,331	4,101	55,279
Athens-Hocking Landfill	Athens	OH		17	0	17
Carbon Limestone Landfill LLC	Mahoning	OH	8	282	73	362
County Environmental of Wyandot	Wyandot	OH	11			11
Countywide RDF - Republic Services	Stark	OH	4,886	4,315	41	9,242
Crawford County Landfill	Crawford	OH		6	0	6
Erie County Sanitary Landfill	Erie	OH			2	2
Evergreen Recycling & Disposal	Wood	OH	3			3
Geneva Landfill	Ashtabula	OH	99	960	3	1,062
Kimble Sanitary Landfill	Tuscarawas	OH	9,596	17,878		27,474
Lake County Solid Waste Facility	Lake	OH	5,746		0	5,746
Lorain County II Landfill LLC	Lorain	OH	136,819	64,608	2,461	203,889
Mahoning Landfill Inc	Mahoning	OH	2	6	0	7
Port Clinton Landfill Inc	Ottawa	OH	73		0	73
Rumpke of Northern Ohio Inc Noble Road Landfill	Richland	OH	17,280	11,959	80	29,319
Suburban Landfill Inc	Perry	OH		3	0	3
Wood County Landfill	Wood	OH	8			8
Out-of-State Waste						
Advanced Disposal Services Blue Ridge Landfill Inc	Estill	KY	3	76	0	79
Total			175,380	150,439	6,761	332,580

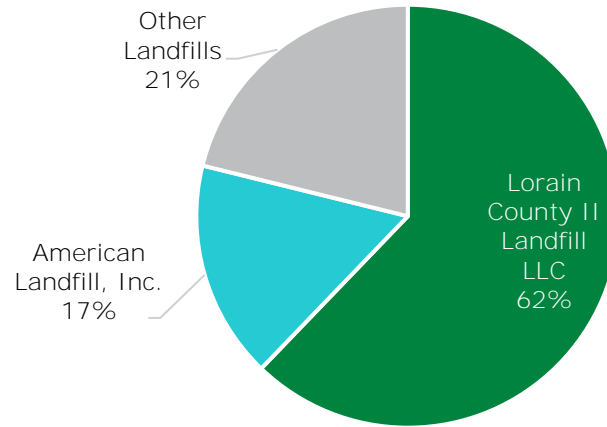
¹ The facilities listed in Table D-1a and identified as able to accept waste from the District (in Appendix M) will constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).

Excluded wastes are classified as slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations.

Source: Ohio EPA. "2022 Ohio Facility Data Report Tables". October 20, 2022., Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2022"
 Indiana Department of Environmental Management. "Waste Received" Excel File, Kentucky Energy and Environment Cabinet. "Waste Quantity Report 2022" Excel File.

Waste flows to the landfills either by direct haul or through a transfer facility. Approximately 31.7 percent of the waste was direct hauled, meaning a refuse truck picked up waste from clients and directly hauled that waste to a landfill for disposal. Direct hauled waste is disposed in in-state and out-of-state landfill facilities. The majority of direct hauled waste was disposed in one privately owned landfill located in Ohio in neighboring Lorain County. Less than 0.1 percent of waste was disposed in out-of-state landfill facilities.

Figure D-1 In-State Landfill Disposal (2022)



A wide variety of wastes are disposed in municipal solid waste landfills. Waste generated from households, commercial businesses, institutions, and industrial plants. In addition, asbestos (if permitted to do so), construction and demolition debris, dewatered sludge, contaminated soil, and incinerator ash. More District waste from residential and commercial sources was disposed than from industrial sources.

Table D-1b: Waste Disposed in Reference Year – Captive Landfills¹

Facility Name	Location		Waste Accepted from the District		
	County	State	Industrial (tons)	Excluded (tons)	Total (tons)
Cleveland-Cliffs Cleveland Works LLC, Vista Pointe Landfill	Cuyahoga	OH	163,054		163,054
Total			163,054	0	163,054

¹ The facilities listed in Table D-1b and identified as able to accept waste from the District (in Appendix M) will constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).

Source(s) of Information: **Source: Ohio EPA. "2022 Ohio Facility Data Report Tables". October 20, 2022. Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2022"**

Captive landfills are landfills used to dispose of waste generated exclusively by the manufacturing company that owns the landfill. 163,054 tons of District waste were disposed in a captive landfill in the reference year.

Table D-1c Total Waste Disposed in Landfills (Direct Haul)

Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
175,380	313,493	6,761	495,634

Source(s) of Information: Facility Annual Operational Reports for 2022

The tonnage of excluded waste in Table D-1c represents less than 10 percent of total disposal. It is included in the total tons of waste disposed in Table D-1c, but not included in the District's total waste disposed for the reference year.

Table D-2 Waste Transferred in Reference Year¹

Facility Name	Location		Waste Accepted from the District			
	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
In-District Waste						
Browning Ferris Industries of Ohio, Inc- Glenwillow	Cuyahoga	OH	104,092	2,429	0	106,521
City of Cleveland, Ridge Rd. Transfer Station	Cuyahoga	OH	208,854		0	208,854
City of Euclid Transfer Station	Cuyahoga	OH	0	0	0	0
Cleveland Heights Transfer Facility	Cuyahoga	OH	14,274		0	14,274
Cleveland Transfer/Recycling Station	Cuyahoga	OH	183,476	462	0	183,938
Harvard Road Transfer Station	Cuyahoga	OH	191,618	4,851	5,534	202,003
Rocky River Transfer Facility	Cuyahoga	OH	1,776		0	1,776
Rumpke Waste Inc Broadview Heights Transfer Facility	Cuyahoga	OH	137,737	718	382	138,837
Shaker Heights Transfer Facility	Cuyahoga	OH	8,361		0	8,361
Strongsville Transfer Facility	Cuyahoga	OH	56,445		4,220	60,665
Out-of-District Waste						
Huron County Solid Waste Facility	Huron	OH	2		0	2
Medina County Central Processing Facility	Medina	OH	11		0	11
Montgomery County South Transfer	Montgomery	OH	0		0	0
Rumpke Waste Inc Richland County Transfer Facility	Richland	OH			1	1
Kimble Transfer & Recycling - Canton	Stark	OH	31		2	33
Kimble Transfer & Recycling - Twinsburg	Summit	OH	128,451	742	1,830	131,023
Republic Services of Ohio LLC Akron Transfer Facility	Summit	OH	7		0	7
Girard Transfer Station	Trumbull	OH	1		0	1
Ohio Valley Waste Warren	Trumbull	OH	38		0	38
Evergreen Recycling & Disposal	Wood	OH			0	0
Out-of-State Waste						
None						0
Total			1,035,176	9,202	11,968	1,056,345

¹ The facilities listed in Table D-2 constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).

Source(s) of Information: Source: Ohio EPA. "2022 Ohio Facility Data Report Tables". October 20, 2022, Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2022", Indiana Department of Environmental Management. "Waste Received" Excel File

Note: The total tonnage of excluded waste in Table D-2 represents less than 10 percent of total disposal and is not included in the District's total waste disposed for the reference year.

In cases where waste is hauled from a transfer facility to a landfill, the county of origin is not recorded at the landfill. This means a load of trash disposed in a landfill from a transfer facility could have waste mixed from several counties. When a transfer facility hauls to more than one landfill, it becomes difficult to track which landfill received a county's waste. For planning purposes, the waste hauled through transfer facilities is listed separately identifying possible destination landfills. Approximately 68.3 percent of the waste was transferred, meaning a refuse truck picked up waste from clients and hauled that waste to a transfer facility. Waste was tipped, reloaded into transfer trucks, and hauled to landfills for disposal. There are ten licensed transfer stations located within the District. In 2022, the City of Cleveland's Ridge Rd. Transfer Station managed the majority of waste transferred from the District.

Table D-3: Waste Incinerated/Burned for Energy Recovery in Reference Year¹

Facility Name	Facility Type	Location		Waste Accepted from the District			
		County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Tradebe Treatment & Recycling, LLC	Solidification Facility	Lake	IN	0	152	0	152
Indianapolis Resource Recovery Facility	Solid Waste Incinerator > = 10 Tons/Day	Marion	IN	0	134	0	134
Merrell Bros Inc Indy Disposal Solutions	Solidification Facility	Marion	IN	0	4	0	4
EQ Industrial Services Processing Facility	Solidification Facility	Marion	IN	0	1	0	1
Medasure Of Indiana Treatment Facility	Medical Waste Processor	Marion	IN	80	0	0	80
Covanta Environmental Solutions, LLC	Solidification Facility	Porter	IN	0	61	0	61
Caldwell's Inc	Solid Waste Processing Facility - Other	Shelby	IN	506	0	0	506
Total				586	352	0	938

¹ The facilities listed in Table D-3 constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).

Source(s) of Information: Source: Ohio EPA. "2022 Ohio Facility Data Report Tables". October 20, 2022. Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2022"

Table D-4: Total Waste Disposed in Reference Year

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Direct Hauled	175,380	313,493	0	488,873
Transferred	1,035,176	9,202	0	1,044,378
Incinerated	0	0	0	0
Total	1,210,556	322,695	0	1,533,251

Source(s) of Information: Source: Ohio EPA. "2022 Ohio Facility Data Report Tables". October 20, 2022. Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2022"

Supplement to Table D-4: Incinerated and Excluded Wastes as Percentages of Total Waste Disposed

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Direct Hauled	175,380	313,493	6,761	495,634
Transferred	1,035,176	9,202	11,968	1,056,345
Incinerated	586	352	0	938
Total	1,211,141	323,047	18,729	1,552,918
Percent of Total	78%	21%	1%	100%

Source(s) of Information: Source: Ohio EPA. "2022 Ohio Facility Data Report Tables". October 20, 2022. Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2022"

Total disposal refers to the sum of waste direct hauled and transferred. According to Ohio EPA Format 4.1, if excluded waste is 10 percent or less of total disposal in the reference year, then districts are not required to account for excluded waste in the solid waste management plan. The District will not include excluded waste in projections.

B. HISTORICAL WASTE ANALYSIS

Table D-5 Historical Disposal Data

Year	Population	Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (PPD)	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)
2018	1,243,857	5.12	1,162,464	346,851	37,594	1,546,909
2019	1,235,072	5.42	1,222,174	281,970	31,789	1,535,933
2020	1,235,072	5.35	1,205,020	225,295	16,148	1,446,463
2021	1,264,817	5.33	1,231,256	210,837	19,965	1,462,058
2022	1,236,174	5.37	1,210,556	322,695	18,729	1,551,980

Source:

Ohio EPA ADR Review Forms for 2018-2022 for population and waste disposal data. Population data for 2022 was taken from Table C-1.

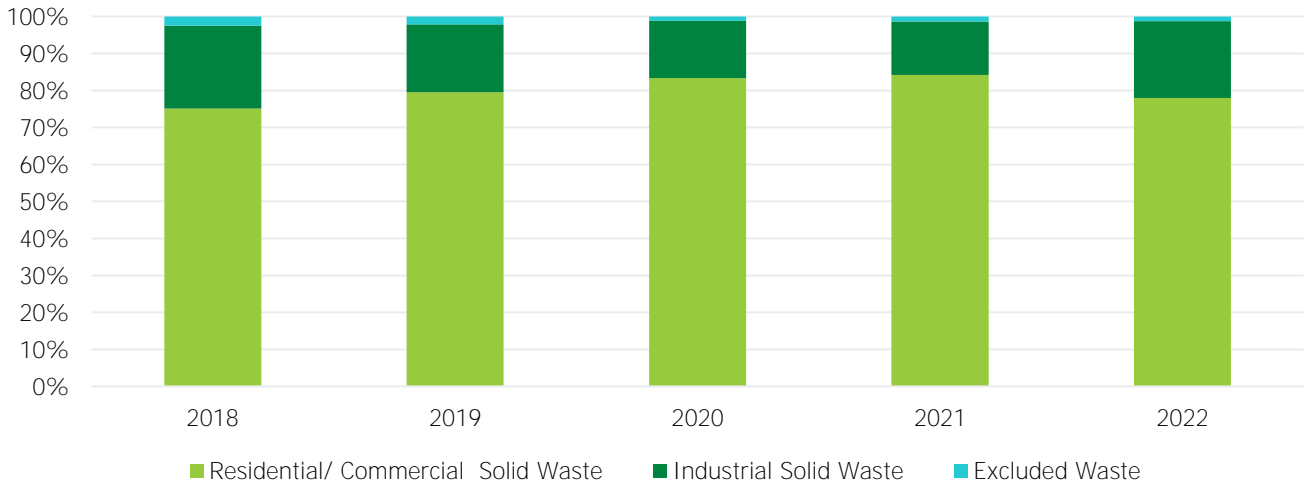
Sample Calculation: Residential/Commercial + Industrial + Excluded = Total Waste

1,210,556 + 322,695 + 18,729 = 1,511,980 tons disposed in 2022

(Residential/Commercial tons * 2,000 pounds per ton) / 365 days) / Population = Residential/Commercial disposal rate (1,210,556 tons * 2,000 pounds per ton) / 365 days) / 1,236,174 persons = 5.37 pound per person per day)

From 2018 to 2022 total disposal demonstrates a 0.33% increasing trend with average annual disposal of roughly 1,508,669 tons. The analysis below separates the waste disposal sectors to determine if there are any correlations for waste disposal in the District.

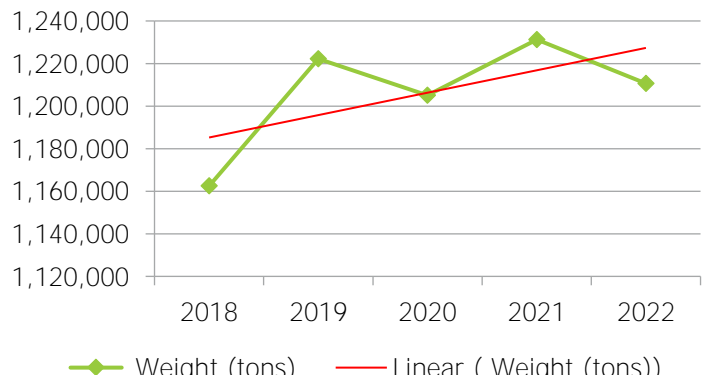
Figure D-2 Percentage of Total Waste Disposed



1. Residential/Commercial

The District’s residential/commercial stream comprises the majority of waste disposed in the landfills as shown in Figure D-3. Also, to note is the residential/commercial waste disposal does not directly follow population trends. Actual disposal increased from 2018 to 2022 at a higher rate than population growth which increased 0.6 percent.

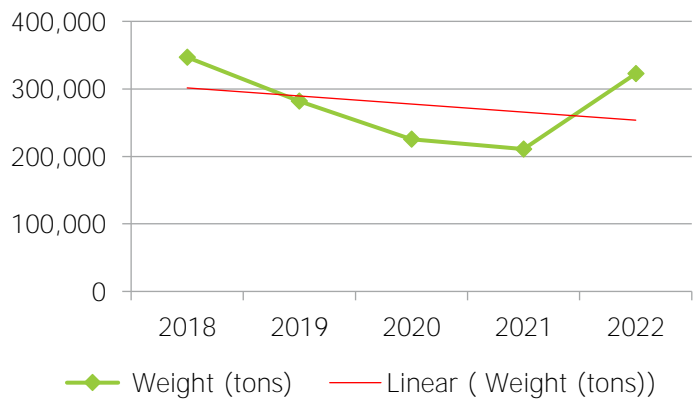
Figure D-3 Residential/Commercial Disposal Analysis



2. Industrial Waste

Industrial waste is a smaller component of the District’s disposal stream, accounting for an average of 18% of total disposal annually over the past 5 years. As shown in Figure D-4 industrial disposal decreased between 2018 and 2021 with a recent increase in 2022 with the impact of COVID-19 on the industrial businesses.

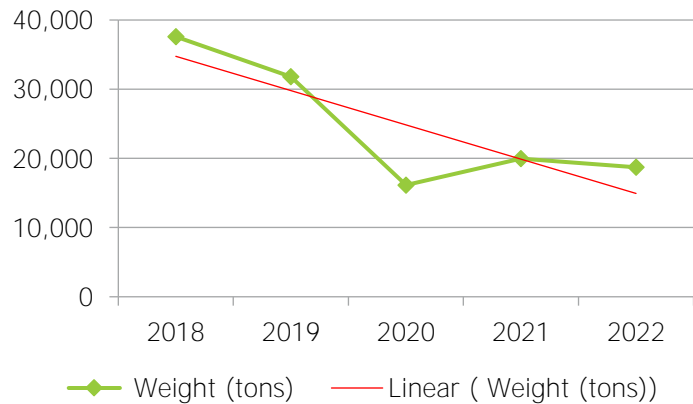
Figure D-4 Industrial Disposal Analysis



3. Excluded Waste

Excluded waste has contributed an average of 1.6% of total disposal annually in the District over the past 5 years. Since 2018, disposal of excluded waste has decreased from 37,594 tons per year to 18,729 tons per year. Excluded wastes include slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations. According to Ohio EPA ADR review reports, the waste disposal is classified as construction and demolition. It should also be noted that excluded waste is fee exempt.

Figure D-5 Excluded Waste Disposal Analysis



C. DISPOSAL PROJECTIONS

There are several methods that can be used for projecting waste disposal through the planning period, such as historical per capita, historical averages and historical trends. After conducting the historical analysis and considering factors that could change historical disposal trends, waste disposal for the planning period is projected in Table D-5.

Table D-6 Waste Disposal Projections

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Waste	Total Waste	Waste Transferred (as part of Total Disposal) Weight (tons)
	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)	
2022	1,210,556	322,695	-	1,533,251	1,044,378
2023	1,213,633	325,854	-	1,539,487	1,048,626
2024	1,208,964	329,044	-	1,538,008	1,047,618
2025	1,204,294	332,265	-	1,536,559	1,046,631
2026	1,198,503	335,518	-	1,534,020	1,044,902
2027	1,192,711	338,802	-	1,531,513	1,043,194
2028	1,186,919	342,119	-	1,529,038	1,041,508
2029	1,181,127	345,468	-	1,526,595	1,039,844
2030	1,175,335	348,850	-	1,524,185	1,038,203
2031	1,167,597	352,265	-	1,519,862	1,035,257
2032	1,159,858	355,713	-	1,515,571	1,032,335
2033	1,152,119	359,196	-	1,511,315	1,029,436
2034	1,144,380	362,712	-	1,507,092	1,026,559
2035	1,136,641	366,263	-	1,502,904	1,023,707
2036	1,127,404	369,848	-	1,497,253	1,019,857
2037	1,118,297	373,469	-	1,491,765	1,016,120
2038	1,109,189	377,125	-	1,486,314	1,012,406
2039	1,100,081	380,817	-	1,480,898	1,008,717
2040	1,091,102	384,545	-	1,475,647	1,005,140

Residential/Commercial: Average Per Capita Over Time (5 Years) of 5.32 PPD	Residential/Commercial projections based on the 5-year average per capita of 5.32 PPD. The rate is applied throughout the planning period and is close to historical numbers.
Industrial: Average Annual Percent Change of 0.98%	The 5-year annual average percent change divided by 2 keeps the projections through the planning period close to historical numbers while providing a conservative estimate of growth.
Excluded: Flat 0 tons	Total disposal refers to the sum of waste direct hauled and transferred. According to Ohio EPA Format 4.1, if excluded waste is 10 percent or less of total disposal in the reference year, then districts are not required to account for excluded waste in the solid waste management plan.

APPENDIX E: RESIDENTIAL/COMMERCIAL RECOVERY DATA

Appendix E presents the reduction and recycling data for the residential and commercial sectors in the 2022 reference year.

A. REFERENCE YEAR RECOVERY DATA

Tables E-1 through E-4 account for all material being credited to the waste reduction and recycling rate for the residential/commercial sector. These tables were adjusted for double counting. Double counting occurs when the same material is reported by more than one survey respondent, typically both the generator of the material and the processor that receives the material from the generator. Material is **“double counted”** if the quantities from both respondents are credited to total recovery. In those instances, the total quantity recovered was adjusted to subtract the quantity reported by one source or the other to avoid crediting the material twice.

Table E-1 is reserved for commercial data obtained from Cuyahoga County survey efforts. Data was aggregated by NAICS codes of responding businesses.

Table E-1 Commercial Survey Results

NAICS	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Yard Waste	Other (Ink/Print)	Other (Other Batteries)	Other (Fluorescent Bulbs)	Other (Motor Oil)	Other (Ballasts)	Other (Antifreeze, Animal Composting, Concrete, Stone/Clay/Sand, & Misc.)	Total
42	0	5	1	0	0	569	1	95	20	7	0	53	0	0	0	0	1	1	20	0	0	773
44	0	0	61	144	2	402	4	12,635	170	156	0	2,996	1,069	4,400	0	0	4	3	167	0	177	22,392
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	3	49	0	1	120	23	161	24	118	2	4,385	26	26	0	0	0	0	76	0	9	5,024
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
52	0	0	0	0	0	0	18	14	25	0	0	0	0	173	17	0	0	0	0	0	3	250
53	0	0	0	0	0	0	0	40	3	0	12	0	0	2	0	0	0	0	0	0	0	57
54	0	0	0	341	0	0	0	0	2	0	0	7	0	0	0	0	0	0	1	0	0	350
55	0	2	0	0	0	0	0	5	77	0	0	0	0	56	0	0	0	0	0	0	0	140
56	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	980	985
61	0	44	1	55	0	52	14	70	49	0	0	20	0	53	0	1	0	2	3	0	3	367
62	0	124	1	41	4	200	0	1,094	4,701	56	94	234	0	2,834	204	8	16	2	0	1	412	10,028
71	0	62	1	42	5	94	22	157	390	7	0	529	11	22	559	0	0	1	4	0	1,291	3,198
72	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
81	0	13	1	19	1	253	3	80	293	0	0	105	2	175	12	2	2	0	13	0	43,467	44,442
92	0	56	18	0	0	290	0	79	606	0	0	58	4	250	22	1	2	5	9	1	80	1,481
Unadj. Total	0	309	134	642	12	1,984	86	14,435	6,359	345	108	8,389	1,112	7,992	815	13	26	17	292	3	46,422	89,493
Adj.		309	134		12	1,984	86		6,359	345	108	3,401	1,112	7,992	815	13	26	17	292	3	10,088	-33,095
Adj. Total	0	0	0	642	0	0	0	14,435	0	0	0	4,988	0	0	0	0	0	0	0	0	36,333	56,398

Assumptions: "Other" includes food donations that were not included in OEPA Compost Facility Report.

Table E-1 shows the aggregated quantities of materials recycled by NAICS code for the commercial sector in the reference year. The District conducts annual surveys utilizing a web-based survey system to collect recycling and waste reduction data. Data from commercial businesses that responded to surveys in 2021 was eliminated from the totals if they responded to the survey in 2022. Methods recommended by Ohio EPA were used to eliminate double counting. Adjustments were made in Table E-1 to subtract out tonnages for materials where broker/processor data was used and was counted for in Table E-2.

Table E-2 reports recycling data from scrap yards, brokers, buybacks, processors and MRFs. Processors and MRF quantities reported in Table E-2 are obtained from Ohio EPA MRF Data Reports. Adjustments were made to this data to account for double counting.

Table E-2 Data from Other Recycling Facilities

Program and/or Source of Materials/Data	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Commingled Recyclables (Mixed)	Yard Waste	Other	Total
Buybacks															
															0
Scrap Yards															
Scrap Yard1					16,275	2,069									18,344
Scrap Yard2		2	198		5,567	1,259									7,026
Brokers															
Broker1										613				488	1,100
Processors/MRFs															
Waste Management - Cleveland MRF (commercial)				0	0	0	12,056	0	0		0	0		0	12,056
Waste Management - Cleveland MRF (residential)				0	0	0	0	0	0		0	872		0	872
Rumpke Waste Recycling - Columbus				1,660	216	0	2,899	3,910	845		0	0		0	9,529
Rumpke Center City Recycling - Hamilton County				3	1	0	4	9	2		0	0		0	19
Lorain County Resource Recovery Complex				0	254	85	7,565	2,541	1,016		0	0		3,577	15,038
Waste Management - Akron MRF (residential)				0	0	0	0	0	0		0	15,832		0	15,832
Waste Management - Akron MRF (commercial)				0	0	0	965	0	0		0	0		0	965
Processor1	19,502				43,945	23,473									86,920
Processor2							210								210
Processor3											4,900		7,677		12,577

Program and/or Source of Materials/Data	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Commingled Recyclables (Mixed)	Yard Waste	Other	Total
Processor4		7	0		6	4	908	1,161	615		138			2	2,841
Processor5							3,000								3,000
Processor6							861	4,535							5,396
Processor7								403							403
Processor8								5,373							5,373
Unadj. Totals	19,502	9	198	1,663	66,263	26,891	28,469	17,931	2,479	613	5,038	16,704	7,677	4,067	197,503
Adjustments		9	198		33,708	85	19,955	7,087	1,016		138	5,610	2,303	3,579	73,688
Adjusted Totals	19,502	0	0	1,663	32,556	26,806	8,514	10,844	1,462	613	4,900	11,094	5,374	488	123,815

Quantities reported in Table E-3 were obtained from Ohio EPA reports. Adjustments were made to this data to account for double counting.

Table E-3 Data Reported to Ohio EPA by Commercial Businesses

Ohio EPA Data Source	Glass	Plastic	Newspaper	Cardboard	Mixed Paper	Nonferrous	Ferrous	Wood	Food: Compost	Food: Other	Commingled Recyclables (Mixed)	Other	Total
Walmart Recycling in Ohio	0	129	0	4,915	10	117	0	0	0		0	833	6,004
Lowe's Companies, Inc.	0	0	0	75	0	1	0	0	0		0	2	78
Home Depot Corporation	0	33	0	1,072	0	85	0	1,372	0		0	7	2,569
Target Corporate	0	63	0	1,595	2	31	0	0	0		14	0	1,705
Dollar General Corporation	0	13	0	1,174	4	0	0	0	0		0	0	1,190
Aldi Inc Hinckley Division	0	31	0	2,591	0	0	0	0	0		0	0	2,622
Kohls Corporate Office & Headquarters	0	9	0	610	0	0	0	0	0		0	1	620
Sam's Club	0	32	0	800	2	5	0	287	0		0	223	1,349
REI	0	0	0	0	0	0	0	0	0		67	0	67
CVS	0	0	0	479	0	0	0	0	0		306	0	785
Family Dollar/Dollar Tree	0	0	0	2,694	0	0	0	0	0		365	0	3,059
Unadj. Totals	0	309	0	16,007	17	239	0	1,658	0	0	753	1,065	20,049
Adjustments	0	309	0	0	17	239	0	1,658	0	0	753	0	2,977
Adjusted Total	0	0	0	16,007	0	0	0	0	0	0	0	1,065	17,072

Assumptions:

Data reported to Ohio EPA by commercial businesses listed in Table E-3 was included in Commercial Recycling Survey results in Table E-1. Adjustments were made to subtract out tonnages to eliminated double counting.

Table E-4 Other Recycling Programs/Other Sources of Data

Other Programs or Sources of Data	Appliances/ "White Goods"	HHW	Used Motor Oil	Electronics	Scrap Tires	Lead-Acid Batteries	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Commingled Recyclables (Mixed)	Yard Waste	Other	Unadjusted Total	Adjustments	Adjusted Total
Curbside Recycling Services	1,936	13	28					9,362	2,251	1,094	9,315	19,634	5,305	19	53,593			102,551	53,593	48,958
Drop-off Recycling Locations	455	4	22						456	5	80	3,057		60	189		4	4,332	189	4,142
Composting Facilities							1,326									120,824		122,150		122,150
Other Food and Yard Waste Management Activities																		0		0
Ohio EPA Scrap Tire Data					14,529													14,529		14,529
Ohio EPA Food Waste Data							1,479											1,479		1,479
Cuyahoga County Special Collection Events		163		191	183	19			1	3	0	0						561	183	378
In-house Facility	1,015	7	53	11		10			1,013	0	1	11	0	1				2,122	2	2,119
Unadj. Total	3,405	187	103	202	14,713	28	2,806	9,362	3,721	1,102	9,397	22,702	5,306	80	53,782	120,824	4	247,724	53,967	193,756
Adjustments				2	183										53,782			53,967		
Adjusted Total	3,405	187	103	200	14,529	28	2,806	9,362	3,721	1,102	9,397	22,702	5,306	80	0	120,824	4	193,756		

Quantities reported in Table E-4 are a compilation of quantities diverted through programs and services. Adjustments were made to exclude 53,782 tons of commingled recyclables, 2 tons of electronics, and 183 tons of scrap tires because it is included from other sources.

Table E-5 summarizes all data sources by commodity after double counting adjustments were made. Assumptions: The data in Table E-5 provides adjusted quantities of materials recovered from the residential/commercial sector in the reference year. These totals match the material totals that were reported by the District in the 2022 Ohio EPA Annual District Report.

Table E-5 Reference Year Residential/Commercial Material Reduced/Recycled

Material	Quantity (tons)
Appliances/ "White Goods"	22,907
Household Hazardous Waste	187
Used Motor Oil	103
Electronics	200
Scrap Tires	14,529
Dry Cell Batteries	0
Lead-Acid Batteries	28
Food	3,447
Glass	11,025
Ferrous Metals	36,277
Non-Ferrous Metals	27,908
Corrugated Cardboard	48,352
All Other Paper	33,546
Plastics	6,768
Textiles	692
Wood	9,888
Rubber	0
Commingled Recyclables (Mixed)	11,094
Yard Waste	126,198
Other (Aggregated)	37,890
Total	391,041

During the reference year, the District diverted 391,041 tons of material from the residential/commercial sector. Table E-5 reports the quantities of materials diverted. Yard waste and cardboard are the two largest material categories recycled for the reference year.

Table E-6 reports quantities diverted for each program/source.

Table E-6 Quantities Recovered by Program/Source

Program/Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	56,398
Data from Other Recycling Facilities	123,815
Ohio EPA Commercial Retail Data	17,072
Curbside Recycling Services*	48,958
Drop-off Recycling Locations**	4,142
Composting Facilities	122,150
Other Food and Yard Waste Management Activities	0
Ohio EPA Scrap Tire Data	14,529
Ohio EPA Food Waste Data	1,479
Cuyahoga County Special Collection Events***	378
In-house Facility****	2,119
Total	391,041

* Curbside recycling was 102,551 tons but was reduced for double counting.

** Drop-off recycling was 4,332 tons but was reduced for double counting.

*** Special collection events were 561 tons but were reduced for double counting.

**** In-house facility recycling was 2,122 tons but was reduced for double counting.

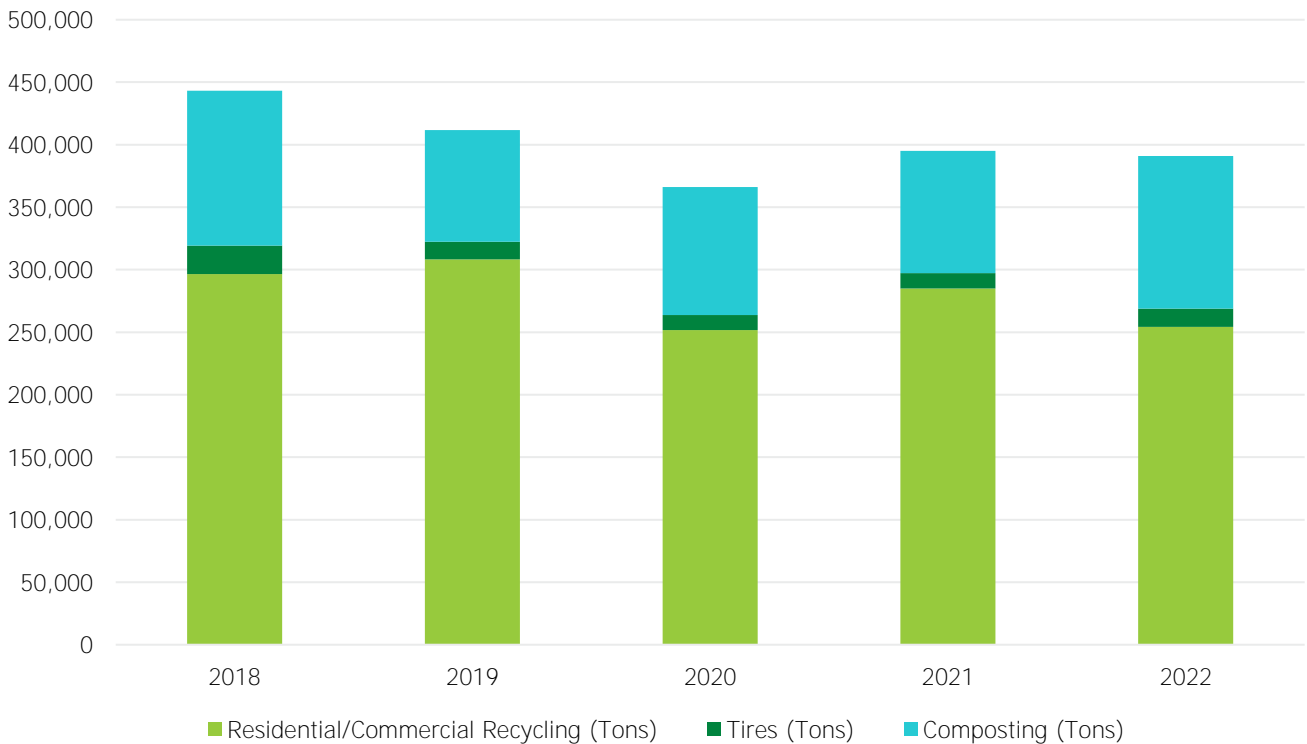
B. HISTORICAL RECOVERY

Cuyahoga County diverts an average of 401,441 tons of material per year, or on average 1.77 pounds per person per day.

Table E-7 Historical Recycling Analysis: 2018-2022

Year	Population	Residential/ Commercial Recycling (Tons)	Tires (Tons)	Composting (Tons)	Total (Tons)	Average Pounds/ Person/ Day	Annual Percent Change (%)	Annual Tonnage Change (Tons)
2018	1,243,857	296,393	23,021	123,716	443,130	1.95		
2019	1,235,072	308,234	14,089	89,280	411,603	1.83	-7.11%	-31,527
2020	1,235,072	251,776	11,873	102,584	366,233	1.62	-11.02%	-45,370
2021	1,264,817	284,984	12,328	97,884	395,196	1.71	7.91%	28,963
2022	1,236,174	254,361	14,529	122,150	391,041	1.73	-1.05%	-4,155
Average over 5 Year Period					401,441	1.77	-2.82%	-13,022

Figure E-1 Historical Recycling by General Material Category: 2018-2022



Source(s): Tables E-7

C. RESIDENTIAL/COMMERCIAL RECOVERY PROJECTIONS

The data analysis in Tables E-7 shows residential and commercial programmatic historical and projected recycling data from 2018 to 2040.

Table E-8 Historical and Projected Residential/Commercial Recovery by Program/Source

Year	Commercial Survey	Data from Other Recycling Facilities	Ohio EPA Commercial Retail Data	Curbside Recycling Services	Drop-off Recycling Locations	Composting Facilities	Ohio EPA Scrap Tire Data	Ohio EPA Food Waste Data	Cuyahoga County Special Collection Events	In-house Facility	Unadjusted Total	Adjustment	Totals
2018	53,050	60,135	13,050	229,574	8,660	123,716	23,021	2,465	931	9,375	523,977	80,847	443,130
2019	103,006	29,024	15,653	208,390	7,209	89,280	14,089	2,309	586	10,315	479,861	68,258	411,603
2020	38,801	56,580	18,374	179,802	6,874	102,584	11,873	2,440	604	8,362	426,293	60,060	366,233
2021	105,131	34,711	15,979	169,341	8,550	97,884	12,328	1,788	523	6,885	453,119	57,923	395,196
2022	56,398	123,815	17,072	102,551	4,332	122,150	14,529	1,479	561	2,122	445,008	53,967	391,041
2023	58,668	128,796	17,072	112,806	4,765	122,150	14,529	1,479	561	2,122	462,947	59,364	403,583
2024	61,028	133,978	17,072	118,446	5,003	122,150	14,529	1,479	561	2,122	476,368	62,332	414,036
2025	63,483	139,369	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	487,918	64,202	423,715
2026	66,038	144,976	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	496,079	64,202	431,877
2027	67,366	147,893	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	500,324	64,202	436,122
2028	68,721	150,868	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	504,655	64,202	440,453
2029	70,104	153,903	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	509,072	64,202	444,870
2030	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2031	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2032	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2033	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2034	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2035	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2036	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2037	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2038	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2039	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376
2040	71,514	156,999	17,072	121,999	5,153	122,150	14,529	1,479	561	2,122	513,579	64,202	449,376

In Table E-7, actual tonnage was used for 2018 through 2022. Projections for each program/source were calculated using the following assumptions and methodology:

- Commercial survey is projected to 4.02 percent from 2023-2026 and 2.01 percent from 2027-2030. The 4.02 percent reflects the average rate of change combining the historical survey and processor data. From 2031 throughout the planning period will remain constant.
- Data from Other Recycling Facilities are projected to 4.02 percent from 2023-2026 and 2.01 percent from 2027-2030. The 4.02 percent reflects the average rate of change combining the historical survey and processor data. From 2031 throughout the planning period will remain constant.

- Ohio EPA Commercial Retail Data is projected to remain constant throughout the planning period.
- Curbside Recycling Services are projected to increase 10 percent in 2023, 5 percent in 2024 and 3 percent in 2025. This is to reflect returning programs and the education and outreach initiatives. From 2026 throughout the planning period will remain constant.
- Drop-off Recycling Locations are projected to increase 10 percent in 2023, 5 percent in 2024 and 3 percent in 2025. This is to reflect returning programs and the education and outreach initiatives. From 2026 throughout the planning period will remain constant.
- Composting Facilities are projected to remain constant throughout the planning period.
- Ohio EPA Scrap Tire Data is projected to remain constant throughout the planning period.
- Ohio EPA Food Waste Data is projected to remain constant throughout the planning period.
- Cuyahoga County Special Collection Events are projected to remain constant throughout the planning period.
- In-house Facility is projected to remain constant throughout the planning period.

APPENDIX F: INDUSTRIAL RECOVERY DATA

This Appendix presents the reduction and recycling data for the industrial sector in the 2022 reference year. To avoid double-counting tonnage, adjustments made to tonnage reported by generators will be **demonstrated. A historic analysis of the industrial sector’s recycling and recycling projections for the planning period** are included in this Appendix.

A. REFERENCE YEAR RECOVERY DATA

The District used generator data only provided by industrial businesses to account for recycling and waste reduction activities in the reference year. The following tables include reference year recycling and waste reduction data from industrial businesses **located in Cuyahoga County that completed the District’s recycling survey.**

Tables F-1 through F-4 account for all material being credited to the waste reduction and recycling rate for the industrial sector. Data from industrial businesses that responded to surveys in 2021 was eliminated from the totals if they responded to the survey in 2022. Methods recommended by Ohio EPA were used to verify the origin of materials and eliminate double counting for the generators. This includes follow up phone calls, e-mails, online research, and site visits.

Table F-1 Industrial Survey Results

NAICS	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Other:	Total
22													0
31	8,013	0	26	100	1,813	94	76	0	220	0	0	2,218	12,561
32	3	0	4,269	683	1,346	12,769	976	0	1,277	21,018	692	1,737	44,770
33	0	6	459,194	25,654	21,745	247	605	1	4,117	0	288	541,694	1,053,551
<i>Unadj. Total</i>	<i>8,016</i>	<i>6</i>	<i>463,489</i>	<i>26,437</i>	<i>24,904</i>	<i>13,111</i>	<i>1,657</i>	<i>1</i>	<i>5,614</i>	<i>21,018</i>	<i>980</i>	<i>545,649</i>	<i>1,110,882</i>
Adjustments	0	0	105,829	7,680	3,425		468		4,541	21,018	980	545,649	667,592
Adjusted Total	8,016	6	357,659	18,757	21,479	13,111	1,189	1	1,073	0	0	0	443,290

Source(s): District industrial survey results.

Table F-1 accounts for material credited for waste reduction and recycling as reported by the industrial businesses. In some instances, an industrial business did not respond to the reference year survey but did respond to a previous survey. Supplemental data, not more than 3 years old, was used in this table when the business was verified as operating in the reference year, the nature of the business did not significantly change, and the business still produced the same type of recyclables. Some materials reported as recycled are considered non-creditable. These materials include train boxcars, construction and demolition debris, metals from vehicles, liquid industrial waste, and hazardous waste. Adjustments were made on Table F-1 to exclude these materials.

Table F-2 Data from Other Recycling Facilities

Program and/or Source of Materials/Data	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	Plastics	Wood	Other:	Total
Buybacks							
None							
Scrap Yards							
None							
Brokers							
Broker1	4,694			367	5		
Processors/MRF's							
Processor1				96			
Processor2	101,134	5,725		4			
Processor3					4,536	16,601	
Processor4		24					
Processor5			537				
Processor6	1	1,931					
MRF1			2,888				
<i>Unadjusted Totals</i>	<i>105,829</i>	<i>7,680</i>	<i>3,425</i>	<i>468</i>	<i>4,541</i>	<i>16,601</i>	<i>138,544</i>
Adjustments						16,601	16,601
Adjusted Totals	105,829	7,680	3,425	468	4,541	0	121,943

Source(s): District industrial survey results and Ohio EPA. "2022 Material Recovery Facility and Commercial Recycling Data." 2023.

Table F-2 data is obtained from the District's surveys and Ohio EPA's reports on processors. There was only one processor/MRF that reported industrial diversion from in-district sources for the reference year.

Note: The District only used data reported by industrial sector generators and processors/brokers. Therefore, Table F-3, "Other Recycling Programs/Other Sources of Data" from the Format Book were omitted.

Table F-4 Industrial Waste Reduced/Recycled in Reference Year

Material	Quantity (tons)
Food	8,016
Glass	6
Ferrous Metals	463,489
Non-Ferrous Metals	26,437
Corrugated Cardboard	24,904
All Other Paper	13,111
Plastics	1,657
Textiles	1
Wood	5,614
Rubber	-
Commingled Recyclables (Mixed)	-
Ash	-
Non-Excluded Foundry Sand	-
Flue Gas Desulfurization	-
Other (Aggregated)	-
Total	543,235

Source(s): Tables F-1, F-2, and F-3

Other recycling programs or sources of recycling data are reported in Table F-3 for industrial material. No other sources of industrial data were found for the District.

The District diverted 435,235 tons from the industrial sector. Table F-4 reports quantities of each material diverted.

Table F-5 reports the total tons diverted for each program/source.

Table F-5 Quantities Recovered by Program/Source

Program/Source of Industrial Recycling Data	Quantity (Tons)
Industrial survey	421,292
Data from other recycling facilities	121,943
Total	543,235

Source(s): Tables F-1, F-2, F-3 and F-4

B. HISTORICAL RECOVERY

The tonnage recovered in the industrial sector followed a consistent trend from 2020 to 2022.

Table F-6 Historical Industrial Recovery by Program/Source

Year	Population	Industrial Recycling (Tons)	Average Pounds/Person/Day	Annual Percent Change (%)	Annual Tonnage Change (Tons)
2018	1,243,857	1,009,952	4.45		
2019	1,235,072	938,668	4.16	-7.06%	(71,284)
2020	1,235,072	410,864	1.82	-56.23%	(527,804)
2021	1,264,817	480,700	2.08	17.00%	69,836
2022	1,236,174	543,235	2.51	17.59%	84,533
Average over 5 Year Period		676,684	2.99	-8.3%	-116,679

Source(s): District Industrial Surveys for 2018 – 2022, "Material Recovery Facility and Commercial Recycling Data" for 2018-2022

Industrial survey data and MRF/ Commercial Recycling Data were used for the historical projections and checked for double counting data.

C. INDUSTRIAL RECOVERY PROJECTIONS

According to Ohio EPA's Plan Format v4.1, if recycling tonnage identified through surveys in the reference year was similar to quantities identified historically, then the quantity attributed to surveys should be held constant at the reference year quantity. All the District's industrial sector recycling data is derived from generator survey data.

Except for 2022, industrial sector recycling tonnage has steadily declined over the five-year period from 2018 to 2022. Totals during this period, except 2022, ranged from 1,009,952 to 480,700 tons. Most of this decrease occurred in 2020, with an industrial recycling tonnage decrease of 527,804. On average, industrial recycling decreased by 116,679 tons annually. There have not been any announcements made about industries planning to begin operations in Cuyahoga County, nor is there any information available about industries planning to cease operations in the District that could impact recycling totals soon. The effects of the pandemic have shown the fluctuations in recycling tonnage from 2020 through 2022. Therefore, tonnage is projected as a constant rate for the remainder of the planning period based on 2022 tonnage. Table F-7 presents the industrial sector recovery statistics and projections from 2022 to 2040.

Table F-7 Industrial Recovery Projections by Program/Source

Year	Total
2022	543,235
2023	631,218
2024	718,468
2025	718,468
2026	718,468
2027	718,468
2028	718,468
2029	718,468
2030	718,468
2031	718,468
2032	718,468
2033	718,468
2034	718,468
2035	718,468
2036	718,468
2037	718,468
2038	718,468
2039	718,468
2040	718,468

Projections

According to the Ohio EPA’s Plan Format v4.1, there is no industrial recycling goal during the reference year. During the reference year, the District achieved a 62.7% industrial diversion rate. The District projects a flat 718,468 tons throughout the planning period to remain conservative. The District’s industrial recovery projections are presented in Table F-7.

APPENDIX G: WASTE GENERATION

A. HISTORICAL YEAR WASTE GENERATED

The historical waste generation for the District from 2018 through 2022 is shown in Table G-1 below. Generation has been calculated based on the sum of reported tons disposed and recycled for each year. In general, disposal and recycling increased during this time. However, little fluctuation occurred in these trends for both residential/commercial and industrial sectors in 2022. The per capita generation rate for residential/commercial generation stayed at about the average of 7.10 pounds per person per day (PPD).

Table G-1 Reference Year and Historical Waste Generated

Year	Population	Residential/Commercial				Industrial			Excl. (tons)	Total (tons)	Annual % Change (tons)		
		Disposed (tons)	Recycled (tons)	Generated (tons)	Per Capita Generated (PPD)	Disposed (tons)	Recycled (tons)	Generated (tons)			R/C	Ind	Ex.
2018	1,243,857	1,162,464	443,130	1,605,594	7.07	346,851	1,009,952	1,356,803	37,594	2,999,991	-	-	-
2019	1,235,072	1,222,174	411,603	1,633,777	7.25	281,970	938,668	1,220,638	31,789	2,886,204	2%	-10%	-15%
2020	1,235,072	1,205,020	366,233	1,571,253	6.97	225,295	410,864	636,159	16,148	2,223,560	-4%	-48%	-49%
2021	1,264,817	1,231,256	395,196	1,626,452	7.05	210,837	480,700	691,537	19,965	2,337,954	4%	9%	24%
2022	1,236,174	1,210,556	391,041	1,601,597	7.10	322,695	543,235	865,930	18,729	2,486,256	-2%	25%	-6%

Note: R/C = residential/commercial, Ind = Industrial, Ex = Exclude waste

Source(s) of Information:

Disposal from Appendix D

Recycled from Appendices E and F

Populations: Annual District Reports

Sample Calculations:

Waste Generation = disposed + recycled = generated

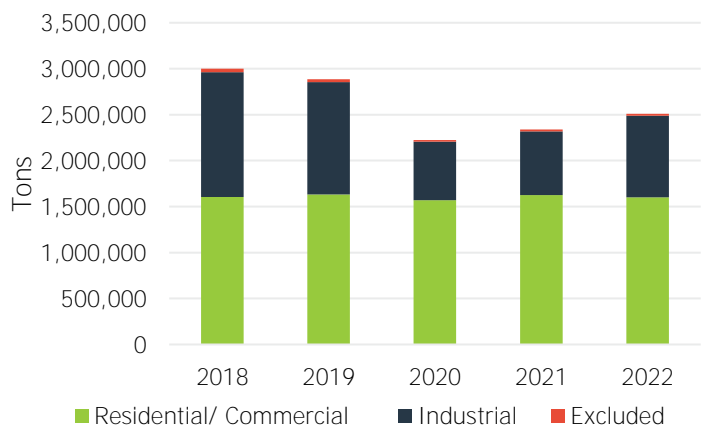
Per Capita Generation = ((generated * 2,000) / 365) / population

Waste Generated = Waste Disposed + Waste Recycled

Figure G-1 Historic Waste Generated

Total waste generation by the District was calculated by adding the quantities of waste disposed from Appendix D and quantities of recycled from Appendices E and F. Quantities resulting from the disposal and recycling as presented in Table G-1 accurately represent waste generation for the District. Waste generation remained relatively consistent for the residential/commercial sectors with the fluctuations represented in the industrial sector from 2018 to 2022, shown in Figure G-1.

Figure G-1 Historic Waste Generated Total

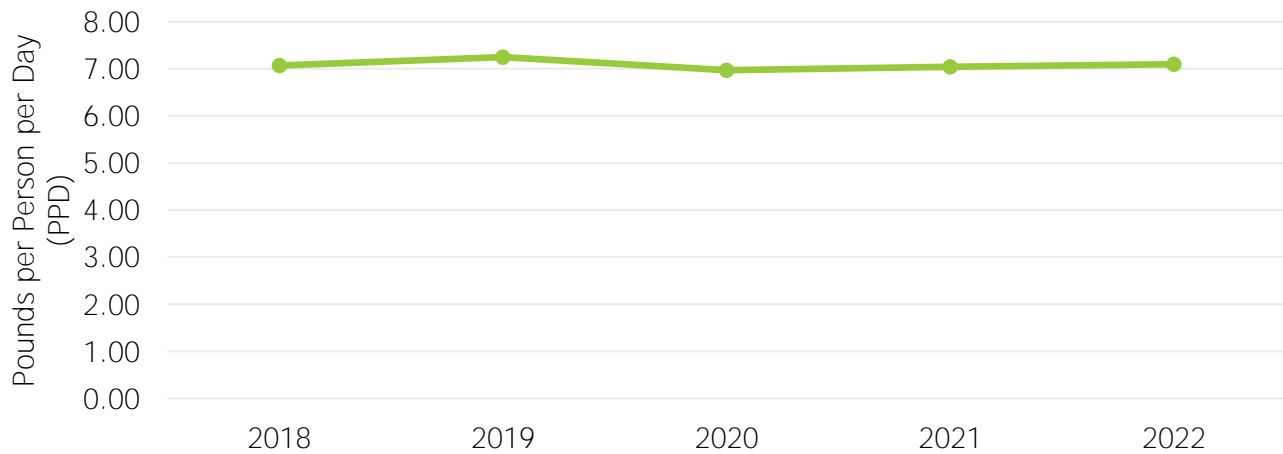


1. Residential/Commercial Generation Analysis

The District's residential/commercial per capita waste generation of 7.10 pounds per person per day (PPD) is slightly lower than the statewide average of 7.27 PPD in 2022. The District's per capita disposal rate of 5.37 PPD was only slightly higher than the statewide average of 5.17.

The District's residential/commercial sector recycling rate of 1.73 PPD was lower than the statewide average. However, the residential disposal rate was approximately 1.98 PPD versus the commercial disposal rate of 3.38 PPD and suggests that the District will need to focus on commercial waste reduction programs. Figure G-2 presents the District's residential/commercial sector per capita total generation rates from 2018 to 2022.

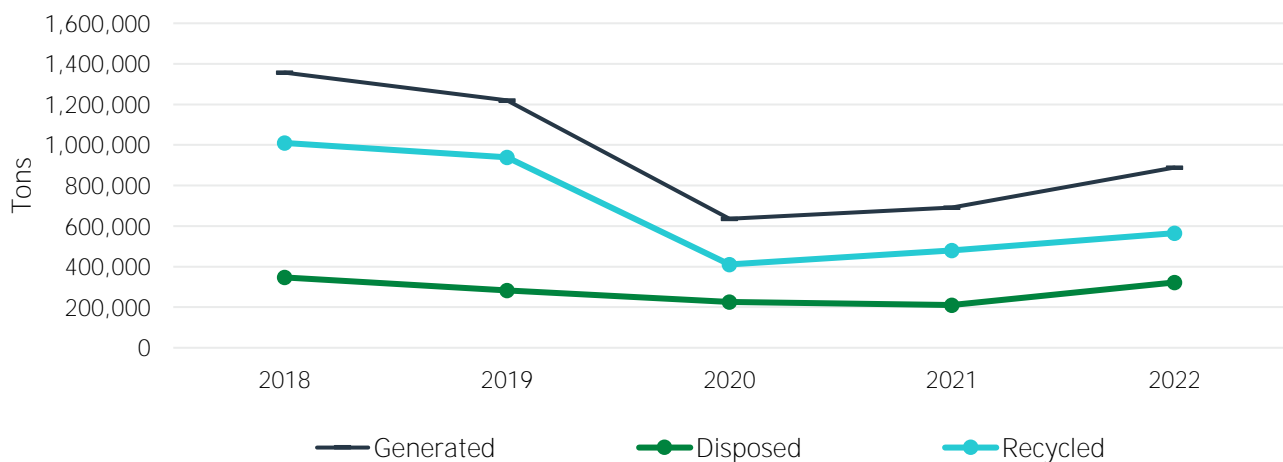
Figure G-2 Historic Residential/Commercial Per Capita Generation



2. Industrial Generation Analysis

Industrial waste generation overall did not see much change over the five-year period with a noticeable decrease from 2020 to 2022. There is a steady increase from 2020 as industrial businesses recover their programs from the COVID-19 pandemic.

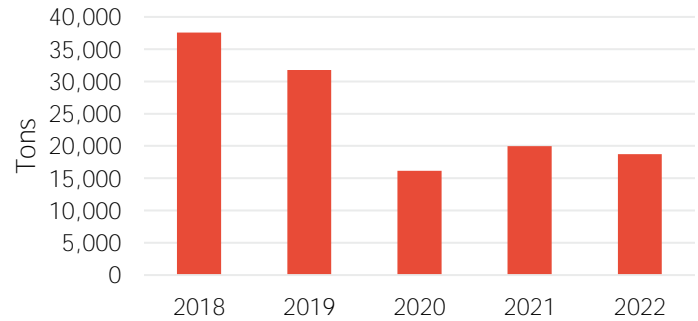
Figure G-3 Historic District Industrial Waste Generation



3. Exempt Waste

The total tons of excluded waste generated in the District is shown in Figure G-4. The excluded tons generated falls under 10% of the total waste stream. Excluded waste accounted for an average of 1.6% of the total material generated in the County.

Figure G-4 Historic Excluded Waste Generated



B. GENERATION PROJECTIONS

Projections for the District have been developed in Appendices D, E, and F for disposal and recycling for the residential/commercial and the industrial sector. Table G-2a and G-2b summarize these projections presented in detail in Appendices D, E and F.

Table G-2a Generation Projections

Year	Population	Residential/ Commercial				Industrial			Total (tons)
		Disposal (tons)	Recycle (tons)	Generation (tons)	Per Capita Generation (PPD)	Disposal (tons)	Recycle (tons)	Generation (tons)	
2022	1,236,174	1,210,556	391,041	1,601,597	7.1	322,695	543,235	865,930	2,467,527
2023	1,250,516	1,213,633	403,583	1,617,217	7.1	325,854	631,218	957,072	2,574,289
2024	1,245,704	1,208,964	414,036	1,623,000	7.1	329,044	777,605	1,106,649	2,729,649
2025	1,240,893	1,204,294	423,715	1,628,010	7.2	332,265	777,605	1,109,870	2,737,880
2026	1,234,925	1,198,503	431,877	1,630,380	7.2	335,518	777,605	1,113,123	2,743,503
2027	1,228,957	1,192,711	436,122	1,628,833	7.3	338,802	777,605	1,116,407	2,745,240
2028	1,222,990	1,186,919	440,453	1,627,371	7.3	342,119	777,605	1,119,724	2,747,096
2029	1,217,022	1,181,127	444,870	1,625,997	7.3	345,468	777,605	1,123,073	2,749,070
2030	1,211,054	1,175,335	449,376	1,624,712	7.4	348,850	777,605	1,126,455	2,751,167
2031	1,203,080	1,167,597	449,376	1,616,973	7.4	352,265	777,605	1,129,870	2,746,843
2032	1,195,106	1,159,858	449,376	1,609,234	7.4	355,713	777,605	1,133,319	2,742,553
2033	1,187,132	1,152,119	449,376	1,601,495	7.4	359,196	777,605	1,136,801	2,738,296
2034	1,179,158	1,144,380	449,376	1,593,757	7.4	362,712	777,605	1,140,317	2,734,074
2035	1,171,184	1,136,641	449,376	1,586,018	7.4	366,263	777,605	1,143,868	2,729,886
2036	1,161,666	1,127,404	449,376	1,576,781	7.4	369,848	777,605	1,147,453	2,724,234
2037	1,152,282	1,118,297	449,376	1,567,673	7.5	373,469	777,605	1,151,074	2,718,747
2038	1,142,897	1,109,189	449,376	1,558,565	7.5	377,125	777,605	1,154,730	2,713,295
2039	1,133,513	1,100,081	449,376	1,549,457	7.5	380,817	777,605	1,158,422	2,707,879
2040	1,124,261	1,091,102	449,376	1,540,479	7.5	384,545	777,605	1,162,150	2,702,628

Source(s) of Information:

Disposal from Appendix D, Recycled from Appendices E and F, Populations: Annual District Reports

Sample Calculations:

Waste Generation = disposed + recycled = generated

Per Capita Generation = ((generated * 2,000) / 365) / population

Table G-2b Generation Projections for Disposal and Recycling

Sector	Type	Current Plan Projected Tons
Residential/ Commercial	Disposal	Residential/commercial projections based on the 5-year average per capita of 5.32 PPD. The rate is applied throughout the planning period and is close to historical numbers.
	Recycling	<p>Commercial survey is projected to 4.02 percent from 2023-2026 and 2.01 percent from 2027-2030. The 4.02 percent reflects the average rate of change combining the historical survey and processor data. From 2031 throughout the planning period will remain constant. Data from Other Recycling Facilities are projected to 4.02 percent from 2023-2026 and 2.01 percent from 2027-2030. The 4.02 percent reflects the average rate of change combining the historical survey and processor data. From 2031 throughout the planning period will remain constant.</p> <p>Ohio EPA Commercial Retail Data is projected to remain constant throughout the planning period.</p> <p>Curbside Recycling Services are projected to increase 10 percent in 2023, 5 percent in 2024 and 3 percent in 2025. This is to reflect returning programs and the education and outreach initiatives. From 2026 throughout the planning period will remain constant.</p> <p>Drop-off Recycling Locations are projected to increase 10 percent in 2023, 5 percent in 2024 and 3 percent in 2025. This is to reflect returning programs and the education and outreach initiatives. From 2026 throughout the planning period will remain constant.</p> <p>Composting Facilities are projected to remain constant throughout the planning period.</p> <p>Ohio EPA Scrap Tire Data is projected to remain constant throughout the planning period.</p> <p>Ohio EPA Food Waste Data is projected to remain constant throughout the planning period.</p> <p>Cuyahoga County Special Collection Events are projected to remain constant throughout the planning period.</p> <p>In-house Facility is projected to remain constant throughout the planning period.</p>
Industrial	Disposal	The 5-year annual average percent change divided by 2 keeps the projections through the planning period close to historical numbers while providing a conservative estimate of growth.
	Recycling	The District projects a flat 777,605 tons throughout the planning period to remain conservative.
Excluded	Disposal	Total disposal refers to the sum of waste direct hauled and transferred. According to Ohio EPA Format 4.1, if excluded waste is 10 percent or less of total disposal in the reference year, then districts are not required to account for excluded waste in the solid waste management plan.

The percentages were applied to the total estimated generation over the planning period in Table G-3.

C. WASTE COMPOSITION

Table G-3 Composition of Residential/Commercial Waste based on EPA Total Generation Estimation, 2018

Material	Paper and Paperboard	Glass	Ferrous	Aluminum	Other Nonferrous	Plastics	Rubber and Leather	Textiles	Wood	Other	Food	Yard Trimmings	Misc Inorganic wastes	Residential/Commercial Waste Generated
Percent of Total Generation ¹	23%	4%	7%	1%	1%	12%	3%	6%	6%	2%	22%	12%	1%	
2022	279,638	50,843	79,897	15,737	10,895	147,688	37,527	70,212	75,054	18,158	261,480	146,477	16,948	1,210,556
2023	280,349	50,973	80,100	15,777	10,923	148,063	37,623	70,391	75,245	18,204	262,145	146,850	16,991	1,213,633
2024	279,271	50,776	79,792	15,717	10,881	147,494	37,478	70,120	74,956	18,134	261,136	146,285	16,925	1,208,964
2025	278,192	50,580	79,483	15,656	10,839	146,924	37,333	69,849	74,666	18,064	260,128	145,720	16,860	1,204,294
2026	276,854	50,337	79,101	15,581	10,787	146,217	37,154	69,513	74,307	17,978	258,877	145,019	16,779	1,198,503
2027	275,516	50,094	78,719	15,505	10,734	145,511	36,974	69,177	73,948	17,891	257,626	144,318	16,698	1,192,711
2028	274,178	49,851	78,337	15,430	10,682	144,804	36,794	68,841	73,589	17,804	256,374	143,617	16,617	1,186,919
2029	272,840	49,607	77,954	15,355	10,630	144,098	36,615	68,505	73,230	17,717	255,123	142,916	16,536	1,181,127
2030	271,502	49,364	77,572	15,279	10,578	143,391	36,435	68,169	72,871	17,630	253,872	142,216	16,455	1,175,335
2031	269,715	49,039	77,061	15,179	10,508	142,447	36,195	67,721	72,391	17,514	252,201	141,279	16,346	1,167,597
2032	267,927	48,714	76,551	15,078	10,439	141,503	35,956	67,272	71,911	17,398	250,529	140,343	16,238	1,159,858
2033	266,139	48,389	76,040	14,978	10,369	140,559	35,716	66,823	71,431	17,282	248,858	139,406	16,130	1,152,119
2034	264,352	48,064	75,529	14,877	10,299	139,614	35,476	66,374	70,952	17,166	247,186	138,470	16,021	1,144,380
2035	262,564	47,739	75,018	14,776	10,230	138,670	35,236	65,925	70,472	17,050	245,515	137,534	15,913	1,136,641
2036	260,430	47,351	74,409	14,656	10,147	137,543	34,950	65,389	69,899	16,911	243,519	136,416	15,784	1,127,404
2037	258,327	46,968	73,808	14,538	10,065	136,432	34,667	64,861	69,334	16,774	241,552	135,314	15,656	1,118,297
2038	256,223	46,586	73,206	14,419	9,983	135,321	34,385	64,333	68,770	16,638	239,585	134,212	15,529	1,109,189
2039	254,119	46,203	72,605	14,301	9,901	134,210	34,103	63,805	68,205	16,501	237,617	133,110	15,401	1,100,081
2040	252,045	45,826	72,013	14,184	9,820	133,114	33,824	63,284	67,648	16,367	235,678	132,023	15,275	1,091,102

¹From Advancing Sustainable Materials Management: 2018 Tables and Figures Assessing Trends in Materials Generation and Management in the United States December 2020

APPENDIX H. STRATEGIC EVALUATION

Appendix H includes thirteen (13) strategic analyses as required by Format v4.1. Each analysis is contained in the sections outlined below. In general, existing district programs are discussed first, followed by any additional analysis not necessarily related to an existing program. All existing programs have been qualitatively evaluated using the suggestions included within Format v4.1 and any identified strengths and challenges and opportunities are summarized at the end of each section. For programs where data is available, quantitative evaluations have also been incorporated.

The following sections are included in Appendix H:

SECTION H-1	•RESIDENTIAL RECYCLING INFRASTRUCTURE ANALYSIS
SECTION H-2	•COMMERCIAL SECTOR ANALYSIS
SECTION H-3	•INDUSTRIAL SECTOR ANALYSIS
SECTION H-4	•RESIDENTIAL/COMMERCIAL WASTE COMPOSITION ANALYSIS
SECTION H-5	•ECONOMIC INCENTIVE ANALYSIS
SECTION H-6	•RESTRICTED AND DIFFICULT TO MANAGE WASTE ANALYSIS
SECTION H-7	•DIVERSION ANALYSIS
SECTION H-8	•SPECIAL PROGRAM NEEDS ANALYSIS
SECTION H-9	•FINANCIAL ANALYSIS
SECTION H-10	•REGIONAL ANALYSIS
SECTION H-11	•DATA COLLECTION ANALYSIS
SECTION H-12	•EDUCATION AND OUTREACH ANALYSIS
SECTION H-13	•PROCESSING CAPACITY ANALYSIS

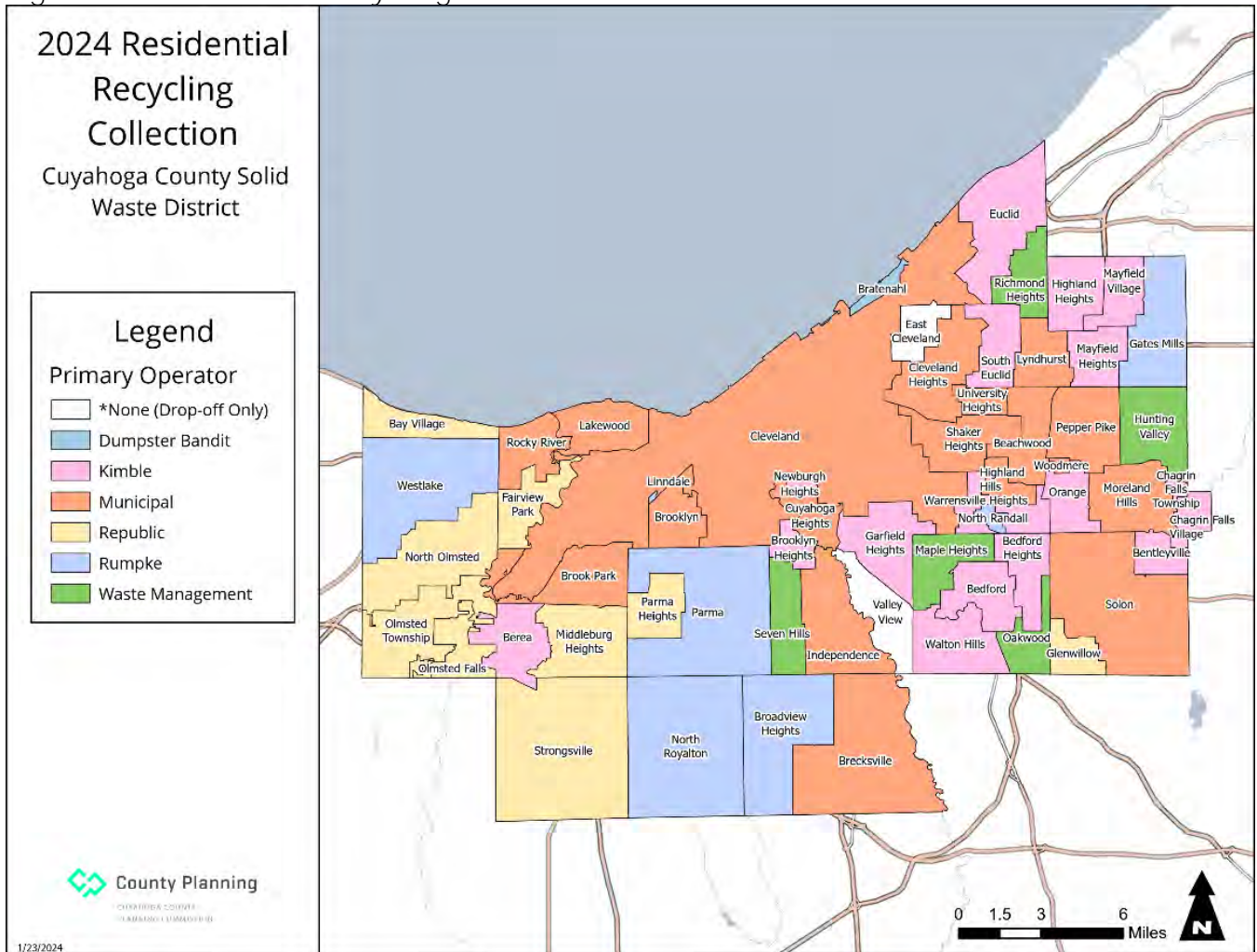
H-1: RESIDENTIAL RECYCLING INFRASTRUCTURE ANALYSIS

This analysis evaluates the performance of the existing residential recycling infrastructure in the Cuyahoga County Solid Waste District presented in Appendix B to determine if it is meeting the residential sector's needs. As demonstrated in this section, Cuyahoga County has a robust recycling infrastructure with 19 communities providing multi-material drop-off recycling. In addition, non-subscription curbside recycling was provided by 56 of 59 communities during the reference year. The average curbside recycling rate across all communities in Cuyahoga County that offered curbside recycling during the reference year was 197 lbs./hh/year.

A. CURBSIDE RECYCLING INFRASTRUCTURE

During the reference year, residents in 56 of 59 communities had access to curbside recycling on a non-subscription basis. The curbside service providers were either the municipalities themselves or a private company under contract with a municipality. The only three communities without curbside recycling in the reference year were East Cleveland, Richmond Heights, and Valley View. The District expects that all 56 curbside recycling programs will continue operating throughout the planning period.

Figure H-1.1. Curbside Recycling Service Providers: 2022*

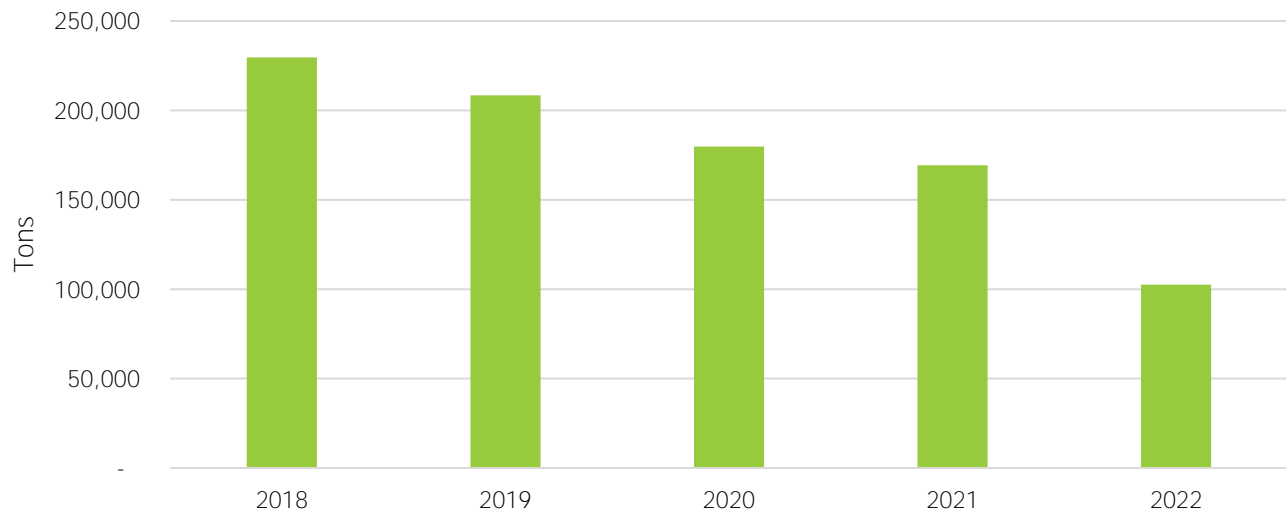


*Except for Richmond Heights, this map depicts the 2022 operator in each community.

Residential Curbside Recycling Infrastructure and Programs

While the population in the District has increased, there has been an overall decrease in the tons recovered from community recycling programs since 2018. Figure H-1.2 presents the tonnage of recyclables collected from curbside recycling programs from 2018 to 2022. Throughout this section, the curbside recycling figures exclude yard waste.

Figure H-1.2 Curbside Recyclables Recovered between 2018 and 2022 in the District



Tons Recovered and Performance

Table H-1.1 shows the total tons of recyclables each community collected through its curbside recycling program and the total pounds collected per household per year (lbs./hh/yr.). [Note: For those communities that were not able to break out drop-off recycling and appliance recycling weights from their curbside weights, Table H-1.1 includes these tonnages.]

According to The Recycling Partnership (TRP), on average, the national rate of recovery from curbside recycling is 300-350 lbs./hh/year. TRP suggests that a good target recovery rate for communities would be 400-450 lbs./hh/year. They report some high performing communities achieve 600 lbs./hh/year on average. The average curbside recycling rate across all communities in Cuyahoga County that offered curbside recycling during the reference year was 320 lbs./hh/year, which falls within the national average.

Table H-1.1 shows that in Cuyahoga County, 30 communities met or exceeded the national average by recycling between 300 and 762 pounds per household per year. The remaining 26 communities that offered curbside recycling during the reference year recycled less than the national average and recovered between 35 and 291/lbs./hh/year.

Table H-1.1. 2022 Curbside Recycling Statistics by Community

Community	Container Type	Households in Curbside Program	2022 Curbside Recycling Tons	Curbside Recycling lbs./hh/year
Bay Village city	Cart	6,208	1,252	403
Beachwood city	Cart	5,941	777	261
Bedford city	Cart	6,608	420	127
Bedford Heights city	Cart	5,435	614	226
Bentleyville village	Cart	298	69	463
Berea city	Cart	7,731	1,329	344
Bratenahl village	Cart	733	113	307
Brecksville city	Bag	5,455	965	354
Broadview Heights city	Cart	8,145	1,346	331
Brook Park city	Cart	7,793	1,099	282
Brooklyn city	Cart	5,266	639	243
Brooklyn Heights village	Cart	612	106	345
Chagrin Falls township	Cart	42	15	708
Chagrin Falls village	Cart	1,918	363	378
Cleveland city	Cart	167,681	2,977	36
Cleveland Heights city	Bag	20,053	2,390	238
Cuyahoga Heights village	Cart	243	54	441
Euclid city	Cart	23,354	2,044	175
Fairview Park city	Cart	7,852	1,297	330
Garfield Heights city	Cart	11,985	753	126
Gates Mills village	Cart	930	178	383
Glenwillow village	Cart	308	142	920
Highland Heights city	Cart	3,369	604	359
Highland Hills village	Cart	298	59	398
Hunting Valley village	Cart	216	80	739
Independence city	Cart	2,914	711	488
Lakewood city	Cart	26,441	2,950	223
Linndale village	Cart	48	8	332
Lyndhurst city	Cart	6605	1,094	331
Maple Heights city	Cart	9841	908	185
Mayfield village	Cart	1421	207	291
Mayfield Heights city	Cart	10152	923	182
Middleburg Heights city	Cart	7200	741	206
Moreland Hills village	Cart	1,313	446	679
Newburgh Heights village	Cart	868	139	320
North Olmsted city	Cart	13807	2,177	315
North Randall village	Cart	510	31	121
North Royalton city	Cart	13505	2,407	356
Oakwood village	Cart	1,580	176	222
Olmsted Falls city	Cart	3,666	994	542
Olmsted township	Cart	5,946	750	252
Orange village	Cart	1,358	262	386
Parma city	Cart	35,124	6,632	378
Parma Heights city	Cart	9,689	864	178
Pepper Pike city	Bag	2,408	292	242
Rocky River city	Bag	9,907	891	180
Seven Hills city	Cart	5,083	996	392

Community	Container Type	Households in Curbside Program	2022 Curbside Recycling Tons	Curbside Recycling lbs./hh/year
Shaker Heights city	Bin	12,416	1,247	201
Solon city	Cart	8,791	1,840	419
South Euclid city	Cart	8,914	1,165	261
Strongsville city	Bag	18,643	1,703	183
University Heights city	Bag	4,843	339	140
Walton Hills village	Cart	931	173	372
Warrensville Heights city	Cart	6223	515	165
Westlake city	Cart	14618	2,306	316
Woodmere village	Bag/Bin	299	20	136
Overall		543,538	53,593	197*

Observations for 2022 community recycling data:

- Overall, 197 pounds of recyclables per household per year.
 - $53,593 \text{ tons of recycling} \div 543,538 \text{ Households} = 0.098 \text{ tons or } 197 \text{ pounds per household}$
- If the outlier City of Cleveland revamp program was not included, the overall is 269 pounds of recyclables per household per year.
 - $50,616 \text{ tons of recycling} \div 375,857 \text{ Households} = 0.135 \text{ tons or } 269 \text{ pounds per household}$

Type of Collection – Automated Collection with Carts

One of the District’s goals has been to continue to improve residential curbside recycling by increasing the number of communities using automated collection with recycling carts. The 64 and 96-gallon recycling carts provide additional capacity for recycling, which is proven to recover 400 to 450-pounds of recyclables per household per year. In addition, automated collection increases collection speed and efficiency and reduces worker compensation claims.

Currently, 48 communities in the District offer curbside recycling using 64 or 96-gallon carts. Eight of these communities have converted to carts since the previous planning period, pointing to the trend for communities to convert to automated collection when new collection contracts are executed. The average lbs./hh/yr. of recyclables recovered from District communities that used carts was 338. The average lbs./hh/yr. of recyclables recovered for all District communities was 320.

One downside of carts however is contamination. National studies indicate that contamination is significantly higher in a single stream cart system than when recyclables are dropped off as individual source separated commodities. **The MRF’s in the District’s MRF-shed** experience contamination levels between 15-25 percent. MRFs are beginning to process the residue a second time to increase recovery and reduce the materials transported for disposal to a landfill.

MRFs are concerned about high contamination rates as domestic and international markets increase standards for the quality of recyclables. The District recommends that each community require their recycling processor to conduct a material composition audit to identify the individual components of their recycling stream, inclusive of contaminants. This information can be utilized by a community to target **“Recycling Right” education**. The District continues its campaign to improve the quality of recyclables delivered to MRFs.

Type of Collection - Blue Bag and/or Bin Collection

During the reference year, 8 communities collected recyclables using blue bags or a combination of blue bags and/or 5-gallon or 18-gallon bins. Both private haulers and municipal crews provided curbside collection services in these communities. These smaller collection receptacles do affect recycling rates. The average lbs./hh/yr. of recyclables recovered from District communities that use blue bags and/or bins is 209. The average lbs./hh/yr. of recyclables recovered for all District communities is 320.

While the blue bag collection is popular with some residents and communities, MRFs want to see the blue bags replaced with loose collection. Plastic film **is a problem for MRF's. The bags must first be split open**, which is time consuming, and the plastic film can damage processing equipment. Additionally, MRFs claim that residents use blue bags for containing garbage rather than recyclables.

Education and Awareness

The District continues to provide **information regarding each community's curbside recycling program** on their website. The District also continues to provide a variety of programs and other types of support to municipalities for curbside recycling, including offering contracting assistance, special waste collections, the creation of an annual *Residential Recycling Report*, recycling awareness toolkit, community contracts and practices, recycling awareness grants, and other services. See Appendix L for a discussion of Education and Awareness programs within the District.

Curbside Recycling Strengths, Challenges and Opportunities

Strengths

- The residential, curbside recycling infrastructure in the District is robust as residents in 56 of 59 communities had access to curbside recycling service during the reference year. Richmond Heights added curbside recycling in 2023 and Valley View began their curbside program in 2024.
- More than two-thirds of communities met or exceeded the average national curbside recycling rate of 300-350 lbs./hh/yr.
- Multiple private haulers compete for municipal contracts that include curbside recycling, which keeps costs low, and the variety of materials accepted high.
- Over two-thirds of communities use carts to collect recyclables (48 total).
- The District **continues its "Recycling Right"** education campaign to decrease contamination in curbside recyclables.

Challenges

- During the reference year, 8 communities still had a blue bag or bin collection system. The lbs./hh/yr. in these communities was approximately 38 percent less than communities that used carts to contain recyclables.
- Recycling rates vary significantly by community.
- **There are communities that are below the "average" for both automated and blue bag systems.**
- Contract prices for recyclables vary based on market conditions.
- The District derives individual community recycling rates based on the community and processor provided data. Currently, there is no formal process to validate disposal or recycling data.

Opportunities

- **Work with "blue bag"** and bin communities to evaluate feasibility of converting to carts
- The District could work with haulers to identify routes or communities with high levels of recycling contamination and target those routes or communities for enhanced education and outreach.

- Promote and assist with a blended market rate recycling model to decrease contamination and increase community participation.
- Promote yard waste/food waste collection at the curb via technical assistance.
- Promote RFID Tags in community contracts.

B. DROP-OFF RECYCLING INFRASTRUCTURE

District residents and businesses had access to numerous drop-off locations during the reference year.

The drop-off sites included in this analysis met the general criteria for achieving the Ohio EPA definition of a *multi-material drop-off site* by accepting more than five designated recyclables. The drop-offs described herein were operated by individual communities or operated by private companies through contracts with individual communities.

This analysis is limited to the traditional drop-offs described above and does not include the extensive infrastructure of drop-offs and specialty recyclers that accept donations and other recyclables. In addition to the recycling drop-offs listed below, there are approximately 350 local business and charitable organizations listed on CuyahogaRecycles.org that accept donations of reusable goods or process other types of recyclables from District residents and businesses.

Drop-Off Recycling Sites

Locations of Drop-Off Sites

Table H-1.2 identifies the recycling drop-offs located in the District that accept common household recyclables such as paper, cardboard, cans, glass and plastic containers. These sites are publicly sponsored by communities.

As mentioned above, Table H-1.2 does not include drop-off locations for other recyclable or reusable materials such as household goods, clothing, scrap metal, e-waste and etcetera. A comprehensive list of **these other reuse and recycling opportunities is available on the District's website – CuyahogaRecycles.org.**

Table H-1.2. Recycling Opportunities (Curbside & Drop-off) by Community

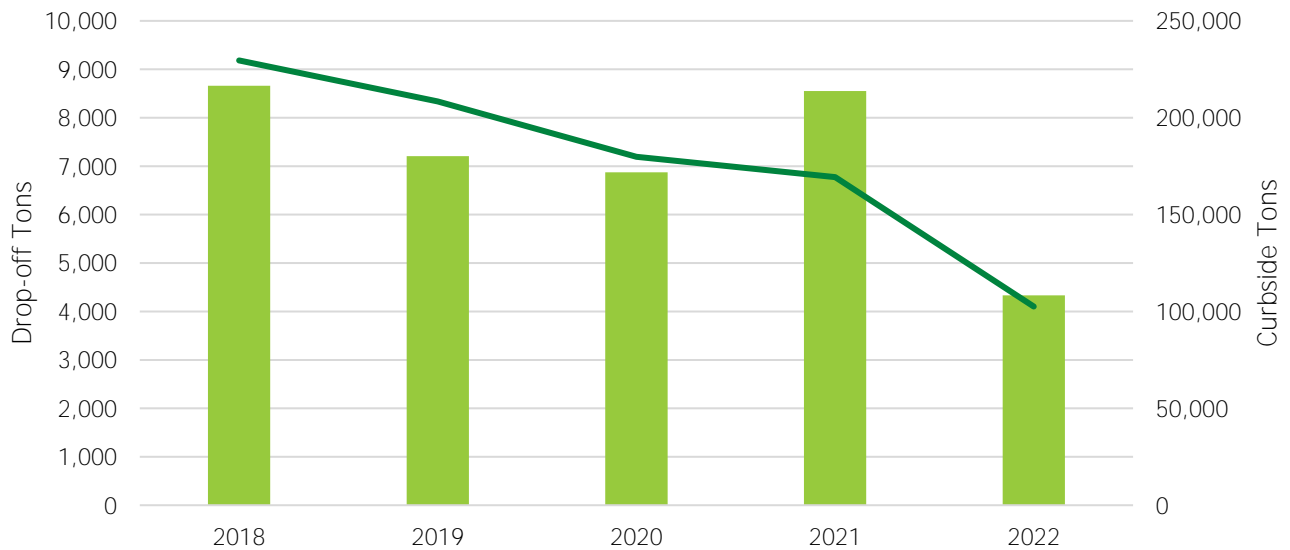
Political Subdivision	Population	Curbside	Drop-off	Political Subdivision	Population	Curbside	Drop-off
Bay Village	15,880	✓		Maple Hts.	23,136	✓	
Beachwood	13,788	✓	✓	Mayfield Village	3,298	✓	
Bedford	12,838	✓		Mayfield Hts.	19,907	✓	✓
Bedford Hts.	10,776	✓		Middleburg Hts.	15,682	✓	
Bentleyville	891	✓		Moreland Hills	3,435	✓	
Berea	18,395	✓		Newburgh Hts.	1,816	✓	
Bratenahl	1,401	✓		North Olmsted	31,724	✓	✓
Brecksville	13,506	✓	✓	North Randall	934	✓	
Broadview Hts.	19,635	✓		North Royalton	30,793	✓	✓
Brook Park	18,171	✓	✓	Oakwood	3,495	✓	
Brooklyn	11,088	✓		Olmsted Falls	8,603	✓	
Brooklyn Hts.	1,485	✓		Olmsted Twp.	14,450	✓	✓
Chagrin Falls	4,114	✓		Orange Village	3,476	✓	
Chagrin Falls Twp.	127	✓		Parma	79,358	✓	
Cleveland	361,607	✓	✓	Parma Hts.	20,389	✓	
Cleveland Hts.	44,201	✓		Pepper Pike	6,812	✓	✓

Political Subdivision	Population	Curbside	Drop-off	Political Subdivision	Population	Curbside	Drop-off
Cuyahoga Hts.	558	✓		Richmond Hts.	10,564		
East Cleveland	13,446		✓	Rocky River	21,346	✓	✓
Euclid	48,496	✓		Seven Hills	11,557	✓	
Fairview Park	16,885	✓		Shaker Hts.	28,723	✓	✓
Garfield Hts.	29,072	✓		Solon	23,792	✓	✓
Gates Mills	2,231	✓		South Euclid	21,395	✓	
Glenwillow	983	✓		Strongsville	45,725	✓	✓
Highland Hts.	8,564	✓		University Hts.	13,319	✓	✓
Highland Hills	670	✓	✓	Valley View	1,858		✓
Hunting Valley	763	✓		Walton Hills	1,998	✓	
Independence	7,520	✓		Warrensville Hts.	13,457	✓	
Lakewood	49,658	✓	✓	Westlake	33,907	✓	✓
Linndale	109	✓		Woodmere	646	✓	
Lyndhurst	13,721	✓					

Source of Information: Appendix B Table B-1a, B-1b, B-2a, B-2b, and B-2c that contain an itemized list of drop-off and curbside programs.

Figure H-1.3. shows the District historic tons for drop-offs have decreased over the last five years in correlation to the curbside programs.

Figure H-1.3. District Curbside and Drop-Off Tonnage Trends 2018-2022



Both drop-off and curbside recycling programs struggled with the effects of COVID-19 and contamination issues. The District has responded with increased efforts with their "Recycle Right" campaign and enhanced recycling education available on their website. The District believes recycling rates may take more time to recover to pre-pandemic levels.

Drop-off Recycling - Materials Accepted

The 18 communities that provided multi-material drop-offs accepted a comprehensive list of materials which exceeded the minimum five materials that Ohio EPA considers highly amenable for the residential sector to recycle. The materials accepted were as follows:

Paper:

- Newspaper
- Office Paper
- Mixed Paper
- Magazines
- Cardboard

Cans/Containers:

- Aluminum Beverage Cans
- Steel, Tin, Bimetal Food Cans
- Plastic Bottles and Jugs
- Glass Bottles and Jars

Additionally, most community drop-offs accepted the following materials:

- Aseptic Containers (Cartons)
- Plastic Tubs

Quantities and Types of Recyclables Received

During the reference year, communities and private recyclers reported that the drop-off sites recovered approximately 4,142 tons of recyclables. [*Note:* not all communities were able to separate their drop-off tonnages from their curbside tonnages. In these instances, the total tonnage was credited towards curbside recycling. Consequently, the drop-off tonnage was most likely higher.]

Using data provided by the communities and private recyclers, Figure H-1.4 shows the composition of the recyclable materials received at drop-off sites during the reference year.

Drop-off Recycling Access

As shown in Table H.1.2, 18 communities provided multi-material drop-off sites during the reference year. The population directly served by a drop-off in their community was 709,295 or 57 percent of the District's population.

Most of the community drop-off sites in the District meet the minimum standards to be classified as full-service drop-offs. Most drop-offs in the District are open from dawn to dusk or 24 hours, 7 days a week. Some drop-offs have specific operating hours (see Appendix B). Figure H-1.5 presents a map of the full time and part time, community drop-off sites in the District.

Figure H-1.4. Materials Received at Drop-Off Sites: 2022

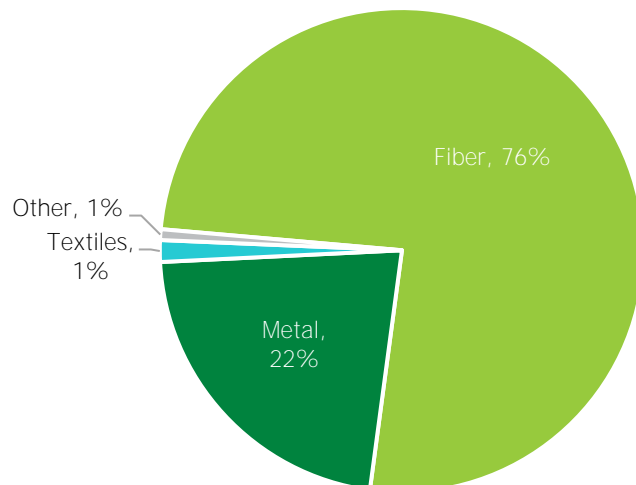
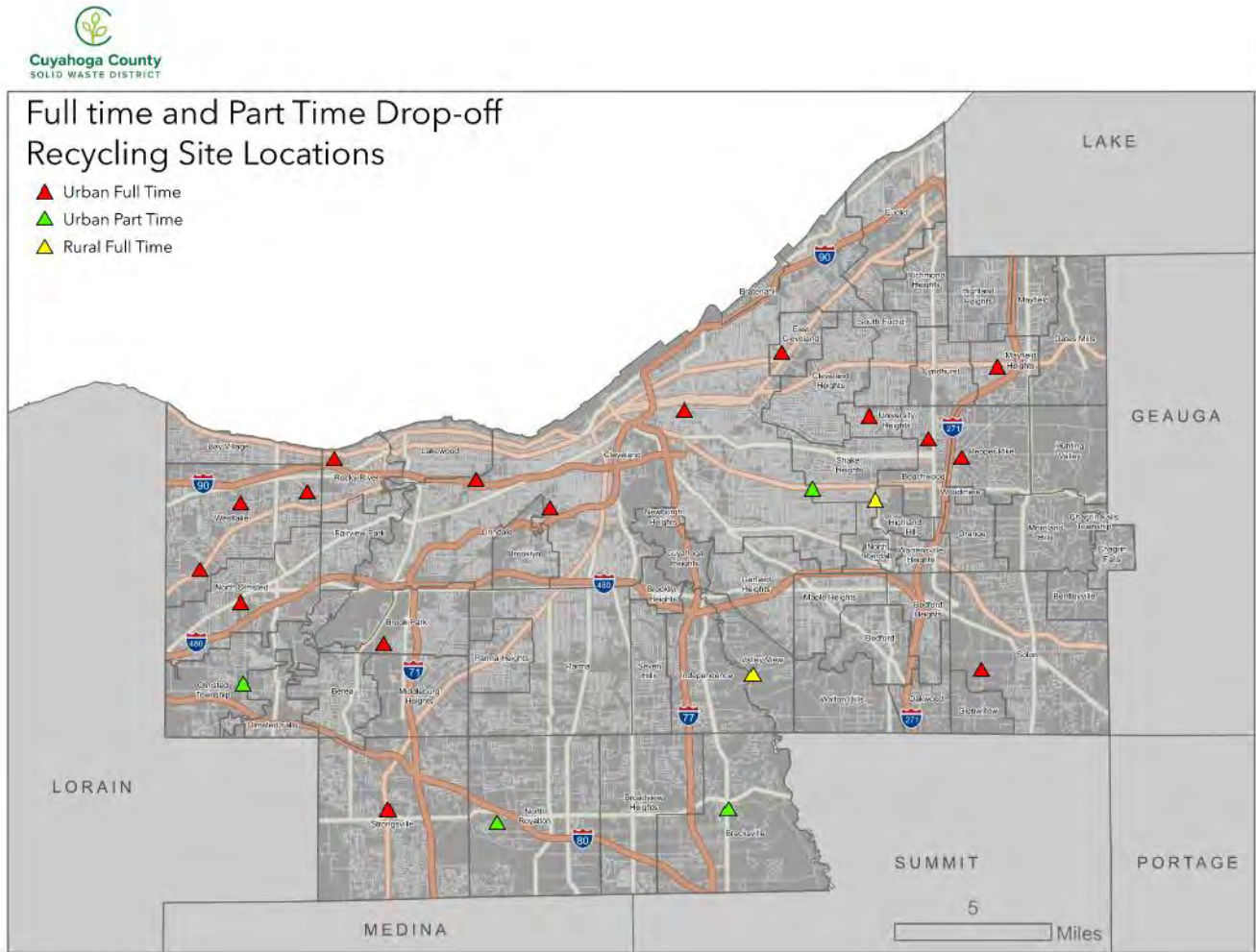


Figure H-1.5. Full and Part-Time Drop-off Locations in the District



Education and Awareness for Drop-off Recycling Opportunities

Residents can search CuyahogaRecycles.org to find locations of multi and limited material drop-offs sites within their community, as well as opportunities to recycle and donate other items at approximately 350 non-profits and private businesses located throughout Cuyahoga County. On the District's website, residents can select their community from a drop-down menu to load a page that includes information about their curbside program, drop-off locations, materials accepted, and special waste collections. Paper Retriever™ and River Valley drop-off locations are not included on the website, but links are provided so that residents may go to the company website.

The District works with each community, and their recycling processor, to post current recycling information on the District's website and the community's website. The purpose is to have accurate recycling information listed. See Appendix H, section 13 and Appendix L for more information about the District's outreach, education and awareness efforts.

Drop-off Infrastructure Strengths, Opportunities and Conclusions

Strengths

- Drop-offs play an important role in expanding recycling opportunities for residents that are not served by curbside recycling programs and small business that may not generate enough volume to make a commercial recycling program viable.
- Drop-offs are especially important in District communities that have many multi-family housing (MFH) properties or a significant portion of the residents living in MFH establishments.
- In addition to the traditional drop-off sites, there are currently private businesses and non-profit organizations that accept various materials for recycling and reuse from all District residents and business regardless of where they reside or where their business is located.
- The **District's website provides residents with** detailed information about all reuse and recycling opportunities in the District as well as community drop-offs.
- If a community sponsors a drop-off site, it is available to their MFH residents and small businesses.
- Contamination does not appear to be a significant problem at fiber- only drop-off sites.

Challenges

- Contamination and illegal dumping at drop-off sites could make some drop-offs financially unsustainable to operate. Most contamination occurs at the multi-material sites.
- Drop off sites provide recycling opportunities for MFH residents and small businesses; however, data is not available to assess the type of generator using the drop-offs or to target educational materials by generator.
- Private companies operating fiber only drop-offs often close or relocate drop-off sites due to low usage.
- Challenges that arise from having the drop-off programs operated by multiple public and private entities include the following:
 - Communities that financially sponsor a drop-off site do not want to accept recyclables from residents and businesses from other communities.
 - Different size and different color bins (lack of branding) may be used at each site, making drop-offs potentially more difficult for residents to identify.
 - The District does not know if there are issues with contamination, vandalism, capacity, damage, etc., and if there are issues, whether they are being addressed in a timely fashion.
 - Containers at sites may not have consistent decals or adequate information displayed regarding materials accepted or who to contact in case of issues/questions.
 - Not all communities are able to itemize the amount of recyclables recovered through their drop-off program from the combined curbside/drop-off total. Consequently, it is difficult to measure and estimate drop-off site usage or program success without tonnage information.

Opportunities

- Investigate community "super drop-off centers" for OCC, glass, food waste, yard waste, and other possible materials.
- Promote year-round HHW/Hard-to-recycle collection.
- Provide technical assistance for communities interested in yard waste drop-off/collection.
- Market in home trash/ recycling stations.
- Support for a community to host a densifier.

C. MFH LOCATIONS AND RECYCLING INFRASTRUCTURE AND ACCESS

Approximately 24.8% of all housing units in the District are multi-family (MFH)¹. The percentage of MFH of all housing units varies greatly among the political subdivisions in the District.

Out of 616,424 living units in Cuyahoga County, over 150,000 are MFH units. The five communities with the greatest number of MFH units include:

- Cleveland
- Lakewood
- Euclid
- East Cleveland
- Cleveland Heights

District Assistance to Develop MFH Recycling Programs

The District works with MFH property owners to implement recycling programs as requested. Through **the District's discussions with property managers and other stakeholders, the following barriers to establishing recycling in MFH were discovered:**

- Property managers must contract separately for recycling services and often lack the interest in providing recycling or the knowledge of how to provide recycling. There is also concern over any added cost.
- One of the largest barriers to MFH recycling are apartments that do not use dumpsters as most recycling haulers only collect materials with front loader vehicles.
- Some MFH units have poor route density for recycling collection.

Multi-Family Recycling Infrastructure - Strengths, Challenges and Opportunities

Strengths

- Drop-off recycling is available for MFH in some communities.
- The District works with MFH property owners to conduct a financial assessment of the costs and value of implementing a recycling program.
- Developed a model ordinance to require MFH recycling.
- The District works with communities and MFH property owners to require a certain percent of a **building's interior or exterior footprint to be allocated to recycling containers.**

Challenges

- The communities with the highest percentage of people living in MFH units do not always have access to recycling.
- It is unclear if MFH have drop-off sites within the recommended 2.0-mile radius.
- Drop off sites provide recycling opportunities for MFH residents and small businesses. However, data is not available to assess the type of generator using the drop-off sites.
- A practical strategy does not currently exist for the District to locate drop-off sites in communities with a high number or percent of MFH.
- MFH property owners do not want to allocate parking space to additional dumpsters for recycling and do not want to pay extra for recycling service.

¹ Cuyahoga County Planning Commission's 2023 Data Book. <https://s3.countyplanning.us/wp-content/uploads/2023/12/Our-County-2023-reduced.pdf>

- The data used for the financial analysis does not include District-specific MFH program results on recovery, contamination and financials.

Opportunities

- The District could target those communities with a high MFH and limited drop-offs for a drop-off recycling program.
- Facilitate joint recycling contracting for MFH
- The District could facilitate cooperative contracting amongst multiple MFH buildings within a geographic region to increase economies of scale and route densities to decrease costs.

D. RESIDENTIAL RECYCLING INFRASTRUCTURE CONCLUSIONS

Most Cuyahoga County residents are served by access to residential recycling infrastructure featuring curbside recycling. While the curbside recycling infrastructure serves residents who live in single family homes very well, it excludes residents living in multi-family housing. Some of these residents can recycle through a community-sponsored drop-off or fiber-only drop-off but these opportunities are not widespread. Threats to residential recycling include contamination in curbside and drop-off materials, **and tighter quality specifications. Local MRF's may charge more to process recyclables and/or limit the types of materials they accept to those they can market domestically.**

H-2 & H-3: BUSINESS AND INDUSTRIAL SECTOR ANALYSES

This analysis considers both commercial and industrial businesses in Cuyahoga since the District's business assistance programs service both similarly. This analysis evaluates the existing commercial and industrial waste recovery, the existing recycling infrastructure and the existing programs and services offered through the District or the private sector. The goal of this analysis is helping the District identify types of businesses that could be targeted for additional recovery and determine if additional infrastructure or assistance is required to increase recovery of business waste streams.

A. BUSINESS AND INDUSTRY PROFILES

The following sections discuss the number and type of businesses in Cuyahoga County, largest employers and geographic considerations.

Commercial/Institutional Establishments

Numerous commercial businesses and institutional organizations have multiple properties within Cuyahoga County and many of these make solid waste management decisions independent of their parent business or organization. Therefore, for planning purposes, **the District defines "establishment"** as the physical location of a commercial/institutional property.

Based on this definition, there were approximately 32,428 commercial/institutional establishments in Cuyahoga County during the reference year. Table H-2.1 shows the number of commercial/institutional establishments that within each North American Industry Classification System (NAICS) code, as well as the median number of staff employed by each commercial/institutional establishment within each NAICS code.

Table H-2.1. 2022 Commercial/Institutional Establishment Statistics

NAICS Code	NAICS Description	Number of Commercial/ Institutional Establishments
42	Wholesale Trade	1,405
44-45	Retail Trade	4,109
48-49	Transportation and Warehousing	781
51	Information	884
52	Finance and Insurance	1,935
53	Real Estate and Rental and Leasing	1,857
54	Professional, Scientific, and Technical Services	3,740
55	Management of Companies and Enterprises	89
56	Administrative and Support and Waste Management and Remediation Services	1,302
61	Educational Services	1,069
62	Health Care and Social Assistance	6,408
71	Arts, Entertainment, and Recreation	790
72	Accommodation/Food Service	3,176
81	Other Services (Except Public Administration)	3,883
92	Public Administration	999

Source: U.S. Business Database. Rep. Reference USA. Web. 29 Feb. 24 and Ohio Department of Development Cuyahoga County Profile, 2023 Edition

Table H-2.1 shows that most commercial/institutional businesses in Cuyahoga County are health care and social assistance enterprises and most employ fewer than nine employees. Due to the small size of

these businesses, most share dumpsters with other businesses. This dynamic makes implementing recycling programs at these establishments more challenging.

However, there are larger commercial and institutional establishments in the District that arrange for their own waste management services which increase the viability of recycling. Table H-2.2 identifies the top 10 employers in the District.

Table H-2.2. Top 10 Employers in the District

Company Name	NAICS	Employees
Cleveland Clinic	62	44,665
University Hospitals	62	24,636
Group Management Services	56	22,145
Minute Men Cos	56	21,802
U.S. Office of Personnel Management	92	15,342
Progressive Corp.	52	12,849
Walmart	45	12,400
Accurate Staffing Inc.	56	9,925
Giant Eagle	44	9,806
State of Ohio	92	7,734

Source: Crain’s List | 100 Largest Northeast Ohio Employers, 2022

Finally, there are concentrations of commercial/institutional establishments with similar NAICS codes throughout Cuyahoga County. Most of these businesses have less than 10 employees. However, a clustering of businesses with a similar waste stream could generate enough volume that in turn, encourages a private recycler to establish a route or site a drop-off to recover their recyclables.

Industrial Establishments

Approximately 4,078 industrial businesses operated in Cuyahoga County during the reference year. Unlike commercial/institutional establishments, most industrial businesses have just one location in Cuyahoga County making it easier to implement a waste reduction and recycling program. Table H-2.3 shows the number of industrial businesses within each North American Industry Classification System (NAICS) code.

Table H-2.3. 2022 Industrial Statistics

NAICS Code	NAICS Description	Number of Industrial Businesses
22	Utilities	79
31	Manufacturing: Food and Apparel	632
32	Manufacturing: Wood, Paper, Printing, Chemical, and Plastics	880
33	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.	2,487

Source: U.S. Business Database. Rep. Reference USA. Web. 29 Feb. 24 and Ohio Department of Development Cuyahoga County Profile, 2023 Edition

Unlike commercial/institutional establishments where most employ less than 10 people, 51 percent of industrial business have a median employment of 10 or more individuals. Similar to commercial/institutional establishments, only a small percentage of industrial businesses (9%) have a

staff of greater than 100 employees. The top 10 industrial business employers are presented in Table H-2.4.

Table H-2.4. Largest Industrial Business Employers

Company Name	City	NAICS	Staff
The Sherwin Williams Co.	Cleveland	32	4,569
Swagelok Co	Solon	33	4,335
Ford Motor Co	Brook Park	33	3,490
Nestle Prepared Foods	Solon	31	3,184
Lincoln Electric Co	Cleveland	33	2,752
Cleveland Cliffs	Cleveland	33	2,400
Lubrizol Advanced Materials	Cleveland	32	2,133
Rockwell Automation	Mayfield Heights	33	1,825
Parker-Hannifin Corp	Cleveland	33	1,800
Howmet Aerospace	Cleveland	33	1,667

Source: **Crain's List | 100 Largest Northeast Ohio Employers, 2022**

B. BUSINESS RECYCLING INFRASTRUCTURE

A robust infrastructure of companies that recycle materials is available to District businesses. This infrastructure includes companies that recycle traditional commodities such as paper and business-specific materials like barrels and drums. The District inventories these recyclers at least once a year, and has created an on-line directory where businesses can keyword search the product they want to recycle.

Some of these recycling facilities will collect waste from a business based on their proximity, amount available, and market value of the material. In addition to these material-specific recycling companies, the District is serviced by multiple hauling companies that also process commingled recyclables, such as Waste Management, Republic, Kimble, and Rumpke. Information on processing capacity in the region is provided in Section H.13.

C. LANDFILL DIVERSION

Commercial/Institutional Landfill Diversion

Based on data reported by landfills, transfer stations, and political subdivisions, the District is able to estimate commercial/institutional disposal data out of the total 1,210,556 tons of waste disposed by the residential and commercial/institutional sector during the reference year. This is the tonnage reported in the Ohio EPA 2022 Annual Report Form for Cuyahoga County.

To estimate the amount of commercial/institutional waste that was disposed, the District subtracted the amount of residential waste cited as disposed in the 2022 Residential Recycling Report (447,384 tons) from the total disposed quantity. Using this methodology, approximately 763,172 tons of commercial/institutional waste was disposed during the reference year.

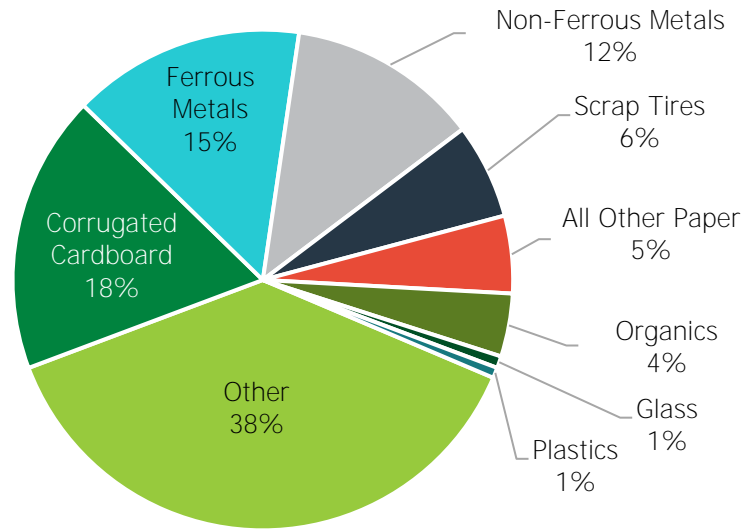
To calculate an estimate of the commercial/institutional sector's recycling rate, the District subtracted the residential sector's 2022 recycling and composting total (174,606 tons) from the total 2022 recycling total (391,041 tons), resulting in approximately 216,435 tons of commercial/institutional-generated recyclables being recovered during the reference year. Using the estimated commercial/institutional

disposal (763,172 tons) and recycling (216,435 tons) totals resulted in a 22% diversion rate for the commercial/institutional sector.

Through its surveying process, the District can isolate certain materials the commercial/institutional generators annually recover. Figure H-2.2 provides the breakdown of the type of recyclables recovered during the reference year based on the 2022 survey data.

As shown by Figure H-2.2, other materials comprise the largest portion of commercial/institutional recyclables followed by paper. Commercial/institutional generators recovered an estimated 82,015 tons of "other" recyclables during the reference year, which includes textiles, bulbs, ballasts, motor oil, antifreeze, animal composting, concrete, and stone.

Figure H-2.2. 2022 Commercial/Institutional Recyclables Recovered by Material (in tons and percent of total)



Industrial Landfill Diversion

In 2022, industrial businesses recycled approximately 543,235 tons of waste while disposing 322,695 tons. Over the five-year period from 2018 to 2022, the industrial sector has remained above 66% diversion. The tons of industrial waste disposed and recycled, including the types of materials recycling, are discussed in more detail in Section H-7, Diversion Analysis. Figure H-2.3 provides the breakdown of the type of recyclables recovered during the reference year.

As shown in Figure H-2.3, metals comprise most industrial sector recyclables. Figure H-2.4 shows the historical industrial sector recyclables that were recovered between 2018 and 2022.

Figure H-2.3. 2022 Industrial Sector Recyclables Recovered by Material (in tons and percent of total)

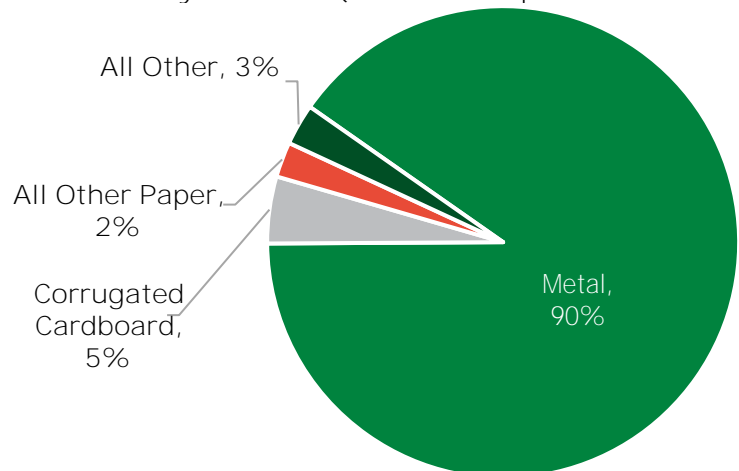
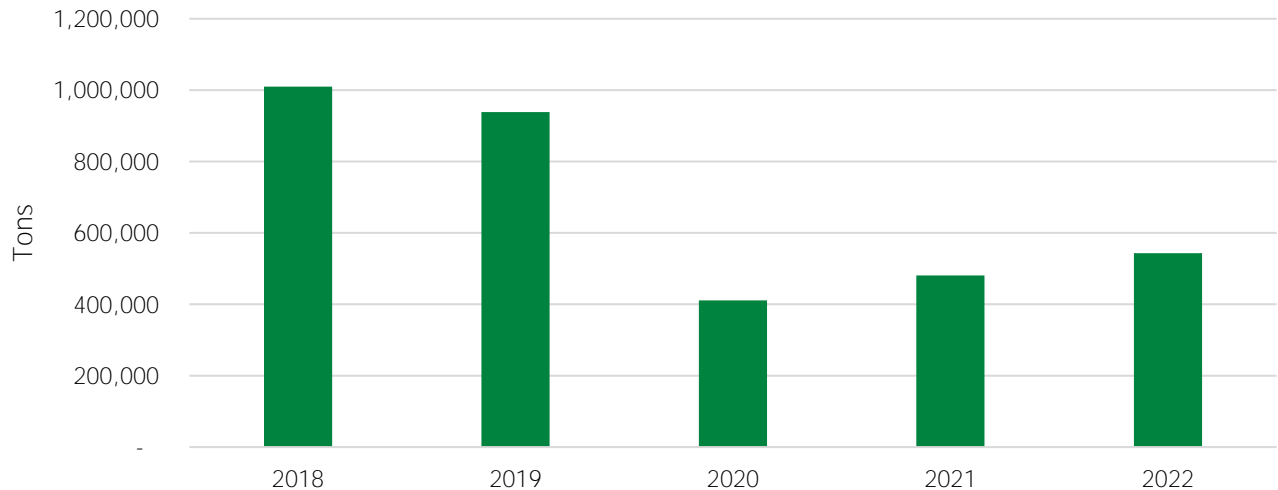


Figure H-2.4. Reported Historical Industrial Sector Recyclables



District Business and Industry Recycling Assistance Programs

The District provides direct assistance to businesses through information on its website, technical assistance, presentations, and waste audits. In 2022, the District assisted 5 small industrial businesses evaluate opportunities to decrease dependency on landfills through waste reduction, reuse, recycling, and composting.

Contracting Assistance

The District also works with trade associations, commercial businesses, industrial parks, large retail complexes, etc. to renegotiate contracts for solid waste and recycling services. Through this District support, commercial/institutional businesses have reduced basic waste management contract costs, which increase the financial attractiveness of recycling.

D. COMMERCIAL/INSTITUTIONAL AND INDUSTRIAL STRENGTHS, CHALLENGES, OPPORTUNITIES AND CONCLUSIONS

Note: where the term “business” is used in the following section, it encompasses commercial, institutional and industrial entities.

Strengths

- The District has a robust and ambitious technical assistance program that has reached over 1,200 businesses in the last 5 years.
- **The District’s assistance considers the economic implications of recycling which establishes a high level of credibility within the commercial/institutional business community.** The District has been successful in reducing collection contract rates through negotiations and cooperative procurements. These savings have facilitated the establishment of recycling programs even when there is an incremental cost.
- **The District’s 115 waste audits** have identified opportunities for businesses to recycle non-traditional materials, such as food waste.
- The District has facilitated the development of new recycling and composting businesses through connecting generators to transporters and processors.

Challenges

- Due to limited resources, the District does not have the ability to reconnect with most businesses after the initial engagement to determine the effectiveness of the program in increasing recycling or composting, or help the businesses mitigate barriers to waste recovery.
- **Conditions beyond the District's control, such as a processor closing or reducing material intake,** competition for storage space at a business location and change in management can revert recycling progress even with a successful technical assistance program.
- Because of the extensive number of commercial/institutional and industrial establishments in Cuyahoga County, it is difficult to achieve significant impact.
- The contracting program is time intensive, and there is no guarantee that a cooperative approach or renegotiated contract will reduce solid waste service fees to make waste recovery economically viable.
- The District does not currently have the resources to monitor the effectiveness of the technical assistance program and whether participation translates into waste reduction.
- Since the District provides waste audits and other technical assistance services at no charge, there is a concern that the lack of financial investment makes businesses less committed to implementing the recommendations.

Opportunities

- Work to expand fiber-collection education and infrastructure
- Work with Hunger Network on food waste prevention
- Support glass drop-off collection sites
- Consider Conditionally Exempt. Small Quantity Generator: CESQG Consortium
- Target hard to recycle items in business and institutional entities
- Target small to medium sized manufacturers w/o EHS person or plant manager

E. CONCLUSIONS

The District offers an extremely robust business assistance program with services designed to help begin or expand recycling programs and educate employees. However, opportunities exist to increase recycling by implementing a more strategic approach to assisting business and industrial sectors. Such an approach could **target the District's largest commercial and industrial employers or target businesses by the type of waste they generate or their geographic location. In this way, the District's Business Recycling Specialist's time could be maximized to focus on areas with the biggest potential result.** In addition, the District will need to find a way to reduce the amount of time spent responding to telephone inquiries and partner with other organizations to leverage District efforts.

H-4: RESIDENTIAL/COMMERCIAL WASTE COMPOSITION ANALYSIS

The purpose of this section is to look at the wastes that typically comprise the largest portions of the waste stream by weight and evaluate the availability of and need for programs to recover those materials. **The District used the U.S. EPA's waste composition and waste generation estimates to conduct this analysis for comparison purposes.**

A. COMPOSITION

Generation Composition

Municipal solid waste (MSW), also called residential/commercial waste, includes common items thrown away after being used, such as packaging, food, grass clippings, sofas, computers, tires, and refrigerators. According to **US EPA's "Advancing Sustainable Materials Management: Facts and Figures 2018"** wastes that typically make up the largest portions of the residential/commercial waste stream are paper and cardboard (23.1%), food (21.6%), plastics (12.2%), and yard trimmings (12.1%).

Table H-4.1 US EPA 2018 Estimated Residential/Commercial Waste Generated by Material for 2022

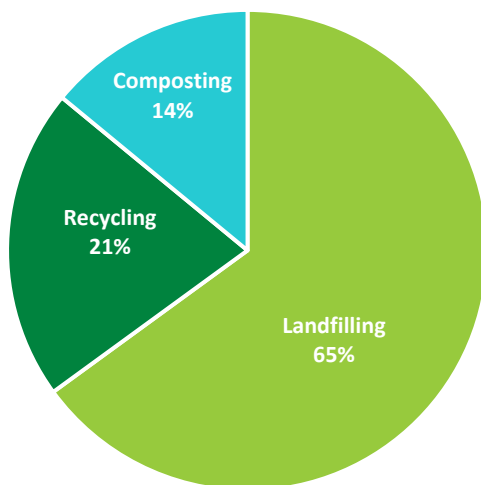
Material	US EPA % Generated	Estimated District Tons Generated
Paper and Cardboard	23%	369,969
Food	22%	345,945
Yard Trimmings	12%	193,793
Plastics	12%	195,395
Rubber, Leather, Textiles	9%	142,542
Metals	9%	140,940
Wood	6%	99,299
Glass	4%	67,267
Other	3%	46,446
Total	100%	1,601,597

Source(s) of Information:

Generation from Appendix G

US EPA. Advancing Sustainable Materials Management: 2018 Fact Sheet. December 2020.

Figure H-4.1 Managed Residential/Commercial Waste 2022



The District's residential and commercial sectors generated 1,601,597 tons of municipal solid waste in 2022. Applying the US EPA waste generation estimates to the SWMD's waste generation gives an approximation of materials generated. As shown in Table H-4.1 paper, food, and yard trimmings are the three largest categories of materials generated. This evaluation looks at the availability of and need for programs to recover these three largest categories.

Disposal Composition

Table H-4.2 US EPA 2018 by Material for 2022

Material	US EPA % Generated	Estimated District Tons Disposed
Paper and Cardboard	23%	279,638
Food	22%	261,480
Yard Trimmings	12%	146,477
Plastics	12%	147,688
Rubber, Leather, Textiles	9%	107,739
Metals	9%	106,529
Wood	6%	75,054
Glass	4%	50,843
Other	3%	35,106
Total	100%	1,210,556

Source(s) of Information:

Generation from Appendix G

US EPA. Advancing Sustainable Materials Management: 2018 Fact Sheet. December 2020.

The District disposed 1,210,556 tons of municipal solid waste in 2022. Applying the US EPA waste disposal **estimates to the SWMD's waste landfilled approximates materials landfilled**. As shown in Table H.4.2 food waste, plastics, paper and paperboard are the three largest categories of materials being landfilled.

The estimated disposal tons per material category were added to the tons of recycled materials to determine an estimated tons of generation per material, as shown in Table H-11.

Table H-4.3 Estimated Waste Composition based District 2022 Estimated Waste & Annual District Report

Material	District % Disposed	Estimated District Tons Disposed	Estimated District Tons Recycled	Estimated District Tons Generation
Paper and Cardboard	28%	342,587	81,899	424,486
Food	15%	177,952	3,447	181,399
Yard Trimmings	4%	44,791	126,198	170,989
Plastics	17%	200,952	6,768	207,720
Rubber, Leather, Textiles	4%	48,422	692	49,115
Metals	3%	39,948	64,185	104,133
Wood	8%	101,687	9,888	111,575
Glass	3%	36,317	11,025	47,342
Other	18%	217,900	86,938	304,838
Total	100%	1,210,556	391,041	1,601,597

Source(s) of Information:

Generation from Appendix E and Appendix G

Table H-4.4 Community Reported Disposal Tons Data

Community	2018	2019	2020	2021	2022
Bay Village	4,711	6,246	7,951	4,806	5,612
Beachwood	3,410	3,429	3,879	3,737	3,360
Bedford	4,188	4,123	4,234	4,518	4,217
Bedford Heights	2,314	2,306	2,391	2,645	2,540
Bentleyville	326	911	1,037	381	362
Berea	4,362	5,841	6,451	7,829	7,298
Bratenahl	512	512	NA	521	483
Brecksville	5,352	5,251	5,516	5,945	5,367
Broadview Heights	7,471	7,392	8,016	7,980	7,579
Brook Park	8,928	9,083	9,842	9,593	9,276
Brooklyn	3,253	3,509	3,878	4,266	3,752
Brooklyn Heights	662	689	730	759	681
Chagrin Falls Township	48	48	18	NA	51
Chagrin Falls Village	1,481	1,696	1,771	1,570	437
Cleveland	182,249	192,443	154,860	157,094	130,390
Cleveland Heights	14,692	18,176	19,524	16,316	13,041
Cuyahoga Heights	347	343	352	305	271
East Cleveland	5,302	6,344	6,288	5,443	4,847
Euclid	16,348	16,208	16,922	17,867	16,646
Fairview Park	4,916	5,874	7,955	6,977	6,763
Garfield Heights	11,668	8,169	11,940	12,724	11,312
Gates Mills	937	902	1,098	1,112	904
Glenwillow	171	193	301	503	777
Highland Heights	3,982	3,851	3,875	3,920	3,933
Highland Hills	272	314	300	303	349
Hunting Valley	316	399	524	648	350
Independence	3,516	3,616	3,710	4,038	3,339
Lakewood	16,907	17,694	19,988	17,555	15,008
Linndale	46	45	60	56	52
Lyndhurst	5,611	5,808	6,204	6,142	5,749
Maple Heights	9,080	9,202	10,888	10,370	8,760
Mayfield Village	1,449	1,397	1,477	1,453	1,334
Mayfield Heights	5,085	5,995	4,698	4,804	4,736
Middleburg Heights	5,209	3,723	3,625	4,300	4,156
Moreland Hills	1,202	1,244	1,454	1,328	1,237
Newburgh Heights	933	891	885	940	864
North Olmsted	7,869	10,746	13,234	12,658	11,230
North Randall	251	254	128	106	105
North Royalton	11,195	10,917	11,799	11,620	10,856
Oakwood	1,220	1,184	1,329	1,298	1,068
Olmsted Falls City	2,534	3,817	3,847	4,661	4,153
Olmsted Township	3,107	3,899	4,702	4,626	4,578
Orange	1,234	1,211	1,341	1,300	1,280
Parma	22,470	25,357	24,306	38,606	36,129
Parma Heights	4,878	5,222	5,398	5,929	5,516
Pepper Pike	2,719	2,762	2,985	2,868	2,757
Richmond Heights	3,966	3,958	4,369	4,033	3,757
Rocky River	7,612	7,831	9,095	8,888	8,487
Seven Hills	5,552	5,770	6,045	5,625	5,277
Shaker Heights	8,363	8,229	9,147	8,754	8,525
Solon	7,441	7,528	7,774	7,872	7,391
South Euclid	8,235	7,928	8,732	8,789	8,207
Strongsville	21,243	21,620	22,479	22,195	20,753
University Heights	4,542	4,590	5,045	4,945	4,627
Valley View	909	899	1,053	981	891
Walton Hills	943	888	910	993	950
Warrensville Heights	2,922	2,922	3,088	3,207	2,846
Westlake	13,266	12,842	13,743	13,183	12,001
Woodmere	167	157	165	145	165
Community Totals	479,886	504,400	493,352	502,027	447,384

B. SPECIFIC WASTE STREAMS

The following analyses focus on three waste streams: yard waste, food waste, and fiber/paper. Table 4.5 shows the historical tonnages and percent of the recovered materials.

Table 4.5 Historical Tonnages for Yard Waste, Food Waste, and Fiber/Paper

Year	Yard Waste	% of Recovered Materials	Food Waste	% of Recovered Materials	Paper	% of Recovered Materials	Card-board	% of Recovered Materials	Total Recovered Materials
2018	169,072	38%	5,073	1%	59,888	14%	44,516	10%	443,130
2019	159,467	39%	3,523	1%	56,767	14%	42,682	10%	411,603
2020	148,713	41%	3,732	1%	38,533	11%	46,180	13%	366,233
2021	132,592	34%	5,516	1%	32,086	8%	46,202	12%	395,196
2022	126,198	32%	3,447	1%	33,546	9%	48,352	12%	391,041
Average	147,208	37%	4,258	1%	44,164	11%	45,586	11%	401,441

Yard Waste

Composting and technologies (anaerobic digesters, in-vessel technologies, etc.) are available options to manage yard trimmings. These management methods can be small, medium, or large scale. Compost facilities (all classes) track material volumes delivered and report to Ohio EPA. Communities report their yard waste management tons to the District via the annual Residential Recycling Report. Both sources are used by the District to track composting activities.

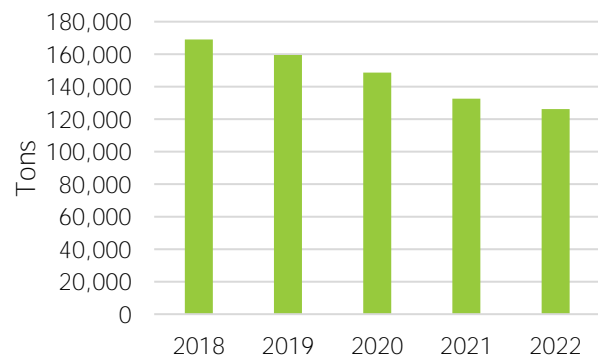
Based on the 2018 US EPA waste composition study minimal yard waste, 3.7 percent, is landfilled. The yard waste management program is successful in diverting large tonnages of yard waste. In 2022, reports indicated 73.8 percent of yard waste was diverted. Figure H-4.5 shows an increasing trend in yard waste composting.

Yard Waste Analysis

Historically, yard waste averages 37 percent of the recycled stream. Historical tonnages recycled are shown in Figure H-4.2.

Composting can be small, medium, or large scale. A diversely developed system reinforces sustainability and environmental stewardship. The District works with interested municipalities, consortiums, and contracts to assist in providing opportunities for yard waste management.

Figure H-4.2 Historical Yard Waste Recycling



Food Waste

There are several available options to manage food waste including waste minimization, donation, composting, and technologies (anaerobic digesters, in-vessel technologies, etc.). Waste minimization is a management method included in programming for the District. The District teaching about making better use of food through storage, portion size, recipe suggestions for leftovers can help prevent food waste.

Based on the 2018 US EPA waste composition study, approximately 15 percent of waste landfilled is food waste and as demonstrated earlier in Table H-4.5, an estimated 177,952 tons of food waste is being landfilled. Food waste is a diversion opportunity.

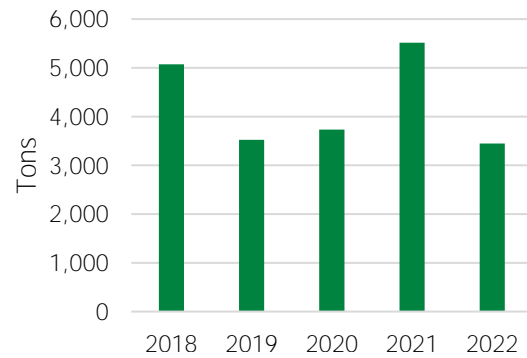
Some infrastructure for collecting and processing food waste has increased over the past 5 years and continues to be the main barrier for increased diversion efforts. Compost is a key sustainability strategy. Most food waste composting in 2022 was directed to out-of-district facilities.

Food Waste Analysis

Historically food waste recycling has been inconsistent as shown in Figure H-4.3.

Food waste is a difficult stream to manage largely because of collection methods and monitoring of composting and technology approaches. There has been an increase of interest in food waste composting and collection.

Figure H-4.3 Historical Food Waste Recycling



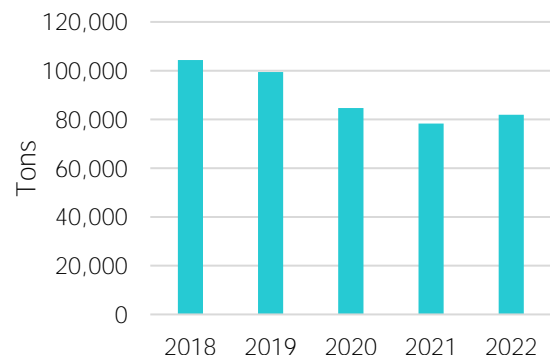
Fiber/Paper

Waste minimization and recycling are two available options to manage paper waste. Waste minimization stops waste before it starts, and recycling is separating the materials from the waste stream and using them as feedstock to manufacture new products. Waste minimization is a management method that is also promoted by the District. Recycling of paper comes down to available collection methods. Paper is one of the common suites of materials accepted by all service providers through curbside and drop-off collections. Single-family households have curbside recycling arranged by an incorporated political jurisdiction or consortium. Multi-family and commercial businesses have opportunities, but the extent of the service outreach is unknown. It is assumed many gaps exist in collection services to these entities.

Based on the waste composition study, fiber materials are the largest material category landfilled. Approximately 28 percent, or 342,587 tons of this waste stream is landfilled. The 2022 ADR reported 81,899 tons of fibers diverted. Currently, approximately 19.3% of the fiber waste stream is being diverted from the landfill.

Fibers have a significant recovery potential. Fibers are accepted from the residential sector through curbside and drop-off programs. Fiber recovery programs and opportunities in the commercial sector are minimal. Educational institutions participating in the school consortiums, or that are provided service through the drop-off recycling program, have opportunity to recycle fiber materials. Unfortunately, assumptions and calculations suggest a large portion of fiber materials are generated and disposed from the commercial sector.

Figure H-4.4 Historical Fiber Waste Recycling



Fiber Analysis

Paper, including cardboard, is one of the largest streams of materials reported as recycled historically as shown in Figure H-4.5. On average, paper accounts for approximately 22 percent of the recycled stream.

There are available programs, however the SWOT analysis exercise identified opportunities in the commercial sector with economics identified as a barrier.

C. STRENGTHS, CHALLENGES, AND OPPORTUNITIES

The following section summarizes the strengths and challenges for residential/commercial waste composition.

Strengths

- The District has outstanding recovery rates for yard waste trimmings (74%) and metals (62%) based on the estimated generation from the US EPA's characterization.
- The residential and commercial sectors are served by a mature recycling infrastructure
- Most residents and businesses have access to recycling opportunities.
- The District has staff dedicated to assist residential, commercial and institutional recycling efforts.

Challenges

- The capacity and location of existing compost facilities may present vulnerabilities for municipal leaf collection programs.
- The District does not currently have a strategy for targeting high volume food waste generators to facilitate more diversion.
- District reliance on private sector entities to expand food waste processing capacity in the District (additional processing capacity is needed to increase food waste recovery).
- Current market conditions for some recyclables including glass and some plastics makes expanding recycling more challenging.
- Higher recycling standards on fiber and mixed plastics may affect local recyclers and MRF operators.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and challenges and other factors identified in this section.

The following opportunities for potential improvements are designed to improve the challenges identified above.

- Support and provide Technical Assistance projects to improve infrastructure for food waste diversion.
- Promoting use of Share Tables as a low-cost way to reduce food waste in cafeterias.

H-5: ECONOMIC INCENTIVE ANALYSIS

In accordance with Goal 7 of the 2020 State Solid Waste Management Plan, the District must explore how to incorporate economic incentives into source reduction and recycling programs. For this analysis, the District evaluated existing economic incentives that the District offers to encourage people to recycle.

District Grant Programs

The District currently administers three grants that provide financial incentives to different target audiences that encourage the implementation of recycling or promote increased recycling. These include the Community Recycling Awareness Grant for municipalities, villages, and townships, the Waste Reduction, Recycling and Composting Equipment Grant for non-profits and schools, and the Special Projects Grant that provides funding for large operationally related projects.

A. WASTE REDUCTION, RECYCLING AND COMPOSTING EQUIPMENT GRANT

The Waste Reduction, Recycling and Composting Equipment Grant for schools and non-profits was created by the Cuyahoga County Solid Waste District to help schools and nonprofit organizations and institutions reduce waste by establishing or expanding waste reduction, recycling, or composting programs within their facilities. Eligible applicants may apply for grants of \$5,000 and under to purchase waste reduction, recycling or composting containers, equipment, supplies and associated signage. Grants will be awarded competitively according to the evaluation criteria below. Grant awards will be subject to **approval by the District's Board of Directors.**

Eligible applicants include any non-profit organization/institution or school located within Cuyahoga County. Eligible schools must be recognized by the Ohio Department of Education. Only one grant per organization will be considered for an award. Previous grantees may only apply for another grant if they are proposing a new project or one that builds on an existing waste reduction, recycling, or composting program.

Allowable Costs

Grant funds may be used for the following purchases:

- Recycling containers, equipment and supplies such as bins, carts, or dollies
 - Note: Many companies sell 2 or 3 bin systems that have side by side recycling, composting, and landfill containers. This grant will only cover the recycling and composting portions of the container, NOT the landfill portion.
- Composting containers, bins, equipment, and accompanying tools.
- Waste reduction equipment such as water refill stations, reusable plates, trays, glasses, cups, water bottles, pitchers, and cutlery. Where possible, choose products made with recycled content.
- Signs, posters, and labels (limited to 15% of the grant request). All signage (signs, posters and labels) produced by the grantee MUST receive signed approval by the District prior to printing/production.

Unallowable Costs

Grant funds may not be used for the following:

- Stand-alone landfill receptacles.
 - Note: Many companies sell 2 or 3 bin systems that have side by side recycling, composting and landfill containers. This grant will only cover the recycling and composting portions of the container, NOT the landfill portion.

- Shipping and handling costs.
- Any expenditure made before the grant's effective start date.
- **Any containers, equipment or supplies that will not be used on the organization's property.**
- Trash, recycling or compost pick up service, dumpsters, consulting services, or labor costs.
- Mail-back recycling programs (e.g. Call2Recycle battery recycling, Terracycle, Keurig K-cup recycling, etc.)
- Anything not listed in allowable costs is not eligible for funding.

Evaluation Criteria

Applications will be reviewed and scored according to the following criteria:

- Degree to which the application describes the grant project, the proposed waste reduction/recycling/composting program, and the materials to be purchased. Well-organized, well thought-out waste reduction/recycling/composting projects will receive the highest consideration.
- Degree to which the project is sustainable. Applications must demonstrate how the program will be implemented, promoted, and maintained. Projects that demonstrate the program longevity will receive the highest consideration.
- Degree to which the project has educational impact. Applications must indicate how the organization will promote waste reduction/recycling/composting and how users will be involved **with the program. Projects that increase a user's understanding of and participation** in waste reduction/recycling/composting will receive the highest consideration.
- Degree to which the project will result in measurable waste reduction and the degree to which **progress will be measured and tracked. Applications must indicate the organization's goals of** waste reduction and how progress will be measured. Projects that reduce the waste stream by 30% or more will receive the highest consideration.
- Degree to which the organization justifies the need for funding and the degree to which costs are reasonable and justified.
- Degree to which the applicant has managed past applications/projects and adhered to grant guidelines.

In 2022, the District awarded 5 grants totaling \$11,168 for the purchase of recycling bins and equipment. Of the 5 awardees, 3 had previously received grant funding and 2 were new recipients.

B. COMMUNITY RECYCLING AWARENESS GRANT

The Cuyahoga County Solid Waste District created the Community Recycling Awareness Grant to help the 59 communities in Cuyahoga County educate residents about recycling and waste reduction. Cities, villages and townships in Cuyahoga County may apply for up to \$6,000 in funding. Funds for special awareness projects may also be requested.

This grant helps communities educate residents about recycling, typically through printed materials such as brochures, refrigerator magnets, newsletters and fliers or calendars. To make it easy to produce these materials and to keep recycling messages consistent across the county, the District has graphics, customizable templates and design tools for communities to use.

Funding is also available to help communities conduct special recycling collection events; shredding events; purchase permanent signage for recycling programs and events; purchase public space recycling containers; purchase drop-off recycling containers; and purchase public space composting containers.

This grant does not cover:

- the cost of items like reusable bags, pens and pencils, seed packets, coloring books, balloons, yard waste bags or similar giveaways.
- the purchase of trash receptacles and/or shipping costs for containers.

Eligible Projects / Costs

The types of eligible projects are listed below. There is no local match required for this grant unless a **project's cost exceeds the grant amount awarded by the District. In this case, the community must fund the excess cost.**

Recycling Awareness and Education Materials

Allowable costs include design, printing, production and mailing of brochures, calendars, cart tags, fliers, info cards, mailers, newsletters, postcards, recycling signs, cart stickers, banners, and refrigerator magnets.

Communities must use either the custom templates or the design tools provided in the CuyahogaRecycles.org ToolKit to produce any grant funded items. The ToolKit has templates for refrigerator magnets, banners, info cards, cart tags and signs. It also has graphics and text that can be incorporated into other items like calendars and brochures. Additionally, District staff will work with any community to create a custom piece.

Recycling or Composting Containers

Allowable costs include purchase of public space recycling or composting containers, event recycling containers, and appropriate container signage to indicate what should be recycled.

Paper Shredding Events and Special Waste Collections

Allowable costs include hiring a paper shredding company, creating permanent signage, and event promotions such as print ads. Communities must include two quotes for paper shredding services in their application. No more than two shredding events per applicant will be funded. Accommodation is to be made by the community and the contractor for volume capacity and staffing for the entire advertised time of the event.

Unallowable Costs

- Promotional giveaways like yard waste bags, mugs, pens, pencils, bags, balloons, seed packets, etc.
- General city calendars, newsletters, or brochures that are not exclusively devoted to recycling and waste reduction.
- Labor or auxiliary police for recycling events.
- Trash containers.
 - **Note: If you purchase a "recycling station" that includes side by side trash and recycle containers, we will cover the cost of the recycling section only.**
- Shipping and handling or delivery costs for recycling or composting containers.
- Reimbursements for purchases, projects, events, or print collateral made or invoiced prior to grant award approval by Solid Waste District Board of Directors.
- Reimbursement for printed material (signs, posters, calendars, cart stickers, booklets, labels, etc.) not receiving signed approval by District staff prior to the grantee producing or printing the item/material.

Recycling Education Tips

- **Create signs and banners without dates so they aren't obsolete after the event.** For instance, if you always hold a shred event the third Saturday of April, refer to the date this way rather than having a specific date and year.
- Support a unified recycling message in Cuyahoga County by using the material icons and graphics **provided in the District's ToolKit.**
- Consider that messaging and lists of acceptable materials have changed, and items you previously created may no longer be applicable.
- **Confirm your community's list of accepted recyclables before designing your education piece.** Check with District staff and your MRF or waste contractor.
- Use clear messaging plus photos and graphics whenever possible.
- Timestamp your education postcards, magnets, or flyers so residents are aware which version **they have and if it's the most recent.**
- Ask District staff for assistance with recycling language, best practices for signage, green tips, or calendars. The District can help communities create the messages and ensure they are correct.
- Consider new and different ways to reach your residents. Think about how you can incorporate waste reduction and recycling education year-round through municipal newsletters, e-blasts, phone calls or social media.
- Involve residents to learn how they would like to receive regular reminders about waste reduction and "recycling right".
- Stop by the District to see unique samples of education pieces and projects by other communities.
- Partner with a neighboring community for a recycling, composting, or shredding event. It may help lower budget costs and improve date scheduling.
- Track the number of cars, vehicles or residents served at a shred event. Make sure your vendor knows in advance that you need a record of the weight collected.

Evaluation Criteria

- Degree to which the project will encourage residents to reduce waste and recycle right.
- Degree to which the application describes the grant project, including the education component and activities to be implemented.
- Degree to which the funding request is reasonable, and the costs are explained and justified.
- Degree to which applicant has managed past applications/projects and adherence to grant guidelines.

In 2022, the District awarded \$210,607.24 in Community Recycling Awareness Grants to 38 communities. Results from the grant indicate that 293,259 residents (about half the population of Wyoming) were reached. This included 2 special project grants which allocated \$25,000 to the city of Brecksville to purchase a tow motor for their recycling center, and \$25,000 to the city of Rocky River to purchase a compactor for cardboard recycling. The District is currently evaluating its Community Recycling Awareness Grant process.

The District also assessed the effectiveness of paper-shredding events, where communities contract with a private company to shred and recycle paper during a one-day event. Some communities provide more than one event per year.

C. SPECIAL PROJECT GRANTS

The Cuyahoga County Solid Waste District created a Special Project Grant to support communities, nonprofit businesses, and institutions that reduce waste by initiating or expanding recycling programs, composting programs, illegal dumping programs, encourages sustainable practices, and increasing awareness of and participation in proper materials management.

Eligible applicants may apply for grants of \$25,000 and under to purchase equipment, materials and services that will support sustainable materials management and reduce the environmental impact of waste. Grants will be awarded competitively and are subject to final approval by the District's Board of Directors.

Eligible Projects

There is no local match required for this grant unless a project's cost exceeds the grant amount awarded by the District. In this case, the community or organization must fund the excess cost. The following project examples are illustrative and not all-inclusive.

- Materials for communities to engage residents through a cart tagging program, directly and indirectly, to change the curbside recycling behavior of households contaminating the recycling stream (mailers, tags, tracking apps, etc.).
- Equipment for illegal dumping law enforcement efforts (surveillance camera equipment, hardware, software, and/or signage).
- Materials for outreach and education (printing, design, and/or production of recycling educational materials).
- **New or expansion of existing curbside recycling, including equipment and recycle containers.** • New or expansion of existing drop-off recycling or organics management, including equipment, trucks, and recycle or organics containers.
- Equipment for collecting and processing recyclable material (cardboard, glass, plastic, etc.) or organics. Recycling equipment, materials, and supplies for special venues and events. Cardboard containers, clear stream containers, permanent recycling containers, permanent organics containers, and associated signage.

Allowable Costs

The following examples of allowable grant costs are illustrative and not all-inclusive.

- Purchase of equipment, tools, and supplies for new or expanded recycling and organics management programs.
- Purchase or rental of equipment, tools, and supplies for illegal dumping law enforcement efforts or cleanup of illegal dumping sites.
- Signage related to the project.
- Outreach and educational materials related to the project.
- Site improvements directly related to project.
- Personal Services Contracts covering the costs necessary for services of public or private contractors related to the project.

Unallowable Costs

- Benefits or administrative costs for employees.
- Financial services and grant writing fees.
- Food or entertainment expenses, including procurement of coolers, grills, and so on.

- Promotional giveaways like yard waste bags, mugs, pens, pencils, bags, balloons, seed packets, etc.
- Bulk fuel for transportation or equipment.
- Land acquisition.
- Replace operational funds with grant funding.
- Shipping and handling or delivery costs for recycling or composting containers.
- Reimbursements for purchases, projects, events, or print collateral made or invoiced prior to grant award approval by Solid Waste District Board of Directors.
- Reimbursements for printed materials (signs, posters, cart stickers, booklets, labels, etc.) not receiving approval by District staff prior to the grantee producing or printing the item/material.

Evaluation Criteria

Applications will be reviewed and scored according to the following criteria:

- Degree to which the application describes the grant project and the materials to be purchased. Well organized, well thought out projects will receive the highest consideration.
- **Degree to which the project has educational impact. Projects that increase a user's understanding of and participation in proper materials management will receive the highest consideration.**
- Degree to which the project will result in measurable waste reduction and the degree to which **progress will be measured and tracked. Applications must indicate the organization's goals of waste reduction and how progress will be measured.**
- Degree to which the organization justifies the need for funding and the degree to which costs are reasonable and justified.
- Degree to which the applicant has managed past applications/projects and adherence to grant guidelines.
- **Degree to which the project compliments the District's goals and Solid Waste Management Plan.**

In 2022, two grants were awarded: \$25,000 to the City of Brecksville for the purchase of a lift truck and another \$25,000 to the City of Rocky River for the purchase a compactor for cardboard recycling.

D. EXISTING PAY-AS-YOU THROW SYSTEMS

None of the 59 political subdivisions in the District had Pay-As-You-Throw (PAYT) programs during the Reference Year.

Analysis and Evaluation

During the reference year, 56 communities within the District had non-subscription curbside recycling programs and most of these (40) paid for the cost of waste and recycling collection through their general fund. The PAYT model is not feasible in these communities because residents do not pay a separate bill for waste collection and recycling services.

A total of 19 communities do charge separately for waste and recycling collection services usually through a fee on their water bill or through a property tax assessment. Of those communities that charge residents for collection, sixteen utilize automated collection. Waste and recyclables in these communities is collected using automated vehicles using standard cart sizes that consist of a 95-gallon cart for trash and a 65-gallon cart for recyclables.

Most communities accommodate different waste generation practices among residents by allowing residents to purchase an extra trash cart if they have a large household and produce a lot of trash but

also to request a smaller trash cart if they have a small household or are not physically able to move a large cart.

While communities accommodate different waste generation practices among residents, they generally do not do the same when it comes to recycling. Residents cannot reduce the size of their garbage cart and increase the size of their recycling cart to accommodate recycling practices.

Many cities throughout the United States with cart-based collection also have a PAYT system where residents pay a higher monthly rate for larger garbage carts. That is not the case within Cuyahoga County but it could be an opportunity to support increased diversion.

E. STRENGTHS, CHALLENGES, OPPORTUNITIES AND CONCLUSIONS

Strengths

- Community Recycling Awareness Grant
 - Education/awareness grants allow communities to design awareness pieces and messages that resonate with their residents and businesses.
 - **Helps leverage District's resources in promoting** local recycling programs.
 - Most District communities participated in the grant.
 - Paper shredding events can be a cost-effective form of fiber recovery.
- Waste Reduction, Recycling and Composting Equipment Grant
 - Helps non-profit organizations and schools implement recycling programs.
 - The District takes an extremely holistic approach for leveraging grant dollars. This includes having Grantees attend recycling program training and involving students in the project.
 - The District requires organizations to be accountable for their expenditures and that organizations implement the program as described in the application.
- Special Project Grants
 - Helps communities and non-profits implement projects that have been unattainable due to the associated dollar amount to implement.
- Pay-As-You-Throw
 - Some communities within the District are potential candidates for a PAYT program because they utilize a cart-based collection system and they charge residents for collection instead of paying for the service their general fund.
 - The District retains information on the rates these cities charge for collection and tracks waste and recycling contract pricing for all communities.

Challenges

- Community Recycling Awareness Grant
 - Grant funding does not directly correlate with increased diversion.
 - On a cost-per-ton basis, paper-shredding events can be expensive for small communities.
 - Some paper shredding companies charge almost four times as much as others.
 - The \$6,000 cap on grants limits what communities (especially large communities) can accomplish with funding.
- Waste Reduction, Recycling and Composting Equipment Grant
 - The Waste Reduction, Recycling and Composting Equipment Grant application requires the organization to describe how the project will significantly reduce waste and how progress will be measured and tracked. However, the District does not monitor applicants to see if the grant recipient achieved those projections.
- Special Project Grants

- Communities have not embraced the idea of utilizing this funding source for cart tagging programs.
- Pay-As-You-Throw
 - PAYT combined with non-subscription curbside recycling is considered a best practice in terms of the most effective types of residential recycling programs but there are currently no PAYT programs operating in the District.
 - Current cart-based programs are already established, therefore changing to a PAYT system would require a community to redesign the system and could be costly. There would be little incentive for a community to switch to a PAYT system unless a community could recoup the full cost of collection.
 - Most communities are not able to implement a PAYT billing structure because services are paid through taxes.
 - Increased recycling processing costs have made PAYT programs difficult to implement.
 - Historically, Cuyahoga County communities have not demonstrated much interest in PAYT systems.

Opportunities

- Community Recycling Awareness Grant
 - Use grants to assess recycling barriers
 - Multiple communities receive a Community Recycling Awareness Grant every year and use most funds for materials to promote recycling, such as calendars, but are not experiencing an increase in recycling. For these communities, the District could expand the scope of the grant to allow them to research why residents are not recycling. This market assessment could include focus groups or surveys. The community could then use the information to design promotional materials that address these barriers.
 - Reduce the number of grants
 - With a grant limited to \$6,000 per community, the Community Recycling Awareness Grants do not really facilitate communities converting to automated collection by purchasing carts. Carts can cost between \$50 and \$75 each, and often prevent communities from implementing even semi-automated collection. In a semi-automated collection system, existing collection vehicles can be retrofitted with tippers rather than purchasing new vehicles. The District could award larger grants to help communities offset the cost of purchasing carts. This would only apply to communities that collect their own recyclables since carts are included in contracts for communities that contract for recycling collection.
 - Encourage Collaboration
 - The education/awareness grant projects are typically community-specific and therefore, not conducive to multiple communities sharing grant funds to produce promotional materials. However, as demonstrated by Pepper Pike and Orange, paper shredding can be extremely cost effective if communities collaborate on events. Therefore, the District could make size of the service area (i.e. population) an evaluation criterion in grant applications, which would encourage communities to collaborate on events.
 - A barrier to communities collaborating on paper shredding events is the legal considerations associated with two communities procuring a single vendor. In addition, some communities may not be receiving the most competitive bid if they are paying almost four times as much as others for a shredding event.
- Waste Reduction, Recycling and Composting Equipment Grant
 - The District could use a web-based platform, such as Survey Monkey, to follow up with Grantees about the performance of the program.

- Special Project Grants
 - The variety and breadth of programming is significant.
- Pay-As-You-Throw
 - With the increased use of automated collection systems, there may be an opportunity to reintroduce the concept.

Conclusions

- Community Recycling Awareness Grant
 - The Community Recycling Awareness Grant program structure has largely remained the **same since the District's last plan**. Shred Days have become a common request, with the number of other special collection programs decreasing. The Community Recycling Awareness Grant has the potential to be more effective through restructuring the focus, reducing the number of grants but increasing the amount and/or encouraging the communities to collaborate.
- Waste Reduction, Recycling and Composting Equipment Grant
 - The Waste Reduction, Recycling and Composting Equipment Grant complements the technical assistance that the District provides commercial businesses and non-profit institutions and takes a holistic approach for educating grantees about how to operate their program. This grant shall be retitled Waste Reduction Grant for Businesses. The District may also consider modifying its technology to continue communicating with grantees.
- Special Project Grants
 - This grant should be continued to allow for innovative, specifically focused diversion and reduction programming.
- New Waste Reduction Grant for Schools and Universities
 - This new grant would allow for funding categories to include equipment, containers, awareness and outreach, and collection programs.
- Pay-As-You-Throw
 - For most Cuyahoga County communities, traditional PAYT programs are not feasible due to the existing billing structure. The District maintains detailed data on the solid waste **management and recycling contracts of each of Cuyahoga County's fifty-nine** communities.

H-6: RESTRICTED AND DIFFICULT TO MANAGE WASTE ANALYSIS

Some components of the solid waste stream are either restricted from landfill disposal or are not appropriate for landfilling because they are either readily recyclable or contain hazardous materials that could leach contaminants through the landfill and into water sources. These materials include scrap tires, household hazardous waste, electronic waste, lead-acid batteries, household batteries, appliances (and bulky waste), and pharmaceuticals. The District and/or local communities have programs designed to address each of these materials.

The District’s overall strategy for the management of the above listed materials is unique as compared to other solid waste districts in Ohio. The District operates in partnership with its 59 communities to conduct local HHW, e-waste and scrap tire collections. Actual collection responsibilities for each material are described later in this section. This is efficient and cost effective for the District and more convenient for residents.

The following section summarizes the programs and initiatives that manage these materials:

A. SCRAP TIRE PROGRAM

The District conducts an annual Scrap Tire Round-Up that is held each October. During the Round-Up, the District, through its contractor, currently Liberty Tire, provides for the collection and recycling of scrap tires from cities located within Cuyahoga County. These are tires that communities collect from their residents throughout the year and store at their city service facility. The District contracts with **Liberty Tire to do a “milk run” to remove and recycle the scrap tires that the cities accumulate** at their service garages.

The District conducted a Scrap Tire Round Up in 2022 collecting 183 tons or 14,822 tires for a cost of \$52,659. The collection event was primarily conducted for communities that accept scrap tires from their residents. Table H-6.1 summarizes the historical scrap tire collection data and costs:

Table H-6.1: 2018-2022 Tire Collection Data and Costs

Year	Tons Collected	Cost	Cost Per Ton Managed
2018	186	\$40,617	\$218
2019	155	\$38,510	\$248
2020	211	\$54,857	\$260
2021	156	\$40,521	\$260
2022	183	\$52,659	\$288

In addition to the Scrap Tire Round Up, the District promotes proper scrap tire management through the process of discarding old tires at tire dealers when new ones are purchased. The District also encourages communities to collect tires from residents on a year-round basis.

Table H-6.2 identifies the communities that accept scrap tires from residents, and how frequently they provide this service:

Table H-6.2: Communities that Accept Scrap Tires from Residents

Political Subdivision	Curbside Collection	Year-Round Drop-Off Collection	Special Event Collections
Cities			
Bay Village	No	No	Yes
Beachwood	No	Yes	No
Bedford	Yes	No	No
Bedford Heights	No	No	Yes
Berea	No	No	Yes
Brecksville	No	No	No
Broadview Heights	No	No	Yes
Brook Park	No	No	Yes
Brooklyn	No	Yes	No
Cleveland	Yes	Yes	No
Cleveland Heights	Yes	No	No
East Cleveland	No	Yes	No
Euclid	No	No	Yes
Fairview Park	Yes	No	No
Garfield Heights	No	Yes	No
Highland Heights	No	No	No
Independence	No	No	Yes
Lakewood	No	Yes	No
Lyndhurst	No	No	Yes
Maple Heights	No	No	No
Mayfield Heights	No	No	No
Middleburg Heights	No	Yes	No
North Olmsted	No	No	Yes
North Royalton	No	No	No
Olmsted Falls	No	Yes	No
Parma	No	Yes	No
Parma Heights	No	No	Yes
Pepper Pike	No	Yes	No
Richmond Heights	No	No	Yes
Rocky River	No	No	Yes
Seven Hills	No	No	Yes
Shaker Heights	No	Yes	No
Solon	No	No	No
South Euclid	No	Yes	No

Political Subdivision	Curbside Collection	Year-Round Drop-Off Collection	Special Event Collections
Strongsville	No	Yes	No
University Heights	No	Yes	No
Warrensville Heights	No	No	No
Westlake	No	No	Yes
Villages			
Bentleyville	No	Yes	No
Bratenahl	No	No	No
Brooklyn Heights	No	Yes	No
Chagrin Falls	No	No	Yes
Cuyahoga Heights	Yes	No	No
Gates Mills	No	No	No
Glenwillow	No	No	Yes
Highland Hills	Yes	No	No
Hunting Valley (adjusted)	No	Yes	No
Linndale	No	No	No
Mayfield	No	Yes	No
Moreland Hills	No	No	Yes
Newburgh Heights	Yes	No	No
North Randall	No	No	Yes
Oakwood	No	No	Yes
Orange	No	Yes	No
Valley View	No	No	No
Walton Hills	No	No	No
Woodmere	Yes	No	No
Townships			
Chagrin Falls Twp.	No	No	No
Olmsted Twp.	No	Yes	No

Local & Regional Tire Haulers

The following list of local and regional tire haulers and recyclers is promoted by the District on its website <https://cuyahogacrecycles.org/recyclables/tires>. Of these companies, Liberty Tire Services and US Tire provide most tire collection services.

Liberty Tire Services of Ohio (hauler and recycler)
 14864 Lincoln Street SE
 Minerva, OH 44657
 (330) 868-0097

Lightner Tire Co. (hauler)
780 E. Waterloo Road
Akron, OH 44306
(330) 724-7436

NEM Recycling (hauler)
1735 Iowa Avenue
Lorain, OH 44052
(440) 240-3752

U.S. Tire Transportation (hauler)
5000 Track Road
Cleveland, OH 44127
(216) 441-0950

Analysis and Evaluation

Each community in the District operates their own solid waste collection program and decides which items are accepted at the curb and/or at their service garages. The District has 8 communities with curbside tire collection, 20 communities with year-round collection at their service garage and 19 communities with special collections. There are 12 communities that do not have any form of tire collection available to residents.

There are 4 haulers and 1 recycler that the District promotes for residential and business scrap tires on its website. According to Ohio EPA 2022 Scrap Tire Data Report, there are 23 scrap tire haulers and/or recyclers that collect scrap tires from the District.

In 2022, the combination of District, community, and private sector initiatives recovered 14,529 tons of scrap tires from the residential/commercial sector, which is an 18% increase over 2021. Table H-6.3 shows the historical scrap tire recycling that occurred within the District.

Table H-6.3: 2018-2022 Total Scrap Tires Collected from within the District (all sectors)

Year	Tons
2018	11,034
2019	14,089
2020	11,873
2021	12,328
2022	14,529

Even with multiple opportunities for proper tire management, illegally dumped tires continue to be a **problem in certain areas of the District. In the District’s opinion and through observations and investigations** by the Cleveland-Cuyahoga Environmental Crimes Task Force, the largest contributors to open tire dumping appear to be non-registered haulers who approach tire stores, tire retread shops, and **other repair shops to “take care” of their tires for a discounted rate. The non-registered hauler cherry picks the tires that can be sold and then dumps the rest.**

Strengths, Challenges, and Opportunities

Reported tons of recovered scrap tires have been consistent and range from 10,000 to 15,000 tons annually, and there appears to be significant opportunity for residents and businesses to properly manage scrap tires. According to the U.S. EPA, average tire generation rate is one passenger tire per capita per year, and the average passenger tire weighs 20 pounds. Based on these parameters and a District population of 1,236,174 (about the population of New Hampshire), an estimated 12,362 tons of tires were generated in the District during the reference year. Thus, with 14,529 tons of tires recovered, the existing infrastructure captured 100% of tires generated in the District. However, illegal tire dumping continues to be a problem that could be contributing to more serious crimes.

Strengths

- According to U.S. EPA tire generation calculations, 100% of scrap tires generated in the District are collected and recycled and/or disposed of properly.
- Residents have multiple locations to recycle/dispose of scrap tires in their respective communities.
- Businesses and other entities have a choice of licensed haulers to manage their scrap tires.

There is a significant infrastructure in the District of tire and car dealers that can manage scrap tires when customers purchase new tires.

Challenges

- The cost per ton for the District collection program has risen from >\$200 per ton in 2016 to \$288 per ton in 2022.
- **Because the District's Scrap Tire Round-Up** is held just one per year, many communities must store large quantities of tires for the collection. Storing scrap tires takes up needed space and can potentially breed disease carrying mosquitos.
- There are limited resources for enforcement of existing open dumping laws for scrap tires in the District, leading to increased dumping of tires.
- Residents who participate in community collections do not have to pay for the tires dropped off, thus creating a disincentive to manage their scrap tires on their own through local tire dealers.
- Twelve communities do not offer at least a special collection of scrap tires.
- Illegal dumping of scrap tires still exists in the District.
- There is no in-District tire processing or transfer facility.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Education of Residents – Proper Tire Disposal

The District could promote the proper disposal of scrap tires to residents through a public education initiative that would encourage them to dispose of scrap tires at the point of purchase. This would explain the need for the disposal fee charged by the retailer. This would reduce the number of tires that communities and the District must pay to manage.

Education of Scrap Tire Dumping Laws

The District could work with each of the entities within the District that sell new tires to develop a persuasive educational poster and flyer comparing the costs of legal versus illegal scrap tire disposal.

The District could encourage these businesses to display the poster and flyers in a highly visible area in their establishment.

The District in partnership with the Cuyahoga County Board of Health, the Cleveland Department of Public Health, and the Cleveland-Cuyahoga County Environmental Crimes Task Force, could work with local tire retailers and businesses that accept scrap tires to educate them about the local problems and legal issues related to tire dumping, including fines and incarceration. The goal is to capture more scrap tires at the point of sale when a scrap tire is being replaced, which should reduce the quantity of scrap tires dumped throughout the District, as well as surrounding areas.

Scrap Tire Dumping Enforcement – Identification

The District could develop a reporting function on its website to allow for the identification of scrap tire dumpers. The reported information could then be passed onto the proper authorities for investigation and possible prosecution.

Scrap Tire Dumping Enforcement – Environmental Crimes Task Force

The District could start working with the health departments to begin inspecting tire dealers to assure they are using registered haulers.

New Tire/Scrap Tire Bundle Pricing Promotion

The District could work with tire shops and dealers to include the cost of disposing of scrap tires in the purchase price of new tires rather than charging a separate fee. Internalizing the cost would hopefully encourage more residents to properly dispose of their tires at the point of purchase instead of bringing them home. It is this scenario that creates the waste management issue for communities and the District.

B. HOUSEHOLD HAZARDOUS WASTE (HHW)

In 2011, the District opened a Special Waste Convenience Center to offer a unique and efficient way of collecting HHW. The year-round center receives HHW that communities collect from their residents. Communities are provided collection supplies and training **by the District's contractor and they hold HHW collection events themselves. They then can deliver the HHW twice per month to the District's Special Waste Convenience Center.** Some communities hold collections year-round and some hold monthly or seasonal collections. The Convenience Center replaced the county-wide HHW collections the District used **to hold at its county fairgrounds twice a year and makes HHW disposal more "convenient" and accessible** for residents.

The HHW Program is free to all communities that deliver acceptable materials to the Special Waste Convenience Center. In 2022, 52 out of the 59 communities participated in the program.

HHW is collected from residents by participating city service departments and subsequently delivered to the District. Collection events are held only at city service departments; residents are not permitted to deliver HHW to the Special Waste Convenience Center directly. Most communities will only accept and manage HHW from their own residents.

District generation fees and a grant from the Northeast Ohio Regional Sewer District fund the management and recycling of HHW materials delivered to the District by the communities.

The District provides environmentally safe disposal and or recycling of acceptable HHW materials. Table H-6.4 lists the acceptable and non-acceptable materials for the program.

Table H-6.4: Materials Accepted at the Special Waste Convenience Center

Acceptable Materials	Non-Acceptable Materials
<ul style="list-style-type: none"> ✓ Oil or solvent-based paint, sealers, primers, or coatings (aerosols or liquids) <ul style="list-style-type: none"> ✓ Varnishes, polyurethanes, shellacs ✓ Paint thinner, mineral spirits, turpentine <ul style="list-style-type: none"> ✓ Pesticides, herbicides, fungicides ✓ Caustic household cleaners <ul style="list-style-type: none"> ✓ Pool chemicals ✓ Oils and grease ✓ Automotive fluids, motor oil ✓ Adhesives, roof tar, driveway sealer <ul style="list-style-type: none"> ✓ Kerosene, gasoline, lighter fluid <ul style="list-style-type: none"> ✓ Mercury ✓ Fluorescent bulbs 	<ul style="list-style-type: none"> ✗ Latex paint ✗ Explosives, gun powder, ammunition, flares ✗ Medical waste, pharmaceuticals, medicine, sharps <ul style="list-style-type: none"> ✗ Batteries ✗ Smoke detectors ✗ Tires ✗ Electronics, appliances <ul style="list-style-type: none"> ✗ Asbestos ✗ Business or commercial waste

The HHW Program meets State Plan Goals #2 and #7. In 2022, the District provided HHW information on its website and recycled 163 tons of materials. Table H-6.5 summarizes the pounds collected by participating communities in 2022.

Table H-6.5: 2022 Pounds of HHW Collected by Community

Community	2022 Pounds
Bay Village	10,186
Beachwood	2,594
Bedford	3,498
Bedford Heights	322
Bentleyville	274
Berea	10,941
Bratenahl	462
Brecksville	15,065
Broadview Heights	6,386
Brook Park	1,544
Brooklyn	2,648
Brooklyn Heights	618
Chagrin Falls	2,644
Chagrin Fall Township	-
Cleveland	12,493
Cleveland Heights	3,910
Cuyahoga Heights	275
East Cleveland	35
Euclid	10,877
Fairview Park	7,699
Garfield Heights	3,540
Gates Mills	1,667

Community	2022 Pounds
Glenwillow	844
Highland Heights	7,551
Highland Hills	-
Hunting Valley	2,133
Independence	11,708
Lakewood	11,003
Linndale	-
Lyndhurst	10,544
Maple Heights	1,435
Mayfield Heights	2,609
Mayfield Village	1,762
Middleburg Heights	7,483
Moreland Hills	2,472
Newburgh Heights	-
North Olmsted	11,551
North Randall	-
North Royalton	8,124
Oakwood Village	750
Olmsted Falls	2,240
Olmsted Township	7,709
Orange Village	2,652
Parma	16,262
Parma Heights	5,271
Pepper Pike	6,401
Richmond Heights	630
Rocky River	20,406
Seven Hills	9,987
Shaker Heights	9,840
Solon	21,088
South Euclid	2,867
Strongsville	16,797
University Heights	1,970
Valley View	-
Walton Hills	2,252
Warrensville Heights	150
Westlake	21,207
Woodmere	-
Total Pounds Collected	325,376
Number of Participating Communities	52

Table H-6.6 summarizes the historical HHW collection program statistics:

Table H-6.6: 2018-2022 HHW Program Statistics

Year	Communities Participating	Tons Collected	Cost	Cost Per Ton Managed
2018	51	268	\$363,164	\$1,355
2019	49	218	\$301,279	\$1,381
2020	48	185	\$302,227	\$1,634
2021	45	180	\$249,457	\$1,384
2022	52	163	\$223,098	\$1,371

The District will continue assisting communities with the management of HHW materials through the District website, social media and other marketing and educational outreach efforts as available.

The District’s goal is to reduce the amount of HHW materials that are placed in landfills. In addition, the District wishes to reduce the amount of usable materials that are being disposed of and educate the public regarding which items are hazardous and non-hazardous and how the creation of HHW can be reduced by using non-toxic alternatives.

The District reserves the right to adjust the HHW management program funding amount each year based upon District budgetary needs.

Analysis and Evaluation

Participation rates and generation rates for collected materials are not available as the actual number of households participating is not tracked by the participating communities that conduct collections for their residents. However, based on City of Columbus statistics of 15 pounds per household per year of HHW generated; the District receiving 163 tons or 326,000 pounds of HHW during the reference year; and there being 545,056 households in Cuyahoga County; the District estimates 4% of households participate in the HHW program.

The number of participating communities varies per year but has ranged between a high of 52 in 2022 to a low of 45 in 2021. Of the communities that do not participate, they are mostly smaller with low volumes of potential HHW.

Strengths, Challenges, and Opportunities

The District has operated the HHW program for over 10 years. Since its inception, the Northeast Ohio Regional Sewer District has provided a grant to the District. The grant pays for one-third of the contractor's cost to manage the HHW materials. Costs to operate the program have increased due to increased operational rates, however, the volume of materials collected has decreased slightly. The program is very successful and is greatly appreciated by the communities that participate and their residents.

The District’s goal is to reduce the amount of HHW materials that are placed in the landfills. In addition, the District wishes to reduce the amount of usable materials that are being disposed of and educate the public regarding which items are hazardous and which items are not. The District believes that the long-

term cost to manage HHW will be greatly reduced as the efforts above are implemented and become effective.

Strengths

- **This is the District's signature program.**
- Creates strong relationships with participating District communities.
- Recycles hundreds of tons of HHW materials annually.
- The collection opportunities are available year-round for participating District communities and their residents.
- Using a contractor to unload and package HHW protects the District from liability.
- There is no charge to the communities or residents for the service.

Challenges

- Not all communities participate in the program.
- The cost to operate the program is high because of increased processing costs even though certain HHW materials have been eliminated.
- The District has had to eliminate materials (batteries) from the acceptance list to control costs.
- The subsidy from the Northeast Ohio Regional Sewer District is not guaranteed in the new planning period.
- Program does not provide a direct opportunity for the District to educate residents on HHW management issues and other District initiatives since the actual collection of HHW occurs at the community location.
- The program does not provide services to businesses such as conditionally exempt small quantity generators of hazardous waste and universal waste generators.
- Because of the nature of how the materials are collected by the communities, verification of household versus business generator type is not conducted.
- The District is not able to determine actual participation in the program by household count because communities collect the materials.

Opportunities

The District has developed a series of potential improvements, initiatives, and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following opportunities for potential improvements listed below are designed to enhance the strengths listed above.

Conduct Campaign on Reducing Consumption and Using versus Discarding HHW

Because this program is very popular and highly used, the District has an opportunity to reach out to the residents who use the program to try and minimize the materials that should not be delivered to their communities. These materials, if used for their intended purpose, would neither be wasted nor brought to their community collection. By reducing these materials, the resident saves money, the District saves money, and the environment benefits. The campaign should focus on buying and using household products smartly to reduce waste and to save money. Residents should strive to only bring materials that, through the use of the product are no longer usable such as used oil, used antifreeze, spent paint thinner, etc. Materials such as paint, cleaners, pesticides, and coatings, if used correctly and purchased in the right volumes based on need, will result in very little waste.

Reduce Cost in HHW Program Operation – Contract Management

The District should consider consistently observing the collection day operations of the HHW contractor to ensure the following:

- Compliance with contract terms and conditions
- Ensure container packing is being maximized to reduce overall poundage costs
- Ensure materials accepted are being packed into the proper categories per the contract pricing proposed
- Ensure HHW contractor staff is working effectively and efficiently

Conditionally Exempt Small Quantity Generator (CESQG) and Universal Waste Program

The District could conduct a market assessment to determine the regulatory and operational aspects of developing a CESQG and/or Universal Waste Collection program for small businesses, institutions, and governments generating hazardous waste and universal waste. There are other similar programs being operated across the country. It is recommended that any program development also consider user fees to run the program.

Participation Data

The District could work with its member communities using the HHW program to collect participation data. This data is very important for the District to understand not only how many participants utilize the program, but other criteria as listed below:

- Number of households participating for event
- Number of households participating per car drop off
- Number of repeat participants annually
- Number of new participants annually
- Zip code of participating households
- How the participant heard about the collection

This data could be collected electronically using small tablet devices or manually through an easy-to-use tracking sheet.

C. ELECTRONICS, APPLIANCES, BATTERIES PROGRAMS

Computers and Electronics

The District has offered programs for residents to recycle computers and electronics since 2000, being one of the first in the State to do so. Residents are encouraged to turn in their e-waste to their local city service departments who then deliver the computers to RET3 Job Corp., a local, non-profit and R2 certified e-waste recycler. In 2022, 47 participating communities collected and recycled 177 tons of electronics from the residential sector. Having communities conduct computer collections for their residents themselves proved to be more cost-effective, efficient, and convenient for residents than having a centralized collection event twice annually.

In addition, RET3 accepts computers and other e-waste from businesses. In 2022, 331 tons were collected from businesses. The District was instrumental in assisting RET3 in developing their operation to be able to manage community and business electronics.

Table H-6.7 summarizes the historical electronics program statistics.

Table H-6.7: 2018-2022 District Electronics Collection Program Statistics

Year	Communities Participating	Residential Tons Collected	Business Tons Collected	Costs*
2018	51	234	253	\$0
2019	49	210	270	\$0
2020	51	205	210	\$0
2021	48	199	253	\$0
2022	47	177	331	\$0

*The costs to the District to advertise the program are incorporated into their outreach and education activities; the District and communities do not incur processing costs for the electronics collection program.

The District does accept computer equipment, peripherals, printers, and small personal electronics including phones, tablets, and GPS at its Special Waste Convenience Center in marked collection bins in the main lobby. Items are recycled or refurbished by a local nonprofit organization RET3 job corp.

The District promotes proper electronics management through the community programs and existing private sector and non-profit organizations in the region. The District works directly with the communities to promote and provide technical assistance for the management of electronics. It also provides educational information throughout the year across all its social media platforms.

Table H-6.8 identifies the cities that collect electronics by hosting Recycle Your Computer Month events and those that have expanded to include year-round electronics collections.

Table H-6.8: Communities that Accept Electronics from Residents

Political Subdivision	Year-Round Collection	Limited Times or Special Collections
Cities		
Bay Village	Yes	
Beachwood	Yes	
Bedford		Yes
Bedford Heights	Yes	
Berea		Yes
Brecksville	Yes	
Broadview Heights	Yes	
Brook Park		Yes
Brooklyn	Yes	
Cleveland	Yes	
Cleveland Heights	Yes	
East Cleveland		
Euclid		Yes
Fairview Park		Yes

Political Subdivision	Year-Round Collection	Limited Times or Special Collections
Garfield Heights		Yes
Highland Heights		Yes
Independence	Yes	
Lakewood	Yes	
Lyndhurst	Yes	
Maple Heights	Yes	
Mayfield Heights		Yes
Middleburg Heights	Yes	
North Olmsted		Yes
North Royalton	Yes	
Olmsted Falls	Yes	
Parma	Yes	
Parma Heights		Yes
Pepper Pike	Yes	
Richmond Heights		Yes
Rocky River		Yes
Seven Hills		Yes
Shaker Heights		Yes
Solon	Yes	
South Euclid		Yes
Strongsville	Yes	
University Heights		Yes
Warrensville Heights		Yes
Westlake		Yes
Villages		
Bentleyville	Yes	
Bratenahl	Yes	
Brooklyn Heights	Yes	
Chagrin Falls		Yes
Cuyahoga Heights	Yes	
Gates Mills		Yes
Glenwillow		Yes
Highland Hills		Yes
Hunting Valley (adjusted)	Yes	
Linndale	Yes	
Mayfield		Yes
Moreland Hills	Yes	
Newburgh Heights	Yes	
North Randall		
Oakwood		Yes

Political Subdivision	Year-Round Collection	Limited Times or Special Collections
Orange	Yes	
Valley View		Yes
Walton Hills		Yes
Woodmere	Yes	
Townships		
Chagrin Falls Twp.		
Olmsted Twp.	Yes	

Donation Sites

The following list of donation sites is provided by the District on its website.

Another Chance of Ohio

<https://anotherchanceofohio.netlify.app/>

2974 East 65 Street, Cleveland, Ohio, 44127
(216)341-8733

Art House, Inc.

www.arthouseinc.org

3119 Denison Avenue, Cleveland, Ohio, 44109
(216)398-8556

Boys & Girls Clubs of Cleveland

www.clevekids.org

6114 Broadway Avenue, Cleveland, Ohio, 44127
(216)883-2106

Common Threads

www.commonthreadsthift.com

22049 Lorain Road, Fairview Park, Ohio, 44126
(440)641-1311

Early Childhood Enrichment Center

19824 Sussex Road, Shaker Heights, Ohio, 44122
(216)991-9761

Easter Seals of Northern Ohio

www.donateclothings.com

2173 North Ridge Road, Suite G, Lorain, Ohio, 44055

Education Alternatives

www.easchools.org

5445 Smith Road, Brook Park, Ohio, 44142
(216)332-9360

FOCUS North America Cleveland
www.focusnorthamerica.org
4410 Franklin Boulevard, Cleveland, Ohio, 44113
(216)961-3806

Goodwill Industries of Greater Cleveland
www.goodwillgoodskills.org
6880 Pearl Road #1, Cleveland, Ohio, 44130
(800)942-3577

HELP Foundation, Inc.
www.helpfoundationinc.org
26900 Euclid Avenue, Euclid, Ohio, 44132
(216)432-4810

Hispanic Urban Minority Alcoholism & Drug Abuse Outreach Project
<https://mha.ohio.gov/get-help/prevention-services/urban-minority-outreach>
3305 West 25 Street, Cleveland, Ohio, 44109
(216)459-1222

Humane Society of Summit County
www.summithumane.org
7996 Darrow Road, Twinsburg, Ohio, 44087
(330)794-7826

Koinonia Homes, Inc.
<https://koinoniahomes.org/>
6161 Oak Tree Boulevard #400, Independence, Ohio, 44131
(216)588-8777

Life's Little Adventures Farm
<https://www.facebook.com/LifesLittleAdventuresFarmInc/>
9199 Burbank Road, Wooster, Ohio, 44691
(330)201-7425

Lutheran Metropolitan Ministry
<http://www.lutheranmetro.org>
4515 Superior Avenue E, Cleveland, Ohio, 44103
(216)696-2715

May Dugan Center
<http://www.maydugancenter.org>
4115 Bridge Avenue, Cleveland, Ohio, 44113
(216)631-5800
Murtis Taylor Human Services System
<http://www.murtistaylor.info>
13422 Kinsman Road, Cleveland, Ohio, 44120
(216)283-4400

New Avenues to Independence, Inc.
<http://www.newavenues.net>
17608 Euclid Avenue, Cleveland, Ohio, 44112
(216)481-1909

Northern Ohio Recovery Association
<http://www.norainc.org>
1400 East 55 Street, Cleveland, Ohio, 44103
(216)391-6672

Rebuilding Together Northeast Ohio
<http://www.rebuildingtogetherneo.org>
9100 Bank Street Unit B, Valley View, Ohio, 44125
(216)800-8556

Recovery Resources
<http://www.recres.org>
4269 Pearl Road, Cleveland, Ohio, 44109
(216)431-4131

Salvation Army of Greater Cleveland
<http://www.salvationarmycleveland.org>
5005 Euclid Avenue, Cleveland, Ohio, 44103
(216)861-8185

The Center for Arts-Inspired Learning
<http://www.arts-inspiredlearning.org>
10917 Magnolia Drive, Cleveland, Ohio, 44106
(216)561-5005

The Centers for Families & Children
<http://www.thecentersohio.org>
4500 Euclid Avenue, 44103
(216)325-9350

University Settlement
<http://www.universitysettlement.net>
4800 Broadway Avenue, Cleveland, Ohio, 44127
(216)641-8948

Vietnam Veterans of America Donations
<http://www.vvadonation.com>
(800)459-8387

The following list of local and regional electronics haulers and recyclers is promoted by the District on its website. The majority of electronics recycling from District communities occurs through RET3 Job Corp.

E Scrap Solutions

<https://www.escraprecycling.com/>

7510 Bittern Avenue, Cleveland, Ohio, 44103
(216)431-0796

E-Waste LLC

<https://www.e-wasteonline.com/>

5211 Hudson Drive, Hudson, Ohio, 44236
(330)650-0274

MCPc Secure Asset Disposition Center

<https://www.mcpc.com/STAD>

4371 Pearl Road, Cleveland, Ohio, 44109
(800)777-7178

Regency Technologies

<http://www.regencytechnologies.com>

4550 Darrow Road, Stow, Ohio, 44224
(440)248-3991

RET3 job corp.

<http://ret3.org/donate/>

1814 East 40th Street - Rear, Cleveland, Ohio, 44103
(216)361-9991

Secure ITADS LLC

<https://www.secure-ohio.com/>

29601 Solon Road, Solon, Ohio, 44139
(216)424-3400

Analysis and Evaluation

The District has 30 communities that provide year-round collection of electronics at their service garage or at the curb, and 26 communities with limited collections. There are 3 communities that do not have any form of electronics collection available to residents. Most communities do not accept TVs as a part of their program. RET3 Job Corp has provided electronic recycling services to the communities since 2000 at no cost. The rising cost for the management of CRTs may require RET3 Job Corp to begin charging the communities for the processing of CRTs in the future.

In 2022, 117 tons of residential electronics and 331 tons of business electronics were recovered.

There are 6 haulers/recyclers and 26 donation entities that accept electronics that service the District for residential and business electronics.

Strengths, Challenges, and Opportunities

Electronics recycling tons have been decreasing and average 205 tons annually. There appears to be significant opportunity for residents and businesses to properly manage electronics but not TVs.

Strengths

- Electronics recycling is available in 56 of the 59 District communities.
- A significant amount of electronics are collected and recycled in the District.
- Residents, businesses, and other entities have additional choices with local and regional recyclers and donation centers to manage their electronics.

Challenges

- The cost for CRT management is rising and may impact the community programs in the future.
- There are 3 communities that do not offer any collection for electronics.
- There are 26 communities that only offer limited collection of electronics.
- Most communities do not include TVs as part of their electronics recycling programs but do collect them if put out with the trash.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements are designed to improve the weaknesses identified above.

CRT and TV Collection Program

The District could evaluate the option of managing CRTs by collecting them along with televisions through a District sponsored collection event at the Special Waste Convenience Center. This option would allow for recycling of the materials.

CRT User Fees

Based on discussions with RET3, the District and its member communities could determine if collecting a user fee to cover part or all of the cost of recycling should be implemented. Options for bulky collection of CRTs could be offered to the resident if the user fee was not acceptable to the resident.

D. ELECTRONIC MEDIA PROGRAM

In 2022, the District began collecting electronic media such as CDs, DVDs, video games and cases at the **District's Convenience Center**. **During regular business hours, residents can recycle unwanted CDs, DVDs, video games and cases** in the applicable drop box located in the vestibule of the Convenience Center. Items are collected year-round.

Acceptable materials include compact discs (CDs), compact discs - recordable (CD-Rs), compact discs - rewritable (CD-RWs), digital video discs (DVDs), Blu-ray discs, 3.5" and 5.25" floppy disks, zip and jazz disks, plus jewel/media cases. In 2022, 4,265 pounds of material were collected at a cost of \$2,883.00.

Materials are recycled by Greendisk. The company also offers a mail-back service recycling program.

CDs, DVDs and video games in good working condition can be donated to local community service organizations that will use them to support their work. Businesses and residents can recycle discs via local companies that specialize in recycling media items.

The District maintains a list of donation and recycling locations on their web page and shares this information through their social media platforms.

Donation Locations

Another Chance of Ohio
<https://anotherchanceofohio.netlify.app/>
2974 East 65 Street, Cleveland, Ohio, 44127
(216)341-8733

Boys & Girls Clubs of Cleveland
www.clevekids.org
6114 Broadway Avenue, Cleveland, Ohio, 44127
(216)883-2106

Catholic Charities, Fatima Family Center
www.ccdocle.org/locations/fatima-family-center
6600 Lexington Avenue, Cleveland, Ohio, 44103
(216)391-0505

Cleveland Furniture Bank
www.clevelandfurniturebank.org
13360 Smith Road, Middleburg Heights, Ohio, 44130
(216)459-2265

Common Threads
www.commonthreadsthift.com
22049 Lorain Road, Fairview Park, Ohio, 44126
(440)641-1311

DonateStuff.com Household Discard Donor Program
www.DonateStuff.com
4334 Cranwood Parkway, Warrensville Heights, Ohio, 44128
(216)662-4483

Easter Seals of Northern Ohio
www.donateclothings.com
2173 North Ridge Road, Suite G, Lorain, Ohio, 44055

Education Alternatives
www.easchools.org
5445 Smith Road, Brook Park, Ohio, 44142
(216)332-9360

Goodwill Industries of Greater Cleveland
www.goodwillgoodskills.org
6880 Pearl Road #1, Cleveland, Ohio, 44130
(800)942-3577

Greater Cleveland Habitat for Humanity ReStore East
www.clevelandhabitat.org/restore/donate.html
4601 Northfield Road, North Randall, Ohio, 44128
(216)429-3631

Greater Cleveland Habitat for Humanity ReStore West
www.clevelandhabitat.org/restore/donate.html
2110 West 110 Street, Cleveland, Ohio, 44102
(216)429-3631

Hispanic Urban Minority Alcoholism & Drug Abuse Outreach Project
<https://mha.ohio.gov/get-help/prevention-services/urban-minority-outreach>
3305 West 25 Street, Cleveland, Ohio, 44109
(216)459-1222

Humane Society of Summit County
www.summithumane.org
7996 Darrow Road, Twinsburg, Ohio, 44087
(330)794-7826

Life's Little Adventures Farm
<https://www.facebook.com/LifesLittleAdventuresFarmInc>
9199 Burbank Road, Wooster, Ohio, 44691
(330)201-7425

May Dugan Center
<http://www.maydugancenter.org>
4115 Bridge Avenue, Cleveland, Ohio, 44113
(216)631-5800

Murtis Taylor Human Services System
<http://www.murtistaylor.info>
13422 Kinsman Road, Cleveland, Ohio, 44120
(216)283-4400

New Avenues to Independence, Inc.
<http://www.newavenues.net>
17608 Euclid Avenue, Cleveland, Ohio, 44112
(216)481-1909

Northern Ohio Recovery Association
<http://www.norainc.org>
1400 East 55 Street, Cleveland, Ohio, 44103
(216)391-6672

Salvation Army of Greater Cleveland
<http://www.salvationarmycleveland.org>
5005 Euclid Avenue, Cleveland, Ohio, 44103
(216)861-8185

The Center for Arts-Inspired Learning
<http://www.arts-inspiredlearning.org>
10917 Magnolia Drive, Cleveland, Ohio, 44106
(216)561-5005

The Centers for Families & Children
<http://www.thecentersohio.org>
4500 Euclid Avenue, 44103
(216)325-9350

Thriftique Showroom
<http://www.thriftiqueshowroom.com>
5055 Richmond Road, Bedford Heights, Ohio, 44146
(216)378-2264

University Settlement
<http://www.universitysettlement.net>
4800 Broadway Avenue, Cleveland, Ohio, 44127
(216)641-8948

Vietnam Veterans of America Donations
<http://www.vvdonation.com>
(800)459-8387

Volunteers of America Greater Ohio
<http://www.voago.org>
27240 Lorain Road, 44070
(440)202-1444

[Business Locations](#)

Greendisk
<https://www.greendisk.com/gdsite/default.aspx>
(800)305-3475

Northcoast Inc. Recycling Specialists
<http://www.northcoastrecycling.com>
1305 Lloyd Road, Wickliffe, Ohio, 44092
(440)943-6968

Regency Technologies
<http://www.regencytechnologies.com>
4550 Darrow Road, Stow, Ohio, 44224
(440)248-3991

Secure ITADS LLC
<https://www.secure-ohio.com/>
29601 Solon Road, Solon, Ohio, 44139
(216)424-3400

E. TELEVISION PROGRAM

In Ohio, there is no ban on placing televisions and electronics in the regular trash, but recycling options do exist. Seasonally, the Solid Waste District holds special collection events for Cuyahoga County residents to recycle televisions. Currently, there is not a fee for this service. The number of televisions accepted during the event is limited by transportation space, so registration is required.

In 2022, 17,605 pounds of televisions were collected for recycling. The District sponsored two collection events for an annual cost of \$7,419.55.

Businesses with TVs or other electronics can recycle the items through local specialized companies. The District maintains a list of recycling locations for businesses on their web page.

Business Locations for TV Recycling

Regency Technologies
<http://www.regencytechnologies.com>
4550 Darrow Road, Stow, Ohio, 44224
(440)248-3991

Secure ITADS LLC
<https://www.secure-ohio.com/>
29601 Solon Road, Solon, Ohio, 44139
(216)424-3400

F. APPLIANCES AND BULKY ITEMS

The District does not conduct a special collection for appliances because all communities collect large appliances and other items (bulky waste) as part of their waste collection programs.

The District promotes the programs offered by the communities within the District. Residents can place at the curb acceptable appliances on their regular scheduled bulky waste collection day. Residents can **also bring acceptable appliances to the District's** large inventory of scrap yards located in the District for recycling.

In 2022, 22,907 tons of appliances and bulky items were recycled in the District. Table H-6.9 summarizes the historical tons recycled.

Table H-6.9: 2018-2022 District Appliances Recycled

Year	Tons
2018	25,912
2019	22,263
2020	16,975
2021	22,980
2022	22,907

Analysis and Evaluation

Appliance recycling tons range from 22,000 to 26,000 tons annually, excluding 2020 as an anomaly. **While the tonnage represents an 11% decline since the prior Plan's range of 26,000 to 28,000 tons** annually, there appears to be significant opportunity for residents and businesses to properly manage appliances.

Strengths, Challenges, and Opportunities

The District is confident that the current infrastructure of appliance recycling is appropriate and does not see any further need to develop additional infrastructure for appliance recycling.

Strengths

- Over 22,000 tons of appliances are recycled annually.
- Ample infrastructure available for residents and businesses to recycle appliances.

Challenges

- None identified.

Opportunities

The District has not developed any potential improvements, initiatives, and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

G. BATTERIES

In 2022, 28 tons of batteries were recycled in the District. Table H-6.10 summarizes the historical tons recycled.

Table H-6.10: 2018-2022 District Batteries Recycled

Year	Tons
2018	45
2019	45
2020	34
2021	28
2022	28

The District promotes local, regional, and national battery recycling locations for residents and businesses to utilize for primary/single-use alkaline batteries, rechargeable batteries, lead acid batteries, e-bike batteries, electric vehicle batteries, and damaged batteries.

Battery Recyclers

The following list of battery recyclers is promoted on the District's website:

A-1 Battery Shop, Inc.
2935 Detroit Avenue
Cleveland, OH 44113
Phone: (216) 861-6001

Battery Empire, Inc.
13049 Triskett Road
Cleveland, OH 44111
Phone: (216) 252-4666

Big Green Box
295 Quarry Road SE
Lancaster, OH 43130
Phone: (877) 461-2345

Bulldog Battery
37645 Vine Street
Willoughby, OH 44094
Phone: (440) 942-2555

Call2Recycle
1000 Parkwood Circle S #200
Atlanta, GA 30339
Phone: (877) 723-1297

Cirba Solutions Michigan
4930 Holtz Drive
Wixom, MI 48393
Phone: (800) 852-8127

Cirba Solutions Ohio
265 Quarry Road SE
Lancaster, OH 43130
Phone: (740) 653-6290

E-Waste LLC
<https://www.e-wasteonline.com/>
5211 Hudson Drive, Hudson, Ohio, 44236
Phone: (330) 650-0274

Greentec Auto
<https://www.greentecauto.com/>
790 Ken Mar Industrial Parkway, Broadview Heights, Ohio, 44147
Phone: (800) 773-6614

Kirk Battery Co.
<https://www.interstatebatteryofcleveland.com/>
5300 Train Avenue, Cleveland, Ohio, 44102
Phone: (216) 281-9800

Northcoast Inc. Recycling Specialists
<http://www.northcoastrecycling.com>
1305 Lloyd Road, Wickliffe, Ohio, 44092
Phone: (440)943-6968

Regency Technologies
<http://www.regencytechnologies.com>
4550 Darrow Road, Stow, Ohio, 44224
Phone: (440)248-3991

Republic Services Universal Waste Program: Batteries
<https://www.republicservices.com/businesses/recycling/battery>

Safety-Kleen Systems Inc.
<https://www.safety-kleen.com/>
1169 Industrial Parkway N, 44212
Phone: (330)273-3111

WM BatteryTracker
http://www.wmlamptracker.com/v2/recycling_battery.cfm
Phone: (800)664-1434

The collection programs for electronics, appliances, and batteries meet State Plan Goals #2 and #6.

Analysis and Evaluation

Battery recycling tons have declined from a former high of 80-90 tons annually, to under 30 tons, largely **attributed to the District's discontinued collection of rechargeable batteries and the disposal of primary/single-use alkaline batteries in the regular trash.**

Strengths, Challenges, and Opportunities

The current infrastructure of battery collection and recycling for alkaline and lead acid batteries is appropriate and does not need further development. The growing use of rechargeable batteries, and the danger they pose when not managed properly, does necessitate a review of the current recycling infrastructure.

Strengths

- Ample infrastructure is available for residents and businesses to recycle lead acid batteries.

Challenges

- Creating greater accessibility for recycling of rechargeable batteries for residents.

Opportunities

The District has developed a series of potential improvements, initiatives, and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements are designed to improve the weaknesses identified above.

Promote Local and Regional Rechargeable Battery Recycling

To reduce the improper management of rechargeable batteries, the District will work with communities to educate residents on the numerous local outlets for rechargeable battery recycling which is free of charge. This may also include assisting communities to establish drop-off sites for these materials.

H. PHARMACEUTICAL PROGRAMS

The Cuyahoga County Sheriff's Office provides an ongoing disposal option for unused medications, which the District promotes. The Sheriff's RX Drug Drop Box Program allows residents to deposit unused, unwanted, or expired prescription drugs at drop boxes in participating law enforcement agencies across Cuyahoga County. District residents are directed to find a drop-off location by visiting www.RXdrugdropbox.com or call 2-1-1.

The District also promotes the following events on the website.

- **The Northeast Ohio Regional Sewer District's seasonal Pitch Those Pills collection events at select Discount Drug Mart locations, accepting pills, capsules, and liquids for proper disposal.**
- **The U.S.DEA's National Prescription Drug Take Back Days to collect unwanted medications.**
- **The Cleveland Clinic's 14 drop boxes at its Northeast Ohio locations, including the Children's Hospital, Euclid Avenue and Taussig Outpatient pharmacies at its main campus in Cleveland.** Any approved prescription medications are accepted, including aerosols, liquids in sealed containers, tablets, capsules, creams, and lotions.
- **MetroHealth's public drop-offs for unused prescription drugs at its Cleveland Heights and Parma medical centers**
- Walgreens Safe Medication Disposal Program drop-box receptacles at several local Walgreen pharmacies.

Analysis and Evaluation

There appears to be significant opportunity for residents and businesses to properly manage pharmaceuticals.

Strengths, Challenges, and Opportunities

The District is confident that the current infrastructure of pharmaceutical collection and management is appropriate and does not see any further need to develop additional infrastructure.

Strengths

- Ample infrastructure available for residents and businesses to properly dispose of pharmaceuticals.

Challenges

- None identified.

Opportunities

The District has not developed a series of potential improvements, initiatives, and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

I. SUMMARY

The District will conduct a prioritization process to determine which of the above improvements, initiatives, and/or strategies will be implemented in Appendix I, Section A. Further details on the implementation of each improvement, initiative, and/or strategy that is ranked high enough to be implemented will be included in Appendix I, Section B.

H-7: DIVERSION ANALYSIS

The purpose of this analysis is to evaluate the quantities of waste reduced and recycled from 2018-2022 to ensure compliance with the state mandated waste reduction goals. Ohio solid waste management districts are required to meet one of the two following recycling goals:

- State Plan Goal #1: Ensure there is adequate infrastructure to provide residents and commercial businesses opportunities to recycle waste.
- State Plan Goal #2: Reduce/recycle at least 25 percent of waste generated by the residential/commercial sector.

The District will continue to strive towards Goal #2.

A. RESIDENTIAL/COMMERCIAL SECTOR

The District met State Plan Goal #1 and Goal #2 for the R/C sector in the 2022 reference year.

Analysis and Evaluation

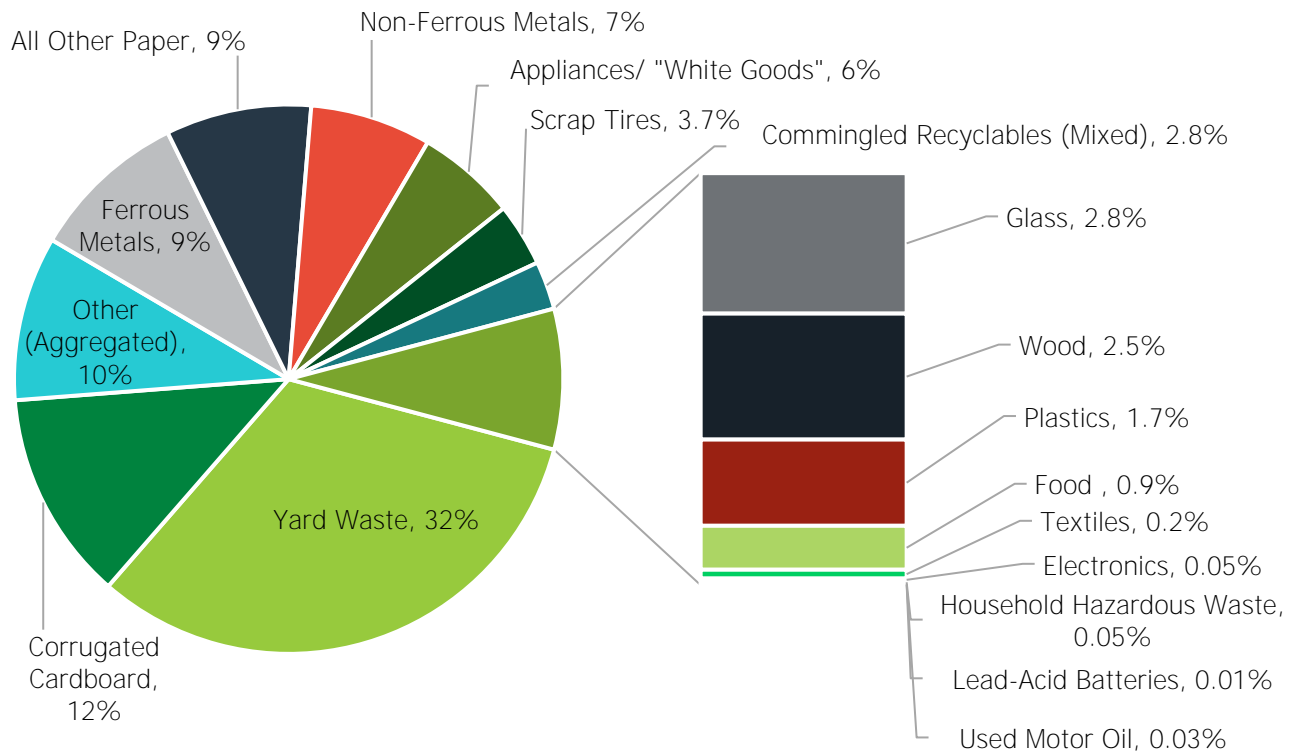
The District's R/C diversion rate during the past five years has fluctuated between 27.6 and 23.3 percent (see Table H-7.1). Diversion is calculated by dividing the total tons recycled plus composted by the total tons generated (which includes tons landfilled, recycled, and composted). The per capita diversion rate as measured in terms of pounds per person per day (PPD) decreased from 2018 to 2022.

Table H-7.1 R/C Diversion Rates: 2018 – 2022

Year	R/C Waste Generated			Diversion Rate	
	Landfilled	Recycled	Composted	Percent (%)	Per Capita
2018	1,162,464	268,986	174,144	27.60%	1.95
2019	1,222,174	248,614	162,989	25.19%	1.83
2020	1,205,020	213,788	152,445	23.31%	1.62
2021	1,231,256	257,087	138,109	24.30%	1.71
2022	1,210,556	261,396	129,645	24.42%	1.73

The two materials that comprised the largest quantities of all materials recycled for the R/C sector in 2022 were Yard Waste: 32% and Cardboard: 12% of 2022 R/C recycling.

Figure H-7.1. R/C Material Types Recycled in Cuyahoga: 2022



Compared to other urban and surrounding SWMDs in Ohio, Cuyahoga County's R/C diversion rate is slightly below average and per capita diversion is slightly below average (see Table H-7.2). The nationwide municipal solid waste (MSW) diversion (recycling and composting) rate is 32.1%². Ohio's statewide R/C diversion rate is 28.95%³.

Table H-7.2. R/C Diversion Rates for Other Select Ohio SWMDs: 2022

SWMD Name	Res/Com Diversion Rate	
	Percent (%)	Recycling Pounds Per Capita/Day
Cuyahoga County SWMD	24.42%	1.73
Hamilton County SWMD	34.48%	3.07
Lorain	21.59%	1.29
Lucas County SWMD	43.21%	3.04
Montgomery County SWMD	23.14%	1.90
Summit County SWMD	30.88%	1.94
SWACO	48.80%	4.58
Average	32.36%	2.51
Statewide	28.95%	2.11

² US EPA. *Advancing Sustainable Materials Management: 2018 Fact Sheet*. December 2020.

³ Ohio EPA. *Disposal Recycling and Generation Analytic 2022 Statewide Figure*.

B. INDUSTRIAL SECTOR

Adoption of the 2020 State Plan removed the 66% industrial reduction and recycling rate goal. The District continues to track industrial recycling efforts in order to provide better technical assistance.

Analysis and Evaluation

Industrial sector diversion rates in Cuyahoga County for 2018 through 2022 are shown in Table H-7.3. Diversion rates decreased from 2018 to 2020, then increased from 2021 to 2022.

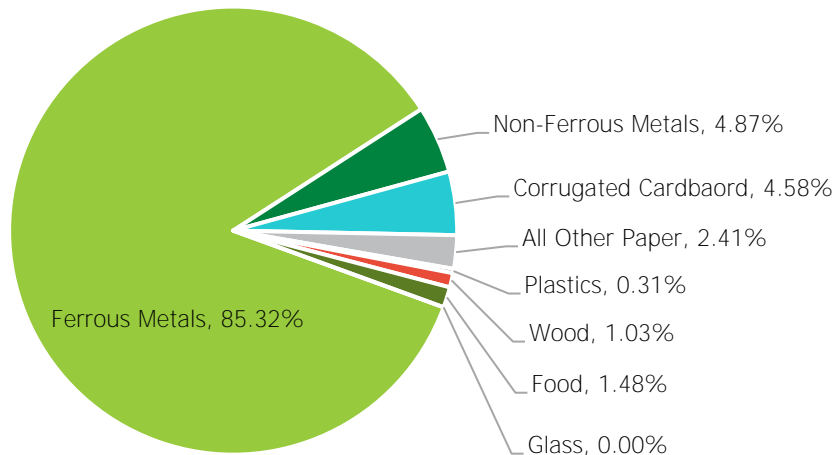
Table H-7.3. Industrial Recycling Rates for Cuyahoga: 2018 – 2022

Year	Percent (%)
2018	74.44%
2019	76.90%
2020	64.59%
2021	69.51%
2022	63.66%

Compared to the current Plan, which projected 855,612 tons of industrial recycling for 2022, the actual amount diverted in the 2022 reference year is 34% lower (approximately 290,000 tons). The current Plan also projected an industrial recycling rate of 73.99% for 2022, which is lower compared to the actual estimated recycling rate of 63.66%. Changes in the economy have impacted diversion rates as well as survey responses.

Ferrous metals represent the material type recycled in the greatest amount from industrial sources (see Figure H-7.2).

Figure H-7.2. Industrial Material Types Recycled in Cuyahoga: 2022



The District's industrial recycling rate for 2022 was above average compared to urban and surrounding solid waste districts, as shown in Table H-7.4.

Table H-7.4. Industrial Diversion Rate Comparison for 2022

SWMD Name	Industrial Diversion Rate
Cuyahoga County SWMD	63.66%
Hamilton County SWMD	82.96%
Lorain	56.83%
Lucas County SWMD	87.61%
Montgomery County SWMD	90.25%
Summit County SWMD	N/A
SWACO	84.51%
Average	77.64%
Statewide	44.93%

Industrial sector diversion can vary greatly among solid waste districts due to the level and type of manufacturing activity present in the District.

Industrial sector recycling totals are directly related to the number of usable surveys received from the **District’s annual recycling survey. The survey is voluntary, so it is likely that industrial sector recycling is** greater than the values reported on the Annual District Reports and thus, greater than the values presented in this Plan Update.

C. STRENGTHS AND CHALLENGES

Strengths

- There are 56 **curbside recycling programs, providing excellent access to recycling for the District’s** residents.
- Good infrastructure (programs, service providers) available for the R/C sector.
- **The District’s continuation of industrial sector surveying assists the understanding of the sector’s** materials.

Challenges

- Residential/Commercial sector recycling has decreased annually 2018-2022.
- R/C recycling rates are below average compared to other urban and surrounding solid waste districts in Ohio.
- There are more than 51,000 commercial businesses in the District. The ability to accurately document commercial sector recycling is limited by the number of survey responses received from commercial generators.
- Collecting commercial sector survey data is time consuming and may not be the most effective use of District personnel and funds.
- **Participation in the District’s recycling survey is voluntary.**
- Industrial sector diversion is dependent upon the economy. The recycling rate for industrial facilities has been decreasing since 2018.
- Industrial sector diversion rate is dependent on one industry (an integrated steel and mining **company**). **The District’s industrial sector recycling rate would decrease from 73.99% to 52.80% if this industry’s recycling and disposal totals were removed from the industrial sector’s** diversion calculations.

The opportunities for the residential and commercial sectors have been incorporated into Sections H-1 and H-2, respectively, and the opportunities for the industrial sector incorporated into Section H-3, to reduce redundancy.

H-8: SPECIAL PROGRAM NEEDS ANALYSIS

Format v4.1 defines Section 8 as programs specifically funded under the authority granted in Ohio Revised Code Section 3734.57(G)(3) through (9). These program areas of allowable uses for SWMD funds collected under ORC Section 3734.57 are as follows:

- Section 3734.57(G)(3). Boards of Health, Solid Waste Enforcement
- Section 3734.57(G)(4). Counties, Road/Facility Maintenance
- Section 3734.57(G)(5). Boards of Health, Water Well Sampling
- Section 3734.57(G)(6). Out-of-state Waste Inspection
- Section 3734.57(G)(7). Enforcement of Anti-littering
- Section 3734.57(G)(8). Boards of Health, Training & Certification
- Section 3734.57(G)(9). Cities and Townships, Road maintenance, public services, etc.

The District utilized generation fees to fund the following special program needs in the reference year:

- Section 3734.57(G)(3). Boards of Health, Solid Waste Enforcement
- Section 3734.57(G)(7). Enforcement of Anti-littering

A. BOARDS OF HEALTH, SOLID WASTE CODE ENFORCEMENT

The District has historically provided funding to the Cuyahoga County Board of Health and the City of Cleveland Department of Public Health to enforce solid waste regulations. During the Reference Year (2022), the Cuyahoga County Board of Health received \$160,000 and the City of Cleveland Health Department received \$70,000.

Analysis and Evaluation

The District annually negotiates the scope and funds for health department agreements. Historically, the scope of services for both health departments included the following provisions:

- Inspection of solid waste transfer stations, construction and demolition debris (C&DD) facilities, compost facilities, captive landfills and closed landfills within their jurisdiction.
- Providing quarterly financial reports documenting the use of District funds.
- Submittal of quarterly program reports to the District in a format prescribed by the District. Reports must include notices of violations, warnings or enforcement actions issued to a solid waste facility.
- **Submittal of the Ohio EPA Annual Survey regarding the health department's performance to the District.**

Cleveland Health Department

In 2022, the Cleveland Department of Public Health was responsible for the inspection of 1 transfer station, 2 construction debris disposal facilities, 3 compost facilities, 1 industrial landfill and several closed landfills. Under the 2022 contract, they performed the following services:

- **20 total inspections**
 - 4 full inspections at 1 public solid waste transfer station
 - 0 full and 0 partial inspections at two private C&DD landfills
 - 4 full and 0 partial inspection at three compost facilities
 - 4 full inspections at one industrial captive landfill
 - 8 full inspections at two closed landfills including methane monitoring
- 0 violations were issued at a compost facility
- Several ongoing violations were reported at the closed landfills.

- The Health Department also responded to numerous nuisance complaints related to open dumping.

Figure H-8.1 compares the City of Cleveland Health Department Inspections by solid waste facility type between 2018 and 2022.

Figure H-8.1. 2018- 2022 City of Cleveland Health Department Inspections

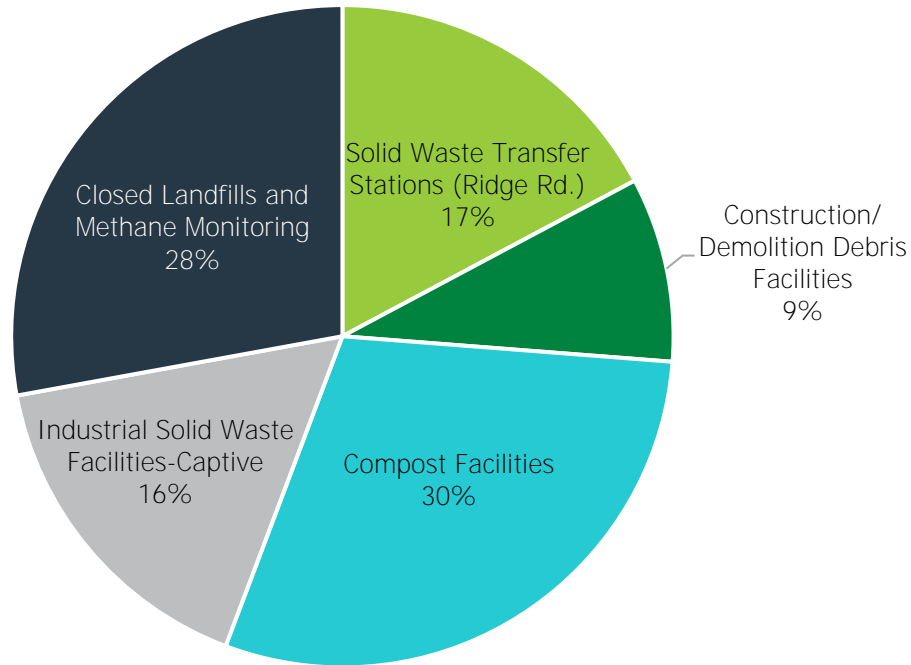
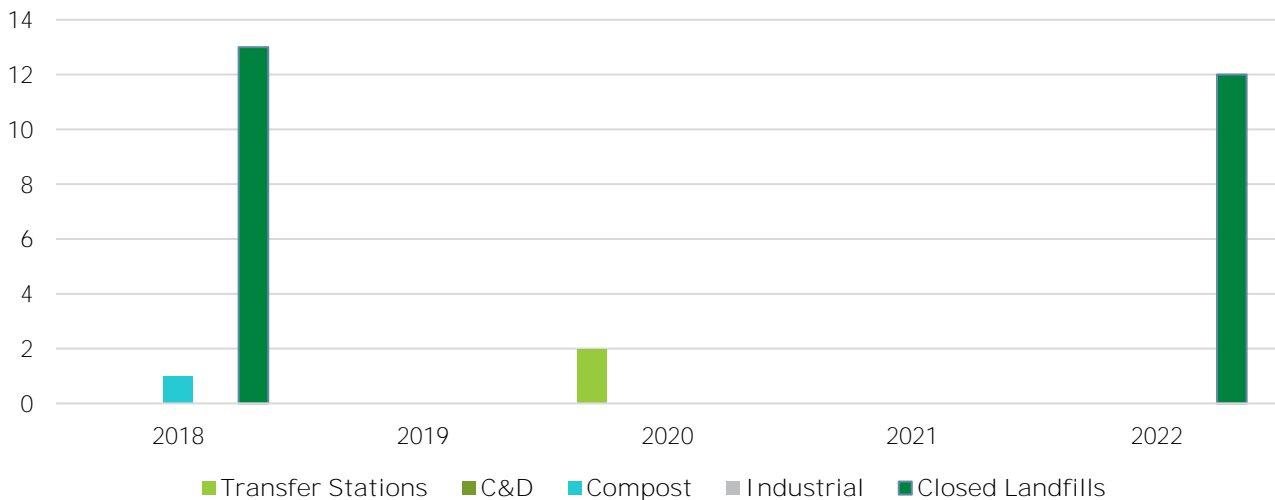


Figure H-8.2 compares the City of Cleveland Health Department Citations by solid waste facility type between 2018 and 2022.

Figure H-8.2. 2018 - 2022 City of Cleveland Health Department Citations (count)



* Note: Citations at the Bradley Rd Landfill and Harvard Refuse noted as ongoing for years 2019-2021. As shown in Figure H-8.2, the Cleveland Health Department issued two citations to the Ridge Road Transfer Station during the last five years and only issued one citation to a compost facility. The Cleveland

Health Department issued no citations to C&DD facilities. The Cleveland Health Department issued 159 citations to closed landfills between 2018 and 2022.

Cuyahoga County Board of Health

In 2022, the Cuyahoga County Board of Health was responsible for inspecting 9 transfer stations, 5 construction debris disposal facilities, 13 compost facilities, 1 industrial/captive landfill, 0 operating landfills, and several closed landfills. They performed the following services in 2022:

- 194 total inspections
 - 36 full inspections at 9 transfer stations
 - 4 full inspections at 1 captive landfill
 - 51 full inspections at 13 compost facilities
 - 20 full inspections at 5 C&DD landfills and recycling facilities
 - 82 full inspections at 21 closed landfills and methane monitoring
 - Responded to 15 nuisance complaints

- 59 citations were issued in 2022, and the citations by solid waste facility type are as follows:
 - Transfer stations – 1 from 1 transfer station
 - Compost facilities – 0 citations
 - C&DD facilities – 9 ongoing citations from 1 facility
 - Closed landfills- 49 from 4 facilities

Figure H-8.3 compares the Cuyahoga County Board of Health Inspections by solid waste facility type between 2018 and 2022.

Figure H-8.3. 2018-2022 Cuyahoga County Board of Health Inspections

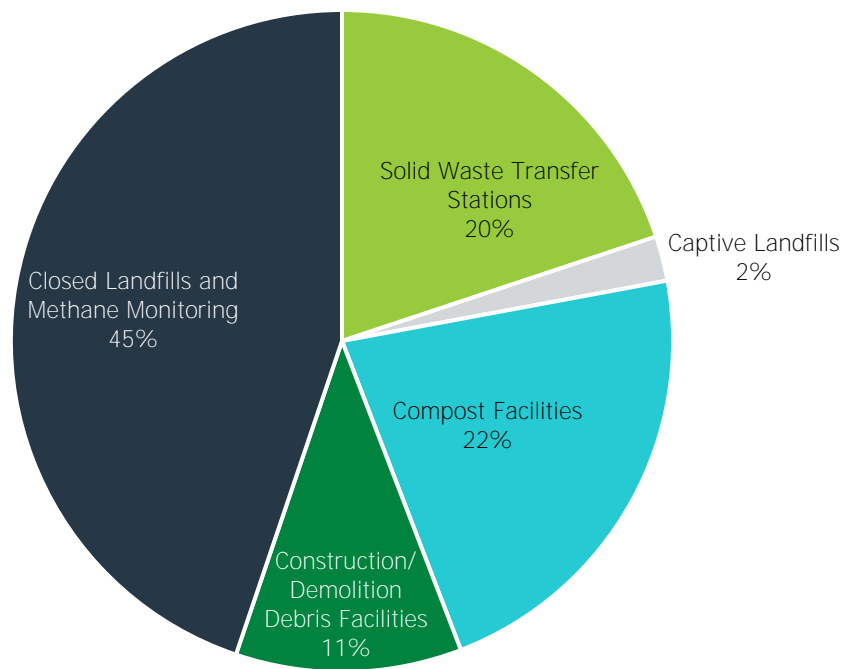
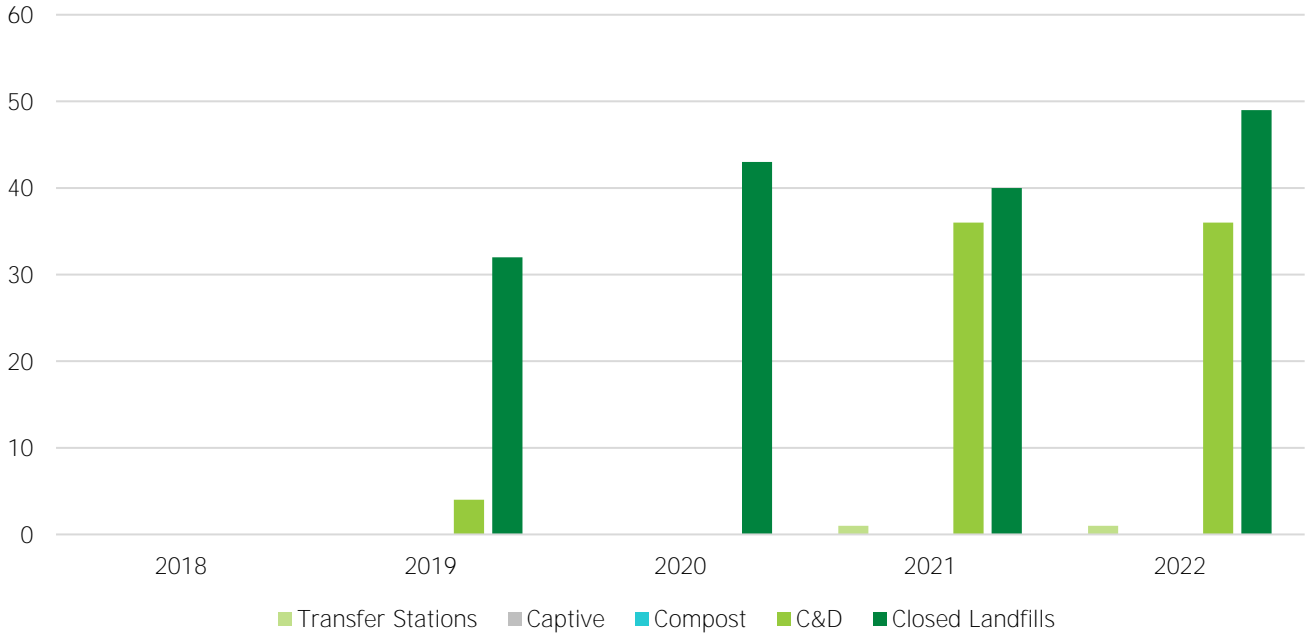


Figure H-8.4 compares the Cuyahoga County Board of Health citations by solid waste facility type between 2018 and 2022

Figure H-8.4. 2018-2022 Cuyahoga County Board of Health Citations



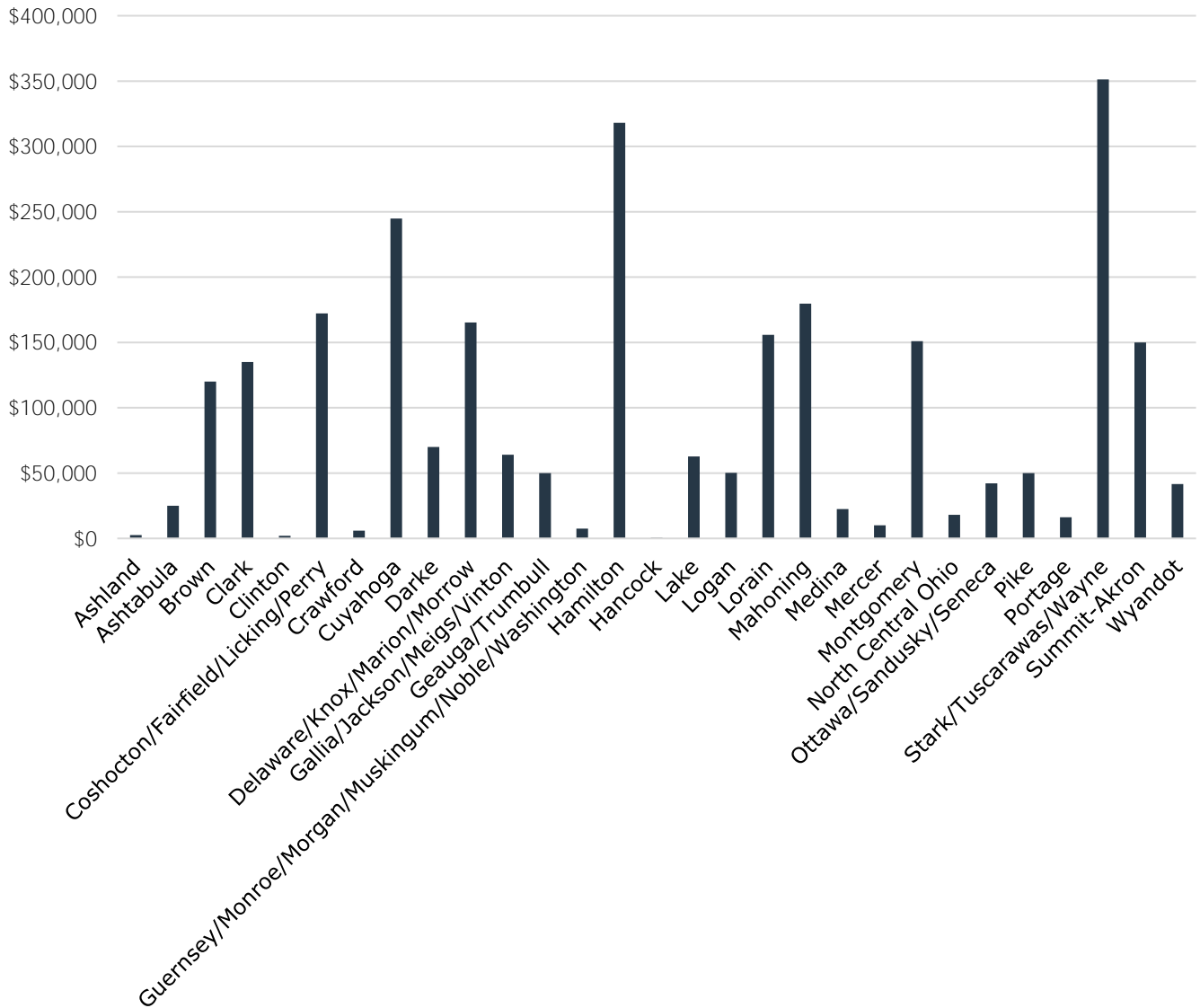
* Note: Citations at the Silver Oak C&D Facility noted as ongoing for years 2019-2022

* Note: There were no citations in 2018

As shown in Figure H-8.4, the Cuyahoga County Board of Health issued the vast majority of citations to closed landfills, followed by C&DD facilities. Closed landfills, many of which are orphaned, have the greatest number of unresolved violations.

The funding of health departments by solid waste districts across Ohio has been evaluated many times. The Ohio EPA Division of Materials and Waste Management published data on health department spending in 2020. Figure H-8.5 summarizes the expenditures by SWMDS to fund health departments. Cuyahoga is the third highest District for funding to health departments and the highest for a solid waste district without a landfill.

Figure H-8.5. Solid Waste District Funding to Health Departments



B. STRENGTHS, CHALLENGES AND OPPORTUNITIES

The District is committed to funding the two health departments for services that benefit the District and its communities. The District continues to work with the health departments on resolving illegal dumping and to ensure that solid waste code enforcement services are conducted in a manner that efficiently and effectively protects the environment of Cuyahoga County.

The following section summarizes the strengths, challenges, and opportunities for health department agreements.

Strengths

- The District annually executes an Agreement with the health departments that formalizes the scope of services and budget.

- Health departments have been amenable to adjusting work scopes and budgets as priorities and needs evolve.
- The health departments provide the District with quarterly reports that detail the number of **inspections, notices of violations (NOVs), the resolution of NOV's and account for funds expended.**
- The health departments have a formal procedure to issue NOVs to solid waste facilities to correct issues of non-compliance (also see challenges below).
- The number of citations at certain types of solid waste facilities has remained low over the last five years, pointing to increased compliance for licensed facilities.
- The health departments partner with the District in the work of its Environmental Crimes Task Force. Investigating and eliminating open dumping has become a larger role beyond just solid waste facility inspections.

Challenges

- Both health departments issue the most citations to closed landfills which never get resolved because there is no revenue source to fix them (orphaned).
- The Cuyahoga County Board of Health issued 148 citations to C&DD facilities during the last five years, but the District does not receive generation fee revenue from C&DD waste to fund inspecting these facilities.
- While the health departments have a formal procedure to issue NOVs to solid waste facilities and property owners to correct issues of non-compliance, often the violations are not corrected.
- The District provides more funds to health departments than any other Ohio solid waste district without solid waste landfills.
- As discussed in Section H.6, Restricted and Difficult to Manage Wastes, illegal dumping of scrap tires and solid waste is prevalent throughout the District but current health department contracts do not include provisions to ensure that tire dealers are properly managing scrap tires.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and challenges and other factors identified in this section.

The following opportunities for potential improvements are designed to improve the challenges identified above.

Include Scrap Tire Generator Inspections in Health Department Contracts

The District could renegotiate its contract with the health departments to focus less on inspecting licensed solid waste facilities that have not received citations over the last five years and focus more on inspecting scrap tire facilities. Inspections would verify that scrap tire generators are using licensed scrap tire haulers and properly storing and securing scrap tires.

Develop a Clean-Up Fund for Open Dump Sites

The District could establish an Open Dump Remediation Fund to be used to clean up open dumps. Funding could come from the payment of illegal dumping fines resulting from the work of the Environmental Crimes Task Force and supplemented with grants.

Another possible source of remediation funding could come from liens on properties. Applicable sites would only be remediated if a lien on the site could be obtained to recover the clean-up costs. Recovered costs would be directed to the District to replenish funds expended.

Sites would only be remediated in cases where a lien could be placed on the property to recover costs, or where there was no identified property owner to cite or in cases of dumping where the property owner was the victim. The grant criteria could mirror that which the Ohio EPA uses for its no-fault scrap tire abatement program and include the following restrictions:

- Funds can only be used to remediate properties located within the District.
- All grant requests must demonstrate a deterrence strategy that either promotes or creates incentives to eliminate future or continued dumping at each designated site.
- Grant could not be used to remediate any hazardous waste (as such term is defined in Chapter 3734 of the Ohio Revised Code) dump sites.

C. CLEVELAND-CUYAHOGA ENVIRONMENTAL CRIMES TASK FORCE

In 2013, the District facilitated the establishment of the Cleveland-Cuyahoga Environmental Crimes Task Force (ECTF). The ECTF is a coalition of public agencies working to end the problem of open dumping in Cuyahoga County by enforcing the criminal open dumping penalties contained in the Ohio Revised Code. Table H-8.1 identifies the Task Force partners.

Table H-8.1. ECTF Partners

Cleveland	County	State & Federal
Cleveland Police Department	Cuyahoga County Sheriff’s Office	Ohio EPA
Cleveland Law Department	Cuyahoga County Prosecutor Office	Ohio Attorney General
Cleveland Health Department	Cuyahoga County Board of Health	US EPA
	Cuyahoga County Solid Waste District	

The ECTF partners confer on cases, develop operating protocols, and develop community outreach strategies.

Investigations are conducted by an Environmental Crimes Unit staffed by the **Cleveland Police Department and the Cuyahoga County Sheriff’s office. Together, six full-time enforcement officers** work solely on open dumping and environmental crimes investigations. The Cleveland Police Department provides three full-time detectives **to the unit. The County Sheriff’s office provides three full-time enforcement officers.**

The Cuyahoga County Prosecutor’s office prosecutes open dumping cases and other environmental crimes. Until the ECTF was formed, enforcement was minimal.

Analysis and Evaluation

In 2022, the ECTF continued its mission to identify, investigate and prosecute those responsible for the illegal dumping of solid waste, scrap tires, C&DD and the violation of other environmental laws of Ohio. Investigators followed up on all felony dumping cases and conducted inspections at local junk yards, scrap yards and tire shops. The use of 18 surveillance cameras greatly aided investigators in 2022. Statistics resulting from the 2022 investigations and inspections are listed below.

- 150 investigations
- 5 misdemeanor citations
- 4 cases sent to the grand jury awaiting trial

Court Fines

In 2022, fines totaling \$575 were collected from court proceedings and ordered to be paid directly to the District. The District used the funds to purchase equipment for use by task force investigators.

In 2022, the District contributed \$3,551.71 to the ECTF. In 2021, the District contributed \$2,316.65 and in 2020, \$125.00. The funding provided by the District is used for equipment purchases and training.

Strengths, Challenges, and Opportunities

The District is committed to continue funding of the ECTF. The following section summarizes the strengths and challenges for the ECTF.

Strengths

- The ECTF completes investigations and inspections on solid waste related issues in the District.
- The ECTF executes warrants, indicts, and convicts felons and issues citations for misdemeanor violations for solid waste issues including open dumping.
- The District uses the fines collected through the ECTF for their services.
- Continual training for investigators and inspectors is conducted to improve techniques and results.

Challenges

- Due to the COVID pandemic impacts on staffing, some ECTF law enforcement personnel were **redirected to cover other law enforcement activities. This had a direct impact on the ECTF's** activities.
- Scrap tire dumping and open dumping remains a significant problem in Cuyahoga County.
- There is no full-time dedicated county prosecutor assigned to environmental crimes cases.
- There is no dedicated Common Pleas court judge to preside over environmental crime cases.
- The open dumping penalty in Ohio is an unclassified felony which may be too severe for some cases.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and challenges and other factors identified in this section.

The following opportunities for potential improvements are designed to improve the challenges identified above.

Execute an Agreement/Memorandum of Understanding Between all ECTF Participants

Create and execute an Agreement or Memorandum of Understanding between the Cuyahoga County **Solid Waste District, Sheriff's Office, Cleveland Police Department, Prosecutor's Office, Common Pleas Court Judge, Cuyahoga County Board of Health, and the Cleveland Department of Health**, outlining responsibilities and staffing and fiscal commitments.

Demonstrate Need for Dedicated Full-Time County Prosecutor

The District could work with the ECTF and other stakeholders to demonstrate the need for a dedicated county prosecutor that would be assigned to environmental crime cases.

Lobby for Dedicated Common Pleas Court Judge

The District could work with the ECTF and other stake holders to lobby for a dedicated Common Pleas court judge to preside over environmental crime cases.

D. COURT COMMUNITY SERVICES LITTER COLLECTION PROGRAM

The District, under contract with Court Community Service (CCS), offered free litter collection services to District communities in 2022. CCS is a nonprofit agency that arranges community work for adult offenders **from the Cuyahoga County Municipal and Common Pleas courts. This is the District’s longest running** service and supplements local litter and illegal dumping removal efforts.

To participate, communities complete a sign-up sheet to identify where crews are needed to work – typically roadways and other public areas. Collection services are available year-round, seven days per week from 9:30 a.m. until 3:30 p.m. CCS then schedules a crew to work in the community. Two crews are available to perform litter collection. Each crew consists of one supervisor and up to eight workers from CCS. Each community is responsible for disposing of the bagged litter. After each collection day, a record is provided identifying the roadways or public areas that were cleaned and the number of bags of trash collected.

Analysis and Evaluation

In 2022, the CCS program provided 11,155 hours of free litter collection to 55 participating communities and collected 7,756 bags of litter. The cost to the District was \$117,100 and covered transportation expenses, supervisor salaries and collection supplies. Table H-8.2 summarizes the past 5 years of expenditures on the CCS program. Cost increases of 1-2% per year cover cost of living increases.

Table H-8.2. CCS Litter Program Expenditures

Year	Program Cost
2018	\$76,284
2019	\$103,603
2020	\$112,724
2021	\$114,978
2022	\$117,100

Table H-8.3 identifies the communities served by the CCS program during the Reference Year, total man hours provided, and total bags of litter collected:

Table H-8.3. CCS Litter Program Statistics

Political Subdivision	# of Times Served	Man Hours	Total Bags Collected	Bags Collected Per Man-Hour Spent
Cities				
Beachwood	7	189	136	0.7
Bedford	9	332	313	0.9
Bedford Heights	7	290	235	0.8
Berea	9	336	149	0.4
Brecksville	8	252	176	0.7
Broadview Heights	8	270	190	0.7

Political Subdivision	# of Times Served	Man Hours	Total Bags Collected	Bags Collected Per Man-Hour Spent
Brooklyn	7	259	185	0.7
Brook Park	7	231	213	0.9
Cleveland	0	0	0	n/a
Cleveland Heights	8	276	239	0.9
East Cleveland	6	192	278	1.4
Euclid	7	173	155	0.9
Fairview Park	10	326	196	0.6
Garfield Heights	9	286	266	0.9
Highland Heights	6	165	109	0.7
Independence	8	225	238	1.1
Lakewood	8	308	216	0.7
Lyndhurst	8	275	184	0.7
Maple Heights	9	273	353	1.3
Mayfield Heights	8	266	202	0.8
Middleburg Heights	8	238	135	0.6
North Olmsted	9	357	241	0.7
North Royalton	8	308	184	0.6
Olmsted Falls	9	338	162	0.5
Parma	7	273	110	0.4
Parma Heights	6	186	101	0.5
Pepper Pike	6	165	67	0.4
Richmond Heights	8	332	175	0.5
Rocky River	6	143	108	0.8
Seven Hills	8	245	113	0.5
Shaker Heights	5	182	125	0.7
Solon	8	266	175	0.7
South Euclid	7	182	142	0.8
Strongsville	8	255	183	0.7
University Heights	7	217	219	1.0
Warrensville Heights	5	283	200	0.7
Westlake	9	177	135	0.8
Villages				
Bay Village	0	0	0	n/a
Bentleyville	7	182	150	0.8
Bratenahl	8	266	234	0.9
Brooklyn Heights	8	245	252	1.0
Chagrin Falls	0	0	0	n/a
Cuyahoga Heights	8	197	150	0.8
Gates Mills	9	273	196	0.7

Political Subdivision	# of Times Served	Man Hours	Total Bags Collected	Bags Collected Per Man-Hour Spent
Glenwillow	8	248	118	0.5
Highland Hills	8	301	196	0.7
Hunting Valley (adjusted)	8	224	72	0.3
Linndale	4	84	74	0.9
Mayfield	7	175	177	1.0
Moreland Hills	6	137	66	0.5
Newburgh Heights	7	199	131	0.7
North Randal	7	305	300	1.0
Oakwood	7	245	205	0.8
Orange	8	189	115	0.6
Valley View	8	259	204	0.8
Walton Hills	7	242	147	0.6
Woodmere	7	177	135	0.8
Townships				
Chagrin Falls Twp.	0	0	0	n/a
Olmsted Twp.	8	266	120	0.5

In addition, the CCS program provided services to the District on three occasions in 2022 with 49 hours spent disassembling yard signs collected at the District for recycling. The CCS program workers also provided 385 hours for 14 communities collecting **scrap tires during the District's Scrap Tire Round-Up**.

Strengths, Challenges, Opportunities, and Conclusions

The following section summarizes the strengths, challenges, and opportunities for the CCS program.

Strengths

- Over 11,000 hours of free labor were utilized for litter collection, and scrap tire collection in 2022.
- Based on a minimum wage of \$10.45 per hour, the value of free labor is \$114,950.
- Over 7,756 bags of litter were filled using CCS workers providing beautification to District communities.
- Over 14,822 scrap tires were collected in this program in 2022.
- Most communities participate in the program.

Challenges

- A few communities do not take advantage of the program.
- Recyclables are not separated out from the litter.
- Some communities indicated a need for more communication with CCS to address the most problematic litter areas.
- Some communities indicated that they need additional clean-up activities in their community.
- Some communities require more man-hours to collect less litter bags than others.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and challenges and other factors identified in this section.

The following opportunities for potential improvements are designed to improve the challenges identified above.

Work with Communities that Do Not Participate

The District could evaluate why some of the communities do not take advantage of the CCS program and then determine what steps are necessary to bring these communities into the program.

Facilitate Targeted Clean Ups

The District could facilitate more communication with CCS and the communities to target clean ups at the most problematic litter locations.

Evaluate the Possibility of Adding a Third Crew

Work with CCS to evaluate the logistics and cost for adding a third crew and supervisor for clean-up activities.

Improve Cost Effectiveness of Program

The District could evaluate why some of the communities require more person-hours of time to collect less bags of litter. Management of each community program could be altered to improve the cost effectiveness depending on the evaluation results.

Evaluate Recycling Opportunities

Work with CCS to determine whether having crews segregate plastic bottles and aluminum cans for recycling would be feasible and cost effective.

Conclusions

The District will conduct a prioritization process to determine which of the above improvements, initiatives and or strategies will be implemented in Appendix I, Section A. Further details on the implementation of each improvement, initiative and or strategy that is ranked high enough to be implemented will be included in Appendix I, Section B.

H-9: FINANCIAL ANALYSIS

The financial analysis has been divided into three parts: Revenues, Expenses, and District Fund Balances.

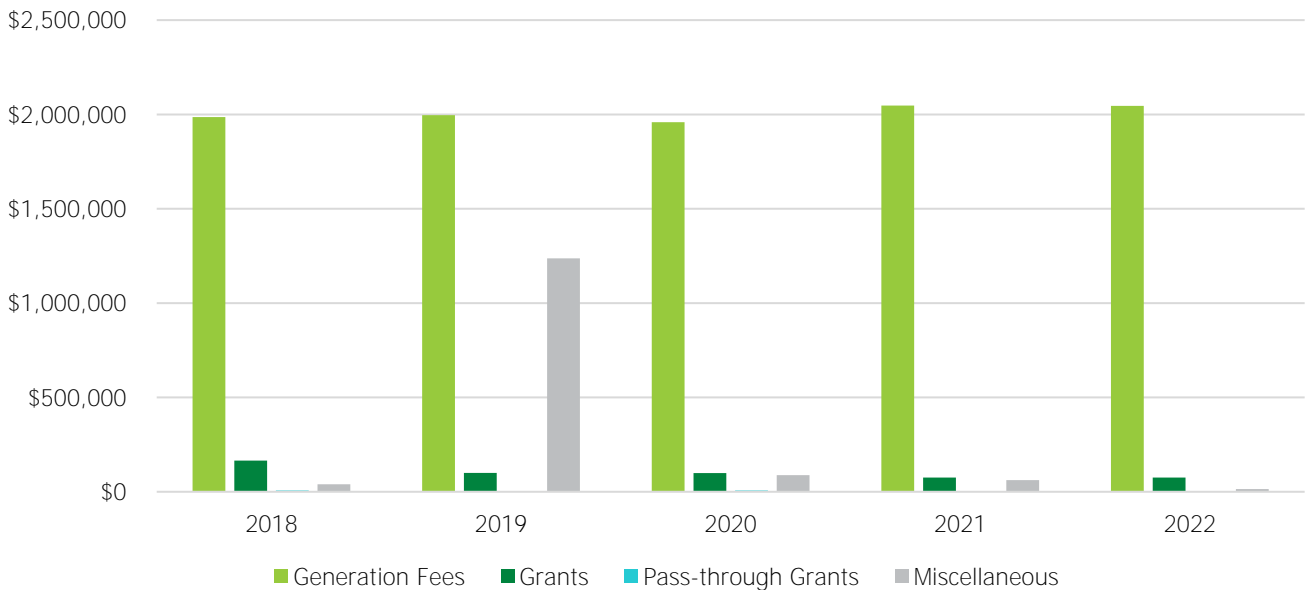
A. REVENUES

The nature of the District’s revenue has remained the same during the past five years (2018 through 2022), with the majority of District revenues coming from generation fees, which are authorized by **Section 3734.573 of the Ohio Revised Code**. The District’s generation fee was \$1.50 per ton in 2022 and had been that rate since 2007. The District has only increased generation fees two times, in 2007 and 2023 since its inception in 1988. In 2023, the generation fee was increase \$0.50 per ton to \$2.00 per ton.

In addition to generation fees, revenue sources for the District between 2018 and 2022 included:

- Grants
 - \$75,000 Grant from Northeast Ohio Regional Sewer District.
- Compost Equipment/Bin Sales
 - \$5 - \$50 per compost equipment/bin
- Miscellaneous
 - \$1,200,000 OWDA Loan in 2019 for the purchase of our Convenience Center Building.
 - C&DD fees
 - Illegal dumping fines.

Figure H-9.1. Sources of Revenue for the District: 2018 – 2022



As shown in Figure H-9.1, the vast majority of District revenue, or 96%, was from generation fees followed by grants at 3.5% in 2022.

Other grants (including NEORS), compost bin sales, and miscellaneous revenue are not guaranteed funding sources, and the amount has varied significantly over the last five years. Therefore, for planning purposes and financial forecasting, the District conservatively limited future revenue sources to the generation fees.

Table H-9.1 shows the amount spent on implementing the plan from 2018 through 2022.

Table H-9.1. 2018-2022 Plan Revenues

Expense	2018	2019	2020	2021	2022
Generation Fees	\$1,986,059	\$1,996,028	\$1,959,207	\$2,047,410	\$2,045,524
Grants	\$164,913	\$100,000	\$99,172	\$75,000	\$75,000
Pass-through Grants	\$6,966	\$0	\$6,966	\$0	\$0
Miscellaneous	\$39,493	\$1,236,838	\$87,984	\$61,534	\$14,697
Total	\$2,197,431	\$3,332,865	\$2,153,32	\$2,183,944	\$2,135,220

B. EXPENDITURES

As prescribed by Section 3734.573 of the Ohio Revised Code, the District can spend generation fees on ten categories of expenditures:

- Plan monitoring
- Plan implementation
- Health department enforcement
- County assistance
- Well testing
- Out-of-state waste inspection
- Open dump, litter law enforcement
- Health department training
- Municipal/township assistance
- Compensation to affected communities

As shown in Figure H-9.2, the District expended a total of \$1,943,346 during the reference year.

Figure H-9.2. District Expenditures: 2022

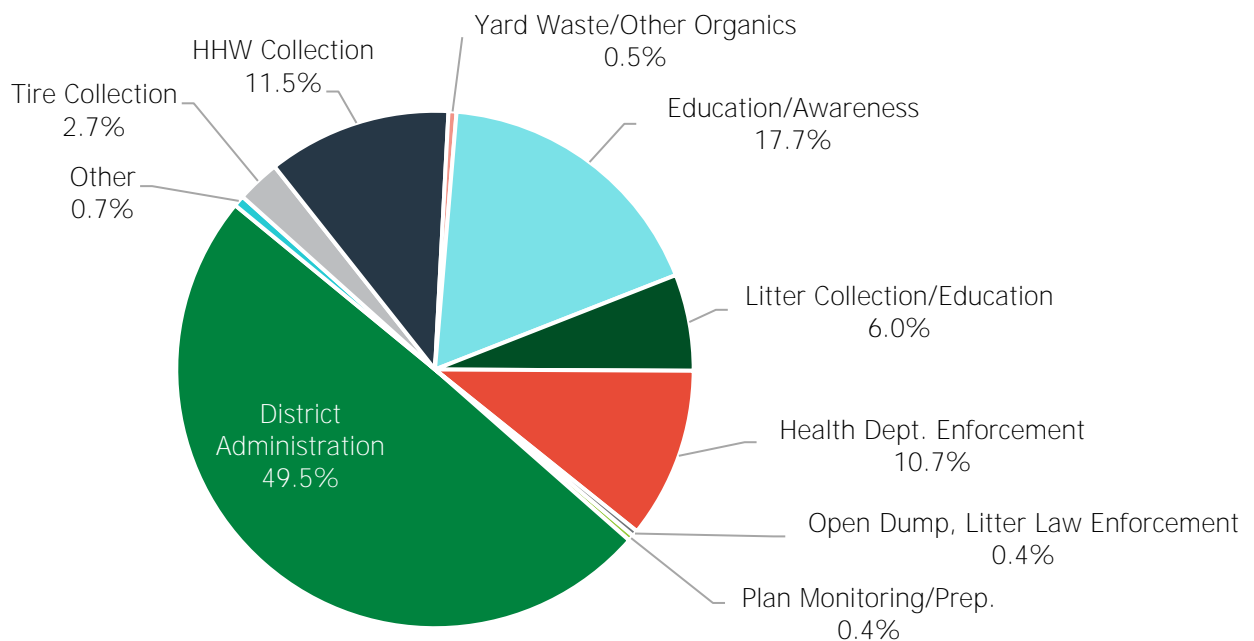
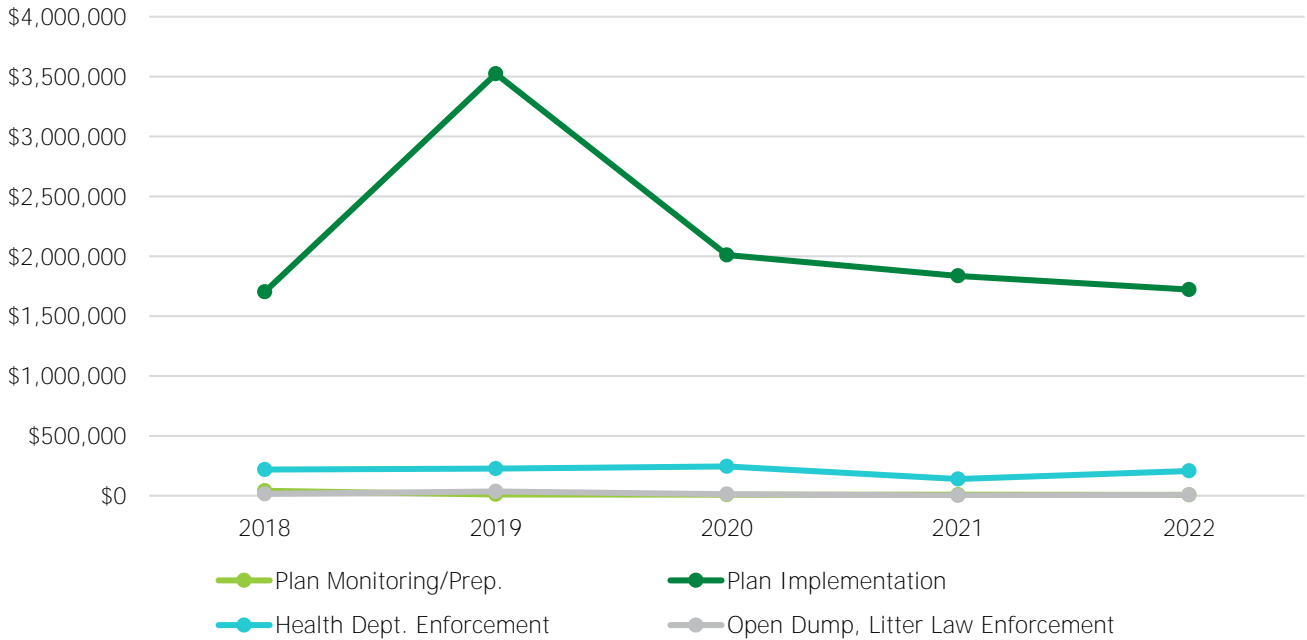


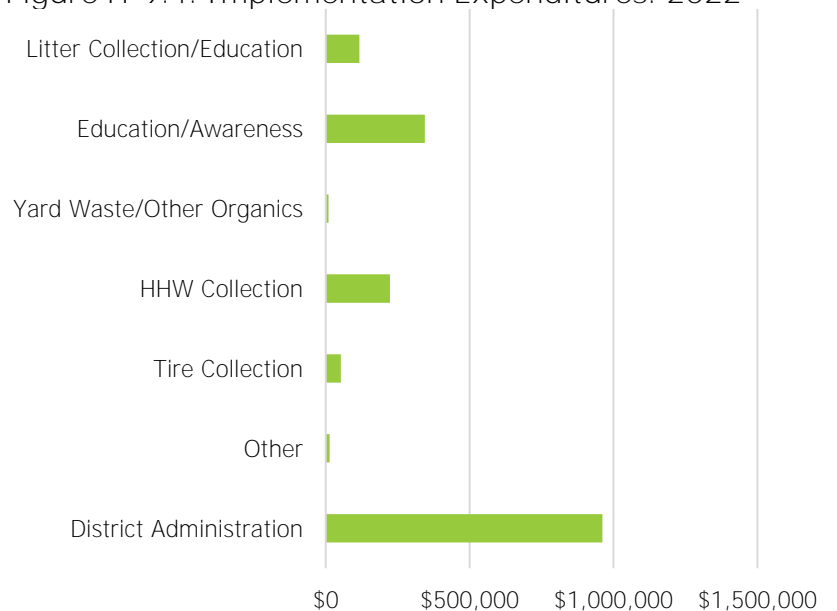
Figure H-9.3 shows the expenses the District incurred for each of these categories between 2018 and 2022. District Administration covers personnel, office/Convenience Center overhead, and contractual/professional service costs.

Figure H-9.3. District Expenditures: 2018 - 2022



Within plan implementation, District administration costs were the highest expenditures during the reference year (Figure H-9.4)⁴. However, Figure H-9.4 only shows the contract and material costs associated with programs such as HHW. Staff time and building space-related costs required to conduct a program are incorporated within the District Administration line item. In 2019, the District acquired an OWDA loan of \$1,200,000.00 for the purchase of the Convenience Center Building.

Figure H-9.4. Implementation Expenditures: 2022



⁴ Office overhead includes lease payments, utilities, supplies, fuel, magazine subscriptions/association memberships, office equipment rental (copy machine/postage machine), other equipment purchase or maintenance (District vehicles, tow motors), telephone/cell phones, postage, staff travel and training, printing, legal notices.

Table H-9.2 shows the amount spent on implementing the plan from 2018 through 2022.

Table H-9.2. 2018-2022 Plan Implementation Expenditures

Expense	2018	2019	2020	2021	2022
Personnel	\$862,070	\$1,206,665	\$1,129,773	\$1,004,508	\$961,238
Office Overhead	\$225	\$200	\$3,217	\$15,265	\$13,483
Tire Collection	\$38,083	\$38,510	\$54,857	\$40,521	\$52,659
HHW Collection	\$363,164	\$301,279	\$302,227	\$249,457	\$223,098
Yard Waste/Other Organics	\$13,094	\$0	\$0	\$4,976	\$9,688
Advertisement/Promotion	\$339,370	\$306,608	\$393,513	\$406,352	\$344,355
Litter Collection/Education	\$76,284	\$103,603	\$112,724	\$114,978	\$117,100
ODNR pass-through grant	\$0	\$0	\$13,931	\$0	\$0
Other	\$10,000	\$1,566,925	\$0	\$0	\$0
Total	\$1,702,290	\$3,523,790	\$2,010,241	\$1,836,057	\$1,721,621

C. BALANCES

Between the years 2021 and 2022, District revenues exceeded expenditures, and expenditures exceeded revenues during 2019 and 2020 (Table H-9.3).

Table H-9.3. District Annual Surplus/Deficit and Year-End Balances

Year	Revenue	Expenses	Annual Surplus/Deficit (\$)	Balance (\$)
2017	Ending Balance			\$3,217,651
2018	\$2,197,431	\$1,977,831	\$219,600	\$3,437,251
2019	\$3,332,865	\$3,796,519	-\$463,654	\$2,973,597
2020	\$2,153,329	\$2,276,994	-\$123,665	\$2,849,932
2021	\$2,183,944	\$1,985,711	\$198,234	\$3,048,166
2022	\$2,135,220	\$1,943,346	\$191,874	\$3,240,040

By the end of 2022, the District still had a balance of \$3,240,040. However, if the District wants to retain a minimum eight months of cash reserves for operating expenses, or approximately \$1.5 million, the District can only withdraw an average of approximately \$96,000 per year from the remaining balance of \$3.2 million to remain financially solvent throughout the planning period. The \$96,000 per year expenditure from the District's Fund Balance would be in addition to the District's annual expenditures (~\$1.9 M), which are based upon the District's annual revenue receipts.

D. STRENGTHS, CHALLENGES, OPPORTUNITIES AND CONCLUSIONS

The following section summarizes the strengths, challenges, opportunities, and conclusions for the District's finances.

Strengths

- The District has only increased the generation fee twice since its inception.
- The District has collaborated with organizations such as health departments to reduce costs.
- The District enters the next planning period with a balance of approximately \$3.2 million.

- The District purchased office space which allows for loan budgeting compared to anticipating rent increases.

Weaknesses

- Generation fees could be less than \$1.5 million a year throughout the planning period.
- The District does not use a full cost accounting approach to allocate salaries and overhead costs to programs.
- The District can only withdraw an average of approximately \$96,000 per year from the remaining balance of \$3.2 million to remain financially solvent throughout a 15-year planning period.

Opportunities

- The District could set aside a minimum eight-months of operating expenses into a fund that cannot be used to supplement revenues.

E. CONCLUSIONS

Due to a projected decrease in population, the District will most likely receive less revenue from generation fees during the next planning period. The District will continue to reduce expenditures by making programs and contract services efficient and cost effective, which will allow the District to retain a significant cash balance.

H-10: REGIONAL ANALYSIS

The purpose of the regional analysis is to consider regional opportunities for collaboration and **partnerships, and to consider how the District's decisions may affect other stakeholders in the region.** This analysis may result in the creation of a systematic plan to communicate, collaborate and/or partner with the stakeholders identified through this process. This analysis may also indicate that the actions of the District and current regional initiatives are sufficient, and no further efforts are warranted.

The District considers recycling collection and processing by nature as regional. For instance, in reference year 2022, a material recovery facility (MRF) was not located within the District, but four single-stream MRFs in neighboring counties processed all the curbside recyclables from the District. A new single-stream MRF opened in 2023 within the District. The District is also reliant on tire processing facilities located outside of the District. Finally, some yard waste and food waste are also composted at facilities outside of the District, but still within the region.

The District views partnerships, collaboration and communication as a necessary process with its private sector partners as well as with its public-sector neighbors. This is very important to the District as the private sector is a significant service provider for solid waste management services within the District.

The following section details the partnerships and collaboration efforts of the District and its partners.

A. REGIONAL PARTNERSHIPS, COMMUNICATION AND COLLABORATION

The District has historically been a leader in regional efforts, communication and collaboration regarding solid waste management. **The following section summarizes the District's efforts to work with other interested parties for the management of solid waste and/or the sharing of expertise.** These are categorized below to describe efforts within the District (intra-district) as well as efforts outside the district (inter-district):

Intra-District Collaboration

- In 1994, the District created a Paper Marketing Cooperative to collectively contract for newspaper recycling services on behalf of participating communities. This cooperative was expanded in 2003 **to include all residential mixed paper. The District's purpose** in forming the cooperative was to help communities obtain better pricing for the fiber they collected. Aggregating the volume from multiple communities resulted in payments back to the participants rather than recycling charges. The cooperative involved the District issuing an RFP on behalf of participating communities for paper recycling services. Those communities then entered into individual contracts with the successful contractor, Caraustar Recycling, and were paid directly. The District managed the procurement and record keeping process and facilitated community involvement and communications. When the communities switched to single stream collection rather than dual stream collection, a new, expanded recycling cooperative was created to contract for single-stream recycling services as described below.
- In 2007 the District developed a Waste Disposal Consortium and in 2010, a Recycling Consortium. **These consortiums are still in place today. The District issues RFP's for waste disposal and recycling services** on behalf of member communities in order to obtain favorable volume pricing. Both consortiums have resulted in savings on waste disposal and recycling rebates for the members.

- The District works with numerous local agencies, entities, non-profit groups and stakeholders as a part of implementing and developing its solid waste management plan.
- The District actively engages with local sustainability focused organizations to promote the role of waste reduction, recycling and composting within the broader sustainability framework. The District is active with the Cleveland Office of Sustainability, local college sustainability offices, Zero Waste NEO, local food rescue and reuse organizations, and more.
- The District provides direct services, such as HHW management, to all 59 political subdivisions, as well as grants, technical assistance, education and outreach support. The level of trust, communication and collaboration between the District and its member communities is unique **amongst Ohio solid waste districts. The District also actively tracks each community's recycling performance and solid waste management contracts and operations.** This information is shared with all communities through its Contracts and Practices Survey and its Residential Recycling **Report. The Report is included in the District's Annual Report and mailed to all communities and other resident and business contacts.**
- The District also engages with the public and businesses through its programs and social media platforms. The District had nearly 10,000 followers of its social media accounts, 136,000 users of its website with nearly 375,000-page views annually.

Inter-District Collaboration

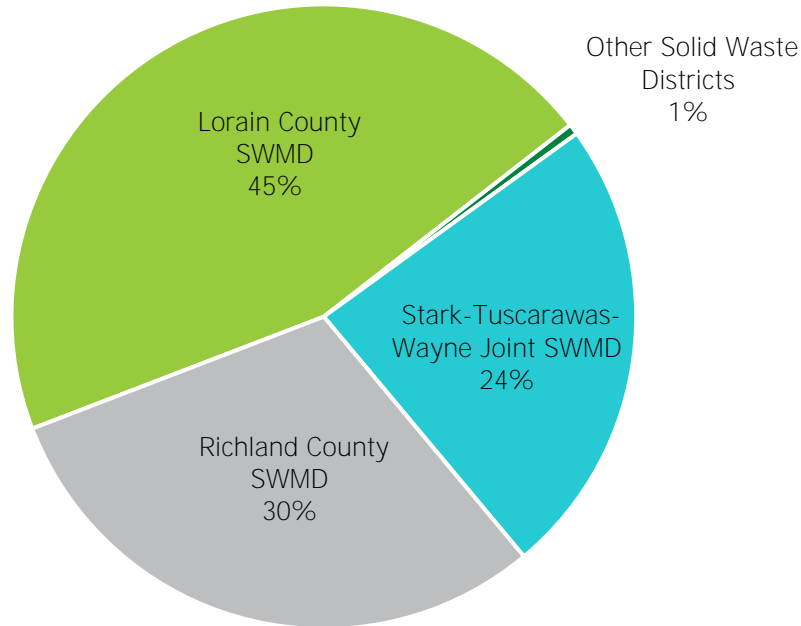
- In 1997, the District created the Northern Ohio HHW Cooperative to collectively bid and contract for HHW services on behalf of nine solid waste districts. This regional cooperative was successful in securing the most competitive pricing for the participating districts and their HHW collection events. The District continued facilitating the procurement process for the cooperative until 2010 when it began operating its year-round HHW collection program through the opening of its Special Waste Convenience Center.
- The District serves or has served in leadership roles on numerous Ohio boards including the Solid Waste Association of North America – Ohio Buckeye Chapter, the Organization of Solid Waste Districts of Ohio, the Ohio Association of Litter Prevention and **Recycling Professionals, and Ohio's Material Management Advisory Council.** These organizations work with their members to advance sustainable solid waste management practices and to network on solutions to solid waste management issues. The District has been especially active with organizing conferences and trainings that assist members in creating or improving solid waste management programs and initiatives.
- The District engaged with other Northeast Ohio solid waste districts on various matters over the years regarding illegal dumping, solid waste facility reporting and fees. Recently, the District had **a sharing session about the operation of each district's permanent HHW center.** The District has also met with its neighboring districts and staff to share information on how they run their various programs.
- The District has, in the past, collaborated with the Lorain, Summit, and Geauga-Trumbull solid waste districts and their health departments regarding illegal dumping and enforcement.
- The District has, in the past, entered into Joint Use Agreements with other solid waste districts for the joint use of facilities as opportunities have arisen that benefit those districts.

B. REGIONAL IMPACT CONSIDERATIONS

The District comprises one of the largest “waste sheds” in Ohio and is heavily reliant on facilities located outside the District for landfill disposal, recycling processing and composting. Since there are no MSW landfills operating in Cuyahoga County, all solid waste is exported to landfills in other districts for disposal.

Figure H-10.1 shows the quantity of waste that was disposed in other Ohio solid waste management districts during the Reference Year.

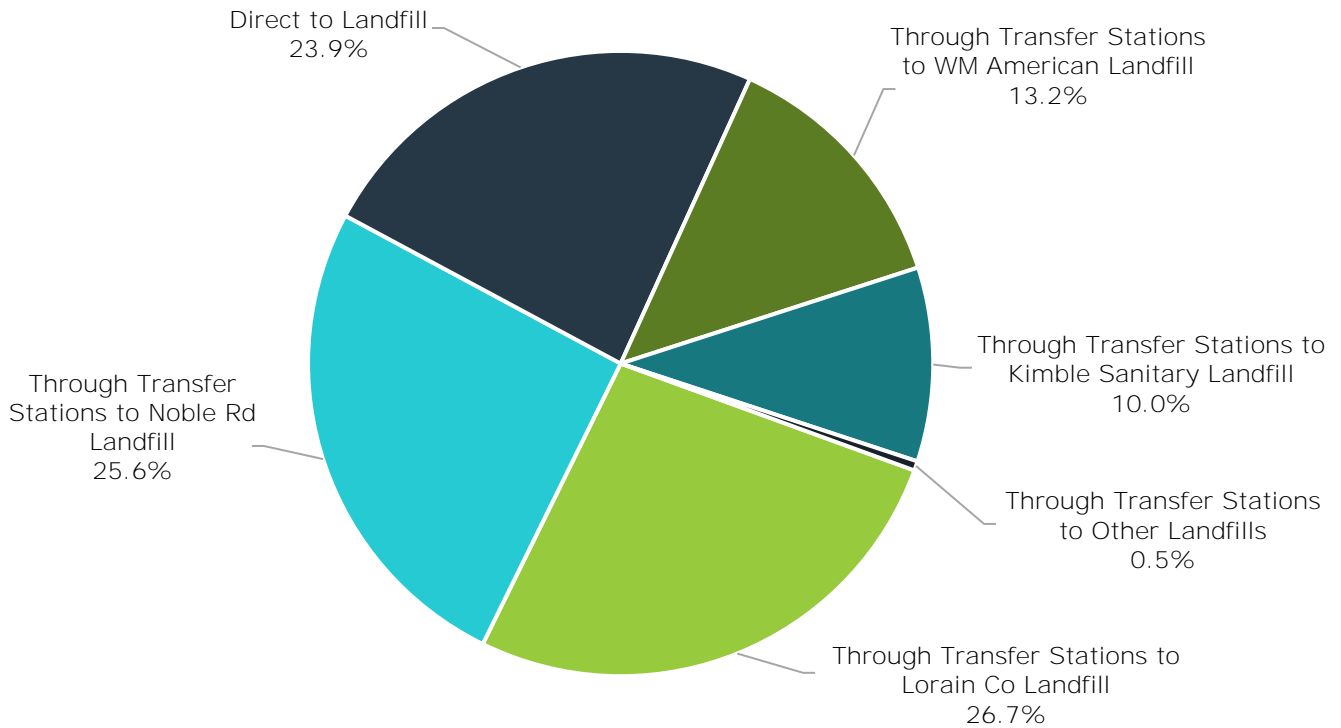
Figure H-10.1: Cuyahoga County Solid Waste District
2022 Waste Flow Analysis - Disposal Tons - Location by District



Note: Total = 1,388,926 tons: sum of direct haul and transferred waste to landfill in year 2022 (Table D-1a+D-2)

Figure H-10.2 shows the quantity of waste directly hauled to the landfill (24%) and the receiving landfills for waste after passing through the various transfer stations located in the District (76%).

Figure H-10.2: Cuyahoga County Solid Waste District
 2022 Waste Flow Analysis
 Disposal Tons – Direct Haul vs Transferred



In addition, since there were no single-stream material recovery facilities (MRF's) operating in the District during the reference year 2022, all single stream curbside recyclables were exported to neighboring districts for processing as shown in Figure H.10-2. Nearly all of the landfills and all the MRF's are privately owned and operated. As a result, the activities and decisions of these private facilities and neighboring solid waste districts can affect the availability and capacity of these facilities for Cuyahoga County waste generators. Conversely, the District is sensitive to the fact that its waste and recycling exports create both opportunities and impacts for other solid waste districts.

Figure H-10.3: Cuyahoga County Solid Waste District
Single Stream Curbside Material Exports – MRFs



The following general policies of the District have been developed and practiced over the years with the above set of circumstances in mind:

- **The District's policies are to support and promote an open market for solid waste management** that reduces the need for public sector investment and involvement but relies on competition among private sector companies for price control and stabilization.
- **The District's** development of contracting consortiums (cooperatives) take into account competitive forces and the flow of solid waste and recyclables. **The District's policy is** to promote competition and foster cooperative initiatives, which limits opportunities for monopolies to develop.
- The District promotes competition to maintain good services and fair prices for solid waste services.
- The District does not designate where solid waste must be accepted in surrounding solid waste districts.
- The District is not considering developing a licensed solid waste management facility that could affect solid waste flow and competition in the region.
- The nine solid waste transfer stations that are located within the District are expected to continue operation throughout the planning period. The District does recognize that the disposal facilities used by each of the transfer stations may change over time due to contracting arrangements and bid processes.

C. REGIONAL ANALYSIS CONCLUSIONS

The District is confident that its approach to regional collaboration and open market approach to solid waste management has served the District and its regional partners very well. This approach has fostered competition, kept prices for services stable, supported private sector investment and job creation, and has been a good value for waste generators.

The District has not identified any needed changes to this approach and all existing policies and approaches regarding engagement with regional public and private partners and solid waste management will continue in the next planning period where appropriate. The following regional policies and initiatives will continue in the new planning period.

Partnership Development, Engagement, Collaboration and Communication

The District will continue its current regional partnerships with public and private partners at the state and local levels and will seek new ones when it makes sense to continue best management practices for solid waste issues and management techniques.

Joint Use Agreements

The District will continue to reserve the right to enter into facility joint use agreements with other solid waste districts if an opportunity and/or issue presents itself that would benefit the District to consider such an arrangement.

Solid Waste Disposal and Recycling Impacts to Region

The District will continue to work within the region regarding solid waste issues, disposal impacts, and recycling impacts as the largest contributor to the regional waste shed. The District will take the lead, as appropriate, when either issues arise, or opportunities present themselves throughout the new planning period.

H-11: DATA COLLECTION ANALYSIS

The State of Ohio classifies solid waste by three generation sectors: residential, commercial, and industrial. Solid waste districts are required to quantify the amount of solid waste that all generators source reduce, recycle, compost, incinerate, and dispose to establish a baseline and to demonstrate **achieving Ohio's landfill diversion goals. Collecting data is challenging due to a variety of factors and** takes considerable time and effort to gather and analyze. Regardless, the primary objective of the District is to divert materials from landfills, therefore data collection is important to measure results. The data collection process from beginning to end for each type of generator is described below.

Due to a robust commitment to obtaining and validating data, the District can demonstrate achieving Goal #2 of the State Plan, which requires a waste reduction and recycling rate of at least 25% for residential/commercial waste.

A. RESIDENTIAL SECTOR

The District's full-time Assistant Director collects and tabulates recycling totals from the 59 communities located in the District on an annual basis. The District compiles this data for its *Annual Report & Residential Recycling Report*, a publication created each year for communities, residents, and other interested parties. The District has established relationships with its communities, which is evident by the 100% reporting rate.

Residential sector recycling tonnages reported by communities includes data from curbside and drop-off recycling programs, yard waste collection programs, and special waste collection programs, such as HHW and scrap tires.

Communities also report disposal data, which provides the District with a more complete understanding of the recycling and disposal activities, as well as recycling rates, throughout a particular community. For example, if recycling tonnage decreases in a community, the District can evaluate whether recycling is truly decreasing, or whether a community lowered their overall waste generation total while maintaining or increasing the percentage recycled.

Data from District-sponsored programs, such as its Computer Round-Up, HHW Program, and Scrap Tire Round-Up, are included in residential sector recycling totals. **The District's contractors provide these** figures and they allocate the quantities by community.

The District obtains data from private recycling companies that operate programs independent of those provided by an individual community. An example of this is the Royal Oak Paper Retriever program. The District inventories the location of each paper drop-off site to assure that the correct community receives the recycling tonnage credit.

Residential Sector Data Gaps

The District is confident that the residential sector recycling data collected represents a nearly complete picture of the residential sector recycling activities that take place throughout the District. All major sources of recycling tonnage are captured **by the District's current data collection activities. If there are** gaps in data, the District estimates that they are negligible quantities.

Strengths, Challenges, and Opportunities

Out of the three sectors of waste generators, the District is most confident with the residential sector recycling data. The District will continue its current efforts.

Strengths

- Confident with residential sector data.
- The District obtains data that is substantially beyond Ohio EPA requirements that allows highly valuable analysis of the community-specific waste management systems.

Challenges

- Due to the extensive amount of data collected from 59 communities, massive excel spreadsheets with many tabs are required. Spreadsheets of this size make data categorization and analysis challenging.

Opportunities

- The District could have a database software program designed for the unique solid waste conditions and reporting requirements in both Cuyahoga County and State of Ohio.
- The District could trial the Municipal Measurement Program.

B. COMMERCIAL/INSTITUTIONAL SECTOR

Each year, the District's full-time Assistant Director conducts a survey to obtain recycling data as part of preparing the Annual District Report (ADR) for submission to Ohio EPA.

Generator Data

To obtain commercial/institutional recycling data for the reference year, 333 companies in Cuyahoga County were mailed/emailed a survey. The District received 97 responses for 2022 data, resulting in a response rate of 29%.

Survey recipients received a cover letter explaining the annual survey's purpose, a paper copy of the survey that could be submitted via mail, e-mail, or fax and a postage-paid business reply envelope. The cover letter also directed **recipients to the District's online surveying platform, Re-TRAC**, to complete the survey electronically. Examples of the envelope, cover letter, and business reply envelope are included at the end of this section in Attachment 1. In addition, the District sends an e-mail directing businesses that have provided a contact e-mail address to complete the survey online.

The District removes duplicate addresses when identified and revises bad addresses/returned envelopes for the next surveying cycle each year.

The District makes follow-up phone calls and sends e-mails as needed. For example, the District would follow-up if a survey is returned but incomplete or information included on the survey needs to be verified (i.e. a very large quantity or an amount which was significantly different from a survey returned from the same respondent in a previous year). The District also makes follow-up calls to non-respondents. The number of follow-up attempts varies based on whether the recipient previously provided data and the size of the business/organization.

The District is able to use survey responses for a three-year period on each Annual District Report (the survey calendar year and previous two years). The District reviews responses from the year preceding the survey year to ensure each company/entity is only counted once and that entities were still operating

during the current survey year. The District confirms operational status by online research, emails and/or phone calls.

Ohio EPA-Collected Data

The District utilizes data collected annually by Ohio EPA, including the *Material Recovery Facility and Commercial Recycling Data Report*, the *Compost Facility Report*⁵, and the *Scrap Tire Report*.

The District typically uses yard waste data reported by political subdivisions in lieu of relying on the data reported by registered composting facilities for most organics diversion activities but is careful to not double-count materials if data from both reporting sources are used.

Processor Data

Processor data is necessary to create a realistic snapshot of the recycling totals in a given survey year. The large quantity of individual commercial and institutional generators makes surveying all generators impractical and costly. Response rates also indicate that without processor data, the recycling conducted at many establishments would not be captured.

For survey year 2022, 95 processors were mailed a paper copy of the survey. This list of processors was based on ongoing annual surveying and reported processors from the business surveys along with other known new processors. Each processor on this list was identified as taking in recyclable materials from residents and/or businesses in Cuyahoga County.

Overall, 16 processors completed the survey and indicated they took in recyclable materials from residents and/or businesses located in Cuyahoga County. Another processor returned the survey but did not provide any information because they did not take in any materials from residents and/or businesses within Cuyahoga County. The remaining 79 processors did not complete the survey. The District received a 17% completion rate on the processor survey. Though the completion rate seems low, new processors have been added to the list over the years to help keep track of all processors known in the District.

The processors surveyed were mailed a cover letter explaining the annual survey's purpose, a paper copy that could be submitted via mail, e-mail, or fax and a postage-paid business reply envelope.

The District makes follow-up phone calls and sends e-mails as needed. For example, the District would follow-up if a survey is returned but incomplete or information included on the survey needs to be verified (i.e. a very large quantity or an amount which was significantly different from a survey returned from the same respondent in a previous year). The District also makes follow-up calls to non-respondents.

Measures to Combat Double Counting

Issues with double counting data can arise with processor data since the recyclable materials received at one reporting facility are often times sold or exchanged to another reporting facility. The District is careful not to double count this data by requiring the processors to provide the destination of their reported material tonnages. Issues with double counting data can also arise when data from generators is blended with processor data. The District only uses processor survey data for the commercial/institutional sector and only if the processor data is greater than the total reported by

⁵ The District uses food waste composting data from the Compost Facility Report, but does not typically use yard waste data, as it obtains this data from political subdivisions.

generators for a specific material. Tonnage data reported by commercial/institutional generators and processors is never blended.

C. INDUSTRIAL SECTOR

The District employs nearly the same sources and methods used for commercial/institutional sector surveying to survey the industrial sector. Methodology is described above. The only exception is that no processor data is used to calculate industrial sector recycling totals; only generator data is used. The original subsample survey list for the industrial sector was developed based on manufacturing SIC codes (20 and 22-39) using the *Harris Directory*. This section will describe only statistics that are specific to the industrial sector survey.

During survey year 2022, the District surveyed 297 industries. A total of 189 completed surveys were received, resulting in a response rate of 63%.

Survey recipients receive a cover letter explaining the annual survey's purpose, a paper copy of the survey that could be submitted via mail, e-mail, or fax and a postage-paid business reply envelope. The **cover letter also directs recipients to the District's online surveying platform, Re-TRAC**, to complete the survey electronically. In addition, the District sends an e-mail directing businesses that have provided a contact e-mail address to complete the survey online.

D. COMMERCIAL AND INDUSTRIAL SECTOR DATA GAPS

The District diligently works to improve data collection efforts each year by thoughtfully preparing the annual surveying list and updating it continually throughout the year on an as-needed basis. The District focuses on surveying commercial and industrial generators and processors. Obtaining data from processors tends to provide a more complete data set than relying strictly on generator data due to limited response rates among generators. However, generator data is valuable as well to the District. Generators can identify new brokers and processors used to manage materials generated in Cuyahoga County. Individual generator data is also important to have because it gives the District a better idea about which businesses recycle and which businesses do not recycle. It can also indicate average volumes and materials generated by different types of establishments.

Although the District invests extensive effort in contacting and following up with generators and processors, some gaps in recycling data remain an issue. The most common cause for the data gaps is **lack of response from businesses from the District's multiple surveying attempts**. Most businesses do not give a reason for declining to participate in the survey. A small portion of businesses have expressed that they do not have time to participate in the survey. Some companies explain that tonnage information is either not tracked, or not in a way that is not usable to the District. For example, some processors track the totals tons recycled but are not able to break down tonnages by sector where the materials originated.

To close gaps in recycling data, District staff currently conduct site visits to attempt to obtain recycling data from known high-**volume generators and recyclers of materials generated within the District's** jurisdiction that do not respond to survey requests via e-mail, mail, or phone calls. During site visits, staff introduce the goals and purpose of the District and provide the business or recycler with information about programs and opportunities that may benefit their establishment. The District attempts to use the visit to identify a contact person at the establishment, explain the purpose of the annual survey, and the importance of their participation in data reporting. **The District's current strategy for site visits is to target** specific businesses that are known recyclers but have not provided data in the past.

As a dynamic organization, the District regularly evaluates whether the data received from surveying efforts is adequate for its **planning purposes**. **As the District's needs change, it may be beneficial to expand or modify the current surveying strategy.**

Strengths, Challenges, and Opportunities

The District focuses on surveying generators and processors of recyclable materials. The District receives responses from the key processors, but small sample sizes and limited responses from generators may result in data gaps.

The following section summarizes the strengths, challenges, and opportunities for data collection.

Strengths

- The District has a dedicated full-time staff member to manage data collection efforts.
- Existing relationships with political subdivisions and businesses that the District has worked with through other programs, such as those run by the Business Recycling Specialist, foster better response rates among recipients.

Challenges

- Significant amounts of time are required to solicit survey responses.
- Staffing changes at surveyed establishments such as losing a contact person can impede the **District's ability to obtain data until a new relationship is established.**
- Errors in reported values; responses from previous years are compared to current reported values (when possible) to identify significant increases or decreases in tonnage or the materials reported.
- The reporting of data is a voluntary activity and not required by law.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, strengths and challenges, and other factors identified in this section.

The following opportunities for potential improvements are designed to improve the challenges identified above.

Expand Survey List

The District could expand survey list in a targeted manner to include high volume generators using a variety of new resources such as Reference USA (business database).

Work with Targeted Businesses

The District could work with targeted types of businesses to gather a more complete dataset for selected NAICS codes (such as grocery stores, department stores, and hospitals) and businesses with high numbers of employees, which generally tends to correlate with a greater amount of waste materials generated.

Conduct Site Visits

The District could conduct site visits with the largest employers in the District to establish a relationship, **educate about District programs, and obtain a commitment to participate in the District's annual recycling survey.**

Update Survey Package

The District could update the survey mailing envelopes and/or send a targeted list of companies the survey package as a certified letter in an effort to improve response rates.

H-11: ATTACHMENT 1

Survey Envelope



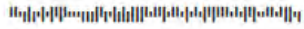
Cuyahoga County
SOLID WASTE DISTRICT

4750 East 131st Street | Garfield Heights, OH 44105

Time Sensitive Material



***** 3-DIGIT 440



Contact Name
Title
Business Name
Street Address
City, State, Zip

Survey Cover Letter

February 13, 2023

«Contact_Name»
«Title»
«Company_Name»
«Address»
«City», «State» «Zip»

Dear «Contact_Name»:

Please give the enclosed survey your personal attention. The Cuyahoga County Solid Waste District is **required by Ohio law (Ohio Revised Code 3734.53;56)** to gather information regarding solid waste management practices within Cuyahoga County. This information can only be obtained from company employees familiar with those operations.

The information we are requesting is critical for state-mandated data reporting and solid waste management planning. Your information will be used to profile waste management in the commercial and institutional sector and to calculate Cuyahoga County's recycling rate for the Ohio EPA. The Cuyahoga County Solid Waste District will use the information you provide for summary purposes only. We will add your company's data to data obtained from other companies.

Your timely and accurate survey response is important. You may either complete the survey using the enclosed paper survey copy or online through Re-TRAC Connect™ using the link provided below. *Note that the Re-TRAC Connect™ survey system requires all respondents to create an account. Once an account has been created, users have access to many features, such as the ability to save survey drafts and export data, which have simplified the reporting process. If you already have an account, simply log in and you will have access to your current and previous surveys.

1. Log on to <https://connect.re-trac.com/registration/cuyahoga-business>
2. Create an account or log in if you have an existing account.
3. Follow the online directions for completing the survey.

Please complete the survey by March 10, 2023. Paper surveys can be mailed using the enclosed postage-paid envelope, e-mailed to jfenos@cuyahogacounty.us, or faxed to 216-478-0014. If you need help completing the survey or accessing the survey online, please contact Jessica Fenos, Assistant Director, at 216-443-3728 or jfenos@cuyahogacounty.us.

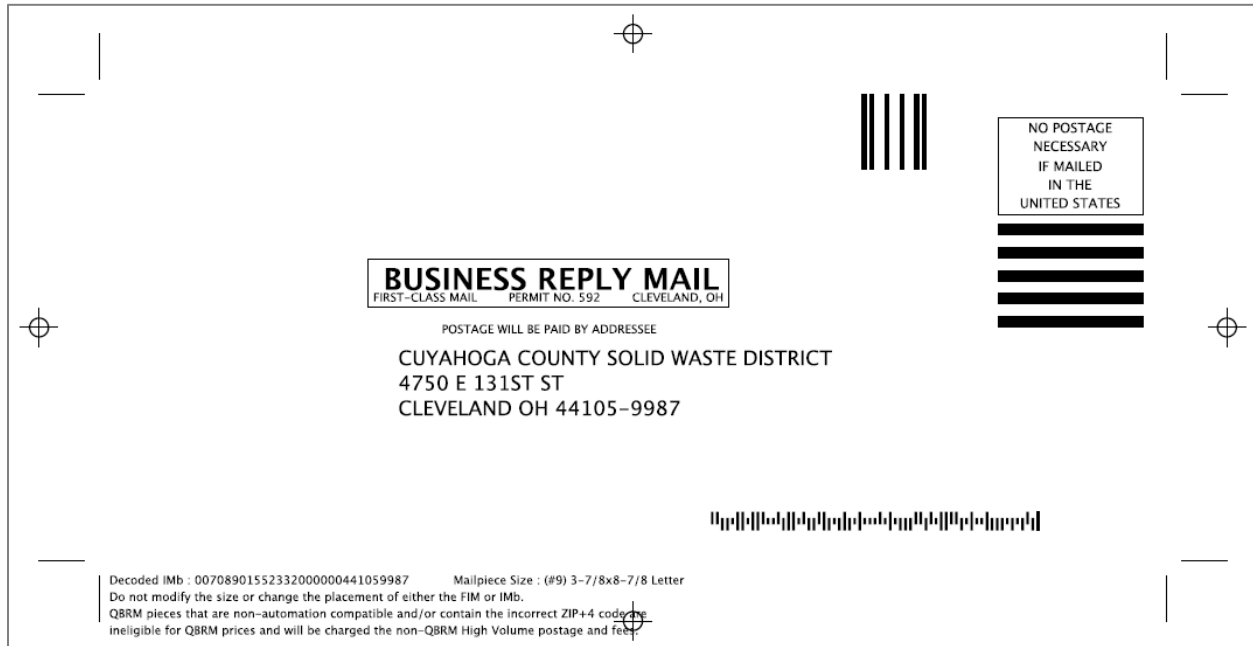
Thank you for your cooperation.

Sincerely,



Elizabeth Biggins-Ramer
Executive Director

Postage-Paid Business Reply Envelope



H-12: EDUCATION AND OUTREACH ANALYSIS

This section evaluates the District's existing education, outreach, and technical assistance efforts, which are described in detail in Appendix L. The purpose of the Appendix H, *Education and Outreach Analysis* is to determine whether the existing programs are effectively and adequately reaching each of the District's target audiences.

MINIMUM REQUIRED EDUCATION PROGRAMS

The *2020 State Solid Waste Management Plan* established nine goals for Districts to achieve. One of the goals (Goal #4) requires solid waste management districts (SWMDs) to provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to identified target audiences using best practices. The District has five target audiences, including: residents, schools, commercial businesses and institutions, industries, and communities and elected officials.

The Residential Recycling Outreach program is comprised of the following programs and resources:

- Website
- Comprehensive Resource Guides
- Infrastructure Inventories
- Speaker/Presenter

A. WEBSITE

The District's website, CuyahogaRecycles.org, is a comprehensive resource for residents, businesses, communities, educators, elected officials and the public. The website was launched by the District in April of 2016 to replace its former website, cuyahogaswd.org, which had been in place since the 1990's and had become stale. The website was refreshed in September of 2022 adding geolocation services and improving mobile optimization.

Analysis and Evaluation

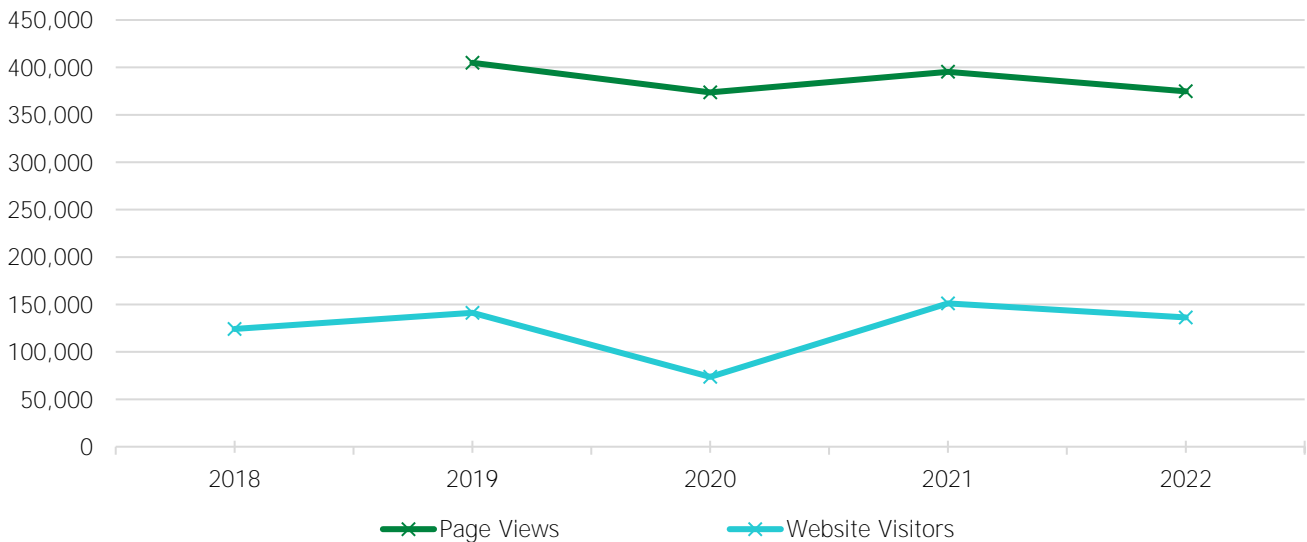
The District's new website launched in spring of 2016 and updated in 2022 allowed for more flexibility and interaction with recycling resources, achieving the District's goal to streamline assistance to visitors, to increase usability, and share more program and commodity specific information.

The website is the best tool to reach the largest audience. The website focuses on how to recycle or properly manage solid waste by material. This is done through the "What Do I Do With?" (WDIDW) section and "Recycling in Your Community" feature. Drop-offs and other recycling locations (such as businesses that accept specific materials) are found under the material category rather than listing the materials under each location. This method allows visitors to the website to focus on the material they wish to recycle before determining the location.

The website is set up to capture analytics which collect and measure user data for the purposes of understanding and optimizing the use of the District's webpage. For example, the District can track total page views, page views from unique users (IP addresses), length of stay on a web page, most viewed pages, and most searched for words/phrases. Website visitors refer to the number of individual users that have at least one session on the website. Page views are the total number of pages people visit on the website. Sessions refer to the number of times visitors are actively engaged on the website without taking a 30-minute break.

Figure H-12.1 presents the total website visitors, page views, and sessions on the District website from 2018 to 2022. Year 2019 page views peaked at 404,844, with fluctuations differing by less than 8% year over year. Website visitors hit a low of 73,629 during the year 2020, largely attributed to the impact of COVID-19 temporary business closures, the inability to travel about freely, and the resultant restrictions placed upon day-to-day activities. The average 143,718 post-COVID website visitors for the years 2021-2022 is 8.3% higher than pre-COVID website visitors for years 2018-2019, indicating post-COVID community recovery.

Figure H-12.1. 2018-2022 Website Statistics



As with the website re-launch in 2016, and its subsequent refresh in 2022, the District continues to **improve the website user experience. The District’s Google Analytics continue to indicate that website users are staying longer on the site, consuming more pages, and more users are located within, or nearer to Cuyahoga County. The website is getting traffic from other countries, which is outside the District’s target demographic.**

Strengths, Challenges, and Opportunities

The new and refreshed website is a streamlined design which organizes its contents by audience. It is user-friendly and compatible with mobile devices.

Strengths

- The interactive categories allow visitors to navigate how and where to recycle materials.
- The website search is organized by category, allowing visitors to focus on the type of material they want to recycle or properly dispose.
- The District manages informational inquiries through the website, email, or hotline calls. This gives residents multiple opportunities to interact with District personnel.
- The District adds seasonal information such as tips for recycling holiday cards, lights, and trees.
- Web analytics provide the District with a quantitative method for measuring the success of the website.
- **The District’s website is receiving the right visitors. With improvements in outreach and marketing, the District is receiving better quality traffic with less junk visitors. The website has been**

successful in reducing bounce rates (traffic that visits and immediately leaves). As website visitors stay longer, it proves that the right audience is finding the information.

Challenges

- Keeping the website fresh so that residents will return to the site for new and updated information.
- Directing residents to the website to reduce the number of calls and emails to which District staff must respond.

Opportunities

The District has identified a series of potential improvements, initiatives, and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Internal Benchmarking

The District can benchmark its posts/pages/blog entries to compare which sections of its site reach the largest audience. This will allow management to allocate resources to the most successful aspects of the website or identify ways to reach audiences with fewer page views.

B. COMPREHENSIVE RESOURCE GUIDES

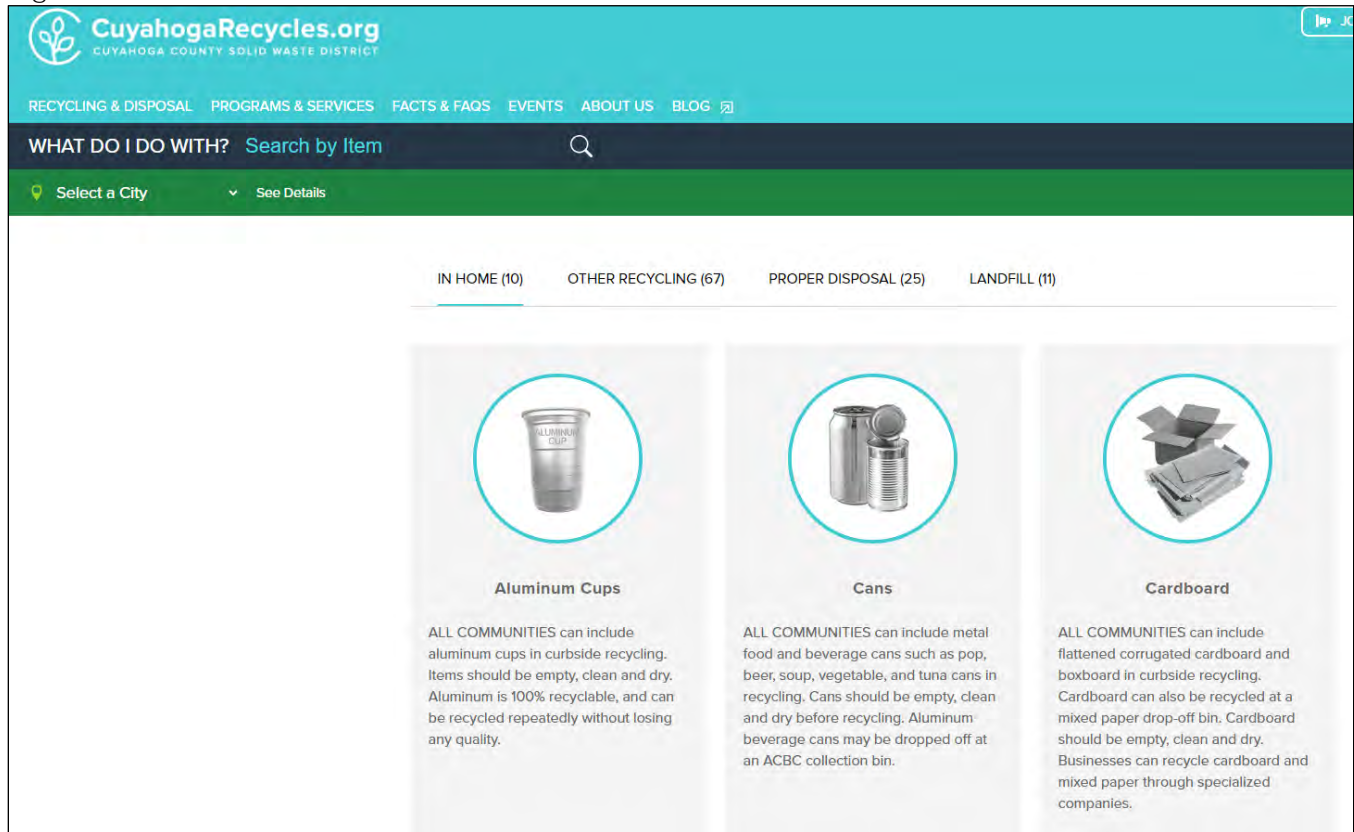
The District maintains an up-to-date compilation of recycling and reuse outlets in Cuyahoga County. People without access to website access can contact the District to obtain the information they seek from a staff member.

Analysis and Evaluation

Website - What Do I Do With (WDIDW) search feature

The District's website has a comprehensive, interactive "What do I do with?" (WDIDW) section for Cuyahoga's residents under "Recycling at Home." This search feature allows residents to search by typing in the item or finding the item in the navigation panel on the left side of the screen, as shown in Figure H-12.2.

Figure H-12.2. **What Do I Do With?** section of the District's Website



Pass It On Book – A Resource-Full Guide to Donating Usable Stuff

This is one of the District's most recognized and popular print publications containing WDIDW information. The most recent version (8th edition, updated in August 2019, 43 pages) may be found and downloaded on the District's website under the publications section. The donation index includes options for donating a wide variety of household goods such as baby items, art supplies, gardening supplies, sporting goods, tools, musical instruments toys and more. Due to increasing costs associated with updating print materials, printing, spiral binding, and mailing, the District may consider limited production of new Pass It On Books, or potentially transitioning from print to online only to provide consumers access to the most current WDIDW content information.

Recycling Directory for Business and Industry - now hosted within WDIDW web pages

The District formerly compiled and posted a Business Recycling Directory on the website that contained a list of recyclers specific to waste streams from businesses and industry, not typically available to the public. In lieu of a stand-alone Business Recycling Directory, the District now hosts a Business Recycling Directory in each of the WDIDW web pages containing the recycler's name, address, website, and phone number if available. The lists are useful tools to find out where to reduce, reuse, and recycle.

Strengths, Challenges, and Opportunities

Strengths

- WDIDW is an interactive feature that enables website visitors to find outlets for recycling or reusing materials.

- The “Pass It On” guide is a popular tangible item available through the website which helps residents identify places to donate usable items. Residents can also search the website to find donation opportunities.
- The District website and WDIDW search makes finding recycling outlets for materials easy for businesses and industries.
- **Having information available in multiple formats (electronic and printed) helps spread the District’s message.**

Challenges

- **It may be difficult for some users to access the District’s website for WDIDW search features or to download the Pass It On Book in PDF format from the website.**
- Printed materials are limited to the best available content at the time of printing and may contain information that is quickly out of date. Increasing costs associated with updating print materials, printing, spiral binding, and postage has challenged the District to potentially consider limited production of new Pass It On Books, or potentially transitioning from print to online only to provide consumers access to the most current WDIDW content information.

Opportunities

The District has identified a series of potential improvements, initiatives, and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Identify WDIDW as The Resource Guide

The District currently provides access to The Pass It On Book on the website under the publications link. The District can test the effectiveness of the link using web analytics as compared to the WDIDW search features to evaluate if WDIDW utilization is providing users with the most current, quickest, and efficient answer to their questions over the embedded PDF.

C. INFRASTRUCTURE INVENTORIES

The District maintains up-to-date information about the solid waste management and recycling infrastructure within Cuyahoga County. This information is available to the public through its website and its staff.

Analysis and Evaluation

The infrastructure inventory is kept up to date by District staff. These inventories include:

- MSW Landfills
- Transfer Stations
- C&DD Landfills
- Scrap Tire Facilities
- Compost Facilities
- Curbside Recycling Services
- Donation/Upcycling Locations
- Drop-off Recycling locations
- Material Recovery Facilities
- Recycling Centers (specialty recycling)
- Yard Waste Collection Program

Information about other types of waste management infrastructure is available in the WDIDW database. These inventories are useful to residents and businesses since information includes whether the facility is open to the public.

Strengths, Challenges, and Opportunities

Strengths

- Infrastructure inventories capture facilities that are available to manage waste materials.
- Making the information public on the website increases transparency.
- The website provides the public with details about solid waste management in Cuyahoga County.

Challenges

- Keeping the information up to date.

Opportunities

The District has identified a series of potential improvements, initiatives, and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Organize Inventories

The District will continue organizing and updating the infrastructure inventories on the website to allow the reader to easily access information.

D. SPEAKER/PRESENTER/RECYCLING HOTLINE

The District works with schools and businesses in the county, gives presentations, and hosts seminars. Its Education Specialist offers classroom presentations, assemblies, and a variety of youth programs that focus on recycling, waste reduction, litter, and overall environmental education. The Business Recycling Specialist offers workplace recycling seminars, waste audits, lunch and learn employee presentations, and other presentations to assist workplace recycling efforts. In addition, the District offers Backyard Composting Seminars and Bin Sales in conjunction with host cities and provides general recycling presentations for adult audiences and clubs.

In 2022, 72 presentations were given as follows:

- 41 general public recycling and composting webinars/events with 1,499 attendees
- 31 business recycling webinars/events reaching 426 businesses.

During the last planning period, the District's education program predominantly focused on adult, in-person educational opportunities, with approximately 69% of presentations given to adult audiences. During this planning period, particularly with the effects of COVID-19's impact on reduced availability for in-person educational opportunities, the District nimbly pivoted to providing more educational opportunities in a digital education format, learning that larger groups of adults within a larger geographic area found interest in participating via Webinar technology. In 2022, the 72 presentations were split evenly, with 50% Webinar format and 50% in-person events.

Analysis and Evaluation

Programs under this section include:

- General Public Recycling and Composting Webinars/Events
- Business Recycling Webinars/Seminars
- Recycling Hotline

General Public Recycling and Composting Webinars/Events

The District offers recycling presentations tailored to the specific interests and needs of groups in Cuyahoga County. Presentations have been given to civic organizations, church groups, parent-teacher organizations, and garden clubs.

The District also offers classroom presentations, assemblies, and a variety of youth programs that focus on recycling, waste reduction, litter, and environmental education. This planning period included 88 classroom presentations in 2018, a continued decline in 2019, and zero classroom presentations in 2020 through 2022, attributed to the impacts of COVID-19.

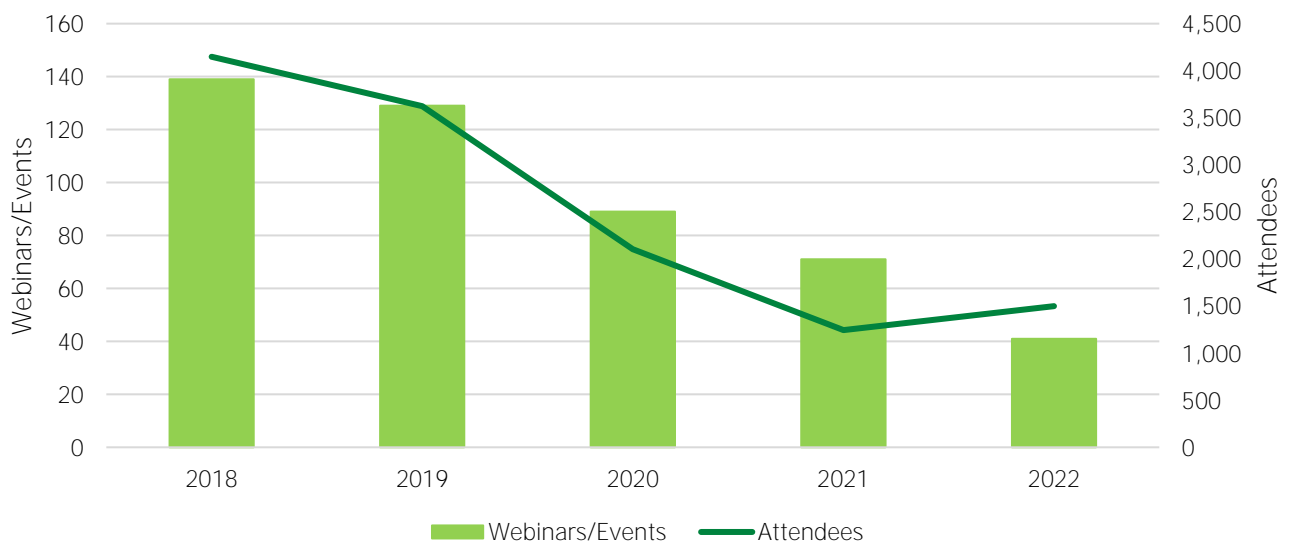
The District holds how-to-compost seminars for Cuyahoga County residents and sells affordable compost bins. Seminars are held March – November throughout Cuyahoga County.

The following presentations are available for general adult audiences by the District’s educators:

- Recycle Right in Cuyahoga County
- Waste: Reduce & Reuse
- Green Cleaning
- Workplace Recycling
- Food Waste Reduction
- Proper Disposal of Special Wastes
- Make & Learns
- Zero Waste Event Training for Volunteer Groups

Figure H-12.3 presents the total number of all general public recycling and composting webinars/events given and the total attendees reached from 2018 to 2022.

Figure H-12.3 General Public Recycling and Composting Webinars/Events



Business Recycling Seminars and Presentations

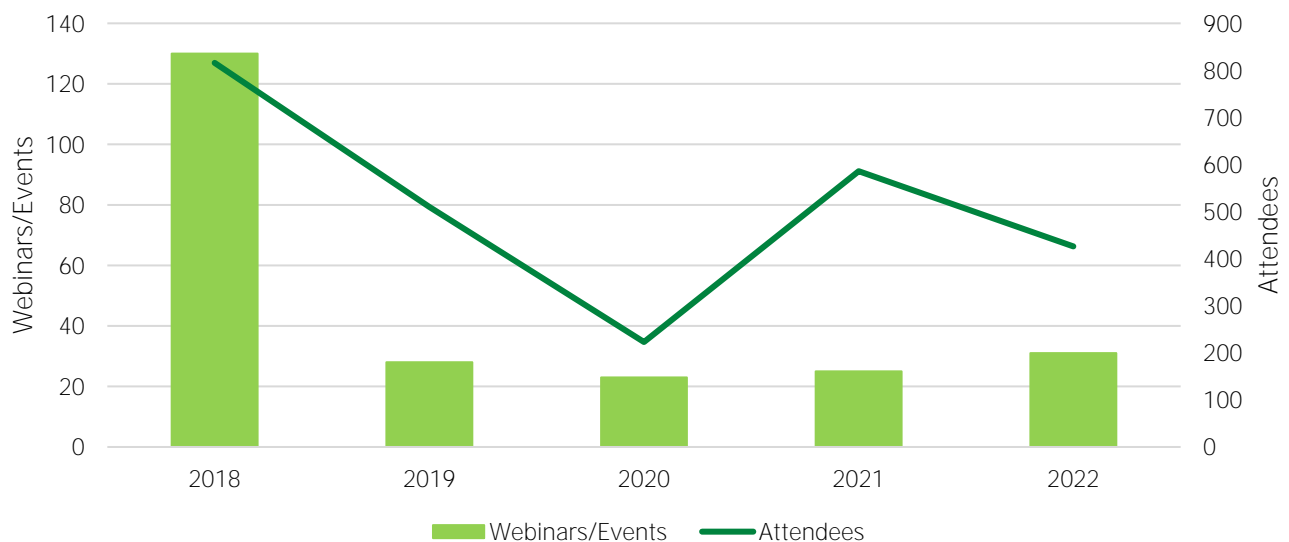
The District offers free recycling and waste reduction seminars for businesses, schools and organizations. The District created multiple new programs during COVID that may be found on the website under business recycling seminars. The programs are scheduled upon request, are customized to the industry, and available online and in-person. The following new programs are available for business audiences by the District’s educators:

- Workplace Recycling – **Let’s Start a Program**
- Workplace Recycling – Equipment, Signs, and Placement
- Workplace Recycling - Fact vs. Fiction
- Workplace Recycling - Creating Culture Change
- Workplace Recycling – Improve your Program
- Workplace Waste Reduction – Roadmap of Waste Hierarchies
- Start a Recycling Program
- Advanced Recycling
- Behaviors for Recycling Success
- Contracting for Waste & Recycling Services

The District also initiated a new Business Resource Champion Program in the fall of 2023, to recognize businesses who have made a strong commitment to eliminating waste sent to landfills, while reducing the amount of waste generated through recycling and composting, helping to keep valuable materials in circulation.

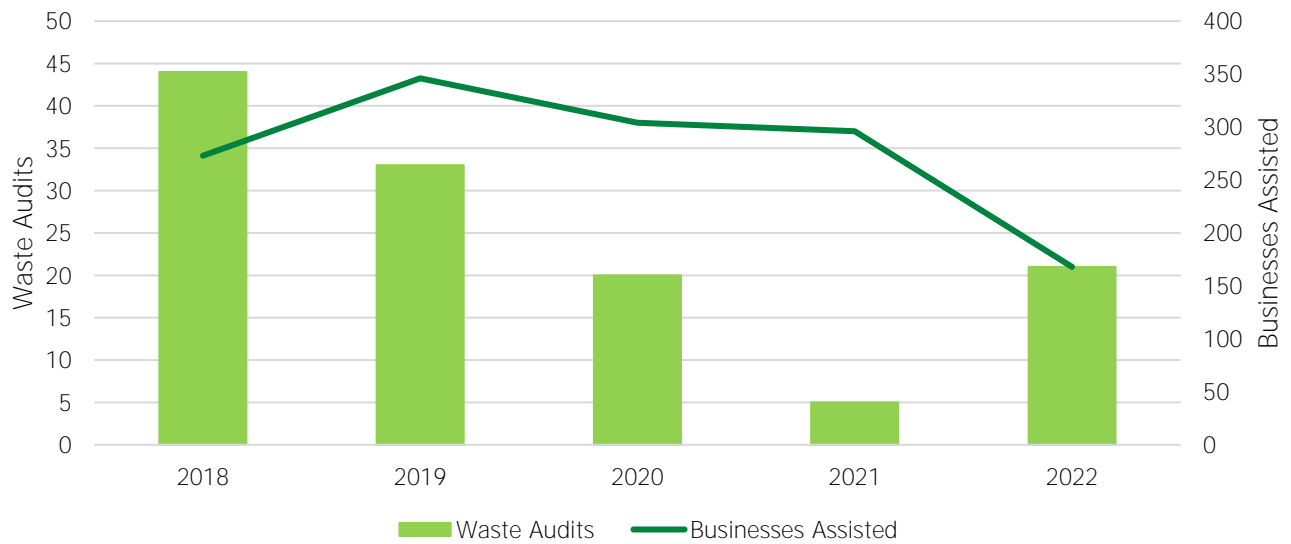
Figure H-12.4 presents the total number of Business Recycling Webinars/Events conducted and the number of attendees from 2018 to 2022.

Figure H-12.4. Businesses Recycling Webinars/Events



In addition to recycling and waste reduction education, the District provides technical assistance and offers waste assessments for businesses. The audits are designed to help businesses create, expand, or improve their recycling programs and initiatives. Figure H-12.4 presents the total number of all audits conducted and the number of businesses/institutions that received technical assistance from 2018 to 2022.

Figure H-12.4. Businesses/Institutions Assisted and Waste Audits and Technical Assistance



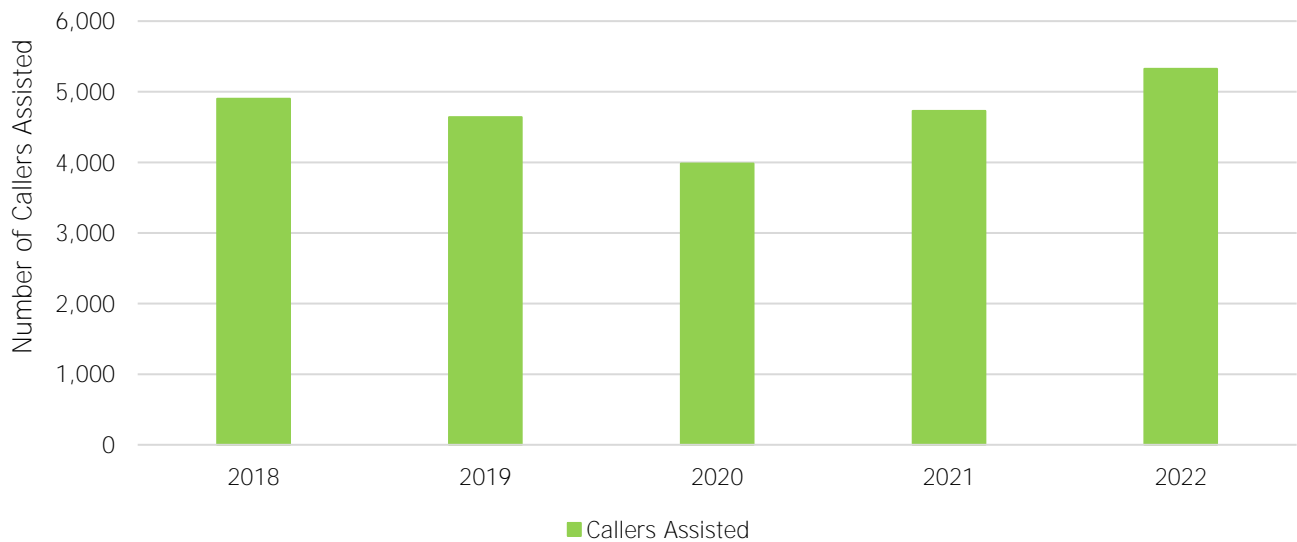
The District also offers a Recycling Roundtable discussion and a Workplace Recycling Success presentation. Some audiences which may benefit from a Recycling Roundtable discussion include:

- Public venues
- Hotel chains
- Manufacturing facilities
- Universities
- Schools
- National parks
- Places of worship
- Non-profits
- City and local government
- Hospitals
- Property management and real estate development firms
- Small businesses
- Start-ups

Recycling Hotline

Residents can reach District staff at (216) 443-3749. The District does not use an automated system to answer calls, which allows residents to have a one-on-one personalized experience and talk to a real person about recycling questions or concerns. 5,324 telephone callers were assisted in the reference year 2022. Figure H-12.5 presents the total number of callers assisted on the Recycling Hotline from 2018 to 2022.

Figure H-12.5. Recycling Hotline Callers Assisted



Strengths, Challenges, and Opportunities

Strengths

- The District providing presentations to schools, groups, and businesses increases visibility and awareness for the District and the recycling programs and opportunities in Cuyahoga County.
- The presenter/speaker opportunities are available for a variety of audiences. The District presentations are flexible for meeting the needs of the requested audience.
- The number of business assisted continues to recover post-COVID.
- The District offers waste audit assistance.

Challenges

- The number of school presentations continued to decrease, dropping to zero during COVID.
- Presentations are often at schools with no recycling program which does not allow for students to actively apply the skills taught by the presenter.
- Achieving school district buy-in to recycling programs/education.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Education at Schools with No Recycling Programs

The District should work with school districts to start recycling programs on a district-wide basis before educational presentations are given to the students. The educational presentation would benefit the start-up of new programs and can be focused on whole schools rather than individual classrooms.

Other School Presentations

The District may consider a focus on schools located in municipalities with underperforming curbside recycling rates. Many times, education in schools is brought home to family and neighbors in the area. This targeted approach may increase recycling in schools and improve education for the community. A pilot program may assist the District in gauging interest in post-COVID learning environment.

School District Recycling Program Buy-In

Many school recycling programs are run by passionate teachers or students and may not have the full support of the school administration. The District could schedule meetings with school superintendents, principals and administration to increase support for recycling programs.

E. Outreach and Marketing Plan

Target Audience #1: Residents

The District has a comprehensive program to conduct outreach to its 1.2 million residents to help them understand how to recycle right and how to be an informed recycler. This includes the following elements: (1) CuyahogaRecycles.org website and blog, (2) marketing media relations and advertising (3) Talking Trash e-newsletter, (4) printed materials, (5) presentations and tabling events, and (6) recycling hotline.

Analysis and Evaluation

Cuyahogarecycles.Org Website and Blog

As mentioned above in Section A, the District's website targets residents as its primary audience. The website is a great tool for reaching and connecting with the residential audience. The site provides a comprehensive resource guide, and a variety of tools designed to inform residents on how to recycle or properly dispose of different materials. This District uses Google Analytics to identify what is being looked at on the website.

Marketing Media Relations and Advertising

The District's marketing campaign includes paid advertising, marketing activities and media relations.

Paid Advertising: This form of marketing strategy allows the District to focus on their targeted audience. The District can reach its residents through digital (including social media), print, and broadcast methods. These are primary sources to target the residential audience by choosing paid time slots to get the most views. The District can do targeted and trackable advertising campaigns using geofencing.

Marketing Activities: Social media outlets include Facebook, Instagram, and Next Door. The District can schedule sponsored posts which can appeal to a wider audience than just the **District's current followers, which helps expand the reach of the District's message.**

Media Relations: **News releases help promote the District's programs to local media outlets. Successful outcomes include follow up interviews on local television, radio and print articles.** These news releases help target the residential audience by showcasing current programs and demonstrating how the District is involved in the community.

Talking Trash E-Newsletter

The District sends out a monthly e-newsletter to residents who have subscribed to receive the publication. E-newsletters provide residents with interesting, useful, and local information about reducing, reusing, recycling, composting. They promote upcoming District programs, such as workshops, and provide links

to useful resources on the website. In 2022, over 32,715 recipients received the Talking Trash E-Newsletter.

The District is able to collect and track e-newsletter analytics, such as open rates, click rates, and most clicked links. The analytics enable the District to compare the success of different newsletters to better identify which subjects or subject lines are received the best amongst subscribers. These analytics can help the District continually improve its e-newsletter program.

Printed Materials

The District publishes many printed materials which are also available on its website. These publications are accessible for residents through the on-line request form, the recycling hotline, and through events and presentations. Though these materials are posted on the website, a tangible publication in the hands of a resident helps increase awareness and outreach for the targeted audience. The increase of **distributed materials provides the opportunity to have publications as a resource in residents' homes.**

Presentations and Tabling Events

Presentations and participation in public events are a large part of the District's marketing outreach efforts. Three employees including the Executive Director, the Education Specialist, and the Business Recycling Specialist regularly address residents at presentations and events throughout Cuyahoga County. Presentations are focused on the adult resident audience. Special events that the District attends typically have an environmental focus.

Master Recycler Program conversion into the Recycling Ambassador Program

The Master Recycler Program, formerly an 8-week course designed to educate residents about all aspects of reduce, reuse, recycle and composting as well as District programs and services, provided graduates a certification to represent the District at events. Historically, approximately 20 residents per year completed the course and were available to assist the District with its outreach efforts. The last graduates of the Master Recycler Program were in 2019. Due to COVID restrictions in 2020, the District began teaching a revamped program online, changing the Master Recycler Program into the Recycling Ambassador Program. The District has found they can reach a larger audience through online training. The challenge to the District is staying engaged with online participants, and consideration is being given on how to re-engage, refresh, and connect with volunteer opportunities.

Strengths, Challenges, and Opportunities

Strengths

- The District has provided a variety of recycling information options with the website, as well as individualized attention with the Recycling Hotline.
- There is a balance of printed and online materials available for residents.
- Media outlets allow the district to focus on residential audiences for advertising.
- Presentations put **the District in the "limelight" to share their knowledge with the community and help improve residential programs.**

Challenges

- Measuring the effectiveness of the programs.
- The District does not have participation rates for its residential sector recycling programs (i.e. set-out rates for curbside recycling programs, drop-off user frequency).

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Targeting Recycling Ambassadors and Green Teams

The District can target Recycling Ambassadors and Green Team participants from communities that have below average recycling rates. Targeting can be done using paid advertising on social media platforms, using geofencing in advertising, or other means as deemed appropriate. Recycling Ambassadors are certified to represent the District; having a District representative in under-performing communities may help improve recycling rates. Recycling Ambassadors from underperforming communities may be able to provide a different perspective to the District about barriers to recycling that exist in their community and how the District can most effectively address those barriers.

The District's outreach to schools mainly focuses on students, teachers, educators, administrators and other staff.

Analysis and Evaluation

Students

The District has a full-time Education Specialist dedicated to student outreach. As mentioned above in section A, the Education Specialist provides classroom presentations and various youth programs. These focus on recycling, waste reduction, litter and environmental education.

The District discontinued the Mission Recycle newspaper to grades K-4 in Cuyahoga County due to **COVID. The newspapers were originally designed to grab students' attention and provide a chance to bring recycling and environmental awareness home.**

Teachers/Professors/Educators

The Education Specialist manages teacher/professor/educator relations. A bi-monthly e-newsletter, *Resources for Educators*, formerly distributed to over 900 subscribers, has been temporarily discontinued but may be revived. The District shares many resources with educators such as worksheets and lesson plans to easily incorporate more recycling education into the classrooms. The District is available to host workshops for teachers, youth leaders, and non-formal educators to increase environmental knowledge and professional development.

Strengths, Challenges, and Opportunities

Strengths

- **Classroom presentations grab students' attention due to a break from the normal schedule. Take home information has the potential to spread information into communities.**

Challenges

- Reaching new student populations in different school districts that have not previously participated in District programming.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Target School Administrators to Establish Recycling Programs

The District could target school administrators to obtain support for setting up school recycling programs on a district-wide basis. School presentations would benefit the start-up of new programs and can be focused on whole schools rather than individual classrooms.

Outsourcing Contracted Presentations

The District may pilot outsourcing contracted presentation(s) to select school districts in Cuyahoga County on demand to gauge impacts on interest and participation with alternative presentation materials.

Target Audience #3: Commercial/Institutional Sector

The District has an existing outreach program which provides services and assistance to the commercial and institutional sectors in order to implement waste reduction, recycling and composting programs. This includes the following subsectors: (1) nonprofit organizations and institutions and government offices (2) commercial business and multi-family property owners, (3) non-residential quarters, (4) special event/sports venues, and (5) transportation centers.

Analysis and Evaluation

Nonprofit Organizations and Institutions – schools, churches, hospitals, government offices

The District's Business Recycling Specialist and Education Specialist interact with non-profits and institutions such as schools, churches, colleges, universities, and hospitals to provide recycling assistance, literature and industry information. The District offers this sector the opportunity to apply for a Recycling Container Grant to purchase recycling containers for their facilities. Grant recipients are required to attend a recycling training and to file a follow-up report of the progress.

Further outreach to this audience includes featuring nonprofits in the District's pamphlet, *Pass It On, a Resource-full Guide to Donating Usable Stuff*. The District's Programs and Communications Officer manages updating and publishing the pamphlet and maintains relationships with participating nonprofits. Staying connected with this audience is mutually beneficial to the District and the nonprofit.

Commercial Business and Multi-Family Property Owners

The District's Business Recycling Specialist oversees relationships with this target audience. Communication with this audience is promoted through presentations and attendance at chamber of commerce and trade association events. All assistance is designed to help business owners and property owners/managers establish recycling programs for their tenants.

The District uses LinkedIn to reach building owners and managers with programming about starting a recycling program. The District often works with businesses when conducting waste audits or serving in a consulting role for improving recycling or composting programs. The District authored a Recycling Guide for Multi-Family Housing for new construction in 2020 with a model ordinance.

Non-residential Quarters (nursing homes, prisons)

These subsectors will continue to be served by the District's Business Recycling Specialist. Presentations specifically designed for nursing homes entitled *Waste and Recycling Sense for Skilled Nursing Facilities* are presented at local nursing homes. This outreach will be continued as requested during the planning period. The District has worked with the Northeast Ohio Reintegration Center for Women to help them improve their recycling program and present *How to Recycle* to inmates at the center for after they are released. This relationship will continue upon request from the center. Promoting outreach to these audiences increases continuity throughout the District.

Special Event/Sports Venues

The District works with the Zero Waste NEO's working group and attends special events. This outreach focuses on recycling and waste reduction in densely populated events and increases District visibility outside of the home, school, and business. The District also created a Zero and Reduced Waste Event Guide that may be found on the website.

Transportation Centers (airports, public transportation)

The Business Recycling Specialist works with the sustainability staff at both Cleveland Hopkins International Airport and the Regional Transit Authority (buses and trains) providing presentations and recycling assistance, negotiating waste hauling contracts, participating in roundtable discussions and work groups, and giving presentations to constituent groups. This outreach will continue as needed/requested by the entities.

Strengths, Challenges, and Opportunities

Strengths

- Works with nonprofits to create WDIDW information and Pass It On, a Resource-Full Guide to Donating Usable Stuff.
- Assists with Recycling Container Grants for nonprofits and schools.
- The District has worked with multi-family property owners and has helped start recycling programs at apartment complexes.
- Including Non-Residential Quarters as an audience helps show the community that the District serves all sectors in Cuyahoga County.
- District offers waste audit assistance as needed.

Challenges

- The District does not have digital signage at special events, venues, and transportations centers.
- Measuring success of outreach.
- Reaching this sector on social media.
- Service gap for residents of multi-family houses due to lack of local ordinances that mandate recycling.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Digital Signage

The District could connect with public relations at special events, venues, and transportation centers to discuss digital signage for the promotion of the District, recycling, and waste reduction.

Meeting with the City of Cleveland

The District should meet with the City of Cleveland to discuss drop-off program management for multi-family housing. The City currently has only two drop-offs for commercial/multi-family entities. The meeting should target opportunities to develop recycling programs for commercial/multi-family entities.

Target Audience #4: Industries

Analysis and Evaluation

Business Recycling Assistance Program

The Business Recycling Specialist maintains a targeted email list for distribution of industrial-related recycling topics. The District also maintains a Green Business Group on LinkedIn. The District uses LinkedIn to focus on the business audience.

The District offers information and assistance on its website on:

- Business Recycling Directory
- Business Resource Champion Program
- Film Industry
- Deconstruction
- Food Donation
- Educational Seminars
- Recycling Equipment & Labels
- Helpful Links and Resources
- Paper Shredding & Document Destruction
- Paper Recycling Drop-offs
- Tips to Green Your Office
- Workplace Recycling Behaviors
- Zero Waste Goals

Strengths, Challenges, and Opportunities

Strengths

- Maintains a Green Business Group on LinkedIn.
- Sends out current industrial recycle information as needed.
- District offers waste audit assistance upon request.

Challenges

- Industries have not expressed much interest in waste audits.
- Measuring effectiveness of the technical assistance from the District.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Zero Waste Planning

The District can help industrial facilities consider the development of a zero-waste plan. This would **include establishing an industrial green team and the development of recommendations for the industry's waste streams.** The District's **Business Recycling Specialist is "TRUE Certified" and assists facilities in achieving zero waste.**

Ohio Materials Marketplace aka. RHEAPLY

The District can direct industrial facilities to the Ohio Materials Marketplace aka RHEAPLY. The Ohio Materials Marketplace aims to create a closed-loop, collaborative network of businesses, organizations **and entrepreneurs where one organization's hard-to-recycle wastes and by-products becomes another organization's raw material. In addition to diverting waste from landfills, these recovery activities could generate significant cost savings, energy savings, and create new jobs and business opportunities.**

Target Audience #5: Communities and Elected Officials

Analysis and Evaluation

The District regularly communicates with its 59 cities, villages and townships and their elected officials through email, its *Trash Heap* newsletter, and mailings. The District finds that connecting with this audience through emails and mailing is the best form of communication. These methods of communication relay information about District programs, collection statistics, recycling trends and more. Depending on the topic, communications may go to the mayor, council members, communications director, economic development director or and/or service director. Occasionally, the District hosts a Trash Talk Lunch to engage local officials on new topics as needed and to provide networking opportunities. By offering face-to-face opportunities, the District can engage and increase visibility with this audience.

The District also provides annual HHW training to service department employees that is recorded to train new employees on the proper handling and storage, what to take, how to package, and safely manage materials.

Strengths, Challenges, and Opportunities

Strengths

- Hosting meetings **helps keep local officials' knowledge of recycling issues current and provides face-to-face opportunities to interact with the District.**
- The District provides presentations to the elected officials and community representatives which **establishes and maintains the District's relationships with individuals in this target audience.**

Challenges

- The District meets with service directors face-to-face, but it is unknown whether the information is relayed to council representatives and mayors.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and weaknesses, and other factors identified in this section.

The following potential improvements listed below are designed to enhance the strengths listed above.

Educational Tours

The District will work with local Material Recovery Facilities and landfill to offer facility tours for local public officials. The purpose is to increase understanding of solid waste facility operations. Many elected officials are not aware of the complex operations for managing the waste stream. This would provide the District with significant opportunities to further network with city and county officials. The District sponsored a Tour Your MRF event several years ago which was very successful and could be hosted again.

H-13: PROCESSING CAPACITY ANALYSIS

This section outlines the current evaluation for recycling processing facilities within the District to meet the need for implementing initiatives to recover more material through existing or new services. [Note: the processing capacity for organics is discussed in Appendix H-4 and not covered in this section.]

A. PROCESSING CAPACITY

In-District: In-District processing capacity is extensive. Numerous in-District specialty recyclers process materials mostly from commercial and industrial sources. Some source-separated residential material is also processed within the District such as e-waste, appliances and paper. While in the reference year 2022 there were no single-stream processors located within the District to process commingled residential recyclables, ample processing capacity existed through material recovery facilities (MRFs) located in neighboring counties (see below). In year 2023 Waste Management modified its Oakwood facility for single-stream recycling within the District.

In-District recyclers typically specialize in handling one or two homogeneous recycling streams. Below are the recyclers operating *within* the District that processed a significant quantity of District-generated recyclables in 2022, including:

- *Ferrous Processing & Trading*: 174,380 tons (primarily scrap metal)
- *All Scrap Salvage*: 18,521 tons (primarily scrap metal)
- *Broadway Scrap Metals*: 7,026 (primarily scrap metal)
- *Shred-It-Brecksville*: 5,373 tons (primarily paper and cardboard)
- *PSC Metals*: Did not report, but based on historic information, this scrap metal processor accepts a significant quantity of materials.

Out-of-District: Other notable facilities, including MRFs, are in neighboring counties that processed a significant quantity of District-generated recyclables (single stream recyclables and fiber) during the reference year. These facilities include:

- *Kimble MRF* (Summit County): 20,822 tons⁶ (single stream curbside materials)
- *Republic MRF* (Lorain County): 18,802 tons (single stream curbside materials)
- *Rumpke MRF* (Franklin County): 9,529 tons (single stream curbside materials)
- *Waste Management MRF* (Summit County): 15,832 tons (single stream curbside materials)
- *River Valley Paper dba Integrity Fiber* (Summit County): 5,396 tons (mixed paper and paperboard)

The facilities listed above do not represent the total number of processors and recycling companies serving the District. A more comprehensive list of 59 brokers, processors, scrap yards, buy backs, drop-offs, haulers, reuse facilities, and end users servicing the District is provided in Table B-7.

Some facilities listed in Table B-7 are processors and scrap yards that accept specific types of materials. The majority of single stream materials collected by residential/commercial recycling programs and sources are managed through MRFs, which are the focus of this analysis.

⁶ Tonnage reported by communities that have curbside recycling programs serviced by Kimble. Total tonnage processed by Kimble may be greater if tonnage is collected from commercial institutions.

Waste Management – Oakwood MRF

This facility is located in Cuyahoga County in the Village of Oakwood. This facility has the capacity to process up to 15,000 tons of material each month or 180,000 tons annually. Based on totals reported in **Ohio EPA's 2022 Material Recovery Facility and Commercial Recycling Data Report**, the facility processed 69,942 tons in 2022 of which 13,485 tons originated in Cuyahoga County. This facility has ample processing capacity.

Waste Management – Akron MRF

This facility is located in Summit County, which borders the District to the south. This facility has the capacity to process up to 15,000 tons of material each month or 180,000 tons annually. Based on totals **reported in Ohio EPA's 2022 Material Recovery Facility and Commercial Recycling Data Report**, the facility processed 24,642 tons in 2022 of which 22,206 tons originated in Cuyahoga County. This facility has ample processing capacity.

Republic Lorain County Resource Recovery Complex

This facility is located in Lorain County, which borders the District to the west. It is designed to process 35 tons per hour and can process 150,000 tons of recycling annually. Based on totals reported in **Ohio EPA's 2022 Material Recovery Facility and Commercial Recycling Data report**, the facility processed 54,449 tons in 2022 of which 7,812 tons originated from Cuyahoga County. This facility has ample processing capacity.

Rumpke Waste Recycling MRF

The facilities that historically received recyclables originating from Cuyahoga County are located south of the District in Franklin County (Columbus) and Hamilton County (Cincinnati), capable of processing 168,000 tons and 187,000 tons annually, for a combined 355,000 tons. Based on totals reported in **Ohio EPA's 2022 Material Recovery Facility and Commercial Recycling Data report**, these facilities processed a total of 54,449 tons in 2022 of which 9,548 tons originated from Cuyahoga County. With Rumpke's new Franklin County MRF coming online in 2024, the facilities can now process 60 and 55 tons per hour, respectively, with a combined capacity of 437,000 tons. Rumpke also operates a MRF located in adjacent Medina County capable of processing 25 tons per hour. The facilities have ample processing capacity.

Kimble Recycling Facility

This facility is located in Summit County, which borders the District to the south. It is designed to process 25 tons per hour and typically processes 300 tons a day running two, shifts or 124,800 tons per year based on 312 operating days. Kimble reported that this facility is not running at maximum processing capacity, which means it could process more recyclables by extending the hours and/or days the facility operates. Actual tons processed in 2022 was not available.

Cuyahoga County is fortunate to be located in a region with healthy competition amongst haulers and recycling processors, so the cost of transporting recyclables to a processing facility and the current cost of processing recyclables do not pose a barrier to improving the recovery of recyclable materials.

B. SINGLE STREAM PROCESSING COSTS

Processing costs vary based on contract terms and service agreements. Information on processing costs for commercial recycling services is not available. Information on processing costs for municipal recycling

services varies by city. In general, for cities that contract for waste collection and recycling services, the processing fee is part of the total contract cost and no separate fee is charged.

For communities that collect their own recyclables and deliver them to a MRF, there is no fee charged **up front for recycling processing for those that participate in the District's Recycling Consortiums. Thus,** while processing costs for single stream recyclables vary during the contract term, Consortium members do not directly pay this fee. Rather, the processing fee is deducted from the total value of the sale of recyclables. The MRF then rebates the net revenue/expense to the city as part of a risk sharing formula between the Recycling Consortium member and the MRF.

The Eastside Recycling Consortium includes the following communities: Beachwood, Cleveland Heights, Highland Hills, Independence, Lyndhurst, Moreland Hills, Pepper Pike, Shaker Heights, Solon, University Heights, and Woodmere. The Southeast Consortium includes the following communities: Bedford, Bedford Heights, Orange, and Walton Hills.

The District has not collected extensive data on processing costs, however, competition in the region appears to keep processing costs below the national average and below processing costs in other areas of Ohio.

C. STRENGTHS, CHALLENGES, OPPORTUNITIES, AND CONCLUSIONS

The following section summarizes the strengths and challenges related to recycling processing capacity for the District.

Strengths

- As of year 2023, there is one high-volume MRF located in the District, and several high-volume specialty recyclers. There are several high-volume MRFs located in neighboring counties that provide capacity and competition for District-generated materials.
- In general, the District has adequate processing capacity for current and projected volumes of recyclables throughout the planning period.

Challenges

- The quantity of residential recyclables recovered between 2018 and 2022 fluctuated with COVID and post-COVID recovery, however, projections are trending upward.
- MRFs continue to report increases in contamination.
- **Cities currently view recycling as "free" since very few pay upfront recycling processing fees. This is likely to change when new contracts are put in place.**
- MRF costs have historically been low due to high competition but are always subject to change during the planning period due to changing markets.

Opportunities

The District has developed a series of potential improvements, initiatives and/or strategies to be considered for implementation in the new planning period based on the analysis, conclusions, strengths and challenges and other factors identified in this section.

The following opportunities for potential improvements are designed to improve the challenges identified above.

Conducting MRF Site Surveys

Contamination and market conditions affect the costs of recycling for District communities. To assess if there are certain District communities where contamination is more prevalent, the District encourages communities to have their recycling processor conduct material audits to quantify contamination associated with District-generated recyclables. This could be accomplished by working more closely with the MRFs to identify communities with higher-than-average contamination issues and work to increase education within those communities.

Educate Communities on Cost of Processing

The District can **develop a strategy to address public perception that recycling is “free” to mitigate** negativity concerning new contracts if recycling becomes fee-based.

D. CONCLUSIONS

Numerous high-volume specialty recyclers and single material recycling processors and MRFs are located in the District or in neighboring counties which have provided ample processing capacity at competitive prices for most materials generated in Cuyahoga County. Impacts from increased contamination because of the expansion of automated collection, and ever-changing market conditions may lead to material-specific processing capacity deficiencies and changes in contract pricing. The District will continue to mitigate potentially negative impacts on processing capacity by conducting its processor/MRF survey. If contract pricing for communities change to include fee-based recycling, proactively addressing public perception issues on the value of recycling services should minimize negativity toward new contracts.

APPENDIX I: CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

A. ACTIONS AND PRIORITIES

The 2026-2040 Plan was developed to meet the 2020 State Plan goals. To fulfill the directives in Ohio Revised Code Section 3734.50, the District's Plan must demonstrate having strategies and programs in place to address all of the required goals. This 2026-2040 Plan Update is prepared to meet compliance with the 2020 State Plan. In order to obtain approval from Ohio EPA for the solid waste management plan, the District must demonstrate being able to achieve either Goal 1 or Goal 2 of the 2020 State Plan. Appendix J shows the District achieved Goal 1 in the reference year meeting 80% access to recycling and will continue to achieve Goal 1 throughout the planning period. Appendix K shows the District did not meet the 25% recycling Goal 2 in the reference year but is projected to throughout the planning period.

This Appendix describes the accomplishments of the strategies/programs and their future direction for the 2022 Plan.

1. Actions (what could be addressed)

The evaluation in Appendix H evaluates the SWMD's performance of strategies/programs in offering and maintaining services. The process of the evaluation shows whether actual performance is what was expected or desired. If strategies/programs didn't perform as intended or challenges were identified, then suggestions were provided to strengthen programs, improve performance, and/or increase effectiveness. The list below is a quick summary of conclusions and findings found from the evaluation.

A full list of what the District could do includes:

Category	List of Actions
Residential Sector Reduction and Recycling Programs	Provide technical assistance for recycling programs, focusing on operational+ effectiveness, increased participation, and lowering contaminants
	Continue municipal contracting for communities and consortiums
	Promote transparency on commodity pricing and end markets
	Work with communities and haulers on yard waste, food waste collection programs
	Assist communities with single-material drop-off programming
	Promote multi-family How-to-Recycle guide
	Promote multi-family recycling model ordinance to communities and economic directors
	Provide incentive grants and education to assist in launching multi-family recycling
	Provide technical support to right size multi-family recycling programs
	Promote in-home trash/recycling stations
	Expand pumpkin/gourd pilot program to other communities
Perform annual survey of communities and compile into a residential recycling report	
Commercial/ Institutional Sector Reduction and Recycling Programs	Work to expand fiber-collection education and infrastructure
	Work with Hunger Network on Food Waste Prevention
	Support Glass Drop-Off Collection Sites
	Consider Conditionally Exempt Small Quantity Generator (CESQG) Consortium

Category	List of Actions
	Target commercial sector fiber generators
	Implement a commitment pledge for all entities receiving a program audit or contracting assistance.
	Evaluate establishing consortiums in dense commercial areas like strip malls
	Engage community economic development directors for program support and education
	Continue collaboration with Trade Associations and Organizations
	Continue to apply for Ohio EPA grants to help businesses expand or implement recycling programs.
	Perform annual survey of recycling processors and commercial businesses
	Conduct waste assessments and audits
	Conduct site visits with the largest employers
	Expand survey lists in a targeted manner to include high volume generators
	Industrial Sector Reduction and Recycling Programs
Work to expand fiber-collection education and infrastructure	
Promote TRUE certification	
Target small to medium sized manufacturers without EHS person or plant manager to implement recycling	
Conduct waste assessments and audits	
Conduct site visits with the largest employers	
Restricted & Difficult to Manage Wastes, Special Collection Events	Promote local and regional rechargeable battery recycling and help establish community collections
	Provide CRT collection with TVs through a District hosted event
	Target hard to recycle items, including textiles, boat shrink wrap, EPS (Styrofoam), laboratory glassware and equipment, vape pens
	Target high volume food waste generators
	Continue to facilitate food rescue programs
	Support regional glass recycling
	Promote "using" versus "discarding" HHW and green cleaning alternatives
	Obtain HHW participation data from communities
	Promote computer (electronics) roundups
	Provide hard to recycle material drop off at the District
	Provide year-round HHW drop off at the District
	Provide annual tire round-up services for communities in the District
	Promote existing battery recycling locations
	Continue District's compost bin sales
	Promote local pharmaceutical collections
	Support and provide technical assistance to improve infrastructure for food waste diversion
	Support and provide technical assistance to improve recycling infrastructure for glass
Consider conducting an analysis on textiles	

Category	List of Actions
	Promote use of Share Tables as a low-cost way to reduce food waste in cafeterias
Education/Outreach	Recycle Right and New Recyclable Materials Outreach Campaign
	Benchmark website posts/pages/entries to ID sections with largest audience
	Maintain the Pass-It-On Book on website
	Recruit Recycling Ambassador Applicants and Green Teams from underperforming communities
	Target school administrators to establish recycling programs
	Continue to use LinkedIn to build business audience
	Provide educational/public official tours of a District facility or materials recovery processing facility
	Provide education and outreach on HHW, scrap tires, organics, food waste
	Continue sharing information on website and social media
	Continue updating and posting recycling guide information on the website
	Continue speaker/presenter programming
	Produce targeted education campaign if a community switches to a new hauler or MRF shed
	Survey local MRFs to ensure District’s educational messages are focused on targeted materials
Educate communities on the cost of processing	
Grants, Economic Incentives, Market Development	Revamp the three existing grant categories: Community Recycling Awareness Grant, Waste Reduction, Recycling, and Composting Equipment Grant, and Special Project Grants
	Create new School and Institutional Grant
	OEPA market development support and administration
	Work with local recycling and reuse companies to develop local markets, expand local recycling infrastructure, and increase local manufacture of recycled products, with emphasis on food waste, glass, and scrap tires
Other Programs	Facilitate Environmental Crimes Task Force (ECTF)
	Continue/Expand Court Community Services (CCS) Litter Collection Program
	Provide Health Department code enforcement funding
	Demonstrate the need for a dedicated full time county prosecutor
	Lobby for dedicated common pleas court judge
	Support a legislative change to the open dumping statute
	Continue to work within the region regarding solid waste issues, disposal impacts, and recycling impacts as the largest contributor to the regional waste shed
	Implement joint use agreements
	Continue partnership development, engagement, collaboration, and communication
	Reevaluate minimum fund balance to ensure sound fiscal management (8 months operations) with new gen fee
	Design a database software program for unique solid waste conditions and reporting requirements in both Cuyahoga County and Ohio

The list of actions does not commit the District to undertake every specific action. Strategies and actions to streamline operations and continue high diversion were discussed, identified, and prioritized.

2. Priorities

Priority areas to focus efforts in the 2022 Plan include:

Priority Program	Priority Area
Outreach	Recycle Right and New Recyclable Materials Outreach Campaign
Grant Programming	Restructure existing grants and add a fourth new grant program
Difficult to Manage Waste	Expand research on hard to manage/recycle materials, including food waste, glass, textiles
Drop-offs	Promote/support/and provide technical assistance to communities for food waste, fiber, and glass drop offs

Strategies/programs being implemented currently address these priority areas. However, based on the evaluation, the programs can adapt specific actions to continue to progress towards the broad goal.

B. PROGRAMS

1. Residential Recycling Infrastructure

Curbside Recycling Services

Status	Name	Start Date	End Date	Goal
Existing	Bay Village city	Existing	Ongoing	1, 2
Existing	Beachwood city	Existing	Ongoing	1, 2
Existing	Bedford city	Existing	Ongoing	1, 2
Existing	Bedford Heights city	Existing	Ongoing	1, 2
Existing	Bentleyville village	Existing	Ongoing	1, 2
Existing	Berea city	Existing	Ongoing	1, 2
Existing	Bratenahl village	Existing	Ongoing	1, 2
Existing	Brecksville city	Existing	Ongoing	1, 2
Existing	Broadview Heights city	Existing	Ongoing	1, 2
Existing	Brook Park city	Existing	Ongoing	1, 2
Existing	Brooklyn city	Existing	Ongoing	1, 2
Existing	Brooklyn Heights village	Existing	Ongoing	1, 2
Existing	Chagrin Falls township	Existing	Ongoing	1, 2
Existing	Chagrin Falls village	Existing	Ongoing	1, 2
Existing	Cleveland city	Existing	Ongoing	1, 2
Existing	Cleveland Heights city	Existing	Ongoing	1, 2
Existing	Cuyahoga Heights village	Existing	Ongoing	1, 2
Existing	Euclid city	Existing	Ongoing	1, 2
Existing	Fairview Park city	Existing	Ongoing	1, 2
Existing	Garfield Heights city	Existing	Ongoing	1, 2
Existing	Gates Mills village	Existing	Ongoing	1, 2
Existing	Glenwillow village	Existing	Ongoing	1, 2
Existing	Highland Heights city	Existing	Ongoing	1, 2

Status	Name	Start Date	End Date	Goal
Existing	Highland Hills village	Existing	Ongoing	1, 2
Existing	Hunting Valley village	Existing	Ongoing	1, 2
Existing	Independence city	Existing	Ongoing	1, 2
Existing	Lakewood city	Existing	Ongoing	1, 2
Existing	Linndale village	Existing	Ongoing	1, 2
Existing	Lyndhurst city	Existing	Ongoing	1, 2
Existing	Maple Heights city	Existing	Ongoing	1, 2
Existing	Mayfield village	Existing	Ongoing	1, 2
Existing	Mayfield Heights city	Existing	Ongoing	1, 2
Existing	Middleburg Heights city	Existing	Ongoing	1, 2
Existing	Moreland Hills village	Existing	Ongoing	1, 2
Existing	Newburgh Heights village	Existing	Ongoing	1, 2
Existing	North Olmsted city	Existing	Ongoing	1, 2
Existing	North Randall village	Existing	Ongoing	1, 2
Existing	North Royalton city	Existing	Ongoing	1, 2
Existing	Oakwood village	Existing	Ongoing	1, 2
Existing	Olmsted Falls city	Existing	Ongoing	1, 2
Existing	Olmsted township	Existing	Ongoing	1, 2
Existing	Orange village	Existing	Ongoing	1, 2
Existing	Parma city	Existing	Ongoing	1, 2
Existing	Parma Heights city	Existing	Ongoing	1, 2
Existing	Pepper Pike city	Existing	Ongoing	1, 2
Existing	Rocky River city	Existing	Ongoing	1, 2
Existing	Seven Hills city	Existing	Ongoing	1, 2
Existing	Shaker Heights city	Existing	Ongoing	1, 2
Existing	Solon city	Existing	Ongoing	1, 2
Existing	South Euclid city	Existing	Ongoing	1, 2
Existing	Strongsville city	Existing	Ongoing	1, 2
Existing	University Heights city	Existing	Ongoing	1, 2
Existing	Walton Hills village	Existing	Ongoing	1, 2
Existing	Warrensville Heights city	Existing	Ongoing	1, 2
Existing	Westlake city	Existing	Ongoing	1, 2
Existing	Woodmere village	Existing	Ongoing	1, 2

Curbside recycling will continue to be offered by communities during the planning period and provide collection of cans, cartons, glass, paper and cardboard, and plastic containers. Curbside recycling is now available to residents in all but one community. The District plans to work with the remaining community to encourage the implementation of a program.

The District offers communities technical assistance to help with contracting for solid waste and recycling services and to implement best practices for collection. The District has helped many communities contract for curbside recycling and switch to cart-based collection which has increased recycling and reduced costs. These services will continue with emphasis on encouraging the switch from recycling collection using blue bags to recycling collection using carts as well as increasing recycling participation and reducing contamination.

The District manages two municipal contracting consortiums – solid waste transfer and disposal consortium (8 members) and recycling processing consortium (11 members). These consortiums have helped the participating cities, who collect their own waste and recyclables, obtain favorable and competitive pricing for solid waste services.

The District also offers special assistance to communities with curbside recycling rates lower than the national average of 300 pounds per household per year. The assistance may include conducting focus groups to identify reasons for the low recycling rate, focusing education in those communities and additional resources intended to help the community improve.

The standard recyclables collected in 2022 were: aluminum cans, cans, cardboard, glass, paper and boxes, plastic bottles and jugs. The District maintains an updated list of recyclables accepted by each **community’s waste hauler that is available on the District’s website under the *Select a City* feature.**

Drop-off Recycling Services

Status	Name	Start Date	End Date	Goal
Full-Time, Urban Drop-offs				
Existing	Beachwood Community Center - 25225 Fairmount Blvd. Beachwood, OH 44122	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	Brook Park Service Department, 19065 Holland Rd. Brook Park, OH 44142	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	Cleveland Division of Waste Collection, 5600 Carnegie Ave., Cleveland, OH 44103	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	Cleveland Ridge Road Transfer Station, 3727 Ridge Rd., Cleveland, OH 44144	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	East Cleveland Service Department, 1610 Eddy Rd., OH 44112	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Existing	Lakewood Service Department, 12920 Berea Rd. Lakewood, OH 44111	Existing	Ongoing	1, 2
Drop-off open to the public 24/7.. The City provides and services this drop-off location.				
Existing	Mayfield Heights Service Department, 6154 Mayfield Road, Mayfield Heights, OH 44124	Existing	Ongoing	1, 2

Status	Name	Start Date	End Date	Goal
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Existing	North Olmsted Service Garage, 5200 Dover Center Rd. North Olmsted, OH 44070	Existing	Ongoing	1, 2
Drop-off open to the public 24/7.. The City provides and services this drop-off location.				
Existing	Pepper Pike City Hall Complex, 28000 Shaker Blvd., Pepper Pike, OH 44124	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	Rocky River Service Department / Transfer Station, 22401 Lake Rd. Rocky River, OH 44116	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	Solon Service Department, 6600 Cochran Rd., Solon, OH 44139	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	Strongsville Food Bank, 13213 Pearl Rd. Strongsville, OH 44136	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Existing	University Heights Service Department, 2300 Warrensville Center Rd. University Heights, OH 44118	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	Westlake Clague Park Cabin, 1500 Clague Rd., Westlake, OH 44145	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Existing	Westlake Meadowood Golf Course, 29800 Center Ridge Rd., Westlake, OH 44145	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Existing	Westlake Police Station, 27300 Hilliard Blvd., Westlake, OH 44145	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Part-Time, Urban Drop-offs				
Existing	Brecksville Service Garage 9023 Brecksville Rd. Brecksville, OH 44141	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Existing	North Royalton Service Garage 10789 Royalton Rd. North Royalton, OH 44133	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Existing	Olmsted Township Service Garage 7900 Fitch Rd. Olmsted Twp., OH 44138	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				

Status	Name	Start Date	End Date	Goal
Existing	Shaker Heights Service Department 15600 Chagrin Blvd. Shaker Heights, OH 44120	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City provides and services this drop-off location.				
Full-Time, Rural Drop-offs				
Existing	Highland Hills Shaker House Complex 3700 Northfield Rd. Highland Hills, OH 44122	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Existing	Valley View Village Hall 6895 Hathaway Rd. Valley View, OH 44125	Existing	Ongoing	1, 2
Drop-off open to the public 24/7. The City directly contracts with a private business to provide and service this drop-off location.				
Part-Time, Rural Drop-offs				
None				

Drop-off recycling opportunities will continue to be offered by many communities during the planning period. Currently, multi-material drop-offs are offered by 15 communities and accept cans, glass, plastic containers, mixed paper and cardboard. In addition, limited-material drop-offs are offered by 23 communities and typically accept cans, paper and cardboard.

2. [Residential Sector Reduction and Recycling Programs](#)

Status	Name	Start Date	End Date	Goal
Existing	Provide technical assistance for recycling programs, focusing on operational effectiveness, increased participation, and lowering contaminants	Existing	Ongoing	1,2,4,7
There were 56 non-subscription curbside recycling programs operating in 2022, with East Cleveland, Richmond Heights, and Valley View the three that did not offer curbside recycling. Cleveland implemented a new opt-in curbside recycling program which commenced in June 2022. These publicly sponsored programs are either operated by the community or contracted by the community and provide single stream collection of cans, cartons, glass, paper and cardboard, and plastic containers. The District will continue to provide technical assistance to its communities in support of these programs.				
Existing	Continue municipal contracting for communities and consortiums	Existing	Ongoing	2,4,7
The District will continue to assist the Eastside Disposal Consortium (8 communities) and the Eastside Recycling Processing Consortium (11 communities) with technical support and contractual activities. These consortiums help participants obtain competitive pricing and are expected to continue.				
New	Promote transparency on commodity pricing and end markets	2026	Ongoing	4,7
The District will encourage more informed views on commodities and end markets to potentially increase community participation.				
Existing	Work with communities and haulers on yard waste, food waste collection programs	Existing	Ongoing	1,2,4

Status	Name	Start Date	End Date	Goal
Efforts will continue to encourage programming around yard waste and food waste. The District will continue to identify the material drop-offs on CuyahogaRecycles.org				
Modify	Assist communities with single-material drop-off programming	2026	Ongoing	1,2
The existing program to establish District recycling drop-offs for fiber in high MFH communities is expanding to allow for consideration of other single-material drop-off programming. The District may also further consider next steps with the communities identified as having the highest concentrations of multi-family housing for consideration as potential fiber drop-off sites.				
Existing	Promote multi-family How-to-Recycle guide	Existing	Ongoing	4
Consideration may be given to sending the How-to-Recycle Guide to property managers, owners, and residents to help establish recycling programs.				
Existing	Promote multi-family recycling model ordinance to communities and economic directors	Existing	Ongoing	1,2
The District continues to encourage the use of the Model Ordinance created in 2022 for Cleveland Heights and Shaker Heights to other communities and economic directors to require recycling space for all new commercial buildings.				
Existing	Provide incentive grants and education to assist in launching multi-family recycling	Existing	Ongoing	4,7
The District may for example, consider piloting a program to distribute small collection containers to support the residents in a multi-family housing arrangement, accompanied by education and outreach to promote recycling.				
Modify	Provide technical support to right size multi-family recycling programs	2026	Ongoing	1,2,4
The District's existing programming will be expanded to consider right sizing recycling programs without cooperative contracting.				
New	Promote in-home trash/recycling stations	2026	Ongoing	1,2,4
The District is interested in exploring this new education and outreach opportunity to promote an easier mechanism for recyclables sorting in the home.				
New	Expand pumpkin/gourd pilot program to other communities	2026	Ongoing	1,2,4
The District is interested in expanding their pumpkin drop-off program to other communities based upon the success of their pilot efforts in the fall of 2024.				
Existing	Perform annual survey of communities and compile into a residential recycling report	Existing	Ongoing	1,2,4
The District will continue to prepare and publish an Annual Report & Residential Recycling Report to share information on statistics, finances and services, looking to the future, and striving for impact in the region.				

3. [Commercial/Institutional Sector Reduction and Recycling Programs](#)

Status	Name	Start Date	End Date	Goal
New	Work to expand fiber-collection education and infrastructure	2026	Ongoing	2,4
The District could meet with fiber recyclers face-to-face to discuss opportunities for expanding fiber-collection infrastructure to the commercial sector.				

Status	Name	Start Date	End Date	Goal
New	Work with Hunger Network on Food Waste Prevention	2026	Ongoing	2,4
New programming may be directed at reducing food waste, diverting edible food, and sending waste to Rust Belt Riders, and working with caterers on compostable ware.				
New	Support Glass Drop-Off Collection Sites	2026	Ongoing	1,2,4
The District will promote the placement of glass collection sites by educating bars and other industries with glass waste, such as laboratories.				
New	Consider Conditionally Exempt Small Quantity Generator (CESQG) Consortium	2026	Ongoing	2,7
The District will investigate the potential for an environmental services company to provide discounted rates for small businesses within the District.				
Existing	Target commercial sector fiber generators	Existing	Ongoing	4,10
The District will explore opportunities to survey and target major restaurants and big box stores with design workshops and the new Business Resource Champion Program to help the District to get the greatest return on its assistance services.				
Modify	Implement a commitment pledge for all entities receiving a program audit or contracting assistance.	2026	Ongoing	2,4,7
The District is proposing the implementation of a commitment pledge for accountability and to create a gateway for continued support and follow up on program implementation, successes, and challenges.				
New	Evaluate establishing consortiums in dense commercial areas like strip malls	2026	Ongoing	2,4,7
The District will develop a plan for identifying dense commercial areas and communicate with community leaders and economic development personnel to identify opportunities for savings that could be used to help pay for recycling services.				
Existing	Continue collaboration with Trade Associations and Organizations	Existing	Ongoing	2,4
The District will collaborate with local commercial trade organizations to reach more generators, distribute information, conduct seminars, and obtain information about various businesses and issues affecting them.				
Existing	Continue to apply for Ohio EPA grants to help businesses expand or implement recycling programs.	Existing	Ongoing	2,4,7
The District will continue to provide technical assistance for Ohio EPA grants to help businesses expand or implement recycling programs.				
Existing	Perform annual survey of recycling processors and commercial businesses	Existing	Ongoing	2,10
The District will continue performing annual surveys of recycling processors and commercial businesses as a means of engaging and building relationships whereby waste and recycling data is shared and opportunities for the District to provide further technical assistance may be realized.				
Existing	Conduct waste assessments and audits	Existing	Ongoing	2,4,7
The District's Business Recycling Specialist and Education Specialist will provide waste assessments for commercial businesses, institutions, schools, and manufacturing facilities as requested to identify opportunities for waste reduction, recycling, and education.				
New	Conduct site visits with the largest employers	2026	Ongoing	2,4

Status	Name	Start Date	End Date	Goal
The District will reach out to the largest employers within the District to provide technical assistance, outreach, and education, with a goal for implementing recycling program or expanding existing recycling programs.				
Modify	Expand survey lists in a targeted manner to include high volume generators	Existing	Ongoing	2,4
The District will develop a program for identifying and categorizing large-volume commercial and industrial generators to evaluate further opportunities for education, outreach, and technical assistance.				

4. Industrial Sector Reduction and Recycling Programs

Status	Name	Start Date	End Date	Goal
Existing	Promote Ohio EPA’s Material Marketplace (aka Rheaply)	Existing	Ongoing	2,4,5
The District will work with Ohio EPA to promote the exchange of used materials through the Ohio Materials Marketplace aka Rheaply. The District will promote the marketplace on its website, arrange speaking opportunities for the Ohio EPA, and distribute information to its businesses and manufacturers.				
New	Work to expand fiber-collection education and infrastructure	2026	Ongoing	2,4,5
The District could meet with fiber recyclers face-to-face to discuss opportunities for expanding fiber-collection infrastructure to the industrial sector.				
New	Promote TRUE certification	2026	Ongoing	2,4,5,7
The District’s Business Recycling Specialist and Education Specialist will promote TRUE (Total Resource Use and Efficiency) certification, a zero-waste certification program used by facilities to define, pursue and achieve their zero waste goals, cutting their carbon footprint and supporting public health in their communications with the industrial sector.				
New	Target small to medium sized manufacturers without EHS person or plant manager to implement recycling	2026	Ongoing	2,4,5
The District will develop a program for identifying small to medium sized manufacturers without an EHS person or plant manager to evaluate further opportunities for education, outreach, and technical assistance.				
Existing	Conduct waste assessments and audits	Existing	Ongoing	2,4,5
The District’s Business Recycling Specialist and Education Specialist will provide waste assessments for commercial businesses, institutions, schools, and manufacturing facilities as requested to identify opportunities for waste reduction, recycling, and education.				
New	Conduct site visits with the largest employers	2026	Ongoing	2,4,5
The District will reach out to the largest employers within the District to provide technical assistance, outreach, and education, with a goal for implementing recycling program or expanding existing recycling programs.				

5. Restricted & Difficult to Manage Wastes, Special Collection Events

Status	Name	Start Date	End Date	Goal
New	Promote local and regional rechargeable battery recycling and help establish community collections	2026	Ongoing	1,4,6
The District will work with local recyclers to help to establish community collections for rechargeable batteries, as they are becoming a more prominent and difficult to manage waste. The District will promote proper disposal of rechargeable batteries with information kept current and published on the District’s website				
New	Provide CRT collection with TVs through a District hosted event	2026	Ongoing	1,2,6
Because the management of CRT glass is a costly problem for many local recyclers, the District will work with its e-waste recycling community to determine the best options for managing the glass which may include charging fees if promoted with existing local computer collection events held by communities as well as other e-waste recycling opportunities offered by local e-waste recyclers and retail stores. The District will promote CRT collection opportunities through social media, digital advertising, and on its website.				
New	Target hard to recycle items, including textiles, boat shrink wrap, EPS (Styrofoam), laboratory glassware and equipment, vape pens	2026	Ongoing	4,6
The District will research and identify emerging hard to recycle items to provide guidance on proper material management. Recycling facilities that accept hard to recycle items will be featured on the District’s website and promoted through social media and digital advertising.				
New	Target high volume food waste generators	2026	Ongoing	2,4,6
The District will research and identify high volume food waste generators to help maximize District resources by identifying companies, or groupings of restaurants and food service organizations, with the greatest opportunity to explore alternatives to food waste disposal. The District could meet with high volume food waste generators face-to-face to discuss opportunities for expanding alternatives to food waste disposal.				
New	Facilitate food rescue programs	2026	Ongoing	1,2,4,6
Facilitate collaboration among entities that generate food waste and those that rescue food waste through meetings or workshops. The goal would be to connect groups that provide food rescue or food waste composting with generators that need their services.				
New	Support regional glass recycling	2026	Ongoing	1,2,4,6
The District will promote regional glass recycling by developing a plan for targeting businesses and manufacturers for assistance. This will help maximize District resources by identifying companies, or groupings of restaurants and bars, with the greatest opportunity to recycle. The District could meet with high glass generators face-to-face to discuss opportunities for expanding glass recycling infrastructure.				
Modify	Promote “using” versus “discarding” HHW and green cleaning alternatives	Existing	Ongoing	4
The District will work to educate residents about the ways it can minimize the creation of HHW through an education campaign using social media and community outreach. The campaign could focus on “using” versus “discarding” HHW and green cleaning alternatives.				
Existing	Obtain HHW participation data from communities	Existing	Ongoing	4,6
The District will work with its communities that participate in the HHW program to collect and compile data to measure participation and to evaluate opportunities to further increase participation through education and outreach.				

Status	Name	Start Date	End Date	Goal
Existing	Promote computer (electronics) roundups	Existing	Ongoing	1,2,6
The District will continue to promote local computer collection events held by communities as well as other e-waste recycling opportunities offered by local e-waste recyclers and retail stores. The District will continue to promote all local collections through social media, digital advertising, and on its website.				
Existing	Provide hard to recycle material drop off at the District	Existing	Ongoing	1,2,4,6
The District will continue to accept hard to recycle materials year-round at its Special Waste Convenience Center. The Center will accept hard to recycle materials collected from participating communities and dropped off by residents.				
Existing	Provide year-round HHW drop off at the District	Existing	Ongoing	1,2,6
The District will continue to operate its year-round HHW collection program at its Special Waste Convenience Center. The Center will accept HHW collected from participating communities at an established frequency. The program provides communities with training and supplies so they can collect HHW from their residents and then deliver the materials to the Center. The District pays for all costs associated with HHW management once it is delivered by the communities and sorted, transported, and disposed through its hazardous waste contractor.				
Existing	Provide annual tire round-up services for communities in the District	Existing	Ongoing	1,2,6
The District will continue to conduct its annual Scrap Tire Round-Up to collect tires from residents and discourage illegal dumping.				
Existing	Promote existing battery recycling locations	Existing	Ongoing	1,4,6
The District will promote proper disposal of batteries with information kept current and published on the District's website				
Existing	Continue District's compost bin sales	Existing	Ongoing	2,4,6
The District will continue to offer backyard composting bins and food waste digesters for sale to the public at its office and through composting seminars.				
Existing	Promote local pharmaceutical collections	Existing	Ongoing	1,4,6
The District will promote existing pharmaceutical collections offered by the Cuyahoga County Sheriff through its Drop Box program, collection events held by the Northeast Ohio Regional Sewer District, and collections offered by local pharmacies and health care providers.				
New	Support and provide technical assistance to improve infrastructure for food waste diversion	2026	Ongoing	1,2,4,6
Facilitate collaboration among entities that generate food waste and those that rescue food waste through meetings or workshops. The goal would be to connect groups that provide food rescue or food waste composting with generators that need their services.				
New	Consider conducting an analysis on textiles	2028	2028	1,2,9
The District will consider conducting a thorough analysis on textiles to determine sources and volumes, to make connections with potential recyclers to determine if there may be an opportunity to establish infrastructure or otherwise promote opportunities.				
New	Promote use of Share Tables as a low-cost way to reduce food waste in cafeterias	2026	Ongoing	1,2,4,6,9
The District will promote the use of Share tables in cafeterias to allow students to reduce their food waste at school by creating the opportunity for students to offer up untouched (unopened and uneaten) food items to other students.				

6. Education/Outreach

Status	Name	Start Date	End Date	Goal
Existing	Recycle Right and New Recyclable Materials Outreach Campaign to promote regional harmonization through electronic and printed collateral	Existing	Ongoing	1,2,3,4
The District will continue its marketing, media relations, and advertising, newsletters, printed materials, presentations and tabling events, and the recycling to promote regional harmonization.				
Existing	Benchmark website posts/pages/entries to ID sections with largest audience	Existing	Ongoing	1,2,3,4
The District will use its analytics to identify the components of the website that reach the largest audience to factor that awareness into widely distributing new content or messaging to similarly reach the largest audience.				
Existing	Maintain the Pass-It-On Book on website	Existing	Ongoing	1,2,3,4
The District will continue to promote its WDIW search feature in conjunction with maintaining the online version of Pass-It-On: A Resource-Full Guide to Donating Usable Stuff				
Existing	Recruit Recycling Ambassador Applicants and Green Teams from underperforming communities	Existing	Ongoing	1,2,3,4
The District will continue to promote its Recycling Ambassador and Green Teams programming, with a special emphasis on engaging communities that have been demonstrated as underperforming.				
Modify	Target school administrators to establish recycling programs	2026	Ongoing	1,2,3,4
The District has determined the most productive way to increase recycling within a school district is to engage school administrators to establish a recycling program. With a new program will come focused education and outreach to the school administration, teachers, custodians, and students, to successfully launch and maintain a recycling program.				
Existing	Continue to use LinkedIn to build business audience	Existing	Ongoing	1,2,3,4
The District's Business Recycling Specialist will continue to use LinkedIn to engage businesses in identifying opportunities for waste reduction, recycling, and education.				
Existing	Provide educational/public official tours of a District facility or materials recovery processing facility	Existing	Ongoing	1,2,3,4
The District will work with local Material Recovery Facilities and landfill to offer facility tours for local public officials. The purpose is to increase understanding of solid waste facility operations. Many elected officials are not aware of the complex operations for managing the waste stream. This would provide the District with significant opportunities to further network with city and county officials. The District sponsored a Tour Your MRF event several years ago which was very successful and could be hosted again.				
Existing	Provide education and outreach on HHW, scrap tires, organics, food waste	Existing	Ongoing	1,2,3,4
The District will work to educate residents about the proper management of materials through an education campaign using social media and community outreach.				
Existing	Continue sharing information on website and social media	Existing	Ongoing	1,2,3,4
The District will continue to update and share information on its website and through social media.				
Existing	Continue updating and posting recycling guide information on the website	Existing	Ongoing	1,2,3,4

Status	Name	Start Date	End Date	Goal
The District will continue to promote its WDIDW search feature in conjunction with maintaining the online version of Pass-It-On: A Resource-Full Guide to Donating Usable Stuff				
Existing	Continue speaker/presenter programming	Existing	Ongoing	1,2,3,4
The District will continue to provide public recycling and composting webinars and events, business recycling seminars, webinars, and workshops.				
Existing	Produce targeted education campaign if a community switches to a new hauler or MRF shed	Existing	Ongoing	1,2,3,4
The District will continue to provide a targeted education campaign if a community switches to a new hauler, to a new MRF shed, or if changes are made to the materials collected and processed using social media and community outreach.				
Existing	Survey local MRFs to ensure District's educational messages are focused on targeted materials	Existing	Ongoing	1,2,3,4
The District will continue to conduct annual surveys of processors, utilizing the information collected to be sure the District's educational messages are specific to the materials accepted within the community curbside and drop-off programs.				
New	Educate communities on the cost of processing	2026	Ongoing	1,2,3,4
The District will encourage more informed views on commodities and end markets to educate communities on the cost of processing and to potentially increase community participation.				

7. [Grants, Economic Incentives, Market Development](#)

Status	Name	Start Date	End Date	Goal
Modify	Revamp the three existing grant categories: Community Recycling Awareness Grant, Recycling and Composting Equipment Grant, and Special Project Grants	2026	Ongoing	1,4,7
Adjust funding levels, establish maximum individual grant awards, grant cycles to run from August 1 of year one through closeout of grant on November 2 of year two. The <i>Community Recycling Awareness Grant</i> allowable funding categories shall include collection events, equipment, containers, education and awareness, and others as approved by the District. The <i>Waste Reduction, Recycling, and Composting Equipment Grant</i> shall be retitled the <i>Waste Reduction Grant for Businesses</i> , with allowable funding categories to include equipment, containers, awareness and outreach, and collection programs. The <i>Special Project Grants</i> shall be available to communities, governmental agencies, and non-profit organizations only				
Existing	OEPA market development support and administration	Existing	Ongoing	1,7,9
The District will identify local recyclers that could benefit from an Ohio EPA Market Development Grant to expand local processing capacity and markets for materials. Assist with the development of the application and the application process. Administer the grant upon award and track progress.				
Existing	Recycling and Sustainable Business Assistance	Existing	Ongoing	1,9
The District will work with local recycling and reuse companies to develop local markets, expand local recycling infrastructure, and increase local manufacture of recycled products, with emphasis on food waste, glass, and scrap tires				

Status	Name	Start Date	End Date	Goal
New	Create new Waste Reduction Grant for Schools and Universities	2026	Ongoing	1,4,7
Establish funding level, establish maximum individual grant award, available to schools and universities only, grant cycle to run from January 1 of year one through closeout of grant on May 1 of year two, allowable funding categories to include equipment, containers, awareness and outreach, and collection programs.				

8. Enforcement & Clean-up

Status	Name	Start Date	End Date	Goal
Existing	Facilitate Environmental Crimes Task Force (ECTF)	Existing	Ongoing	None
The District will continue to facilitate the Cleveland-Cuyahoga County Environmental Crimes Task Force which works to investigate and prosecute illegal dumping cases and other environmental crimes. Partners include the Cuyahoga County Prosecutor, Cleveland Police Department, Cuyahoga County Sheriff, local health departments and the City of Cleveland. The District will coordinate task force meetings, purchase equipment such as cameras, conduct training on Ohio's environmental laws, and provide funding to the environmental crimes units within the Cleveland PD and the County Sheriff's office.				
Modify	Continue/Expand Court Community Services (CCS) Litter Collection Program	2028	Ongoing	None
The District will continue to fund litter collection services provided through Court Community Service. Under an annual grant with CCS, two supervised litter crews will clean up roadways and public areas throughout Cuyahoga County, with the addition of a third supervised crew in year 2028.				
Existing	Provide Health Department code enforcement funding	Existing	Ongoing	None
The District will continue to provide an annual subsidy to the Cuyahoga County Board of Health and the Cleveland Department of Public Health to inspect licensed solid waste facilities, inspect tire generators, respond to nuisance complaints, and participate on the Cleveland-Cuyahoga Environmental Crimes Task Force.				
Existing	Demonstrate the need for a dedicated full time county prosecutor	Existing	Ongoing	None
The District will continue to demonstrate the need for a dedicated full time county prosecutor based upon the number of enforcement cases in Cuyahoga County per year.				
Existing	Lobby for dedicated common pleas court judge	Existing	Ongoing	None
The District will continue to demonstrate the need for a dedicated common pleas court judge based upon the number of enforcement cases in Cuyahoga County per year.				
Existing	Support a legislative change to the open dumping statute	Existing	Ongoing	None
The District will work with its Environmental Crimes Task Force partners to seek change to the open dumping penalty statute to give judges more leeway in sentencing.				

9. Other Programs

Status	Name	Start Date	End Date	Goal
Existing	Continue to work within the region regarding solid waste issues, disposal impacts, and recycling impacts as the largest contributor to the regional waste shed	Existing	Ongoing	2,10
The District will continue to strengthen relationships, build resources, and to broadly share information to provide access to opportunities for recycling and to increase the volume of material recycled within the District on an annual basis.				
Existing	Implement joint use agreements	Existing	Ongoing	1,4
The District will promote joint use agreements to highlight mutually beneficial partnerships and to hold parties accountable to the terms of their agreements.				
Existing	Continue partnership development, engagement, collaboration, and communication	Existing	Ongoing	1,4
The District will continue to explore all available opportunities to grow partnerships, increase community engagement, encourage collaboration, and provide harmonized communications to reach all sectors of the community.				
New	Reevaluate minimum fund balance to ensure sound fiscal management (8 months operations) with 2023 increase in generation fee	2026	Ongoing	10
With the increase in generation fee implemented in 2023, the District will reevaluate its minimum fund balance to ensure a minimum reserve to cover 8 months of operations as a means of sound fiscal management.				
Existing	Design a database software program for unique solid waste conditions and reporting requirements in both Cuyahoga County and Ohio	Existing	Ongoing	10
The District may hire a software developer to create a database software program to help organize and utilize District data and streamline data management.				

APPENDIX J: REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL 1

A. RESIDENTIAL SECTOR OPPORTUNITY TO RECYCLE IN THE REFERENCE YEAR

Demonstrating compliance with Goal 1 means the SWMD shall ensure adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.

Table J-1 Opportunity to Recycle

ID #	Cuyahoga County	2022		2026		2040	
	Name of Community (City, Village, Township)	Community Pop.	Pop. Credit	Community Pop.	Pop. Credit	Community Pop.	Pop. Credit
Non-subscription curbside							
NCS1	Bay Village city	15,880	15,880	15,864	15,864	14,442	14,442
NCS2	Beachwood city	13,788	13,788	13,774	13,774	12,540	12,540
NCS3	Bedford city	12,838	12,838	12,825	12,825	11,676	11,676
NCS4	Bedford Heights city	10,776	10,776	10,765	10,765	9,800	9,800
NCS5	Bentleyville village	891	891	890	890	810	810
NCS6	Berea city	18,395	18,395	18,376	18,376	16,730	16,730
NCS7	Bratenahl village	1,401	1,401	1,400	1,400	1,274	1,274
NCS8	Brecksville city	13,506	13,506	13,492	13,492	12,283	12,283
NCS9	Broadview Heights city	19,635	19,635	19,615	19,615	17,857	17,857
NCS10	Brook Park city	18,171	18,171	18,153	18,153	16,526	16,526
NCS11	Brooklyn city	11,088	11,088	11,077	11,077	10,084	10,084
NCS12	Brooklyn Heights village	1,485	1,485	1,483	1,483	1,351	1,351
NCS13	Chagrin Falls township	127	127	127	127	116	116
NCS14	Chagrin Falls village	4,114	4,114	4,110	4,110	3,742	3,742
NCS15	Cleveland city	361,607	361,607	361,242	361,242	328,870	328,870
NCS16	Cleveland Heights city	44,201	44,201	44,156	44,156	40,199	40,199
NCS17	Cuyahoga Heights village	558	558	557	557	507	507
NCS18	Euclid city	48,496	48,496	48,447	48,447	44,106	44,106
NCS19	Fairview Park city	16,885	16,885	16,868	16,868	15,356	15,356
NCS20	Garfield Heights city	29,072	29,072	29,043	29,043	26,440	26,440
NCS21	Gates Mills village	2,231	2,231	2,229	2,229	2,029	2,029
NCS22	Glenwillow village	983	983	982	982	894	894
NCS23	Highland Heights city	8,564	8,564	8,555	8,555	7,789	7,789
NCS24	Highland Hills village	670	670	669	669	609	609
NCS25	Hunting Valley village	630	630	629	629	573	573
NCS26	Independence city	7,520	7,520	7,512	7,512	6,839	6,839
NCS27	Lakewood city	49,658	49,658	49,608	49,608	45,162	45,162
NCS28	Linndale village	109	109	109	109	99	99
NCS29	Lyndhurst city	13,721	13,721	13,707	13,707	12,479	12,479
NCS30	Maple Heights city	23,136	23,136	23,113	23,113	21,041	21,041
NCS31	Mayfield village	3,298	3,298	3,295	3,295	2,999	2,999
NCS32	Mayfield Heights city	19,907	19,907	19,887	19,887	18,105	18,105
NCS33	Middleburg Heights city	15,682	15,682	15,666	15,666	14,262	14,262
NCS34	Moreland Hills village	3,435	3,435	3,432	3,432	3,124	3,124
NCS35	Newburgh Heights village	1,816	1,816	1,814	1,814	1,652	1,652
NCS36	North Olmsted city	31,724	31,724	31,692	31,692	28,852	28,852
NCS37	North Randall village	934	934	933	933	849	849
NCS38	North Royalton city	30,793	30,793	30,762	30,762	28,005	28,005
NCS39	Oakwood village	3,495	3,495	3,491	3,491	3,179	3,179

ID #	Cuyahoga County	2022		2026		2040	
	Name of Community (City, Village, Township)	Community Pop.	Pop. Credit	Community Pop.	Pop. Credit	Community Pop.	Pop. Credit
NCS40	Olmsted Falls city	8,603	8,603	8,594	8,594	7,824	7,824
NCS41	Olmsted township	14,450	14,450	14,435	14,435	13,142	13,142
NCS42	Orange village	3,476	3,476	3,472	3,472	3,161	3,161
NCS43	Parma city	79,358	79,358	79,278	79,278	72,174	72,174
NCS44	Parma Heights city	20,389	20,389	20,368	20,368	18,543	18,543
NCS45	Pepper Pike city	6,812	6,812	6,805	6,805	6,195	6,195
NCS46	Rocky River city	21,346	21,346	21,324	21,324	19,414	19,414
NCS47	Seven Hills city	11,557	11,557	11,545	11,545	10,511	10,511
NCS48	Shaker Heights city	28,723	28,723	28,694	28,694	26,123	26,123
NCS49	Solon city	23,792	23,792	23,768	23,768	21,638	21,638
NCS50	South Euclid city	21,395	21,395	21,373	21,373	19,458	19,458
NCS51	Strongsville city	45,725	45,725	45,679	45,679	41,585	41,585
NCS52	University Heights city	13,319	13,319	13,306	13,306	12,113	12,113
NCS53	Walton Hills village	1,998	1,998	1,996	1,996	1,817	1,817
NCS54	Warrensville Heights city	13,457	13,457	13,443	13,443	12,239	12,239
NCS55	Westlake city	33,907	33,907	33,873	33,873	30,837	30,837
NCS56	Woodmere village	646	646	645	645	588	588
Subscription curbside							
None		0	0	0	0	0	0
Full-time, urban drop-off							
FTU1	Beachwood Community Center, 25225 Fairmount Blvd. Beachwood, OH 44122	13,788	0	13,774	0	12,540	0
FTU2	Brook Park Service Department, 19065 Holland Rd. Brook Park, OH 44142	18,171	0	18,153	0	16,526	0
FTU3	Cleveland Division of Waste Collection, 5600 Carnegie Ave., Cleveland, OH 44103	361,607	0	361,242	0	328,870	0
FTU4	Cleveland Ridge Road Transfer Station, 3727 Ridge Rd., Cleveland, OH 44144	361,607	0	361,242	0	328,870	0
FTU5	East Cleveland Service Department, 1610 Eddy Rd., OH 44112	13,446	0	13,432	0	12,229	0
FTU6	Lakewood Service Department, 12920 Berea Rd. Lakewood, OH 44111	49,658	0	49,608	0	45,162	0
FTU7	Mayfield Heights Service Department, 6154 Mayfield Road, Mayfield Heights, OH 44124	19,907	0	19,887	0	18,105	0
FTU8	North Olmsted Service Garage, 5200 Dover Center Rd. North Olmsted, OH 44070	31,724	0	31,692	0	28,852	0
FTU9	Pepper Pike City Hall Complex, 28000 Shaker Blvd., Pepper Pike, OH 44124	6,812	0	6,805	0	6,195	0
FTU10	Rocky River Service Department / Transfer Station, 22401 Lake Rd. Rocky River, OH 44116	21,346	0	21,324	0	19,414	0
FTU11	Solon Service Department, 6600 Cochran Rd., Solon, OH 44139	23,792	0	23,768	0	21,638	0
FTU12	Strongsville Food Bank, 13213 Pearl Rd. Strongsville, OH 44136	45,725	0	45,679	0	41,585	0
FTU13	University Heights Service Department, 2300 Warrensville Center Rd. University Heights, OH 44118	13,319	0	13,306	0	12,113	0
FTU14	Westlake Clague Park Cabin, 1500 Clague Rd., Westlake, OH 44145	33,907	0	33,873	0	30,837	0

ID #	Cuyahoga County	2022		2026		2040	
	Name of Community (City, Village, Township)	Community Pop.	Pop. Credit	Community Pop.	Pop. Credit	Community Pop.	Pop. Credit
FTU15	Westlake Meadow Golf Course, 29800 Center Ridge Rd., Westlake, OH 44145	33,907	0	33,873	0	30,837	0
FTU16	Westlake Police Station, 27300 Hilliard Blvd., Westlake, OH 44145	33,907	0	33,873	0	30,837	0
Part-time, urban drop-off							
PTU1	Brecksville Service Garage 9023 Brecksville Rd. Brecksville, OH 44141	13,506	0	13,492	0	12,283	0
PTU2	North Royalton Service Garage 10789 Royalton Rd. North Royalton, OH 44133	30,793	0	30,762	0	28,005	0
PTU3	Olmsted Township Service Garage 7900 Fitch Rd. Olmsted Twp., OH 44138	14,450	0	14,435	0	13,142	0
PTU4	Shaker Heights Service Department 15600 Chagrin Blvd. Shaker Heights, OH 44120	28,723	0	28,694	0	26,123	0
Full-time, rural drop-off							
FTR1	Highland Hills Shaker House Complex 3700 Northfield Rd. Highland Hills, OH 44122	670	0	669	0	609	0
FTR2	Valley View Village Hall 6895 Hathaway Rd. Valley View, OH 44125	1,858	0	1,856	0	1,690	0
Part-time, rural drop-off							
None		0	0	0	0	0	0
Mixed municipal waste material recovery facility							
None							
Total County Population		1,236,174		1,234,925		1,124,261	
Total Population Credit		1,210,173		1,208,950		1,100,614	
Percent of Population		98%		98%		98%	

Residential infrastructure the SWMD credits to achieving Goal 1 includes non-subscription curbside recycling, subscription curbside recycling, and full-time urban drop-offs. The SWMD is using the standard demonstration established in the 2020 State Plan to show compliance with Goal 1. Demonstration involves assigning population credits to the opportunities. Generally the most convenient programs that serve the largest populations receive the most population credits.

Non-subscription curbside recycling programs credit the entire population of a jurisdiction that is served by a qualifying non-subscription curbside program toward the population that has the opportunity to recycle. The following five minimum materials are collected: newspaper, mixed paper, steel containers, aluminum containers and plastic containers.

Drop-offs, as demonstrated in this 2024 Plan Update, assign default population credit if the drop-offs collect at least five of the materials listed in the Format 4.1 Appendix J Reference Table A; easily

accessible to residents; meet minimum capacity standards; have adequate signage; and meets the demand of the population. The default population credit for full-time urban drop-offs is 5,000. The following five minimum materials are collected: corrugated cardboard, newspaper, mixed paper, steel containers, and aluminum containers. Two 6-cubic yard containers are located at each site thus meeting the minimum 10-cubic yards of capacity for urban drop-offs.

Format 4.1 limits the credit for infrastructure in a community to the population of an entire community, up to and including the entire credit for a drop-off that would be needed to achieve providing 100% of the residential population with access to recycling infrastructure. This limit affects the access credit demonstration for the SWMD. Communities receive full population credit for their non-subscription curbside recycling programs. Since these communities receive full population credit they cannot receive additional population credit for their full-time drop-off locations.

The SWMD achieved Goal 1 in the reference year and will continue to achieve Goal 1 throughout the planning period as shown in Table J-1.

Format 4.1 provides alternate demonstrations for achieving Goal 1 requiring completion of Tables J-2 or J-3. The SWMD demonstrated achieving Goal 1 using the default population credits thus Tables J-2 and J-3 are not used.

B. COMMERCIAL SECTOR OPPORTUNITY TO RECYCLE

Table J-4 Demonstration of Commercial Opportunity to Recycle

Service Provider	Type of Recycling Service Provided	Cardboard	Mixed Paper	Plastics	Aluminum Containers	Wood
Cuyahoga County						
Kimble	Hauler/MRF	X	X	X	X	
Republic Services	Hauler/MRF	X	X	X	X	
Rumpke	Hauler/MRF	X	X	X	X	
WM	Hauler/MRF	X	X	X	X	
TCP Pallet Management	Pallet Recycler					X
River City Wood Products	Pallet Recycler					X
Armes Pallet Recycling	Pallet Recycler					X

Source(s) of Information: Website and web research for MRFs and recyclers.

Commercial infrastructure the SWMD credits to achieving Goal 1 includes recycling service providers/haulers that offer collection services to commercial/institutional generators throughout the county and buybacks operations/scrap yards located within the county. The following five minimum materials are collected: corrugated cardboard, newspaper, mixed paper, steel containers, and aluminum containers.

C. DEMONSTRATION OF OTHER REQUIREMENTS FOR ACHIEVING GOAL 1

1. Residential/Commercial Waste Reduction and Recycling Rate

According to Goal 1 of the 2020 State Plan, the District must demonstrate meeting at least an 80% of its residential population in each county and ensure that commercial generators have access to adequate recycling opportunities. Tables J-1 and J-4 respectively show that the District meets Goal 1.

The District will continue to focus on meeting Goal 1 and strive towards Goal 2 with a 25 percent residential/commercial waste reduction and recycling rate. Appendix K calculates the residential/commercial solid waste reduction and recycling rate for the reference year and the planning period. The reference year rate is 24.4 percent, less than 25 percent thus the SWMD is striving to raise this rate over the planning period.

2. Industrial Waste Reduction and Recycling Rate

In format 4.1, there is no requirement to achieve an industrial waste reduction and recycling rate in the reference year or will achieve annual increases in the reduction and recycling rate during the planning period. Appendix K calculates the industrial solid waste reduction and recycling rate for the reference year and the planning period. The reference year rate is 63.7 percent.

3. Encouraging Participation

The SWMD will encourage residents and commercial generators to participate in available recycling infrastructure. Programs include:

- District website
- **"Recycle More, Recycle Better" Campaign**

Appendices I and L provide more explanation on outreach/education programs planned for this planning period.

APPENDIX K: WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL 2

A. THE SWMD IS DEMONSTRATING COMPLIANCE WITH GOAL 2.

This Appendix presents the District’s waste reduction and recycling rates from 2022 to 2040, which demonstrates that it achieves Goal 2 of the 2020 State Solid Waste Management Plan in the planning period. During the reference year (2022), approximately 24 percent of the District’s residential/commercial sector waste stream was either recycled or composted and was equivalent to 1.73 pounds per person per day (PPD).

Projections presented in Table K-1 show that the District does not meet the state 25% in the recycling goal in reference year but is projected to throughout the planning period. The programs and activities presented in Appendix I outline how the District will continue to achieve the state goal throughout the planning period. Historically, the District has met the 25% state goal and through 2020 and 2022 trends, the District is confident the recover to achieving Goal #2.

Table K-1 Residential Commercial Annual Rate of Waste Reduction

Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate (%)	Per Capita Waste Reduction & Recycling Rate (ppd)
2018	1,243,857	443,130	1,162,464	1,605,594	27.6%	1.95
2019	1,235,072	411,603	1,222,174	1,633,777	25.2%	1.83
2020	1,235,072	366,233	1,205,020	1,571,253	23.3%	1.62
2021	1,264,817	395,196	1,231,256	1,626,452	24.3%	1.71
2022	1,236,174	391,041	1,210,556	1,601,597	24.4%	1.73
2023	1,250,516	403,583	1,213,633	1,617,217	25.0%	1.77
2024	1,245,704	414,036	1,208,964	1,623,000	25.5%	1.82
2025	1,240,893	423,715	1,204,294	1,628,010	26.0%	1.87
2026	1,234,925	431,877	1,198,503	1,630,380	26.5%	1.92
2027	1,228,957	436,122	1,192,711	1,628,833	26.8%	1.94
2028	1,222,990	440,453	1,186,919	1,627,371	27.1%	1.97
2029	1,217,022	444,870	1,181,127	1,625,997	27.4%	2.00
2030	1,211,054	449,376	1,175,335	1,624,712	27.7%	2.03
2031	1,203,080	449,376	1,167,597	1,616,973	27.8%	2.05
2032	1,195,106	449,376	1,159,858	1,609,234	27.9%	2.06
2033	1,187,132	449,376	1,152,119	1,601,495	28.1%	2.07
2034	1,179,158	449,376	1,144,380	1,593,757	28.2%	2.09
2035	1,171,184	449,376	1,136,641	1,586,018	28.3%	2.10
2036	1,161,666	449,376	1,127,404	1,576,781	28.5%	2.12
2037	1,152,282	449,376	1,118,297	1,567,673	28.7%	2.14
2038	1,142,897	449,376	1,109,189	1,558,565	28.8%	2.15
2039	1,133,513	449,376	1,100,081	1,549,457	29.0%	2.17
2040	1,124,261	449,376	1,091,102	1,540,479	29.2%	2.19

Source:

Population – Appendix C, Table C-1

Recycled – Appendix E, Table E-4 and E-5

Disposed – Appendix D, Table D-3

Sample Calculation:

Total Generated = Recycled + Disposed

Waste Reduction & Recycling Rate = Recycled / Total Generated

Per Capita Waste Reduction & Recycling Rate = (Recycled x 2,000 lbs/ton) / (Population x 365 days)

Adoption of the 2020 State Plan removed the 66% industrial reduction and recycling rate goal. As shown in Table K-2, the District demonstrates diversion rates over 62.7%.

Table K-2 Industrial Annual Rate of Waste Reduction

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2022	543,235	322,695	865,930	62.7%
2023	624,737	325,854	950,591	65.7%
2024	718,468	329,044	1,047,512	68.6%
2025	718,468	332,265	1,050,733	68.4%
2026	718,468	335,518	1,053,986	68.2%
2027	718,468	338,802	1,057,270	68.0%
2028	718,468	342,119	1,060,587	67.7%
2029	718,468	345,468	1,063,936	67.5%
2030	718,468	348,850	1,067,318	67.3%
2031	718,468	352,265	1,070,733	67.1%
2032	718,468	355,713	1,074,181	66.9%
2033	718,468	359,196	1,077,664	66.7%
2034	718,468	362,712	1,081,180	66.5%
2035	718,468	366,263	1,084,731	66.2%
2036	718,468	369,848	1,088,316	66.0%
2037	718,468	373,469	1,091,937	65.8%
2038	718,468	377,125	1,095,593	65.6%
2039	718,468	380,817	1,099,285	65.4%
2040	718,468	384,545	1,103,013	65.1%

Source:

Recycled – Appendix F, Table F-4 and F-5

Disposed – Appendix D, Table D-3

Sample Calculation:

Total Generated = Recycled + Disposed

Waste Reduction & Recycling Rate = Recycled / Total Generated

The projections presented in Table K-3 show that the District will continue to improve the waste reduction and recycling rates established in Goal 2 of the 2020 State Plan for all sectors throughout the planning period.

Table K-3 Annual Rate of Waste Reduction: Total Solid Waste

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2022	934,276	1,533,251	2,467,527	38%
2023	1,028,321	1,539,487	2,567,808	40%
2024	1,132,504	1,538,008	2,670,512	42%
2025	1,142,184	1,536,559	2,678,743	43%
2026	1,150,345	1,534,020	2,684,365	43%
2027	1,154,590	1,531,513	2,686,103	43%
2028	1,158,921	1,529,038	2,687,958	43%
2029	1,163,338	1,526,595	2,689,933	43%
2030	1,167,844	1,524,185	2,692,030	43%
2031	1,167,844	1,519,862	2,687,706	43%
2032	1,167,844	1,515,571	2,683,416	44%
2033	1,167,844	1,511,315	2,679,159	44%
2034	1,167,844	1,507,092	2,674,936	44%
2035	1,167,844	1,502,904	2,670,748	44%
2036	1,167,844	1,497,253	2,665,097	44%
2037	1,167,844	1,491,765	2,659,610	44%
2038	1,167,844	1,486,314	2,654,158	44%
2039	1,167,844	1,480,898	2,648,742	44%
2040	1,167,844	1,475,647	2,643,491	44%

Recycled – Appendix F, Table F-4 and F-5 and Appendix E, Table E-4 and E-5

Disposed – Appendix D, Table D-3

Sample Calculation:

Total Generated = Recycled + Disposed

Waste Reduction & Recycling Rate = Recycled / Total Generated

The combined Waste Reduction and Recycling Rate for residential/commercial and industrial sectors is shown in Table K-3. For the reference year, the overall rate was 38% and is projected to increase to 44% by the end of the planning period based on the conservative projections for disposal in Appendix D.

APPENDIX L: MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS

A. MINIMUM REQUIRED EDUCATION PROGRAM

The *2020 State Solid Waste Management Plan* Waste Reduction and Recycling Goal #3 requires the SWMD shall provide the following required programs:

- A website;
- A comprehensive resource guide;
- An inventory of available infrastructure; and
- A speaker or presenter.

Website

Name	Start Date	End Date	Goal
www.CuyahogaRecycles.org	Ongoing	Ongoing	3

The District has always offered these resources to residents, even its original website which was one of the first Solid Waste District websites in Ohio. The website is a comprehensive resource guide for residents, businesses, communities, educators, elected officials and the general public. The website was launched in April of 2016 to replace its former website, cuyahogaswd.org, which had been in place since **the 1990's and had become stale. CuyahogaRecycles.org was developed in such a way to allow the District to control the content and make necessary updates.** The website was refreshed in September of 2022 adding geolocation services and improving mobile optimization.

The District uses its website to provide up to date recycling information to the community. It is updated **daily by the District's Communication Specialist. All the District's marketing and advertising efforts are** designed to let the public know that CuyahogaRecycles.org is the best source for recycling information within Cuyahoga County. Below are some of the key features:

- *What Do I Do With (WDIDW)?* search engine where visitors can enter an item to learn how to reduce, reuse, recycle or properly dispose of an item.
- *Recycling in Your Community* recycling pages for each of the 59 communities in Cuyahoga County that provides curbside, and drop-off recycling information specific to each city.
- *Be a Recycling Ambassador* section for volunteer opportunities for Cuyahoga County residents what are passionate about reducing waste, recycling, and composting, and the Green Team **space where you can find an organized effort in your area, learn about other government agencies, subject matter experts (SMEs) and nonprofits that work to better the environment, and connect you to green topics and activities of interest.**
- *The Recycling Process* section that explains important information about the recycling process.
- *Events* page promoting the District's upcoming workshops and seminars.

The following table shows the main CuyahogaRecycles.org navigation pages and the links to various subpages below each heading.

Recycling & Disposal	Programs & Services	Facts & FAQs	About Us
What Do I Do With?	Be a Recycling Ambassador	Environment & Recycling Facts	Our Team
How to Recycle Right	Business Services	Frequently Asked Questions	Legal Notices, ITB & RFP
Recycling in Your Community	Environmental Crimes Task Force	Learn About Landfills	Media Hub
Waste & Compost Facilities	For Schools & Educators	Reduce Plastic Waste	Newsletters
Recycling at the District	Grants	Reduce, Reuse, Recycle	Solid Waste Management Plan
Composting	Litter Program: Clean Up Cuyahoga	The Recycling Process	
Greening the Holidays	Municipal Support		
Party & Event Recycling	Presentations, Seminars & Events		
	Publications		

Resource Guides

Name	Start Date	End Date	Goal
WDIDW search feature on CuyahogaRecycles.org	Ongoing	Ongoing	3
Pass It On: A Resourceful Guide to Donating Useful Stuff, is downloadable under the District's website under the publications section	Ongoing	Ongoing	3
Business Recycling Directory, now hosted within each of the WDIDW web pages with a listing of recycling locations, website, and phone number, for materials specific to business and industry.	Ongoing	Ongoing	3

The District maintains an up-to-date compilation of outlets for recycling and reuse in Medina County. These are made available to the staff and to the public to provide the most current information on how and where particular materials may be recycled. The District has learned that publishing a printed guide is not the best way to provide the information because the information becomes out of date very quickly. People without access to the digital information can contact the District and get the information they seek from a staff member. **The following describes the District's three main resource guides:**

What Do I Do With (WDIDW) search feature:

On CuyahogaRecycles.org there is a bar where residents can type in an item they wish to recycle, donate, or dispose of, and find out how to recycle, donate, or properly dispose of that item. **This comprehensive list of items helps answer residents "what do I do with" questions. The District maintains an inventory of recycling and reuse centers for these items and updates the list frequently. Below is the list of recyclable items for which residents can find information:**

Acrylic Plastic, Aluminum Cups, Aluminum Foil, Appliances, Arts and Crafts Supplies, Asphalt, Baby Items, Barrels, Drums & Totes, Bicycles, Boats, Books, Bricks, Cameras & Photography Supplies, Campaign Signs, Cans, Cardboard, Cartons, Cassette Tapes, CDs, DVDs, and Video Games, Cell Phones, Christmas Trees, Cleaning Supplies, Clothing, Coffee Pods, Computers & Electronics, Concrete, Construction Debris, Cosmetics, Cups (Plastic and Paper), Egg Cartons, Eyeglasses, Food, Food Waste, Furniture, Gardening Supplies, Glass Bottles & Jars, Hearing Aids, Holiday Lights, Household Goods, Industrial Filters, Jewelry,

Litho Film & X-Ray, Medical Equipment & Supplies, Musical Instruments, Office Furniture and Equipment, Packing Peanuts, Pallets, Paper & Boxes, Paper Shredding Services, Pens, Pet Food & Supplies, Plants & Flowers, Plastic Bags, Plastic Bottles & Jugs, Plastic Tubs, Post-Industrial Plastic, Propane Tanks, School Supplies, Scrap Metal, Shredded Paper, Shrink Wrap, Solar Panels, Sporting Goods, Televisions, Textiles, Tires, Toiletries, Toner Cartridges, Tools & (usable) Building Materials, Toys and Games, Transparency Film, Tyvek Envelopes, VCR Tapes, Vehicles, Vinyl & PVC, Wood & Lumber, Yard Waste.

Below is the list of proper disposal and landfill items for which residents can find information:

Aerosols, Antifreeze, Asbestos, Batteries, Broken Ceramics, Car Seats, Carpet & Carpet Padding, Durable Plastic, Fire Extinguishers, Flags, Flares, Flower Pots & Flats, Fluorescent Bulbs, Fryer Oil, Gasoline/Kerosene, Grease, Helium & Oxygen Tanks, Household Hazardous Waste, Latex Paint, Mattresses, Medications, Mercury, Motor Oil, Needles & Sharps, Oil-Based Paint, Oils & Oil Filters, Photographic Chemicals, Refrigerant, Smoke Detectors, Solvents, Styrofoam™ Blocks, Styrofoam™ Containers, Takeout Containers, Utensils & Other Plastic, Tangles, Thermostats.

Pass It On – A Resource-Full Guide to Donating Usable Stuff:

This District has been publishing this book since 1997 and recently published its 8th edition in August 2019. This book lists over 120 community services organizations that use donated items to support their work. The organizations accept donations to serve the homeless, youth seniors, animals and others in Cuyahoga County. The donation index includes options for donating a wide variety of household goods such as baby items, art supplies, gardening supplies, sporting goods, tools, musical instruments, toys, **and more. This is one of the District’s most recognized and popular publications. Residents may download the book from the District’s website, order a hard copy, or search for items using the *What Do I Do With* search feature.**

Business Recycling Directory – now hosted within WDIDW web pages:

The District formerly compiled and posted a Business Recycling Directory on the website that contained a list of recyclers specific to waste streams from businesses and industry, not typically available to the public. In lieu of a stand alone Business Recycling Directory, the District now hosts a Business Recycling **Directory in each of the WDIDW web pages containing the recycler’s name, address, website, and phone number of available.**

Infrastructure Inventory

Name	Start Date	End Date	Goal	Reference
MSW Landfills	Ongoing	Ongoing	3	A link to the Ohio EPA Map of Solid Waste Facilities in the state is posted on the District website
Waste Transfer Stations	Ongoing	Ongoing	3	Downloaded annually from the Ohio EPA website and posted on the District website
Construction and Demolition Debris Facilities	Ongoing	Ongoing	3	Downloaded annually from the Ohio EPA website and posted on the District website
Scrap Tire Facilities	Ongoing	Ongoing	3	Downloaded annually from the Ohio EPA website and posted on the District website
Registered Compost Facilities	Ongoing	Ongoing	3	Downloaded annually from the Ohio EPA website and posted on the District website
Curbside Recycling Services	Ongoing	Ongoing	3	The District annually surveys its communities and regularly updates information on municipal collection methods and contract pricing and terms, with

Name	Start Date	End Date	Goal	Reference
				information posted about each curbside recycling program posted on the District website. An annual <i>Residential Recycling Report</i> is published and contains recycling rates for each City
Donation Locations	Ongoing	Ongoing	3	A list of donation locations is posted on the District website in the WDIDW search feature
Drop-off Recycling Locations	Ongoing	Ongoing	3	A list of recycling drop-off locations is posted on the District website specific to each City under the <i>Recycling in Your Community</i> tab or in the WDIDW search feature
Material Recovery Facilities	Ongoing	Ongoing	3	The District maintains up to date information on the MRF's servicing Cuyahoga County that is available upon request
Recycling Centers (Specialty Recycling)	Ongoing	Ongoing	3	A list of Cuyahoga County recycling centers is posted on the District website within the WDIDW search feature
Yard Waste Collection Programs	Ongoing	Ongoing	3	The District annually surveys its communities and yard waste recycling data, with information posted about each community's yard waste program posted on the District website. An annual <i>Residential Recycling Report</i> is published and contains yard waste recycling rates for each City

The District regularly updates information about the solid waste management and recycling infrastructure within Cuyahoga County and makes this information available to the public through its website and its staff.

Speaker/Presenter

Name	Start Date	End Date	Goal
Youth presentations – classroom and other	Ongoing	Ongoing	3
Adult presentations	Ongoing	Ongoing	3
Composting seminars	Ongoing	Ongoing	3
Business recycling seminars and presentations	Ongoing	Ongoing	3

The District has five staff available to give presentations to residents, businesses, communities, schools, and other groups in Cuyahoga County. Its Education Specialist is available for classroom presentations, assemblies and a variety of youth programs that focus on recycling, waste reduction, litter, and environmental education. While in-person programming in schools was paused in 2020, largely due to COVID, the District has been evaluating how to re-engage with the local school districts on youth presentations. Its Business Recycling Specialist offers workplace recycling seminars, waste audits, lunch and learn employee presentations, and other presentations to assist workplace recycling efforts. In addition, the District offers Backyard Composting Seminars and Bin Sales in conjunction with host cities and general recycling presentations for adult audiences and clubs. The District strongly believes that its direct communication with the public through its presentations are one of the best ways of educating children and adults about recycling.

In 2022, 72 presentations were given as follows:

- 41 general public recycling and composting webinars/events with 1,499 attendees
- 31 business recycling webinars/events reaching 426 businesses

B. OUTREACH AND EDUCATION – OUTREACH PLAN AND GENERAL REQUIREMENTS

The *2020 State Solid Waste Management Plan* Waste Reduction and Recycling Goal #4 requires the SWMD shall provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to target audiences using best practices. **The outreach and marketing plan is to contain strategies for evolving the District's environmental education programs away from traditional awareness education towards changing residents' and businesses' behaviors, so they aren't just aware of the recycling resources available within the District, but also use those resources.** The outreach and marketing plan shall also explain how the District will align its outreach and education programs with recycling opportunities (both existing and needed).

Per *Format 4.1*, the outreach and marketing plan is required to include the following components:

- Address, at a minimum, the following five target audiences: Residences, Schools, Industries, Institutions and Commercial Businesses, and Communities and Elected Officials.
- Follow basic best practices when developing and selecting outreach programs.
- Select an outreach priority and provide education and outreach programs to all appropriate audiences in the context of the priority using social marketing principles and tools.

The following are best practices as outlined in the 2020 State Plan:

1. Be familiar with the solid waste management infrastructure -
Understanding the solid waste management infrastructure, particularly the reduction and recycling infrastructure, is crucial to understanding how outreach can be the most effective.
2. Provide outreach within the context of the infrastructure -
The central message of the outreach and marketing plan is to get more people and businesses to recycle and to increase the amount of material recycled by aligning education, outreach, and technical assistance with available recycling infrastructure. If the District lacks infrastructure, then the outreach and education programs should be focused on the audiences that can implement that infrastructure. If the District has adequate infrastructure, then the programs should be focused on getting residents, businesses, and institutions to use the infrastructure.
3. Develop and implement outreach effectively -
The five best practices below borrow from social marketing to promote a desired behavior and/or to seek a change to an undesirable behavior as it applied to recycling opportunities and to increase recycling.
 - Understanding the different needs of different audiences;
 - Focusing on changing behavior not just creating awareness;
 - Having measurable outcomes to achieve;
 - Using a consistently and frequently repeated message; and
 - Evaluating the results to determine if the program is achieving the desired outcome.

To align with *Format 4.1* **the District's existing programs were organized by target audience. Some of the existing District programs cross several target audiences.**

Education/Outreach Programs and Target Audiences

Education/Outreach Program	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website and Blog	X	X	X	X	X
Public Communication	X	X	X	X	X
Educational Presentations/Displays	X	X		X	X
Recycling Ambassador/Green Team	X				
Recycling Hotline	X		X	X	X
HHW Education	X				X
Scrap Tire Disposal Education	X				X
Yard Waste Education	X				X
Commercial Solid Waste and Recycling Assessments	X			X	
Industrial Solid Waste and Recycling Assessments			X		
Ohio Materials Marketplace Referrals			X	X	

The District is interested in integrating its Recycle Right slogan with consistent branding, logos, and recycle symbols in all their social marketing and messaging.

The District’s outreach and marketing plan specifically addresses the minimum five target audiences as follows:

Residents

Name	Start Date	End Date	Goal
District Website and Blog	Ongoing	Ongoing	3 & 4
Public Communication via Marketing, Media Relations, Advertising, E-Newsletter, Printed Materials	Ongoing	Ongoing	3 & 4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4
Recycling Ambassador/Green Team	Ongoing	Ongoing	3 & 4
Recycling Hotline	Ongoing	Ongoing	3 & 4
HHW Education	Ongoing	Ongoing	3 & 4
Scrap Tire Disposal Education	Ongoing	Ongoing	3 & 4
Yard Waste Education	Ongoing	Ongoing	3 & 4
Commercial Solid Waste and Recycling Assessments	Ongoing	Ongoing	3 & 4

Needs of the Audience: The District’s website www.CuyahogaRecycles.com caters to a wide audience with the “What Do I Do With?” (WDIDW) search feature that directs visitor to the website to focus on the material they wish to recycle before determining the location for doing so. With the website’s relaunch in 2016 and refresh in 2022, the District continues to see an increase in visitors to the website,

time spent on the various pages, and for longer periods of time. In addition to the daily updates made to the recyclable *materials* on the website, the District also provides recycling information specific to each *community* within the District. The website features web page headings that include Recycling & Disposal, Programs & Services, Facts & FAQs, Events, About Us, and a Blog to appeal to a broad group. Other paid advertising, marketing activities, media relations, and social media platforms, including Facebook, Instagram, Next Door, and LinkedIn are used by the District to widely share recycling information and event news. The District will continue to use its website and social media tools to provide information, guiding residents on acceptable materials by the local MRF infrastructure to assist with reducing contamination, and increase recycling volumes.

Behavior Change: In the District’s creation of a campaign to Recycle Right, specific actions will be addressed for residents to undertake. For example, adding a small recycling bin inside the house, visiting a recycling drop-off once per week, participating in the collection events, printing District flyers to hang on the refrigerator, etc. The District may consider a corresponding advertising program with similar messaging. Further detail is provided in Outreach Priority below.

Measuring Outcomes: The District is able to obtain recycling tonnage for the curbside and drop-off programs. The District may use statistics of interactions from social media and receive the number of views from posts.

Consistent/Frequent Messaging: All social media postings and other promotional material will have the same logo and branding to represent the District. Messages will be kept simple, concise, and repetitive for residents to remember the main message being communicated.

Evaluating Results: The District is able to obtain recycling tonnage for the curbside and drop-off programs.

Schools

Name	Start Date	End Date	Goal
District Website and Blog	Ongoing	Ongoing	3 & 4
Public Communication via E-Newsletter, Printed Materials	Ongoing	Ongoing	3 & 4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4

Needs of the Audience: The District has a variety of classroom presentations and youth programs that focus on Earth Day, composting, litter prevention, municipal solid waste, pollution, and recycling that were restricted during COVID and the inability to meet in person. As the District considers options for reengaging with the local school districts post-COVID, the District may have interest in piloting an outsourced presentation program and/or reviving the former bi-monthly e-newsletter Resources for Educators. The District may also be interested in identifying schools in which to establish recycling programs.

Behavior Change: The District’s Education Specialists may dedicate time to working with school districts to start recycling programs before educational presentations are given to the students. The educational presentations would benefit the startup of new programs and can focus on the schools rather than the individual classrooms. The District could also schedule meetings with school superintendents, principals, and administration to increase support for recycling programs. A guide or a flyer may be developed to describe how to recycle at school and what common materials at school are recyclable.

Measuring Outcomes: The number of lessons and attendance are quantitative measures. The District tracks the number of lessons and individuals present.

Consistent/Frequent Messaging: **The District’s messaging at schools will link recycling infrastructure** in the schools with curbside and drop-off programs. The message will be similar to what students are told during presentations.

Evaluating Results: Participation trends for new recycling programs, resultant presentations, and the **number of school districts visited will allow for the schools to have visibility of the District’s programs.**

Industries

Name	Start Date	End Date	Goal
District Website and Blog	Ongoing	Ongoing	3 & 4
Public Communication via Targeted Email	Ongoing	Ongoing	3 & 4
Recycling Hotline	Ongoing	Ongoing	3 & 4
Industrial Solid Waste and Recycling Assessments	Ongoing	Ongoing	3 & 4
Ohio Materials Marketplace Referrals (a.k.a. RHEAPLY)	Ongoing	Ongoing	3 & 4

Needs of the Audience: The District provides resources on the website for industries. Technical assistance is provided if the entity/person contacts the SWMD.

Behavior Change: The presence of the industrial survey opens opportunities for interaction between industries and the District.

Measuring Outcomes: The District can track the number of surveys sent and received in addition to the number of requests for technical assistance and waste audits.

Consistent/Frequent Messaging: The District will use a branded message to focus on what opportunities the District can provide for technical assistance.

Evaluating Results: The District can track the results by recycling tonnages reported on surveys.

Institutions & Commercial Businesses

Name	Start Date	End Date	Goal
District Website and Blog	Ongoing	Ongoing	3 & 4
Public Communication via Marketing, Media Relations, Advertising, E-Newsletter, Printed Materials	Ongoing	Ongoing	3 & 4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4
Recycling Hotline	Ongoing	Ongoing	3 & 4
Commercial Solid Waste and Recycling Assessments	Ongoing	Ongoing	3 & 4
Ohio Materials Marketplace Referrals (a.k.a. RHEAPLY)	Ongoing	Ongoing	3 & 4

Needs of the Audience: The District provides resources on the website for institutions and commercial businesses. Technical assistance is provided if the entity/person contacts the SWMD.

Behavior Change: **The District could post “Did you know?” information on social media to allow for interaction and distribution of recycling information.** The District’s new Business Resource Champion Program initiated in the fall of 2023 may grow interest by recognizing businesses who have made a strong commitment to eliminating waste sent to landfills, while reducing the amount of waste generated through recycling and composting, helping to keep valuable materials in circulation.

Measuring Outcomes: The District can track the number of requests for technical assistance and program participation.

Consistent/Frequent Messaging: The District will use a branded message to focus on what opportunities the District can provide for technical assistance.

Evaluating Results: The District can track the results by recycling tonnages reported to brokers/MRFs.

Communities & Elected Officials

Name	Start Date	End Date	Goal
District Website and Blog	Ongoing	Ongoing	3 & 4
Public Communication via Marketing, Media Relations, Advertising, E-Newsletter, Printed Materials	Ongoing	Ongoing	3 & 4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4
Recycling Hotline	Ongoing	Ongoing	3 & 4
HHW Education	Ongoing	Ongoing	3 & 4
Scrap Tire Disposal Education	Ongoing	Ongoing	3 & 4
Yard Waste Education	Ongoing	Ongoing	3 & 4

Needs of the Audience: The District regularly communicates with its 59 cities, villages and townships and their elected officials through email, its Trash Heap newsletter, mailings, annual HHW training to service department employees, and hosted Talk Trash meetings to discuss new topics as needed and to provide networking opportunities. The District also provides resources on the website for this audience.

Behavior Change: The District may benefit from notifying and inviting communities and elected officials to like or share posts on social media. The District may also arrange for an educational tour of the **District’s solid waste and recycling infrastructure to demonstrate** the complexity of recycling, composting, HHW, collection, transfer, and landfill facilities for managing the waste stream.

Measuring Outcomes: The District can keep track of any responses to shared communication with communities or elected officials and participations in tours.

Consistent/Frequent Messaging: The District can send emails or other notifications for events with a consistent message to keep officials up-to-date.

Evaluating Results: The District may use results tracked by responses to shared communication to determine message effectiveness.

C. OUTREACH PRIORITY

Name	Start Date	End Date	Goal
Recycle Right and New Recyclable Materials Outreach Campaign	Ongoing	Ongoing	1,2,3,4

Goal/Purpose: The District will focus on its Recycle Right and New Recyclable Materials Outreach Campaign to increase website visibility and utilization with a targeted social media campaign.

Targeted Audience: Residents and Community Leaders

Strategy: The District will use the website and social media to create regional harmonization through electronic and printed material, sharing and reminding residents of the correct materials which go into the recycling programs, especially if a change occurs to a **community’s hauler or MRF shed**. The District may also consider the creation of a flyer to visually showcase how recycling helps the community in sharing recycling statistics, highlighting new recyclable materials, job creation, and other metrics. The District will assist in reaching out to communities to ensure their community websites are up to date or **appropriately linked to the District’s website for the most current and updated materials acceptance lists**.

The District is interested in integrating its Recycle Right slogan with consistent branding, logos, and recycle symbols in all their social marketing and messaging.

The District may consider piloting a “get caught green handed” type of campaign and quarterly have a district staff member spend 2-4 hours at a recycling drop-off site educating and interacting with residents about what materials they are bringing to the recycle sites. This engagement can be shared on social media. Information gathered from interactions and acceptable or most non-acceptable materials brought those days can be used to focus on educational messages shared through social media.

Milestones:

- Collaborate with local MRFs to ensure District is sharing consistent messaging
- Consistent signage for correct materials and new materials education at drop-off sites
- Outreach to all community leaders for website and consistent messaging
- Advertisements and consistent messaging about Recycling Right
- Increase in recycling tonnage reported by businesses on surveys
- Increase in relationships built with businesses, schools, and community officials
- The District will aim to increase engagement at drop-off locations within the District.

Implementation Responsibility: The District will be responsible for collaborating with the local MRFs and sharing content on the District website and social media page. Communities will be responsible for updating their websites to the latest accepted materials list by the local MRFs.

The Measure of Success:

- The District will review community recycling rates for year over year increases in curbside and drop-off recycling programs to include in the Annual Report and Residential Recycling Reports.
- District can quantify the posts and views on the various social media tools over time.

APPENDIX M: CAPACITY ANALYSIS

This appendix provides the SWMD’s strategy for ensuring access to solid waste management facilities. While the primary focus of this strategy is ensuring access to adequate disposal capacity, the SWMD will also ensure that it has access to processing capacity for recyclables, and if needed, access to transfer facilities.

A. ACCESS TO PUBLICLY-AVAILABLE LANDFILL FACILITIES

Table M-1 Remaining Operating Life of Publicly-Available Landfills

Facility	County	State	Years of Remaining Capacity
In-District Landfills			
None			
Out-of-District Landfills			
American Landfill, Inc.	Stark	OH	86
Athens-Hocking Landfill	Athens	OH	46
Carbon Limestone Landfill LLC	Mahoning	OH	37
County Environmental of Wyandot	Wyandot	OH	104
Countywide RDF - Republic Services	Stark	OH	60
Crawford County Landfill	Crawford	OH	21
Erie County Sanitary Landfill	Erie	OH	39
Evergreen Recycling & Disposal	Wood	OH	36
Geneva Landfill	Ashtabula	OH	33
Kimble Sanitary Landfill	Tuscarawas	OH	30
Lake County Solid Waste Facility	Lake	OH	23
Lorain County II Landfill LLC	Lorain	OH	14
Mahoning Landfill Inc	Mahoning	OH	43
Port Clinton Landfill Inc	Ottawa	OH	87
Rumpke of Northern Ohio Inc Noble Road Landfill	Richland	OH	13
Suburban Landfill Inc	Perry	OH	138
Wood County Landfill	Wood	OH	139
Out-of-State Landfills			
Advanced Disposal Services Blue Ridge Landfill Inc	Estill	KY	20

Source(s) of Information:

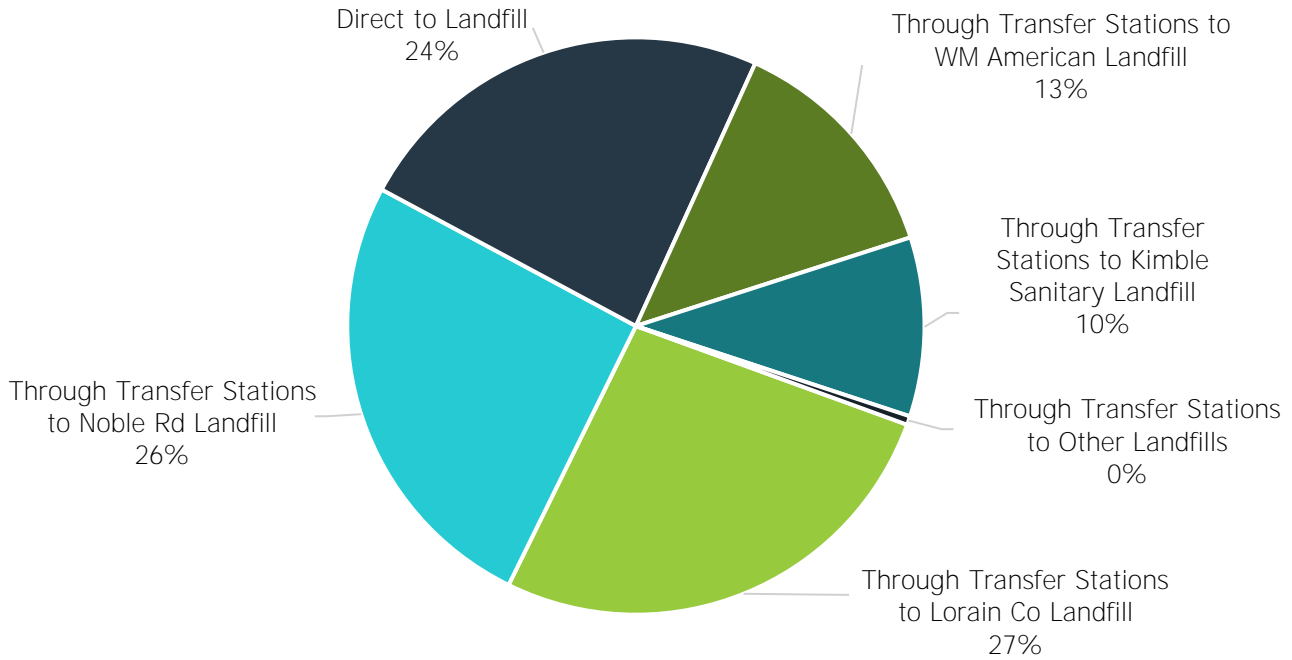
2022 Ohio Solid Waste Facility Data Report Tables (Table 13) published by Ohio EPA, Waste Received Excel File by Indiana Department of Environmental Management, Waste Quantity Report 2024 Excel File by Kentucky Energy and Environment Cabinet, and LMOP Database by EPA.

Table M-1 lists the municipal solid waste landfills where waste from the SWMD was disposed in the reference year. The landfills listed include those that accepted direct-haul and those that accepted transferred waste. Over the reference year, the SWMD sent material for disposal to 17 in-state landfills and 1 out-of-state landfills.

The majority of the SWMD’s waste was disposed in state at the Lorain County II Landfill LLC. Lorain County II Landfill LLC reported 14 years of remaining capacity at the end of 2022. To demonstrate the

SWMD has adequate disposal capacity the landfill that historically took the largest amounts of the SWMD’s waste must have adequate remaining life for the first eight years of the planning period. All Landfills used during the reference year have an average of 56 years of remaining capacity.

Figure M-1 Cuyahoga County Solid Waste District: 2022 Waste Flow Analysis, Disposal Tons – Direct Haul vs Transferred



B. CAPACITY AT PRIVATE LANDFILL FACILITIES

Captive or residual waste landfills are designated exclusively for the disposal of one or any combination of wastes from seven specific industrial categories. Due to regulations these facilities will not receive municipal solid waste. Residual/captive landfills are landfills used to dispose of waste generated exclusively by the manufacturing company that owns the landfill. The SWMD did not send waste to captive landfills in the reference year.

Table M-3 Remaining Operating Life of Privately-Available Landfills

Facility	Location	Years of Remaining Capacity
Cleveland-Cliffs Cleveland Works LLC, Vista Pointe Landfill	Cuyahoga County	16

Source of Information: 2022 Ohio Facility Data Report Tables (Table 13.1) published by Ohio EPA

In 2022, there was only one privately-available landfill operating in the District. This was the Arcelor Mittal captive industrial landfill used to dispose of waste generated on-site from the company’s steel mill operations. In 2022, this amounted to 163,054 tons of exempt waste including foundry sand and slag. Exempt wastes are not subject to ORC 3734 disposal or generation fees.

APPENDIX N: EVALUATING GREENHOUSE GAS

The Waste Reduction Model (WARM)

WARM is a tool that US EPA developed to quantify the effects of waste management decisions on greenhouse gas emissions. The model demonstrates the benefits of alternative management technologies over traditional management methods. The WARM model is updated regularly. A SWMD can use a different but comparable modeling program to calculate greenhouse gas emission reductions provided the model accounts for waste management and recycling activities.

WARM is intended to compare municipal solid waste management scenarios. Therefore, use data for only the residential/commercial sector.

Each SWMD will run WARM twice and include the results in the solid waste management plan:

- For the first run, enter all quantities recycled in the reference year in the landfill column (for the baseline year) and for the alternative scenario, enter the quantities recycled in the tons recycled column.
- For the second run, enter the quantities of residential/commercial material recycled in the reference year in the tons recycled column (for the baseline scenario), and then enter the quantities projected to be recycled in the sixth year of the planning period in the alternative scenario column.

Include printouts of the results for both runs in the solid waste management plan.

A. GHG MEASUREMENT

Gases that trap heat in the atmosphere are called greenhouse gases. The main greenhouse gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. **Each gas's effect on the climate depends on how much is in the atmosphere, how long they stay in the atmosphere, and how strongly they impact the atmosphere.** Disposal and treatment of materials results in greenhouse gas emissions from collection, transport, landfill disposal, manufacture, etc.

The most common way to measure climate impact of waste management is to state the impact in carbon equivalents. Since waste reduction results in the reduction of several types of greenhouse gases, the conversion to a standard carbon equivalent (CO₂E) measurement allow for a total quantification of the impact. It also provides a standard language for people to compare these actions to others such as transportation and energy conservation efforts. A carbon equivalent CO₂E is simply the amount of CO₂ that would have the same global warming potential as the waste reduction impacts, when measured over a specified timescale. The international reporting standard for CO₂ emissions is metric tons, so carbon dioxide amounts may be reported as MTCO₂E, metric tons of carbon equivalent.

Produced by US EPA, the Waste Reduction Model (WARM) was designed to help solid waste planners, municipal leaders, and other stakeholder organizations track and report greenhouse gas emissions reductions. It is a database tool that helps decision makers predict the strategies that most reduce GHG emissions. The WARM model calculates GHG emission across six waste management modalities (source reduction, recycling, composting, anaerobic digestion, combustion, and landfilling). Modeling different combinations of waste management practices sees which approach leads to the least GHG entering the atmosphere.

This report shows the metric tons of carbon dioxide equivalent (MTCO₂E), which describes the global-warming potential of all common greenhouse gases as an equivalent of carbon dioxide. Negative values indicate GHG savings and positive values indicate increasing emissions. In 2022, Cuyahoga County generated 1,601,597 tons of MSW from the residential and commercial sectors, landfilled or incinerated 76% (1,210,556 tons), recycled 15% (242,055 tons) and composted 9% (148,986 tons).

EPA’s estimates of the GHG-related impacts of composting organics was developed within the framework of the larger WARM development effort and therefore, the presentation of results, estimation of emissions and sinks, and description of ancillary benefits is not comprehensive. One of the limitations is the lack of data and resources thus analyzing a small sampling of feedstocks and specific application scenarios for compost. A full range of soil conservation and management practices are not considered. This makes using the WARM model challenging for modeling GHG biosolids management. Biosolids is not one of the material category types to model in WARM, so food waste was used a proxy. Also, HHW and used oil were excluded because of lack of material category and no relevant proxy.

Total GHG Emissions from Baseline (Year 2022)	(694,237) MTCO ₂ E
Total GHG Emissions from Alternative (Year 2031)	(797,803) MTCO ₂ E
Incremental GHG Emissions	Stable MTCO ₂ E

If the SWMD had no diversion programs in place and all the diverted tons instead went to landfill, the MTCO₂E savings would be close to zero. With the current diversion programs, the SWMD reduces GHG emissions by (694,237) MTCO₂E. To put this into perspective, the diversion programs are equivalent to:

- Removing emissions from 169,385 passenger vehicles annually
- Conserving 89,771,944 gallons of gasoline annually
- Conserving 96,721 **households’ annual energy consumption annually**

Diversion is projected to increase throughout the planning process so that the GHG emissions reduction from waste diversion programs will increase to around 798,000 MTCO₂E per year.

APPENDIX O: FINANCIAL PLAN

A. FUNDING MECHANISMS AND REVENUE GENERATED

Disposal Fee

The District will not use a disposal fee to finance its operations during the planning period.

Generation Fee

As authorized by Section 3734.573 of the Ohio Revised Code the District instituted a generation fee. Under its current solid waste management plan, the generation fee is \$2.00 per ton, which was increased in 2023 from \$1.50 in 2022 and makes up the majority of the District's revenues. It is collected by receiving transfer stations and landfills on solid waste originating within Cuyahoga County and disposed within Ohio. All monies are forwarded to the District pursuant to Section 3745-28-03 of the Ohio Administrative Code.

The District strives to operate efficiently in order to keep its fee low for waste generators. The District's generation fee has only been raised twice since its implementation. For comparison purposes, the statewide generation fee average is \$4.74 per ton.

In order to determine if its current fee would provide adequate revenue to fund plan implementation it **considered the projections in Appendix D which showed a continued decline in the District's population** throughout the planning period and the prior 5-year fluctuations on revenue generating tons in the amount of residential and commercial waste disposed. Future generation fee revenue was projected using the average tons of waste the District received revenue from for years 2018 - 2022 as the basis for disposal revenue for the 2024 budget. This tonnage was adjusted downward for years 2025 – 2032 to coincide with projected declining populations for generation fee projections, with revenue held constant from year 2032, the seventh year of the planning period. The budget projections show the generation fee will remain constant at \$2.00 per ton for the planning period to demonstrate a positive fund balance.

This analysis determined that total revenue (generation fees and other revenue) will remain in the \$2.6 million range in the planning period, declining slightly year over year, while expenses will remain in the \$2.7 million range, resulting in a slightly declining fund balance. This analysis is presented in Appendix H: Section H-9 which includes District Annual Surplus/Deficit and Year-End Balances.

Maintaining the generation fee at the current \$2.00 per ton level would require an annual drawdown of **the District's fund balance to make up the difference between revenues and expenditures** – on average, approximately \$100,000. This is projected to draw the balance down to \$3 million by year 2040.

In order to ensure overall financial stability, the District determined it needs to maintain a minimum fund balance of \$1.5 million to have the ability to encumber contracts, address variability and timing of expenditures and receipts and pay for unforeseen capital expenses, equipment repairs and emergencies. This will ensure the District has six to eight months of operating expenses set aside along with enough funds set aside for contract encumbrances. The District ensures this fund balance through 2029 when the District will be starting to look at their 15-year plan update.

Table O-1 has been omitted since the District does not collect disposal fee revenues.

The fee schedule and projected revenues are presented in Table O-2 below. Revenue projections are held constant after 2032 as allowed by the Ohio EPA plan format.

Table O-2: Generation Fee Schedule and Revenue Projections

Year	Generation Fee Schedule (\$ per ton)	Total Revenue from Generation Fee (\$)
2018	\$1.50	\$1,986,059
2019	\$1.50	\$1,996,028
2020	\$1.50	\$1,959,207
2021	\$1.50	\$2,047,410
2022	\$1.50	\$2,045,524
2023	\$2.00	\$2,680,298
2024	\$2.00	\$2,676,545
2025	\$2.00	\$2,674,024
2026	\$2.00	\$2,669,605
2027	\$2.00	\$2,665,242
2028	\$2.00	\$2,660,935
2029	\$2.00	\$2,656,684
2030	\$2.00	\$2,652,490
2031	\$2.00	\$2,644,966
2032	\$2.00	\$2,637,499
2033	\$2.00	\$2,637,499
2034	\$2.00	\$2,637,499
2035	\$2.00	\$2,637,499
2036	\$2.00	\$2,637,499
2037	\$2.00	\$2,637,499
2038	\$2.00	\$2,637,499
2039	\$2.00	\$2,637,499
2040	\$2.00	\$2,637,499

Historical Generation Fee Revenue Analysis:

As shown on Table O-2, the revenue collected from generation fees by the District in the reference year totaled \$2,045,524. That was 13% more than the \$1,808,171 projected for 2022 in the current approved Plan. The District reviewed this discrepancy and found that in its current plan, revenue projections were based on historical generation projections at the time which indicated that revenue would be about 200,000 tons under the actual tonnage recorded in 2022. This discrepancy between estimated tonnages and actual tonnages, along with other factors including lingering economic effects of the COVID-19 pandemic and decreased landfill diversion would explain the projection discrepancy.

Designation Fees

The District will not use a designation fee to finance its operations during the planning period. Table O-3 has been omitted since the District does not collect designation fee revenues.

Debt/Loans

The District reserves the right to assume debt for any purpose that is in the best interest of the District. The District currently holds debt from one loan after purchasing its current facility, as indicated in Table O-4.

Table O-4 – Loans

Year Debt Was/Will be Obtained	Outstanding Balance	Lending Institution	Repayment Term (years)	Annual Debt Service (\$)
2019	\$1,218,908	ODSA	15	\$104,629.32

Other Sources of Revenue

Other sources of revenue for the District comes from grants, compost bin sales, illegal dumping fines, construction and demolition landfill fees, and other miscellaneous sources. Historical and projected revenue totals for each of those sources are shown in Table O-5. An explanation of these other revenue sources follows the table and is described in more detail in Appendix H-9.

Table O-5: Other Sources of Revenue

Year	Sewer District Grant	Pass-Through Grants	C&DD Landfill Fees & Other	Total Other Revenue
2018	\$164,913.40	\$6,966	\$39,493	\$211,372
2019	\$100,000.00	\$0	\$1,236,838	\$1,336,838
2020	\$99,172.35	\$6,966	\$87,984	\$194,122
2021	\$75,000.00	\$0	\$61,534	\$136,534
2022	\$75,000.00	\$0	\$14,697	\$89,697
2023	\$75,000.00	\$200,000	\$16,796	\$291,796
2024	\$75,000.00	\$0	\$16,000	\$91,000
2025	\$0.00	\$0	\$16,000	\$16,000
2026	\$0.00	\$0	\$16,000	\$16,000
2027	\$0.00	\$0	\$16,000	\$16,000
2028	\$0.00	\$0	\$16,000	\$16,000
2029	\$0.00	\$0	\$16,000	\$16,000
2030	\$0.00	\$0	\$16,000	\$16,000
2031	\$0.00	\$0	\$16,000	\$16,000
2032	\$0.00	\$0	\$16,000	\$16,000
2033	\$0.00	\$0	\$16,000	\$16,000
2034	\$0.00	\$0	\$16,000	\$16,000
2035	\$0.00	\$0	\$16,000	\$16,000
2036	\$0.00	\$0	\$16,000	\$16,000
2037	\$0.00	\$0	\$16,000	\$16,000
2038	\$0.00	\$0	\$16,000	\$16,000
2039	\$0.00	\$0	\$16,000	\$16,000
2040	\$0.00	\$0	\$16,000	\$16,000

Sewer District Grant Revenue & Pass-Through Grants

From 2018 through 2020, the District received funds from the Northeast Ohio Regional Sewer District (NEORS) Supplemental Environmental Project (SEP) Grant. The NEORS Community Relations Sponsorship Grant of \$75,000 replaced the prior grant and has been received by the District since 2021.

It is a non-pass-through revenue source. The District is not able to predict the continuance of this grant after 2024, or other grants revenue, therefore, Sewer District Grant and Pass-Through Grants becomes \$0 after 2024.

C&DD Landfill Fees and Miscellaneous Revenue

Miscellaneous revenue has historically fluctuated and will continue to fluctuate due to the inconsistent nature of the revenues categorized as miscellaneous. The District conservatively estimated Revenue Source to be \$16,000 annually throughout the planning period.

C&DD **Landfill Fees consists of the County’s share of the C&DD disposal fee** - \$0.06 on each ton of construction and demolition debris disposed in C&DD landfills within the District. In 2005, when Ohio EPA began assessing fees on all debris disposed in licensed construction and demolition debris landfills, with local boards of health receiving \$0.60 per ton, the Board of Cuyahoga County Commissioners passed a resolution appropriating \$0.06 of the local fee. In Q3 of 2017 Cuyahoga County agreed to transfer its share of the fee to the Solid Waste District. The District estimates \$10,000 in future annual revenue based on historical averages of C&DD revenue received by the County.

Summary of District Revenues

Table O-6 summarizes historical and projected revenues from all sources including generation fee revenue and revenue from other sources described in Table O-5. Actual revenue is presented for 2018 – 2023. Estimated revenue is presented for 2024 – 2032 and is then held constant through 2040 per the plan format.

Table O-6: Total District Revenue

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue	Total Revenue
2018	\$0.00	\$1,986,059	\$0	\$211,372	\$2,197,431
2019	\$0.00	\$1,996,028	\$0	\$1,336,838	\$3,332,865
2020	\$0.00	\$1,959,207	\$0	\$194,122	\$2,153,329
2021	\$0.00	\$2,047,410	\$0	\$136,534	\$2,183,944
2022	\$0.00	\$2,045,524	\$0	\$89,697	\$2,135,220
2023	\$0.00	\$2,680,298	\$0	\$291,796	\$2,972,094
2024	\$0.00	\$2,676,545	\$0	\$91,000	\$2,767,545
2025	\$0.00	\$2,674,024	\$0	\$16,000	\$2,690,024
2026	\$0.00	\$2,669,605	\$0	\$16,000	\$2,685,605
2027	\$0.00	\$2,665,242	\$0	\$16,000	\$2,681,242
2028	\$0.00	\$2,660,935	\$0	\$16,000	\$2,676,935
2029	\$0.00	\$2,656,684	\$0	\$16,000	\$2,672,684
2030	\$0.00	\$2,652,490	\$0	\$16,000	\$2,668,490
2031	\$0.00	\$2,644,966	\$0	\$16,000	\$2,660,966
2032	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2033	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2034	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2035	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2036	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2037	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2038	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2039	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499
2040	\$0.00	\$2,637,499	\$0	\$16,000	\$2,653,499

B. COST OF IMPLEMENTING THE PLAN

Explanation of Historical Expenses

The District compared the projected costs of plan implementation contained in its current Plan Update with actual expenditures. It found that the projected annual cost of plan implementation between 2018 and 2022 would average \$2,268,039 per year while the actual average cost came to \$2,396,080. Overall, annually, the District was on track or overbudgeted with its projections, despite individual year variations. For instance, reference year expenses totaled \$1,943,346, which was over \$239,000 less than projected expenses. However, two individual years had expenses over what was projected. The most significant of **these overages was in 2019, with the anticipated purchase of the District's current** facility pushing actual expenses significantly over budget. This was due to the purchase of a new office space.

While **the District's** year to year expenses varied greatly, its expenses increased on average from 2018 to 2022 at an average rate of 9% a year while the average percent change projected over that five-year period was only 1%. The District attributes this to the cost to purchase the current District facility.

Plan Implementation Expenses

Table O-7 shows plan implementation expenses beginning in 2018 and through 2040. The table is broken up into two sections for formatting purposes. Actual costs for plan implementation are shown for years 2018 through 2023. Estimated costs are shown for years 2024 through 2040. Descriptions and projection explanations for each line item can be found following Table O-7.

Explanation of Plan Implementation Expenses

Line Item 1. Plan Monitoring/Preparation

1.a Plan Preparation

Includes the cost of a planning consultant contract to help prepare the next Plan Update in 2028 through 2030 for planning services or other consultant services that may be needed for plan updates and implementation.

1.c Other

Includes the District's annual subscription for Re-TRAC software used for reporting and maintaining survey data. The projected cost of the District's annual surveying is expected to increase by 2.5% each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatline from 2033 to 2040.

Includes the cost to print and mail annual recycling surveys to municipalities, businesses and processors. **The projected cost of the District's annual surveying is expected to increase by 2.5% each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatline from 2033 to 2040.**

Line Item 2. Plan Implementation

2.a District Administration

2.a.1 Personnel

Includes salaries and benefits (workers compensation, health insurance, PERS and Medicare). The District included a 2.5% increase in personnel costs and in the cost of benefits each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatline from 2033 to 2040. Benefit costs are the hardest to predict but the District kept the projected costs consistent with other administrative costs. This line item also includes funding to help implement new actions and initiatives in this Plan Update beginning in 2026.

2.a.2 Office Overhead

Includes building lease payments (through mid-2019), utilities, supplies, fuel, magazine subscriptions, association memberships, office equipment rental (copy and postage machines), other equipment purchase or maintenance (vehicles and tow motors), telephone/cell phones, postage, staff duty travel and training, general printing and legal notices.

The District included a 2.5% increase in personnel costs and in the cost of benefits each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatlined from 2033 to 2040.

[Note: The District purchased a new office building in 2019. Loan payments for this purchase are paid out of line item 2.o. Other costs including utilities, building maintenance, janitorial services, repairs and capital expenses will continue to be paid out of this Office Overhead line item – approx. \$150,000 annually.]

2.a.3 Other

Includes attorney fees for the Solid Waste District's special counsel. The District has an existing three-year contract with its special counsel that will end in 2025. The budget accounts for an annual \$5,000 baseline for special council fees in year 2026 forward, and funding for a textile study in year 2026.

The District included a 2.5% increase in Other District Administration costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatlined from 2033 to 2040.

2.d Recycling Collection

2.d.6 Other

Includes the recyclers' material handling fees for processing the "hard to recycle materials" that the District collects through its Special Waste Convenience Center (election signs, electronics, and light strands). Residents drop-off these items at the District's facility.

The District included a 2.5% increase in other recycling collection costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatlined from 2033 to 2040.

2.e Special Collections

[Note: all advertising and promotion costs are included in 2.g.2]

2.e.1 Tire Collection

Contract for scrap tire collection and disposal related to its Scrap Tire Round-Up and scrap tire cleanups. The District will get a new contract in 2026 and projects a lower annual cost for the service. The amount of tires collected annually is declining as enforcement improves and more residents are instructed to pay for tire disposal at the point of purchase. The District included a 2.5% increase in other recycling

collection costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatlined from 2033 to 2040.

2.e.2 HHW Collection

Contract for the operation of the District’s HHW program/facility including material handling, processing, transportation and disposal. This is the largest District program which handles about 326,000 lbs. of HHW annually collected by communities from their residents. The District included a 2.5% increase in other recycling collection costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatlined 2033 to 2040.

2.f Yard Waste / Other Organics

This includes the cost of purchasing compost bins and composting supplies that the District sells to the public through its composting seminars and bin sales. Large purchases of compost bins are made every few years to obtain a volume discount. Supplies such as compost thermometers, pails and turners are purchased annually.

2.g Education/Awareness

2.g.2 Advertisement/Promotion

This includes all District advertising including all paid print, digital, broadcast and social media advertising related to promoting programs services and general recycling education and awareness. The District has budgeted \$150,000 beginning in 2025 for District public outreach campaigns.

The District included a 2.5% increase in other recycling collection costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatlined from 2033 to 2040.

2.g.3 Other

This includes all other costs associated with delivering District education and awareness programs such as graphic design, printing, brochures, educational materials, classroom supplies, contest prizes and promotional items. In addition, this line item includes \$350,000 annually for its grant programs (\$200,000/year for the Community Recycling Awareness Grant, \$50,000/year for the Recycling Container Grant, \$50,000/year for the Special Project Grant, and \$50,000 for other grant projects). The remaining education and awareness costs/other costs will fluctuate annually. The District anticipates that other education/awareness costs will remain steady at \$450,000 annually from 2026 on.

2.h Recycling Market Development

2.h.2 Ohio EPA Pass-Through Grant

This includes any pass-through Ohio EPA Market Development Grants received and market development grants received from other sources. The District is not able to predict future grant awards so this line item is blank going into the planning period.

2.m Litter Collection/Education

This cost is the District’s annual contract with Court Community Service to perform county-wide litter collection using two supervised crews of workers assigned community service work. This contract was expanded in 2020 to increase the number of days the crews work. Other minimal expenses related to litter education including litter clean up kits for schools are included in 2.g.3

The budget includes the expansion to a third crew in 2026, and a 2.5% increase in other recycling collection costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatlines from 2033 to 2040.

2.o Loan Payment

The annual loan payment for the 2019 purchase of the District's current headquarters building and warehouse (Special Waste Convenience Center) including principal and interest is \$104,629. This figure is contained in the budget until the debt is retired in 2034. Other costs including utilities, building maintenance, janitorial services, repairs and capital expenses have been accounted for in 2.a.2. Payments in 2020 to 2022 were included in the 2.a.2 Office Overhead in the Quarterly Fee Reports.

2.p Other

In 2019, this line item contains a one-time expenditure of \$1,566,925 which was the total amount of a down payment plus closing costs and realtor fees related to a new building for the District as described above. No additional other costs are anticipated throughout the planning period.

Line Item 3. Health Department Enforcement

The District provides an annual subsidy to the Cuyahoga County Board of Health and the Cleveland Department of Public Health to perform solid waste facility inspections and respond to nuisance complaints. The District plans to increase its subsidy at a rate of 2.5% increase in other recycling collection costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, and flatline from 2033 to 2040 for the planning period unless budgetary conditions necessitate a reduction.

Line Item 4. County Assistance

No Expenses

Line Item 5. Well Testing

No Expenses

Line Item 6. Out-of-State Waste Inspection

No Expenses

Line Item 7. Open Dump, Litter Law Enforcement

7.c Other

This item includes other costs related to the Cleveland-Cuyahoga County Environmental Crimes Task Force including purchasing supplies, equipment like surveillance cameras and hosting workshops for local law enforcement. The District included a 2.5% increase in other recycling collection costs each year in 2025 and 2026, 2% from 2027 through 2029, 1% from 2030 through 2032, flatlined from 2033 to 2040, and a \$50,000 allocation for the purchase of a law enforcement vehicle in 2026.

Line Item 8. Heath Dept. Training

No Expenses

Line Item 9. Municipal/Township Asst.

No Expenses

Line Item 10. Compensation to Affected Community
No Expenses

[Summary of Expenses by Program](#)

Table O-7 summarizes the District's planned expenses by program and offers a more concise way to see how the District plans to allocate its resources.

Table O-7 Expenses by Program

Line #	Category/Program	2018	2019	2020	2021	2022	2023
1	1. Plan Monitoring/Prep.	\$41,584	\$10,771	\$8,469	\$8,463	\$7,320	\$17,134
1.a	a. Plan Preparation	\$30,964	\$0	\$0	\$0	\$0	\$8,331
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$0	\$0
1.c	c. Other	\$10,620	\$10,771	\$8,469	\$8,463	\$7,320	\$8,803
2	2. Plan Implementation	\$1,702,290	\$3,523,790	\$2,010,241	\$1,836,057	\$1,721,621	\$1,854,602
2.a	a. District Administration	\$862,070	\$1,206,665	\$1,129,773	\$1,004,508	\$961,238	\$939,199
2.a.1	Personnel	\$605,241	\$601,690	\$625,420	\$556,775	\$670,449	\$697,690
2.a.2	Office Overhead*	\$243,329	\$381,686	\$357,179	\$427,073	\$285,120	\$165,578
2.a.3	Other	\$13,500	\$223,289	\$147,173	\$20,660	\$5,669	\$75,931
2.d	d. Recycling Collection	\$225	\$200	\$3,217	\$15,265	\$13,483	\$14,468
2.d.6	Other	\$225	\$200	\$3,217	\$15,265	\$13,483	\$14,468
2.e	e. Special Collections	\$401,247	\$339,789	\$357,084	\$289,978	\$275,758	\$323,873
2.e.1	Tire Collection	\$38,083	\$38,510	\$54,857	\$40,521	\$52,659	\$52,793
2.e.2	HHW Collection	\$363,164	\$301,279	\$302,227	\$249,457	\$223,098	\$269,505
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$1,575
2.f	f. Yard Waste/Other Organics	\$13,094	\$0	\$0	\$4,976	\$9,688	\$7,839
2.g	g. Education/Awareness	\$339,370	\$306,608	\$393,513	\$406,352	\$344,355	\$335,699
2.g.2	Advertisement/Promotion	\$120,301	\$83,811	\$144,681	\$138,514	\$93,822	\$54,676
2.g.3	Other	\$219,070	\$222,796	\$248,831	\$267,839	\$250,534	\$281,023
2.h	h. Recycling Market Development	\$0	\$0	\$13,931	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$13,931	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$76,284	\$103,603	\$112,724	\$114,978	\$117,100	\$119,422
2.o	o. Loan Payment*	\$0	\$0	\$0	\$0	\$0	\$104,629
2.p	p. Other	\$10,000	\$1,566,925	\$0	\$0	\$0	\$9,472
3	3. Health Dept. Enforcement	\$218,342	\$226,181	\$244,743	\$139,589	\$207,392	\$250,856
3	<i>Cuyahoga County Bd. Of Health</i>	\$218,342	\$226,181	\$244,743	\$139,589	\$207,392	\$250,856
7	7. Open Dump, Litter Law Enforcement	\$15,615	\$35,777	\$13,541	\$1,602	\$7,013	\$18,389
7.c	c. Other	\$15,615	\$35,777	\$13,541	\$1,602	\$7,013	\$18,389
Total Expenses		\$1,977,831	\$3,796,519	\$2,276,994	\$1,985,711	\$1,943,346	\$2,140,981

*The OWDA Loan payment was included in 2.a.2 for years 2020, 2021, 2022.

Line #	Category/Program	2024	2025	2026	2027	2028	2029
1	1. Plan Monitoring/Prep.	\$91,900	\$32,323	\$12,000	\$12,240	\$21,232	\$91,484
1.a	a. Plan Preparation	\$75,000	\$15,000	\$0	\$0	\$8,747	\$78,750
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$0	\$0
1.c	c. Other	\$16,900	\$17,323	\$12,000	\$12,240	\$12,485	\$12,734
2	2. Plan Implementation	\$2,119,910	\$2,183,951	\$2,376,932	\$2,393,378	\$2,430,153	\$2,467,663
2.a	a. District Administration	\$872,549	\$924,363	\$917,472	\$915,821	\$934,138	\$952,820
2.a.1	Personnel	\$716,149	\$734,053	\$752,404	\$767,452	\$782,801	\$798,457
2.a.2	Office Overhead*	\$131,400	\$184,685	\$139,302	\$142,088	\$144,930	\$147,829
2.a.3	Other	\$25,000	\$5,625	\$25,766	\$6,281	\$6,407	\$6,535
2.d	d. Recycling Collection	\$50,100	\$50,100	\$50,100	\$51,102	\$52,124	\$53,167
2.d.6	Other	\$50,100	\$50,100	\$50,100	\$51,102	\$52,124	\$53,167
2.e	e. Special Collections	\$456,046	\$469,744	\$501,488	\$511,517	\$521,748	\$532,183
2.e.1	Tire Collection	\$65,646	\$69,584	\$71,324	\$72,750	\$74,205	\$75,689
2.e.2	HHW Collection	\$380,400	\$389,910	\$399,658	\$407,651	\$415,804	\$424,120
2.e.5	Other Collection Drives	\$10,000	\$10,250	\$30,506	\$31,116	\$31,739	\$32,373
2.f	f. Yard Waste/Other Organics	\$13,000	\$13,325	\$13,658	\$13,931	\$14,210	\$14,494
2.g	g. Education/Awareness	\$501,796	\$500,000	\$603,750	\$606,825	\$609,962	\$613,161
2.g.2	Advertisement/Promotion	\$151,796	\$150,000	\$153,750	\$156,825	\$159,962	\$163,161
2.g.3	Other	\$350,000	\$350,000	\$450,000	\$450,000	\$450,000	\$450,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$121,790	\$121,790	\$185,835	\$189,551	\$193,342	\$197,209
2.o	o. Loan Payment*	\$104,629	\$104,629	\$104,629	\$104,629	\$104,629	\$104,629
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$230,000	\$235,750	\$241,644	\$246,477	\$251,406	\$256,434
3	<i>Cuyahoga County Bd. Of Health</i>	\$230,000	\$235,750	\$241,644	\$246,477	\$251,406	\$256,434
7	7. Open Dump, Litter Law Enforcement	\$24,620	\$24,000	\$74,600	\$26,092	\$26,614	\$27,146
7.c	c. Other	\$24,620	\$24,000	\$74,600	\$26,092	\$26,614	\$27,146
Total Expenses		\$2,466,430	\$2,476,024	\$2,705,175	\$2,678,186	\$2,729,405	\$2,842,728

Line #	Category/Program	2030	2031	2032	2033	2034	2035
1	1. Plan Monitoring/Prep.	\$28,612	\$12,990	\$13,120	\$13,120	\$13,120	\$13,120
1.a	a. Plan Preparation	\$15,750	\$0	\$0	\$0	\$0	\$0
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$0	\$0
1.c	c. Other	\$12,862	\$12,990	\$13,120	\$13,120	\$13,120	\$13,120
2	2. Plan Implementation	\$2,486,793	\$2,506,115	\$2,525,630	\$2,525,630	\$2,525,630	\$2,421,001
2.a	a. District Administration	\$962,349	\$971,972	\$981,692	\$981,692	\$981,692	\$981,692
2.a.1	Personnel	\$806,442	\$814,506	\$822,651	\$822,651	\$822,651	\$822,651
2.a.2	Office Overhead	\$149,307	\$150,800	\$152,308	\$152,308	\$152,308	\$152,308
2.a.3	Other	\$6,600	\$6,666	\$6,733	\$6,733	\$6,733	\$6,733
2.d	d. Recycling Collection	\$53,698	\$54,235	\$54,778	\$54,778	\$54,778	\$54,778
2.d.6	Other	\$53,698	\$54,235	\$54,778	\$54,778	\$54,778	\$54,778
2.e	e. Special Collections	\$537,504	\$542,880	\$548,308	\$548,308	\$548,308	\$548,308
2.e.1	Tire Collection	\$76,446	\$77,211	\$77,983	\$77,983	\$77,983	\$77,983
2.e.2	HHW Collection	\$428,361	\$432,645	\$436,971	\$436,971	\$436,971	\$436,971
2.e.5	Other Collection Drives	\$32,697	\$33,024	\$33,354	\$33,354	\$33,354	\$33,354
2.f	f. Yard Waste/Other Organics	\$14,639	\$14,785	\$14,933	\$14,933	\$14,933	\$14,933
2.g	g. Education/Awareness	\$614,792	\$616,440	\$618,105	\$618,105	\$618,105	\$618,105
2.g.2	Advertisement/Promotion	\$164,792	\$166,440	\$168,105	\$168,105	\$168,105	\$168,105
2.g.3	Other	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$199,181	\$201,173	\$203,185	\$203,185	\$203,185	\$203,185
2.o	o. Loan Payment	\$104,629	\$104,629	\$104,629	\$104,629	\$104,629	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$258,999	\$261,589	\$264,204	\$264,204	\$264,204	\$264,204
3	<i>Cuyahoga County Bd. Of Health</i>	\$258,999	\$261,589	\$264,204	\$264,204	\$264,204	\$264,204
7	7. Open Dump, Litter Law Enforcement	\$27,418	\$27,692	\$27,969	\$27,969	\$27,969	\$27,969
7.c	c. Other	\$27,418	\$27,692	\$27,969	\$27,969	\$27,969	\$27,969
Total Expenses		\$2,801,821	\$2,808,386	\$2,830,923	\$2,830,923	\$2,830,923	\$2,726,294

Line #	Category/Program	2036	2037	2038	2039	2040
1	1. Plan Monitoring/Prep.	\$13,120	\$13,120	\$13,120	\$13,120	\$13,120
1.a	a. Plan Preparation	\$0	\$0	\$0	\$0	\$0
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$0
1.c	c. Other	\$13,120	\$13,120	\$13,120	\$13,120	\$13,120
2	2. Plan Implementation	\$2,421,001	\$2,421,001	\$2,421,001	\$2,421,001	\$2,421,001
2.a	a. District Administration	\$981,692	\$981,692	\$981,692	\$981,692	\$981,692
2.a.1	Personnel	\$822,651	\$822,651	\$822,651	\$822,651	\$822,651
2.a.2	Office Overhead	\$152,308	\$152,308	\$152,308	\$152,308	\$152,308
2.a.3	Other	\$6,733	\$6,733	\$6,733	\$6,733	\$6,733
2.d	d. Recycling Collection	\$54,778	\$54,778	\$54,778	\$54,778	\$54,778
2.d.6	Other	\$54,778	\$54,778	\$54,778	\$54,778	\$54,778
2.e	e. Special Collections	\$548,308	\$548,308	\$548,308	\$548,308	\$548,308
2.e.1	Tire Collection	\$77,983	\$77,983	\$77,983	\$77,983	\$77,983
2.e.2	HHW Collection	\$436,971	\$436,971	\$436,971	\$436,971	\$436,971
2.e.5	Other Collection Drives	\$33,354	\$33,354	\$33,354	\$33,354	\$33,354
2.f	f. Yard Waste/Other Organics	\$14,933	\$14,933	\$14,933	\$14,933	\$14,933
2.g	g. Education/Awareness	\$618,105	\$618,105	\$618,105	\$618,105	\$618,105
2.g.2	Advertisement/Promotion	\$168,105	\$168,105	\$168,105	\$168,105	\$168,105
2.g.3	Other	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$203,185	\$203,185	\$203,185	\$203,185	\$203,185
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$264,204	\$264,204	\$264,204	\$264,204	\$264,204
3	<i>Cuyahoga County Bd. Of Health</i>	\$264,204	\$264,204	\$264,204	\$264,204	\$264,204
7	7. Open Dump, Litter Law Enforcement	\$27,969	\$27,969	\$27,969	\$27,969	\$27,969
7.c	c. Other	\$27,969	\$27,969	\$27,969	\$27,969	\$27,969
Total Expenses		\$2,726,294	\$2,726,294	\$2,726,294	\$2,726,294	\$2,726,294

Budget Summary and Fund Balance Impacts

Table O-8 Budget Summary

Year	Revenue	Expenses	Annual Surplus/Deficit (\$)	Balance (\$)
2017	Ending Balance			\$3,217,651
2018	\$2,197,431	\$1,977,831	\$219,600	\$3,437,251
2019	\$3,332,865	\$3,796,519	-\$463,654	\$2,973,597
2020	\$2,153,329	\$2,276,994	-\$123,665	\$2,849,932
2021	\$2,183,944	\$1,985,711	\$198,234	\$3,048,166
2022	\$2,135,220	\$1,943,346	\$191,874	\$3,240,040
2023	\$2,972,094	\$2,140,981	\$831,113	\$4,071,153
2024	\$2,767,545	\$2,466,430	\$301,114	\$4,372,267
2025	\$2,690,024	\$2,476,024	\$214,001	\$4,586,268
2026	\$2,685,605	\$2,705,175	-\$19,570	\$4,566,698
2027	\$2,681,242	\$2,678,186	\$3,056	\$4,569,754
2028	\$2,676,935	\$2,729,405	-\$52,470	\$4,517,284
2029	\$2,672,684	\$2,842,728	-\$170,044	\$4,347,240
2030	\$2,668,490	\$2,801,821	-\$133,331	\$4,213,908
2031	\$2,660,966	\$2,808,386	-\$147,420	\$4,066,488
2032	\$2,653,499	\$2,830,923	-\$177,424	\$3,889,064
2033	\$2,653,499	\$2,830,923	-\$177,424	\$3,711,639
2034	\$2,653,499	\$2,830,923	-\$177,424	\$3,534,215
2035	\$2,653,499	\$2,726,294	-\$72,795	\$3,461,420
2036	\$2,653,499	\$2,726,294	-\$72,795	\$3,388,625
2037	\$2,653,499	\$2,726,294	-\$72,795	\$3,315,830
2038	\$2,653,499	\$2,726,294	-\$72,795	\$3,243,035
2039	\$2,653,499	\$2,726,294	-\$72,795	\$3,170,240
2040	\$2,653,499	\$2,726,294	-\$72,795	\$3,097,445

C. ALTERNATIVE BUDGET

The District is not presenting an alternative budget within this Draft Plan Update.

APPENDIX P: DESIGNATION

A. STATEMENT AUTHORIZING/PRECLUDING DESIGNATION

The Board of Directors of the Cuyahoga County Solid Waste Management District is hereby authorized to establish facility designations in accordance with Section 343.014 of the Ohio Revised Code after this plan has been approved by the Ohio Environmental Protection Agency. In addition, facility designations will be established and governed by applicable District rules.

B. DESIGNATED FACILITIES

The District supports an open market for the collection, transport, and disposal of solid waste. As required in Section 3734.53(A)(13)(a) of the Ohio Revised Code, the District is therefore identifying all Ohio licensed and permitted solid waste landfill, transfer or resource recovery facilities or recycling activities as well as permitted out-of-state landfill, transfer or resource recovery facilities or recycling activities to receive solid waste generated within the District.

The District is not designating any facilities in this Plan Update but reserves the right to designate one or more solid waste facilities to receive solid waste generated within the District if deemed necessary by its Board of Directors. In addition, facility designation will be established and governed by applicable District rules.

C. WAIVER PROCESS FOR THE USE OF UNDESIGNATED FACILITIES

If the Board elects to designate facilities after this Plan Update is approved by the Director of the Ohio EPA, the following waiver process may be followed by any person, municipal corporation, township or other entity that wishes to deliver waste to a solid waste facility not designated by the District. In the event that any person, municipal corporation, township or other entity requests a waiver to use a facility, other than a designated facility, it must submit a written request for a waiver of designation to the Board. The request must contain the following information;

1. Identification of the persons, municipal corporation, township or other entity requesting the waiver;
2. Identification of the generators(s) of the solid waste for which the waiver is requested;
3. Identification of the type and quantity (TPY) of solid waste for which the waiver is requested;
4. Identification of the time period(s) for which the waiver is requested;
5. Identification of the disposal facility(s) to be used if the waiver is granted;
6. A letter from the receiving solid waste management district acknowledging that the activity is **consistent with that District's current plan;**
7. An estimate of the financial impact to the District with issuance of the requested waiver; and
8. An explanation of the reason(s) for requesting the waiver.

Upon receipt of the properly completed waiver request, the District will review and request additional information if necessary to conduct its review. The Board shall act on a waiver request within ninety days. A waiver may be granted only if the Board determines that:

1. **Issuance of the waiver is not inconsistent with projections contained in the District's approved Plan Update under Section 3734.53 (A)(6) and (A)(7) of the Ohio Revised Code;**
2. **Issuance of the waiver will not adversely affect implementation and financing of the District's approved Plan Update;** and
3. The entity is willing to enter into an agreement requiring the payment of a waiver fee to the District.

APPENDIX Q: DISTRICT RULES

A. EXISTING RULES

According to Ohio Revised Code Section 3734.53(C), “the solid waste management plan of a county or joint district may provide for the adoption of rules under division (G) of section 343.01 of the Revised Code after approval of the plan under section 3734.521 or 3734.55 of the Revised Code.”

While the District reserved the authority for the Board to adopt rules within its initial solid waste management plan and within subsequent plan updates, the Board has not yet adopted any rules to implement that authority.

B. PROPOSED RULES

This Plan Update provides the authority to the Board to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code Section 343.01 divisions (G)(1), (G)(2), (G)(3) and (G)(4) and section 3734.53 division (C) and include the following authorities:

1. Prohibiting or limiting the receipt of waste generated outside the District,
2. Governing the maintenance, protection and use of solid waste collection, transfer, disposal, recycling or resource recovery facilities (including a rule incorporating Appendix S: Siting Strategy),
3. Governing a program to inspect out of state waste; and,
4. Exempting an owner or operator of a solid waste facility from compliance with local zoning requirements.

Such rules shall comply with the legislative authority of the District to promulgate such rules and to regulate solid waste services, facilities and operation of the District in accordance with the Plan or amended Plan of the District and/or as authorized by applicable statutes, governmental regulations, local ordinances and rules of the District as now existing or hereafter enacted or amended.

C. RULE APPROVAL PROCESS

Proposed rules shall follow the steps presented below prior to final approval by the Board of Directors.

1. **Public Notice of the proposed rule(s) in The Plain Dealer and on the District’s website, social media and other publications at its discretion.**
2. 30-day public comment period of the proposed rules.
3. A public hearing on the proposed rules shall be conducted.
4. Rule adoption at a Board of Directors meeting.

SAMPLE COVER LETER FOR BUSINESS SURVEYS

February 13, 2023

«Contact_Name»
«Title»
«Company_Name»
«Address»
«City», «State» «Zip»

Dear «Contact_Name»:

Please give the enclosed survey your personal attention. The Cuyahoga County Solid Waste District is **required by Ohio law (Ohio Revised Code 3734.53;56)** to gather information regarding solid waste management practices within Cuyahoga County. This information can only be obtained from company employees familiar with those operations.

The information we are requesting is critical for state-mandated data reporting and solid waste management planning. Your information will be used to profile waste management in the commercial and institutional sector and to calculate Cuyahoga County's recycling rate for the Ohio EPA. The Cuyahoga County Solid Waste District will use the information you provide for summary purposes only. We will add your company's data to data obtained from other companies.

Your timely and accurate survey response is important. You may either complete the survey using the enclosed paper survey copy or online through Re-TRAC Connect™ using the link provided below. *Note that the Re-TRAC Connect™ survey system requires all respondents to create an account. Once an account has been created, users have access to many features, such as the ability to save survey drafts and export data, which have simplified the reporting process. If you already have an account, simply log in and you will have access to your current and previous surveys.

1. Log on to <https://connect.re-trac.com/registration/cuyahoga-business>
2. Create an account or log in if you have an existing account.
3. Follow the online directions for completing the survey.

Please complete the survey by March 10, 2023. Paper surveys can be mailed using the enclosed postage-paid envelope, e-mailed to jfenos@cuyahogacounty.us, or faxed to 216-478-0014. If you need help completing the survey or accessing the survey online, please contact Jessica Fenos, Assistant Director, at 216-443-3728 or jfenos@cuyahogacounty.us.

Thank you for your cooperation.

Sincerely,



Elizabeth Biggins-Ramer
Executive Director



**CUYAHOGA COUNTY SOLID WASTE DISTRICT
COMMERCIAL AND INSTITUTIONAL SOLID WASTE SURVEY
(February 2023)**

This inventory of commercial and institutional solid waste management is being conducted by the Solid Waste District, as required by Ohio EPA, in order to meet reporting requirements for the state-mandated County Solid Waste Plan Update (Ohio Revised Code 3734.53 & 56). Responses will be used to calculate the District's progress in meeting state and local recycling goals and to verify information provided by others.

Instructions: Please complete all of the following tables to the best of your ability. Please return the completed survey by **March 10, 2023**. A postage-paid return envelope is enclosed for your convenience.

Note: This survey is only regarding industrial recycling generated by your company's facilities located in Cuyahoga County. Do not include data from any facilities located outside of Cuyahoga County.

Confidentiality: The Cuyahoga County Solid Waste District will use the information in this survey only for summary purposes and identify types of waste that may be further reduced or recycled. We will add your answers to those from similar companies.

If you have any questions regarding the completion of this survey, please contact:

Jessica Fenos, Assistant Director
jfenos@cuyahogacounty.us
216-443-3728

Part I – General Information

Name of Company / Institution _____

Mailing Address _____

City / State / Zip _____

Survey For: (check one) All Locations in Cuyahoga County This Location Only

Number of Employees _____ NAICS Code* (see page 4) _____

Survey Completed by _____ Title _____

Phone (____) _____ Email Address** _____

RECYCLING: *The systematic collection, sorting, decontaminating, and returning of waste materials to commerce as commodities for use or exchange. Recycling also means to use, reuse, or reclaim a material.*

* If you do not know your NAICS Code, please see page 4 of this survey or check at <https://www.naics.com/search/>

**Please note that your email address will not be sold to any company or organization. Email addresses will be used for follow-up purposes only by the Cuyahoga County Solid Waste District.

Part II – Recycling

Table 1a – List the totals for each material **recycled** by your company in 2022. Please include the name of the recycling company or facility where each material was taken for processing. This data is used to calculate the District’s progress in meeting state and local recycling goals. **Enter the data in pounds or tons (2000 pounds = 1 ton).** You can estimate the quantities of **each type** of material recycled. The standard conversion from cubic yards to tons is 3 cy = 1 ton. **If you do not have specific values, use Table 1b to estimate the weight of materials recycled. *Do NOT include materials disposed of in a landfill.**

TABLE 1a: AMOUNT RECYCLED IN 2022		
TYPES OF RECYCLED MATERIALS	TOTAL RECYCLED (specify if pounds or tons)	NAME OF RECYCLER / PROCESSOR
Fiber		
Office / Mixed Paper		
Newsprint		
Cardboard		
Other Paper (specify)		
Wood		
Wood Pallets		
Boardends and Wood Scrap		
Sawdust		
Other Wood (specify)		
Nonferrous Metals		
Aluminum Cans		
Aluminum Scrap		
Copper		
Other Nonferrous Metals (specify)		
Ferrous Metals		
Steel Cans		
Steel Drums		
Steel Scrap		
Other Ferrous Metals (specify)		
Glass		
Glass		
Plastics		
PETE (#1)		
HDPE (#2)		
Vinyl (#3)		
LDPE (#4)		
Polypropylene (#5)		
Polystyrene (#6)		
Composite Plastics (#7)		
Other Plastics (specify)		
Plastic Pallets & Packaging		
Co-mingled (Mixed) Recyclables		
Co-mingled (Mixed) Recyclables		
Rubber		
Tires		
Other Rubber (specify)		
Organics		
Food Composting		
Yard Waste Composting		
Animal Waste Composting		
Textiles and Furniture		
Cloth & Fabrics		
Furniture		

TYPES OF RECYCLED MATERIALS	TOTAL RECYCLED (specify if pounds or tons)	NAME OF RECYCLER / PROCESSOR
Misc. Other		
Computers / Electronics		
Ink/Print Cartridges		
Litho / Photo Film		
Stone / Clay / Sand		
Non-Exempt Foundry Sand / Slag		
Concrete		
Composites		
Lead Acid Batteries		
Other Batteries (specify)		
Fluorescent Bulbs		
Ballasts		
Motor Oil		
Antifreeze		
Other (specify)		
Other (specify)		
Other (specify)		
Other (specify)		
Other (specify)		

Table 1b – Recycling Material in Dumpster – If you were unable to complete Table 1a, Table 1b is a method by which your company’s annual **recycling** can be estimated by the District.

*Do **NOT** include materials disposed of in a landfill.

Table 1b: Recycling Estimation				
Dumpster / Location	Material Recycled	No. of Pickups per Week	Size of Dumpster (cubic yards)	Name of Recycler / Processor
Example: Recycling Dumpster #1	Cardboard	2	8	The ABC Recycle Company

Would you like to receive information about recycling, waste reduction, waste cost reduction, or any other waste-related issues?

Yes No

For more information about recycling at work, contact Business Recycling Specialist, Doreen Schreiber at 216-443-3732 or dschreiber@cuyahogacounty.us

Connect with Us

www.CuyahogaRecycles.org



/cuyahogarecycles



/cuyahoga_recycles



/company/cuyahoga-recycles



@RecycleCuyahoga

Thank you for your cooperation. Please return your completed survey by **March 10, 2023**, either via email to jfenos@cuyahogacounty.us, or fax to 216-478-0014, or by mail in the enclosed postage-paid envelope to:

**CUYAHOGA COUNTY SOLID WASTE DISTRICT
4750 EAST 131ST STREET
CLEVELAND, OH 44105-9987**

Commercial / Institutional NAICS Codes

- 42 Wholesale Trade
- 44 Retail Trade
- 48 Transportation and Warehousing
- 51 Information
- 52 Finance and Insurance
- 53 Real Estate and Rental and Leasing
- 54 Professional, Scientific, and Technical Services
- 55 Management of Companies and Enterprises
- 56 Administrative and Support and Waste Management and Remediation Services
- 61 Educational Services
- 62 Health Care and Social Assistance
- 71 Arts, Entertainment, and Recreation
- 72 Accommodation and Food Services
- 81 Other Services (except Public Administration)
- 92 Public Administration



**CUYAHOGA COUNTY SOLID WASTE DISTRICT
INDUSTRIAL SOLID WASTE SURVEY
(February 2023)**

This inventory of industrial solid waste management is being conducted by the Solid Waste District, as required by Ohio EPA, in order to meet reporting requirements for the state-mandated County Solid Waste Plan Update (Ohio Revised Code 3734.53 & 56). Responses will be used to calculate the District's progress in meeting state and local recycling goals and to verify information provided by others.

Instructions: Please complete all of the following tables to the best of your ability. Please return the completed survey by **February 13, 2023**. A postage-paid return envelope is enclosed for your convenience.

Note: This survey is only regarding industrial recycling generated by your company's facilities located in Cuyahoga County. Do not include data from any facilities located outside of Cuyahoga County.

Confidentiality: The Cuyahoga County Solid Waste District will use the information in this survey only for summary purposes and identify types of waste that may be further reduced or recycled. We will add your answers to those from similar companies.

If you have any questions regarding the completion of this survey, please contact:

Jessica Fenos, Assistant Director
jfenos@cuyahogacounty.us
216-443-3728

Part I – General Information

Name of Company / Institution _____

Mailing Address _____

City / State / Zip _____

Survey For: (check one) All Locations in Cuyahoga County This Location Only

Number of Employees _____ NAICS Code* (see page 4) _____

Survey Completed by _____ Title _____

Phone (____) _____ Email Address** _____

RECYCLING: *The systematic collection, sorting, decontaminating, and returning of waste materials to commerce as commodities for use or exchange. Recycling also means to use, reuse, or reclaim a material.*

* If you do not know your NAICS Code, please see page 4 of this survey or check at <https://www.naics.com/search/>

**Please note that your email address will not be sold to any company or organization. Email addresses will be used for follow-up purposes only by the Cuyahoga County Solid Waste District.

Part II – Recycling

Table 1a – List the totals for each material **recycled** by your company in 2022. Please include the name of the recycling company or facility where each material was taken for processing. This data is used to calculate the District’s progress in meeting state and local recycling goals. **Enter the data in pounds or tons (2000 pounds = 1 ton).** You can estimate the quantities of **each type** of material recycled. The standard conversion from cubic yards to tons is 3 cy = 1 ton. **If you do not have specific values, use Table 1b to estimate the weight of materials recycled. *Do NOT include materials disposed of in a landfill.**

TABLE 1a: AMOUNT RECYCLED IN 2022		
TYPES OF RECYCLED MATERIALS	TOTAL RECYCLED (specify if pounds or tons)	NAME OF RECYCLER / PROCESSOR
Fiber		
Office / Mixed Paper		
Newsprint		
Cardboard		
Other Paper (specify)		
Wood		
Wood Pallets		
Boardends and Wood Scrap		
Sawdust		
Other Wood (specify)		
Nonferrous Metals		
Aluminum Cans		
Aluminum Scrap		
Copper		
Other Nonferrous Metals (specify)		
Ferrous Metals		
Steel Cans		
Steel Drums		
Steel Scrap		
Other Ferrous Metals (specify)		
Glass		
Glass		
Plastics		
PETE (#1)		
HDPE (#2)		
Vinyl (#3)		
LDPE (#4)		
Polypropylene (#5)		
Polystyrene (#6)		
Composite Plastics (#7)		
Other Plastics (specify)		
Plastic Pallets & Packaging		
Co-mingled (Mixed) Recyclables		
Co-mingled (Mixed) Recyclables		
Rubber		
Tires		
Other Rubber (specify)		
Organics		
Food Composting		
Yard Waste Composting		
Animal Waste Composting		
Textiles and Furniture		
Cloth & Fabrics		
Furniture		

TYPES OF RECYCLED MATERIALS	TOTAL RECYCLED (specify if pounds or tons)	NAME OF RECYCLER / PROCESSOR
Misc. Other		
Computers / Electronics		
Ink/Print Cartridges		
Litho / Photo Film		
Stone / Clay / Sand		
Non-Exempt Foundry Sand / Slag		
Concrete		
Composites		
Lead Acid Batteries		
Other Batteries (specify)		
Fluorescent Bulbs		
Ballasts		
Motor Oil		
Antifreeze		
Other (specify)		
Other (specify)		
Other (specify)		
Other (specify)		
Other (specify)		

Table 1b – Recycling Material in Dumpster – If you were unable to complete Table 1a, Table 1b is a method by which your company’s annual **recycling** can be estimated by the District.

*Do **NOT** include materials disposed of in a landfill.

Table 1b: Recycling Estimation				
Dumpster / Location	Material Recycled	No. of Pickups per Week	Size of Dumpster (cubic yards)	Name of Recycler / Processor
Example: Recycling Dumpster #1	Cardboard	2	8	The ABC Recycle Company

Would you like to receive information about recycling, waste reduction, waste cost reduction, or any other waste-related issues?

Yes No

For more information about recycling at work, contact Business Recycling Specialist, Doreen Schreiber at 216-443-3732 or dschreiber@cuyahogacounty.us

Connect with Us

www.CuyahogaRecycles.org



/cuyahogarecycles



/cuyahoga_recycles



/company/cuyahoga-recycles



@RecycleCuyahoga

Thank you for your cooperation. Please return your completed survey by **March 10, 2023**, either via email to ifenos@cuyahogacounty.us, or fax to 216-478-0014, or by mail in the enclosed postage-paid envelope to:

**CUYAHOGA COUNTY SOLID WASTE DISTRICT
4750 EAST 131ST STREET
CLEVELAND, OH 44105-9987**

Industrial NAICS Codes

311 Food

312 Beverage and Tobacco

313 Textile Mills

314 Textile Products

315 Apparel

316 Leather and Allied Products

321 Wood Products

322 Paper

323 Printing and Related Support

324 Petroleum and Coal Products

325 Chemical Manufacturing

326 Plastics and Rubber

327 Nonmetallic Mineral Products

331 Primary Metals

332 Fabricated Metals

333 Machinery

334 Computer and Electronic Products

335 Electrical Equipment, Appliance, and
Components

336 Transportation Equipment

337 Furniture and Related Products

339 Miscellaneous Manufacturing



Cuyahoga County

SOLID WASTE DISTRICT

CUYAHOGA COUNTY SOLID WASTE DISTRICT RECYCLING ACTIVITIES SURVEY (Calendar Year 2023)

This inventory of recycling activities (by brokers, processors, scrap yards, etc.) is being conducted by the Solid Waste District, as required by Ohio EPA, in order to meet reporting requirements for the state-mandated County Solid Waste Plan Update (Ohio Revised Code 3734.53 & 56). Responses will be used to calculate the District's progress in meeting state and local recycling goals and to verify information provided by others.

Instructions: Please complete all of the following questions to the best of your ability. Please return the completed survey by **February 24, 2023**.

Note: This survey is only in regard to your company's facilities that receive recyclables from Cuyahoga County. Do not include data on recyclables received from outside of Cuyahoga County.

If you have any questions regarding the completion of this survey, please contact Jessica Fenos at the Solid Waste District at 216-443-3728 or email jfenos@cuyahogacounty.us.

Part I – General Information

Name of Recycling Facility _____

Mailing Address _____

City / State / Zip _____

Survey Completed by _____ Title _____

Phone (____) _____ Fax (____) _____

Email Address _____

If your company operates more than one facility that receives recyclables from Cuyahoga County (for example one which may be out of state or in a different county in Ohio), please copy this survey and complete a separate form for each facility.

Facility Location, if different from mailing address:

Street Address _____

City / State / Zip _____

Phone (____) _____

Part 2 – Recycling Activities in 2022

1. Please identify the nature of your recycling activity. Circle all that apply.

- | | |
|-------------------------------------------|-------------------------------|
| 1 Broker | 5 Buy-Back Recycling Center |
| 2 End-User | 6 Materials Recovery Facility |
| 3 Processor | 7 Drop-Off Recycling Center |
| 4 Scrap Yard | 8 Auto Body Processor |
| 5 Construction/Demolition Debris Recycler | 9 Other (specify) _____ |

2. Is your facility: Open to the public For private use only

3. Did your company / organization process any recyclable materials generated within **CUYAHOGA COUNTY** in 2022? Yes No

A list of communities in Cuyahoga County is provided below.

If no, please return this survey using the contact information on page 4. Thank you.

If yes, please complete the remainder of this survey. Please complete a separate form for each recycling facility run by your company. You may copy this survey or contact the Solid Waste District for additional copies.

Communities in Cuyahoga County		
1 Bay Village	21 Garfield Hts.	41 Olmsted Falls
2 Beachwood	22 Gates Mills	42 Olmsted Twp.
3 Bedford	23 Glenwillow	43 Orange
4 Bedford Hts.	24 Highland Hts.	44 Parma
5 Bentleyville	25 Highland Hills	45 Parma Hts.
6 Berea	26 Hunting Valley	46 Pepper Pike
7 Bratenahl	27 Independence	47 Richmond Hts.
8 Brecksville	28 Lakewood	48 Rocky River
9 Broadview Hts.	29 Linndale	49 Seven Hills
10 Brook Park	30 Lyndhurst	50 Shaker Hts.
11 Brooklyn	31 Maple Hts.	51 Solon
12 Brooklyn Hts.	32 Mayfield Village	52 South Euclid
13 Chagrin Falls	33 Mayfield Hts.	53 Strongsville
14 Chagrin Falls Twp.	34 Middleburg Hts.	54 University Hts.
15 Cleveland	35 Moreland Hills	55 Valley View
16 Cleveland Hts.	36 Newburgh Hts.	56 Walton Hills
17 Cuyahoga Hts.	37 North Olmsted	57 Warrensville Hts.
18 East Cleveland	38 North Randall	58 Westlake
19 Euclid	39 North Royalton	59 Woodmere
20 Fairview Park	40 Oakwood	

Part 3 – Materials Processed at your facility in 2022 from Cuyahoga County Sources

Identify the types and quantity of materials recycled/reused during 2022 that were derived from Cuyahoga County sources. Use quantity abbreviations listed which are most appropriate for your operation. Please attach additional information as needed. **EXCLUDE:** train boxcars, metals from demolition activities, and ferrous metals resulting from salvage operations conducted by licensed motor vehicle salvage dealers (auto parts and bodies).

“T” = tons “G” = gallons “CY” = cubic yards “Lbs” = pounds “UN” = units

Check Materials Processed	Materials Processed	Amount Recycled RESIDENTIAL (Include Units)	Amount Recycled COMMERCIAL (Include Units)	Amount Recycled INDUSTRIAL (Include Units)	Total Amount Processed (Include Units)
	PAPER				
	Newsprint				
	Cardboard				
	All Other Paper				
	METALS				
	Aluminum beverage cont.				
	Aluminum scrap				
	Copper				
	All Other Non-ferrous Metals				
	Bi-metal/tin food cans				
	Steel (cans, drums, scrap)				
	White goods				
	All Other Ferrous				
	PLASTICS				
	PETE (#1)				
	HDPE (#2)				
	LLDPE (#3)				
	PVC (#4)				
	Polypropylene (#5)				
	Polystyrene (#6)				
	All Other Plastic				
	GLASS				
	RUBBER				
	Tires				
	All Other Rubber				
	ORGANICS				
	Food Wastes (including napkins, coffee filters, etc.)				
	Yard Waste				
	WOOD				
	Wood Pallets & Packaging				
	All Other Wood				
	FURNITURE / HOUSEHOLD GOODS				
	TEXTILES - Cloth & Fabric				
	BATTERIES				
	Lead Acid Batteries				
	All Other Batteries				
	Computers / Electronics				
	Litho / Photo Film				
	Other (specify)				
	Other (specify)				
	Other (specify)				

Part 4 –Destination of Recyclables in 2022

Were any of the recyclables received at your facility from Cuyahoga County sold, donated, or exchanged to another recycling facility or end-user in Cuyahoga County in 2022? Yes No

If **YES**, identify those facilities below and list the recyclables sold/donated as well as the quantity of each and specify the appropriate unit:

“G” = gallons “CY” = cubic yards “Lbs” = pounds “UN” = number of units “T” = tons

Name of Receiving Facility or End-User	Recyclable Materials	Quantity

Thank you for taking the time to complete this survey. Please return this form (keep a copy for yourself) via email to jfenos@cuyahogacounty.us, fax to 216-478-0014 or by mail to:

**CUYAHOGA COUNTY SOLID WASTE DISTRICT
4750 EAST 131st STREET
GARFIELD HEIGHTS, OH 44105**



Cuyahoga County
SOLID WASTE DISTRICT

2022 Residential Recycling Report

Instructions

The 2022 Residential Recycling Report is a means by which the Cuyahoga County Solid Waste District will gather information on the recycling and composting services provided by your community or your private contractor.

Please take a moment to review the forms. There is a tab for each of the following:

Sheet

- 1 Instructions**
- 2 Community Background/Contact Information Sheet**
- 3 Curbside Recycling** – Provide information about your residential curbside recycling programs.
- 4 Drop-Off Recycling** – Provide information about your residential drop-off recycling programs.
- 5 In-House Facility Recycling** – Provide information about recycling programs of the political subdivision's departments and agencies.
- 6 Recycling & Disposal Data** - Provide annual tonnages for any materials recycled and/or composted through your community's curbside, drop-off, and in-house programs, and your community's annual tonnage of trash that was landfilled.

We would appreciate as much detail as you can provide. Check the appropriate boxes, complete any blanks, and list the tonnages collected in 2022 for all applicable materials.

Your community's annual information is due to the District by: FRIDAY, FEBRUARY 24, 2023

Keep a copy of these forms for your records. If you have any questions or concerns, contact Jessica Fenos at (216) 443-3728. Please return the 2022 Residential Recycling Report forms via email to: jfenos@cuyahogacounty.us



Cuyahoga County
SOLID WASTE DISTRICT

Community: Background/Contact Information Sheet

Community Name : _____

Individual Responsible for Completing 2022 Residential Recycling Report

Name: _____

Title: _____

Telephone number: _____

Email: _____

Website: _____

Community's 2022 population: _____

Number of residential units: _____

Number of residential units that have access to curbside recycling: _____

Who collects your community's trash? (Check one)

_____ You

_____ Private contractor _____ (Contractor's Name)

Length of the contract for trash collection is _____ years

Contract for trash collection terminates on _____ (month/day/year)

Automated or Manual trash collection? _____

How is your community's trash collection service funded?

_____ General fund

_____ Resident Charge Back

Who is the biller? _____ Hauler _____ City/Village/Twp

How much? _____

How often? _____

_____ Property tax assessment

How much? _____

How often? _____

_____ Tax levy

How much? _____

How often? _____

_____ Other (explain) _____

How does your community promote your residential recycling programs?



Curbside Recycling Program for Single Family and Multi-Family Units

Community Name : _____

Recycling Provide information about your residential curbside recycling programs.

Who collects the recyclables from the single/multi-family units?

- You
- A private contractor _____ (Contractor's Name)
- No curbside recycling offered

Where are the recyclables placed for collection?

- Curb
- Other (explain) _____

Automated or Manual recyclable collection? _____

How often are recyclables collected from the single/multi-family units?

- Weekly Every other week Other (explain) _____

How are the recyclables set out for collection? (Check ALL that apply)

- ALL recyclables are commingled in a:
 bag bin/bucket wheeled cart

- Cans, glass & plastics are commingled in a:
 bag bin/bucket wheeled cart

Residential mixed paper (RMP) is placed in a brown paper bag and then placed next to the other recyclables.

Cardboard (OCC) is collected separate from RMP and other recyclables.

Other (explain) _____

Continued on next page

Composting Provide information about your residential curbside composting programs.

Is residential yard waste collected separate from solid waste, so that it may be composted?

_____ Yes _____ No

Who collects?

_____ A private contractor _____ (Contractor's Name)

_____ City/Village/Twp

What materials are collected for composting? (Check ALL that apply)

_____ Brush

How are residents instructed to set out brush for collection?

_____ Grass

How are residents instructed to set out grass for collection?

_____ Leaves

How are residents instructed to set out leaves for collection?

_____ Logs

How are residents instructed to set out logs for collection?

_____ Holiday Trees

How are residents instructed to set out holiday trees for collection?

How often is residential yard waste collected for composting?

_____ Year-round - Specify frequency (example: weekly):

_____ Seasonal - Specify frequency (example: weekly from Apr. 1st – Nov. 1st):

Continued on next page



Drop-Off Recycling Program

Community Name : _____

Provide information about your residential drop-off recycling programs.

Does your community offer drop-off recycling services to your residents?

_____ Yes _____ No

**List ALL resident drop-off locations that accept one or more of the following materials ONLY:
Paper, Cardboard, Plastics, Glass, and Metal Cans**

1) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

_____ You

_____ A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

_____ Yes _____ No

Is there any money raised from the sale of the drop-off recyclables?

_____ Yes _____ No

2) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

_____ You

_____ A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

_____ Yes _____ No

Is there any money raised from the sale of the drop-off recyclables?

_____ Yes _____ No

Continued on next page

3) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

You

A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

Yes No

Is there any money raised from the sale of the drop-off recyclables?

Yes No

4) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

You

A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

Yes No

Is there any money raised from the sale of the drop-off recyclables?

Yes No

5) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

You

A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

Yes No

Is there any money raised from the sale of the drop-off recyclables?

Yes No

Continued on next page

6) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

You

A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

Yes No

Is there any money raised from the sale of the drop-off recyclables?

Yes No

7) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

You

A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

Yes No

Is there any money raised from the sale of the drop-off recyclables?

Yes No

8) _____

What materials are collected at this location?

Who collects the recyclables from the drop-off location?

You

A private contractor _____ (Contractor's Name)

Hours of Operation _____

Is this drop-off restricted only to community residents?

Yes No

Is there any money raised from the sale of the drop-off recyclables?

Yes No



In-House Facility Recycling Program

Community Name : _____

Provide information about recycling programs of the political subdivision's departments and agencies.

Do any of the community's departments/agencies/facilities participate in any type of recycling program/activities?

_____ Yes

_____ No

Who participates in a recycling program/activity?

_____ City Hall

_____ Service Department

_____ Recreation Department

_____ Parks Department

_____ Police Department

_____ Fire Department

_____ Other

How many employees participate in the in-house program(s)? _____ people

Who collects the recyclables from the internal facility recycling program?

_____ You

_____ A private contractor _____ (Contractor's Name)

_____ Nobody

Is there any money raised from the sale of the in-house recyclables?

_____ Yes

_____ No

2022 Community Recycling & Disposal Data

Community Name: _____

Provide annual tonnages for any materials recycled and/or composted through your community's curbside, drop-off, and in-house programs, and your community's annual tonnage of trash that was landfilled. Please do NOT double count materials.

Materials Collected	Curbside	Drop-Off	In-House	TOTAL TONS RECYCLED
<u>Fiber</u>				
Cardboard				
Newsprint				
Office Paper				
Paper Retriever (Drop-Off <u>Only</u>)				
Residential Mixed Paper (RMP)				
Other Fiber				
<u>Metals</u>				
Aluminum & Bi-metal Cans				
Steel Cans				
Scrap Metal				
White Goods / Appliances				
<u>Plastics</u>				
PET #1				
HDPE #2				
#3 - #7 Plastics				
Other Plastics				
<u>Glass</u>				
Glass				
<u>Commingled Recycling</u> (Do NOT enter tons here if you already listed the individual material tons above.)				
Cans + Plastics				
Cans + Plastics + Glass				
Cans + Plastics + Glass + Fiber				
<u>Miscellaneous</u>				
Furniture				
Clothing/Fabric/Textiles				
Carpet Padding				
Campaign/Election Signs				
Holiday Lights				
<u>Special Waste</u> (Do NOT include materials recycled through the District's Sponsored Programs)				
Computers				
Fluorescent Tubes				
Lead Acid Batteries (wet cell)				
Household Batteries (dry cell)				
Gas/Solvents				
Motor Oil				
Antifreeze				
Tires				
TOTAL TONS RECYCLED				

*District Sponsored Collections	
*Computer Round-Up	
*HHW Round-Up	
*Tire Round-Up	
TOTAL TONS RECYCLED	

*Use the tonnages provided by the District. Contact the District if you do not have them already.

Materials Collected	Curbside	Drop-Off	In-House	TOTAL TONS COMPOSTED
<i>Yard Waste</i>				
Leaves				
Brush (chipped & whole)				
Holiday Trees				
Grass Clippings				
Logs				
Grasscycling				
Backyard Composting				
TOTAL TONS COMPOSTED				

Below, include your community's total tons of waste disposed (landfilled) in 2022.

SOLID WASTE LANDFILLED	
TOTAL TONS DISPOSED	

GRAND TOTALS <i>(District will calculate)</i>				
TONS RECYCLED	TONS COMPOSTED	TONS DIVERTED <i>(tons recycled + tons composted)</i>	TONS LANDFILLED	TOTAL GENERATED <i>(tons diverted + tons landfilled)</i>
<u>0.00%</u> % RECYCLED	<u>0.00%</u> % COMPOSTED	<u>0.00%</u> *% DIVERTED	<u>0.00%</u> % LANDFILLED	

* $Tons\ Diverted\ (tons\ recycled\ +\ tons\ composted) \div Total\ Generated = \% \text{ Diverted}$

Additional information and/or Comments

APPENDIX S: SITING STRATEGY

The Board of Directors of the Cuyahoga County Solid Waste Management District is authorized by Revised Code section 343.01(G)(2) to adopt a rule requiring the submission of general plans and specifications to the Board for a determination by the Board that any proposed new solid waste facility or major existing facility modification complies with the District Plan. This Plan Update authorizes the Board to adopt the rule authorized Revised Code section 343.01(G)(2). In the event that the Board adopts a rule to implement a Siting Strategy, such Siting Strategy shall be as follows:

A. SITING STRATEGY

Definitions:

For the purposes of this section, the following definitions shall apply:

- a) **Solid Waste Facility** shall mean all solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities as defined by Ohio EPA.
- b) **Siting Strategy** shall mean the process by which the Board of Directors shall review proposals for the construction or modification of any Solid Waste Facility and determine whether such proposal complies with the Plan Update.
- c) **General Plans and Specifications** shall mean that information required to be submitted to the Board for review for the construction or modification of any proposed Solid Waste Facility and includes, but is not limited to, a site plan for the proposed facility, architectural drawings or artists renderings of the proposed facility, the projected size and capacity of the proposed facility and all other information identified in this Siting Strategy.
- d) **Applicant** shall mean a person, corporation, Municipal Corporation, township or other political subdivision proposing to construct or modify a Solid Waste Facility within the District.
- e) **Modify** shall mean a significant change in the operation of an existing in-District Solid Waste Facility: (1) that requires the approval of the Director of the Ohio Environmental Protection Agency; or (2) that involves a change in the type of material, manner of operation, or activities conducted at the facility (i.e., a conversion of a legitimate recycling facility to a transfer station).

B. PURPOSE AND OBJECTIVE

The District's Siting Strategy for Solid Waste Facilities ensures that proposals to construct a new Solid Waste Facility within the District or to modify an existing Solid Waste Facility within the District are in compliance with the Plan Update. The Board shall not approve the General Plans and Specifications for any proposed Solid Waste Facility or the modification of any existing in-District Solid Waste Facility where the construction and operation of the proposed facility, as determined by the Board, will: (1) have significant adverse impacts upon **the Board's ability to finance and implement the Plan Update;** (2) **interfere with the Board's obligation to** provide for the maximum feasible utilization of existing in-District Solid Waste Facilities; (3) materially and adversely affect the quality of life of residents within 300 feet of the proposed facility; or (4) have material adverse impacts upon the local community, including commercial businesses within 500 feet of the proposed facility and the adequacy of existing infrastructure to serve the proposed facility.

Except as otherwise provided herein, all proposed Solid Waste Facilities, whether to be sited by or on behalf of the District, or by or on behalf of any person, municipal corporation, township or other political subdivision, shall be subject to this Siting Strategy and shall comply with the requirement to submit **General Plans and Specifications** to the District.

- a) Siting Procedure Limited Exemption:

Notwithstanding the foregoing requirement, existing in-District Solid Waste Facilities specifically identified in this Siting Strategy are not subject to this Siting Strategy unless the owner or operator of any such in-District Solid Waste Facility proposes a modification to the operation of the in-District Solid Waste Facility: (1) that requires the approval of the Director of the Ohio Environmental Protection Agency; or (2) that involves a change in the type of material, manner of operation or activities conducted at the facility (i.e., a conversion of a legitimate recycling facility to a transfer station).

b) Maximum Feasible Utilization of Existing In-District Solid Waste Facilities:

The Board has determined that the owners and operators of existing in-District Solid Waste Facilities rely on market factors in the determination of whether to expand or modify the facilities or current operations and activities at such existing facilities. The private corporate decisions of those owners and operators determine and establish the maximum feasible utilization of those existing in-District Solid Waste Facilities and the limited exemption for such existing in-District Solid Waste Facilities from the application of this Siting Strategy permits the owners and operators of those facilities to determine the maximum feasible utilization of those facilities. Other than the limited exemption from the application of this Siting Strategy, the Board **has no additional obligation with respect to the continuing operation or modification of those facilities.**

C. REQUIREMENTS

The District requires that *General Plans and Specifications* for all proposals to construct any new Solid Waste Facility within the District or to modify any existing in-District Solid Waste Facility be submitted for a determination by the Board of whether such General Plans and Specifications and the proposals comply with the Plan Update.

D. PROCEDURE IMPLEMENTING SITING STRATEGY

Unless otherwise provided herein, or an exemption or waiver from this requirement has been granted by the Board, the following procedure and process shall be followed in the event the construction of a new Solid Waste Facility or the modification of an existing in-District Solid Waste Facility is proposed within the District:

Step 1: Submittal of General Plans and Specifications

Any person, municipal corporation, township or other political subdivision proposing to construct a new Solid Waste Facility or modify an existing in-District Solid Waste Facility shall:

- a) Provide General Plans and Specifications of the proposed facility to the Board. Such General Plans and Specifications shall include, but may not be limited to, the following documents and information:
- i. site plan for the proposed Solid Waste Facility;
 - ii. architectural drawings or artists renderings of the proposed Solid Waste Facility;
 - iii. availability of necessary utilities;
 - iv. projected size and capacity of the proposed Solid Waste Facility;
 - v. hours of operation;
 - vi. anticipated source of solid waste or recyclable materials to be received at the proposed Solid Waste Facility. If recycling activities will be conducted at the proposed facility, a detailed description of the recycling activity including materials to be recycled, technology to be utilized to accomplish the separation and processing of the recyclable materials, the anticipated percentage of waste reduction anticipated from the

- operation of the facility and the identification of the market for the sale of the recyclable materials recovered at the facility must be submitted;
 - vii. types and anticipated number of vehicles utilizing the proposed Solid Waste Facility on an hourly and daily basis;
 - viii. routes to be used by vehicles utilizing the facility and methods of ingress and egress to the facility; and
 - ix. any other information necessary for the Board to evaluate whether the proposed Solid Waste Facility complies with each of the criteria listed below.
- b) Adequately demonstrate to the Board that the construction or modification and subsequent operation of the proposed Solid Waste Facility will:
- i. be consistent with the goals, objectives, projections and strategies contained in the Plan Update;
 - ii. not adversely affect financing for the implementation of the Plan Update;
 - iii. **not adversely affect the Board's obligation to provide for the maximum feasible** utilization of existing in-District solid waste facilities;
 - iv. be installed, operated and maintained to be harmonious and appropriate in appearance and use with the existing or intended character of the area;
 - v. be adequately served by essential public facilities and services;
 - vi. not create excessive additional requirements at public cost for public facilities or services;
 - vii. not be detrimental to the economic welfare of the community;
 - viii. not involve the excessive production of traffic, noise, smoke, fumes or odors;
 - ix. have vehicular approaches to the property that are designed not to create an interference with traffic;
 - x. not result in the destruction, loss or damage of a natural, scenic, or historic feature of major importance; and
 - xi. not adversely affect property values within the surrounding community.
- c) The Applicant shall submit any additional information as the Board requests to establish, to the reasonable satisfaction of the Board, that the construction or modification and subsequent operation of the proposed Solid Waste Facility or proposed modification of an existing in-District Solid Waste Facility will comply with the Plan Update.

Step 2: Board Review

The Board shall conduct a review of the information submitted for the proposed Solid Waste Facility to determine whether the Applicant has adequately demonstrated that the proposed Solid Waste Facility will be constructed or modified and subsequently operated in compliance with the Plan Update and demonstrated that the impacts listed in Step 1 do not adversely affect the District, its residents and businesses. The Board may expend District funds to employ a consultant or consultants familiar with Solid Waste Facility construction and operation, land use planning and solid waste planning to assist the Board in implementing this Siting Strategy and in its determination of whether a proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility complies with the Plan Update.

Within sixty days of receiving the General Plans and Specifications from an applicant, the Board shall make a determination as to whether the General Plans and Specifications submitted by the applicant contain sufficient information for the Board to complete its review of the proposal. In the event the Board determines that more information is necessary to complete its review of the proposal, the Board shall notify the Applicant of such request in writing within ten days.

Within ninety days of determining that the Applicant has submitted a complete set of General Plans and Specifications, the Board shall determine whether the proposal complies with the Plan Update and the criteria identified in Step 1 herein. The Board shall notify the Applicant of its decision in writing. While the Board has broad discretion regarding the approval of General Plans and Specifications for a proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility, it is the intent of this Siting Strategy that the Board shall not approve General Plans and Specifications for a proposed Solid Waste Facility unless the Board determines that the proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility complies with the Plan Update and the criteria identified in Step 1 herein.

Step 3: Development Agreement

In the event the Board determines that the proposed construction or modification and subsequent operation of a Solid Waste Facility complies with the Plan Update, the person, municipal corporation, township or other political subdivision proposing to construct or modify the Solid Waste Facility shall enter into a development agreement with the District which memorializes the obligations that are the **basis of the Board's conclusion** that the General Plans and Specifications demonstrate that the proposed facility or its modification complies with the Plan Update. The party proposing to construct a Solid Waste Facility shall have an ongoing obligation to comply with the Plan Update and the development agreement.

E. WAIVER

The Board reserves the right to waive application of the requirement for the submission and Board approval of General Plans and Specifications, and any portion or all of the Siting Strategy or otherwise grant exceptions to the rules of the District, or unilaterally modify or amend the Siting Strategy if the Board concludes such waiver, modification or amendment is in the best interest of the District, its residents and businesses and will assist the Board in the successful implementation of the Plan Update and further District goals with respect to solid waste and waste reduction activities.

A determination by the Board to construct or modify any District-owned Solid Waste Facility shall be deemed to be in compliance with the Plan Update and the other requirements of these rules.

Waiver for Legitimate Recycling Facilities

The Board has a strong commitment to encourage the development of recycling and waste reduction activities that are consistent with the waste reduction, reuse and recycling goals as may be required by the Ohio Revised Code, the Ohio Administrative Code, the State Solid Waste Management Plan and the Plan Update. Upon adequate demonstration to the Board of the likelihood of attainment of certain waste reduction goals, the Board may waive application of the Siting Strategy for any facility determined by the **Board as likely to qualify as a "legitimate recycling facility" as defined in Section 3745-27-01(L)(2)** of the Ohio Administrative Code.

In the event an Applicant desires a waiver from the application of the Siting Strategy for a legitimate recycling facility, the Applicant shall submit sufficient information to the Board regarding the proposed facility, the waste reduction method to be implemented, technology to be used in the operation of the facility, the source and type of waste to be received at the facility, the materials to be removed from the waste stream and the anticipated amount of waste reduction.

The Board shall review the proposal following the procedures and process in Step 2 of this Siting Strategy and determine whether the waste reduction standards required by OAC Section 3745-27-01(L)(2) are

likely to be satisfied at the proposed facility. In the event the Board determines that such facility is likely to qualify as a legitimate recycling facility, the Board may grant a waiver of the application of the Siting Strategy to the proposed facility.

Such waiver may be made contingent upon the execution of a development agreement by which the proposed facility will be obligated to meet the proposed waste reduction standards on a continuing basis and such other obligations regarding operation of the facility as the Board shall require, including such recordkeeping and reporting requirements as may be necessary to establish compliance with the waste reduction goals. Failure to comply with the terms of any such agreement may result in the revocation of Board approval for operation of any such facility. As part of any such development agreement, the Board may require such bond or other assurances in such amounts as the Board determines, in its discretion, shall be necessary to assure that funds are available for the removal of the facility or conversion of the facility to a legal use in the event of noncompliance with waste reduction standards or other obligations as set forth in the development agreement.

APPENDIX T: Miscellaneous Plan Documents

During the process of preparing a plan, the policy committee signs three official documents certifying the plan. These documents are as follows:

A. CERTIFICATION STATEMENT FOR THE DRAFT SOLID WASTE MANAGEMENT PLAN

The Policy committee signs this statement to certify that the information presented in the draft solid waste management plan submitted to Ohio EPA is accurate and complies with the Format 4.1.

B. RESOLUTION ADOPTING THE SOLID WASTE MANAGEMENT PLAN

(adopted prior to distributing the draft plan for ratification)

The policy committee signs this resolution to accomplish two purposes:

- Adopt the draft solid waste management plan.
- Certify that the information in the solid waste management plan is accurate and complies with the Format 4.1.

The policy committee signs this resolution after considering comments received during the public hearing/public comment period and prior to submitting the solid waste management plan to political jurisdictions for ratification. The policy committee should not make any changes to the solid waste management plan after signing the resolution.

C. RESOLUTION CERTIFYING RATIFICATION OF THE SOLID WASTE MANAGEMENT PLAN

The policy committee signs this resolution to certify that the solid waste management plan was ratified properly by the political jurisdictions within the solid waste management district. The policy committee signs this resolution after the solid waste management plan is ratified and before submitting the ratified plan to Ohio EPA)

- Other documents to include in Appendix T include:
- Public notices
- Copies of notices sent to:
 - adjacent SWMDs;
 - the director of Ohio EPA;
 - the 50 industrial, commercial, or institutional facilities that generate the largest quantities of solid waste within the SWMD; and
 - the local trade associations representing the industrial, commercial, or institutional facilities generating the largest quantities of solid waste in the SWMD.

**CUYAHOGA COUNTY SOLID WASTE MANAGEMENT POLICY COMMITTEE
RESOLUTION NO. 240808**

Authorizing the transmittal of the *DRAFT* Cuyahoga County Solid Waste Management Plan Update to the Director of the Ohio Environmental Protection Agency for initial review and non-binding advisory opinion, pursuant to *Ohio Revised Code* Sections 3734.55 and .56.

WHEREAS, the Ohio Solid Waste Disposal Act, effective June 24, 1988, mandated that all counties establish a Solid Waste Management District and a Solid Waste Policy Committee to prepare, adopt and submit to the Ohio Environmental Protection Agency a Solid Waste Management Plan; and

WHEREAS, through Resolution No. 883536, adopted August 29, 1988, the Cuyahoga County Board of Commissioners formed a single-county solid waste management district, in accordance with ORC Section 3734.52 ; and

WHEREAS, the Director of the Ohio Environmental Protection Agency, on March 30, 1989, designated the Cuyahoga County Planning Commission to serve as the Cuyahoga County Solid Waste Policy Committee for the purpose of preparing and submitting a solid waste management plan for Cuyahoga County pursuant to ORC Section 3734.54(D); and

WHEREAS, the Board of Cuyahoga County Commissioners, pursuant to Resolution No. 934112, adopted on September 28, 1993, appointed two additional Policy Committee members in accordance with Section 3734.54(D); and

WHEREAS, the Director of the Ohio Environmental Protection Agency approved the Cuyahoga County Solid Waste District's Initial Solid Waste Management Plan on July 8, 1994; and subsequent Plan Updates on October 6, 2000; November 8, 2006 and, May 1, 2013; August 23, 2019 and,

WHEREAS, Ohio Revised Code Section 3734.56(A) requires the Cuyahoga County Solid Waste District and its Policy Committee to prepare and submit a draft Plan Update to the Ohio Environmental Protection Agency by August 23, 2024; and,

NOW, THEREFORE, BE IT RESOLVED, that the Cuyahoga County Solid Waste Policy Committee of the Cuyahoga County Solid Waste District hereby certifies that to the best of its knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the Draft Solid Waste Management Plan Update are accurate and are in compliance with the requirements of Ohio EPA Plan Format version 4.1.

BE IT FURTHER RESOLVED, that the Executive Director of the Cuyahoga County Solid Waste Management District is authorized to deliver the *Draft* Cuyahoga County Solid Waste Management Plan Update to the Director of the Ohio Environmental Protection Agency for review and non-binding advisory opinion prior to the initiation of the local ratification process among Cuyahoga County cities villages and townships.

On a motion of Director Dever, seconded by Mayor Kurtz, the foregoing resolution was adopted.

AYES: Mayor Burke, Joe Nanni for Councilperson Conwell, Director, Dever, Director Huang, Mayor Kurtz, Councilperson Simon, Mayor Wiess, Mayor Welo, Tim Weber, and Michele Wilhelm.

NAYS: None.

ABSTENTIONS: None.

NOT PRESENT: Mayor Dailey Jones, Mayor Gallo, and Mayor Orcutt.

Passed August 8, 2024

PUBLIC NOTICE
CUYAHOGA COUNTY SOLID WASTE MANAGEMENT DISTRICT

Public Comment Period for Draft Solid Waste Management Plan

The Cuyahoga County Solid Waste District (District) is establishing a 30-day written comment period on the draft *Cuyahoga County Solid Waste Management Plan Update (2026 – 2040)*.

The public comment period will take place from February 13, 2025, through March 14, 2025. Written comments should be mailed to Elizabeth Biggins-Ramer, Executive Director, Cuyahoga County Solid Waste District, 4750 East 131st Street, Garfield Heights, OH 44105.

A public hearing will be held on March 18, 2025, from 2:00 p.m. to 3:00 p.m. at the office of the Cuyahoga County Solid Waste District at the address listed above.

The draft plan is available for review on the District's website www.cuyahogarecycles.org or at the Cuyahoga County Solid Waste District office located at 4750 E 131st Street, Garfield Heights, OH 44105.

The District prepared the draft Cuyahoga County Solid Waste Management Plan Update 2026 - 2040 as required by ORC Section 3734.54. This is an update to the current solid waste management plan for Cuyahoga County and documents Cuyahoga County's progress in achieving State of Ohio waste reduction goals and assures adequate landfill capacity for disposal of solid waste for the 15-year planning period. Under this *Plan Update*, the District does not designate any facilities but reserves the right to designate facilities as authorized by its Board of Directors in accordance with Section 343.014 of the Ohio Revised Code.

The Plan Update demonstrates that Cuyahoga County will exceed Ohio's waste reduction goals by reducing residential and commercial waste by 25% and has sufficient access to landfill capacity to meet the Cuyahoga County's needs for a minimum of 15 years. Under this Plan Update, the District does not designate any facilities but reserves the right to designate facilities as authorized by its Board of Directors in accordance with Section 343.014 of the Ohio Revised Code.

The Plan Update also describes the programs and services that the Cuyahoga County Solid Waste District will provide to communities, businesses and the public during the 15-year planning period and the funding mechanism it will use to implement them. Examples of programs and services include Education and Outreach, Business Recycling Assistance, Children's Education, Grant programs, Household Hazardous Waste Collection, Computer Recycling, Scrap Tire Recycling, Litter Collection, Local Government Assistance and Solid Waste Code Enforcement.

Funding to operate the Solid Waste District and to implement these services will come from a Generation Fee to be assessed on each ton of solid waste generated in Cuyahoga County and landfilled in Ohio. Under this Plan Update, the current fee of \$2.00 per ton will not increase during the 15-year planning period.

Please call (216) 443-3749 with any questions regarding the Plan Update or the opportunity to review a copy.

PUBLIC NOTICE
CUYAHOGA COUNTY SOLID WASTE MANAGEMENT DISTRICT

Public Hearing for Draft Solid Waste Management Plan

The Cuyahoga County Solid Waste Management District will be holding a public hearing to obtain oral comments regarding the draft *Cuyahoga County Solid Waste Management Plan Update (2026–2040)* on Tuesday, March 18, 2025 from 2:00 p.m. to 3:00 p.m. at the Cuyahoga County Solid Waste Management District, 4750 East 131st Street, Garfield Heights, OH 44105 as required by Sections 3734.54 and 3734.55 of the Ohio Revised Code.

The draft *Cuyahoga County Solid Waste Management Plan Update* is an update to a previously approved solid waste management plan and documents Cuyahoga County's progress in achieving State of Ohio waste reduction goals and assures adequate landfill capacity for disposal of solid waste for a 15-year planning period.

The *Plan Update* may be viewed on the District's website www.cuyahogarecycles.org or at the Cuyahoga County Solid Waste District office located at 4750 E 131st Street, Garfield Heights, OH 44105. The District is also accepting written comments until Friday, March 14, 2025. Written comments should be sent to Elizabeth Biggins-Ramer, Executive Director, Cuyahoga County Solid Waste Management District, 4750 East 131st Street, Garfield Heights, OH 44105.

Please call (216) 443-3749 with any questions regarding the Plan Update or the opportunity to review a copy.

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Rentals includes Full Equip - Tools, Office & more. \$25.00 per call. Call 216-311-4024 Call M-F 8:30-4:00
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Brooklyn, Ohio, 44144-2336



Plain Dealer

CUYAHOGA COUNTY SOLID WASTE DISTRICT
4750 E 131 ST
CLEVELAND, OH 44105

AD#: 0010972379

Sales Rep: Russ Mackowski
Account Number:40189490
AD#: 0010972379

Remit Payment to:
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Dept 77571
P.O. Box 77000
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Date	Position	Description	P.O. Number	Ad Size	Costs
03/04/2025	Public Notices OH	PUBLIC NOTICE CUYAHOGA COUNTY SOLID WASTE MANAGEMENT		1 x 52 L	
				Affidavit Notary Fee - 03/04/2025	\$17.00
				Basic Ad Charge - 03/04/2025	\$438.64
				Total	\$455.64

FOR QUESTIONS CONCERNING THIS AFFIDAVIT, PLEASE CALL 216-999-4693

AD#: 0010972379

State of Ohio,) ss
County of Cuyahoga)

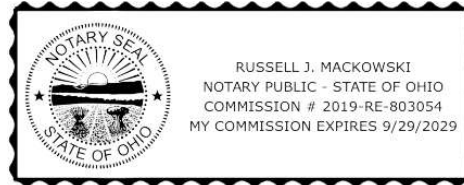
Joe Rosa being duly sworn, deposes that he/she is principal clerk of Advance Ohio; that Plain Dealer is a public newspaper County of Cuyahoga published in the city of Cleveland, with general circulation in Cuyahoga, Ashtabula, Geauga, Lake, Lorain, Medina, Portage, Summit and Trumbull counties, and this notice is an accurate and true copy of this notice as printed in said newspaper, was printed in the regular edition and issue of said newspaper on the following date(s):

Plain Dealer 03/04/2025

Principal Clerk of the Publisher

Sworn to and subscribed before me this 05th day of March 2025

Notary Public



Online Notary Public. This notarial act involved the use of online audio/video communication technology. Notarization facilitated by SIGNiX®

**PUBLIC NOTICE
CUYAHOGA COUNTY SOLID WASTE
MANAGEMENT DISTRICT**

**Public Hearing for Draft Solid Waste
Management Plan**

The Cuyahoga County Solid Waste Management District will be holding a public hearing to obtain oral comments regarding the draft Cuyahoga County Solid Waste Management Plan Update (2026-2040) on Tuesday, March 18, 2025 from 2:00 p.m. to 3:00 p.m. at the Cuyahoga County Solid Waste Management District, 4750 East 131st Street, Garfield Heights, OH 44105 as required by Sections 3734.54 and 3734.55 of the Ohio Revised Code.

The draft Cuyahoga County Solid Waste Management Plan Update is an update to a previously approved solid waste management plan and documents Cuyahoga County's progress in achieving State of Ohio waste reduction goals and assures adequate landfill capacity for disposal of solid waste for a 15-year planning period.

The Plan Update may be viewed on the District's website www.cuyahogarecycles.org or at the Cuyahoga County Solid Waste District office located at 4750 E 131st Street, Garfield Heights, OH 44105. The District is also accepting written comments until Friday, March 14, 2025. Written comments should be sent to Elizabeth Biggins-Ramer, Executive Director, Cuyahoga County Solid Waste Management District, 4750 East 131st Street, Garfield Heights, OH 44105.

Please call (216) 443-3749 with any questions regarding the Plan Update or the opportunity to review a copy.
Plain Dealer: Mar 4, 2025 - 10972379

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Brooklyn, Ohio, 44144-2336



Plain Dealer

CUYAHOGA COUNTY SOLID WASTE DISTRICT
4750 E 131 ST
CLEVELAND, OH 44105

AD#: 0010962238

Sales Rep: Stacey Tredici
Account Number:40189490
AD#: 0010962238

Remit Payment to:
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Dept 77571
P.O. Box 77000
Detroit, MI 48277-0571

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Date	Position	Description	P.O. Number	Ad Size	Costs
02/05/2025	Public Notices OH	PUBLIC NOTICE CUYAHOGA COUNTY SOLID WASTE MANAGEMENT	#12-982-478] Legal Ad for Cuyahoga County Solid	1 x 101 L	
				Affidavit Notary Fee - 02/05/2025	\$17.00
				Basic Ad Charge - 02/05/2025	\$840.32
				Total	\$857.32

FOR QUESTIONS CONCERNING THIS AFFIDAVIT, PLEASE CALL 216-999-4693

State of Ohio,) ss
County of Cuyahoga)

Joe Rosa being duly sworn, deposes that he/she is principal clerk of Advance Ohio; that Plain Dealer is a public newspaper County of Cuyahoga published in the city of Cleveland, with general circulation in Cuyahoga, Ashtabula, Geauga, Lake, Lorain, Medina, Portage, Summit and Trumbull counties, and this notice is an accurate and true copy of this notice as printed in said newspaper, was printed in the regular edition and issue of said newspaper on the following date(s):

Plain Dealer 02/05/2025



Principal Clerk of the Publisher

Sworn to and subscribed before me this 5th day of February 2025

Notary Public

**PUBLIC NOTICE
CUYAHOGA COUNTY SOLID WASTE
MANAGEMENT DISTRICT**

**Public Comment Period for Draft Solid Waste
Management Plan**

The Cuyahoga County Solid Waste District (District) is establishing a 30-day written comment period on the draft Cuyahoga County Solid Waste Management Plan Update (2026 – 2040).

The public comment period will take place from February 13, 2025, through March 14, 2025. Written comments should be mailed to Elizabeth Biggins-Ramer, Executive Director, Cuyahoga County Solid Waste District, 4750 East 131st Street, Garfield Heights, OH 44105.

A public hearing will be held on March 18, 2025, from 2:00 p.m. to 3:00 p.m. at the office of the Cuyahoga County Solid Waste District at the address listed above.

The draft plan is available for review on the District's website www.cuyahogarecycles.org or at the Cuyahoga County Solid Waste District office located at 4750 E 131st Street, Garfield Heights, OH 44105.

The District prepared the draft Cuyahoga County Solid Waste Management Plan Update 2026 -2040 as required by ORC Section 3734.54. This is an update to the current solid waste management plan for Cuyahoga County and documents Cuyahoga County's progress in achieving State of Ohio waste reduction goals and assures adequate landfill capacity for disposal of solid waste for the 15-year planning period. Under this Plan Update, the District does not designate any facilities but reserves the right to designate facilities as authorized by its Board of Directors in accordance with Section 343.014 of the Ohio Revised Code.

The Plan Update demonstrates that Cuyahoga County will exceed Ohio's waste reduction goals by reducing residential and commercial waste by 25% and has sufficient access to landfill capacity to meet the Cuyahoga County's needs for a minimum of 15 years. Under this Plan Update, the District does not designate any facilities but reserves the right to designate facilities as authorized by its Board of Directors in accordance with Section 343.014 of the Ohio Revised Code.

The Plan Update also describes the programs and services that the Cuyahoga County Solid Waste District will provide to communities, businesses and the public during the 15-year planning period and the funding mechanism it will use to implement them. Examples of programs and services include Education and Outreach, Business Recycling Assistance, Children's Education, Grant programs, Household Hazardous Waste Collection, Computer Recycling, Scrap Tire Recycling, Litter Collection, Local Government Assistance and Solid Waste Code Enforcement.

Funding to operate the Solid Waste District and to implement these services will come from a Generation Fee to be assessed on each ton of solid waste generated in Cuyahoga County and landfilled in Ohio. Under this Plan Update, the current fee of \$2.00 per ton will not increase during the 15-year planning period.

Please call (216) 443-3749 with any questions regarding the Plan Update or the opportunity to review a copy.

Plain Dealer: February 5, 2025 - 0010962238



Order Confirmation

Ad Order Number 0010962238

Customer

CUYAHOGA COUNTY SOLID WASTE DISTRICT
 Account:40189490
 CUYAHOGA COUNTY SOLID WASTE DISTRICT
 4750 E 131 ST,
 CLEVELAND OH 44105 USA
 (216)443-3707

FAX:
 csnyder@cuyahogacounty.us

Payor Customer

CUYAHOGA COUNTY SOLID WASTE DISTRICT
 Account: 40189490
 CUYAHOGA COUNTY SOLID WASTE DISTRICT
 4750 E 131 ST,
 CLEVELAND OH 44105 USA
 (216)443-3707

PO Number #12-982-478] Legal Ad

Sales Rep. Stacey Tredici

Order Taker Stacey Tredici

Order Source Phone

Special Pricing

Tear Sheets	1	TearsheetsCost	\$2.00	Net Amount	\$857.32
Proofs	0			Tax Amount	\$0.00
Affidavits	1	AffidavitsCost	\$15.00	Total Amount	\$857.32
Blind Box				Payment Method	Invoice
Promo Type				Payment Amount	\$0.00
Materials				Amount Due	\$857.32
Invoice Text	#12-982-478] Legal Ad for Cuyahoga County Solid Waste District				

Ad Schedule

Product	OH Plain Dealer::Full_OH	Placement/Class	Legals
# Inserts	1	POS/Sub-Class	Public Notices
Cost	\$840.32	AdNumber	0010962238-01
Ad Type	OH CLS Legal Liner	Ad Size	1 X 100 li
Pick Up #		Ad Attributes	
External Ad #		Color	<NONE>
Production Method	AdBooker	Production Notes	
Run Dates	Sort Text	PUBLICNOTICECUYAHOGACOUNTYSOLIDWASTEMANAGEMENTDISTRICTPUBLICCOMMENTPERIODFORDRAFTSO	
	02/05/2025		

Product	Inventory	Placement/Class	Legals
# Inserts	1	POS/Sub-Class	Public Notices
Cost	\$0.00	AdNumber	0010962238-01
Ad Type	OH CLS Legal Liner	Ad Size	1 X 100 li
Pick Up #		Ad Attributes	
External Ad #		Color	<NONE>
Production Method	AdBooker	Production Notes	
Run Dates	Sort Text	PUBLICNOTICECUYAHOGACOUNTYSOLIDWASTEMANAGEMENTDISTRICTPUBLICCOMMENTPERIODFORDRAFTSO	
	02/05/2025		

Ad Content Proof

PUBLIC NOTICE
CUYAHOGA COUNTY SOLID WASTE
MANAGEMENT DISTRICT

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Management Plan

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The public comment period will take place from February 13, 2025, through March 14, 2025. Written comments should be mailed to Elizabeth Biggins-Ramer, Executive Director, Cuyahoga County Solid Waste District, 4750 East 131st Street, Garfield Heights, OH 44105.

A public hearing will be held on March 18, 2025, from 2:00 p.m. to 3:00 p.m. at the office of the Cuyahoga County Solid Waste District at the address listed above.

The draft plan is available for review on the District's website www.cuyahogarecycles.org or at the Cuyahoga County Solid Waste District office located at 4750 E 131st Street, Garfield Heights, OH 44105.

The District prepared the draft Cuyahoga County Solid Waste Management Plan Update 2026 -2040 as required by ORC Section 3734.54. This is an update to the current solid waste management plan for Cuyahoga County and documents Cuyahoga County's progress in achieving State of Ohio waste reduction goals and assures adequate landfill capacity for disposal of solid waste for the 15-year planning period. Under this Plan Update, the District does not designate any facilities but reserves the right to designate facilities as authorized by its Board of Directors in accordance with Section 343.014 of the Ohio Revised Code.

The Plan Update demonstrates that Cuyahoga County will exceed Ohio's waste reduction goals by reducing residential and commercial waste by 25% and has sufficient access to landfill capacity to meet the Cuyahoga County's needs for a minimum of 15 years. Under this Plan Update, the District does not designate any facilities but reserves the right to designate facilities as authorized by its Board of Directors in accordance with Section 343.014 of the Ohio Revised Code.

The Plan Update also describes the programs and services that the Cuyahoga County Solid Waste District will provide to communities, businesses and the public during the 15-year planning period and the funding mechanism it will use to implement them. Examples of programs and services include Education and Outreach, Business Recycling Assistance, Children's Education, Grant programs, Household Hazardous Waste Collection, Computer Recycling, Scrap Tire Recycling, Litter Collection, Local Government Assistance

Confidentiality Notice: This facsimile is intended only for its addressee and may contain information that is privileged, confidential or otherwise protected from disclosure. Dissemination, distribution or copying of this facsimile or the information by anyone other than the intended recipient is prohibited. If you have received this facsimile in error, please notify us immediately and return the facsimile by mail.

Water Collection, Local Government Assistance
and Solid Waste Code Enforcement.

Funding to operate the Solid Waste District and to implement these services will come from a Generation Fee to be assessed on each ton of solid waste generated in Cuyahoga County and landfilled in Ohio. Under this Plan Update, the current fee of \$2.00 per ton will not increase during the 15-year planning period.

Please call (216) 443-3749 with any questions regarding the Plan Update or the opportunity to review a copy.

Plain Dealer: February 5, 2025 - 0010962238

**CUYAHOGA COUNTY SOLID WASTE MANAGEMENT POLICY COMMITTEE
RESOLUTION NO. 250410**

**Declaring the Adoption of the Amended Cuyahoga County Solid Waste
Management Plan for the Cuyahoga County Solid Waste Management District.**

WHEREAS, the Ohio Solid Waste Disposal Act, effective June 24, 1988, mandated that all counties establish a Solid Waste Management District and Solid Waste Management Policy Committee to prepare, adopt and submit to the Ohio Environmental Protection Agency a Solid Waste Management Plan and to update the plan every five years; and,

WHEREAS, the Director of the Ohio Environmental Protection Agency approved the Cuyahoga County Solid Waste District's Initial Solid Waste Management Plan on July 8, 1994; and subsequent Plan Updates on October 6, 2000; November 8, 2006 and, May 1, 2013, August 23, 2019; and,

WHEREAS, the Cuyahoga County Solid Waste Management District ("District") and Cuyahoga County Solid Waste Policy Committee ("Policy Committee") prepared a draft amended Solid Waste Management Plan ("Plan") and submitted it to the Ohio Environmental Protection Agency for review and comment on August 23, 2024, and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on October 7, 2024.

WHEREAS, the Policy Committee reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and have taken these comments into consideration and incorporated changes into the amended Plan as appropriate;

WHEREAS, the District conducted a 30-day public comment period from February 13, 2025 through March 14, 2025 and a public hearing on March 18, 2025;

WHEREAS, the District received no comments during the public comment period nor the public hearing, therefore no additional changes to the Plan Update were made.

NOW, THEREFORE, BE IT RESOLVED that the Cuyahoga County Solid Waste Policy Committee of the Cuyahoga County Solid Waste Management District adopts the amended Solid Waste Management Plan in the form submitted for public comment and the public hearing.

BE IT FURTHER RESOLVED that the Cuyahoga County Solid Waste Policy Committee certifies to the best of its knowledge and belief, that the statements, demonstrations and all accompanying materials that comprise the Plan are accurate and comply with the requirements of Plan Format 4.1.

BE IT FURTHER RESOLVED that the Cuyahoga County Solid Waste Policy Committee directs the Executive Director of the Cuyahoga County Solid Waste District to distribute one copy of the adopted Plan to the legislative authority of each municipal corporation, village and township under the jurisdiction of the District for ratification.

On a motion of Councilperson Simon, seconded by Mayor Burke, the foregoing resolution was duly adopted.

AYES: Mayor Burke, Mayor Dailey Jones, Councilperson Conwell, Michael Dever, Mayor Gallo, Mayor Kurtz, Mayor Orcutt, Councilperson Simon, Mayor Weiss, Mayor Welo, Tim Weber, Michele Wilhelm

NAYS: None

ABSTENTIONS: None

NOT PRESENT: None

Adopted April 10, 2025

**CUYAHOGA COUNTY SOLID WASTE MANAGEMENT
POLICY COMMITTEE RESOLUTION NO. 251009 - A**

Declaring the Cuyahoga County Solid Waste Management Plan Update (2026 – 2040) for the Cuyahoga County Solid Waste Management District to be ratified and authorizing delivery of the Plan Update to the Director of the Ohio Environmental Protection Agency for final approval pursuant to O.R.C. 3734.55.

WHEREAS, the Ohio Solid Waste Disposal Act, effective June 24, 1988, mandated that all counties establish a Solid Waste Management District and Solid Waste Management Policy Committee to prepare, adopt and submit to the Ohio Environmental Protection Agency a Solid Waste Management Plan and to update the plan every five years; and,

WHEREAS, the Director of the Ohio Environmental Protection Agency approved the Cuyahoga County Solid Waste District Initial Solid Waste Management Plan on July 8, 1994; and subsequent Plan Updates on October 6, 2000; November 8, 2006, May 1, 2013, August 23, 2019; and,

WHEREAS, the Cuyahoga County Solid Waste Management District (“District”) and Cuyahoga County Solid Waste Policy Committee (“Policy Committee”) prepared a draft amended Solid Waste Management Plan (“Plan”) and submitted it to the Ohio Environmental Protection Agency for review and comment on August 23, 2024, and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on October 7, 2024.

WHEREAS, the Policy Committee reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and incorporated changes into the amended Plan as appropriate;

WHEREAS, the District conducted a 30-day public comment period from February 13, 2025 through March 14, 2025 and a public hearing on March 18, 2025;

WHEREAS, the Policy Committee pursuant to *Resolution No. 250410* adopted the amended Plan and authorized its delivery to the legislative authority of each municipal corporation, village and township under the jurisdiction of the Cuyahoga County Solid Waste District for ratification pursuant to Section 3734.55 of the *Ohio Revised Code*; and

WHEREAS, the Plan has been approved by the County Council of Cuyahoga County through its *Resolution No. R2025-0167*, passed on June 25, 2025; by the City of Cleveland, the largest city within the District, through its *Ordinance No. 714-2025*, passed on July 9, 2025; and the legislative authorities of a combination of municipal corporations and townships with a combined population within the boundaries of the District comprising at least sixty percent of the total population of the District, said combination of municipal corporations and townships being recorded on **Exhibit A**, attached hereto and incorporated herein by reference;

NOW, THEREFORE BE IT RESOLVED that the Solid Waste Management District Policy Committee of the Cuyahoga County Solid Waste Management District:

1. Verifies that the Cuyahoga County Solid Waste Management Plan Update (2026 - 2040) for the Cuyahoga County Solid Waste Management District has been ratified;
2. Authorizes the Executive Director of the Cuyahoga County Solid Waste Management District on behalf of the Policy Committee to deliver the ratified Plan Update to the Director of the Ohio Environmental Protection Agency for review and approval for compliance with Section 3734.53 of the *Ohio Revised Code*.

On a motion of Mayor Welo and seconded by Mayor Gallo the foregoing resolution was duly adopted.

AYES: Mayor Burke, Cuyahoga County Councilperson Conwell, Mayor Dailey Jones, Michael Dever, Marka Fields for Mayor Justin Bibb, Mayor Gallo, Mayor Orcutt, Cuyahoga County Councilperson Simon, Mayor Welo, Tim Weber, Michele Wilhelm

NAYS: None

ABSTENTIONS: None

NOT PRESENT: Mayor Weiss and Mayor Kurtz

***Solid Waste Policy Committee
Folder 2025
Resolution No. 251009 – A
October 9, 2025***

**Exhibit A : Cuyahoga County Solid Waste District
Legislative Action by Communities on the *Solid Waste Plan Update: 2026-2040***

Cuyahoga County			
Cuyahoga County Council	Approved	Rejected	Date Resolution Adopted
	Yes		6/10/2025
Community	Population		Date Resolution Adopted
	Approved	Rejected	
Cities			
Bay Village city	15,880		5/19/2025
Beachwood city	13,788		6/16/2025
Bedford city	12,838		6/2/2025
Bedford Heights city	10,776		6/17/2025
Berea city	18,395		6/16/2025
Brecksville city	13,506		6/3/2025
Broadview Heights city	19,635		6/16/2025
Brook Park city	18,171		5/20/2025
Brooklyn city	11,088		5/27/2025
Cleveland city	361,607		7/9/2025
Cleveland Heights city	44,201		6/16/2025
East Cleveland city*		13,446	
Euclid city	48,496		5/19/2025
Fairview Park city	16,885		6/16/2025
Garfield Heights city	29,072		5/12/2025
Highland Heights city	8,564		6/24/2025
Independence city	7,520		5/13/2025
Lakewood city	49,658		6/16/2025
Lyndhurst city	13,721		6/2/2025
Maple Heights city	23,136		6/4/2025
Mayfield Heights city	19,907		5/28/2025
Middleburg Heights city	15,682		6/10/2025
North Olmsted city	31,724		6/3/2025
North Royalton city	30,793		6/3/2025
Olmsted Falls city	8,603		6/10/2025
Parma city	79,358		5/19/2025
Parma Heights city	20,389		5/12/2025
Pepper Pike city	6,812		6/10/2025
Richmond Heights city	10,564		7/8/2025
Rocky River city	21,346		6/9/2025
Seven Hills city	11,557		7/29/2025
Shaker Heights city	28,723		6/23/2025
Solon city	23,792		6/16/2025
South Euclid city	21,395		6/23/2025
Strongsville city	45,725		5/19/2025
University Heights city	13,319		5/19/2025
Warrensville Heights city	13,457		7/15/2025
Westlake city	33,907		5/15/2025
Townships			
Chagrin Falls township	127		6/23/2025
Olmsted township	14,450		5/9/2025
Villages			
Bentleyville village	891		5/28/2025
Bratenahl village	1,401		6/18/2025
Brooklyn Heights village	1,485		5/20/2025
Chagrin Falls village	4,114		6/9/2025
Cuyahoga Heights village	558		5/14/2025
Gates Mills village	2,231		7/15/2025
Glenwillow village	983		6/4/2025
Highland Hills village	670		5/14/2025
Hunting Valley village	763		6/10/2025
Linndale village	109		5/13/2025
Mayfield village	3,298		6/16/2025
Moreland Hills village	3,435		5/14/2025
Newburgh Heights village	1,816		7/15/2025
North Randall village	934		7/14/2025
Oakwood village	3,495		7/8/2025
Orange village	3,476		7/9/2025
Valley View village	1,858		6/3/2025
Walton Hills village	1,998		5/20/2025
Woodmere village	646		6/11/2025
Total	1,222,728	13,446	
County Population			1,236,174
Ratification percentage			98.9%
* The City of East Cleveland took no action pertaining to the 2026-2040 Cuyahoga County Solid Waste Management Plan Update prior to the conclusion of the ratification period. However, they did pass a resolution of support on 9-3-2025.			

APPENDIX U: RATIFICATION RESULTS

Table U-1 Ratification Results

Cuyahoga County			
Board of County Commissioners	Approved	Rejected	Date Resolution Adopted
	Yes		6/10/2025
Community	Population		Date Resolution Adopted
	Approved	Rejected	
Cities			
Bay Village city	15,880		5/19/2025
Beachwood city	13,788		6/16/2025
Bedford city	12,838		6/2/2025
Bedford Heights city	10,776		6/17/2025
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Brooklyn city	11,088		5/27/2025
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East Cleveland city*		13,446	
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Parma Heights city	20,389		5/12/2025
Pepper Pike city	6,812		6/10/2025
Richmond Heights city	10,564		7/8/2025
Rocky River city	21,346		6/9/2025
Seven Hills city	11,557		7/29/2025
Shaker Heights city	28,723		6/23/2025
Solon city	23,792		6/16/2025
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University Heights city	13,319		5/19/2025
Warrensville Heights city	13,457		7/15/2025

Cuyahoga County			
Board of County Commissioners	Approved	Rejected	Date Resolution Adopted
	Yes		6/10/2025
Community	Population		Date Resolution Adopted
	Approved	Rejected	
Westlake city	33,907		5/15/2025
Townships			
Chagrin Falls township	127		6/23/2025
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Bratenahl village	1,401		6/18/2025
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Chagrin Falls village	4,114		6/9/2025
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Hunting Valley village	763		6/10/2025
Linndale village	109		5/13/2025
Mayfield village	3,298		6/16/2025
Moreland Hills village	3,435		5/14/2025
Newburgh Heights village	1,816		7/15/2025
North Randall village	934		7/14/2025
Oakwood village	3,495		7/8/2025
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Total	1,222,728	13,446	
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Ratification percentage			98.9%

**The City of East Cleveland took no action pertaining to the 2026-2040 Cuyahoga County Solid Waste Management Plan Update prior to the conclusion of the ratification period. However, the City did pass a resolution of support on 9-3-2025 which was outside the 90-day ratification period.

Erin Oulton

From: Elizabeth Biggins-Ramer <ebiggins-ramer@cuyahogacounty.gov>
Sent: Tuesday, September 9, 2025 1:09 PM
To: Stacey White; Mayor Lateek Shabazz; Ken Myers; Eric Brewer; Dawn Jones; Jessica Fenos
Cc: Twon Billings; Twon Billings; Patricia Blochowiak; Patricia Blochowiak; Terrie Richardson; Terrie Richardson; Timothy Austin
Subject: RE: Ratification of the Cuyahoga County Solid Waste Management Plan Update

Dear Stacey, Mayor Shabazz and East Cleveland City Council:

Thank you for considering a resolution to support the Cuyahoga County Solid Waste District's 2026-2040 Solid Waste Management Plan Update. We will include a copy of this resolution in the document that we will forward to the Ohio Environmental Protection Agency for final review and approval. Unfortunately, we cannot count you vote pertaining to the Plan Update as affirmative, since the legislative action was taken beyond the statutory deadline permitted for our Ratification Period. Our statutory Ratification Period began May 10, 2025 and ended on August 10, 2025.

We look forward to working with you in the future.

Sincerely,
Beth

Beth Biggins-Ramer, Executive Director

ebiggins-ramer@cuyahogacounty.gov

Direct: (216) 443-3714

Mobile: (216) 340-4108

CUYAHOGA COUNTY SOLID WASTE DISTRICT

4750 East 131 Street, Garfield Heights, OH 44105

Main: (216) 443-3749

CuyahogaRecycles.org

** Please note my updated email address: ebiggins-ramer@cuyahogacounty.gov

From: Stacey White <swhite@eastcouncil.org>
Sent: Monday, September 8, 2025 8:17 AM
To: Elizabeth Biggins-Ramer <ebiggins-ramer@cuyahogacounty.gov>; Mayor Lateek Shabazz <mayorshabazz@eastcleveland.org>; Ken Myers <kmyers@eastcleveland.org>; Eric Brewer <ebrewer@eastcleveland.org>; Dawn Jones <djones@eastcleveland.org>
Cc: Twon Billings <Tbillings@eastcouncil.org>; Twon Billings <twonbillings70@yahoo.com>; Patricia Blochowiak <pblochowiak@gmail.com>; Patricia Blochowiak <pblochowiak@eastcouncil.org>; Terrie Richardson <msterrierichardson@gmail.com>; Terrie Richardson <Trichardson@eastcouncil.org>; Timothy Austin <Taustin@eastcouncil.org>
Subject: Ratification of the Cuyahoga County Solid Waste Management Plan Update

Hello Beth,

Please find the attached legislation for use by the CCSWMD.

Truly,



Stacey R. White, MSSA
Clerk of Council
CITY OF EAST CLEVELAND
Ph: (216) 681-2310
Fax: (216) 681-5440
swhite@eastcouncil.org

From: Stacey White
Sent: Monday, August 4, 2025 1:18 PM
To: Mayor Lateek Shabazz <mayorshabazz@eastcleveland.org>; Ken Myers <kmyers@eastcleveland.org>
Cc: Eric Brewer <ebrewer@eastcleveland.org>; Justyn Anderson <janderson@eastcleveland.org>; Dawn Jones <djones@eastcleveland.org>
Subject: URGENT COUNCIL ACTION NEEDED - Ratification of the Cuyahoga County Solid Waste Management Plan Update by August 10, 2025.
Importance: High

Please see below, regarding the urgently needed legislation by CCSWMD, no later than 08/10/12025.



Stacey R. White, MSSA
Clerk of Council
CITY OF EAST CLEVELAND
Ph: (216) 681-2310
Fax: (216) 681-5440
swhite@eastcouncil.org

From: Elizabeth Biggins-Ramer <ebiggins-ramer@cuyahogacounty.gov>
Sent: Tuesday, July 22, 2025 3:22 PM
To: Mayor Lateek Shabazz <mayorshabazz@eastcleveland.org>; lateek.shabazz@aol.com
Cc: Jessica Fenos <jfenos@cuyahogacounty.gov>
Subject: COUNCIL ACTION NEEDED - Ratification of the Cuyahoga County Solid Waste Management Plan Update
Importance: High

Dear Mayor Shabazz,

I am reaching out to you pertaining to the ratification process of our solid waste management plan. We understand your community has been focused on many things currently, but we need Council to consider this issue at your next Council meeting.

The highlighted area below is a copy of correspondence that was sent to Mayors, Council Clerks and Service Directors in each of our 59 communities earlier this year. The attached documents were also attached for review by each community. One of the attached files is a sample resolution that you can utilize.

Your council must vote to approve or disapprove the Plan Update by ordinance or resolution during the 90-day ratification period which ends on August 10, 2025. Because this timeframe cannot be extended, we appreciate your immediate attention and assistance.

At the bottom of this e-mail, I have included information pertaining to the support we have provided East Cleveland over the past 5-year Plan Update period.

May 23, 2025

Re: COUNCIL ACTION NEEDED - Ratification of the Cuyahoga County Solid Waste Management Plan Update

Enclosed, please find the Cuyahoga County Solid Waste District's 2026-2040 Solid Waste Management Plan Executive Summary. We have also enclosed copies of a sample resolution and a one-page fact sheet that can be shared with each Council member.

You are receiving these documents because your council must now vote on this state-mandated Plan Update as part of a county-wide ratification process that is taking place now.

The development of the solid waste plan is a requirement of Ohio law. Every solid waste management district in Ohio must periodically revise and update their solid waste management plan and submit it to each political subdivision to be ratified. Ratification occurs when communities representing 60% of a district's population vote to approve the plan, including its largest city.

The Cuyahoga County Solid Waste Management Plan Update was prepared by the Cuyahoga County Solid Waste District in conjunction with its Solid Waste Policy Committee. It was submitted to Ohio EPA for review on August 23, 2024, and revised to incorporate Ohio EPA comments. The District held a public comment period from February 13, 2025, to March 14, 2025, and a public hearing on March 18, 2025. No comments were received during this period. On April 10, 2025, the Cuyahoga County Solid Waste Policy Committee passed a resolution adopting the Plan Update and it is now being sent to each city, village and township within Cuyahoga County for approval.

Your council must vote to approve or disapprove the Plan Update by ordinance or resolution during the 90-day ratification period which takes place through August 10, 2025. Because this timeframe cannot be extended, we appreciate your immediate attention and assistance.

- 1. Please distribute the enclosed sample resolution and fact sheet to your council members for their review.**
- 2. Please share the Cuyahoga County Solid Waste District's 2026-2040 Solid Waste Management Plan Executive Summary with Council. The Plan, in its entirety (329 pages), is also available on the District's website at CuyahogaRecycles.org**
- 3. Schedule the hearing of the resolution/ordinance as soon as possible since action must be taken by August 10, 2025. A sample resolution is enclosed for your convenience.**
- 4. Mail a copy of the adopted resolution/or ordinance to Elizabeth Biggins-Ramer, Executive Director, Cuyahoga County Solid Waste District, 4750 E. 131st Street, Garfield Heights, OH 44105**

I look forward to hearing from you no later than August 10, 2025. Please note that resolutions enacted after August 10, 2025, cannot be counted towards ratification.

If you have any questions, please call me at (216) 443-3714 or email me at ebiggins-ramer@cuyahogacounty.gov. Thank you.

Sincerely,

Elizabeth Biggins-Ramer
Executive Director

Enclosures

- *Cuyahoga County Solid Waste District's 2026-2040 Solid Waste Management Plan Executive Summary*
- *Copies of sample resolution adopting the Solid Waste Management Plan Update*
- *Copies of Plan fact sheet*

Services Provided by the Cuyahoga County Solid Waste District to East Cleveland

1. Organizer of the 2025 Elderwood Avenue clean-up project – removal of ~250 tons solid waste and tires for \$73,000.
2. District pays for Court Community Services litter clean-up within East Cleveland annually.
3. District underwrites an annual Scrap Tire Round-Up program. East Cleveland participates in this free program, which collects from service department yards scrap tires collected by municipal staff from rights-of-ways in a community. These tires are recycled. East Cleveland generates ~18% of all of the scrap tires collected in this District-wide program annually.
4. District receives and manages Household Hazardous Waste and other specialty wastes such as computer equipment, campaign signs, cell phones, handheld electronics, CD/DVDs and their cases, holiday lights, PakTech ring carriers and handles, and VHS/Cassette tapes and their cases at the District facility from East Cleveland residents.
5. District underwrites Environmental Crimes Task Force investigative activities within East Cleveland.

If you have any concerns, please contact me. I appreciate your understand of this time-sensitive issue.

Sincerely,
Beth

Beth Biggins-Ramer, Executive Director
ebiggins-ramer@cuyahogacounty.gov

Direct: (216) 443-3714
Mobile: (216) 340-4108

CUYAHOGA COUNTY SOLID WASTE DISTRICT
4750 East 131 Street, Garfield Heights, OH 44105
Main: (216) 443-3749
CuyahogaRecycles.org

** Please note my updated email address: ebiggins-ramer@cuyahogacounty.gov

APPENDIX V: INVENTORY OF OPEN DUMPS & OTHER DISPOSAL FACILITIES

A. EXISTING OPEN DUMP SITES AND WASTE TIRE DUMPS

Ohio Revised Code Section 3734.53 (A)(4) requires an inventory of open dumping sites for solid wastes, and scrap tires and facilities for the disposal of fly ash and bottom ash, foundry sand, and slag within the district. The following Map and Table V-1 present information about the known open dumps located in the District as provided by the Environmental Crimes Task Force.

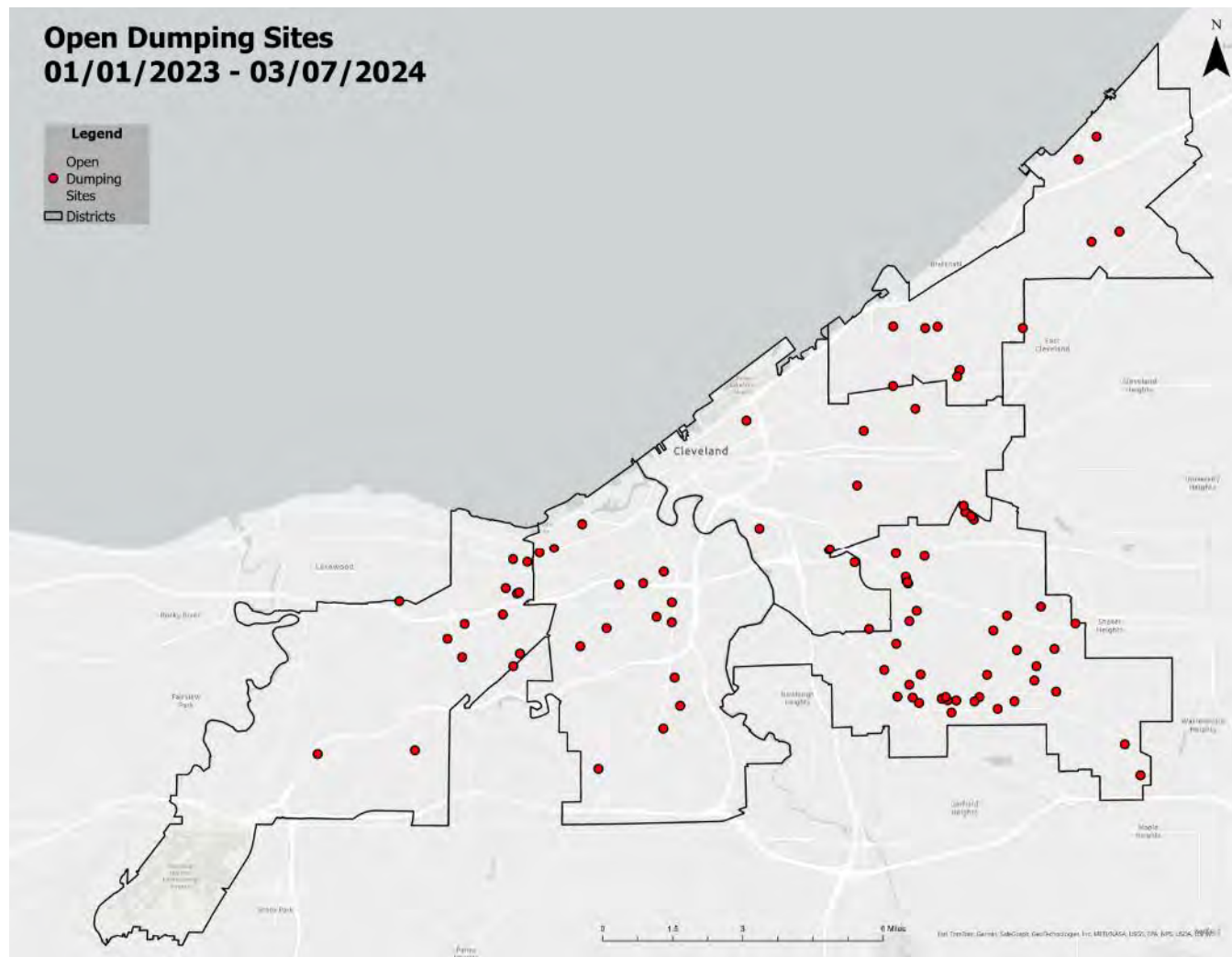


Table V-1 Inventory of Open Dump Sites

Site Location (either address or description of site location)	Materials at Site (solid waste and/or scrap tires)
11802 Lorain Avenue	solid waste and/or scrap tires
9944 Lorain Avenue	solid waste and/or scrap tires
11218 Fortune Avenue	solid waste and/or scrap tires
4415 W 130th Street	solid waste and/or scrap tires
9820 Zimmer Avenue	solid waste and/or scrap tires
9401 Maywood Avenue	solid waste and/or scrap tires
3207 W 112th Street	solid waste and/or scrap tires
2172 W 93rd Street	solid waste and/or scrap tires
W 96th Street & Detroit	solid waste and/or scrap tires
8811 Detroit Avenue	solid waste and/or scrap tires
15922 Eleanore Drive	solid waste and/or scrap tires
13501 Lakewood Heights Blvd	solid waste and/or scrap tires
2181 W 95th Street	solid waste and/or scrap tires
9701 Walford Avenue	solid waste and/or scrap tires
3216 Broadview Road	solid waste and/or scrap tires
W 22 nd Street & Calgary	solid waste and/or scrap tires
2182 W 44th Street	solid waste and/or scrap tires
2303 Forestdale Avenue	solid waste and/or scrap tires
1387 W 83rd Street	solid waste and/or scrap tires
6001 Breakwater Avenue	solid waste and/or scrap tires
3215 W 33rd Street	solid waste and/or scrap tires
3474 W 60th Street	solid waste and/or scrap tires
5414 Bangor Avenue	solid waste and/or scrap tires
2704 Clark Avenue	solid waste and/or scrap tires
3260 W 25th Street	solid waste and/or scrap tires
W 50th Place	solid waste and/or scrap tires
Train Avenue	solid waste and/or scrap tires
7500 Detroit Road	solid waste and/or scrap tires
W 30th Street	solid waste and/or scrap tires
2445 Lakeside Avenue E	solid waste and/or scrap tires
E 68th Street	solid waste and/or scrap tires
2800 E 55th Street	solid waste and/or scrap tires
E 55th Street	solid waste and/or scrap tires
E 67th Street	solid waste and/or scrap tires
3475 E 70th Street	solid waste and/or scrap tires
1707 E 70th Street	solid waste and/or scrap tires
2525 Rockefeller Avenue	solid waste and/or scrap tires
8912 Birchdale Avenue	solid waste and/or scrap tires
11905 Miles Avenue	solid waste and/or scrap tires
11121 La Rose Road	solid waste and/or scrap tires
9905 Gaylord Avenue	solid waste and/or scrap tires

Site Location (either address or description of site location)	Materials at Site (solid waste and/or scrap tires)
3073 E 84th Street	solid waste and/or scrap tires
8702 Bessemer Avenue	solid waste and/or scrap tires
8915 Miles Park Drive	solid waste and/or scrap tires
E 127th Street	solid waste and/or scrap tires
4102 E 104th Street	solid waste and/or scrap tires
3371 E 123rd Street	solid waste and/or scrap tires
4035 E 143rd Street	solid waste and/or scrap tires
3681 E 143rd Street	solid waste and/or scrap tires
3042 E 84th Street	solid waste and/or scrap tires
E 127th Street	solid waste and/or scrap tires
4748 E 176th Street	solid waste and/or scrap tires
11722 Union Avenue	solid waste and/or scrap tires
10822 Mount Overlook Avenue	solid waste and/or scrap tires
4100 E 100th Street	solid waste and/or scrap tires
9706 Gaylord Avenue	solid waste and/or scrap tires
E 81st Street	solid waste and/or scrap tires
Saxe Avenue	solid waste and/or scrap tires
Booth Avenue	solid waste and/or scrap tires
3627 E 81st Street	solid waste and/or scrap tires
3308 E 139th Street	solid waste and/or scrap tires
E 111th Street	solid waste and/or scrap tires
11131 Mount Carmel Road	solid waste and/or scrap tires
10849 Garfield Court	solid waste and/or scrap tires
17001 S Miles Road	solid waste and/or scrap tires
E 83rd Street	solid waste and/or scrap tires
7636 Broadway Avenue	solid waste and/or scrap tires
Nelson Avenue	solid waste and/or scrap tires
12715 Holborn Avenue	solid waste and/or scrap tires
3094 E 84th Street	solid waste and/or scrap tires
4068 E 79th Street	solid waste and/or scrap tires
10200 Miles Avenue	solid waste and/or scrap tires
13510 Durkee Avenue	solid waste and/or scrap tires
8172 Whitehead Avenue	solid waste and/or scrap tires
Harvard Avenue	solid waste and/or scrap tires
8919 Bessemer Avenue	solid waste and/or scrap tires
3720 E 152nd Street	solid waste and/or scrap tires
2866 Alpine Avenue	solid waste and/or scrap tires
E 136th Street	solid waste and/or scrap tires
E 108th Street	solid waste and/or scrap tires
10833 Olivet Avenue	solid waste and/or scrap tires
849 E 93rd Street	solid waste and/or scrap tires
E 82nd Street	solid waste and/or scrap tires

Site Location (either address or description of site location)	Materials at Site (solid waste and/or scrap tires)
10831 Olivet Avenue	solid waste and/or scrap tires
15213 Ridpath Avenue	solid waste and/or scrap tires
15919 Damon Avenue	solid waste and/or scrap tires
969 Nathaniel Road	solid waste and/or scrap tires
8023 Superior Avenue	solid waste and/or scrap tires
10206 Garfield Avenue	solid waste and/or scrap tires
E 131st Street	solid waste and/or scrap tires
1001 London Road	solid waste and/or scrap tires

B. ASH, FOUNDRY SAND, AND SLAG DISPOSAL SITES

There are no facilities for these materials in the District.

Table V-2 Inventory of Ash, Foundry Sand, and Slag Disposal Sites

Site Location (Address, description of site location)	Materials at Site (fly ash, bottom ash, foundry sand, and/or slag)
None	NA

Cleveland-Cuyahoga Environmental Crimes Task Force

In 2013, the District facilitated the establishment of the Cleveland-Cuyahoga Environmental Crimes Task Force (ECTF). The ECTF is a coalition of public agencies working to end the problem of open dumping in Cuyahoga County by identifying, investigating, and enforcing the criminal open dumping penalties contained in the Ohio Revised Code. Investigations are conducted by an Environmental Crimes Unit **staffed by the Cleveland Police Department and the Cuyahoga County Sheriff's office. A combination of full-time enforcement officers, detectives and/or deputies work solely on open dumping investigations. Prosecutions are conducted by the Cuyahoga County Prosecutor's office to prosecute open dumping cases and other environmental crimes indicted by the Unit.**

Court Community Services Litter Collection Program

The District, under contract with Court Community Service Inc. (CCS), offers free litter collection services to District communities. CCS is a nonprofit agency that arranges community work for adult offenders from the Cuyahoga County Municipal and Common **Pleas courts. This is the District's longest running service and supplements local litter removal efforts.**

APPENDIX W: DISTRICT MAP

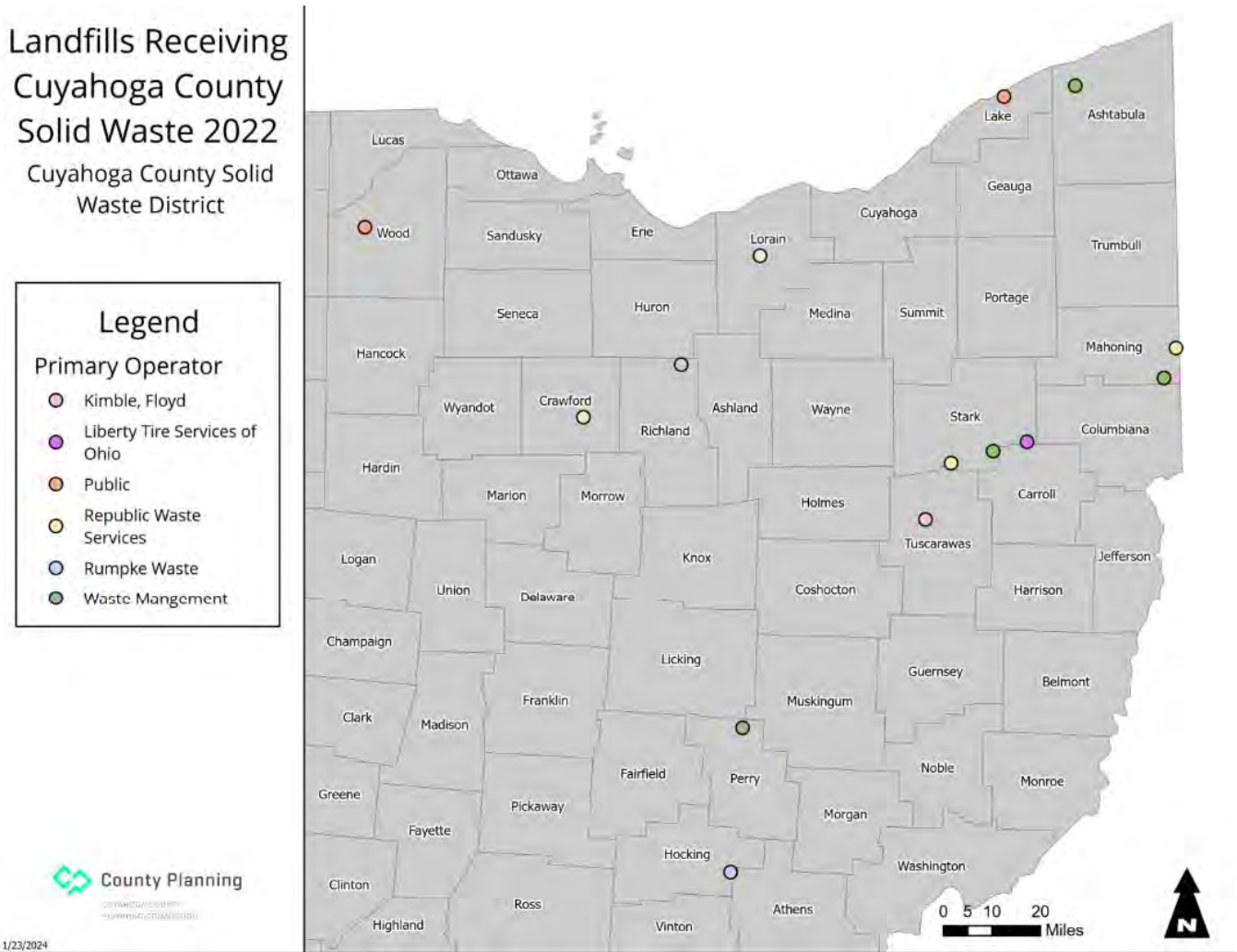
A. SOLID WASTE MANAGEMENT AND RECYCLING INVENTORIES RESPONSE

In accordance with Ohio Revised Code 3734.53(A)(2) and (A)(6) the District shall provide maps that show the locations of the following in the District:

- All existing facilities where solid wastes are being disposed of.
- All resource recovery facilities.
- All recycling activities within the District.
- Solid waste open dumping sites, including scrap tires.
- Disposal facilities for fly ash and bottom ash, foundry sand, and slag – N/A.

Several maps are provided below to provide information about the District’s Solid Waste Management and Recycling Inventories.

Landfills Receiving Cuyahoga County Solid Waste Map



Residential Recycling Method

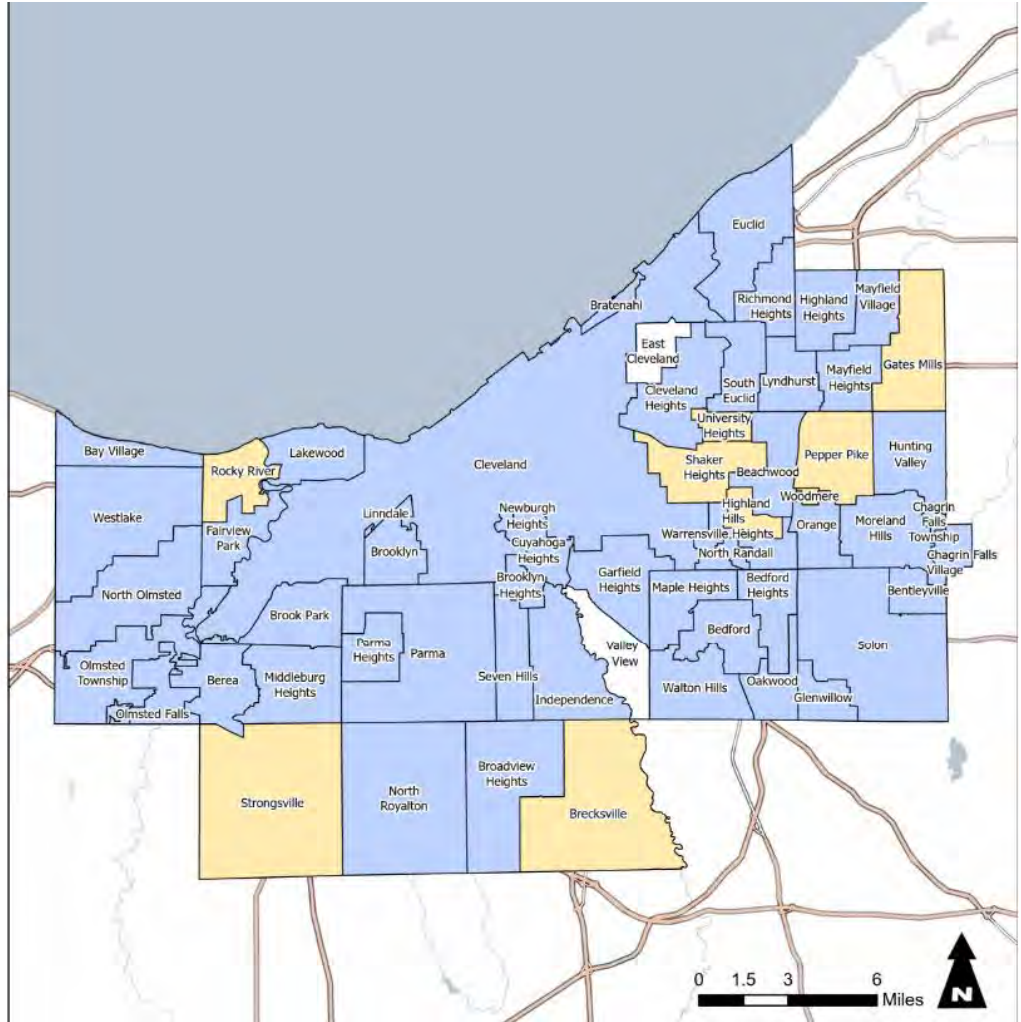
2024 Residential Recycling Method

Cuyahoga County Solid Waste District

Legend

Collection Method

- Automated
- Manual
- NA



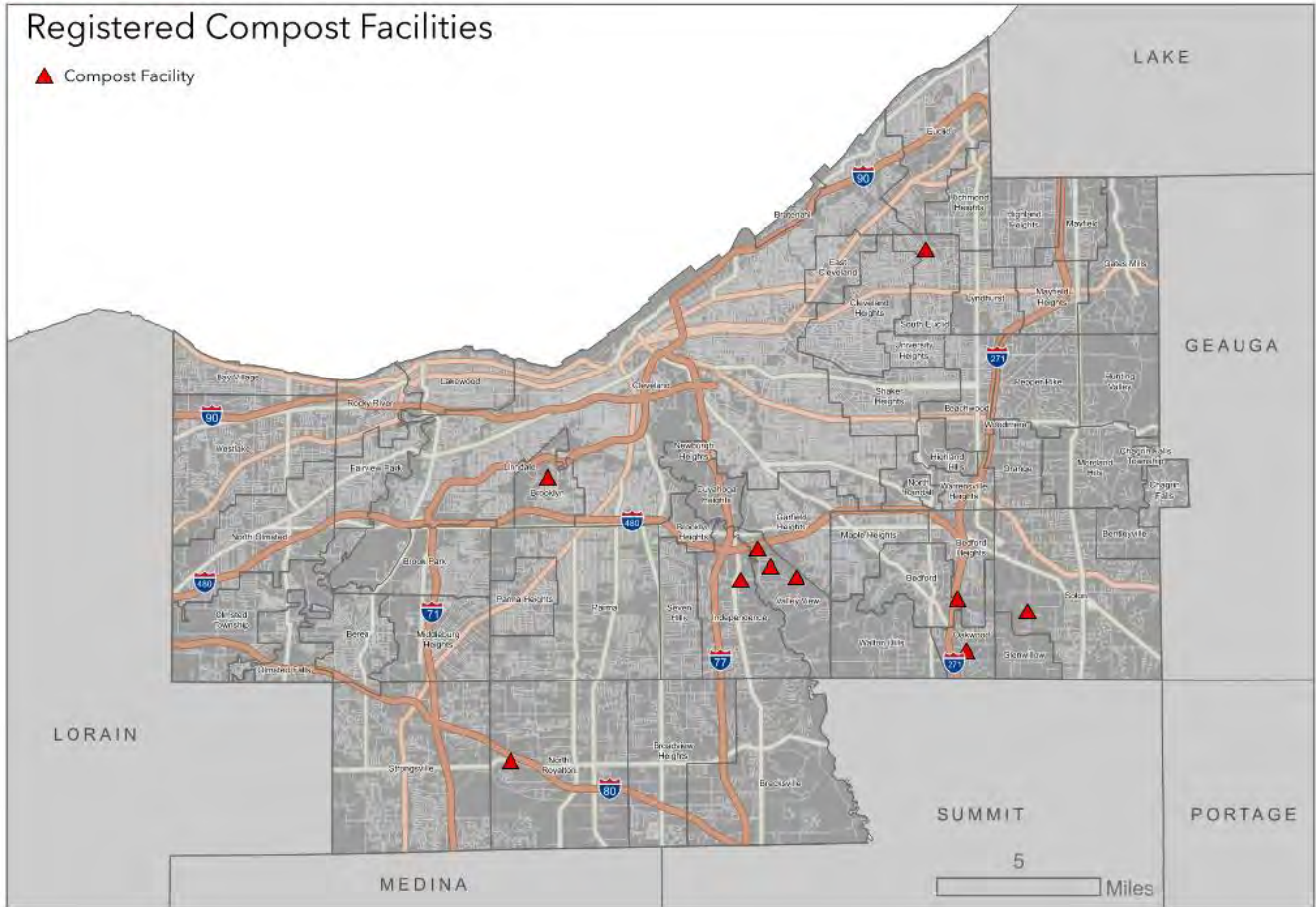
1/23/2024

Compost Facilities Map



Registered Compost Facilities

▲ Compost Facility



Open Dumping Sites Map

