

SOLID WASTE
APPROVED
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LETTER OF APPROVAL
ATTACHED HERETO

2024 SOLID WASTE MANAGEMENT PLAN

DRAFT

Warren County Solid Waste
Management District

PREPARED BY:



recycle.com

COMMISSIONED BY:



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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 3745-27-01(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 3745-27-01(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):
 - Rural drop-offs must provide a minimum of six cubic yards of capacity, and
 - Urban drop-offs must provide a minimum of 10 cubic yards of capacity.
4. There are signs that are adequate to, at a minimum:

- Direct the public to the site or provide the location of the site,
 - List the materials that are accepted, and
 - 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 3745-27-01(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 2020 as 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:

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	Warren County Solid Waste Management District
Member Counties	Warren County Solid Waste Management District
Coordinator's Name (main contact)	Warren County
Job Title	Susanne Mason
Street Address	Program Manager
City, State, Zip Code	406 Justice Drive
Phone	Lebanon, Ohio 45036
Fax	513-695-1209
E-mail address	513-695-2980
Webpage	Susanne.Mason@co.warren.oh.us

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

Member Name	Representing
Martin Russell	County Commissioners
Betty Davis	Municipal Corporations
David Crisenberry	Townships
Duane Stansbury	Health District
William Romaine	Generators
Chris Brausch	Citizens
Molly Conley	Public

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

Chairperson	
Name	David Crisenberry
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Table i-4 Board of County Commissioners/Board of Directors

Commissioner Name	County	Chairperson/President
Tom Grossmann	Warren	President
Shannon Jones	Warren	
David G. Young	Warren	

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

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 at least 10 years of landfill capacity 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.

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.

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.

C. District Overview

The SWMD was formed as a single county district in 1993 after splitting with Clinton County. The SWMD consists of one centralized office. The role of the SWMD is facilitator. The solid waste management system, of hauling, processing, landfilling, composting, and recycling, is operated exclusively by private companies. The structure and role of the SWMD remains consistent but continues to achieve progress. One of the SWMD's major accomplishments is the implementation of sustainable programming through partnerships between public and private sectors. The system is deliberately designed to bring convenient programs to the residents.

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 *2024 Solid Waste Management Plan (2020 State 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 Web site; 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

Purpose of Chapter 2

This chapter provides context for the SWMD's solid waste management plan by providing an overview of general characteristics of the SWMD. Characteristics discussed in this chapter include:

- The communities and political jurisdictions within the SWMD;
- The SWMD's population in the reference year and throughout the planning period;
- The available infrastructure for managing waste and recyclable materials within the SWMD;
- The commercial businesses and institutional entities located within the SWMD;
- The industrial businesses located within the SWMD; and
- Any other characteristics that are unique to the SWMD and affect waste management within the SWMD or provide challenges to the SWMD.

Understanding these characteristics helps the policy committee make decisions about the types of programs that will most effectively address the needs of residents, businesses, and other waste generators within the SWMD's jurisdiction.

Population distribution, density, and change affect the types of recycling opportunities that make sense for a particular community and for the SWMD as a whole.

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

Unique circumstances, such as hosting an amusement park, a large university, or a coal burning power plant present challenges, particularly for providing waste reduction and recycling programs.

The policy committee must take into account all of these characteristics when developing its overall waste management strategy.

A. Profile of Political Jurisdictions

1. Counties in the Solid Waste Management District

The Solid Waste Management District is a single county District composed of Warren County and the local units of governments within the County borders. There have been no changes in the configuration of the District since the District's original solid waste management plan was approved.

2. County Overview

Warren County is located in Southwestern Ohio and ranks as one of the top growth areas in the country. Two main interstate highway corridors I-75 and I-71 border Warren County. These transportation corridors give both businesses and residents easy access to the metropolitan centers of Cincinnati (to the south) and Dayton (to the north) and because of this the county has experienced growth pressure from the two major metropolitan areas.

Municipalities such as Lebanon, Mason, and Springboro have been transformed from rural communities to growing suburban areas in the process. With its location and available land and infrastructure, Warren County is expected to continue to experience growth rates for the foreseeable future.

There are 24 political entities (13 incorporated municipalities and 11 townships) within the SWMD. The largest township is Deerfield Township. The City of Mason is the largest City. Lebanon is the county seat and the third largest urban area.

The SWMD is a single county District geographically located in Warren County. Warren County encompasses 399.9 square miles and according to “Ohio County Profile of Warren County” prepared by Office of Research the land use/land cover is:

- 19.94% Developed, Lower Intensity
- 3.96% Developed, Higher Intensity
- 0.12% Barren (strip mines, gravel pits, etc.)
- 29.94% Forest
- 0.51% Shrub/Scrub and Grasslands
- 19.92% Pasture/Hay
- 23.46% Cultivated Crops
- 0.27% Wetlands
- 1.88% Open Water

The City of Mason has a relatively well-balanced mix of land uses. The single largest land use is single-family residential, although the community contains substantial percentages of recreation/open space, industrial park, agricultural and vacant or undeveloped land. Multi-family residential makes up a small percentage of land usage because the City strives to be a community of single-family, owner-occupied homes. Mason is a thriving tourism destination with a premier location for high-tech industry, corporate campuses and light industrial development. The City has a diversified mix of businesses – high tech, research facilities, and corporate headquarters. Mason is one of the most visited cities in Ohio being home to Kings Island Amusement Park, The Beach Waterpark, Lindner Family Tennis Center and private driving ranges. Commercial uses consist mainly of strip shopping centers that serve the local community or surrounding neighborhoods with convenience orientated goods and services such as gas stations, convenience stores, drug stores, restaurants, and grocery stores, etc. Regional shopping centers are located near the City limits offering a wide range of stores and merchandise. Mason’s household incomes are considerably higher than the Cincinnati region.

B. Population

1. Reference Year Population

In 2020, Warren County ranked 10th in terms of population out of Ohio’s 88 total counties¹. 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. There are no additions or subtractions necessary to adjust Warren’s population.

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

2. Population Distribution

Table 2-2 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 Warren County accounts for 15% of the SWMD's population.

Table 2-1 Population Distribution in the Reference Year

County		Largest Political Jurisdiction		
Name	Population	Community Name	Population	Percent of Total County Population
Warren	238,813	Mason	34,792	15%

Table 2-2 shows distribution of the population in cities, villages, and townships and the distribution of the population in incorporated versus unincorporated areas. Population between villages and unincorporated townships is almost equally divided. There are six cities in Warren County.

Table 2-2 Population Distribution

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Warren	41%	3%	56%

3. Population Change

The District's population is expected to increase by 16.7 percent (or 41,696 residents) from 2024 to 2038.

Table 2-3 District Population Change

Time Period	Area	Warren
Time Period	Area	Warren
2010 to 2020	County	10.94%
	Largest City	11.73%
	Unincorporated areas	13.40%
Planning Period 2024 -2038	County	16.65%
	Largest City	16.65%
	Unincorporated areas	16.65%

4. Implications for Solid Waste Management

The profile of the SWMD 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 increase through the planning period but per capita waste generation is projected to decrease.

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.

Warren County’s generation has historically fluctuated but within 25,000 tons. This relative consistency explains why the increasing population continually calculates a lower generation rate. Examine the equation for calculating waste generation rates:

$$\text{Waste Generation (lbs/day)} = \text{Waste Generation Rate (lbs/person/day)}$$

Looking at the equation the numerator is staying constant while the denominator is increasing resulting in a lower calculated rate. Population increases are not expected to have incremental increases on program volumes.

C. Profile of Commercial and Institutional Sector

Southwestern Ohio ranks as one of the top growth areas in the country. Warren County is a growth leader in the region. Two main interstate highway corridors I-75 and I-71 border Warren County. These transportation corridors give both businesses and residents easy access to the metropolitan centers of Cincinnati and Dayton. The proximity of the two major metropolitan centers and the accessibility provided by the interstate highways are a driving force behind the growth taking place in the County.

The County’s top employers are sales, service, or manufacturing industries. The County also has a sizable tourist industry. In fact, Warren County is referred to as “Ohio’s Largest Playground”. The County is home to area attractions, festivals, sporting events, an amusement park, and outdoor recreation activities and is easy access to two international airports and major interstates, making it a great hub-and-spoke destination for visitors. Geographically Warren County offers a metropolitan lifestyle with many major shopping, dining, and cultural attractions.

Businesses and institutions are concentrated within either a Central Business District (CBD) or more local concentrations within business and residential districts. There are clusters of concentrated commercial businesses/institutions, amusement attractions, entertainment areas, etc. throughout the County.

Service-providing businesses account for more employment and business establishments than goods-producing businesses. The two largest employment sectors fall under the trade, transportation and utilities service and the leisure and hospitality service.

Table 2-4 Top Employers by Employment in Commercial and Institutional Sectors

Business Name	Type of Business/Organization
Macy’s Credit & Customer Svc	Finance and Insurance
Kings Island	Arts, Entertainment, and Recreation
Atrium Medical Ctr	Health Care and Social Assistance
Cintas Corp	Other Services (Except Public Administration)
Huma Care	Administrative and Support and Waste Management and Remediation Services
St Ritas Medical Ctr	Health Care and Social Assistance
Premier Health Pharmacy-Amc	Health Care and Social Assistance
Lenscrafters	Retail Trade

Source: U.S. Business Database. Rep. Reference USA. Web. 5 July 2022

D. Profile of Industrial Sector

The majority of the County’s labor force is actually employed outside of the County. Industry has grown to employ over 75,000 persons but still has opportunity to grow. Warren County showed employment concentrations at least 20% above the national concentration in 2012 for NAICS 31 through 33. Such high concentration of employment is a broad indicator of the County’s economic strengths. The County is continually developing diversification economically for employment in County. Agriculture is important and predominantly occupied in northern, northeastern and southeastern sections of the County. Tourism takes a lead role in the economy with area attractions and outdoor recreation opportunities.

The top manufacturing employers in the County are listed in Table 2-5. The State of Ohio is a leader in manufacturing jobs, with 14,000 establishments.

Table 2-5 Top Employers by Employment in Manufacturing Sectors

Business Name	Type of Business/Organization
Procter & Gamble Co	Manufacturing: Wood, Paper, Printing, Chemical, and Plastics
L3harris Space & Sensors	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.
Advics Manufacturing	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.
Articure	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.
Kraft Heinz Co	Manufacturing: Food and Apparel
Faurecia	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.
Harris Products Group	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.

Source: U.S. Business Database. Rep. Reference USA. Web. 5 July 2022

E. Other Characteristics

The county is complex and multi-faceted with many different kinds of areas: rural, urban (low and high density), and natural. Warren County is as much a rural community as it is an urban community. Residents, planners, and commissioners continue to develop highly livable communities throughout the County that respect the rural traditions mixing natural and man-made environments. Warren County has attracted population and new development from urbanization activities generated in Dayton and Cincinnati.

CHAPTER 3: WASTE GENERATION

Purpose of Chapter 3

This chapter of the solid waste management plan provides a summary of the SWMD's historical and projected solid waste generation. The policy committee needs to understand the waste the SWMD will generate before it can make decisions regarding how to manage the waste. Thus, the policy committee analyzed the amounts and types of waste that were generated within the SWMD in the past and that could be generated in the future.

The SWMD's policy committee calculated how much solid waste was generated for the residential/commercial and industrial sectors. Residential/commercial waste is essentially municipal solid waste and is the waste that is generated by a typical community. Industrial solid waste is generated by manufacturing operations. To calculate how much waste was generated, the policy committee added the quantities of waste disposed of in landfills and reduced/recycled.

The SWMD's policy committee obtained reduction and recycling data by surveying communities, recycling service providers, collection and processing centers, commercial and industrial businesses, owners and operators of composting facilities, and other entities that recycle. Responding to a survey is voluntary, meaning that the policy committee relies upon an entity's ability and willingness to provide data. When entities do not respond to surveys, the policy committee gets only a partial picture of recycling activity. How much data the policy committee obtains has a direct effect on the SWMD's waste reduction and recycling and generation rates.

The policy committee 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 policy committee analyzed historic quantities of waste generated to project future waste generation. The details of this analysis are presented in Appendix G. The policy committee used the projections to make

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, Warren 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.
- 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.

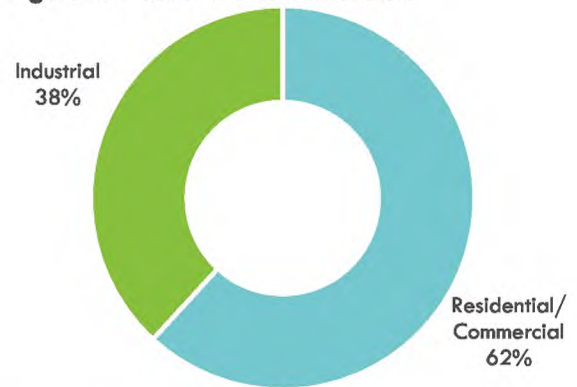
$$\text{Waste Generation} = \text{Wastes Disposed} + \text{Wastes Diverted}$$

In 2020, Warren County generated 374,725 tons of material, as shown in Table 3-1, with the percentages by sector shown in Figure 3-1.

Table 3-1 Solid Waste Generated in the Reference Year

Type of Waste	Quantity Generated (tons)
Residential/ Commercial	234,716
Industrial	143,911
Excluded	0
Total	378,627

Figure 3-1 Total Waste Generated



1. Residential/Commercial Waste Generated in the Reference Year

Warren County generated 231,333 tons of waste in the residential/commercial sector. This estimated generation indicates each person generates approximately 5.31 pounds per day. Benchmarking Warren County’s per capita generation shows the County’s average is less than that of Ohio’s statewide average and the higher compared to the U.S.’s national average in 2018.

Comparing the District to other surrounding and single county SWMDs, Warren County has a per capita generation rate below the average of the three compared counties, and state, shown in Table 3-2. The challenge facing the SWMD is to find ways to reduce waste generation as well as characterizing landfilled waste to identify diversion methods to lower the disposal rate.

Table 3-2 Benchmark Per Capita Residential/Commercial Solid Waste

Type of Waste	Lbs. / Capita / Day
Warren County	5.3
Butler County	6.3
Greene County	4.6
Lake County	8.1
Ohio Statewide	7.1
U.S Nationwide (2018)	4.9

2. Industrial Waste Generated in the Reference Year

The industrial sector generated 143,393 tons of waste, accounting for approximately 38.3% of total waste generated in the County. However, the majority of the waste generated by industrial sector, 91% is diverted, with 12,511 tons of the industrial waste generated that was disposed of. The County should strive to continue to work with the industrial sector, especially manufacturers, to ensure that these companies have 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 9.2% 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 210,000 and 235,000 tons over the past five years and population has remained fairly flat, as shown in Figure 3-2. Overall, the waste generation has increase 8.7% from 2016 to 2020 while population increase by 5.2%.

Generation was greatest in 2020, at 5% more than the average tons for 2016-2020. Disposal for residential/commercial sector appeared to follow the US economy which tracked a slow pace in 2016 and 2017. Recycling, the other part of the equation, is collected through voluntary data reporting and by nature succumbs to data fluctuations.

Figure 3-2 Historical Residential/Commercial Waste Generation



2. Historical Industrial Waste Generated

Industrial generation was low in 2016 and 2017 but increased in 2018 due to reported recycling tonnages while disposal have stayed relatively constant (shown in Figure 3-3). The generation rate is driven primarily by the industry's recycling tons. The industrial recycling tonnage reported accounts for 91% of the District's industrial waste generated in 2020. The primary materials recycled are non-excluded foundry sand from the manufacturing sector.

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 increase at a slow rate throughout the planning period. This projection is mainly attributed to the slow decline in the projected population. Diversion is projected to slightly increase during the planning period due to the current recycling program options available to District residents.

To project the industrial sector generation, the District looked to economic indicators. Prior to COVID-19 pandemic which began in the US in March 2020, predictions anticipated to decrease at a slow rate throughout the planning period at an average of 0.23% annually.

Excluded waste has fluctuated between a high of 21,411 tons in 2019 to a low of 3,136 tons in 2018. The average of the past five years was 14,291 tons and 19,184 in 2020 which was 8.8% 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)	Excluded Waste (tons)	Total (tons)
2024	482,845	284,868	0	767,713
2025	486,994	284,183	0	771,177
2026	493,369	283,519	0	776,887
2027	499,744	282,874	0	782,618
2028	506,119	282,249	0	788,368
2029	512,496	281,641	0	794,137

Source: Appendices G and K

Sample Calculation:

Generation = Disposal + Recycle

Total = Residential/Commercial Generation + Industrial Generation

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

CHAPTER 4: WASTE MANAGEMENT

Purpose of Chapter 4

Chapter 3 provided a summary of how much waste the SWMD generated in the reference year and how much waste the policy committee estimates the SWMD will generate during the planning period. This chapter summarizes the policy committee's strategy for how the SWMD will manage that waste during the planning period.

A SWMD must have access to facilities that can manage the waste the SWMD will generate. This includes landfills, transfer facilities, incinerator/waste-to-energy facilities, compost facilities, and facilities to process recyclable materials. This chapter describes the policy committee's strategy for managing the waste that will be generated within the SWMD during the planning period.

To ensure that the SWMD has access to facilities, the solid waste management plan identifies the facilities the policy committee expects will take the SWMD's trash, compost, and recyclables. Those facilities must be adequate to manage all of the SWMD's solid waste. The SWMD does not have to own or operate the identified facilities. In fact, most solid waste facilities in Ohio are owned and operated by entities other than the SWMD. Further, identified facilities can be any combination of facilities located within and outside of the SWMD (including facilities located in other states).

Although the policy committee needs to ensure that the SWMD will have access to all types of needed facilities, Ohio law emphasizes access to disposal capacity. In the solid waste management plan, the policy committee must demonstrate that the SWMD will have access to enough landfill capacity for all of the waste the SWMD will need to dispose of. If there isn't adequate landfill capacity, then the policy committee develops a strategy for obtaining adequate capacity.

Ohio has more than 30 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 SWMDs in that region would likely rely on transfer facilities to get waste to an existing landfill instead of building a new landfill.

Finally, SWMD has the ability to control which landfill and transfer facilities can, and by extension cannot, accept waste that was generated within the SWMD. The SWMD accomplishes this by designating solid waste facilities (often referred to as flow control). A SWMD's authority to designate facilities is explained in more detail later in this chapter.

A. Waste Management Overview

Warren County manages waste through a combination of landfills, recycling programs and facilities, transfer stations, and composting facilities. Figure 4-1 depicts total waste generation management in the reference year. About 32% of the waste generated is diverted—meaning the majority of generation is being recycled or composted.

Table 4-1 presents projected waste generation for the first 6 years of the planning period. The District is expecting growth in recycling and landfilling and composting to hold flat.

Figure 4-1 Methods of Managing Waste

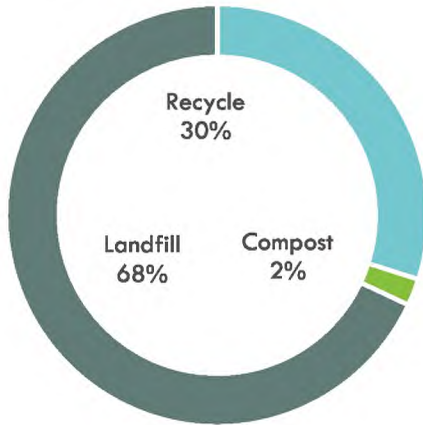


Table 4-1 Methods for Managing Waste Projections

Year	Generate	Recycle	Compost	Transfer	Landfill
2020	278,152	83,206	5,771	21,640	167,535
2024	383,854	178,572	3,117	29,709	172,456
2025	385,586	178,870	3,117	27,745	175,854
2026	388,441	179,168	3,117	27,941	178,215
2027	391,306	179,466	3,117	28,292	180,431
2028	394,181	179,765	3,117	28,645	182,655
2029	397,066	180,063	3,117	28,998	184,887

Source:

¹Reference Year Appendix Table G-1 and Projections Table G-2

²Reference Year Appendix Table E-7 and Projections Table E-8 and Reference Year Appendix Table F-6 and Projections Table F-7

³Reference Year Appendix Table D-5 and Projections Table D-6

⁴Reference Year and Projections Appendix Table K-3

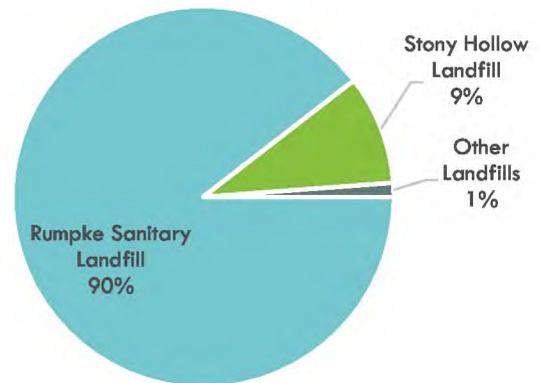
B. Profile of Waste Management Infrastructure

This next section identifies waste management infrastructure and identifies gaps and needs to handle the expected growth.

1. Landfill Facilities

A wide variety of wastes are disposed in municipal solid waste landfills and includes 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 may also be disposed in municipal solid waste landfills.

Figure 4-2 Landfills Used in Reference Year



The Rumpke Sanitary Landfill received 90% of the District's direct hauled municipal solid waste. Landfills used by the SWMD include nine out-of-district but in-state landfills, and four out-of-state landfills located in the State of Kentucky. The source of information is Ohio EPA, Indiana Department of Environmental Management, and Kentucky Energy and Environment Cabinet. Table 4-2, "Landfill Facilities Used by the District in the Reference Year" contains the information concerning waste that was disposed of at these facilities.

2. Transfer Facilities

There were three transfer facilities that accepted waste from the SWMD during the reference year. There were two located outside the District but within the state, and one facility located out-of-state. Information for this section was obtained from Ohio EPA, Indiana Department of Environmental Management, and Kentucky Energy and Environment Cabinet.

3. Composting Facilities

There were five composting and yard waste management facilities that provided services to the SWMD in 2020. During 2020, these facilities composted approximately 1,833 tons of material. Two of the facilities are located within the SWMD and three facilities are located out-of-District.

4. Processing Facilities

A MRF is a specialized facility that receives, separates and prepares recyclable materials for marketing to end-user manufacturers. Materials collected at the curb and through drop-off programs are sent to MRFs. Three processing facilities provided recycling services to the District in 2020. All processing facilities are located out-of-District, but within the state of Ohio. Rumpke operates one facility located in Dayton, Ohio as a pre-sort facility which sorts materials, compacts and transfers materials to their main facility. Rumpke's main processing facility is located in Cincinnati and is classified as a Materials Recovery Facility (MRF).

5. Waste Collection

There were three haulers providing collection services for solid waste and recyclables to District residents in 2020. Warren County requires that all solid waste haulers operating in the County obtain a license. The three haulers providing services include Republic Waste Services, Rumpke Waste, and Waste Management.

All cities and villages in the SWMD have non-subscription curbside achieved through contracts between the municipality and a trash hauler. Provision of solid waste services is privatized in the SWMD, no public haulers provide hauling services. 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.

All townships in the SWMD have non-subscription curbside achieved through Performance Obligation agreements between the SWMD and waste haulers. All residents living in a township who have subscription trash service must be enrolled in non-subscription curbside recycling. All waste haulers providing trash service in the SWMD are required to offer non-subscription curbside recycling service to their customers in the unincorporated areas of the townships. To provide service in these areas, waste haulers must sign and adhere to a Performance Obligation agreement which specifies materials be collected on a weekly basis, containers to be provided, and with educational and awareness responsibilities.

C. Solid Waste Facilities Used in the Reference Year

1. Landfill Facilities

Table 4-2 lists the landfills receiving waste from Warren County in the reference year, which is direct hauled, i.e., not transferred through a transfer facility.

Table 4-2 Landfill Facilities Used by the District in the Reference Year (2020 Direct Hauled)

Facility Name	Location		Waste Accepted from SWMD (tons)	Percent of all SWMD Waste Disposed	Remaining Capacity (years)
	County	State			
<i>In-District</i>					
None					
<i>Out-of-District</i>					
Rumpke Brown County Landfill	Brown	OH	425	0	68
Wilmington Sanitary Landfill	Clinton	OH	12	0%	26
Pine Grove Regional Facility	Fairfield	OH	48	0%	84
SWACO Franklin County Sanitary Landfill	Franklin	OH	0	0%	47
Rumpke Sanitary Landfill	Hamilton	OH	169,819	90%	23
Hancock County Landfill	Hancock	OH	0	0%	27
Stony Hollow Landfill	Montgomery	OH	17,615	9%	3
Preble County Sanitary Landfill	Preble	OH	9	0%	59
American Landfill	Stark	OH	73	0%	97
<i>Out-of-State</i>					
Twin Bridges Landfill	Madison	IN	3	0%	19
Medora Sanitary Landfill	Jackson	IN	9	0%	21
Rumpke of KY Inc - Pendleton Co Landfill	Pendleton	KY	143	0%	15
Bavarian Trucking Co Inc	Boone	KY	1,540	1%	15
Total			189,694	100%	256

Source: 2020 Ohio Facility Data Report Tables. Ohio EPA, Appendix D, Table D-1 and Appendix M, Table M-1

2. Transfer Facilities

Table 4-3 lists the transfer facilities receiving waste from Warren County in the reference year before landfilling.

Table 4-3 Transfer Facilities Used by the District in the Reference Year (2020)

Facility Name	Location		Waste Accepted from District (tons)	Percent of all District Waste Transferred	Landfill Where Waste was Taken to be Disposed
	County	State			
<i>In-District</i>					
None					
<i>Out-of-District</i>					
Republic Service Evendale Transfer Facility	Hamilton	OH	20,829	76%	Rumpke Sanitary Landfill & Bavarian Waste
Montgomery County South Transfer	Montgomery	OH	5,728	21%	Rumpke Landfill
<i>Out-of-State</i>					
Dearborn County Trash and Recycling Transfer Station	Dearborn	IN	953	3%	N/A
Total			27,510	100%	0

Source: "2020 Ohio Facility Data Report Tables". Ohio EPA, Appendix D, Table D-2

3. Composting Facilities

Table 4-4 lists the permitted composting facilities receiving materials from Warren County in the reference year.

Table 4-4 Compost Facilities Used by the District in the Reference Year (2020)

Facility Name	Location	Material Composted (tons)	Percent of all Material Composted
In District			
Melena Organic Compost	3268 US Rte 42S	61	3%
Klasmulch	788 Reading Rd	330	18%
Out-of-District			
NPK Compost Facility	10795 Hughes Rd	1,274	70%
The Siebenthaler Company	5250 Cobblegate Dr	99	5%
Marvins Organic Gardens Class IV	2055 S US Rte 42 S	68	4%
Total		1,833	

Source: Appendix B, Table B-5

4. Processing Facilities

Table 4-6 lists the processing facilities receiving materials from Warren County in the reference year.

Table 4-6 Processing Facilities Used by the District in the Reference Year (2020)

Name of Facility	Location		Facility Type	Recyclables Accepted from District (tons)
	County	State		
In-District				
None				
Out-of-District				
Rumpke Center City Recycling - Hamilton County: Commercial	Hamilton	OH	MRF	3,589
Rumpke Center City Recycling - Hamilton County: Residential	Hamilton	OH	MRF	11,685
Rumpke Elmwood Recycling Cincinnati: Commercial	Hamilton	OH	MRF	526
Rumpke Recycling - Dayton: Residential	Montgomery	OH	MRF	688
Rumpke Recycling - Dayton: Commercial	Montgomery	OH	MRF	38
Out-of-State				
None				
Total				15,801

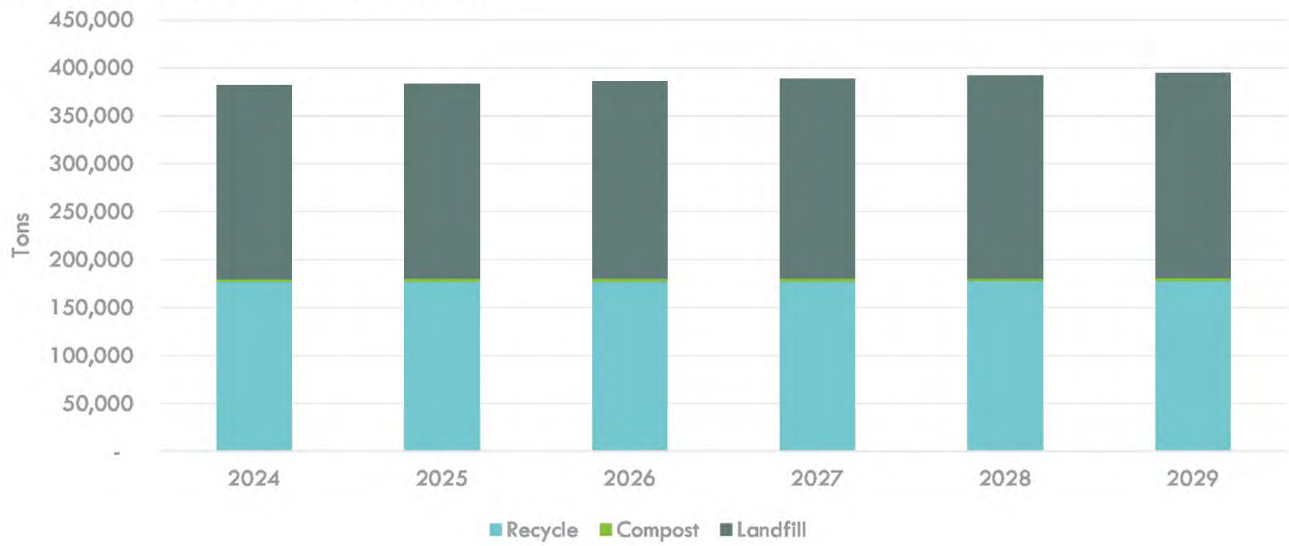
Source: Appendix B, Table B-7

D. Use of Solid Waste Facilities During the Planning Period

The District continues to support an open market for the collection, transport and disposal of solid waste. There is sufficient access to municipal solid waste landfill capacity for the planning period and access to transfer facilities to manage waste. Landfill capacity remains abundant and exceeds available volume of waste generated locally.

Warren County is not expecting changes in the management of waste through the planning period. Following historical trends, the planning period expects waste to be similarly managed as shown in Figure 4-3. Warren County does not expect any changes to the recyclable processing facilities or flows to processing facilities during the planning period. Additional capacity is not needed.

Figure 4-2 Landfills Used in Reference Year



E. Siting Strategy

As explained earlier, the solid waste management plan must demonstrate that the SWMD will have access to enough capacity at landfill facilities to accept all of the waste the SWMD will need to dispose of during the planning period. If existing facilities cannot provide that capacity, then the policy committee must develop a plan for obtaining additional disposal capacity.

Although unlikely, the policy committee can conclude that it is in the SWMD’s best interest to construct a new solid waste landfill facility to secure disposal capacity. In that situation, Ohio law requires the policy committee to develop a strategy for identifying a suitable location for the facility. That requirement is found in Ohio Revised Code Section 3734.53(A)(8). This strategy is referred to as a siting strategy. The policy committee must include its siting strategy in the solid waste management plan. The siting strategy is located in Appendix S.

If a solid waste facility should be proposed for Warren County, the SWMD will defer the authority to the siting strategy contained in the Ohio Administrative Code 3734-27, 3734-30, and 3734-37 including any amendments.

F. Designation

Purpose of Designation

Ohio law gives each SWMD (refers to both SWMDs and Authorities) the ability to control where waste generated from within the SWMD can be taken. Such control is generally referred to as flow control. In Ohio, SWMDs establish flow control by designating facilities. SWMDs can designate any type of solid waste facility, including recycling, transfer, and landfill facilities.

Even though a SWMD has the legal right to designate, it cannot do so until the policy committee specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If it wants the SWMD to have the ability to designate facilities, then the policy committee includes a clear statement in the solid waste management plan giving the designation authority to the board of directors. The policy committee can also prevent the board of directors from designating facilities by withholding that authority in the solid waste management plan.

Even if the policy committee grants the board of directors the authority to designate in a solid waste management plan, the board of directors decides whether or not to act on that authority. If it chooses to use its authority to designate facilities, then the board of directors must follow the process that is prescribed in ORC Section 343.014. If it chooses not to designate facilities, then the board of directors simply takes no action.

Once the board of directors designates facilities, only designated facilities can take the SWMD's waste. That means, no one can legally take waste from the SWMD to undesignated facilities and undesignated facilities cannot legally accept waste from the SWMD. The only exception is in a situation where, the board of directors grants a waiver to allow an undesignated facility to take the SWMD's waste. Ohio law prescribes the criteria that the board must consider when deciding whether to grant a waiver and how long the board has to make a decision on a waiver request.

If the board of directors designates facilities, then the next section will provide a summary of the designation process and Table 4-6 will list currently designated facilities.

1. Description of the SWMD's Designation Process

The Board of Directors of the Warren County Solid Waste Management District is precluded from establishing facility designation in accordance with Section 343.014 of the ORC.

2. List of Designated Facilities

There are no facilities currently designated.

Table 4-6 Facilities Currently Designated

Facility Name	Location		Facility Type
	County	State	
<i>In-District</i>			
None			
<i>Out-of-District</i>			
None			
<i>Out-of-State</i>			
None			

CHAPTER 5: WASTE REDUCTION AND RECYCLING

Purpose of Chapter 5

As was explained in Chapter 1, a SWMD (refers to SWMDs and Authorities) must have programs and services to achieve reduction and recycling goals established in the state solid waste management plan. A SWMD also ensures that there are programs and services available to meet local needs. The SWMD may directly provide some of these programs and services, may rely on private companies and non-profit organizations to provide programs and services, and may act as an intermediary between the entity providing the program or service and the party receiving the program or service.

Between achieving the goals of the state plan and meeting local needs, the SWMD needs to 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 SWMD's strategy for furthering reduction and recycling in its member counties.

Before deciding on the programs and services that are necessary and will be provided, the policy committee (board of trustees for an Authority) performed a strategic, in-depth review of the SWMD's existing programs and services, recycling infrastructure, recovery efforts, finances, and overall expectations. This review consisted of a series of 14 analyses that allowed the policy committee to obtain a holistic understanding of the SWMD by answering questions such as:

- Is the SWMD adequately serving all waste generating sectors?
- Is the SWMD recovering high volume wastes such as yard waste and cardboard?
- How well is the SWMD's recycling infrastructure being used/how well is it performing?
- What is the SWMD's financial situation and ability to fund programs?

Using what it learned, the policy committee drew conclusions about the SWMD's abilities, strengths and weaknesses, operations, existing programs and services, outstanding needs, available resources, etc. The policy committee then compiled a list of actions the SWMD could take, programs the SWMD could implement, or other things the SWMD could do to address its conclusions. The policy committee used that list to make decisions about the programs and services that will be available in the SWMD during the upcoming planning period.

After deciding on programs and services, the policy committee projected the quantities of recyclable materials that would be collected through those programs and services. This in turn allowed the policy committee to project its waste reduction and recycling rates for both the residential/commercial sector and the industrial sector (See Appendix E for the residential/commercial sector and Appendix F for the industrial sector).

A. Solid Waste Management District Priorities

Priority areas to focus efforts in the 2022 Plan include:

Priority Program	Priority Area
Full-Time Drop-off	Optimizing drop-off locations acceptable recyclables
Social Media Outreach	Increase social media presence
Recycle Right and New Recyclable Materials Outreach Campaign	Focus on correct materials in the recycling stream campaign.

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.

1. Residential Recycling Programs

Curbside Recycling Services

Table 5-1 Curbside Recycling Services

Status	Name	Service Provider	Start Date	End Date	Goal
Non-Subscription Curbside					
Existing	Carlisle Village	Rumpke	Existing	Ongoing	1, 2
Existing	Corwin Village	Rumpke	Existing	Ongoing	1, 2
Existing	Franklin City	Rumpke	Existing	Ongoing	1, 2
Existing	Harveysburg Village	Republic Services	Existing	Ongoing	1, 2
Existing	Lebanon City	Rumpke	Existing	Ongoing	1, 2
Existing	Maineville Village	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Mason City	Rumpke	Existing	Ongoing	1, 2
Existing	Morrow Village	Rumpke	Existing	Ongoing	1, 2
Existing	Springboro City	Rumpke	Existing	Ongoing	1, 2
Existing	South Lebanon City	Rumpke	Existing	Ongoing	1, 2
Existing	Waynesville Village	Rumpke	Existing	Ongoing	1, 2
Subscription Curbside					
Existing	Butler Village	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Clearcreek Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Deerfield Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Franklin Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Hamilton Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Harlan Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Massie Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Pleasant Plain Village	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Salem Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2

Status	Name	Service Provider	Start Date	End Date	Goal
Existing	Turtlecreek Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Union Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Washington Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2
Existing	Wayne Township	Republic Services, Rumpke, WM	Existing	Ongoing	1, 2

Most cities and villages in the SWMD have non-subscription curbside achieved through contracts between the municipality and a trash hauler. 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. In 2020, all curbside materials were collected single stream (commingled) with either a bin or cart-based system.

All townships in the SWMD have non-subscription curbside achieved through Performance Obligation agreements between the SWMD and waste haulers. All residents living in a township who have subscription trash service must be enrolled in non-subscription curbside recycling. All waste haulers providing trash service in the SWMD are required to offer non-subscription curbside recycling service to their customers in the unincorporated areas of the townships. To provide service in these areas, waste haulers must sign and adhere to a Performance Obligation agreement which specifies materials be collected on a weekly basis, containers to be provided, and with educational and awareness responsibilities. In 2020, all curbside materials were collected single stream (commingled) with either a bin or cart-based system.

The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. Each community maintains an updated list of recyclables accepted by their waste hauler.

The SWMD offers contract assistance to municipalities and townships. Assistance includes meetings with political jurisdiction representatives and haulers, contract review and guidance, and cost analysis. Each political jurisdiction contract terms vary. Assistance is offered when the SWMD attends political jurisdiction meetings and communicated by Policy Committee to constituents they represent.

Drop-off Recycling Services

Table 5-2 Drop-off Recycling Locations

Status	Name	Service Provider	Start Date	End Date	Goal
Full-Time, Urban Drop-offs					
Existing	Deerfield Township - 8395 Snider Road	Rumpke	Existing	Ongoing	1, 2
Drop-off open to the public 24/7 collecting 117 tons of commingled recyclable material (includes Mason location) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The municipal jurisdiction directly contracts with a private business to provide and service this drop-off location.					
Existing	Lebanon City - 406 Justice Drive	Rumpke	Existing	Ongoing	1, 2
Drop-off open to the public 24/7 collecting 33 tons of commingled recyclable material (includes both Lebanon locations) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. The County directly contracts with a private business to provide and service this drop-off location.					
Existing	Lebanon City - 50 S Broadway	Rumpke	Existing	Ongoing	1, 2

Status	Name	Service Provider	Start Date	End Date	Goal
Drop-off open to the public 24/7 collecting 33 tons of commingled recyclable material (includes both Lebanon locations) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. The City of Lebanon directly contracts with a private business to provide and service this drop-off location.					
Existing	Mason - 2095 Kings Mill Road	Rumpke	Existing	Ongoing	1, 2
Drop-off open to the public 24/7 collecting 117 tons of commingled recyclable material (includes Deerfield Township location) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. The City of Mason directly contracts with a private business to provide and service this drop-off location.					
Part-Time, Urban Drop-offs					
None					
Full-Time, Rural Drop-offs					
None					
Part-Time, Rural Drop-offs					
None					

2. Residential Sector Reduction and Recycling Programs

Status	Name	Start Date	End Date	Goal
Existing	Curbside Recycling Monitoring Plan	Existing	Ongoing	1
<p>Monitoring Plan was developed to identify and detect any waste hauler deviating from the standards set forth in the Performance Obligations. Anonymous calls are made on a semi-annual basis, to each waste hauler requesting service information for an address within their service area. These are made for each of the 11 townships located within the District.</p> <p>If a waste hauler fails to offer non-subscription curbside recycling service as part of the service package, the specific company will be notified immediately that it is in violation of the Performance Obligation. The waste hauler will be given 30 days to rectify the situation and return to compliance with the Performance Obligation. Since the monitoring will be done unannounced and semi-annually, any failure will be identified and resolved quickly. If a waste hauler fails to return to compliance, the District will implement Contingency 1 in which sufficient drop-off recycling stations will be set up until the District is again reaching 80% access.</p> <p>Any new waste hauler that begins operation in the District must register with the Warren County Health Department. The County Health Department will notify the District and provide the information concerning the new hauler. The District will contact the new hauler and inform them of the Performance Agreement that must be signed. The waste hauler will be given 3 months to sign the agreement and begin offering non-subscription curbside recycling services along with the trash collection for the unincorporated township areas. Once the agreement is signed, the new hauler will be included in the monitoring program outlined above.</p> <p>As part of the District's Annual Report, an annual Monitoring Report will be submitted to the Ohio EPA that includes the following information:</p> <ol style="list-style-type: none"> Percentage of households receiving curbside recycling service. Results of monitoring phone calls, and Recycling tonnages from the curbside program. <p>A copy of the monitoring form can be found in Appendix S Monitoring Forms. Calls were made to trash haulers to ensure that curbside recycling was included as part of trash service to all county residents. All trash haulers are including curbside recycling as part of the trash package.</p>				
Existing	Technical Assistance/Resource Information	Existing	Ongoing	3, 4

Status	Name	Start Date	End Date	Goal
	The District maintains a web page that delineates the locations where residents and businesses can drop-off materials that would be included in the programs			
New	Contamination awareness education	2024	Ongoing	3, 4
	The District will provide educational messages on contamination on either the website or with communities for them to post on their websites/social media.			
New	Educational support for large amounts of donatable food	2024	Ongoing	4
	The District will provide educational support if residents or businesses request assistance for donatable foods.			

3. Commercial/Institutional Sector Reduction and Recycling Programs

Status	Name	Start Date	End Date	Goal
Existing	Commercial Solid Waste and Recycling Assessments	Existing	Ongoing	3, 4
	Companies desiring audits are welcome to contact the District and will be directed to businesses that can help with conducting waste audits. The SWMD will add a Business Content page on the website which will contain a Waste Audit How-To Guide and Steps to Better Business Recycling. A flyer will be developed and included as an insert when conducting the annual surveys which will direct businesses to the SWMD website and available resources. Advertisements for this program will be listed on the District's website and have a list on hand of consultants in order to readily provide resources to businesses. Collaboration with the economic development department and/or chamber of commerce may allow further outreach.			
New	Targeting material-specific campaigns such as paper and cardboard.	2024	Ongoing	2, 4
	The District can share educational posted targeted for the commercial/institutional sector focused on fibrous materials such as paper and cardboard. This campaign may include "Did you know?" or "How do I start?" question and answer the questions for the audience to learn.			

4. Industrial Sector Reduction and Recycling Programs

Status	Name	Start Date	End Date	Goal
Existing	Materials Marketplace Referrals and Promotion	Existing	Ongoing	5
	The Ohio EPA released an online service for Ohio businesses, not-for-profits and government organizations. The Ohio Materials Marketplace will be an online platform where businesses can advertise and acquire potentially useful products and materials that might otherwise be destined for disposal in landfills. The District has the link on the SWMD webpage. The District will promote the Materials Marketplaces as a part of the website and Facebook outreach.			
New	Industrial Technical Assistance	2024	Ongoing	5
	The District will provide industrial technical assistance upon request for support for Ohio EPA grants and assist with grant applications as needed. Due to time constraints, the District may refer the business to a consultant for additional grant writing assistance. Advertisements for this program will be listed on the District's website and have a list on hand of consultants in order to readily provide resources to businesses. Collaboration with the economic development department and/or chamber of commerce may allow further outreach.			
New	Industrial Solid Waste and Recycling Assessments	2024	Ongoing	5
	Companies desiring audits are welcome to contact the District and will be directed to businesses that can help with conducting waste audits. The SWMD will add a Business Content page on the website which will contain a Waste Audit How-To Guide and Steps to Better Business Recycling. A flyer will be developed and included as an insert when conducting the annual surveys which will direct businesses to the SWMD website and available resources. Advertisements for this program will be listed on the District's website and have a list on hand of consultants in order to readily provide resources to businesses. Collaboration with the economic development department and/or chamber of commerce may allow further outreach.			

5. Restricted & Difficult to Manage Wastes, Special Collection Events

Status	Name	Start Date	End Date	Goal
Existing	Annual Electronics Collection Event	Existing	Ongoing	2, 5
The SWMD offers an annual electronic collection event. The SWMD contracts with a private business to manage electronics at the collection event and remove for furthering processing. The SWMD charges a nominal fee for TVs and CTR monitors; but reserves the right to charge user fees for any electronics collected.				
Existing	Paint Recycling Drop-off Program	Existing	Ongoing	2, 5
January 2015 the SWMD began a latex paint collection program. The District built a shed to serve as a drop-off location for residents to drop-off leftover latex paint. The site is un-attended but monitored on a routine basis. Once the shed has a larger quantity of paint cans, District staff delivers the paint cans to a private facility for recycling. Providing costs and manageability are reasonable, paint will continue to be collected.				
Existing	Styrofoam / ESP Recycling Drop-off Program	Existing	Ongoing	2, 5
The District uses the shed to serve as a drop-off location for residents to drop-off Styrofoam / ESP. The site is un-attended but monitored on a routine basis. Once the shed has a larger quantity of Styrofoam / ESP, District staff delivers the Styrofoam / ESP to a private facility for recycling. Providing costs and manageability are reasonable, Styrofoam / ESP will continue to be collected.				
Existing	Yard Waste Collection from Municipalities/Private Haulers	Existing	Ongoing	2, 5
Yard waste management is decentralized. Collection or drop-off opportunities are made available by some cities, villages, and townships (Springboro, Mason, and Deerfield Township, Lebanon, and Franklin). Either the public entity provides the service or contracts with a private business/hauler. Collection frequency varies (each city or village maintains their own level of service list). Two private haulers, Waste Management and Rumpke offer subscription based curbside yard waste from their customers.				

6. Education/Outreach

Status	Name	Start Date	End Date	Goal
Existing	Yard Waste Information - Website	Existing	Ongoing	2, 5
Yard waste management is decentralized. Collection or drop-off opportunities are made available by the city, village or township. The District's website guides residents to the city, village, and township websites for information about their programs. There are four registered Class IV compost facilities operating within the District.				
Existing	Scrap Tire Disposal Information - Website	Existing	Ongoing	3, 4, 6
Locations that accept tires are listed on the District's web page. As retailers and materials are identified the website will be updated. Take-back programs vary so residents are guided to contact retailers prior to dropping off materials. The Ohio EPA's Scrap Tire Report includes tires recycled from the District's Litter Program. Warren County Combined Health District typically hosts four scrap tire amnesty dates a year.				
Existing	Educational Presentations/Displays	Existing	Ongoing	3, 4
Educational displays are typically presented at the County Fair, Coney Island and the Cincinnati Zoo. Literature was distributed at several community events. This program will be incorporated in the outreach and marketing plan.				
Existing	District Website and Facebook page	Existing	Ongoing	3, 4
The SWMD maintains a website meeting the requirements prescribed by Goal 3 of the 2020 State Plan. The site promotes recycling and includes locations where materials may be taken and information about the Education and Awareness Program.				
The website has the essential information and ease of navigability. To build upon its success the SWMD will monitor and update the site at least quarterly to contain accurate and up-to-date information at all times. The SWMD will work with all 24 political jurisdictions to add the SWMD's website link to their home webpages and help to add community recycling information to their specific websites. The District will also begin developing a common suite of materials and messaging to promote and enhance recycling information which will be made available on the website and promoted to the 24 political jurisdictions to include on their websites.				

Status	Name	Start Date	End Date	Goal
The website will add a Business content page which will include recycling resources such as the 6 drop-off containers in the northern half of the District that accept newspapers, Waste Audit How-To Guide and Steps to Better Business Recycling.				
Existing	HHW Information - Website	Existing	Ongoing	3, 4, 6
Locations where residents may dispose of HHW are listed on the District's web page. Residents are encouraged to call the District for information. Providing costs and manageability are reasonable latex paint will be collected at an un-attended shed located behind the SWMD offices.				
Existing	Communication with the public through website, emails, Facebook and phone consultations.	Existing	Ongoing	3, 4
The District will continue to use the website, email, Facebook, and phone as communication mediums to support community outreach initiatives. The District will develop a slogan, catchphrase and/or District recycle symbol to be used in all messaging.				
New	Boost outreach and education around backyard composting, smart landscaping, grass-cycling, and leaf mulching or mowing in place.	2024	Ongoing	3, 4
Boost outreach and education messaging on social media and around backyard composting, smart landscaping, grass-cycling, and leaf mulching or mowing in place.				
New	Focused messaging on expansion of plastics recycling	2024	Ongoing	3, 4
In 2021 and 2022, the local MRF which receives most residential collection material announced the acceptance of plastic tubs and cups. A local processor has recently opened which accepted EPS (expanded polystyrene ex. Styrofoam). Flexible plastics may also be taken to grocery stores which accept these materials. The District will focus resources for messaging on the newly accepted plastics recycling.				
New	HHW material education and outreach.	2024	Ongoing	4, 5
The District will create or share post/messaging on HHW material outlets and ways to handle materials.				
New	Recycle Right and New Recyclable Materials Outreach Campaign for drop-off and curbside programs.	2024	Ongoing	3, 4
The District will focus education messages for residents on the importance of recycling right and keeping contamination out of the recycling stream for drop-off and curbside programs. Quarterly station a staff member for a day at a minimum one of the public drop-offs. See Appendix L for Outreach Priority.				
New	Develop customizable materials that can be posted for curbside and drop-off recycling programs.	2024	Ongoing	3, 4
Develop customizable materials that can be posted on community webpages and/or social media platforms that educate residents on allowable and unacceptable materials for curbside and drop-off recycling programs.				
New	Offer reduction tips on social media and the webpage.	2024	Ongoing	3, 4
The District will incorporate waste reduction tips into social media posts and on the website.				
New	Outreach to multi-family	2024	Ongoing	3, 4
The District will develop an outreach plan for multi-family housing landlords and property management companies to help establish or improve multi-family housing recycling programs.				

7. Grants, Economic Incentives, Market Development

Status	Name	Start Date	End Date	Goal
Existing	Mini-grant Program	Existing	Ongoing	7
In 2015, the SWMD began offering Recycling Mini-Grants to Warren County schools, scouts and non-profit groups of up to \$250 for use in composting and recycling projects. The number of grants awarded depends on the amount requested and funds available. Grants are competitive.				
New	Advertise mini-grant more through communities and school contacts.	2024	Ongoing	7
The District can advertise the mini-grant through conversations with community leaders, posting on social media				

Status	Name	Start Date	End Date	Goal
New	Apply for Ohio EPA grants to help businesses expand or implement recycling programs.	2024	Ongoing	7

The District will provide technical assistance to apply for OEPA grants as interested businesses approach the District with recycling initiatives.

8. Enforcement & Clean-up

Status	Name	Start Date	End Date	Goal
Existing	Roadside Litter Collection Program	Existing	Ongoing	None

The District has two employees that utilize people sentenced to community service through the courts to aid in the cleanup activities. The number of road miles serviced, the number of parks served, bags of trash, tires, etc. collected and total hours worked by employee and community service worker are recorded annually.

9. Other Programs

Status	Name	Start Date	End Date	Goal
Existing	District Surveying Program	Existing	Ongoing	2, 10

The SWMD surveys the waste haulers annually to determine the amount of materials collected for recycling from residents and businesses in the District. Commercial and industrial surveying is administered at a minimum every five years. The SWMD utilizes Ohio EPA's annual data for commercial recycling information and plans to annually target a small portion of commercial businesses to survey beginning in 2024.

Existing	Contingency 1 - Drop-off Recycling	Existing	Ongoing	1
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Contingency 1 was developed if a waste hauler was determined to be in violation of the Performance Obligation Agreement due to not offering non-subscription curbside recycling service to households in the unincorporated areas of the townships and exceeded the 90-day grace period to be back in compliance. Contingency 1 allows the District to site and operate drop-off recycling stations in specific areas of the townships. Each site would have two 6-cubic yard dumpsters to collect at a minimum paper, glass, plastics, and metals. Drop-off recycling stations would be available 24 hours a day, 365 days a year.

Existing	Contingency 2 - Franchise Service Areas	Existing	Ongoing	1
----------	---	----------	---------	---

Contingency 2 was developed if Contingency Plan 1 was in operation for two consecutive years. Contingency 2 would allow the District to franchise the service areas in the unincorporated portions of the townships in the District for households to receive waste and non-subscription curbside recycling service.

Existing	Performance Obligation Agreements -All Haulers	Existing	Ongoing	1, 2
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Copies of Obligation Agreements are on file with the District. All trash haulers operating with the District have signed agreements.

10. Outreach, Education, Awareness, and Technical Assistance

Minimum education requirements prescribed by Goal 3:

- District maintains a website at <https://www.co.warren.oh.us/solidwaste/>
- District's webpage serves as a resource guide.
- Solid Waste Management Plan and website serve as an infrastructure inventory.
- The SWMD employs a part-time Environmental Educator available for presentations.

The District as plans to help focus on Goal 4: Outreach and Education. 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.

Education/Outreach Program	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website and Facebook Page	X	X	X	X	X
Public Communication	X	X	X	X	X
Educational Presentations/Displays	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		
Materials Marketplace Referrals			X	X	

11. 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. The local MRF, 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 update and share the correct materials accepted list.

Milestones:

- Collaborate with local MRF to ensure 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 MRF 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 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.

C. Waste Reduction and Recycling Rates

The SWMD did not meet the 25% residential/commercial waste reduction rate goal in the reference year, 2020, and the SWMD will continue to strive to that goal throughout the planning period with additional education and outreach initiatives.

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

Year	Projected Quantity Collected (tons)	Residential/Commercial WRR ¹ (%)
2024	50,808	21%
2025	51,106	21%
2026	51,404	21%
2027	51,702	21%
2028	52,001	21%
2029	52,299	20%

Notes: WRR = Waste Reduction Rate

Source:

Appendix K, Table K-1

Sample Calculation:

Waste Reduction Rate = Recycled / Total Generated

Table 5-4 Industrial Waste Reduction and Recycling Rate

Year	Projected Quantity Collected (tons)	Industrial WRR ¹ (%)
2024	130,881	92%
2025	130,881	92%
2026	130,881	92%
2027	130,881	93%
2028	130,881	93%
2029	130,881	93%

Notes: WRR = Waste Reduction Rate

Source:

Appendix K, Table K-2

Sample Calculation:

Waste Reduction Rate = Recycled / Total Generated

CHAPTER 6: COST AND FINANCING OF PLAN IMPLEMENTATION

Purpose of Chapter 6

Ohio Revised Code Section 3734.53(B) requires a solid waste management plan to present a budget. This budget accounts for how the SWMD will obtain money to pay for operating the SWMD and how the SWMD will spend that money. For revenue, the solid waste management plan identifies the sources of funding the SWMD will use to implement its approved solid waste management plan. The plan also provides estimates of how much revenue the SWMD expects to receive from each source. For expenses, the solid waste management plan identifies the programs the SWMD intends to fund during the planning period and estimates how much the SWMD will spend 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 SWMD 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 SWMD will not have enough money to pay for all planned expenses or if the SWMD has reason to believe that uncertain circumstances could change its future financial position, then the plan must demonstrate how the SWMD will balance its budget. This can be done by increasing revenues, decreasing expenses, or some combination of both.

This chapter of the solid waste management plan provides an overview of the SWMD's budget. Detailed information about the budget is provided in Appendix O.

A. Overview of SWMD's Budget

The activities and services described in Chapter 5 are supported through three main sources of revenue: generation fee, county contributions, and sale of recyclables. The District projects to receive an annual average of \$370,931 in revenues over the first six years of the planning period (2024-2029). The first six years of District expenses are projected to average an annual of \$372,111. Expenses are projected higher than revenues, expecting a net loss with the purpose of drawing down the reserve balance.

Figure 6-1 Projected Revenues and Expenses



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 that is 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 that is generated within the levying SWMD and accepted at either a transfer facility or landfill located 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.

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.

1. Disposal Fee

The District does not receive revenue from disposal fees.

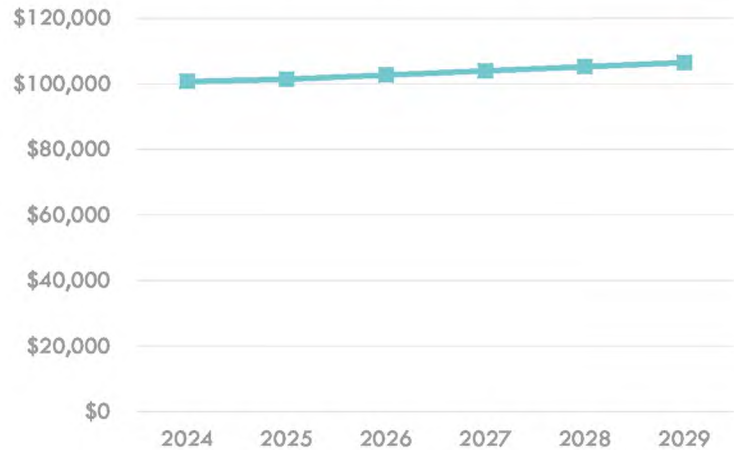
2. Generation Fees

In accordance with ORC 3734.573, a solid waste management policy committee may levy fees on the generation of solid wastes within the district. In 2005, the District adopted, ratified, and implemented a \$0.50 per ton generation fee. This fee amount has remained unchanged and will remain unchanged for this planning period.

To forecast future revenues anticipated from the generation fee, the historic revenues were analyzed in Appendix H. Over the past five years the quantity of waste the SWMD collected its generation fee on followed an inclining trend with a spike in 2019. The total waste disposal average over the past five years is 190,823 tons. Generation Fee revenues are based on projected tonnage in Appendix D.

The District operates on a cash accounting basis, and, as a result, tonnages for fee tracking purposes are not recorded until fee revenue is actually received from a landfill facility. Waste Disposed tons are based on actual revenue from 2016-2021. Total revenue from 2022-2038 is based on projections from Appendix D not including out-of-state waste.

Figure 6-2 Projected Generation Fee Revenue



3. Rates and Charges

The District does not receive revenue from rates and charges

4. Contract Fees

The District does not receive revenue from contract fees.

5. Other Sources of District Revenue

Recycling Revenue

The SWMD previously collected an occasional revenue from sale of recyclables. Recycling revenue is not projected during the planning period.

Reimbursement

Reimbursement revenues are miscellaneous monies resulting from worker's compensation refunds, unused community grant refunds, various rebates, and personnel reimbursements. Reimbursement revenue is not projected during the planning period.

County Contributions

The Warren County Courts provides the SWMD with \$30,000 per year to support the use of community service works for Litter Collection program activity.

Donations

Donation revenue is not projected during the planning period.

Other

Other revenue is not projected during 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	Generation Fees	Other Revenue				Total Revenue
		Recycling Revenue	Reimbursements	County Contributions	Donations	
Reference Year						
2020	\$97,013	\$91	\$5	\$30,000	\$1,780	\$128,889
Planning Period						
2024	\$101,083	\$0	\$0	\$30,000	\$0	\$131,083
2025	\$101,800	\$0	\$0	\$30,000	\$0	\$131,800
2026	\$103,078	\$0	\$0	\$30,000	\$0	\$133,078
2027	\$104,362	\$0	\$0	\$30,000	\$0	\$134,362
2028	\$105,650	\$0	\$0	\$30,000	\$0	\$135,650
2029	\$106,943	\$0	\$0	\$30,000	\$0	\$136,943

Source(s) of Information:

Year 2020 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 of 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 composting facilities);
- offering collection programs (such as for yard waste and scrap tires);
- providing outreach and education;
- providing services; and
- paying for community clean-up programs.

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	Year						
	Reference	Planning Period					
	2020	2024	2025	2026	2027	2028	2029
Plan Preparation (1.a)	\$2,511	\$3,978	\$4,018	\$4,058	\$5,044	\$41,014	\$9,431
District Administration (2.a)	\$155,408	\$113,484	\$116,889	\$120,395	\$124,007	\$127,728	\$131,559
HHW Collection (2.e.2)	\$1,488	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Electronics Collection (2.e.3)	\$10,191	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130
Other Collection Drives (2.e.5)	\$600	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Education/Awareness (2.g)	\$6,563	\$13,109	\$13,427	\$13,755	\$14,093	\$14,441	\$14,799
Litter Collection/Education (2.m)	\$7,824	\$12,164	\$67,529	\$14,555	\$69,991	\$17,091	\$17,604
Total Expenses	\$184,585	\$153,366	\$212,493	\$163,394	\$223,766	\$210,904	\$184,024

Source(s) of Information:

Year 2020 sourced from Quarterly Fee Reports

Planning period years sourced from Appendix O

Sample Calculations:

Total Expenses = sum of expenses category

1. Plan Monitoring/Prep.

1.a Plan Preparation

The District contracted a consultant for developing the 2024 Plan Update using Format 4.1. The expense line item shown are for consulting fees for plan preparation.

This cost includes staff and contracts with outside consultant to prepare the SWMD’s solid waste management plan updates. The SWMD assumed the cost of the contract for all subsequent plan updates would be the same.

2. Plan Implementation

2.a District Administration

- 2.a.1 Personnel
This is the cost for payroll (one full-time coordinator and two full-time litter) and benefits (including PERS, Medicare, and insurance), supplies (including postage, reproductions, advertising, printing, utilities, etc.), webpage maintenance, office equipment, and travel. Administrative costs also include staffing time for some program costs which are difficult to separate into their own line item. The costs of the program in 2016 through 2022 are actual expenses. Administrative costs are increased 3 percent on an annual basis to account for raises and cost of living adjustment. Note: Warren County Courts provides \$30,000 annually to support the Litter Collection Program.
- 2.a.2 Office Overhead – The costs of the program in 2016 through 2022 are actual expenses. Costs are increased 3 percent on an annual basis to account for raises and inflation.
- 2.a.3 Other – No expenses budgeted.

2.e. Special Collections

- 2.e.2. HHW Collection – This is the actual cost for latex paint collection. A budget of \$2,500 for latex paint collection is budgeted and remains flat through the planning period.
- 2.e.3. Electronics Collection – A budget of \$6,000 for annual electronics collection is budgeted and remains flat through the planning period.
- 2.e.5. Other Collection Drives - A budget of \$2,000 for Styrofoam and other collections is budgeted and remains flat through the planning period.

2.g. Education/Awareness

- 2.g.1 Education Staff - This is the cost for a part-time educator and supplies. The costs of the program in 2016 through 2022 are actual expenses. Costs are increased 3 percent on an annual basis to account for raises and inflation.
- 2.g.2. Advertisement/Promotion - This is the cost for outreach and education program supplies. A flat amount of \$1,500 is expected annually for print costs, meeting expenses, distribution of reports and flyers, etc. for the following programs: Adult Education, Educational Displays, Recycle Right Campaign, Recognition, Community Report, Presentations, Classroom Lessons, and School Administrators.
- 2.g.3. Other - This is the cost budgeted for mini-grants.

2.m. Litter Collection

This is the cost for operational costs which include fuel for litter and cleanup activities. Expenditures also include miscellaneous supplies such as providing bags, vests, gloves, and signs for cleanup projects. Costs slightly inflated to \$20,000 in 2018 to cover any miscellaneous or inflation increases. Costs are increased 3 percent on an annual basis to account for inflation.

2025 and 2027 - The SWMD will purchase two new litter crew trucks. The cost of each truck is estimated at \$55,000 each. The cost is based on previous quoted prices from the county service department.

D. Budget Summary

Table 6-3 presents a summary of the budget for the 2020 reference year and the first six years of the planning period (2024 to 2029). 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				
2020	\$128,889	\$184,841	-\$55,952	\$1,398,955
Planning Period				
2024	\$131,083	\$153,366	(\$22,283)	\$1,284,144
2025	\$131,800	\$212,493	(\$80,694)	\$1,203,450
2026	\$133,078	\$163,394	(\$30,316)	\$1,173,134
2027	\$134,362	\$223,766	(\$89,404)	\$1,083,730
2028	\$135,650	\$210,904	(\$75,254)	\$1,008,476
2029	\$136,943	\$184,024	(\$47,081)	\$961,395

Source(s) of Information:

Year 2020 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

The SWMD Reserve Account comprises funds that the SWMD received through tier fees from the Big Foot Run Sanitary Landfill, which closed in 1999. 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 2020.

B. Planning Period

The planning period for this solid waste management plan is 2024 to 2038.

C. Goal Statement

The District will achieve the following Goal:

Goal 1: The SWMD shall provide the opportunity to recycle to at least 80% of the residential population.

D. Explanations of differences between data previously reported and data used in the solid waste management plan

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

Data does not differ.

- b. 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

The SWMD will use its normal operational procedures to monitor plan implementation activities and determine whether and when a material change in circumstances has occurred affecting the District that requires a formal solid waste management plan amendment. The Warren County Board of County Commissioners and the policy committee meet at least twice per year, to receive updates on District implementation activities, enact necessary legislative actions, and perform the annual review of the implementation of the solid waste management plan. The frequency of these meetings are as necessary to allow both the County Commissioners and the policy committee to detect and respond to changing circumstances.

The SWMD continually monitors and evaluates solid waste activities within the District that would indicate significant changes in how the solid waste stream is managed. Circumstances that may result in a material change include, but are not limited to the following:

- Solid Waste Generation in the District decreases by 25%
- Solid Waste Facilities accepting District waste
 - Landfill(s) permitted and daily capacity decreases by 25%
 - Landfill(s) remaining life is less than 2 years
 - Transfer Facility permitted and daily capacity decreases 25%
 - Transfer Facility(s) recycling activities decreases by 25%
 - Waste Hauler activities
- Projected Solid Waste Generation decreases by 25%
- Private Recycling Activities decreases by 25%
- Financing for Plan Implementation decreases by 20%
- Changes in Strategies for Waste Reduction or Recycling
- Delay of more than One Year in Program Implementation
- Legislative Changes

If any member of the Board of County Commissioners or the District Director believes that a material change has occurred, the member or the Director will notify the Chairperson of the Board of County Commissioners and place an item on the agenda for the next meeting, or schedule a special meeting, as appropriate. The County Commissioners will review the changed circumstances, and utilizing any of the applicable criteria described above, or based on the estimated impact of the change on the projections, timetables, programs, and activities contained in the approved District Plan, approve or disapprove a resolution to recommend the preparation of a formal Plan Amendment. The County Commissioners may refer this matter to the Policy Committee for further analysis or for a preliminary recommendation. The County Commissioners will make a determination on whether to request that a Plan Amendment be prepared by the Policy Committee within 90 days after the matter is first placed on its agenda, unless the time period is formally extended by the County Commissioners. Upon making the determination, the County Commissioners will provide press releases to newspapers of general circulation within the District informing the public of its decision. If a recommendation for a Plan Amendment is adopted, the Policy Committee will prepare the Plan Amendment to address the material change in circumstances. The schedule for the development of the Plan Amendment, and the approval, ratification, and implementation, will be established by the Policy Committee, depending upon the extent of the amendment required to address the change in circumstances.

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

1. Curbside Recycling Services

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

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT	Weight of Materials Collected from SWMD (tons)
							✓	
<i>Non-subscription curbside</i>								
NSC1	Carlisle Village	Warren	Agreement between SWMD and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream		217
NSC2	Corwin Village	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		71
NSC3	Franklin City	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		3,269
NSC4	Harveysburg Village	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		68
NSC5	Lebanon City	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		1,052
NSC6	Maineville Village	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		53
NSC7	Mason City	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		2,787
NSC8	Morrow Village	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		134
NSC9	Springboro City	Warren	Contract between a political jurisdiction and a private hauler	Bi-Weekly	Paper, Plastic, Metals, Glass	Single Stream Manual		1,563
NSC10	South Lebanon City	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		354
NSC11	Waynesville Village	Warren	Contract between a political jurisdiction and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		56
Total								9,624

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: 2020 District data

All cities and villages in the SWMD have non-subscription curbside achieved through contracts between the municipality and a trash hauler. Provision of solid waste services is privatized in the SWMD, no public haulers provide hauling services. 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.

All townships in the SWMD have subscription curbside achieved through Performance Obligation agreements between the SWMD and waste haulers. All residents living in a township who have subscription trash service must be enrolled in non-subscription curbside recycling. All waste haulers providing trash service in the SWMD are required to offer non-subscription curbside recycling service to their customers in the unincorporated areas of the townships. To provide service in these areas, waste haulers must sign and adhere to a Performance Obligation agreement which specifies materials be collected on a weekly basis, containers to be provided, and with educational and awareness responsibilities.

Residents mix all recyclables (single stream) in bins or carts for curb collection.

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

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected ⁽¹⁾	Type of Collection	PAYT	Weight of Materials Collected from SWMD (tons)
							ü	
Subscription curbside								
SC1	Butlerville Village	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		Included with Harlan Township
SC2	Clearcreek Township	Warren	Agreement between SWMD and a private hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		1,257
SC3	Deerfield Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		2,575
SC4	Franklin Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		568
SC5	Hamilton Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		1,684
SC6	Harlan Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		276
SC7	Massie Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		73
SC8	Pleasant Plain Village	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		Included in Harlan Township
SC9	Salem Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		179
SC10	Turtlecreek Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		854
SC11	Union Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		163
SC12	Washington Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		153
SC13	Wayne Township	Warren	Resident Directly Subscribes with Hauler	Weekly	Paper, Plastic, Cartons, Metals, Glass	Single Stream Manual		317
							Total	8,098

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: 2020 District data

2. Drop-Off Recycling Locations

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

ID #	Name of Drop-off Site	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (yes or no)	Weight of Materials Collected from SWMD (tons)
Full-time, urban drop-offs							
FTU1	Deerfield Township - 8395 Snider Road	Warren	Contract with SWMD and private hauler	24/7	Paper, Plastic, Cartons, Metals, Glass	yes	87
FTU2	Lebanon City - 406 Justice Drive	Warren	Contract with SWMD and private hauler	24/7	Paper, Plastic, Cartons, Metals, Glass	yes	131
FTU3	Lebanon City - 50 S Broadway	Warren	Contract between political jurisdiction and private hauler	24/7	Paper, Plastic, Cartons, Metals, Glass	yes	This address data is included with the Justice Drive location data
FTU4	Mason - 2095 Kings Mill Road	Warren	Contract between political jurisdiction and private hauler	24/7	Paper, Plastic, Cartons, Metals, Glass	yes	328
FTU5	Various Drop-Offs	Warren	Rumpke provided data for various drop-offs throughout the county but did not provide specific addresses. The County does not run these drop-offs	24/7	Paper, Plastic, Cartons, Metals, Glass	yes	339
Total							886

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: 2020 District data

Drop-off recycling opportunities consist of two 6-cubic yard containers located at each site. Recyclables are commingled. Containers are emptied weekly.

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

ID #	Name of Drop-off Site	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (yes or no)	Weight of Materials Collected from SWMD (tons)
Part-time, urban drop-offs							
None							
Total							0

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

ID #	Name of Drop-off Site	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (yes or no)	Weight of Materials Collected from SWMD (tons)
Full-time, rural drop-offs							
None							
Total							0

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

ID #	Name of Drop-off Site	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (yes or no)	Weight of Materials Collected from SWMD (tons)
Part-time, rural drop-offs							
None							
Total							0

Table B-2e: Inventory of Other Drop-off Sites Available in the Reference Year

ID #	Name of Drop-off Site	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected ⁽¹⁾	Drop-off Meets All Minimum Standards? (yes or no)	Weight of Materials Collected from SWMD (tons)
Other drop-offs							
None							
Total							0

3. 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	Weight of Materials Recovered (tons)	Waste Processed (tons)	Bypass Waste (tons)	Total Waste (tons)	Recovery Rate in Reference Year (percent)
None							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: Inventory Curbside Recycling and Trash Collection Service Providers in the Reference Year

Name of Provider	County(ies) Served	Trash Collection Service				Curbside Recycling Service		
		PAYT	Residential	Commercial	Industrial	Residential	Commercial	Industrial
Republic Waste Services	Warren		✓	✓	✓	✓	✓	✓
Rumpke Waste, Inc.	Warren		✓	✓	✓	✓	✓	✓
Waste Management	Warren		✓	✓	✓	✓	✓	✓

Source: 2022 web and desktop research

Three private haulers operate in the county providing recycling and trash collection services. According to agreements, private haulers are required to offer recycling services to residential customers. Residents living in unincorporated areas directly contract services with private haulers. Incorporated cities negotiate hauling contracts for the residents.

C. Composting Facilities

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

ID#	Facility or Activity Name	Compost Class	Publicly Accessible	Location	Waste Received from the SWMD	
					Food Waste (tons)	Yard Waste (tons)
Compost Facilities						
YW1	Melena Organic Compost	III		3268 US Rte 42S		61
YW2	NPK Compost Facility	IV		10795 Hughes Rd		1274
YW3	Klasmulch	IV		788 Reading Rd		330
YW4	The Siebenthaler Company	IV		5250 Cobblegate Dr		99
YW5	Marvins Organic Gardens Class IV	IV		2055 S US Rte 42 S		68
YW6	Hauler/Grocer			N/A	572	
Total					572	1,833
Community Yard Waste Collection Programs						
YW7	City of Mason leaf collection			Mason, Ohio		N/A
YW8	City of Lebanon			Lebanon, Ohio		N/A
YW9	City of Springboro			Springboro, Ohio		N/A
YW10	Village of Waynesville			Waynesville, Ohio		N/A
YW11	City of South Lebanon			South Lebanon, Ohio		N/A
YW12	Deerfield Township			Deerfield Township, Ohio		N/A
Total					0	0
Mulching Operations						
YW13	City of Mason brush collection			Mason, Ohio		N/A
YW14	Deerfield Township			Deerfield Township, Ohio		N/A
Total					0	0
Land Application						
	None					
Total					0	0
Anaerobic Digestion						
	None					
Total					0	0

Source: 2020 Ohio EPA Compost Facility Planning Analytical Report

Two private sector haulers, Waste Management and Rumpke, provide yard waste collection service to customers. Hauling trucks do not have truck scales so individual hauler quantities are not available. Compost facilities (all classes) track material volumes delivered and report to Ohio EPA, which is how the District tracks composting activities.

Four municipalities and one township, Mason, Lebanon, Springboro, Waynesville, and Deerfield Township, provide some form of curbside yard waste pick-up. In the reference year, Mason provides their residents the opportunity to place brush and leaves at the curb utilizing the Public Works Department to haul materials. Crews chip the brush making it available for residents and municipality use while leaves are delivered to local nurseries. Lebanon provides their residents the opportunity to place yard waste, small limbs, brush, and grass at the curb. Curbside yard waste collection is part of the refuse collection contract held with Rumpke and composted at their facility. In addition, Lebanon utilizes the Service Department to collect yard waste at two drop-off days per year (spring and fall). Brush is chipped and used by the municipality. Springboro provides their residents the opportunity to place yard waste, small limbs, brush, and grass at the curb as part of the refuse contract held with Waste Management. Yard waste is delivered to a compost facility. Springboro also utilizes the Service Department to collect leaves at

the curb during the fall. Leaves are delivered to Swartz Mulch where it's utilized as mulch. Deerfield Township's Service Department provides brush and leaf pickups yearly on a predetermined schedule.

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	N/A	N/A	572	
Total			572	0

Source: 2020 Ohio EPA Compost Facility Planning Analytical Report

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

E. Material Handling Facilities Used by the SWMD in the Reference Year

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

Facility Name	County	State	Type of Facility	Weight of Material Accepted from SWMD (tons)
Rumpke Center City Recycling - Hamilton County: Commercial	Hamilton	OH	MRF	3,589
Rumpke Center City Recycling - Hamilton County: Residential	Hamilton	OH	MRF	11,685
Rumpke Elmwood Recycling Cincinnati: Commercial	Hamilton	OH	MRF	526
Rumpke Recycling - Dayton: Residential	Montgomery	OH	MRF	688
Rumpke Recycling - Dayton: Commercial	Montgomery	OH	MRF	38
Total				16,526

Source: Material Recovery Facility and Commercial Recycling Data", Ohio EPA, 2020.

Note: MRF = material recovery facility

Three facilities reported receiving the SWMD recyclable materials. All are material recovery facilities (MRF) and perform some level of processing materials to market.

APPENDIX C: POPULATION DATA

A. Reference Year Population

Table C-1a: Reference Year Population Adjustments

Community	Warren
Before Adjustment	242,337
Additions	
Springboro	1,191
Carlisle	214
Subtractions	
Middletown	3,777
Monroe	118
Loveland	1,034
After Adjustment	238,813

Source: "2020 Ohio County Population Estimates" prepared by Ohio Development Services Agency, Office of Research

Table C-1b: Total Reference Year Population

Total Reference Year Population	
Before Adjustment Population	After Adjustment Population
242,337	238,813

Reference year population is taken from Ohio Department of Development's Office of Strategic Research (ODOD, OSR). OSR provided estimate populations for 2020 based on the 2010 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 four communities that are located in more than one solid waste management District: Springboro, Middletown, Monroe and Loveland. The majority of Springboro and Carlisle resides in Warren County; however, the majority of population for the other three municipalities is outside of Warren County. Adjustments were made to add the portion of Springboro and Carlisle located in Montgomery County to the Warren County population and to subtract the portion of the municipalities located in Warren County from the Warren County population.

B. Population Projections

Table C-2: Population Projections

Year	Warren
2020	238,813
2021	241,553
2022	244,506
2023	247,460
2024	250,413
2025	252,746
2026	256,542
2027	260,338
2028	264,134
2029	267,930
2030	271,725
2031	275,802
2032	279,879
2033	283,956
2034	288,032
2035	292,109
2036	292,109
2037	292,109
2038	292,109

Source: Mid-Ohio Regional Planning Commissions County Growth Projections 2020-2050, updated July 26, 2019

Sample Calculations:

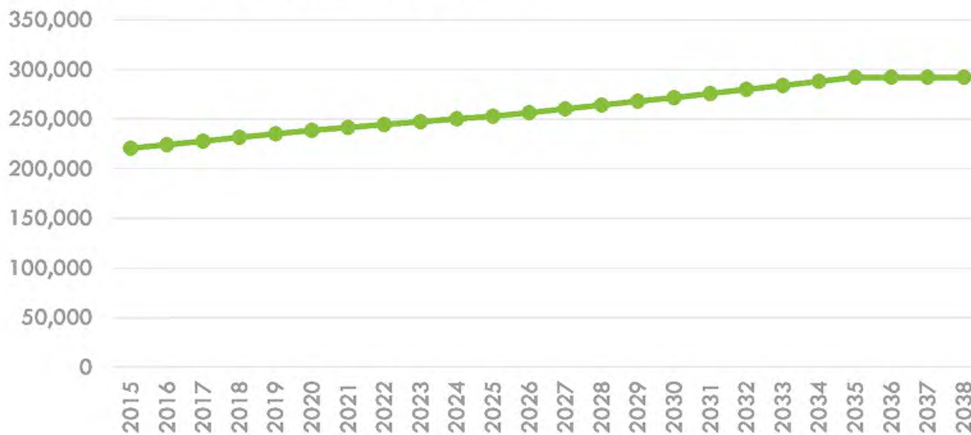
Projected population in 2020 = 238,813

Population change 2020 to 2025 = 13,933

Projected population in 2021 = 2025 population – 2020 population / 5 years + 2020 Population = 241,553

Figure C-1 depicts the historical and projected population for Warren County demonstrating a relatively flat population.

Figure C-1 Historical and Projected 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 2010 census data and projected estimates for 2015, 2020, 2025, 2030, and 2035. To determine population estimates between these years, straight-line interpolation was used.

Over the fifteen-year planning period, population figures are expected to increase 22 percent, averaging a 1.4 percent annual increase.

Population projections can gauge future demand for services, but in projection calculations there are room for errors because of the difficulty associated with forecasting. As projected by ODSA, population is expected to increase. However, when compared to historical population growth, the projected growth is modest. According to the United States Census Bureau between the years 2015 and 2020 population for Warren County grew by 8 percent, averaging a 2 percent annual increase.

APPENDIX D: DISPOSAL DATA

A. Reference Year Waste Disposed

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

Facility Name	Location		Waste Received from SWMD (TPY)			
	County	State	Residential/ Commercial	Industrial	Excluded	Total
<i>In-district facilities</i>						
None						0
<i>Out-of-district facilities</i>						
Rumpke Brown County Landfill	Brown	OH	403		22	425
Wilmington Sanitary Landfill	Clinton	OH	1		11	12
Pine Grove Regional Facility	Fairfield	OH	0	48		48
SWACO Franklin County Sanitary Landfill	Franklin	OH	0.12			0.12
Rumpke Sanitary Landfill	Hamilton	OH	148,209	2,856	18,753	169,819
Hancock County Landfill	Hancock	OH	0.03			0.03
Stony Hollow Landfill	Montgomery	OH	7,955	9,595	65	17,615
Preble County Sanitary Landfill	Preble	OH	9			9
American Landfill	Stark	OH	61	12		73
<i>Out-of-state facilities</i>						
Twin Bridges Landfill	Madison	IN	0	3	0	3.21
Medora Sanitary Landfill	Jackson	IN	0	9	0	8.50
Rumpke of KY Inc - Pendleton Co Landfill	Pendleton	KY	2	141	0	143.00
Bavarian Trucking Co Inc	Boone	KY	1,173	367	0	1,539.50
Total Direct Haul Waste Disposed in Landfills			157,813	13,030	18,851	189,694

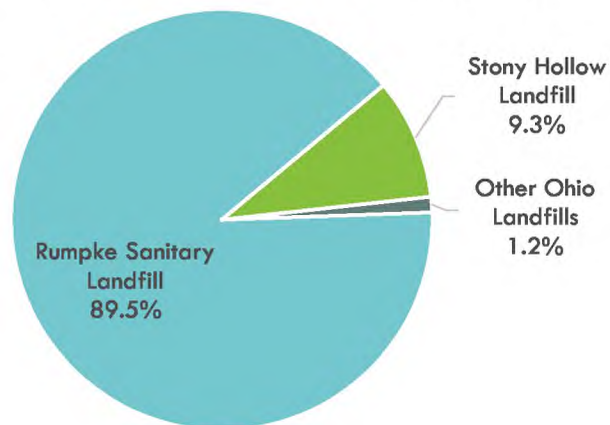
¹ The facilities listed in Table D-1a and identified as able to accept waste from the SWMD (in Appendix M) will constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).

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. "2020 Ohio Facility Data Report Tables". August 9, 2021., Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2020" Indiana Department of Environmental Management. "Waste Received" Excel File, Kentucky Energy and Environment Cabinet. "Waste Quantity Report 2021" Excel File.

Waste flows to the landfills either by direct haul or through a transfer facility. Approximately 86 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 Hamilton County. Approximately 1.2% of waste was disposed in out-of-state landfill facilities.

Figure D-1 In-State Landfill Disposal (2020)



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)
None.					0
Total			0	0	0

¹ The facilities listed in Table D-1a and identified as able to accept waste from the SWMD (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. "2020 Ohio Facility Data Report Tables". August 9, 2021. Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2020"

Captive landfills are landfills used to dispose of waste generated exclusively by the manufacturing company that owns the landfill. District waste was not disposed in a captive landfill in the reference year.

Source(s) of Information: Facility Annual Operational Reports for 2020

Table D-2 Reference Year Waste Transferred¹

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/Commercial	Industrial	Excluded	Total	
In-district facilities							
None						0	
Out-of-district facilities							
Republic Service Evendale Transfer Facility	Hamilton	OH	20,803		25	20,829	Rumpke Sanitary Landfill & Bavarian Waste
Montgomery County South Transfer	Montgomery	OH	5,728			5,728	Rumpke Landfill
Out-of-state facilities							
Dearborn County Trash and Recycling Transfer Station	Dearborn	IN	644	0	308	953	N/A
Total Transferred Waste			27,176	0	334	27,510	

¹ The facilities listed in Table D-2 and identified as able to accept waste from the SWMD (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. "2020 Ohio Facility Data Report Tables". August 9, 2021, Ohio EPA. "Disposal Recycling and Generation Analytic. Summary for 2020", Indiana Department of Environmental Management. "Waste Received" Excel File

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 14 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 no in-district transfer stations located in the District. In 2020, the Republic Service Evendale Transfer Facility managed the majority of waste transferred.

Table D-3: Reference Year Total Waste Disposed

	Residential/ Commercial	Industrial	Excluded	Total
Direct Hauled	157,813	13,030	0	170,844
Transferred	27,176	0	0	27,176
Total	184,989	13,030	0	198,019

¹ The facilities listed in Table D-3 and identified as able to accept waste from the SWMD (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. "2020 Ohio Facility Data Report Tables". August 9, 2021. Ohio EPA. "Disposal Recycling and Generation Analytic Summary for 2020"

No waste to energy facilities were used as a management method.

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 SWMD's are not required to account for excluded waste in the solid waste management plan.

B. Historical Waste Analysis

Table D-4 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)
2011	212,693	4.33	168,021	30,060	7,425	205,506
2012	217,240	3.95	156,792	17,243	8,253	182,288
2013	219,169	4.11	164,517	13,671	9,515	187,703
2014	219,257	4.33	173,286	15,889	0	189,175
2015	224,469	4.22	172,994	26,287	10,158	209,439
2016	227,063	4.10	170,082	23,507	11,219	204,808
2017	228,882	3.97	166,005	16,988	16,507	199,500
2018	228,882	4.18	174,546	24,590	3,136	202,272
2019	234,602	4.26	182,284	14,622	21,411	218,317
2020	238,813	4.24	184,989	13,030	19,184	217,204

Source:

Ohio EPA ADR Review Forms for 2011-2020 for population and waste disposal data. Population data for 2020 was taken from Table C-1.

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

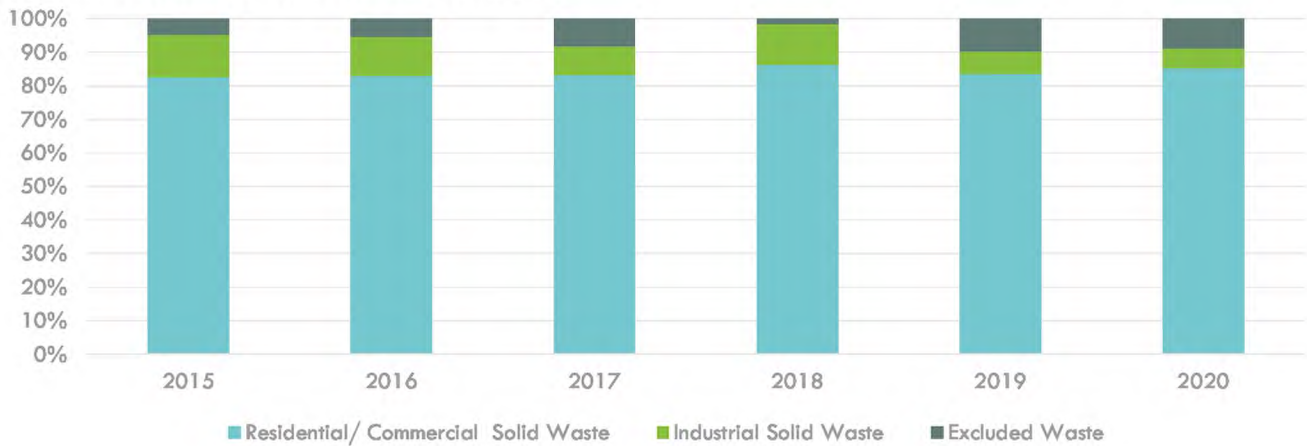
183,170 + 12,511 + 18,876 = 214,557 tons disposed in 2020

(Residential/Commercial tons * 2,000 pounds per ton) / 365 days / Population = Residential/Commercial disposal rate

(183,170 tons * 2,000 pounds per ton) / 365 days / 238,813 persons = 4.2 pound per person per day)

From 2015 to 2020 total disposal demonstrates a 7% increasing trend with average annual disposal of roughly 171,352 tons. The analysis below separates the waste disposal sectors to determine if there are any correlations for waste disposal in the SWMD.

Figure D-2 Percentage of Waste Disposal as Total



1. Residential/Commercial

The SWMDs 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 2015 to 2019 at a higher rate than population growth which increased less than a half percent.

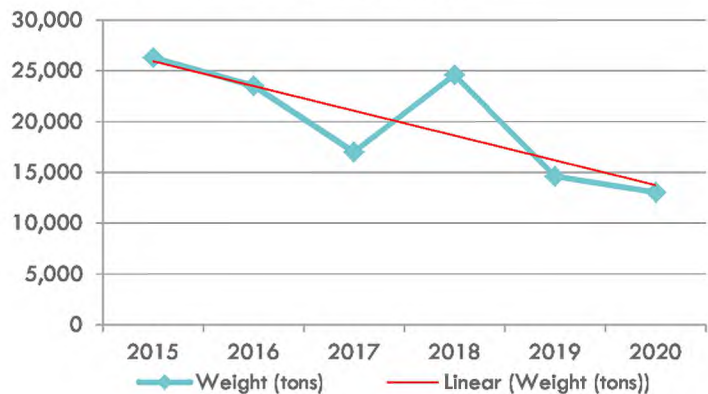
Figure D-3 Residential/Commercial Disposal Analysis



2. Industrial Waste

Industrial waste is not a major component of the SWMD’s disposal stream, accounting for an average of 9% of total disposal annually over the past 5 years. As shown in Figure D-4 industrial disposal have decreased since 2015.

Figure D-4 Industrial Disposal Analysis



3. Excluded Waste

Excluded waste has contributed between 1.6% to 9.8% of total disposal annually in the SWMD over the past 5 years. Since 2015, disposal of excluded waste has increased from 10,158 tons per year to 19,184 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-5 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)
2020	184,989	13,030	0	198,019	27,176
2021	183,868	12,644	0	196,512	26,969
2022	186,116	12,269	0	198,385	27,226
2023	188,364	11,906	0	200,270	27,485
2024	190,612	11,553	0	202,165	27,745
2025	192,389	11,211	0	203,599	27,941
2026	195,278	10,878	0	206,156	28,292
2027	198,167	10,556	0	208,723	28,645
2028	201,057	10,243	0	211,300	28,998
2029	203,946	9,940	0	213,886	29,353
2030	206,835	9,645	0	216,480	29,709
2031	209,938	9,359	0	219,298	30,096
2032	213,042	9,082	0	222,124	30,484
2033	216,145	8,813	0	224,958	30,873
2034	219,248	8,552	0	227,800	31,263
2035	222,351	8,298	0	230,649	31,654
2036	222,351	8,052	0	230,403	31,620
2037	222,351	7,814	0	230,165	31,587
2038	222,351	7,582	0	229,933	31,556

<p>Residential/Commercial: Use average annual per capita disposal rate of 4.17 lb/person/day</p>	<p>Residential/Commercial projections based on 2011 to 2020 average annual per capita disposal calculated at 4.17 pounds per person per day. The per capita rate of 4.17 pounds per person per day is representative of the typical per person disposal historically exhibited. Applying the 4.17 pounds per person per day to the increasing population over the planning period averages a waste disposal of 208,861 tons which falls between the 190,000- and 223,000-ton fluctuation exhibited for the SWMD.</p>
<p>Industrial: Average Annual Percent Change of -2.96%</p>	<p>The 10-year annual average percent change keeps the projections through the planning period within historical disposal ranges.</p>
<p>Excluded: Flat 0 tons</p>	<p>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 SWMD's are not required to account for excluded waste in the solid waste management plan.</p>

APPENDIX E: RESIDENTIAL/COMMERCIAL RECOVERY DATA

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 Warren County survey efforts. Data was aggregated from businesses that responded to the survey.

Table E-1 Commercial Survey Results

NAICS	Textiles	Commingled Recyclables (Mixed)	Unadjusted Quantities	Adjustments	Adjusted Quantities
42			0		0
44			0		0
45			0		0
48			0		0
49			0		0
51			0		0
52			0		0
53			0		0
54			0		0
55			0		0
56			0		0
61			0		0
62			0		0
71			0		0
72			0		0
81			0		0
92			0		0
Other:	48		48		48
Other:	48	1,739	1,787		1,787
Unadjusted Total	96	1,739	1,835	0	1,835
Adjustments			0		
Adjusted Total	96	1,739	1,835		

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. No adjustments were made to this data.

Table E-2 Data from Other Recycling Facilities

Program and/or Source of Materials/Data	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Wood	Unadjusted Total	Adjustments	Adjusted Total
Buybacks										
None								0		0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0
Adjustments								0		
Adjusted Total	0	0	0	0	0	0	0	0		
Scrap Yards										
None								0		0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0
Adjustments								0		
Adjusted Total	0	0	0	0	0	0	0	0		
Processors										
None								0		0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0
Adjustments								0		
Adjusted Total	0	0	0	0	0	0	0	0		
MRFs										
Rumpke Center City Recycling - Commercial	211	37	27	2,610	588	116		3,589		3,589
Rumpke Center City Recycling - Residential	1,995	353	254	2,422	5,561	1,101		11,685		11,685
Rumpke Elmwood Recycling Cincinnati - Commercial	0		8	335	12	123	48	526		526
Rumpke Recycling Dayton - Residential	27	18	11	102	447	82		688		688
Rumpke Recycling Dayton - Commercial	37						1	38		38
Unadjusted Total	2,270	408	300	5,469	6,608	1,422	49	16,526	0	16,526
Adjustments								0		
Adjusted Total	2,270	408	300	5,469	6,608	1,422	49	16,526		
Grand Total	2,270	408	300	5,469	6,608	1,422	49	16,526		

Quantities reported in Table E-3 were obtained from Ohio EPA reports. No adjustments were needed.

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

Ohio EPA Data Source	Glass	Plastic	Card-board	Mixed Paper	Non-ferrous	Wood	Comm-ingled	Other	Unadj. Total	Adjust.	Adjusted Total
Walmart Recycling in Ohio	0	46	1,603	4	1,487	0		74	3,213		3,213
Home Depot Corporation	0	1	136	0	0	109		25	271		271
Meijer Corporation	0	47	780	2				0	829		829
Target Corporation	0	6	253	1	7		2		269		269
Dollar General Corporation	0	1	227	1					230		230
Kohl's Corporate Office & Headquarters	0	5	57				5	0	68		68
Kroger	0	91	2,515					24	2,631		2,631
CVS							44		44		44
ALDI	0	8	183			482			673		673
Unadjusted Total	0	206	5,754	8	1,494	591	51	124	8,227	0	8,227
Adjustments									0		
Adjusted Total	0	206	5,754	8	1,494	591	51	124	8,227		

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

Other Recycling Programs or Other Sources of Data	Appliances/ "White Goods"	HHW	Electronics	Scrap Tires	Food	All Other Paper	Commingled Recyclables (Mixed)	Yard Waste	Other: Christmas Tree Lights	Other: Latex Paint	Other: Expanded Polystyrene	Unadjusted Total	Adjustments	Adjusted Total
Ohio EPA Scrap Tire Data				1,330								1,330		1,330
Household Hazardous Waste Collection										65		65		65
Electronics Collection Events			13									13		13
Curbside							16,159					16,159		16,159
Drop-offs						0	886				1	887		887
Composting					572			1,833				2,404		2,404
Warren County Shred Day						51						51	51	0
Yard Waste Collection from Private Haulers								2,546				2,546	1,833	713
Christmas Tree Light Collection									2			2		2
Litter Collection Program	2	1										3		3
Unadjusted Total	2	1	13	1,330	572	51	17,045	4,378	2	65	1	23,459	1,884	21,575
Adjustments						51		1,833				1,884		
Adjusted Total	2	1	13	1,330	572	0	17,045	2,545	2	65	1	21,575		

Quantities reported in Table E-4 is a compilation of quantities diverted through programs and services. Adjustments were made to exclude 1,833 tons of “Yard Waste and 52 tons of “All Other Paper” because it is included from other sources.

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

Material	Quantity (tons)
Appliances/ "White Goods"	2
Household Hazardous Waste	1
Used Motor Oil	0
Electronics	13
Scrap Tires	1,330
Dry Cell Batteries	0
Lead-Acid Batteries	0
Food	572
Glass	2,270
Ferrous Metals	408
Non-Ferrous Metals	1,793
Corrugated Cardboard	11,223
All Other Paper	6,616
Plastics	1,628
Textiles	96
Wood	640
Rubber	0
Commingled Recyclables (Mixed)	18,834
Yard Waste	2,545
Other (Aggregated)	192
Recycling Subtotals	48,163
Incineration	0
Grand Total	48,163

During the reference year, the District diverted 48,163 tons of material from the residential/commercial sector. Table E-5 reports the quantities of materials diverted. Commingled recyclables 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	1,835
Buybacks	0
Scrap Yards	0
Processors	0
MRFs	16,526
Ohio EPA Commercial Retail Data	8,227
Ohio EPA Scrap Tire Data	1,330
Household Hazardous Waste Collection	65
Electronics Collection Events	13
Curbside	16,159
Drop-offs	887
Composting*	2,404
Warren County Shred Day**	0
Yard Waste Collection from Private Haulers	713
Christmas Tree Light Collection	2
Litter Collection Program	3
Total	48,163

* Composting was 4,378 tons but was reduce for double counting.

** Shred day was 51 tons but was reduce for double counting.

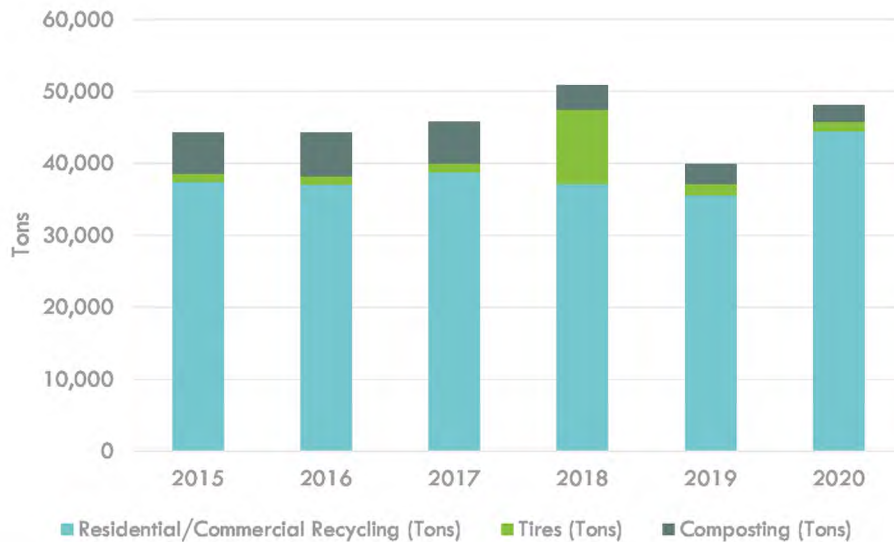
B. Historical Recovery

Warren County diverts an average of 45,817 tons of material per year, or on average 1.08 pounds per person per day.

Historical Recycling Analysis: 2015-2020

Year	Population	Residential/ Commercial Recycling (Tons)	Tires (Tons)	Composting (Tons)	Total (Tons)	Average Pounds/ Person/Day	Annual Percent Change (%)	Annual Tonnage Change (Tons)
2015	223,864	37,370	1,171	5,755	44,296	1.08		
2016	226,539	37,062	1,180	6,077	44,320	1.07	0.1%	24
2017	228,709	38,764	1,193	5,830	45,786	1.10	3.3%	1,467
2018	231,945	37,154	10,271	3,466	50,891	1.20	11.1%	5,104
2019	234,602	35,509	1,647	2,770	39,926	0.93	-21.5%	-10,965
2020	238,813	44,430	1,330	2,404	48,163	1.11	20.6%	8,237
Average over 5 Year Period					45,817	1.08	2.7%	773

Figure E-1 Historical Recycling by General Material Category: 2015-2020



Source(s): Tables E-7

The data analysis in Tables E-7 show residential and commercial programmatic historical and projected recycling data from 2015 to 2038.

Table E-7 Historical and Projected Residential/Commercial Recovery by Program/Source

Year	Commercial Survey	Buybacks	MRFs	Ohio EPA Commercial Retail Data	Ohio EPA Scrap Tire Data	Household Hazardous Waste Collection	Electronics Collection Events	Curbside	Drop-offs	Composting	Warren County Shred Day	Christmas Tree Light Collection	Litter Collection Program	Totals (tons)
2020	1,784	0	16,526	8,227	1,330	65	13	17,722	887	3,117	51	2	3	49,727
2021	1,788	0	16,559	8,244	1,478	66	17	17,939	887	3,117	51	2	0	50,147
2022	1,806	0	16,559	8,244	1,478	67	17	18,156	887	3,117	51	2	0	50,382
2023	1,824	0	16,559	8,244	1,478	67	17	18,372	887	3,117	51	2	0	50,618
2024	1,842	0	16,559	8,244	1,478	68	17	18,544	887	3,117	51	2	0	50,808
2025	1,860	0	16,559	8,244	1,478	69	17	18,822	887	3,117	51	2	0	51,106
2026	1,879	0	16,559	8,244	1,478	70	17	19,101	887	3,117	51	2	0	51,404
2027	1,898	0	16,559	8,244	1,478	71	17	19,379	887	3,117	51	2	0	51,702
2028	1,917	0	16,559	8,244	1,478	72	17	19,658	887	3,117	51	2	0	52,001
2029	1,936	0	16,559	8,244	1,478	73	17	19,936	887	3,117	51	2	0	52,299
2030	1,955	0	16,559	8,244	1,478	74	17	20,235	887	3,117	51	2	0	52,619
2031	1,975	0	16,559	8,244	1,478	75	17	20,534	887	3,117	51	2	0	52,938
2032	1,994	0	16,559	8,244	1,478	76	17	20,833	887	3,117	51	2	0	53,258
2033	2,014	0	16,559	8,244	1,478	78	17	21,132	887	3,117	51	2	0	53,579
2034	2,034	0	16,559	8,244	1,478	79	17	21,432	887	3,117	51	2	0	53,899
2035	2,055	0	16,559	8,244	1,478	79	17	21,432	887	3,117	51	2	0	53,919
2036	2,075	0	16,559	8,244	1,478	79	17	21,432	887	3,117	51	2	0	53,940
2037	2,096	0	16,559	8,244	1,478	79	17	21,432	887	3,117	51	2	0	53,961
2038	2,117	0	16,559	8,244	1,478	79	17	21,432	887	3,117	51	2	0	53,982

In Table E-7, actual tonnage was used for 2015 through 2020. Projections for each program/source were calculated using the following assumptions and methodology:

- Commercial survey data is projected remain constant throughout the planning period.
- Buyback data is projected to remain constant throughout the planning period. There are no planned changes to the program that the District is aware of at this time.
- MRF data is projected is projected to remain constant throughout the planning period.
- Ohio EPA Commercial Retail data is projected to remain constant throughout the planning period.
- Ohio EPA Scrap Tire data is projected to remain constant throughout the planning period.
- Electronics Collection Event data is projected to remain constant throughout the planning period.
- Curbside data is projected to increase based on change in population, approximately 1.1 percent annually.
- Drop-off data is projected to remain constant throughout the planning period.
- Composting data is projected to remain constant throughout the planning period.
- Warren County Shred Day data is projected to remain constant at 51 tons through the planning period.

APPENDIX F: INDUSTRIAL RECOVERY DATA

A. Reference Year Recovery Data

Tables F-1 through F-4 account for all material being credited to the waste reduction and recycling rate for the industrial sector.

Table F-1 Industrial Survey Results

NAICS	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Commingled Recyclables (Mixed)	Oil, Batteries, Bulbs	Crushed Concrete	Unadjusted Quantities
22												0
31												0
32												0
33												0
42												0
44												0
Other:	1	5,420	1,086	17,570	14,680	790	905	281	31	117	90,000	130,881
Unadjusted Total	1	5,420	1,086	17,570	14,680	790	905	281	31	117	90,000	130,881
Adjustments												0
Adjusted Total	1	5,420	1,086	17,570	14,680	790	905	281	31	117	90,000	130,881

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-1 accounts for material credited for waste reduction and recycling as reported by industrial businesses. 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.

Table F-2 Data from Other Recycling Facilities

Program and/or Source of Materials/Data	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (MRF's)	Ash	Non-Excluded Foundry Sand	Flue Gas Desulfurization	Unadjusted Total
Buybacks															
None															0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustments															0
Adjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scrap Yards															
None															0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustments															0
Adjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Processors															
None															0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustments															0
Adjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MRF's															
None															0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustments															0
Adjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source(s): District industrial survey results and Ohio EPA. "2020 Material Recovery Facility and Commercial Recycling Data." 2021.

Table F-2 data is obtained from the district's industrial 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.

Table F-3 Other Recycling Programs/Other Sources of Data

Other Recycling Programs or Other Sources of Data	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (MRF's)	Ash	Non-Excluded Foundry Sand	Flue Gas Desulfurization	Unadjusted Total	Adjustments	Adjusted Total
Buybacks																	
None															0		0
Unadjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
Adjustments															0		
Adjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Source(s): Ohio EPA. District recorded program data.

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 does not survey or source industrial data from buybacks, processors, scrap yards and MRFs.

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

Material	Quantity (tons)
Food	0
Glass	1
Ferrous Metals	5,420
Non-Ferrous Metals	1,086
Corrugated Cardboard	17,570
All Other Paper	14,680
Plastics	790
Textiles	905
Wood	281
Rubber	0
Commingled Recyclables (Mixed)	31
Ash	117
Non-Excluded Foundry Sand	90,000
Flue Gas Disulfurization	0
Other (Aggregated)	0
Total	130,881

The District diverted 130,881 tons from the industrial sector. Table F-4 reports quantities of each material diverted.

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

Table F-5 Quantities Recovered by Program/Source

Program/Source of Industrial Recycling Data	Quantities (Tons)
Industrial Survey	130,881
Buybacks	0
Scrap Yards	0
Processors	0
MRFs	0
Total	130,881

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

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 2018 to 2020. In 2018, there was a significant, 156%, increase in number of tons recovered. This appears to be mainly due to the number of respondents to the survey and the amount report in the surveys.

Table F-6 Historical Industrial Recovery by Program/Source

Year	Population	Industrial Survey	MRFs	Total (Tons)	Average Pounds/ Person/Day	Annual Percent Change (%)	Annual Tonnage Change (Tons)
2016	224,305	50,161	0	50,161	1.21		
2017	227,878	51,177	4	51,181	1.23	3.0%	1,020
2018	231,452	130,844	83	130,927	3.09	155.8%	79,746
2019	235,025	130,881	0	130,881	3.06	0.0%	-46
2020	238,599	130,881	0	130,881	3.00	0.0%	0
Average over 5 Year Period				82,339	2.32	11.6%	-10,032

Source(s): District Industrial Surveys for 2016 – 2020, “Material Recovery Facility and Commercial Recycling Data” for 2016-2020

Industrial survey data and MRF/ Commercial Recycling Data was used for the historical projections rather than the ADRs due to issues with double counting data.

C. Industrial Recovery Projections

Table F-7 Industrial Recovery Projections by Program/Source

Year	Industrial Recycling Tons	Projections
2020	130,881	<p>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 91% industrial diversion rate. The District projects a flat 130,881 tons throughout the planning period to remain conservative. The District’s industrial recovery projections are presented in Table F-6.</p>
2021	130,881	
2022	130,881	
2023	130,881	
2024	130,881	
2025	130,881	
2026	130,881	
2027	130,881	
2028	130,881	
2029	130,881	
2030	130,881	
2031	130,881	
2032	130,881	
2033	130,881	
2034	130,881	
2035	130,881	
2036	130,881	
2037	130,881	
2038	130,881	

APPENDIX G: WASTE GENERATION

A. Historical Year Waste Generated

Table G-1 Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial				Industrial			Excluded (tons)	Total (tons)	Annual % Change		
		Disposal (tons)	Recycled (tons)	Generated (tons)	Per Capita Generation (ppd)	Disposal (tons)	Recycled (tons)	Generated (tons)			R/C	Ind	Ex.
2016	227,063	170,082	44,320	214,402	5.17	23,507	50,161	73,668	11,219	299,289			
2017	228,882	166,005	45,786	211,791	5.07	16,988	51,181	68,169	16,507	296,467	-1.2%	-7.5%	-0.9%
2018	228,882	174,546	50,891	225,437	5.40	24,590	130,927	155,517	3,136	384,090	6.4%	128.1%	29.6%
2019	234,602	182,284	39,926	222,210	5.19	14,622	130,881	145,503	21,411	389,124	-1.4%	-6.4%	1.3%
2020	238,813	184,989	48,163	233,153	5.35	13,030	130,881	143,911	19,184	396,248	4.9%	-1.1%	1.8%

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

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 from 2016 to 2020, shown in Figure G-1.

Figure G-1 Historic Waste Generated



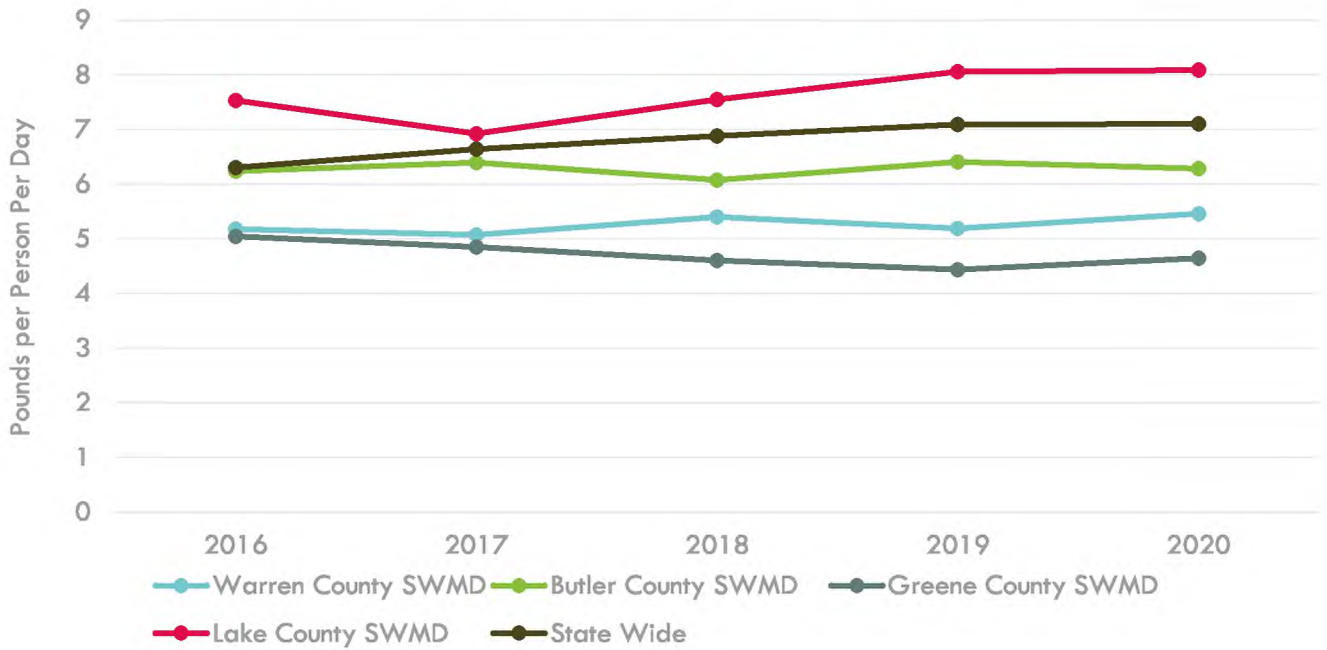
The following table compares the daily per capita generation rates of the District and other select Ohio solid waste management districts (SWMDs). The other solid waste management districts were selected because they share similar population sizes, similar geographical locations, or similar ratios of urban vs. rural land use patterns. The statewide statistics were also included for reference.

Reference Year 2020	Warren County SWMD	Butler County SWMD	Greene County SWMD	Lake County SWMD	Statewide
Population	234,602	390,110	168,522	230,149	1,169,9626
Residential/Commercial Diversion Rate	21%	13%	32%	24%	29%
Industrial Diversion Rate	91%	25%	74%	84%	52%
Total Waste Generation (Disposal + Recycling) P/P/P/D	9.30	11.80	5.54	10.41	13.53
Total Diversion Rate	45%	15%	38%	37%	38%

1. Residential Generation Analysis

Total residential/commercial waste generation in the District has increased approximately 17,000 tons or 8% since 2016 as illustrated in Figure G-2. Of the total generation, disposal increased approximately 13,000 tons or 8% over a 5-year period, while recycling increased nearly 4,000 tons or 9%. Compared to other selected SWMDs, Warren County has a lower average pounds/person/day generation and lower than the average statewide generation for the residential/commercial sector.

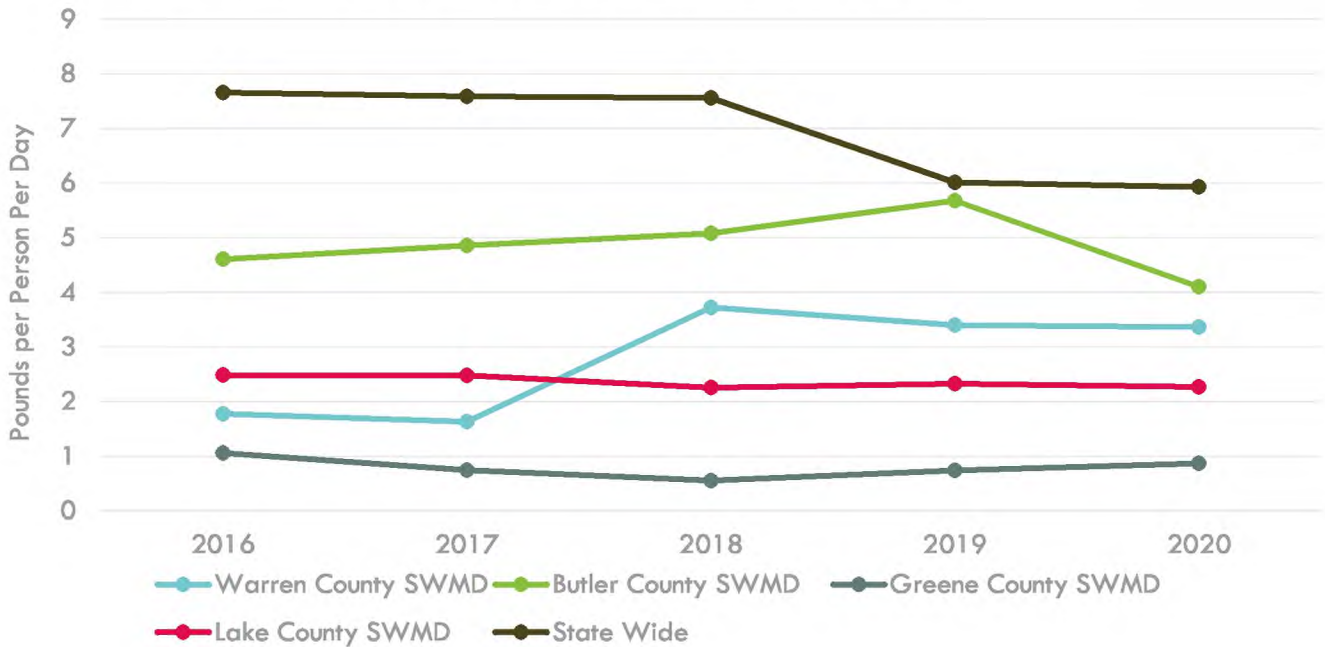
Figure G-2 Historic Residential/Commercial Total Waste Generation Rates for Selected Ohio SWMDs:



2. Industrial Generation Analysis

Total industrial waste generation in the District has increased approximately 70,000 tons or 95% since 2016 as illustrated in Figure G-2. Of the total generation, disposal decreased approximately 11,000 tons or 47% over a 5-year period, while recycling increased nearly 81,000 tons or 161%. Compared to other selected SWMDs, Warren County has a middle range average pounds/person/day generation and lower than the average statewide generation for the industrial sector. The increase from 2017 to 2018 recycling was due to new survey respondents for recycling data collection.

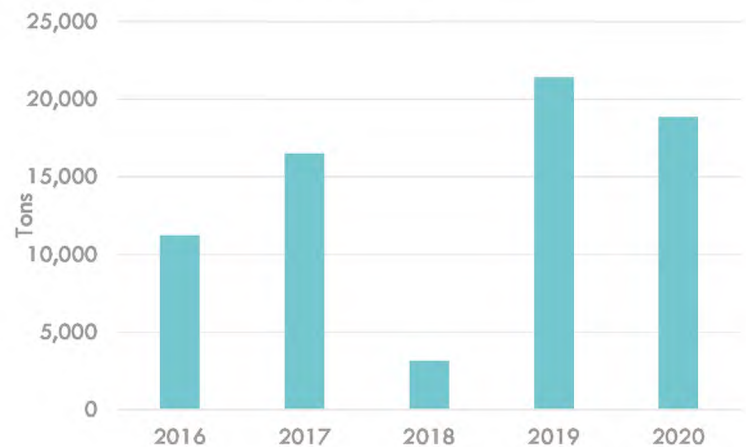
Figure G-3 Historic Industrial Total Waste Generation Rates for Selected Ohio SWMDs:



3. Exempt Waste

The total tons of exempt waste generated in the District is shown in Figure G-5. The exempt tons generated falls under 10% of the total waste stream. Exempt waste accounted for an average of 6.9% of the total material generated in the County.

Figure G-1 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-2, summarizes these projections which are presented in detail in Appendices D, E and F.

- Residential/Commercial Sector
 - Disposal is projected to increase an average annual 4.17 pounds per person per day based on the population increases in Appendix C.
 - Recycling is expected to remain stable and increase slowly based on projections in Appendix E throughout the planning period
- Industrial Sector:
 - Disposal is projected to decrease an average annual -3.36% per year.
 - Recycling is expected to remain constant throughout the planning period
- Excluded Waste: According to Ohio EPA Format 4.1, if excluded waste is 10 percent or less of total disposal in the reference year, then SWMD's are not required to account for excluded waste in the solid waste management plan.

Table G-2 Generation Projections

Year	Population	Residential/ Commercial				Industrial			Total (tons)
		Disposal (tons)	Recycle (tons)	Generated (tons)	Recycled (tons)	Disposal (tons)	Recycle (tons)	Generated (tons)	
2020	238,813	184,989	48,163	233,153	5.35	13,030	130,881	143,911	377,064
2021	241,553	183,868	48,513	232,381	5.27	12,644	130,881	143,525	375,906
2022	244,506	186,116	48,642	234,758	5.26	12,269	130,881	143,150	377,908
2023	247,460	188,364	48,761	237,125	5.25	11,906	130,881	142,787	379,912
2024	250,413	190,612	48,875	239,488	5.24	11,553	130,881	142,434	381,921
2025	252,746	192,389	49,062	241,450	5.23	11,211	130,881	142,092	383,542
2026	256,542	195,278	49,250	244,528	5.22	10,878	130,881	141,759	386,287
2027	260,338	198,167	49,440	247,607	5.21	10,556	130,881	141,437	389,044
2028	264,134	201,057	49,631	250,688	5.20	10,243	130,881	141,124	391,812
2029	267,930	203,946	49,824	253,770	5.19	9,940	130,881	140,821	394,590
2030	271,725	206,835	50,018	256,853	5.18	9,645	130,881	140,526	397,379
2031	275,802	209,938	50,214	260,152	5.17	9,359	130,881	140,240	400,393
2032	279,879	213,042	50,411	263,453	5.16	9,082	130,881	139,963	403,416
2033	283,956	216,145	50,610	266,755	5.15	8,813	130,881	139,694	406,449
2034	288,032	219,248	50,811	270,059	5.14	8,552	130,881	139,433	409,492
2035	292,109	222,351	51,013	273,364	5.13	8,298	130,881	139,179	412,544
2036	292,109	222,351	51,217	273,568	5.13	8,052	130,881	138,933	412,502
2037	292,109	222,351	51,423	273,774	5.14	7,814	130,881	138,695	412,469
2038	292,109	222,351	51,631	273,982	5.14	7,582	130,881	138,463	412,445

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

APPENDIX H: STRATEGIC EVALUATION

The state solid waste management plans establish recycling and reduction goals for solid waste management districts. In this Appendix, the Policy Committee completed a strategic process of evaluating its reduction and recycling efforts. To do this, the status of the reduction and recycling efforts were evaluated in the context of factors presented in the 13 analyses described in Format 4.1. The strategic program evaluation was performed on the following:

In this Appendix the Policy Committee completed a strategic process of evaluating its reduction and recycling efforts. To do this, the status of the reduction and recycling efforts were evaluated in the context of factors presented in the 13 analyses described in Format 4.1. This strategic program evaluation was performed on the following analyses:

- Residential Recycling Infrastructure Analysis
- Commercial Sector Analysis
- Industrial Sector Analysis
- Waste Composition Analysis
- Economic Incentive Analysis
- Restricted and Difficult to Manage Waste Analysis
- Diversion Analysis
- Special Program Needs Analysis
- Financial Analysis
- Regional Analysis
- Data Collection Analysis
- Education and Outreach Analysis
- Processing Capacity Analysis

H-1 RESIDENTIAL RECYCLING INFRASTRUCTURE ANALYSIS

This evaluation of the SWMD’s existing residential recycling infrastructure determines whether the needs of the residential sector are being met and if the infrastructure is adequately performing. There are many materials that can be recycled. The SWMD’s waste management system relies on various collection systems and programs to divert materials from the landfill to be recycled. The residential recycling infrastructure consists of curbside programs, drop-off recycling programs, special event drop-offs, take-back retailers, reuse centers, thrift stores, and a network of food banks. The SWMD’s role in instituting this network of available opportunities varies.

Curbside Programs

Geographical

Single stream curbside recycling programs are available to all 24 political entities (13 incorporated municipalities and 11 townships). The incorporated municipalities have non-subscription curbside achieved through contracts between the municipality and the hauler.

Functionality

All communities in Warren County have access to non-subscription or subscription curbside recycling for single-family households.

Comparison of Reference Year to Currently Approved Plan

As shown in Table H.1, recycling increased since the last plan update from 5,543 to 8,061 tons; a 45% increase.

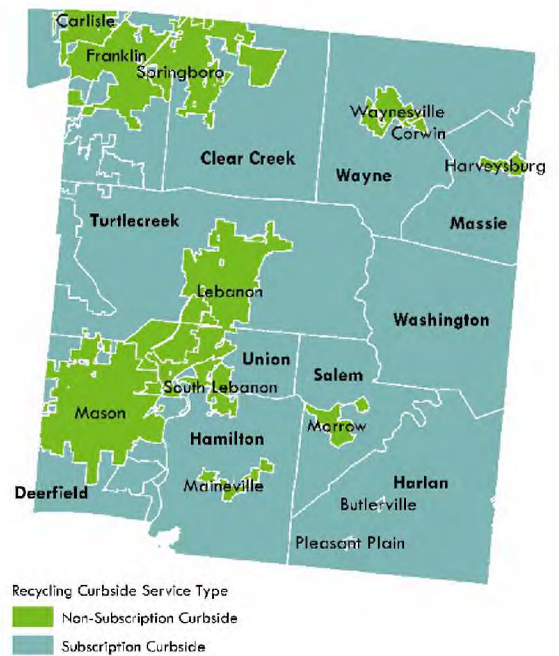


Table H-1.1 Incorporated Municipality Curbside Recycling

Political Entity	2014 Tons	2020 Tons	2014 lb./HH	2020 lb./HH	2020 Service Type
Butlerville Village	Included with Harlan Township	Included with Harlan Township	-	-	Subscription
Carlisle Village	163	216.59	183	216	Non-subscription
Corwin Village	1	71.41	11	569	Non-subscription
Franklin City	442	3269.29	189	1,743	Non-subscription
Harveysburg Village	2	68	20	458	Non-subscription
Lebanon City	941	1051.98	253	314	Non-subscription
Maineville Village	29	52.51	146	233	Non-subscription
Mason City	2,733	2787.28	496	554	Non-subscription
Morrow Village	93	134.13	407	360	Non-subscription
Pleasant Plain Village	Included in Harlan Twp	Included in Harlan Twp	-	-	Subscription
South Lebanon City	247	354.07	322	328	Non-subscription
Waynesville Village	164	55.8	291	104	Non-subscription
Springboro City	728	Montgomery County	243	-	Non-subscription
Total	5,543	8,061			

As shown in Table H-1.2, recycling decreased since the last plan update from 8,193 to 8,098 tons; a 1% decrease.

Table H-1.2 Township Curbside Recycling

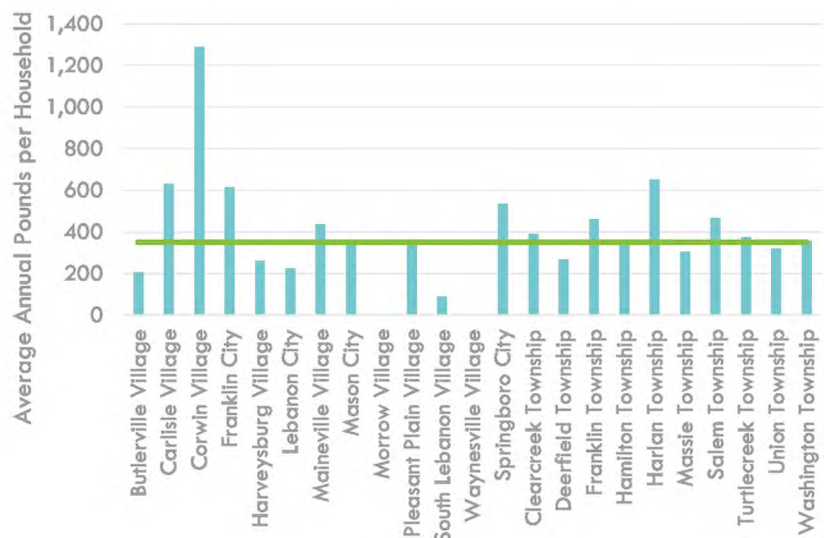
Political Entity	2014 Tons	2020 Tons	2014 lb./HH	2020 lb./HH	2020 Service Type
Clearcreek Township	2,140	1257.11	892	555	Subscription
Deerfield Township	2,500	2575.31	373	406	Subscription
Franklin Township	542	567.59	249	276	Subscription
Hamilton Township	1,485	1683.81	397	477	Subscription
Harlan Township	194	275.7	244	367	Subscription
Massie Township	70	72.64	614	674	Subscription
Salem Township	150	178.73	249	314	Subscription
Turtlecreek Township	646	853.69	346	484	Subscription
Union Township	98	163.1	220	388	Subscription
Washington Township	126	153.36	258	332	Subscription
Wayne Township	242	317.04	266	369	Subscription
Total	8,193	8,098			

Both Tables H.1 and H.2 show calculated data of pounds recovered per household. Household counts are taken from “Population and Household Counts for Governmental Units: 2010, 2000, 1990” dated August 2011 published by Ohio Department of Development Policy Research and Strategic Planning Office for 2014 and report household counts by hauler for 2020. The report determines households based on the number of persons in a home. It does not publish if the households are residing in single family or multi-family units. For purposes of this analysis the number of single versus multi-family units being serviced are unknown. The Performance Obligation Agreements require waste haulers to provide non-subscription curbside recycling to District residents. The agreements further call out “all residential units located in the District”. The language in the agreement is not definitive as to whether residential units refer to both single family and multi-family units. There is ambiguity in regard to the types of units serviced with curbside recycling.

Participation/Performance

While the Policy Committee sees the measured tonnage growth successful, the SWOT identified concerns to improve community participation in the curbside programs. As shown in Figure H.1, setting a benchmark of 350 pounds per household a number of communities fall below. Contracted communities had reported number of households served. For subscription communities, a total number of households served was reported by 3 haulers and this number was divided based on the community population proportion.

Figure H.A1 Community Pounds per Household Recycled in 2020



Through conversations with the MRF receiving the recyclables from the District’s curbside recycling, contamination continues to remain an issue with materials such as non-recyclable plastics, textiles, and food residue in the curbside stream in the region.

Drop-off Programs

Geographical

One drop-off recycling program is funded by the SWMD (Lebanon City on Justice Drive), the other 3 are provided by political entities. All provision and servicing of drop-off locations achieved through contracts between the SWMD or political entity and the hauler.

Performance Analysis

Recycling tonnages reported historically are shown in Figure H.3. Years 2018, 2019, and 2020 demonstrate higher recycling tonnages because new reported community supported drop-off figures. The District relies on the service hauler (which is also the processor) to provide data.

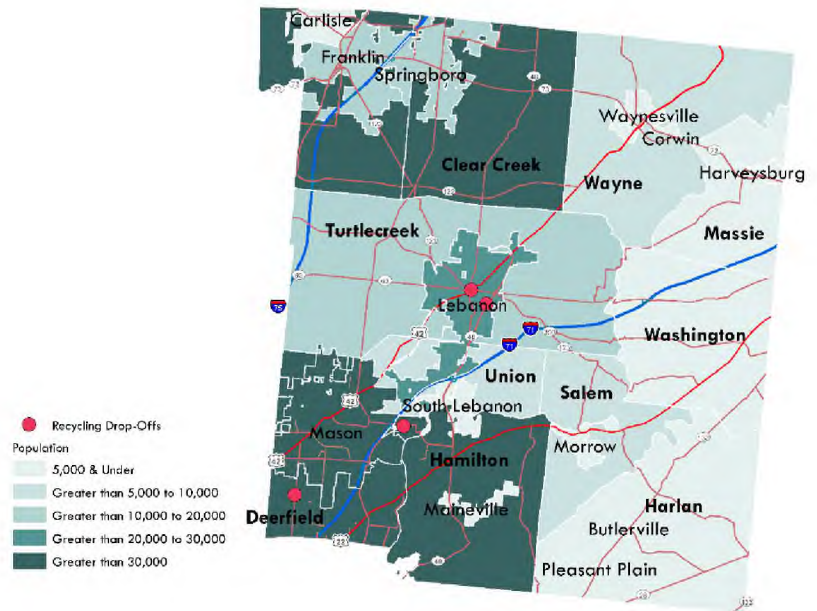
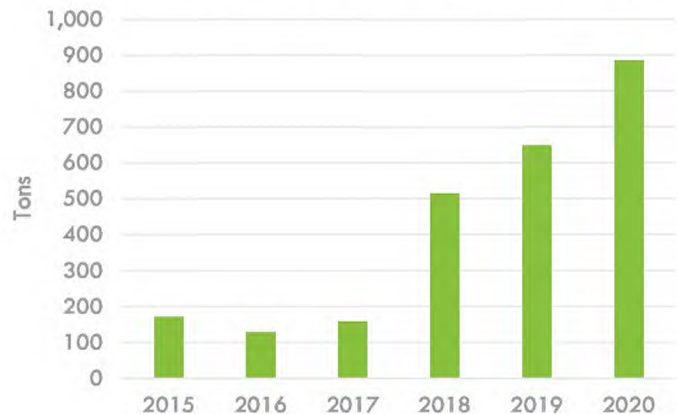


Figure H.2 Historical Trend for Drop-Off Recycling



Data has improved and reports of recycling tonnages are now being received but it is difficult to determine how well the sites are performing. The Policy Committee identified this as a challenge for the program. Other challenges include identifying contamination, contamination rates, and the population served by the drop-offs.

Conclusions/Findings

Possible opportunities include:

- Contamination education through website or shared with communities for them to post on their websites/social media.
- Consider looking at the contamination in the drop-off and curbside programs and targeting those most commonly incorrectly recycled materials and making campaigns out of them.
- Encourage support of reuse and thrift stores.
- Provide educational support to residents and businesses with large amounts of donatable food

H-2 COMMERCIAL/INSTITUTIONAL SECTOR ANALYSIS

This evaluation of the SWMD’s existing commercial/institutional determines if existing programs are adequate to serve the sector or if there are needs that are not being met. The analysis conducted here for this plan update evaluates the strengths and weaknesses of existing programs. The ultimate goal is to determine if the commercial/institutional sector is already adequately served or if the SWMD can do more to address the commercial sector. Commercial/institutional sector within the SWMD consists of the following (non-exhaustive list): commercial businesses, schools and colleges, government agencies, office buildings, stadiums, amusement parks, event venues (stadiums, concert halls), hospitals and non-profit organizations.

Geographical

The SWMD is a single county District geographically located in Warren County. According to “Ohio County Profile of Warren County” prepared by Office of Research the land use/land cover is:

The county is complex and multi-faceted with many different kinds of areas: rural, urban (low and high density), and natural. Warren County is as much a rural community as it is an urban community. Residents, planners, and commissioners continue to develop highly livable communities throughout the County that respect the rural traditions mixing natural and man-made environments. Warren County has attracted population and new development from urbanization activities generated in Dayton and Cincinnati.



Table H-2.1 Commercial/Institutional Establishment Statistics

NAICS Code	NAICS Description	Total Establishment Establishments	Establishments with over 100 Employees
42	Wholesale Trade	207	11
44-45	Retail Trade	895	36
48-49	Transportation and Warehousing	130	0
51	Information	139	3
52	Finance and Insurance	645	4
53	Real Estate and Rental and Leasing	333	2
54	Professional, Scientific, and Technical Services	795	5
55	Management of Companies and Enterprises	10	1
56	Administrative & Support and Waste Management and Remediation Services	302	9
61	Educational Services	201	10
62	Health Care and Social Assistance	2189	25
71	Arts, Entertainment, and Recreation	174	6
72	Accommodation/Food Service	492	14
81	Other Services (Except Public Administration)	846	10
92	Public Administration	297	11

The City of Cincinnati or its suburbs cover a portion of the county's four hundred square miles mostly in southwest corner of the County. The county's largest township, Deerfield Township and the largest City, City of Mason, are located in that portion of the County. Lebanon is the county seat and the third largest urban area and is located in the center of the County. Much commercial development has been along the southwest and central west of the Interstate 71 corridor. Warren County also experienced extended growth east of Interstate 71 in the southern portion of the County. The northwest corner of the County is the "new" growth area. This area along Interstate 75 is developing with residential and commercial growth. For now, the eastern portion of the County remains rural.

Businesses and institutions are concentrated within either a Central Business District (CBD) or more local concentrations within business and residential districts. There are clusters of concentrated commercial businesses/institutions, retail, entertainment areas, etc. throughout the County. In addition to these commercial urban development areas, the County is home to a 364-acre amusement park, an amusement park focused resort, a casino featuring a 1,000-seat grandstand, and tennis center that expands 19 acres.

Commercial businesses or landlords' contract with a private service provider for recycling services.

Functionality

The SWMD does not track many commercial/institutional recycling efforts. Recycling activities and opportunities in this sector are largely unknown and the District offers assistance to businesses who reach out. Throughout the clusters similar waste streams could be generated. One of the challenges of analyzing this sector is the lack of information regarding the services available and received throughout the County. While it is assumed the SWMD could assist this sector, at this time it is unknown. However, one of the SWMD's strengths is the relationship and ability to work with private sector haulers.

Stadiums, Amusement Parks, Event Venues: Very little is known of away-from-home recycling activities. Private haulers offer collection services, but it is unknown if these venues contract for services. The County has a sizable tourist industry. In fact, Warren County is referred to as "Ohio's Largest Playground". The County is home to area attractions, festivals, sporting events, an amusement park, and outdoor recreation activities and is easy access to two international airports and major interstates, making it a great hub-and-spoke destination for visitors. Geographically Warren County offers a metropolitan lifestyle with many major shopping, dining, and cultural attractions. There is a large employment sector in the leisure and hospitality service.

Commercial Businesses: Very little is known of commercial business recycling activities. Private haulers offer collection services, but it is unknown how many businesses contract for services.

Schools, Universities: There are forty-four K-12 public schools in Warren County. Other learning centers, technical, vocational and private schools also exist. Recycling activities at schools is on the onus of the school to subscribe with a private sector service provider. The SWMD provides technical assistance when approached by the schools or colleges and will provide some financial assistance for in-school use recycling containers. Several of the schools have recycling programs to collect paper. The duties of the educator include: conducting adult education, teacher, and school-aged classes that focus on recycling, reducing waste, and composting.

Government Agencies, Office Buildings: Very little is known of government and office business recycling activities. Private haulers offer collection services, but it is unknown how many businesses contract for services.

Diversion

As mentioned earlier, the SWMD does not track many commercial/institutional recycling efforts. Recycling data obtained from this sector is diversion data sourced from Ohio EPA (includes commercial businesses and material

recovery facilities (MRFs)). Collecting data from this sector has historically been time consuming and a challenge to obtain. However, efforts of data collection to the commercial sector, buybacks (scrap yards) and processors could contribute additional diversion.

As shown in Table H.3 a total of 14,177 tons are estimated as commercial recycling activities.

Table H.3 Commercial Recycling for 2020

Program/Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	1835
MRFs	4,115
Ohio EPA Commercial Retail Data	8,227
Total	14,177

Programs

Solid Waste and Recycling Assessments are offered to commercial and institutional businesses upon request. In 2020, waste and recycling assessments were not requested. At this time, SWMD staff does not have the expertise to conduct assessments. The District will offer online resources or consults to reference if requested. Also, businesses are not always responsive.

Conclusions/Findings

The commercial sector is provided different assistance options by the SWMD. The District's website provides the commercial/institutional sector with a list of opportunities to recycle. The most significant barrier is the cost of service in the County has limited solutions.

Possible opportunities include:

- Targeting material-specific campaigns such as paper and cardboard.
- Explore public and private sector partnerships and funding.
- Apply for Ohio EPA grants to help businesses who request to expand or implement recycling programs.

H-3 INDUSTRIAL SECTOR ANALYSIS

This evaluation of the SWMD’s industrial sector determines if existing programs are adequate to serve the sector or if there are needs that are not being met. The analysis conducted here for this plan update evaluates the strengths and weaknesses of existing programs. The ultimate goal is to determine if the industrial sector is already adequately served or if the SWMD can do more to address the industrial sector.

Manufacturing Composition

Manufacturing has grown in Warren County through the years. A few of the largest manufacturing businesses and what they manufacturer include:

Table 3.1 Largest Manufacturers (over 250 employees)

Material	City	NAICS	Employees
Procter & Gamble Co	Mason	32	1150
L3harris Space & Sensors	Mason	33	600
Advics Manufacturing	Lebanon	33	500
Articure	Mason	33	500
Kraft Heinz Co	Mason	31	450
Faurecia	Franklin	33	391
Harris Products Group	Mason	33	350
Armor Group Inc	Mason	33	300
Atricure Inc	Mason	33	300
Burrows Paper Corp	Franklin	32	300
Cincinnati Industrial Mchry Co	Mason	33	300
Down Lite Inc	Mason	33	300
General Dynamics Ordnance	Springboro	33	250

Based on a web search most of these largest industry employers have a corporate sustainability plan. Materials recovered are known for three of the above-identified manufacturers because of responses to SWMD survey requests. Table H-3.2 shows the distribution of industries by NAICS code and how many have more than 100 employees.

Table H-3.2 Industrial Establishment Statistics

NAICS Code	NAICS Description	Total Establishments	Establishments with over 100 Employees
22	Utilities	13	0
31	Manufacturing: Food and Apparel	56	3
32	Manufacturing: Wood, Paper, Printing, Chemical, and Plastics	74	10
33	Manufacturing: Metal, electronics, Transportation, Furniture, and Misc.	176	19

As shown in Table H-3.3, non-excluded foundry sand, cardboard, and paper account for the largest material volumes recycled.

Table H-3.3 Industrial Recycling for 2020

Material	Quantities (Tons)
Glass	1
Ferrous Metals	5,420
Non-Ferrous Metals	1,086
Corrugated Cardboard	17,570
All Other Paper	14,680
Plastics	790
Textiles	905
Wood	281
Commingled Recyclables (Mixed)	31
Ash	117
Non-Excluded Foundry Sand	90,000
Total	130,881

The SWMD does not assist industrial recycling efforts. Recycling activities and opportunities in this sector are largely unknown. Reports seen from other Ohio Counties with higher manufacturing employment demonstrate manufacturing industries leading the way in waste reduction and recycling. Industry is also demonstrated as an enormous consumer of recycled materials. One of the challenges of analyzing this sector is the lack of information regarding the services available and received throughout the County. Reporting is voluntary. There could be opportunity to assist this sector however there would be limitations on time available of SWMD staff.

Programs

Solid Waste and Recycling Assessments

Solid Waste and Recycling Assessments are offered to industrial businesses upon request. In 2020, waste and recycling assessments were not requested. At this time, SWMD staff does not have the expertise to conduct assessments. The District will offer online resources or consults to reference if requested. Also, businesses are not always responsive for direct outreach.

Materials Marketplace Referrals

The District has a link to the Ohio Material Market Place on the district's website. co.warren.oh.us/solidwaste/Business/Default.aspx

Conclusions/Findings

Manufacturing is an important industry in the County. industrial surveys are key in understanding the sectors' waste/recycling and data collection. Consistent high diversion rates in this sector the District concentrates less resources in this sector.

Possible opportunities towards this sector include:

- Promoting Ohio EPA's Material Marketplace and add more information on website.
- Provide industrial technical assistance upon request for support for Ohio EPA grants and assist with grant applications.

H-4 RESIDENTIAL/COMMERCIAL WASTE COMPOSITION ANALYSIS

This evaluation looks at the wastes that typically make up the largest portions of the residential/commercial waste stream and determines whether the SWMD currently has or should have programs to address those wastes.

Composition

Generation Composition

Municipal solid waste (MSW) also referred to as 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 (17.7%), paper and paperboard (15.1%), and rubber, leather & textiles (11.6%).

The SWMD generated 231,333 tons of municipal solid waste in 2020. 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.

Table H.4.1 US EPA Estimated Waste Generated by Material

Material	US EPA % Generated (2018)	Estimated Warren County Tons Generated (2020)
Paper and Cardboard	23.1%	53,858
Food	21.6%	50,361
Yard Trimmings	12.1%	28,211
Plastics	12.2%	28,445
Rubber, Leather, Textiles	8.9%	20,751
Metals	8.8%	20,517
Wood	6.2%	14,455
Glass	4.2%	9,792
Other	2.9%	6,761
Total	100.0%	233,153

Disposal Composition

The SWMD disposed 184,989 tons of municipal solid waste in 2020. About 48,163 tons were recycled and composted, which leaves a large amount of material still being landfilled. Applying the US EPA waste disposal estimates to the SWMD’s waste landfilled gives an approximation of materials landfilled. As shown in Table H.4.2 food waste, plastics, paper and paperboard are the three largest categories of materials being landfilled.

Table H.4.2 US EPA Estimated Waste Disposal by Material

Material	US EPA % Generated (2018)	Estimated Warren County Tons Disposed (2020)
Paper and Cardboard	23.1%	42,733
Food	21.6%	39,958
Yard Trimmings	12.1%	22,384
Plastics	12.2%	22,569
Rubber, Leather, Textiles	8.9%	16,464
Metals	8.8%	16,279
Wood	6.2%	11,469
Glass	4.2%	7,770
Other	2.9%	5,365
Total	100.0%	184,989

Specific Waste Streams

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. Two service providers, Waste Management and Rumpke, provide yard waste collection service to customers. Hauling trucks do not have truck scales so individual hauler quantities are not available. Compost facilities (all classes) track material volumes delivered and report to Ohio EPA, which is how the District tracks composting activities.

Three municipalities and one township, Mason, Lebanon, Springboro, and Deerfield Township, provide some form of curbside yard waste pick-up. In the reference year, Mason provided their residents the opportunity to place brush and leaves at the curb utilizing the Public Works Department to haul materials. Crews chip the brush making it available for residents and municipality use while leaves are delivered to local nurseries. Lebanon provides their residents the opportunity to place yard waste, small limbs, brush, and grass at the curb. Curbside yard waste collection is part of the refuse collection contract held with Rumpke. In addition, Lebanon utilizes the Service Department to collect yard waste at two drop-off days per year (spring and fall). Springboro provides their residents the opportunity to place yard waste, small limbs, brush, and grass at the curb as part of the refuse contract held with Waste Management. Springboro also utilizes the Service Department to collect leaves at the curb during the fall. Deerfield Township’s Service Department provides brush and leaf pickups yearly on a predetermined schedule.

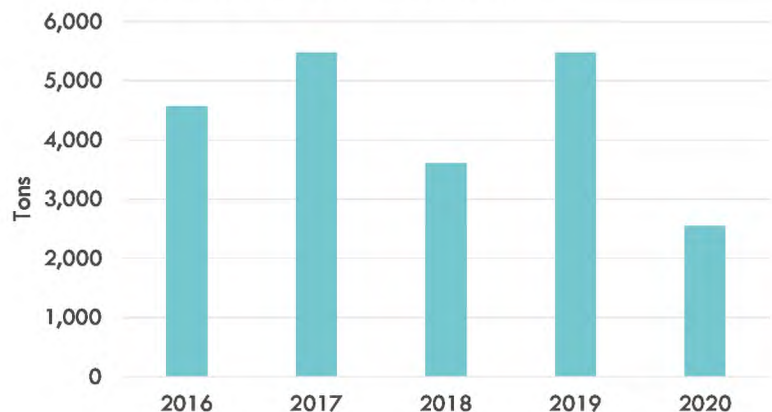
The SWMD provides limited outreach on small, medium, and large-scale composting management methods.

Yard Waste Analysis

Historically yard waste averages 10 percent of the recycled stream. Historical tonnages recycled are shown in Table H-4.1.

Composting can be small, medium, or large scale. A diversely developed system reinforces sustainability and environmental stewardship. The Policy Committee discussed these systems and the benefits of these opportunities, especially decentralized approaches.

Figure H-4.1 Historical Yard Waste Recycling



Food Waste

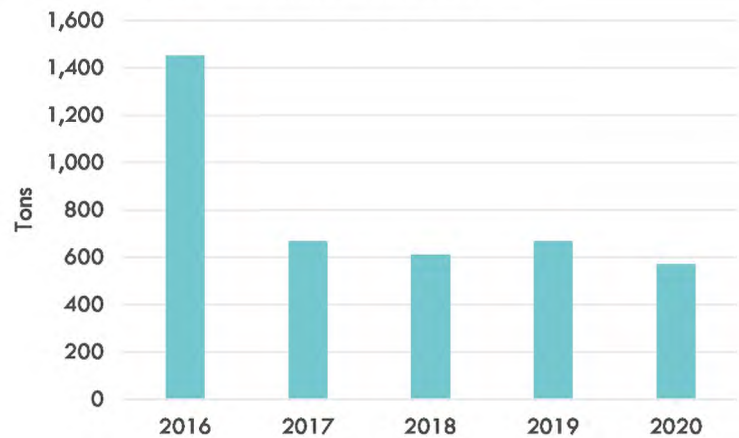
There are several available options to manage food waste including waste minimization, donation, composting, and technologies (anaerobic digesters, in-vessel technologies, etc.). Waste minimization is a management method that has had little promotion by the SWMD. Teaching about making better use of food through storage, portion size, recipe suggestions for leftovers can help prevent food waste. Two permitted Class II facilities are located in the SWMD, however, over 2 years of complaints and Ohio EPA issued violations has led to stricter County policy limiting the activity at these facilities. The SWMD provides limited outreach to the residential/commercial sector regarding the available options to manage food waste.

Food Waste Analysis

Historically food waste recycling has been inconsistent as shown in Table H-4.2.

Food waste is a difficult stream to manage due to limited local collection methods and nearby facilities which accept food waste. The SWOT analysis identified siting and operating Class II compost facilities as a threat within County boundaries because of the historical issues and problems with operating such facilities. However, waste minimization and donation are methods of managing that have not received concerted focus by the District.

Figure H-4.2 Historical Food Waste Recycling



Fiber/Paper

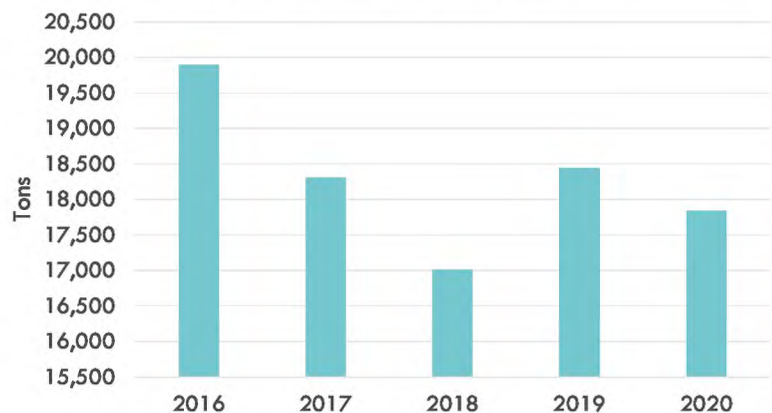
Waste minimization and recycling are two available options to manage paper waste. Waste minimization stops the waste before it starts and recycling is separating the materials from the waste stream and using them as virgin feedstock to manufacture new products. Waste minimization is a management method that has had little promotion by the SWMD. Recycling of paper comes down to available collection methods. Paper is one of the common suite 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 by Performance Obligation agreements by the SWMD. 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. Drop-off recycling containers are available in three political jurisdictions.

Fiber Analysis

Paper (includes cardboard) is one of the largest streams of materials reported as recycled historically as shown in Table H.4.3. The Other than year 2013, paper accounts for approximately 30 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.

Figure H-4.3 Historical Fiber Waste Recycling



Conclusions/Findings

Based on waste characterizations from the state of Ohio, Warren County's largest residential/commercial disposal streams are paper, including cardboard, plastics, and food waste. The District has captured the lower hanging fruit. To divert more material additional policy or education interventions will help push to increase capture rates.

Potential program opportunities include:

- Offer school custodian training/resources on recycling.
- Boost outreach and education around backyard composting, smart landscaping, grass-cycling, and leaf mulching or mowing in place.
- Work with the communities with compost facilities to make sure residents are informed about the program offering/services.
- Consider looking at the contamination in the drop-off and curbside programs and targeting those most commonly incorrectly recycled materials and making campaigns out of them.
- Focus on education and resources on the changes in the area's expansion of plastics recycling (tubs, cups, plastic film, and Styrofoam recycling).
- Support end market development through grants, business assistance, or other programs.

H-5 ECONOMIC INCENTIVE ANALYSIS

By definition, economic incentives encourage increased participation in recycling programs. In accordance with Goal 7 of the 2020 State Solid Waste Management Plan, the SWMD is required to explore how to incorporate economic incentives into source reduction and recycling programs. Since the SWMD does not offer economic incentives, this analysis, evaluates the feasibility of implementing incentives.

In 2020, the SWMD did not offer economic incentives to encourage into source reduction or recycling programs. One of the weaknesses identified during the SWOT analysis was the lack of incentives for people to recycle. There are various incentive models available as described in this analysis.

Pay-As-You-Throw (PAYT)

Pay as you throw (PAYT) is an economic incentive for curbside residents to pay for only the amount of MSW disposed per household. Also referred to as unit pricing, variable rate pricing or user-pay, this per-usage-pricing model has been effective in reducing waste by 50% and increasing recycling while seeing significant savings in tipping fees depending on the community.

PAYT communities often charge a flat-rate based on their waste consumption; similar to other household utilities (electricity, water, gas). The household waste generation can be calculated through by variable billing based on container weight, size, or service frequency using Radio Frequency Identification (RFID). Some popular models require the purchase of custom bags or tags at a cost of typically around \$1-\$2.

There are no PAYT programs in the District.

RFID Readers

Cities have seen success with the use of automated carts with RFID readers for curbside collection. Once the garbage cart is serviced customers are charged only for the number of cart tips, this method can also provide varying cart sizes. Larger recycling containers and a custom-built recycling rewards program, called mygrcitypoints, incentivizes recycling participation, resulting in increased recycling rates and tonnages. Rather than accounting for individual household performance, the points are based on per route recycling weight. Each recycling truck has an assigned neighborhood route, and throughout its route, it is scanning RFID tags on carts and collecting material. At the end of the route, the weight of recyclable material in the truck is divided by the number of RFID tags scanned on the route, the average weight per cart is determined, and each participating household on that neighborhood route receives 10 points per pound based on the determined average. This method encourages neighbors to increase recycling frequency as the more individual households serviced will increase the neighborhood average and result in more points earned. In addition, residents earn points by recycling, community service and volunteering. Points can be redeemed at small local businesses, services and restaurants. Residents can also choose to donate their points to a community project like upgrades to a local park.

As consumers, we have been trained to expect points, rebates and other similar rewards for our purchases or other behaviors desired by advertisers and marketers. A recent trend in the waste industry is to reward residents that participate in recycling programs in a similar fashion. RecycleBank is the most publicized and widely known system; however, other forms of this rewards program are now available from local contractors. The premise of the system is that people receive points for the tons of recyclables collected. The points are redeemable discount coupons for retail purchases. Older programs were based on individual efforts, but recent versions provide rewards on a collective tonnage per route system, which divides the points among the residents on the route who place a tagged

recycling container at the curb. Another simple system is to catch a resident in the act of recycling “Get Caught”. Residents caught recycling can be presented with gift certificates to local commercial venues as a reward for recycling. While not as effective as a PAYT program, these rewards programs are an acceptable choice where infrastructure or rate structure changes are prohibitive. The costs of such a program vary but typically range from \$0.50 to \$1.50 per home per month depending on the number of participating households. This option is probably cheaper than a new billing system and it is likely to have greater public acceptance.

Contract assistance such as aggregating similar services or communities/businesses can increase negotiating power to reduce costs for services.

SWMD Support

The SWMD could support these incentivized recycling programs in several ways. Initially, providing clear and easy-to-understand information on PAYT and other economic incentive programs to communities within the District on their website. Subsequently, connecting with leaders and staff within the District to discover their individual community’s needs; recommending a realistic economic incentive program based on that community’s resources, needs, and current recycling infrastructure. If it is the right fit the SWMD could encourage the community to apply for applicable grant funds to get these programs started. For example, a city with automated cart collection could recommend grant assistance for RFID readers for trucks to initiate a PAYT program. For communities that have manual collection, the SWMD could offer the initial capital to purchase the bags until bag revenue is neutral.

Recycling Mini-Grants

In 2015, the SWMD began offering Recycling Mini-Grants to Warren County schools, scouts, and non-profit groups for up to \$250 for use in composting and recycling projects. The number of grants awarded depends on the amount requested and the funds available. Grants are competitive. There were no grants awarded in 2019 or 2020 due to no applications.

Conclusions/Findings

The PAYT and rebates were designed to incentivize diversion and data support program success for PAYT programs. Mini-grants are available but underutilized by the targeted audience.

Potential program opportunities include:

- Lack of Recycling mini-grants may be related to limited advertisement and further advertising would benefit this program.
- Assistance with this process by lending expertise, potentially funding, for a rate structure study.
- Provide technical assistance for communities interested in RFID tags.
- Advertise mini-grant more through communities and school contacts.
- Conduct a brief survey of the business sectors to ascertain their awareness of SWMD programs.

H-6 RESTRICTED AND DIFFICULT TO MANAGE WASTE STREAMS ANALYSIS

Goal 6 of the 2020 State Solid Waste Management Plan requires SWMDs to provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste (HHW), and obsolete/end-of-life electronic devices. This analysis evaluates the existing programs offered for managing restricted wastes and difficult to manage wastes. For waste streams where programs are not available the SWMD evaluates the need for and feasibility of providing programs.

There are strategies and alternative management options to address all of the wastes (scrap tires, yard waste, lead-acid batteries, HHW, and obsolete/end-of-life electronic devices) required by Goal 6 available for SWMD residents. Strategies are education web-based which include identifying available outlets, benefits of recycling, and hazards of improper handling. Scrap tires and lead-acid batteries are directed to retailer take-back outlets within the SWMD. HHW is directed to permanent facilities located in neighboring Hamilton County. This is possible by an agreement between the two SWMDs and the permanent facilities. The SWMD contracts for an electronic recycling event and a latex paint collection drop-off. Annually the SWMD hosts a computer and electronics recycling event. Every day from dawn to dusk residents have the opportunity to drop off latex paint (limit of 6 cans per week) at shed located behind the SWMD office.

Other materials that are difficult to manage which have outlet opportunities include: pharmaceuticals, appliances, and florescent lamp and ballasts.

The electronics and paint collections were successful in diverting materials from the landfill and recovered for recycling. Opportunity and service of these two collections programs are considered strengths.

Table H-6.1 Restricted and Difficult To Manage Materials Programs

Material	Local Programs
Scrap Tires	Directed to retailer take-back outlets, County Health Department hosts several tire events each year
Appliances	Residents are directed to contact their local trash collection provider or scrap metal processor
Pharmaceuticals	Pharmaceutical diversion is a statewide initiative directed to local police and sheriff offices.
Household and Rechargeable Batteries	Directed to local companies such as Batteries Plus
Bulky Items (such as furniture, carpet, mattresses, etc.)	Residents are directed to contact their local trash collection provider or nearby landfills
Electronics	District Annual computer and electronics recycling event

The District currently does not collect any user fees for the electronics and paint collections.

Conclusions/Findings

The SWMD provides educational opportunities to its residents by directly residents to local recycling and proper disposal facilities for managing hard to recycle and restricted materials for diversion.

Households produce hazardous wastes containing chemicals that pose environmental risk. Informing the public to these dangers and providing outlets for proper disposal or recycling can be a priority item. Education on using less-harmful ingredients and more environmentally friendly products can be increased on the webpage and social media outlets. List other outlets available for other difficult to manage waste such as: chargeable batteries, lead-acid batteries, tires, prescriptions, smoke alarms, used motor oil, cell phones and electronics. Minimal data obtained from lead-acid battery recyclers is a challenge.

Potential program opportunities include:

- Focused HHW material education and outreach with tracking views and engagements will allow for the District to analyze improving outreach to residents in the future.
- Assessment of user fees for any materials collected by the District to pass on the cost of the program.

H-7 DIVERSION ANALYSIS

Waste diversion is defined as the amount of waste recycled and the amount of waste diverted from entering the waste stream through source reduction activities. Waste diversion activities include waste minimization (also called source reduction), reuse, recycling, and composting. The diversion analysis takes a look at the diversion programs, infrastructure, rate and trends, and materials.

Residential/commercial diversion in the SWMD trends a relatively linear line as shown in Figure H.7.1. The slight peak in 2018 is attributed to higher reported yard waste composting.

The material categories reported as most recycled in 2020 include commingled recyclables, other paper, and cardboard. Based on reported data, commingled recyclables are largely being captured by the curbside and drop-off recycling programs and paper and cardboard are being captured by MRFs. Figure H-7.2 shows the residential/commercial material categories diverted in 2020.

Figure H-7.1 Residential/Commercial Diversion

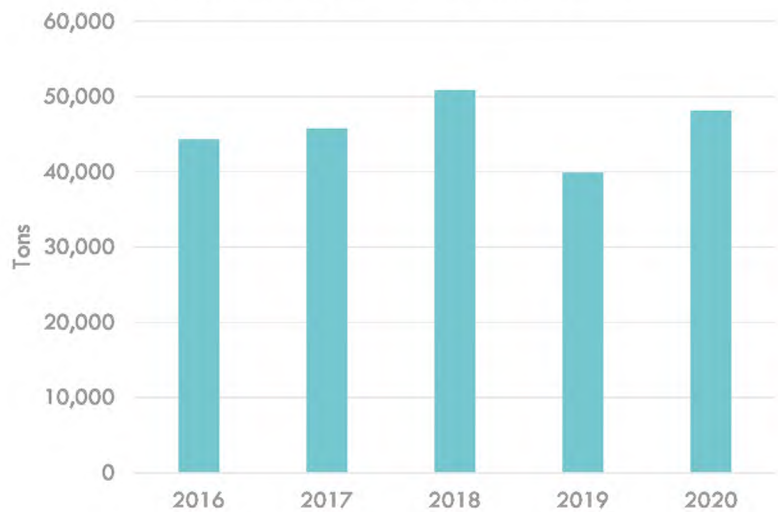
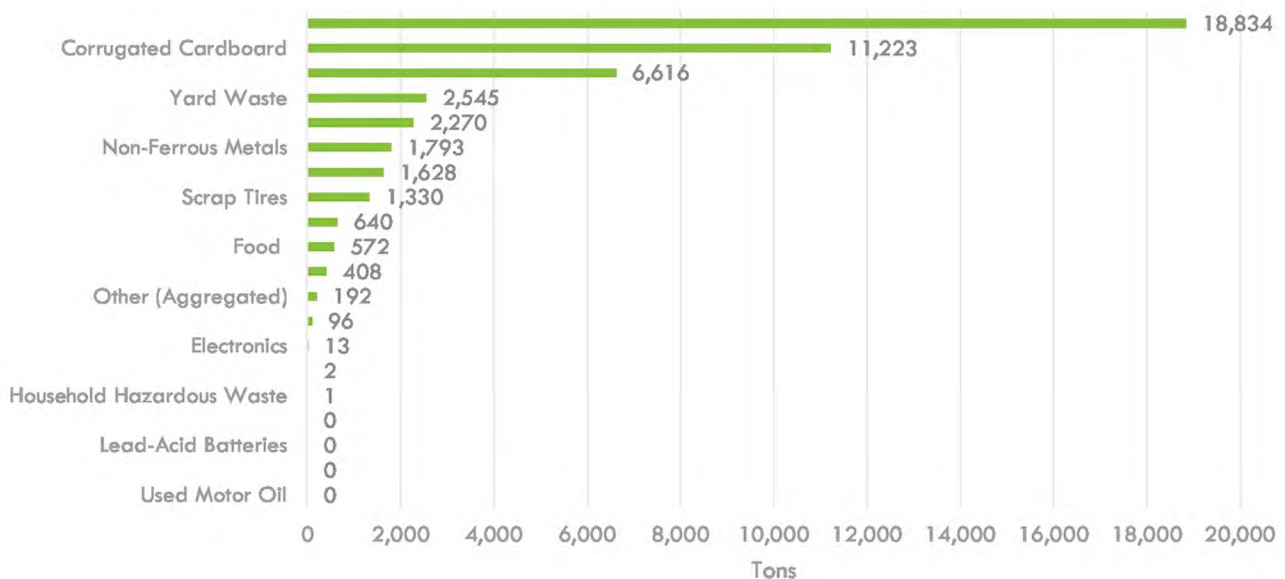
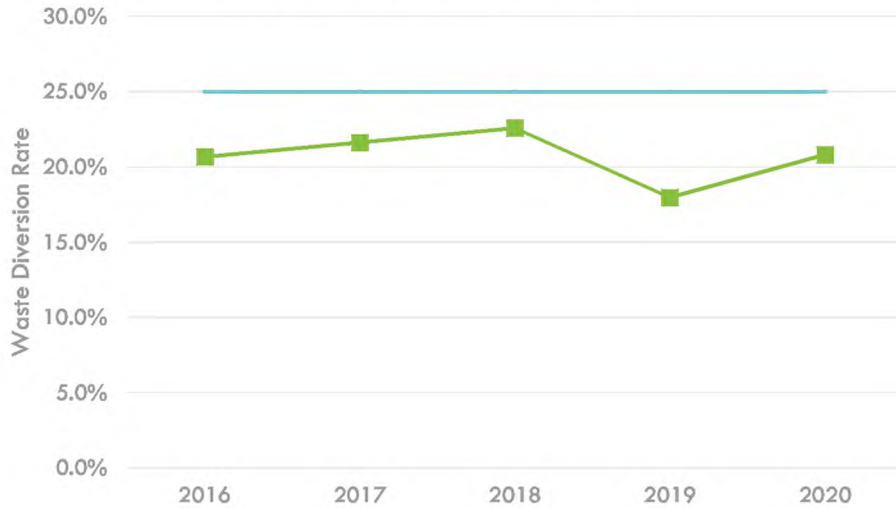


Figure H-7.2 Residential/Commercial Materials Diverted



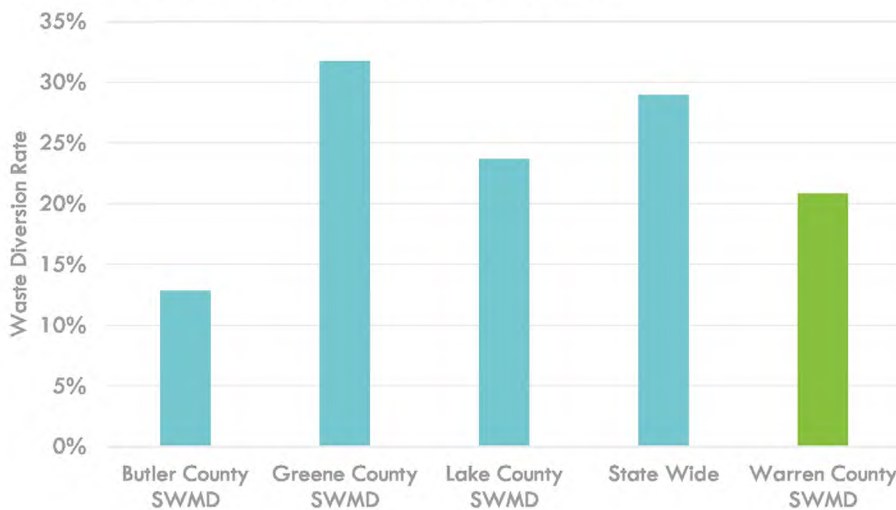
The diversion trend is relatively flat. Figure H-7.3 shows the diversion achieved over the past five years in comparison to the State residential/commercial waste diversion goal, represented by the blue line. The higher peak in 2018 is attributed to increased volumes of scrap tires reported by the Ohio EPA.

Figure H-7.3 Residential/Commercial Waste Reduction Rate



The SWMD's waste reduction rate compared to other regional districts and the state average is outlined in Figure H-7.4.

Figure H-7.4 2020 Waste Reduction Rate Comparison



Conclusions/Findings

While the SWMD is achieving consistent diversion there are more materials being landfilled that could potentially be reduced or recycled to increase the diversion.

Also, current opportunities for waste minimization and reuse are largely unexploited for the residential/commercial sectors. Reuse infrastructure heavily falls on non-profits and their development of reuse centers. Potential opportunities to consider include compiling a resource guide to donating as well as assisting in the development of reuse centers. Program areas to consider implementing for this plan update to address waste minimization and reuse models are volume-based incentive-fee collection systems, education and outreach approaches, creation and promotion of a reuse and repair network.

H-8 SPECIAL PROGRAM NEEDS ANALYSIS

Ohio Revised Code 3734.57(G) gives SWMDs the authority to fund a number of activities that are not related to achieving the goals of the state solid waste management plan. In addition, there are other programs that SWMDs fund that are not addressed in either the state plan or law. The SWMD does fund and provide activities and programs that fall into this category. The only special program is Roadside Litter Collection Program.

Roadside Litter Collection

Roadside Litter Collection is about four percent of total SWMD expenses. Litter is an eyesore, nuisance, and if not managed can lead to crime. Studies show there is a direct relationship between the presence of trash and crime. Removing litter throughout the County costs money. The SWMD strategy is to use a combination of employees and people sentenced to community service through the courts. Through this program 412 miles of roadsides and many parks in the County were cleaned in 2020. This work generated 7,091 bags of trash and approximately 500 tires. The SWMD coordinates the program in conjunction with the Warren County Court, Warren County Common Pleas Court, Adult probation, Municipal Courts of Lebanon, Franklin, Mason, Waynesville, South Lebanon plus Warren County Juvenile Court. The robust program utilizes jail inmates and community service workers and is active in recycling events and paint recycling.

Some counties are well served by volunteer programs to help remove litter. In Warren County the only other volunteer program is Adopt-a-Highway. The SWMD is serving a need and filling a gap in programming which has direct impact on the community and has strong leadership support.

The SWMD does not provide financial assistance to the health department.

Conclusions/Findings

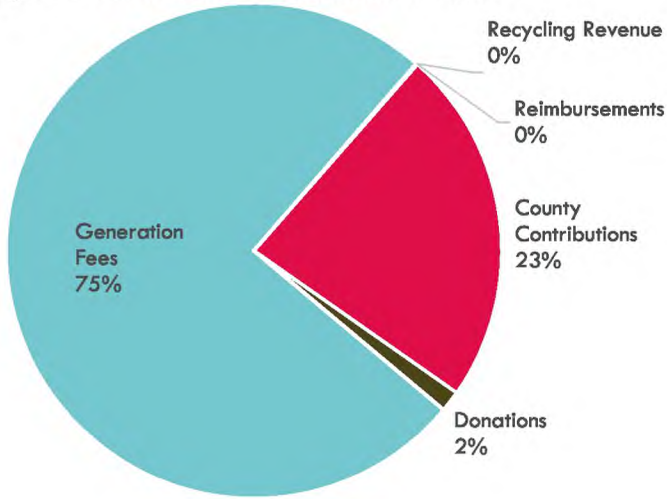
Funding for the health department and law enforcement activities are not related to achieving the goals of the state solid waste management plan but does play a role in the SWMD's management. The Roadside Litter Collection program provides solid waste control (helping more littered areas not attract more litter) and provides the opportunity for community partnerships. The trucks used by the litter crew will need to be replaced in the next couple of years due to the age and associated maintenance costs.

H-9 FINANCIAL ANALYSIS

The purpose of this analysis is to examine the SWMD's current financial position and assess the financial requirements and revenue sources throughout the next planning period. The SWMD is currently funded through revenues from tiered disposal fees, user fees, and the sale of collected recyclables.

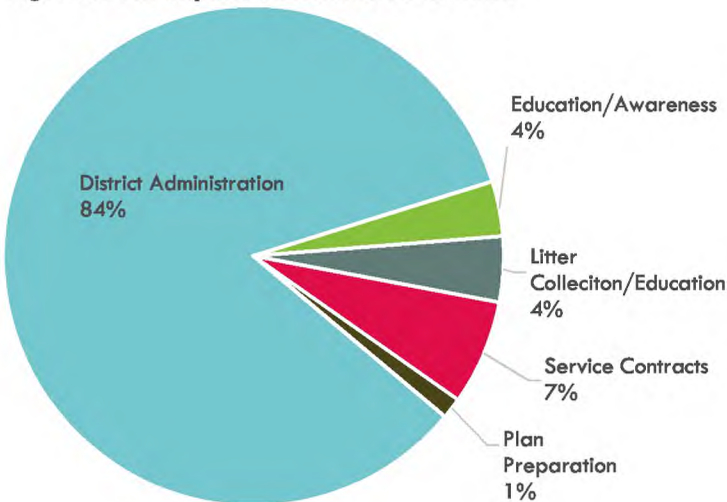
This analysis evaluates the SWMD's financial position currently and during the planning period.

Figure H-9.1 Revenue Distribution in 2020



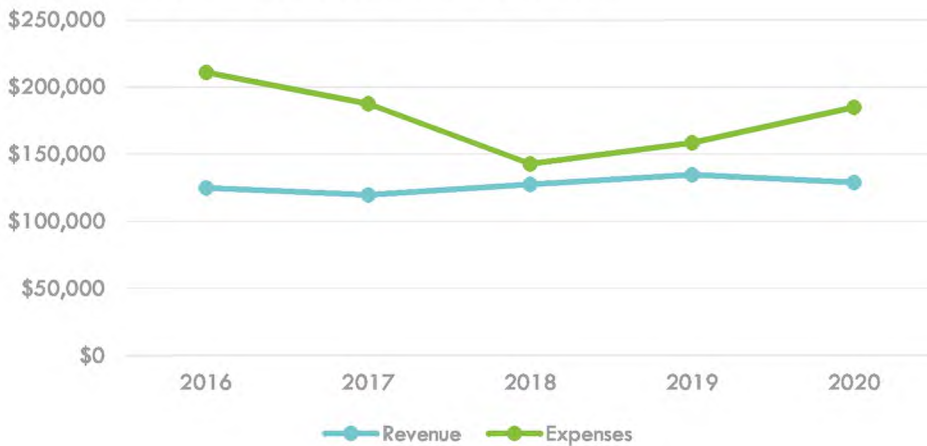
In accordance with ORC 3734.573, a solid waste management policy committee may levy fees on the generation of solid wastes within the district. Levying a generation fee means any landfill or transfer facility receiving district waste, regardless of where in Ohio the waste is disposed, remits the generation fee. The SWMD's generation fee funds solid waste recycling, reuse, and reduction programs as outlined in the solid waste management plan. Management of these programs includes fulfilling obligations to organize and/or provide programs, funding, enforcement, and education. In 2020, the District's expenses fell into the following distribution categories as shown in Figure H-9.2.

Figure H-9.2 Expense Distribution in 2020



Over the past few years, the District has been extracting from the carryover balance to cover the deficit. Figure H-9.2 shows revenues in comparison to expenses.

Figure H-9.3 Historical Revenues versus Expenses



As shown in Table H-9.1 the average generation fee revenue collected was \$95,411. The analysis demonstrates a steady fluctuation from 2016 to 2020.

Source(s) of information: Disposed tons were sourced from Annual District Review Forms. Generation fee tons were sourced from quarterly fee reports

Table H-9.1 Historical Generation Fee Analysis

Year	Waste Disposed (tons)	Total Revenue from Generation Fee (\$)
2016	189,429	\$94,714
2017	179,265	\$89,633
2018	183,983	\$91,991
2019	207,410	\$103,705
2020	194,027	\$97,013
Average Tonnage/Revenue	190,823	\$95,411
Average Annual Change +/-	1,149	\$575
Average Annual Percent +/-	0.9%	

Actual received generation fee revenues declined compared to the projections in the 2018 Approved Plan.

Table H-9.2 Historical Generation Revenue Compared to Approved Plan Projections

Year	Plan Generation Fee Revenue Projections	Actual Generation Fee Revenue Received	Difference
2016	\$98,437	\$94,714	-\$3,723
2017	\$99,922	\$89,633	-\$10,289
2018	\$101,431	\$91,991	-\$9,440
2019	\$102,964	\$103,705	\$741
2020	\$101,669	\$97,013	-\$4,656
Average	\$100,885	\$95,411	-\$5,473

Conclusions/Findings

Historically the average \$126,000 in revenues supported programming. Every year the county contributes \$30,000 to the revenue. The SWMD generation fee funding mechanisms has sustained a positive fund balance.

H-10 REGIONAL ANALYSIS

The purpose of the regional analysis is to consider regional opportunities for collaboration and partnerships, and to also consider how the policy committee's decisions may impact other stakeholders in the region.

Collaboration is a process where people or organizations come together to solve problems with a common goal. Through the process of sharing differing perspectives, experiences and resources we can expand opportunity and improve performance. Collaboration enables decision makers to realize several benefits, including mutual respect for agency/jurisdictional authority, unified efforts, collective support with mutually beneficial financial outcomes. Geographically differing economic challenges, program performance, constituent demands and emerging technologies, issues faced by all Ohio's MSWDs, dictate that regional concepts be explored.

Jurisdictional collaboration is not new. Medical, public safety, utilities, water/sewer, entertainment entities have all capitalized upon the beneficial dynamics of regionalization. Solid waste managers are similarly familiar as RCRA's Sub-Title D lined landfill mandates (late 1980's) and their subsequent waste reduction and recycling goals were all catalyst for the formation of Ohio's MSWD (HB 592) and similar governing agencies across the US. As such, by joining forces and economies of scale, communities have been able to explore best available technologies while implementing projects that individually would have been too expensive to develop for a single entity. Urban, rural plus small and large communities have benefited as costs and volume responsibilities are spread over a larger population of participants while educational, management and purchasing power are shared.

The SWMD identified stakeholders in the region that may have a key interest and involvement in SWMD programs, problems, and solutions.

- Neighboring SWMD's (Clinton, Butler, Hamilton, Adams-Clermont, Montgomery, and Greene)
- Warren County Soil and Water Conservation District
- Neighboring Soil and Water Conservation Districts
- Private service providers (Rumpke)
- Non-profit organizations
- Chamber of Commerce

Regional partnerships could help with costs and provide more opportunities for programs. A partnership opportunity explored could be HHW management. Costs and convenient outlets are similar issues for neighboring SWMDs that partnerships could benefit.

Conclusions/Findings

The region has adequate capacity and infrastructure for managing trash and recyclables. Potential program opportunities include:

- Work with local MRF to ensure education messages on contamination are focused on targeted materials.
- Work regionally to promote on food rescue, bank and donation programs. Food rescue is the highest tier on the EPA's food waste hierarchy. The SWMD could help bring together local and regional non-profits, SWMDs and other partners to discuss building a better food redistribution network.
- Focus strategies to promote source reduction as well as on-site/backyard composting options.

H-11 DATA COLLECTION ANALYSIS

This analysis evaluates the SWMDs current data collection efforts and identifies ways to improve its data.

Waste is generated by three sectors: residential, commercial and industrial. Waste source reduced, recycled, composted, incinerated, and disposed are measured to establish a baseline and determine waste generation, and measure recycling rates. 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 SWMD is to divert materials from landfills, therefore an accurate measurement of diversion from landfills is needed. The data collection process from beginning to end for each sector is described below.

Residential

The SWMD gathers data from service providers and Ohio EPA annual published data. Service providers are contacted to identify recycling that occurred within the SWMD. Phone call requests are made.

Commercial

The SWMD gathers data from Ohio EPA annual published data. A SWMD survey is not distributed for the commercial sector.

Industrial

The SWMD gathers data by surveying the industrial sector businesses. Paper surveys are mailed a cover letter, survey, and postage-paid return envelope. Recipients are also given the option to fax completed surveys. The SWMD follows up with survey recipients two to three weeks after the initial request. Non-responders are prioritized. Priority is placed on obtaining responses from prior year responders and recipients that are assumed to be managing significant volumes of materials.

The SWMD uses the Ohio Recycles Survey, a collaborative statewide recycling survey effort promoted by Ohio's solid waste management districts, the Ohio Council of Retail Merchants, the Ohio Chamber of Commerce, the Ohio Manufacturers' Association, and the Ohio Environmental Protection Agency (Ohio EPA). Businesses also have the opportunity to complete the Ohio Recycles Survey online.

The SWMD did not survey the industrial sector in 2020. Issues encountered when surveying include:

- Low participation rates
- SWMD time commitment
- Lack of response

The SWMD makes an effort to understand how materials are obtained and managed by entities that submit recycling information. The SWMD tries to identify if there are any materials that might be reported by more than one entity.

Conclusions/Findings

Overall, data collection is vital to measuring the waste reduction and recycling rate. Potential program opportunities include:

- The SWMD could consider adding on online capability for completing the survey, such as JotForm or another platform. This type of capability will provide more convenience to those completing the survey, plus compiles the data for the SWMD
- Post card reminder mailings keep administrative costs lower and return comparable response rates.
- Phone follow-up efforts are needed to return survey responses.

H-12 EDUCATION/OUTREACH ANALYSIS

The 2020 State Plan goals restructured the education and awareness goals with the intention of creating minimum standards for outreach programming but still allow for flexibility for localized outreach and education. The 2020 State Plan refocused the general “awareness” of recycling to changing behavior through outreach. This analysis evaluates the SWMD’s existing education, outreach and technical assistance efforts to determine:

- If the programs address all five target audiences (residents, schools, industries, institutions and commercial businesses, and communities and elected officials).
- Effectiveness and adequacy of programs.
- Strategy for incorporating Goal 4 into the programs.

Audiences

The 2020 State Solid Waste Management Plan established ten goals for Districts to achieve. One of the goals requires that solid waste management districts (SWMDs) shall provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to identify target audiences using best practices. The District has five target audiences, including:

- Residents
- Schools
- Industries
- Commercial businesses and institutions
- Communities and elected officials

The following chart shows the targeted audience for each of the District’s existing programs:

Education/Outreach Program	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website and Facebook Page	X	X	X	X	X
Public Communication	X	X	X	X	X
Educational Presentations/Displays	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		
Materials Marketplace Referrals			X	X	

Existing Programs

District Website & Facebook Page

The SWMD maintains a website at <https://www.co.warren.oh.us/solidwaste/> and is a resource that provides much of the information that residents and educational institutions would seek. The website is updated as often as needed

or at least annually. The SWMD site is a county web address site maintained by the District Coordinator. The website included the following heading for the public to navigate:

- Home
- General Info
- Recycling Outlets
- Education
- Mini Grants
- Industry Survey
- Trash
- Landfills
- Businesses

Comprehensive Resource Guide

The website is a resource guide for SWMD managed outlets and services. Business resources are also provided. Additionally, the SWMD has a list of resources and links to outside information.

Inventory

The website is an inventory for SWMD managed outlets and services. The SWMD has no control over third party waste management outlets which can improperly manage materials. As such, the Policy Committee made the decision to list only SWMD managed outlets on the website.

Public Communication

The Districts educates the public through various means such as the internet, social media, phone calls, and classroom instruction.

Educational Presentations/Displays

The SWMD employs a part-time Environmental Educator. The duties of the educator include: conducting adult education, teacher, and school-aged classes that focus on recycling, reducing waste, and composting. Adult education classes were provided upon request at libraries and clubs.

The District's educator does programming in schools, but due to covid the educator has been unable to visit schools after March of 2020. While program was temporarily paused in 2020 and 2021 due to covid, in 2022 the program resumed with the educator back presenting in the schools.

HHW Education

Locations, where residents may dispose of HHW are listed on the District's web page. Residents are encouraged to call the District for information. In 2020, the District collected 65 tons of latex paint. The District built a shed to serve as a drop-off location for residents to drop off leftover latex paint. The site is unattended but monitored on a routine basis. Once the shed has a larger quantity of paint cans, the District staff delivers the paint cans to a private facility for recycling. Providing costs and manageability are reasonable, the paint will continue to be collected.

The District's office educates the public on HHW disposal through its website and outreach to the public.

Scrap Tire Disposal Education

Locations that accept tires are listed on the District's web page. As retailers and materials are identified the website will be updated. Take-back programs vary so residents are guided to contact retailers prior to dropping off materials. According to Ohio EPA's Scrap Tire Report 1,329.50 tons of tires were recycled in 2020. It is believed that this amount includes tires recycled from the District's Litter Program.

The District partners with the Health Department in hosting several tire amnesty days throughout the county.

Yard Waste Education

Yard waste management is decentralized. Collection or drop-off opportunities are made available by the city, village, or township. The District's website guides residents to the city, village, and township websites for information about their programs. There are four registered Class IV compost facilities operating within the District.

According to Ohio EPA's Annual Composting Report, Warren County composted 3,498 tons of yard waste, and 1,183 tons of food waste in 2020.

The district promotes composting through the website including easy instructions on how to start composting. Commercial businesses and food pantries were encouraged to learn about composting through CET webinars.

Commercial Solid Waste and Recycling Assessments

Companies desiring audits are welcome to contact the District and will be directed to businesses that can help with conducting waste audits. The SWMD will add a Business Content page on the website which will contain a Waste Audit How-To Guide and Steps to Better Business Recycling. A flyer will be developed and included as an insert when conducting the annual surveys which will direct businesses to the SWMD website and available resources.

Industrial Solid Waste and Recycling Assessments

Industries desiring audits are welcome to contact the District and will be directed to businesses that can help with conducting waste audits. The SWMD will add a Business Content page on the website which will contain a Waste Audit How-To Guide and Steps to Better Business Recycling. A flyer will be developed and included as an insert when conducting the annual surveys which will direct businesses to the SWMD website and available resources.

Materials Marketplace Referrals

The District has a link to Ohio Materials Market Place on the District's website.

Conclusions/Findings

Possible opportunities include:

- Consider adding education resources for schools and businesses such as: how to waste audit guide, classroom lessons, workplace recycling guide, waste-free classroom, etc.
- Consider adding more waste reduction tips and guides for homes and businesses seeking a zero waste lifestyle.
- Educate residents on the importance of recycling right and keeping contamination out of the recycling stream for drop-off and curbside programs.
- Develop customizable materials that can be posted on community webpages and/or social media platforms that educate residents on allowable and unacceptable materials for curbside and drop-off recycling programs.
- Offer reduction tips on social media and the webpage.

- Outreach to multi-family housing landlords and property management companies to help establish or improve multi-family housing recycling programs.
- Provide resources for self-conducting waste-audits on the webpage.
- Online flyer samples provided to each political jurisdiction to customize their residential recycling program contact information details to clarify what is and is not recyclable.

H-13 PROCESSING CAPACITY ANALYSIS

The purpose of this analysis is to evaluate the existing capacity for processing recovered materials. The analysis evaluates material recovery facilities (MRFs) in the SWMD and surrounding areas. A MRF is a specialized facility that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers.

Both residential and commercial curbside collection and drop-off materials are processed at Rumpke Dayton, Ohio Facility, which is located in Montgomery County and Rumpke Cincinnati MRF, which is located in Hamilton County.

Rumpke's Dayton, Ohio facility is a Category III facility which pre-sorts, compacts and transfers recyclables. This facility sorts out inbound materials, screening glass to send to a processor and sending the other materials to the Cincinnati MRF. Rumpke's Cincinnati facility processes 27 tons per hour. Rumpke processes a large range of materials including glass bottles & jars, aluminum & steel cans, plastic bottles, jugs & tubs, mixed paper, and cartons.

Conclusions/Findings

The SWMD has found having a MRF operating in the region provides convenience and infrastructure to address the gaps that exist in residential and commercial recycling. With the main MRF in the region, it could make sense to explore partnerships to reach work on education and outreach with the MRF to streamline communication of new accepted materials.

APPENDIX I: CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

A. Actions and Priorities

The 2016 Plan was developed to meet the 2009 State Plan goals. To fulfill the directives in Ohio Revised Code Section 3734.50, the SWMD's Plan must demonstrate having strategies and programs in place to address all of the required goals. This 2022 Plan Update is prepared to meet compliance with the 2020 State Plan. Appendix K shows the SWMD's progress to meeting Goal 2 of the 2020 State Plan. In order to obtain approval from Ohio EPA for the solid waste management plan, SWMD must demonstrate being able to achieve either Goal 1 or Goal 2. The SWMD demonstrates Goal 1 meeting 80% access to recycling.”

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 as outlined in the 2016 Plan. 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	Contamination education through website or shared with communities for them to post on their websites/social media.
	Encourage support of reuse and thrift stores.
	Provide educational support to residents and businesses with large amounts of donatable food Consider looking at the contamination in the drop-off and curbside programs and targeting those most commonly incorrectly recycled materials and making campaigns out of them.
Commercial/Institutional Sector Reduction and Recycling Programs	Targeting material-specific campaigns such as paper and cardboard.
	Explore private sector partnerships and funding.
	Continue to apply for Ohio EPA grants to help businesses expand or implement recycling programs.
Industrial Sector Reduction and Recycling Programs	Promoting Ohio EPA's Material Marketplace.
Restricted & Difficult to Manage Wastes, Special Collection Events	Work with the communities with compost facilities to make sure residents are informed about the program offering/services.
	Assessment of user fees.
Education/Outreach	Focused HHW material education and outreach.
	Offer school custodian training/resources on recycling.
	Boost outreach and education around backyard composting, smart landscaping, grass-cycling, and leaf mulching or mowing in place.

Category	List of Actions
	<p>Focus on education and resources on the changes in the area's expansion of plastics recycling (tubs, cups, plastic film, and Styrofoam recycling).</p> <p>Consider adding education resources for schools and businesses such as: how to waste audit guide, classroom lessons, workplace recycling guide, waste-free classroom, etc.</p> <p>Consider adding more waste reduction tips and guides for homes and businesses seeking a zero waste lifestyle.</p> <p>Educate residents on the importance of recycling right and keeping contamination out of the recycling stream for drop-off and curbside programs.</p> <p>Develop customizable materials that can be posted on community webpages and/or social media platforms that educate residents on allowable and unacceptable materials for curbside and drop-off recycling programs.</p> <p>Offer reduction tips on social media and the webpage.</p> <p>Outreach to multi-family housing landlords and property management companies to help establish or improve multi-family housing recycling programs.</p> <p>Provide resources for self-conducting waste-audits on the webpage.</p> <p>Online flyer samples provided to each political jurisdiction to customize their residential recycling program contact information details to clarify what is and is not recyclable.</p>
Grants, Economic Incentives, Market Development	<p>Support end market development through grants, business assistance, or other programs.</p> <p>Assistance with this process by lending expertise, potentially funding, for a rate structure study.</p> <p>Provide technical assistance for communities interested in RFID tags.</p> <p>Advertise mini-grant more through communities and school contacts.</p> <p>Conduct a brief survey of the business sectors to ascertain their awareness of SWMD programs.</p>
Other Programs	<p>The SWMD could consider adding on online capability for completing the survey, such as JotForm or another platform. This type of capability will provide more convenience to those completing the survey, plus compiles the data for the SWMD</p> <p>Post card reminder mailings keep administrative costs lower and return comparable response rates.</p> <p>Phone follow-up efforts are needed to return survey responses.</p>

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
Full-Time Drop-off	Optimizing drop-off locations acceptable recyclables
Social Media Outreach	Increase social media presence
School Recycling Outreach	Find best arrangement for collecting recyclables at schools.

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
Non-Subscription Curbside				
Existing	Carlisle Village	Existing	Ongoing	1, 2
Existing	Corwin Village	Existing	Ongoing	1, 2
Existing	Franklin City	Existing	Ongoing	1, 2
Existing	Harveysburg Village	Existing	Ongoing	1, 2
Existing	Lebanon City	Existing	Ongoing	1, 2
Existing	Maineville Village	Existing	Ongoing	1, 2
Existing	Mason City	Existing	Ongoing	1, 2
Existing	Morrow Village	Existing	Ongoing	1, 2
Existing	Springboro City	Existing	Ongoing	1, 2
Existing	South Lebanon City	Existing	Ongoing	1, 2
Existing	Waynesville Village	Existing	Ongoing	1, 2
Subscription Curbside				
Existing	Butlerville Village	Existing	Ongoing	1, 2
Existing	Clearcreek Township	Existing	Ongoing	1, 2
Existing	Deerfield Township	Existing	Ongoing	1, 2
Existing	Franklin Township	Existing	Ongoing	1, 2
Existing	Hamilton Township	Existing	Ongoing	1, 2
Existing	Harlan Township	Existing	Ongoing	1, 2
Existing	Massie Township	Existing	Ongoing	1, 2
Existing	Pleasant Plain Village	Existing	Ongoing	1, 2
Existing	Salem Township	Existing	Ongoing	1, 2
Existing	Turtlecreek Township	Existing	Ongoing	1, 2
Existing	Union Township	Existing	Ongoing	1, 2
Existing	Washington Township	Existing	Ongoing	1, 2
Existing	Wayne Township	Existing	Ongoing	1, 2

Most cities and villages in the SWMD have non-subscription curbside achieved through contracts between the municipality and a trash hauler. 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. In 2020, all curbside materials were collected single stream (commingled) with either a bin or cart-based system.

All townships in the SWMD have non-subscription curbside achieved through Performance Obligation agreements between the SWMD and waste haulers. All residents living in a township who have subscription trash service must be enrolled in non-subscription curbside recycling. All waste haulers providing trash service in the SWMD are required to offer non-subscription curbside recycling service to their customers in the unincorporated areas of the townships. To provide service in these areas, waste haulers must sign and adhere to a Performance Obligation agreement which specifies materials be collected on a weekly basis, containers to be provided, and with

educational and awareness responsibilities. In 2020, all curbside materials were collected single stream (commingled) with either a bin or cart-based system.

The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. Each community maintains an updated list of recyclables accepted by their waste hauler.

The SWMD offers contract assistance to municipalities and townships. Assistance includes meetings with political jurisdiction representatives and haulers, contract review and guidance, and cost analysis. Each political jurisdiction contract terms vary. Assistance is offered when the SWMD attends political jurisdiction meetings and communicated by Policy Committee to constituents they represent.

Drop-off Recycling Services

Status	Name	Start Date	End Date	Goal
Full-Time, Urban Drop-offs				
Existing	Deerfield Township - 8395 Snider Road	Existing	Ongoing	1, 2
Drop-off open to the public 24/7 collecting 117 tons of commingled recyclable material (includes Mason location) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The municipal jurisdiction directly contracts with a private business to provide and service this drop-off location.				
Existing	Lebanon City - 406 Justice Drive	Existing	Ongoing	1, 2
Drop-off open to the public 24/7 collecting 33 tons of commingled recyclable material (includes both Lebanon locations) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. The County directly contracts with a private business to provide and service this drop-off location.				
Existing	Lebanon City - 50 S Broadway	Existing	Ongoing	1, 2
Drop-off open to the public 24/7 collecting 33 tons of commingled recyclable material (includes both Lebanon locations) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. The City of Lebanon directly contracts with a private business to provide and service this drop-off location.				
Existing	Mason - 2095 Kings Mill Road	Existing	Ongoing	1, 2
Drop-off open to the public 24/7 collecting 117 tons of commingled recyclable material (includes Deerfield Township location) in 2020. This location has two 6-cubic yard dumpsters that are emptied once a week. The standard recyclables collected in 2020 were: cardboard, paper, plastic containers, metal, and glass. The City of Mason directly contracts with a private business to provide and service this drop-off location.				
Part-Time, Urban Drop-offs				
None				
Full-Time, Rural Drop-offs				
None				
Part-Time, Rural Drop-offs				
None				

2. Residential Sector Reduction and Recycling Programs

Status	Name	Start Date	End Date	Goal
Existing	Curbside Recycling Monitoring Plan	Existing	Ongoing	1
<p>Monitoring Plan was developed to identify and detect any waste hauler deviating from the standards set forth in the Performance Obligations. Anonymous calls are made on a semi-annual basis, to each waste hauler requesting service information for an address within their service area. These are made for each of the 11 townships located within the District.</p> <p>If a waste hauler fails to offer non-subscription curbside recycling service as part of the service package, the specific company will be notified immediately that it is in violation of the Performance Obligation. The waste hauler will be given 30 days to rectify the situation and return to compliance with the Performance Obligation. Since the monitoring will be done unannounced and semi-annually, any failure will be identified and resolved quickly. If a waste hauler fails to return to compliance, the District will implement Contingency 1 in which sufficient drop-off recycling stations will be set up until the District is again reaching 80% access.</p> <p>Any new waste hauler that begins operation in the District must register with the Warren County Health Department. The County Health Department will notify the District and provide the information concerning the new hauler. The District will contact the new hauler and inform them of the Performance Agreement that must be signed. The waste hauler will be given 3 months to sign the agreement and begin offering non-subscription curbside recycling services along with the trash collection for the unincorporated township areas. Once the agreement is signed, the new hauler will be included in the monitoring program outlined above.</p> <p>As part of the District's Annual Report, an annual Monitoring Report will be submitted to the Ohio EPA that includes the following information:</p> <ul style="list-style-type: none"> a) Percentage of households receiving curbside recycling service. b) Results of monitoring phone calls, and c) Recycling tonnages from the curbside program. <p>A copy of the monitoring form can be found in Appendix T. Calls were made to trash haulers to ensure that curbside recycling was included as part of trash service to all county residents. All trash haulers are including curbside recycling as part of the trash package.</p>				
Existing	Technical Assistance/Resource Information	Existing	Ongoing	3, 4
<p>The District maintains a web page that delineates the locations where residents and businesses can drop-off materials that would be included in the programs</p>				
New	Contamination awareness education	2024	Ongoing	3, 4
<p>The District will provide educational messages on contamination on either the website or with communities for them to post on their websites/social media.</p>				
New	Educational support for large amounts of donatable food	2024	Ongoing	4
<p>The District will provide educational support if residents or businesses request assistance for donatable foods.</p>				

3. Commercial/Institutional Sector Reduction and Recycling Programs

Status	Name	Start Date	End Date	Goal
Existing	Commercial Solid Waste and Recycling Assessments	Existing	Ongoing	3, 4
<p>Companies desiring audits are welcome to contact the District and will be directed to businesses that can help with conducting waste audits. The SWMD will add a Business Content page on the website which will contain a Waste Audit How-To Guide and Steps to Better Business Recycling. A flyer will be developed and included as an insert when conducting the annual surveys which will direct businesses to the SWMD website and available resources. Advertisements for this program will be listed on the District's website and have a list on hand of consultants in order to readily provide resources to businesses. Collaboration with the economic development department and/or chamber of commerce may allow further outreach.</p>				
New	Targeting material-specific campaigns such as paper and cardboard.	2024	Ongoing	2, 4
<p>The District can share educational posted targeted for the commercial/institutional sector focused on fibrous materials such as paper and cardboard. This campaign may include "Did you know?" or "How do I start?" question and answer the questions for the audience to learn.</p>				

4. Industrial Sector Reduction and Recycling Programs

Status	Name	Start Date	End Date	Goal
Existing	Materials Marketplace Referrals and Promotion	Existing	Ongoing	5
<p>The Ohio EPA released an online service for Ohio businesses, not-for-profits and government organizations. The Ohio Materials Marketplace will be an online platform where businesses can advertise and acquire potentially useful products and materials that might otherwise be destined for disposal in landfills. The District has the link on the SWMD webpage. The District will promote the Materials Marketplaces as a part of the website and Facebook outreach.</p>				
New	Industrial Technical Assistance	2024	Ongoing	5
<p>The District will provide industrial technical assistance upon request for support for Ohio EPA grants and assist with grant applications as needed. Due to time constraints, the District may refer the business to a consultant for additional grant writing assistance. Advertisements for this program will be listed on the District's website and have a list on hand of consultants in order to readily provide resources to businesses. Collaboration with the economic development department and/or chamber of commerce may allow further outreach.</p>				
New	Industrial Solid Waste and Recycling Assessments	2024	Ongoing	5
<p>Companies desiring audits are welcome to contact the District and will be directed to businesses that can help with conducting waste audits. The SWMD will add a Business Content page on the website which will contain a Waste Audit How-To Guide and Steps to Better Business Recycling. A flyer will be developed and included as an insert when conducting the annual surveys which will direct businesses to the SWMD website and available resources. Advertisements for this program will be listed on the District's website and have a list on hand of consultants in order to readily provide resources to businesses. Collaboration with the economic development department and/or chamber of commerce may allow further outreach.</p>				

5. Restricted & Difficult to Manage Wastes, Special Collection Events

Status	Name	Start Date	End Date	Goal
Existing	Annual Electronics Collection Event	Existing	Ongoing	2, 5
<p>The SWMD offers an annual electronic collection event. The SWMD contracts with a private business to manage electronics at the collection event and remove for furthering processing. The SWMD charges a nominal fee for TVs and CTR monitors; but reserves the right to charge user fees for any electronics collected.</p>				
Existing	Paint Recycling Drop-off Program	Existing	Ongoing	2, 5
<p>January 2015 the SWMD began a latex paint collection program. The District built a shed to serve as a drop-off location for residents to drop-off leftover latex paint. The site is un-attended but monitored on a routine basis. Once the shed has</p>				

Status	Name	Start Date	End Date	Goal
	a larger quantity of paint cans, District staff delivers the paint cans to a private facility for recycling. If costs and manageability are reasonable under the District's budget, paint will continue to be collected.			
Existing	Styrofoam / ESP Recycling Drop-off Program	Existing	Ongoing	2, 5
	The District uses the shed to serve as a drop-off location for residents to drop-off Styrofoam / ESP. The site is un-attended but monitored on a routine basis. Once the shed has a larger quantity of Styrofoam / ESP, District staff delivers the Styrofoam / ESP to a private facility for recycling. Providing costs and manageability are reasonable, Styrofoam / ESP will continue to be collected.			
Existing	Yard Waste Collection from Municipalities/Private Haulers	Existing	Ongoing	2, 5
	Yard waste management is decentralized. Collection or drop-off opportunities are made available by some cities, villages, and townships (Springboro, Mason, and Deerfield Township, Lebanon, and Franklin). Either the public entity provides the service or contracts with a private business/hauler. Collection frequency varies (each city or village maintains their own level of service list). Two private haulers, Waste Management and Rumpke offer subscription based curbside yard waste from their customers.			

6. Education/Outreach

Status	Name	Start Date	End Date	Goal
Existing	Yard Waste Information - Website	Existing	Ongoing	2, 5
	Yard waste management is decentralized. Collection or drop-off opportunities are made available by the city, village or township. The District's website guides residents to the city, village, and township websites for information about their programs. There are four registered Class IV compost facilities operating within the District.			
Existing	Scrap Tire Disposal Information - Website	Existing	Ongoing	3, 4, 6
	Locations that accept tires are listed on the District's web page. As retailers and materials are identified the website will be updated. Take-back programs vary so residents are guided to contact retailers prior to dropping off materials. The Ohio EPA's Scrap Tire Report includes tires recycled from the District's Litter Program. Warren County Combined Health District typically hosts four scrap tire amnesty dates a year.			
Existing	Educational Presentations/Displays	Existing	Ongoing	3, 4
	Educational displays are typically presented at the County Fair, Coney Island and the Cincinnati Zoo. Literature was distributed at several community events. This program will be incorporated in the outreach and marketing plan.			
Existing	District Website and Facebook page	Existing	Ongoing	3, 4
	The SWMD maintains a website meeting the requirements prescribed by Goal 3 of the 2020 State Plan. The site promotes recycling and includes locations where materials may be taken and information about the Education and Awareness Program.			
	The website has the essential information and ease of navigability. To build upon its success the SWMD will monitor and update the site at least quarterly to contain accurate and up-to-date information at all times. The SWMD will work with all 24 political jurisdictions to add the SWMD's website link to their home webpages and help to add community recycling information to their specific websites. The District will also begin developing a common suite of materials and messaging to promote and enhance recycling information which will be made available on the website and promoted to the 24 political jurisdictions to include on their websites.			
	The website will add a Business content page which will include recycling resources such as the 6 drop-off containers in the northern half of the District that accept newspapers, Waste Audit How-To Guide and Steps to Better Business Recycling.			
Existing	HHW Information - Website	Existing	Ongoing	3, 4, 6
	Locations where residents may dispose of HHW are listed on the District's web page. Residents are encouraged to call the District for information. Providing costs and manageability are reasonable latex paint will be collected at an un-attended shed located behind the SWMD offices.			

Status	Name	Start Date	End Date	Goal
Existing	Communication with the public through website, emails, Facebook and phone consultations.	Existing	Ongoing	3, 4
The District will continue to use the website, email, Facebook, and phone as communication mediums to support community outreach initiatives. The District will develop a slogan, catchphrase and/or District recycle symbol to be used in all messaging."				
New	Boost outreach and education around backyard composting, smart landscaping, grass-cycling, and leaf mulching or mowing in place.	2024	Ongoing	3, 4
Boost outreach and education messaging on social media and around backyard composting, smart landscaping, grass-cycling, and leaf mulching or mowing in place.				
New	Focused messaging on expansion of plastics recycling	2024	Ongoing	3, 4
In 2021 and 2022, the local MRF which receives most residential collection material announced the acceptance of plastic tubs and cups. A local processor has recently opened which accepted EPS (expanded polystyrene ex. Styrofoam). Flexible plastics may also be taken to grocery stores which accept these materials. The District will focus resources for messaging on the newly accepted plastics recycling.				
New	HHW material education and outreach.	2024	Ongoing	4, 5
The District will create or share post/messaging on HHW material outlets and ways to handle materials.				
New	Recycle Right and New Recyclable Materials Outreach Campaign for drop-off and curbside programs.	2024	Ongoing	3, 4
The District will focus education messages for residents on the importance of recycling right and keeping contamination out of the recycling stream for drop-off and curbside programs. Quarterly station a staff member for a day at a minimum one of the public drop-offs. See Appendix L for Outreach Priority.				
New	Develop customizable materials that can be posted for curbside and drop-off recycling programs.	2024	Ongoing	3, 4
Develop customizable materials that can be posted on community webpages and/or social media platforms that educate residents on allowable and unacceptable materials for curbside and drop-off recycling programs.				
New	Offer reduction tips on social media and the webpage.	2024	Ongoing	3, 4
The District will incorporate waste reduction tips into social media posts and on the website.				
New	Outreach to multi-family	2024	Ongoing	3, 4
The District will develop an outreach plan for multi-family housing landlords and property management companies to help establish or improve multi-family housing recycling programs.				

7. Grants, Economic Incentives, Market Development

Status	Name	Start Date	End Date	Goal
Existing	Mini-grant Program	Existing	Ongoing	7
In 2015, the SWMD began offering Recycling Mini-Grants to Warren County schools, scouts and non-profit groups of up to \$250 for use in composting and recycling projects. The number of grants awarded depends on the amount requested and funds available. Grants are competitive.				
New	Advertise mini-grant more through communities and school contacts.	2024	Ongoing	7
The District can advertise the mini-grant through conversations with community leaders, posting on social media				
New	Apply for Ohio EPA grants to help businesses expand or implement recycling programs.	2024	Ongoing	7
The District will provide technical assistance to apply for OEPA grants as interested businesses approach the District with recycling initiatives.				

8. Enforcement & Clean-up

Status	Name	Start Date	End Date	Goal
Existing	Roadside Litter Collection Program	Existing	Ongoing	None
<p>The District has two employees that utilize people sentenced to community service through the courts to aid in the cleanup activities. The number of road miles serviced, the number of parks served, bags of trash, tires, etc. collected and total hours worked by employee and community service worker are recorded annually.</p>				

9. Other Programs

Status	Name	Start Date	End Date	Goal
Existing	District Surveying Program	Existing	Ongoing	2, 10
<p>The SWMD surveys the waste haulers annually to determine the amount of materials collected for recycling from residents and businesses in the District. Commercial and industrial surveying is administered at a minimum every five years. The SWMD utilizes Ohio EPA's annual data for commercial recycling information and plans to annually target a small portion of commercial businesses to survey beginning in 2024.</p>				
Existing	Contingency 1 - Drop-off Recycling	Existing	Ongoing	1
<p>Contingency 1 was developed if a waste hauler was determined to be in violation of the Performance Obligation Agreement due to not offering non-subscription curbside recycling service to households in the unincorporated areas of the townships and exceeded the 90-day grace period to be back in compliance. Contingency 1 allows the District to site and operate drop-off recycling stations in specific areas of the townships. Each site would have two 6-cubic yard dumpsters to collect at a minimum paper, glass, plastics, and metals. Drop-off recycling stations would be available 24 hours a day, 365 days a year.</p>				
Existing	Contingency 2 - Franchise Service Areas	Existing	Ongoing	1
<p>Contingency 2 was developed if Contingency Plan 1 was in operation for two consecutive years. Contingency 2 would allow the District to franchise the service areas in the unincorporated portions of the townships in the District for households to receive waste and non-subscription curbside recycling service.</p>				
Existing	Performance Obligation Agreements -All Haulers	Existing	Ongoing	1, 2
<p>Copies of Obligation Agreements are on file with the District. All trash haulers operating with the District have signed agreements.</p>				

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 #	Warren	2020		2024		2028		2033		2038	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
<i>Non-subscription curbside</i>											
NSC1	Carlisle Village	5,501	5,501	5,768	5,768	6,084	6,084	6,541	6,541	6,729	6,729
NSC2	Corwin Village	484	484	508	508	535	535	575	575	592	592
NSC3	Franklin City	11,690	11,690	12,258	12,258	12,929	12,929	13,900	13,900	14,299	14,299
NSC4	Harveysburg Village	554	554	581	581	613	613	659	659	678	678
NSC5	Lebanon City	20,841	20,841	21,853	21,853	23,051	23,051	24,781	24,781	25,492	25,492
NSC6	Maineville Village	1,405	1,405	1,473	1,473	1,554	1,554	1,671	1,671	1,719	1,719
NSC7	Mason City	34,792	34,792	36,482	36,482	38,481	38,481	41,369	41,369	42,557	42,557
NSC8	Morrow Village	2,049	2,049	2,149	2,149	2,266	2,266	2,436	2,436	2,506	2,506
NSC9	Springboro City	19,062	19,062	19,988	19,988	21,083	21,083	22,665	22,665	23,316	23,316
NSC10	South Lebanon City	6,384	6,384	6,694	6,694	7,061	7,061	7,591	7,591	7,809	7,809
NSC11	Waynesville Village	2,669	2,669	2,799	2,799	2,952	2,952	3,174	3,174	3,265	3,265
<i>Subscription curbside</i>											
SC1	Butlerville Village	155	0	163	0	171	0	184	0	190	0
SC2	Clearcreek Township	36,238	0	37,998	0	40,080	0	43,088	0	44,325	0
SC3	Deerfield Township	40,525	0	42,493	0	44,822	0	48,185	0	49,569	0
SC4	Franklin Township	31,676	0	33,215	0	35,035	0	37,664	0	38,745	0
SC5	Hamilton Township	30,587	0	32,073	0	33,830	0	36,369	0	37,413	0
SC6	Harlan Township	4,929	0	5,168	0	5,452	0	5,861	0	6,029	0
SC7	Massie Township	1,195	0	1,253	0	1,322	0	1,421	0	1,462	0
SC8	Pleasant Plain Village	129	0	135	0	143	0	153	0	158	0
SC9	Salem Township	5,215	0	5,468	0	5,768	0	6,201	0	6,379	0
SC10	Turtlecreek Township	17,644	0	18,501	0	19,515	0	20,979	0	21,582	0
SC11	Union Township	6,251	0	6,555	0	6,914	0	7,433	0	7,646	0

ID #	Warren	2020		2024		2028		2033		2038	
	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
SC12	Washington Township	2,752	0	2,886	0	3,044	0	3,272	0	3,366	0
SC13	Wayne Township	8,658	0	9,079	0	9,576	0	10,295	0	10,590	0
Hauler 1	Rumpke subscription	102,154	102,154	107,116	107,116	112,985	112,985	121,464	121,464	124,952	124,952
Hauler 2	Republic Subscription	740	740	776	776	818	818	879	879	905	905
Hauler 3	WM Subscription	2,844	2,844	2,982	2,982	3,145	3,145	3,381	3,381	3,478	3,478
Full-time, urban drop-off											
FTU1	Deerfield Township - 8395 Snider Road	40,525	5000	42,493	5000	44,822	5000	48,185	5000	49,569	5000
FTU2	Lebanon City - 406 Justice Drive	20,841	0	21,853	0	23,051	0	24,781	0	25,492	0
FTU3	Lebanon City - 50 S Broadway	20,841	0	21,853	0	23,051	0	24,781	0	25,492	0
FTU4	Mason - 2095 Kings Mill Road	34,792	0	36,482	0	38,481	0	41,369	0	42,557	0
Part-time, urban drop-off											
	none										
Full-time, rural drop-off											
	none										
Part-time, rural drop-off											
	none										
Mixed municipal waste material recovery facility											
	none										
Total County Population		238,813		250,413		264,134		283,956		292,109	
Total Population Credit		216,168		226,426		238,558		256,085		263,295	
Percent of Population		91%		90%		90%		90%		90%	

* Subscription curbside recycling credits are from actual reported hauler subscriptions multiplied by the average number of persons per household (2.67) based on reported 2020 census households

Subscription counts were collected from local haulers and the following are the calculations for the estimated for recycling credits based on the average number of persons per household (2.67):

- Rumpke subscription customers: 38,260 customers x 2.67 persons per household = 102,154 persons
- Republic Subscription: 277 customers x 2.67 persons per household = 740 persons
- WM Subscription: 1,065 customers x 2.67 persons per household = 2,844 persons

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. Cities of Mason and Lebanon receive the full population credit for their non-subscription curbside recycling programs. Since these communities receive full population credit they cannot receive additional population credit for the 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	Corrugated Cardboard	Newspaper	Mixed Paper	Steel Containers	Aluminum Containers
Warren						
Republic Waste Services	Hauler Collection	x	x	x	x	x
Rumpke Waste, Inc.	Hauler Collection	x	x	x	x	x
Waste Management	Hauler Collection	x	x	x	x	x
Cohen Recycling	Buyback	x	x		x	x

Source(s) of Information: Phone calls with haulers 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 21 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 91 percent.

3. Encouraging Participation

The SWMD will encourage residents and commercial generators to participate in available recycling infrastructure. Programs include:

- District website
- Get Caught Recycling
- Curbside 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.

Goal 2: Waste Reduction and Recycling Rates
 The SWMD shall reduce and recycle at least 25% of the solid waste generated by the residential/commercial sector.

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)
2020	238,813	48,163	184,989	233,153	20.7%	1.1
2021	241,553	48,513	183,868	232,381	20.9%	1.1
2022	244,506	48,642	186,116	234,758	20.7%	1.1
2023	247,460	48,761	188,364	237,125	20.6%	1.1
2024	250,413	48,875	190,612	239,488	20.4%	1.1
2025	252,746	49,062	192,389	241,450	20.3%	1.1
2026	256,542	49,250	195,278	244,528	20.1%	1.1
2027	260,338	49,440	198,167	247,607	20.0%	1.0
2028	264,134	49,631	201,057	250,688	19.8%	1.0
2029	267,930	49,824	203,946	253,770	19.6%	1.0
2030	271,725	50,018	206,835	256,853	19.5%	1.0
2031	275,802	50,214	209,938	260,152	19.3%	1.0
2032	279,879	50,411	213,042	263,453	19.1%	1.0
2033	283,956	50,610	216,145	266,755	19.0%	1.0
2034	288,032	50,811	219,248	270,059	18.8%	1.0
2035	292,109	51,013	222,351	273,364	18.7%	1.0
2036	292,109	51,217	222,351	273,568	18.7%	1.0
2037	292,109	51,423	222,351	273,774	18.8%	1.0
2038	292,109	51,631	222,351	273,982	18.8%	1.0

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 2000 lbs/ton) / (Population x 365 days)

The District achieved 20.8% residential/commercial waste reduction and recycling rate in the reference year which does not meet the 25% state goal. As shown in Table K-1, the District demonstrates it will continue to strive towards the 25% residential/commercial waste reduction and recycling rate goal.

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)
2020	130,881	13,030	143,911	90.9%
2021	130,881	12,644	143,525	91.2%
2022	130,881	12,269	143,150	91.4%
2023	130,881	11,906	142,787	91.7%
2024	130,881	11,553	142,434	91.9%
2025	130,881	11,211	142,092	92.1%
2026	130,881	10,878	141,759	92.3%
2027	130,881	10,556	141,437	92.5%
2028	130,881	10,243	141,124	92.7%
2029	130,881	9,940	140,821	92.9%
2030	130,881	9,645	140,526	93.1%
2031	130,881	9,359	140,240	93.3%
2032	130,881	9,082	139,963	93.5%
2033	130,881	8,813	139,694	93.7%
2034	130,881	8,552	139,433	93.9%
2035	130,881	8,298	139,179	94.0%
2036	130,881	8,052	138,933	94.2%
2037	130,881	7,814	138,695	94.4%
2038	130,881	7,582	138,463	94.5%

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

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 90.9%.

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)
2020	179,044	198,019	377,064	47.5%
2021	179,394	196,512	375,906	47.7%
2022	179,523	198,385	377,908	47.5%
2023	179,642	200,270	379,912	47.3%
2024	179,756	202,165	381,921	47.1%
2025	179,943	203,599	383,542	46.9%
2026	180,131	206,156	386,287	46.6%
2027	180,321	208,723	389,044	46.3%
2028	180,512	211,300	391,812	46.1%
2029	180,705	213,886	394,590	45.8%
2030	180,899	216,480	397,379	45.5%
2031	181,095	219,298	400,393	45.2%
2032	181,292	222,124	403,416	44.9%
2033	181,491	224,958	406,449	44.7%
2034	181,692	227,800	409,492	44.4%
2035	181,894	230,649	412,544	44.1%
2036	182,098	230,403	412,502	44.1%
2037	182,304	230,165	412,469	44.2%
2038	182,512	229,933	412,445	44.3%

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 47.5% and is projected to decrease to 44.3% by the end of the planning period.

APPENDIX L: MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS

A. Minimum Required Education Program

Goal 3: Waste Reduction and Recycling Rates The SWMD shall provide the following required programs:

- A website;
- A comprehensive resource guide;
- An inventory of available infrastructure; and
- A speaker or presenter.

1. Website

Name	Start Date	End Date	Goal
District Website	ongoing	ongoing	4

The SWMD maintains a website that meets the requirements specified by Goal 3 of the 2020 State Plan. The website is a resource that provides much of the information that residents and educational institutions would seek. The website is updated as often as needed or at least annually. The SWMD site is a county web address site maintained by the District Coordinator.

Warren County Solid Waste Management District Website:

<https://www.co.warren.oh.us/solidwaste/>

Warren County Solid Waste Management District Facebook:

<https://www.facebook.com/warrencountysolidwasteandrecycling>

2. Resource Guide

Name	Start Date	End Date	Goal
Webpage	ongoing	ongoing	4

The SWMD has a resource guide that details the inventory of outlets available for recyclable materials. The resource guide is maintained on the website, reviewed and updated annually.

3. Infrastructure Inventory

Name	Start Date	End Date	Goal
Inventory	ongoing	ongoing	4

The SWMD provides a complete infrastructure inventory within the solid waste management plan, which is updated every 5 years. In addition the SWMD website maintains a limited inventory. Items on the website include:

- Solid waste disposal facilities
- Construction and demolition debris facilities
- Service providers and hauling services for waste and recycling

4. Speaker/Presenter

Name	Start Date	End Date	Goal
SWMD Coordinator	ongoing	ongoing	4

The SWMD employs a part-time Environmental Educator. The duties of the educator include: conducting adult education, teacher, and school-aged classes that focus on recycling, reducing waste, and composting. Adult education classes were provided upon request at libraries and clubs. Educational displays were presented at the County Fair, Coney Island, Cincinnati Zoo, and literature was distributed at several community events. Designed and have available 17 classroom lessons. The lessons are appropriate for students in preschool through adult age and are hands-on. Examples of the lessons include recycling paper or plastics. Each lesson is correlated to State Proficiency Learning Outcomes. The District's educator does programming in schools, but due to covid the educator has been unable to visit schools after March of 2020. While program was temporarily paused in 2020 and 2021 due to covid, in 2022 the program resumed with the educator back presenting in the schools.

B. Outreach and Education – Outreach Plan and General Education Requirements

Goal 4: Outreach and Education – Outreach Plan and General Requirements 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.

As prescribed by the 2020 State Plan, each SWMD will provide education, outreach, marketing, and technical assistance regarding education and reuse through an outreach and marketing plan. Per *Format 4.1* the outreach and marketing plan needs to have the following components:

1. Five target audiences as identified in Ohio EPA Format 4.1.
2. Follow basic best practices when developing and selecting outreach programs.
3. Outreach priority.
4. Education and outreach programs to all appropriate audiences in the context of the priority using social marketing principles and tools.

The outreach and marketing plan needs to demonstrate these best practices

- Demonstrate that the SWMD will address all of the five target audiences;
- Explain how the SWMD will align its outreach and education programs with recycling opportunities (both existing and needed); and
- Explain how the SWMD will incorporate principles and tools for changing behavior into the outreach and marketing plan.

Best Practices outline 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 will depend upon the existing infrastructure. The goal of the outreach and marketing plan is to increase how much material is diverted from disposal within the SWMD by changing behavior. However, it is not possible for people to divert material if the necessary infrastructure is not available. Thus, if a SWMD lacks infrastructure, then the outreach and education programs should be focused on the audiences that can implement that infrastructure. If the SWMD 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 by:
 - Having measurable outcomes to achieve;
 - Understanding the different needs of different audiences;
 - Using a consistently and frequently repeated message;
 - Focusing on changing behavior not just creating awareness; and
 - Evaluating the results to determine if the program is achieving the desired outcome.

To align with *Format 4.1* the SWMD's existing programs were organized by target audience. Some of the existing SWMD programs cross several target audiences.

Education/Outreach Program	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website and Facebook Page	X	X	X	X	X
Public Communication	X	X	X	X	X
Educational Presentations/Displays	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		
Materials Marketplace Referrals			X	X	

The District will develop a slogan, catchphrase and/or District recycle symbol to be used in all messaging.

Each SWMD's outreach and marketing plan must address, at a minimum, five target audiences (residents, schools, industries, institutions and commercial businesses, communities, and elected officials).

1. Residents

Program	Start Date	End Date	Goal
District Website and Facebook Page	Ongoing	Ongoing	3 & 4
Public Communication	Ongoing	Ongoing	4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4
HHW Education	Ongoing	Ongoing	4
Scrap Tire Disposal Education	Ongoing	Ongoing	4

Yard Waste Education	Ongoing	Ongoing	4
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Needs of the Audience: A great way to reach residents as an audience is to have a presence on social media. The District has a Facebook page and uses it to share information such as collection events. The District will continue to use the website and Facebook as a tool to provide information to residents. Residents need guidance on acceptable materials by the local MRF infrastructure to assist with reducing contamination.

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 should be kept simple, concise, and repetitive in order 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.

2. Schools

Program	Start Date	End Date	Goal
District Website and Facebook Page	Ongoing	Ongoing	3 & 4
Public Communication	Ongoing	Ongoing	4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4

Needs of the Audience: The educator has developed 17 different classroom lessons for schools. The lessons are appropriate for students in preschool through adult age and are hands-on. Examples of the lessons include recycling paper or plastics. Each lesson is correlated to State Proficiency Learning Outcomes. The educator and the lessons are in high demand from the schools. This program is designed to be delivered by the educator and teachers if teachers participate in the Teacher Partnership program. School education meets the desired outcome of reaching and delivering the message to many students and teachers.

Behavior Change: The District educator can be further improved by providing an interactive activity after presentations about how to recycle right specifically at school. After or during a presentation at a school, the educator could provide a guide or flyer 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 were told during the presentation.

Evaluating Results: Participation trends for presentations and the number of school districts visited will allow for the schools to have visibility of the District’s programs.

3. Industries

Program	Start Date	End Date	Goal
District Website and Facebook Page	Ongoing	Ongoing	3 & 4
Public Communication	Ongoing	Ongoing	4
Industrial Solid Waste and Recycling Assessments	Ongoing	Ongoing	4
Materials Marketplace Referrals	Ongoing	Ongoing	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.

Consistent/Frequent Messaging: The District will use a branded message to focus on what opportunities the District can provide technical assistance.

Evaluating Results: The District can track the results by recycling tonnages reported on surveys.

4. Institutions & Commercial Businesses

Program	Start Date	End Date	Goal
District Website and Facebook Page	Ongoing	Ongoing	3 & 4
Public Communication	Ongoing	Ongoing	4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4
Commercial Solid Waste and Recycling Assessments	Ongoing	Ongoing	4
Materials Marketplace Referrals	Ongoing	Ongoing	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.

Measuring Outcomes: The District can track the number of requests for technical assistance.

Consistent/Frequent Messaging: The District will use a branded message to focus on what opportunities the District can provide technical assistance.

Evaluating Results: The District can track the results by recycling tonnages reported to brokers/MRFs.

5. Communities & Elected Officials

Program	Start Date	End Date	Goal
District Website and Facebook Page	Ongoing	Ongoing	3 & 4
Public Communication	Ongoing	Ongoing	4
Educational Presentations/Displays	Ongoing	Ongoing	3 & 4
HHW Education	Ongoing	Ongoing	4
Scrap Tire Disposal Education	Ongoing	Ongoing	4
Yard Waste Education	Ongoing	Ongoing	4

Needs of the Audience: The District has a good relationship with many communities and elected officials and can provide technical assistance as needed. The District provides resources on the website for this audience. Officials may benefit from an email update such as one from the District on changes or improvements with infrastructure in their communities.

Behavior Change: The District may benefit from notifying and inviting communities and elected officials to like or share posts on social media.

Measuring Outcomes: The District can keep track of any responses to shared communication with communities or elected officials.

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

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. The local MRF, 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 update and share the correct materials accepted list.

The District will develop a slogan, catchphrase and/or District recycle symbol to be used in all messaging.

The District will incorporate 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 MRF to ensure 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
- Quarterly station a staff member for a day at a minimum one of the public drop-offs.
- **The District will aim to increase engagement at other drop-off locations within the District.**

Implementation Responsibility: The District will be responsible for collaborating with the local MRF 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 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 track and compare tonnages and percent changes over the two-year period for the drop-off programs and the curbside programs.
- District can quantify the posts and views on social media over time.
- Comparing notes on number of residents bringing more or less non-acceptable materials to the drop-offs over the two year campaign. Some notes may be qualitative based on interactions with residents.
- Goal to achieve 10% reduction in number of residents which bring non-acceptable materials to the recycling drop-off program from the first quarter to the last quarter of the campaign..

Warren County Solid Waste District
Get Caught Green Handed

TRACKING SHEET

Name: _____

Location: _____

Date: _____

Begin Time: _____ End Time: _____

	Material Dropped Off	Unacceptable Items	Notes on Interaction	Literature Distributed
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

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	Location	Years of Remaining Capacity
In-District		
None		
Out-of-District		
Rumpke Brown County Landfill	Brown, Ohio	68
Wilmington Sanitary Landfill	Clinton, Ohio	26
Pine Grove Regional Facility	Fairfield, Ohio	84
SWACO Franklin County Sanitary Landfill	Franklin, Ohio	47
Rumpke Sanitary Landfill	Hamilton, Ohio	23
Hancock County Landfill	Hancock, Ohio	27
Stony Hollow Landfill	Montgomery, Ohio	3
Preble County Sanitary Landfill	Preble, Ohio	59
Out-of-State		
Twin Bridges Landfill	Madison, Indiana	19
Medora Sanitary Landfill	Jackson, Indiana	21
Rumpke of KY Inc - Pendleton Co Landfill	Pendleton, Kentucky	15
Bavarian Trucking Co Inc	Boone, Kentucky	15

Source(s) of Information:

2020 and 2019 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 2021 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 8 in-state landfills and 4 out-of-state landfills.

The majority of the SWMD’s waste was disposed in state at the Rumpke Sanitary Landfill. Rumpke Sanitary Landfill reported 23 years of remaining capacity at the end of 2020. 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. Rumpke Sanitary Landfill has 23 years of remaining capacity which means the landfill has enough permitted airspace to accept waste through year 2038. The first 8

years of the SWMD's planning period are 2024 through 2032. Rumpke Sanitary Landfill has adequate remaining life to manage the SWMD's waste.

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.

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 2020, Warren County generated 233,153 tons of MSW from the residential and commercial sectors, landfilled or incinerated 79% (184,989 tons), recycled 19% (44,406 tons) and composted 1% (3,117 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 batteries were excluded because of lack of material category and no relevant proxy.

Total GHG Emissions from Baseline (Year 2020)	(128,941) MTCO ₂ E
Total GHG Emissions from Alternative (Year 2029)	(133,385) 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 (128,941) MTCO₂E. To put this into perspective, the diversion programs are equivalent to:

- Removing emissions from 27,962 passenger vehicles annually
- Conserving 14,819,294 gallons of gasoline annually
- Conserving 9,420 households’ annual energy consumption annually

Diversion is projected to remain stable throughout the planning process so that the GHG emissions reduction from waste diversion programs with stay roughly around 130,000 MTCO₂E per year.

APPENDIX O: FINANCIAL PLAN

Ohio Revised Code Section 3734.53(B) requires a solid waste management plan to present a budget. This budget accounts for how the SWMD will obtain money to pay for programs and operations and how the SWMD will spend that money. For revenue, the solid waste management plan identifies the sources of funding the SWMD will use to implement its approved plan. The plan also provides estimates of how much revenue the SWMD expects to receive from each source. For expenses, the solid waste management plan identifies the programs the SWMD intends to fund during the planning period and estimates how much the SWMD will spend on each program. The plan must 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 SWMD will have adequate money to implement the approved solid waste management plan for a period of 15 years, from 2024 to 2038.

A. Funding Mechanisms and Revenue Generated

In this section, all of the funding mechanisms expected to be used by the SWMD are discussed. In addition, anticipated revenues from each source listed below are projected for each year of the planning period.

1. Disposal Fee

Disposal fees are collected on each ton of solid waste that is disposed at landfills in the levying SWMD. There are three components, or tiers, to the fee. The tiers correspond to where waste was generated – in-district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the levying 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 $\geq \$1.00$ and $\leq \$2.00$;
- The out-of-district fee must be $\geq \$2.00$ and $\leq \$4.00$; and
- The out-of-state fee must be equal to the in-district fee.

The District does not receive revenues from disposal fees. The District previously levied fees in accordance with ORC Section 3734.57(B) on waste disposal at a solid waste facility located within the District. The District's fee structure is \$1.00 collected on each ton of solid waste that is generated within the District and disposed at a solid waste landfill located within the District, \$2.00 collected on each ton of solid waste generated outside the District but within Ohio and disposed at a solid waste landfill located within the District, and \$1.00 collected on each ton of solid waste generated outside of Ohio and disposed at a solid waste landfill located within the District.

The District does not have active operating landfills in the District and does plan to have operating landfills in the District's borders. Revenues are not collected and will not be collected from disposal fees at this time or during the planning period.

The District does not receive revenue from disposal fees; therefore, Table O-1 has been omitted.

2. Generation Fee

In accordance with ORC 3734.573, a solid waste management policy committee may levy fees on the generation of solid wastes within the district. In 2005, the District adopted, ratified, and implemented a \$0.50 per ton generation fee. This fee amount has remained unchanged and will remain unchanged for this planning period.

To forecast future revenues anticipated from the generation fee, the historic revenues were analyzed in Appendix H. Over the past five years the quantity of waste the SWMD collected its generation fee on followed an inclining trend with a spike in 2019. The total waste disposal average over the past five years is 190,823 tons. Generation Fee revenues are based on projected tonnage in Appendix D.

The District operates on a cash accounting basis, and, as a result, tonnages for fee tracking purposes are not recorded until fee revenue is actually received from a landfill facility. Waste Disposed tons are based on actual revenue from 2016-2022. Total revenue from 2022-2038 is based on projections from Appendix D not including out-of-state waste.

Table O-2 Generation Fee Schedule

Year	Generation Fee Schedule (\$ per ton)	Waste Disposed (tons)	Total Revenue from Generation Fee (\$)
2016	\$0.50	189,429	\$94,714
2017	\$0.50	179,265	\$89,633
2018	\$0.50	183,983	\$91,991
2019	\$0.50	207,410	\$103,705
2020	\$0.50	194,027	\$97,013
2021	\$0.50	207,102	\$103,551
2022	\$0.50	198,385	\$99,193
2023	\$0.50	200,270	\$100,135
2024	\$0.50	202,165	\$101,083
2025	\$0.50	203,599	\$101,800
2026	\$0.50	206,156	\$103,078
2027	\$0.50	208,723	\$104,362
2028	\$0.50	211,300	\$105,650
2029	\$0.50	213,886	\$106,943
2030	\$0.50	216,480	\$108,240
2031	\$0.50	219,298	\$109,649
2032	\$0.50	222,124	\$111,062
2033	\$0.50	224,958	\$112,479
2034	\$0.50	227,800	\$113,900
2035	\$0.50	230,649	\$115,325
2036	\$0.50	230,403	\$115,202
2037	\$0.50	230,165	\$115,082
2038	\$0.50	229,933	\$114,967

3. Designation Fee

In accordance with Ohio Revised Code 343.014, a solid waste management district may adopt designation fees to assure adequate financing to implement the approved solid waste plan. Designation fees have not been adopted.

The District does not receive revenue from designation fees; therefore, Table O-3 has been omitted.

4. Loans

The District does not have outstanding debt due to existing loans and the Policy Committee does not intend to secure loans to finance implementing this 2024 Plan; therefore, Table O-4 has been omitted.

5. Other Sources of District Revenue

Recycling Revenue

The SWMD previously collected an occasional revenue from sale of recyclables. Recycling revenue is not projected during the planning period.

Reimbursement

Reimbursement revenues are miscellaneous monies resulting from worker's compensation refunds, unused community grant refunds, various rebates, and personnel reimbursements. Reimbursement revenue is not projected during the planning period.

County Contributions

The Warren County Courts provides the SWMD with \$30,000 per year to support the use of community service works for Litter Collection program activity.

Donations

Donation revenue is not projected during the planning period.

Other

Other revenue is not projected during the planning period.

Table O-5 Other Revenues and Other Revenue Sources

Year	Recycling Revenue	Reimbursements	County Contributions	Donations	Other	"Other Revenue" Total
2016	\$6	\$192	\$30,000	\$0	\$0	\$30,198
2017	\$0	\$3	\$30,000	\$0	\$0	\$30,003
2018	\$0	\$100	\$30,000	\$0	\$5,343	\$35,443
2019	\$165	\$0	\$30,000	\$766	\$16	\$30,947
2020	\$91	\$5	\$30,000	\$1,780	\$0	\$31,876
2021	\$672	\$0	\$30,000	\$1,491	\$46	\$32,209
2022	\$901	\$0	\$30,000	\$1,432	\$8	\$32,341
2023	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2024	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2025	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2026	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2027	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2028	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2029	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2030	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2031	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2032	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2033	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2034	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2035	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2036	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2037	\$0	\$0	\$30,000	\$0	\$0	\$30,000
2038	\$0	\$0	\$30,000	\$0	\$0	\$30,000

Summary of District Revenues

Table O-6 Total Revenue (in accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573)

Year	Disposal Fees	Generation Fees	Contract Fees	Other Revenue	Total Revenue
2016	\$0	\$94,714	N/A	\$30,198	\$124,912
2017	\$0	\$89,633	N/A	\$30,003	\$119,636
2018	\$0	\$91,991	N/A	\$35,443	\$127,434
2019	\$0	\$103,705	N/A	\$30,947	\$134,652
2020	\$0	\$97,013	N/A	\$31,876	\$128,889
2021	\$0	\$103,551	N/A	\$32,209	\$135,759
2022	\$0	\$114,406	N/A	\$32,341	\$146,748
2023	\$0	\$100,135	N/A	\$30,000	\$130,135
2024	\$0	\$101,083	N/A	\$30,000	\$131,083
2025	\$0	\$101,800	N/A	\$30,000	\$131,800
2026	\$0	\$103,078	N/A	\$30,000	\$133,078
2027	\$0	\$104,362	N/A	\$30,000	\$134,362
2028	\$0	\$105,650	N/A	\$30,000	\$135,650
2029	\$0	\$106,943	N/A	\$30,000	\$136,943
2030	\$0	\$108,240	N/A	\$30,000	\$138,240
2031	\$0	\$109,649	N/A	\$30,000	\$139,649
2032	\$0	\$111,062	N/A	\$30,000	\$141,062
2033	\$0	\$112,479	N/A	\$30,000	\$142,479
2034	\$0	\$113,900	N/A	\$30,000	\$143,900
2035	\$0	\$115,325	N/A	\$30,000	\$145,325
2036	\$0	\$115,202	N/A	\$30,000	\$145,202
2037	\$0	\$115,082	N/A	\$30,000	\$145,082
2038	\$0	\$114,967	N/A	\$30,000	\$144,967

Table O-6 includes all funding mechanisms that will be used, and the total amount of revenue generated by each method for each year of the planning period. The SWMD’s primary funding mechanism is the generation fee. The SWMD also receives alternate revenues from other contributions, reimbursements, recycling revenue and other.

B. Cost of Implementing Plan

Table O-7 Expenses

Line #	Category/Program	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	1. Plan Monitoring/Prep.	\$13,715	\$36,079	\$17,782	\$14,470	\$9,050	\$2,511	\$3,720	\$39,019	\$8,939
1.a	a. Plan Preparation	\$8,489	\$29,943	\$14,768	\$0	\$750	\$0	\$900	\$35,119	\$5,000
1.b	b. Plan Monitoring	\$5,226	\$6,137	\$3,014	\$14,470	\$8,300	\$2,511	\$2,820	\$3,900	\$3,939
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$137,618	\$174,800	\$169,689	\$128,049	\$149,294	\$182,330	\$172,218	\$135,855	\$145,419
2.a	a. District Administration	\$117,152	\$107,741	\$103,374	\$104,163	\$118,406	\$155,408	\$143,693	\$106,970	\$110,179
2.a.1	1 Personnel	\$112,396	\$102,151	\$97,632	\$98,837	\$113,406	\$142,892	\$135,598	\$102,893	\$105,980
2.a.2	Office Overhead	\$4,756	\$5,590	\$5,742	\$5,325	\$5,000	\$11,611	\$7,895	\$4,077	\$4,199
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$905	\$200	\$0	\$0
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$0	\$0	\$0	\$0	\$0	\$255	\$1,436	\$95	\$0
2.d.1	Curbside	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.2	Drop-off	\$0	\$0	\$0	\$0	\$0	\$255	\$0	\$0	\$0
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$1,436	\$95	\$0
2.e	e. Special Collections	\$1,759	\$1,063	\$8,547	\$2,015	\$10,687	\$12,279	\$8,033	\$9,092	\$10,630
2.e.1	Tire Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.2	HHW Collection	\$1,527	\$1,063	\$7,797	\$1,564	\$1,655	\$1,488	\$2,762	\$2,336	\$2,500
2.e.3	Electronics Collection	\$232	\$0	\$750	\$450	\$9,032	\$10,191	\$5,071	\$6,130	\$6,130
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$600	\$200	\$625	\$2,000
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$11,244	\$12,758	\$10,215	\$11,620	\$12,640	\$6,563	\$7,427	\$8,003	\$12,800
2.g.1	Education Staff	\$10,994	\$11,682	\$10,215	\$11,568	\$10,424	\$6,563	\$7,427	\$6,692	\$10,300
2.g.2	Advertisement/Promotion	\$0	\$313	\$0	\$52	\$2,197	\$0	\$0	\$193	\$1,500
2.g.3	Other	\$250	\$763	\$0	\$0	\$19	\$0	\$0	\$1,118	\$1,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$304	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activities	\$0	\$0	\$0	\$0	\$304	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$7,463	\$53,238	\$47,554	\$10,252	\$7,257	\$7,824	\$11,234	\$11,466	\$11,810
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$396	\$230	\$0
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Health Department Name:</i>									
3.a	a. Personnel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.b	b. Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.c	c. Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.d	d. Vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.e	e. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	4. County Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$246	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$246	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$151,333	\$210,879	\$187,471	\$142,765	\$158,344	\$184,841	\$175,938	\$174,874	\$154,358

Line #	Category/Program	2024	2025	2026	2027	2028	2029	2030	2031
1	1. Plan Monitoring/Prep.	\$3,978	\$4,018	\$4,058	\$5,044	\$41,014	\$9,431	\$4,223	\$4,265
1.a	a. Plan Preparation	\$0	\$0	\$0	\$945	\$36,874	\$5,250	\$0	\$0
1.b	b. Plan Monitoring	\$3,978	\$4,018	\$4,058	\$4,099	\$4,140	\$4,181	\$4,223	\$4,265
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$149,388	\$208,475	\$159,338	\$218,722	\$169,890	\$174,592	\$179,436	\$184,425
2.a	a. District Administration	\$113,484	\$116,889	\$120,395	\$124,007	\$127,728	\$131,559	\$135,506	\$139,571
2.a.1	1 Personnel	\$109,159	\$112,434	\$115,807	\$119,281	\$122,860	\$126,545	\$130,342	\$134,252
2.a.2	2 Office Overhead	\$4,325	\$4,455	\$4,588	\$4,726	\$4,868	\$5,014	\$5,164	\$5,319
2.a.3	3 Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.1	1 MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.2	2 Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	3 Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	4 Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.1	1 Curbside	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.2	2 Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.3	3 Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	4 Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	5 Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	6 Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$10,630	\$10,630	\$10,630	\$10,630	\$10,630	\$10,630	\$10,630	\$10,630
2.e.1	1 Tire Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.2	2 HHW Collection	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
2.e.3	3 Electronics Collection	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130
2.e.4	4 Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	5 Other Collection Drives	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$13,109	\$13,427	\$13,755	\$14,093	\$14,441	\$14,799	\$15,168	\$15,548
2.g.1	1 Education Staff	\$10,609	\$10,927	\$11,255	\$11,593	\$11,941	\$12,299	\$12,668	\$13,048
2.g.2	2 Advertisement/Promotion	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
2.g.3	3 Other	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.1	1 General Market Development Activities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	2 ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$12,164	\$67,529	\$14,555	\$69,991	\$17,091	\$17,604	\$18,132	\$18,676
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Health Department Name:</i>								
3.a	a. Personnel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.b	b. Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.c	c. Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.d	d. Vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.e	e. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	4. County Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$153,368	\$212,493	\$163,394	\$223,766	\$210,904	\$184,024	\$183,659	\$188,691

Line #	Category/Program	2032	2033	2034	2035	2036	2037	2038
1	1. Plan Monitoring/Prep.	\$4,308	\$5,343	\$43,113	\$9,951	\$4,483	\$4,528	\$4,573
1.a	a. Plan Preparation	\$0	\$992	\$38,718	\$5,513	\$0	\$0	\$0
1.b	b. Plan Monitoring	\$4,308	\$4,351	\$4,395	\$4,439	\$4,483	\$4,528	\$4,573
1.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	2. Plan Implementation	\$189,564	\$194,857	\$200,309	\$205,924	\$211,708	\$217,666	\$223,802
2.a	a. District Administration	\$143,758	\$148,071	\$152,513	\$157,089	\$161,801	\$166,655	\$171,655
2.a.1	1 Personnel	\$138,280	\$142,428	\$146,701	\$151,102	\$155,635	\$160,304	\$165,113
2.a.2	2 Office Overhead	\$5,479	\$5,643	\$5,813	\$5,987	\$6,166	\$6,351	\$6,542
2.a.3	3 Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.1	1 MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.2	2 Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	3 Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	4 Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.1	1 Curbside	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.2	2 Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.3	3 Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	4 Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	5 Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	6 Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$10,630	\$10,630	\$10,630	\$10,630	\$10,630	\$10,630	\$10,630
2.e.1	1 Tire Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.2	2 HHW Collection	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
2.e.3	3 Electronics Collection	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130	\$6,130
2.e.4	4 Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	5 Other Collection Drives	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$15,939	\$16,342	\$16,758	\$17,185	\$17,626	\$18,080	\$18,547
2.g.1	1 Education Staff	\$13,439	\$13,842	\$14,258	\$14,685	\$15,126	\$15,580	\$16,047
2.g.2	2 Advertisement/Promotion	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
2.g.3	3 Other	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.1	1 General Market Development Activities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	2 ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$19,236	\$19,813	\$20,408	\$21,020	\$21,650	\$22,300	\$22,969
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Health Department Name:</i>							
3.a	a. Personnel	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.b	b. Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.c	c. Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.d	d. Vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.e	e. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	4. County Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$193,872	\$200,201	\$243,422	\$215,875	\$216,191	\$222,193	\$228,375

The expense line items in Table O-7 are the same as those that the District uses to report expenses for the quarterly fee report. Each expense applicable to the District allocated to line items in Table O-7 are explained here:

1. Plan Monitoring/Prep.

1.a Plan Preparation

The District contracted a consultant for developing the 2024 Plan Update using Format 4.1. The expense line item shown are for consulting fees for plan preparation.

This cost includes staff and contracts with outside consultant to prepare the SWMD's solid waste management plan updates. The SWMD assumed the cost of the contract for all subsequent plan updates would be the same.

1.b Plan Monitoring

No expected costs outside of District personnel costs which are included in other line item allocations.

2. Plan Implementation

2.a District Administration

- 2.a.1 Personnel

This is the cost for payroll (one full-time coordinator and two full-time litter) and benefits (including PERS, Medicare, and insurance), supplies (including postage, reproductions, advertising, printing, utilities, etc.), webpage maintenance, office equipment, and travel. Administrative costs also include staffing time for some program costs which are difficult to separate into their own line item. The costs of the program in 2016 through 2022 are actual expenses. Administrative costs are increased 3 percent on an annual basis to account for raises and cost of living adjustment. Note: Warren County Courts provides \$30,000 annually to support the Litter Collection Program.

- 2.a.2 Office Overhead – The costs of the program in 2016 through 2022 are actual expenses. Costs are increased 3 percent on an annual basis to account for raises and inflation.

- 2.a.3 Other – No expenses budgeted.

2.d. Recycling Collection

- 2.d.2 Drop-off – No expenses budgeted.

- 2.d.6 Other - No expenses budgeted.

2.e. Special Collections

- 2.e.1. Tire Collection – No expenses budgeted.

- 2.e.2. HHW Collection – This is the actual cost for latex paint collection. A budget of \$2,500 for latex paint collection is budgeted and remains flat through the planning period.

- 2.e.3. Electronics Collection – A budget of \$6,000 for annual electronics collection is budgeted and remains flat through the planning period.

- 2.e.4. Appliance Collection - No expenses budgeted.

- 2.e.5. Other Collection Drives - A budget of \$2,000 for Styrofoam and other collections is budgeted and remains flat through the planning period.

2.f. Yard Waste/Other Organics

No expenses incurred or budgeted.

2.g. Education/Awareness

- 2.g.1 Education Staff - This is the cost for a part-time educator and supplies. The costs of the program in 2016 through 2022 are actual expenses. Costs are increased 3 percent on an annual basis to account for raises and inflation.
- 2.g.2. Advertisement/Promotion - This is the cost for outreach and education program supplies. A flat amount of \$1,500 is expected annually for print costs, meeting expenses, distribution of reports and flyers, etc. for the following programs: Adult Education, Educational Displays, Recycle Right Campaign, Recognition, Community Report, Presentations, Classroom Lessons, and School Administrators.
- 2.g.3. Other - This is the cost budgeted for mini-grants.

2.h Recycling Market Development

- 2.h.1 General Market Development Activities - No expenses incurred or budgeted.

2.m. Litter Collection

This is the cost for operational costs which include fuel for litter and cleanup activities. Expenditures also include miscellaneous supplies such as providing bags, vests, gloves, and signs for cleanup projects. Costs slightly inflated to \$20,000 in 2018 to cover any miscellaneous or inflation increases. Costs are increased 3 percent on an annual basis to account for inflation.

2025 and 2027 - The SWMD will purchase two new litter crew trucks. The cost of each truck is estimated at \$55,000 each. The cost is based on previous quoted prices from the county service department.

2.p. Other

No expenses incurred or budgeted.

3. Health Dept. Enforcement

No expenses incurred or budgeted.

4. County Assistance

No expenses incurred or budgeted

5. Well Testing

No expenses incurred or budgeted

6. Out-of-State Waste Inspection

No expenses incurred or budgeted

7. Open Dump, Litter Law Enforcement

No expenses incurred or budgeted

8. Health Department Training

No expenses incurred or budgeted

9. Municipal/Township Assistance

No expenses incurred or budgeted

10 Compensation to Affected Community (ORC Section 3734.35)

No expenses incurred or budgeted

The SWMD Reserve Account comprises funds that the SWMD received through tier fees from the Big Foot Run Sanitary Landfill, which closed in 1999.

Table O-8 Budget Summary

Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
2015			Ending Balance	\$1,647,730
2016	\$124,912	\$210,879	-\$85,967	\$1,561,763
2017	\$119,636	\$187,471	-\$67,835	\$1,493,928
2018	\$127,434	\$142,765	-\$15,330	\$1,478,598
2019	\$134,652	\$158,344	-\$23,691	\$1,454,906
2020	\$128,889	\$184,841	-\$55,952	\$1,398,955
2021	\$135,759	\$175,938	-\$40,179	\$1,358,776
2022	\$146,748	\$174,874	-\$28,126	\$1,330,650
2023	\$130,135	\$154,358	-\$24,223	\$1,306,427
2024	\$131,083	\$153,366	-\$22,283	\$1,284,144
2025	\$131,800	\$212,493	-\$80,694	\$1,203,450
2026	\$133,078	\$163,394	-\$30,316	\$1,173,134
2027	\$134,362	\$223,766	-\$89,404	\$1,083,730
2028	\$135,650	\$210,904	-\$75,254	\$1,008,476
2029	\$136,943	\$184,024	-\$47,081	\$961,395
2030	\$138,240	\$183,659	-\$45,419	\$915,976
2031	\$139,649	\$188,691	-\$49,042	\$866,934
2032	\$141,062	\$193,872	-\$52,810	\$814,124
2033	\$142,479	\$200,201	-\$57,722	\$756,402
2034	\$143,900	\$243,422	-\$99,522	\$656,880
2035	\$145,325	\$215,875	-\$70,551	\$586,330
2036	\$145,202	\$216,191	-\$70,989	\$515,340
2037	\$145,082	\$222,193	-\$77,111	\$438,229
2038	\$144,967	\$228,375	-\$83,408	\$354,821

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.

C. Alternative Budget

The SWMD does not anticipate the need to identify any type of contingent funding or financing that would be necessary to fund any type of program activity in conjunction with Plan implementation efforts.

D. Major Facility Project

A SWMD that is considering whether to construct and operate a new solid waste management facility or renovate an existing solid waste facility will provide a budget for the facility. For the purposes of this section, a solid waste management facility means a facility the SWMD owns and operates or will own and operate to manage solid waste and/or recyclable materials. Examples of solid waste management facilities include:

- a municipal solid waste landfill or solid waste transfer station
- a yard waste composting facility
- a material recovery facility
- a recycling center
- a permanent household hazardous waste collection facility

The SWMD is not planning to construct or operate a new solid waste management facility during this planning period.

The SWMD does not anticipate the need to develop an in-District sanitary landfill or transfer station by either the private or public sector given the access to existing disposal capacity. However, the SWMD does recognize that over the planning period, reasonable economic access to disposal capacity may pose a problem to ensure that District-generated solid waste continues to be disposed at an acceptable rate at licensed facilities. In the event that the SWMD determines that the access to, and the costs, for the disposal becomes an economic burden for residents and businesses, the SWMD reserves the right to explore the development of a transfer facility for District-generated solid waste.

APPENDIX P: DESIGNATION

A. Statement Authorizing/Precluding Designation

The Board of Directors of the Warren County Solid Waste Management District is hereby precluded from establishing facility designations in accordance with Section 343.014 of the Ohio Revised Code.

Table P-1 Designation

Facility Name	Location		Facility Type	Year Designated
	County	State		
<i>In-District</i>				
None		Ohio		
<i>Out-of-District</i>				
None		Ohio		
<i>Out-of-State</i>				
None				

B. Designated Facilities

At the present time, the District has not designated any facilities to which District waste must be taken.

C. Documents

None included.

APPENDIX Q: DISTRICT RULES

A. Existing Rules

The SWMD is currently authorized and has adopted rules governing the maintenance, protection, and use of solid waste collection, transfer, disposal, recycling, and resource recovery facilities.

A copy of the adopted rules can be found in this Appendix. The rules were adopted on February 24, 1994. Since no facilities have been developed to date, the full impact of the rules has not been tested.

B. Proposed Rules

The SWMD does not intend to adopt additional rules during this planning cycle. However, in the event it is determined necessary, the Policy Committee upon recommendation to the Board of County Commissioners, reserves the right to adopt any such rules as authorized by ORC 3734.53 that will support implementation of the Plan.

**BOARD OF COUNTY COMMISSIONERS
WARREN COUNTY, OHIO**

Resolution

Number 94-209

Adopted Date February 24, 1994

ADOPT THE WARREN COUNTY SOLID WASTE MANAGEMENT DISTRICT'S RULES GOVERNING THE MAINTENANCE, PROTECTION AND USE OF SOLID WASTE FACILITIES

WHEREAS, the Warren County Board of Commissioners have established the Warren County Solid Waste Management District to prepare, adopt, submit, and implement a solid waste management plan; and

WHEREAS, the Warren County Board of Commissioners established and convened a Solid Waste Management Policy Committee which prepared A Solid Waste Management Plan ("Plan") for the District; and

WHEREAS, that Plan was ratified by the Board of County Commissioners of Warren County and by the legislative authorities of a combination of municipal corporations and townships with a combined population within the District comprising at least sixty percent of the total population of the District including the municipal corporation having the largest population within the boundaries of the District; and

WHEREAS, the Plan was subsequently approved by the Director of the Ohio Environmental Protection Agency on December 27, 1993; and

WHEREAS, the District's Plan provides for rules governing the maintenance, protection and use of such facilities and requiring the submission of such plans and specifications to the Board of Directors of the District; and

WHEREAS, the adoption of such rules furthers the purposes of the District and is in the public interest;

BE IT RESOLVED, that the "Warren County Solid Waste Management District Rules Governing the Maintenance, Protection, and Use of Solid Waste Facilities" be, and hereby are, adopted in the form attached hereto; and

BE IT FURTHER RESOLVED, that any rules previously adopted by the Clinton-Warren Joint Solid Waste Management District or Warren County Solid Waste Management District be, and hereby are, superseded; and

BE IT FURTHER RESOLVED, that the District be, and hereby is directed to publish the "Warren County Solid Waste Management District Rules Governing the Maintenance, Protection and Use of Solid Waste Management Facilities," in their entirety, in The Western Star in the earliest possible issue; and

BE IT FURTHER RESOLVED, that any other and all actions required by law to make effective the "Warren County Solid Waste Management District Rules Governing the Maintenance, Protection and Use of Solid Waste Management Facilities" be, and hereby are, authorized.


RESOLUTION #94-
FEBRUARY 24, 1994
PAGE 2

Mr. Kilburn moved for adoption of the foregoing resolution, being seconded by Mrs. South. Upon call of the roll the following vote resulted:

Mr. Crisenbery - yea
Mrs. South - yea
Mr. Kilburn - yea

Resolution adopted this 24th day of February 1994.

BOARD OF COUNTY COMMISSIONERS



Tina Davis, Clerk

/dad

cc: Solid Waste (file)

**WARREN COUNTY SOLID WASTE MANAGEMENT DISTRICT
RULES GOVERNING THE MAINTENANCE, PROTECTION AND USE OF
SOLID WASTE FACILITIES**

I. Authority

These rules have been authorized by the Solid Waste Management Plan of the Warren County Solid Waste Management District, and are adopted, published and enforced pursuant to the authority provided in Revised Code Sections 343.01 (G)(2) and 3734.53 (C)(2).

II. Applicability

These rules shall be applicable to all solid waste collection, transfer, disposal, recycling or resource recovery facility within the District, except as provided in Section III hereof.

III. Exemptions

These rules shall not apply to:

- A. a solid waste facility owned by a generator of solid waste when the solid waste facility exclusively disposes of solid wastes generated at one or more premises owned by the generator, regardless of whether the facility is located on the premises where the wastes are generated; except that such facilities shall comply with Sections X and XIII of these rules;
- B. a solid waste facility that exclusively disposes of wastes that are generated from the combustion of coal that is not combined in any way with garbage at one or more premises owned by the generator; except that such facilities shall comply with Sections X and XIII of these rules;
- C. solid wastes generated on the premises of a single-family residence, and disposed of on the premises where they were generated;
- D. sites and facilities for feeding garbage to swine or poultry, and governed by Chapter 942 of the Revised Code;
- E. incinerators located on the premises where the wastes incinerated are generated;

- F. any establishment having facilities for processing iron, steel or non-ferrous scrap and whose principal product is scrap iron and/or steel or non-ferrous scrap for sale or remelting purposes;
- G. any facility used exclusively for the transfer of solid wastes that consists solely of portable containers and that has an aggregate volume of fifty cubic yards or less. For the purposes of this exemption, aggregate volume shall mean the total volume of all portable containers at a facility designated for receiving solid wastes, and shall not include the volume of an empty portable container being delivered to a facility by a transport vehicle, whose purpose includes removal of a full or partially full container of equal or greater volume, at the time of the delivery of the empty container.
- H. tree stumps which are disposed in a construction and demolition debris disposal licensed facility by the State of Ohio; and
- I. transfer facilities which accept exclusively yard waste for transfer; and
- J. any other facilities or wastes which the Board may exempt from all or part of the requirements of these rules, as it from time to time may determine to be in the public interest.

IV. Definitions

As used in these rules:

- A. "Airport" means a public use airport open to the public without prior permission and without restrictions within the physical capacity of available facilities.
- B. "Applicant" means any person who has submitted general plans and specifications for the construction, enlargement or modification of any solid waste collection, transfer, disposal, recycling or resource recovery facility to the Board of Directors for its approval pursuant to these rules.
- C. "Aquifer" means a consolidated or unconsolidated geologic formation or series of formations that are hydraulically interconnected and have or has the ability to receive, store or transmit water to wells or springs.

- D. "Board" or "Board of County Commissioners" means the Board of County Commissioners of the Warren County Solid Waste Management District.
- E. "Composting" means the controlled biological decomposition of organic solid wastes under predominantly aerobic conditions which stabilizes the organic fraction of a material. Fermentation and/or putrefaction, the decomposition of wastes under predominantly anaerobic conditions resulting in the production of leachate and/or odor, is not composting. Composting shall be considered a form of solid waste disposal.
- F. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, emitting or placing any solid waste into or on any land or ground or surface water or into the air.
- G. "District" means the Warren County Solid Waste Management District.
- H. "Endangered Species" means any species designated as such by the United States Secretary of the Interior or the United States Secretary of Commerce, or any other species designated as such by the State of Ohio.
- I. "Enlargement" means, in the case of recycling facilities, resource recovery facilities or transfer facilities, an increase in the capacity of the facility beyond the permit, or other authorization, issued for the facility by the OEPA; and, in the case of all other solid waste disposal facilities, means a horizontal or vertical increase in the size of the facility beyond the limits approved in the permit, or other authorization, issued for the facility by the OEPA.
- J. "Floodway" means the channel of a watercourse and those portions of the adjoining floodplain which are required to convey a regional one-hundred-year flood.
- K. "Ground water" means any water below the surface of the earth in a zone of saturation.
- L. "Hazardous Wastes" means any waste or any combination of wastes in a solid, liquid, semi-solid or contained gaseous form that, in the determination of the Director of Environmental Protection, because of its quantity, concentration or physical or chemical characteristics, may: (1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health

and safety or to the environment when improperly stored, transported, disposed of or otherwise managed. Hazardous wastes include any substance identified as such under the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6921 et seq.), as amended, and do not include any substance that is subject to the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.), as amended.

- M. "Incineration" means the use of controlled combustion to thermally break down solid waste.
- N. "Incinerator" means any equipment, machine, device, article, contrivance, structure, or part of a structure, used to burn solid waste.
- O. "Landfill" or "Sanitary Landfill" means an engineered facility where the final deposition of solid waste is practiced in accordance with the Administrative Code, including areas of solid waste placement, all ground water monitoring/control system structures, buildings, explosive gas monitoring/control/extraction system structures, surface water run-on and runoff control structures, sedimentation pond(s), liner systems, leachate management system structures, and areas within the three-hundred-foot radius from the limits of solid waste placement.
- P. "Leachate" means liquid that has come into contact with or been released from solid waste.
- Q. "Modification" when used with respect to a solid waste transfer, disposal, recycling, or resource recovery facility, means: (i) any material change in total capacity, finished topography or depth of excavation; or (ii) any substantial change which may endanger human health in the technique of waste receipt, the type of waste received, the type of equipment used, or the process utilized at or in the facility; or (iii) a change in the authorized maximum daily waste receipt established for the facility; or (iv) any other substantial alteration of said facility, unless performed in response to the terms of a permit or order of OEPA; or (v) any change that may result in a significant adverse environmental impact. The installation of an interim composite liner system required by the Administrative Code to be installed in an existing unit or new unit (s) within the limits of waste placement of a sanitary landfill facility as of April 1, 1994, is not a "modification."
- R. "OEPA" means the Ohio Environmental Protection Agency.

- S. "Person" means the State or any political subdivision thereof, any private or public corporation, any individual, any partnership or any other entity.
- T. "Plan" means the Solid Waste Management Plan of the Warren County Solid Waste Management District, adopted October 27, 1993, and approved by the Director of the Ohio Environmental Protection Agency December 27, 1993, and as may be amended from time to time.
- U. "Policy Committee" means the Solid Waste Management Policy Committee of the Warren County Solid Waste Management District.
- V. "Recycling" means the process of collecting, sorting, cleansing, treating and reconstituting solid waste that would otherwise be disposed in a solid waste disposal facility and returning reconstituted materials to commerce as commodities for use or exchange.
- W. "Recycling Facility" or "Legitimate Recycling Facility" means an engineered facility or site where recycling is the primary objective of the facility, and: (1) the facility accepts only source separated materials and/or mixed recyclables which are currently recoverable using existing technology; or (2) the facility accepts mixed solid waste streams, and recovers for beneficial use not less than sixty per cent (60%) of the volume of solid wastes brought to the facility each month (as averaged monthly) for not less than eight months in each calendar year, and disposes of not more than forty per cent (40%) of the total volume of solid wastes brought to facility each month (as averaged monthly) for not less than eight months in each calendar year. A "recycling facility" does not include a solid waste disposal facility, and does not include a waste tire disposal facility.
- X. "Resource Recovery Facility" means a facility that extracts, removes or reclaims valuable materials and/or energy from solid wastes or any combination of structures, machinery or devices utilized to separate, process, modify, convert, treat, or prepare collected solid waste for management other than by disposal so that component materials or substances or recoverable resources may be recovered or used as a new material or energy source.
- Y. "Solid Wastes" or "Solid Waste" means such unwanted residual solid or semi-solid material as results from industrial, commercial, agricultural and community operations, (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 fly ash, spent non-toxic foundry sand, and slag) and other substances that are not harmful or inimical to the public health, and 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 hazardous waste.

- Z. "Solid Waste Disposal Facility" means any site, location, tract of land, installation or building used for incineration, composting, sanitary landfilling other methods of disposal of solid wastes.
- AA. "Solid Waste Transfer Facility" or "Transfer Facility" means any site, location, tract of land, installation or building that is used 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 another facility. A purported recycling facility which does not fully meet the definition of a recycling facility provided in Section IV(W) of these rules is a transfer facility. The term does not include facilities consisting only of portable containers that have an aggregate volume fifty cubic yards or less and does not include a recycling facility as defined in Section IV(W) of these rules.
- BB. "Source Separation" means the practice of dividing solid waste into some or all of its constituent parts at the point of generation.
- CC. "Surface Water" means any water on the surface of the earth.
- DD. "TAC" or "Technical Advisory Council" means the Technical Advisory Council of the Warren County Solid Waste Management District as it may from time to time be established and appointed by the Policy Committee pursuant to Section 3734.54(F) of the Revised Code.
- EE. "Yard Waste" means solid waste that includes only leaves, grass clippings, brush, garden waste, tree trunks, holiday trees, tree trimmings and/or prunings.

V. Proposed Improvements to Comply with Plan

- A. No person shall construct, enlarge or modify any solid waste transfer, disposal, recycling or resource recovery facility within the District until general plans and

specifications for the proposed improvement have been submitted to and approved by the Board as complying with the Plan, in accordance with these rules. Copies of such general plans and specifications for the proposed improvement, together with the compliance report required pursuant to Section VI(C) of these rules, shall be submitted to and approved by the Board before the establishment, enlargement or modification of the solid waste transfer, disposal, recycling or resource recovery facility is begun.

- B. Each person proposing to construct a new solid waste transfer, disposal, recycling or resource recovery facility, or proposing to enlarge or modify an existing solid waste transfer, disposal, recycling or resource recovery facility, shall submit five (5) copies of general plans and specifications for the proposed improvement, together with copies of the compliance report described in Section VI(C) hereof. Such general plans and specifications shall contain all of the information required in Section VI(C) hereof, so that the Board can determine whether the criteria set forth in Sections VI(A) and VI(B) hereof are satisfied.
- C. Upon receipt of the general plans and specifications and the compliance report required by Section VI(C) of these rules, or a modification thereto as authorized by Section V(F) of these rules, the Board shall promptly:
1. Distribute one copy thereof to the Policy Committee. With the advice and assistance of the TAC, if then established, the Policy Committee shall review the proposed improvement or modified proposed improvement for its compliance with the Plan. The Policy Committee shall render its non-binding recommendation to the Board, and explain the basis for its recommendation, at the public hearing to be convened in accordance with Section V(D) of these rules.
 2. Distribute one copy thereof to, at a minimum, the Warren County Board of County Commissioners.
 3. Prepare and publish a public notice which describes the proposed improvement or modified proposed improvement, specifies the location where the general plans, specifications, and compliance report, or revisions thereto, are available for review, and establishes a period of no less than thirty (30) days for comments

- B. The Board shall approve the general plans and specifications as complying with the Plan only if it determines that the proposed improvement does not compete with or inhibit the financing, use or operation of proposed or existing solid waste management programs or facilities developed by or on behalf of the District; that the proposed improvement avoids or mitigates adverse socioeconomic impacts, environmental impacts and/or health effects to the maximum extent practicable; and the proposed improvement is consistent with the District's siting strategy. In determining whether the proposed improvement complies with the Plan, the Board shall give due consideration to the general plans, specifications and compliance report submitted by the applicant, the applicant's presentation at the public hearing, the non-binding recommendation of the Policy Committee, written comments submitted by interested persons pursuant to Section V(C)(3) and, if applicable, Section V(F) of these rules, and comments made at the public hearing convened pursuant to Section V(D) of these rules.
- C. Compliance Report. Together with the general plans and specifications, the applicant shall submit to the Board a compliance report containing sufficient information so that the Board can determine whether the standards and criteria set forth in Sections VI(A) and VI(B) hereof are satisfied. The report shall contain, at a minimum, that information described in Sections VI(C)(1), (2), and (3) hereof.
1. The compliance report shall include an analysis which describes the effects of the proposed improvement on the District's existing solid waste management infrastructure and programs, including, without limitation, the effect of the proposed improvement on the financing, use or operation of existing or proposed facilities developed by or on behalf of the District. In particular, but without limitation, the compliance report shall describe the effects and impacts of the proposed improvement in light of the following:
 - a. the technical feasibility and reliability of the proposed improvement;
 - b. the relevant costs of the proposed improvement, including fully loaded life cycle costs and the costs of procuring, developing, permitting, operating, closing and monitoring (both pre-closure

and post-closure) the proposed improvement;

- c. the costs of inspection, testing or supervision at the proposed improvement by the District and/or the Warren County Combined Health District;
 - d. the maximum capacity of the proposed improvement, if any;
 - e. the minimum daily volume of waste which will need to be received at the proposed improvement in order to operate without financial loss;
 - f. the proposed improvement's relationship to existing or proposed solid waste management programs or facilities that have been or will be developed by or on behalf of the District, and pursuant to which solid waste generated within the District will be managed in accordance with the Plan;
 - g. the proposed improvement's relationship to existing or proposed source separation and recycling activities within the District; and
 - h. the proposed improvement's relationship to existing or proposed regional initiatives for the management of solid waste.
2. The compliance report shall also include an analysis describing the impacts and effects of the proposed improvement on the District's environment. In particular, but without limitation, the compliance report shall describe the effects and impacts of the proposed improvement in light of the following:
- a. acreage involved in the proposed improvement;
 - b. soil types at the proposed improvement site, and their current use;
 - c. proximity of the proposed site to any building, site or district listed on the

State or National Register of Historic Places;

- d. depth to water table at the site;
- e. proximity of the site to any aquifer;
- f. slopes at the site, in terms of percentage of site that is sloped and steepness of the slope;
- g. hunting, trapping or fishing opportunities currently available at the site;
- h. regular utilization of the site by any endangered species for habitat, forage or range;
- i. surface waters on or near the site;
- j. traffic impacts related to the proposed improvement (during and after development);
- k. amounts and types of vegetation to be permanently removed from the site;
- l. odors to be produced by the proposed improvement and impact on the community;
- m. noise to be produced by the proposed improvement and impact on the community;
- n. the proposed improvement's projected consumption of energy or natural resources;
- o. the proposed improvement's projected consumption of the potable water supply in the District;
- p. the proposed improvement's compatibility with land use ordinances, township zoning resolutions, county rural zoning resolutions, and existing land uses at the proposed site and for one-quarter mile in all directions;
- q. demand of the proposed improvement on community-provided services (e.g. fire, police, and emergency services);

- r. the proposed improvement's increased demands on the community's sewer capacity;
- s. impacts on property values in the District;
- t. impacts on job opportunities and tax revenues in the District;
- u. impacts on population distribution and community growth in the District;
- v. impacts on aesthetics;
- w. the measures to be taken by the applicant to ensure worker and community safety; and
- x. socioeconomic impacts.

The analysis of the foregoing contained in the compliance report shall be sufficient to allow the Board to understand the environmental, health and/or socioeconomic impacts or effects of the proposed improvement on the District, in order that the Board may determine whether the proposed improvement complies with the Plan. Nothing in these rules shall be deemed or construed to establish design standards.

3. Siting Analysis. If the proposed improvement involves the construction of a new facility or the enlargement of an existing facility, the compliance report shall include a siting analysis. The siting analysis must describe the process used to select the proposed site, including evaluation criteria, elimination criteria, assumptions made, data sources, numerical ranking systems utilized and all other factors used to make siting decisions. The analysis must demonstrate that the range of alternative sites evaluated was reasonable in light of the objectives and capabilities of the applicant, and that, of the evaluated sites, the selected site is most appropriate. Finally, the analysis must include maps of sites and describe the results of field investigations, the comparative advantages and disadvantages of the highest ranked sites and the basis for selecting the proposed site. The site selection process must be

comprehensive and must identify and evaluate the complete range of alternative sites within the District which are reasonable, given the objectives and capabilities of the applicant. All criteria used to eliminate and evaluate the suitability of potential sites shall be clearly defined and consistently applied. A phased approach shall be used, in which a more detailed evaluation of sites is undertaken as the number of potential is reduced. If the proposed improvement involves the enlargement of an existing facility, including without limitation the lateral expansion of a landfill, the siting analysis may be limited to a demonstration that the applicable prohibited siting criteria described in Section VI(C)(3)(d) of these rules have not been violated.

- a. In the first phase of the siting process, areas where siting is impossible or prohibited should be eliminated. Prohibited siting criteria for specified facilities are listed in Section VI(C)(3)(d) of these rules.
- b. The second phase of the siting process results in the identification of potential sites by application of a two part analysis. In the first part of the second phase, the applicant should identify preferred siting areas through the designation and application of evaluation criteria most pertinent to the siting of the proposed improvement, thereby identifying candidate areas which may contain suitable sites for the proposed improvement. In the second part of the second phase, potentially suitable sites are identified within the preferred siting areas through the application of additional evaluation criteria to all available potential sites within the candidate areas. A list of potentially suitable sites should result at the completion of both parts of the second phase. Evaluation criteria utilized in identifying potential

sites shall include, at a minimum, those provided in Section VI(C)(3)(e) of these rules.

- c. In the third phase, a ranking methodology is utilized to select a preferred site. To identify the preferred site, an applicant must compare two or more similar sites that remain in the site selection process after the first two phases, and shall assign numerical values to the qualitative evaluation of the subject sites, rating them numerically for each evaluation criteria. Each evaluation criteria must then be weighed to reflect its relative importance as compared to other evaluation criteria. This rating matrix provides a method by which potential sites can be objectively evaluated and rated in order of suitability, and ensures that the site which demonstrates acceptable risk levels while minimizing environmental consequences will be selected.
- d. Prohibited Siting Criteria. The siting analysis required by Section VI(C)(3) hereof shall include the following areas as prohibited sites for the specified solid waste facility types:
 - i. With respect to sanitary landfills:
 - aa. any area that would be prohibited as a location for a sanitary landfill site pursuant to the Ohio Administrative Code;
 - bb. any area located within 5,000 feet of any airport runway used by piston type aircraft, or within 10,000 feet of any runway used by turbojet aircraft; unless the owner or operator of the

sanitary landfill can demonstrate that the sanitary landfill will be so designed and operated that it will not increase likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to the occupants of the aircraft;

cc. any area where environmental monitoring and site remediation cannot be conducted, based upon the ability to characterize ground water and surface water flow and locate upgradient/downgradient directions, ability to place environmental monitoring points which will detect releases from the sanitary landfill, ability to characterize and define a release from the sanitary landfill and determine necessary corrective actions, and ability to successfully implement those corrective actions;

dd. any part of any wetland;
and

ee. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.

ii. With respect to recycling facilities and transfer

facilities:

- aa. any area that would be prohibited as a location for a solid waste transfer facility pursuant to the Ohio Administrative Code;
 - bb. any site that will call for placement of waste within fifty (50) feet of the proposed improvement's property line;
 - cc. any part of any wetland; and
 - dd. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.
- iii. With respect to yard waste composting facilities:
- aa. any area that would be prohibited as a location for a yard waste composting facility pursuant to the Ohio Administrative Code; and
 - bb. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.
- iv. With respect to solid waste incinerators, resource recovery facilities or waste tire

storage facilities:

- aa. any area that would be prohibited as the location of a solid waste transfer facility pursuant to the Ohio Administrative Code;
 - bb. any area that would call for the placement of solid waste within fifty (50) feet of the facility's property line;
 - cc. any part of any wetland; and
 - dd. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.
- e. Evaluation Criteria. The siting analysis required by Section VI(C)(3) hereof shall consider the following criteria, at a minimum, as evaluation criteria:
- i. hydrogeologic characteristics of the site, particularly with regard to:
 - aa. the thickness and prevalence of low permeability materials to minimize the migration of contaminants from the facility;
 - bb. depth to bedrock;
 - cc. ground water flow patterns and water quality should be such that contaminant releases would do the least environmental damage and

would be easiest to correct;

- dd. the facility's proximity and relationship to water supply sources;
 - ee. the impacts of the site's natural topography on the facility; and
 - ff. anomalous hydrogeologic features that might alter ground waste flow, such as mines, caves, or other like features;
- ii. population density and anticipated growth, both around the site and around major transportation routes to the facility;
 - iii. adequacy of transport routes for additional traffic anticipated to result from the development of the proposed improvement and increased safety hazards incident to the traffic increase;
 - iv. proximity of the site to incompatible structures such as schools, churches, nursing homes, hospitals or commercial centers;
 - v. impacts on the host community, including local land use planning and zoning, and any financial impacts the proposed improvement may have on the community;
 - vi. proximity to and availability of necessary emergency services;
 - vii. proximity of the facility to open spaces or cultural, historical and recreational resources;

viii. impacts on agriculture and agricultural land; and

ix. improvements proposed by or on behalf of the District may be subjected to additional criteria provided in the Plan.

VII. Supervision of Construction, Enlargement or Modification; Costs

- A. The construction, enlargement or modification of any solid waste transfer, disposal, recycling or resource recovery facility shall be done under the supervision of the county sanitary engineer designated by the Board.
- B. Any person constructing, enlarging or modifying any solid waste transfer, disposal, recycling or resource recovery facility under the supervision of the county sanitary engineer designated by the Board, or proposing such improvements, shall pay to the District all expenses incurred by the Board in connection therewith.

VIII. Submission of Permit to Install Application to Board

Any person submitting an application to OEPA for a permit to install to construct, enlarge or modify a solid waste transfer, disposal, recycling or resource recovery facility located in the District shall simultaneously submit a copy of such application to the Board.

IX. Rights of Access for Sanitary Engineer

- A. The county sanitary engineer designated by the Board, or any assistant(s) authorized by the county sanitary engineer, shall have the right to enter upon public or private property for the purpose of making surveys or examinations at solid waste facilities located within the District, or to otherwise supervise their construction, enlargement, modification or operation.
- B. No person shall forbid or interfere with the county sanitary engineer designated by the Board, or any authorized assistant(s), in making surveys or examinations at, or otherwise supervising the construction, enlargement, modification or operation of, solid waste facilities located within the District.
- C. The owner of any property actually damaged by the county

sanitary engineer designated by the Board, or any authorized assistant(s), in the exercise of their rights under this section shall be compensated by the Board in an amount representing the reasonable value of the damage to the property.

X. Daily Logs to Policy Committee

Copies of annual reports summarizing daily logs required to be prepared and maintained by OEPA in accordance with the Ohio Administrative Code shall be provided to the Policy Committee at the same time as their submission to OEPA.

XI. Submission of OEPA Materials to Policy Committee

In addition to the other requirements of these rules, any person who obtains from OEPA a permit to install a solid waste transfer, recycling, or resource recovery facility in the District shall provide to the Policy Committee a copy of all plans, specifications, and other materials submitted to OEPA, whether such materials were submitted as a part of the permit to install application process, or are required to be submitted to OEPA pursuant to the permit to install.

XII. Notice of Intent to Close Required

No less than one hundred eighty (180) days prior to the anticipated date on which the owner of any solid waste transfer, disposal, recycling or resource recovery facility intends to cease accepting waste at that facility, the facility owner, or an authorized representative, shall provide to the Board, by certified mail, notice of the anticipated date on which the solid waste transfer, disposal, recycling or resource recovery facility will cease accepting solid waste.

XIII. Submission of Inventory Information

Not later than the first day of April of each year, every operator of a solid waste transfer, disposal, recycling, or resource recovery facility located within the District shall submit to the Policy Committee a verified report detailing the amount and types of solid waste disposed of, stored or treated at the facility and, to the extent available, the origins of the waste, in order to allow the District to fulfill its reporting obligations under OAC 3745-29-02(C) and 3745-29-02(C), as they may be from time to time amended.

XIV. Penalties, Prosecution

- A. Whoever violates any provision of these rules shall be fined not more than five thousand dollars (\$5,000) for each offense. Each separate day of each violation is a separate offense.
- B. The Prosecuting Attorney of Warren County is hereby authorized, upon the request of the Board, to prosecute to termination or bring a civil action for appropriate relief against any person that has violated, is violating, or is threatening to violate any of these rules within their respective jurisdictions. The court of common pleas in which the civil action is filed has jurisdiction to and shall grant appropriate relief including a temporary restraining order or a temporary or permanent injunction, upon a showing that the person against whom the action is brought has violated, is violating, or is threatening to violate any of these rules.
- C. All fines imposed under this section shall be deposited in the District's special fund maintained pursuant to Revised Code Section 3734.57(E).

XV. Zoning Override

The owner or operator of any solid waste collection, transfer, disposal, recycling, or resource recovery facility, or any proposed solid waste collection, transfer, disposal, recycling or resource recovery facility, provided for in the Plan is hereby exempted from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the solid waste collection, transfer, disposal, recycling, or resource recovery facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit to install under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste collection, transfer, disposal, recycling, or resource recovery facility.

XVI. Storage in Recycling Facilities

- A. All putrescible materials stored at a recycling facility within the District shall be transferred as soon as possible. In any event, all putrescible materials which are not transferred within twelve (12) hours of receipt shall be placed in closed containers, or in totally

enclosed buildings or structures, so that water, birds, insects, rodents, or other vectors are prevented from reaching the materials.

- B. Non-putrescible materials may be stored at a recycling facility for up to thirty (30) consecutive calendar days. Non-putrescible materials may be stored for a longer period of time only with the approval of the Board, after a finding by the Board that:
1. there is demonstrable need to do so (such as a bona fide arm's length marketing agreement with terms of receipt based on greater than thirty (30) day intervals or in amounts that require more than thirty (30) days to acquire); and
 2. the storage of the materials at the recycling facility for such extended lengths of time will not pose a nuisance or sanitary or environmental problem.

XVII. Succession of Rule Authority

The Warren County Solid Waste Management District's Rules, upon adoption, will supersede the Clinton-Warren Joint Solid Waste Management District's rules.

XVIII. Severability

The provisions of these rules shall be severable, and if any section, clause or portion hereof, or the applicability hereof to any person or circumstance be invalidated, the remainder of these rules shall not be affected.

XIX. Effective Date

These rules shall be effective immediately.

XX. Transition Rules

These rules shall apply to the construction, enlargement or modification of every solid waste collection, transfer, disposal, recycling or resource recovery facility in the District for which a final and binding permit to install or other authorization has not been issued by the Director of the Environmental Protection, or in the case of a composting facility, which facility has not been registered with OEPA prior to the effective date of the rules.

APPENDIX R: BLANK SURVEY FORMS AND RELATED INFORMATION

APPENDIX S: SITING STRATEGY

As the District is not constructing a new solid waste landfill facility to secure disposal capacity, the Policy Committee is not including a siting strategy.

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:

1. 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.

2. 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.

3. 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.

CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Policy Committee (SWPC) of the Warren County Solid Waste Management District (District), do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft Warren County Solid Waste Management Plan Update, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and are in compliance with the requirements in the District Solid Waste Management Plan Format, revision 4.1.



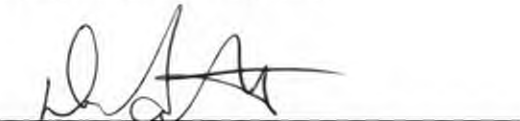
Representing the County Commissioners

11-21-22

Date Signed

Representing CEO of Largest City

Date Signed



Representing County Health Department

11-21-22

Date Signed



Representing Townships

11-21-22

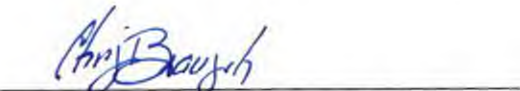
Date Signed



Representing Commercial/Industrial Generators

11-21-22

Date Signed



Representing the General Interest of Citizens

11/21/22

Date Signed



Representing the Public

11/21/22

Date Signed

PUBLIC NOTICE
WARREN COUNTY SOLID WASTE MANAGEMENT DISTRICT

Public Comment Period and Public Hearing Notice for Draft Solid Waste Management Plan Update

The Warren County Solid Waste Management District (District) is establishing a 30-day written comment period (June 4, 2023 until July 5, 2023) on the draft Solid Waste Management Plan Update (Plan Update) (Ohio Revised Code Section 3734.54). The District has prepared the draft Plan Update as required by Section 3734.54 of the Ohio Revised Code. The draft Plan Update includes a budget and fees to finance the Plan, a solid waste facility inventory, projections and strategies, facilities and programs to be used, and an analysis of the progress made toward achieving state solid waste reduction goals.

The Plan Update includes six chapters that are prepared specifically for the public's review. They include: 1. Introduction, 2. District Profile, 3. Waste Generation, 4. Waste Management, 5. Waste Reduction and Recycling, and 6. Budget.

This draft is an update to a previously approved solid waste plan. This Plan Update details the following: Recycling Infrastructure Inventory, Population Data, Disposal Data, Residential/Commercial/Industrial Recycling Data, Waste Generation Data, a Strategic Evaluation of Old and New Proposed District Programs, Achievement of State Recycling Goals, Education and Outreach Programs, Greenhouse Gas Emissions Calculations, Financial Data, Designation of Facilities, and a Siting Strategy.

The draft Plan Update includes a demonstration of access to landfill capacity and determines there are 23 years of landfill capacity available at the Rumpke Landfill located in Cincinnati which accepts 89% of the District's waste. Based on other landfills used to manage waste generated in Warren County during the 2020 reference year for the planning period, landfills had an average life expectancy of more than 38 years.

Under this plan, the Board of Commissioners is authorized to establish facility designations which establish the facilities where solid waste must be taken for processing or disposal. In this Plan Update, the District is not designating facilities to which waste generated in the District must be taken. However, the District reserved the right to establish facility designations in accordance with Section 343.013, 343.014 and 343.015 of the Ohio Revised Code with respect to both in-state and out-of-state facilities.

The draft Plan Update complies with State Plan Goal #1: Providing infrastructure for recycling to over 80% of the population. The District is committed to maintaining its achievement of Goal 1.

The District currently funds plan programs and current operations through apportionment of the generation fees. Currently, the generation fees are \$0.50 per ton of solid waste delivered. No fee changes are anticipated during this draft period.

The District will hold a public hearing to obtain oral comments regarding the draft Solid Waste Management Plan Update on Thursday, July 6, 2023, at 3:30 PM at the Warren County Administration Building, 406 Justice Drive, Lebanon, OH 45036 in Room 128.

The District will accept written comments as required by Ohio Revised Code Section 3734.55 on the draft Plan Update from June 4, 2023 until July 5, 2023. Written comments must be submitted by July 5, 2023, to Ms. Susanne Mason, District's Office, 406 Justice Drive, Lebanon, OH 45036, or by email to Susanne.Mason@co.warren.oh.us

The draft Plan Update is available for review at District website: www.co.warren.oh.us/solidwaste

Please call (513) 695-1209 with any questions about the Plan Update.

RESOLUTION No. 2023-01

**Resolution Adopting
the Warren County Solid Waste Management Plan**

A resolution declaring that the amended Solid Waste Management Plan for the Warren County Management District has been adopted.

WHEREAS, the District completed the draft amended Solid Waste Management Plan and submitted it to the Ohio Environmental Protection Agency for review and comment on December 1, 2022, and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on January 17, 2023;

WHEREAS, this Solid Waste Management District Policy Committee has reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and taken into consideration these comments, incorporating changes into the amended Plan where necessary;

WHEREAS, the Solid Waste Management District has conducted a 30-day public comment period, and a public hearing held on July 6, 2023, to provide the public an opportunity to have input in this Plan;

NOW, THEREFORE, BE IT RESOLVED that the Solid Waste Management Policy Committee of the Warren County Solid Waste Management District:

1. Adopts the amended Plan for the Warren County Solid Waste Management District; and
2. Certifies that, to the best of our knowledge and belief, the statements, demonstrations, and all accompanying materials that comprise the District's Plan, and availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the 15-year period covered by this Plan, are accurate and are in compliance with the requirements of the District Solid Waste Management Plan Format, version 4.1.

Motion made by Chris Brausch seconded by Duane Stansbury.
Upon call of the roll the following vote resulted:

<u>Members</u>	<u>Yea</u>	<u>Nay</u>	<u>Abstain</u>	<u>Not Present</u>
Chris Brausch	✓			
Molly Conley	✓			
David Crisenbery				✓
Betty Davis	✓			
William Romaine				✓
Martin Russell	✓			
Duane Stansbury	✓			



Chairman, Solid Waste Policy Committee

ATTEST



**Resolution Certifying Ratification
of the Solid Waste Management Plan**

A resolution declaring that the amended Solid Waste Management Plan for the Warren County Solid Waste Management District has been ratified in accordance with Section 3734.55 of the Ohio Revised Code.

WHEREAS, the District held a public hearing on July 6, 2023, and the Solid Waste Management District Policy Committee adopted the amended Solid Waste Management Plan on July 17, 2023;

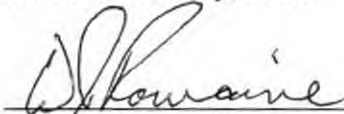
WHEREAS, this Solid Waste Management District Policy Committee has received copies of resolutions and ordinances approving the amended Plan from the Warren County Board of County Commissioners, the legislative body of the largest municipality (City of Mason), and from legislative jurisdictions representing at least 60 percent of the population within the District;

NOW, THEREFORE, BE IT RESOLVED that the Solid Waste Management Policy Committee of the Warren County Solid Waste Management District declares the amended Plan for the Warren County Solid Waste Management District to be ratified in accordance with Section 3734.55 of the Ohio Revised Code, and shall cause the amended Plan to be submitted to the Director of the Ohio Environmental Protection Agency for review.

This resolution shall be in effect immediately upon its adoption.

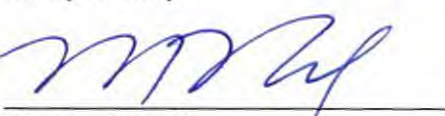
Voting for resolution:

David Crisenbery, Chair




William Romaine

Molly Conley

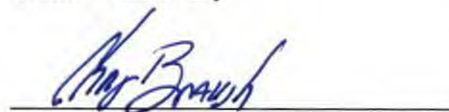


Martin Russell


12-12-23
Date



Duane Stansbury



Chris Brausch



Betty Davis

**BOARD OF COUNTY COMMISSIONERS
WARREN COUNTY, OHIO**

Resolution

Number 94-209

Adopted Date February 24, 1994

ADOPT THE WARREN COUNTY SOLID WASTE MANAGEMENT DISTRICT'S RULES GOVERNING THE MAINTENANCE, PROTECTION AND USE OF SOLID WASTE FACILITIES

WHEREAS, the Warren County Board of Commissioners have established the Warren County Solid Waste Management District to prepare, adopt, submit, and implement a solid waste management plan; and

WHEREAS, the Warren County Board of Commissioners established and convened a Solid Waste Management Policy Committee which prepared A Solid Waste Management Plan ("Plan") for the District; and

WHEREAS, that Plan was ratified by the Board of County Commissioners of Warren County and by the legislative authorities of a combination of municipal corporations and townships with a combined population within the District comprising at least sixty percent of the total population of the District including the municipal corporation having the largest population within the boundaries of the District; and

WHEREAS, the Plan was subsequently approved by the Director of the Ohio Environmental Protection Agency on December 27, 1993; and

WHEREAS, the District's Plan provides for rules governing the maintenance, protection and use of such facilities and requiring the submission of such plans and specifications to the Board of Directors of the District; and

WHEREAS, the adoption of such rules furthers the purposes of the District and is in the public interest;

BE IT RESOLVED, that the "Warren County Solid Waste Management District Rules Governing the Maintenance, Protection, and Use of Solid Waste Facilities" be, and hereby are, adopted in the form attached hereto; and

BE IT FURTHER RESOLVED, that any rules previously adopted by the Clinton-Warren Joint Solid Waste Management District or Warren County Solid Waste Management District be, and hereby are, superseded; and

BE IT FURTHER RESOLVED, that the District be, and hereby is directed to publish the "Warren County Solid Waste Management District Rules Governing the Maintenance, Protection and Use of Solid Waste Management Facilities," in their entirety; in The Western Star in the earliest possible issue; and

BE IT FURTHER RESOLVED, that any other and all actions required by law to make effective the "Warren County Solid Waste Management District Rules Governing the Maintenance, Protection and Use of Solid Waste Management Facilities" be, and hereby are, authorized.


RESOLUTION #94-
FEBRUARY 24, 1994
PAGE 2

Mr. Kilburn moved for adoption of the foregoing resolution, being seconded by Mrs. South. Upon call of the roll the following vote resulted:

Mr. Crisenbery - yea
Mrs. South - yea
Mr. Kilburn - yea

Resolution adopted this 24th day of February 1994.

BOARD OF COUNTY COMMISSIONERS



Tina Davis, Clerk

/dad

cc: Solid Waste (file)

**WARREN COUNTY SOLID WASTE MANAGEMENT DISTRICT
RULES GOVERNING THE MAINTENANCE, PROTECTION AND USE OF
SOLID WASTE FACILITIES**

I. Authority

These rules have been authorized by the Solid Waste Management Plan of the Warren County Solid Waste Management District, and are adopted, published and enforced pursuant to the authority provided in Revised Code Sections 343.01 (G)(2) and 3734.53 (C)(2).

II. Applicability

These rules shall be applicable to all solid waste collection, transfer, disposal, recycling or resource recovery facility within the District, except as provided in Section III hereof.

III. Exemptions

These rules shall not apply to:

- A. a solid waste facility owned by a generator of solid waste when the solid waste facility exclusively disposes of solid wastes generated at one or more premises owned by the generator, regardless of whether the facility is located on the premises where the wastes are generated; except that such facilities shall comply with Sections X and XIII of these rules;
- B. a solid waste facility that exclusively disposes of wastes that are generated from the combustion of coal that is not combined in any way with garbage at one or more premises owned by the generator; except that such facilities shall comply with Sections X and XIII of these rules;
- C. solid wastes generated on the premises of a single-family residence, and disposed of on the premises where they were generated;
- D. sites and facilities for feeding garbage to swine or poultry, and governed by Chapter 942 of the Revised Code;
- E. incinerators located on the premises where the wastes incinerated are generated;

- F. any establishment having facilities for processing iron, steel or non-ferrous scrap and whose principal product is scrap iron and/or steel or non-ferrous scrap for sale or remelting purposes;
- G. any facility used exclusively for the transfer of solid wastes that consists solely of portable containers and that has an aggregate volume of fifty cubic yards or less. For the purposes of this exemption, aggregate volume shall mean the total volume of all portable containers at a facility designated for receiving solid wastes, and shall not include the volume of an empty portable container being delivered to a facility by a transport vehicle, whose purpose includes removal of a full or partially full container of equal or greater volume, at the time of the delivery of the empty container.
- H. tree stumps which are disposed in a construction and demolition debris disposal licensed facility by the State of Ohio; and
- I. transfer facilities which accept exclusively yard waste for transfer; and
- J. any other facilities or wastes which the Board may exempt from all or part of the requirements of these rules, as it from time to time may determine to be in the public interest.

IV. Definitions

As used in these rules:

- A. "Airport" means a public use airport open to the public without prior permission and without restrictions within the physical capacity of available facilities.
- B. "Applicant" means any person who has submitted general plans and specifications for the construction, enlargement or modification of any solid waste collection, transfer, disposal, recycling or resource recovery facility to the Board of Directors for its approval pursuant to these rules.
- C. "Aquifer" means a consolidated or unconsolidated geologic formation or series of formations that are hydraulically interconnected and have or has the ability to receive, store or transmit water to wells or springs.

- D. "Board" or "Board of County Commissioners" means the Board of County Commissioners of the Warren County Solid Waste Management District.
- E. "Composting" means the controlled biological decomposition of organic solid wastes under predominantly aerobic conditions which stabilizes the organic fraction of a material. Fermentation and/or putrefaction, the decomposition of wastes under predominantly anaerobic conditions resulting in the production of leachate and/or odor, is not composting. Composting shall be considered a form of solid waste disposal.
- F. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, emitting or placing any solid waste into or on any land or ground or surface water or into the air.
- G. "District" means the Warren County Solid Waste Management District.
- H. "Endangered Species" means any species designated as such by the United States Secretary of the Interior or the United States Secretary of Commerce, or any other species designated as such by the State of Ohio.
- I. "Enlargement" means, in the case of recycling facilities, resource recovery facilities or transfer facilities, an increase in the capacity of the facility beyond the permit, or other authorization, issued for the facility by the OEPA; and, in the case of all other solid waste disposal facilities, means a horizontal or vertical increase in the size of the facility beyond the limits approved in the permit, or other authorization, issued for the facility by the OEPA.
- J. "Floodway" means the channel of a watercourse and those portions of the adjoining floodplain which are required to convey a regional one-hundred-year flood.
- K. "Ground water" means any water below the surface of the earth in a zone of saturation.
- L. "Hazardous Wastes" means any waste or any combination of wastes in a solid, liquid, semi-solid or contained gaseous form that, in the determination of the Director of Environmental Protection, because of its quantity, concentration or physical or chemical characteristics, may: (1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health

and safety or to the environment when improperly stored, transported, disposed of or otherwise managed. Hazardous wastes include any substance identified as such under the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6921 et seq.), as amended, and do not include any substance that is subject to the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.), as amended.

- M. "Incineration" means the use of controlled combustion to thermally break down solid waste.
- N. "Incinerator" means any equipment, machine, device, article, contrivance, structure, or part of a structure, used to burn solid waste.
- O. "Landfill" or "Sanitary Landfill" means an engineered facility where the final deposition of solid waste is practiced in accordance with the Administrative Code, including areas of solid waste placement, all ground water monitoring/control system structures, buildings, explosive gas monitoring/control/extraction system structures, surface water run-on and runoff control structures, sedimentation pond(s), liner systems, leachate management system structures, and areas within the three-hundred-foot radius from the limits of solid waste placement.
- P. "Leachate" means liquid that has come into contact with or been released from solid waste.
- Q. "Modification" when used with respect to a solid waste transfer, disposal, recycling, or resource recovery facility, means: (i) any material change in total capacity, finished topography or depth of excavation; or (ii) any substantial change which may endanger human health in the technique of waste receipt, the type of waste received, the type of equipment used, or the process utilized at or in the facility; or (iii) a change in the authorized maximum daily waste receipt established for the facility; or (iv) any other substantial alteration of said facility, unless performed in response to the terms of a permit or order of OEPA; or (v) any change that may result in a significant adverse environmental impact. The installation of an interim composite liner system required by the Administrative Code to be installed in an existing unit or new unit (s) within the limits of waste placement of a sanitary landfill facility as of April 1, 1994, is not a "modification."
- R. "OEPA" means the Ohio Environmental Protection Agency.

- S. "Person" means the State or any political subdivision thereof, any private or public corporation, any individual, any partnership or any other entity.
- T. "Plan" means the Solid Waste Management Plan of the Warren County Solid Waste Management District, adopted October 27, 1993, and approved by the Director of the Ohio Environmental Protection Agency December 27, 1993, and as may be amended from time to time.
- U. "Policy Committee" means the Solid Waste Management Policy Committee of the Warren County Solid Waste Management District.
- V. "Recycling" means the process of collecting, sorting, cleansing, treating and reconstituting solid waste that would otherwise be disposed in a solid waste disposal facility and returning reconstituted materials to commerce as commodities for use or exchange.
- W. "Recycling Facility" or "Legitimate Recycling Facility" means an engineered facility or site where recycling is the primary objective of the facility, and: (1) the facility accepts only source separated materials and/or mixed recyclables which are currently recoverable using existing technology; or (2) the facility accepts mixed solid waste streams, and recovers for beneficial use not less than sixty per cent (60%) of the volume of solid wastes brought to the facility each month (as averaged monthly) for not less than eight months in each calendar year, and disposes of not more than forty per cent (40%) of the total volume of solid wastes brought to facility each month (as averaged monthly) for not less than eight months in each calendar year. A "recycling facility" does not include a solid waste disposal facility, and does not include a waste tire disposal facility.
- X. "Resource Recovery Facility" means a facility that extracts, removes or reclaims valuable materials and/or energy from solid wastes or any combination of structures, machinery or devices utilized to separate, process, modify, convert, treat, or prepare collected solid waste for management other than by disposal so that component materials or substances or recoverable resources may be recovered or used as a new material or energy source.
- Y. "Solid Wastes" or "Solid Waste" means such unwanted residual solid or semi-solid material as results from industrial, commercial, agricultural and community operations, (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 fly ash, spent non-toxic foundry sand, and slag) and other substances that are not harmful or inimical to the public health, and 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 hazardous waste.

- Z. "Solid Waste Disposal Facility" means any site, location, tract of land, installation or building used for incineration, composting, sanitary landfilling other methods of disposal of solid wastes.
- AA. "Solid Waste Transfer Facility" or "Transfer Facility" means any site, location, tract of land, installation or building that is used 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 another facility. A purported recycling facility which does not fully meet the definition of a recycling facility provided in Section IV(W) of these rules is a transfer facility. The term does not include facilities consisting only of portable containers that have an aggregate volume fifty cubic yards or less and does not include a recycling facility as defined in Section IV(W) of these rules.
- BB. "Source Separation" means the practice of dividing solid waste into some or all of its constituent parts at the point of generation.
- CC. "Surface Water" means any water on the surface of the earth.
- DD. "TAC" or "Technical Advisory Council" means the Technical Advisory Council of the Warren County Solid Waste Management District as it may from time to time be established and appointed by the Policy Committee pursuant to Section 3734.54(F) of the Revised Code.
- EE. "Yard Waste" means solid waste that includes only leaves, grass clippings, brush, garden waste, tree trunks, holiday trees, tree trimmings and/or prunings.

V. Proposed Improvements to Comply with Plan

- A. No person shall construct, enlarge or modify any solid waste transfer, disposal, recycling or resource recovery facility within the District until general plans and

specifications for the proposed improvement have been submitted to and approved by the Board as complying with the Plan, in accordance with these rules. Copies of such general plans and specifications for the proposed improvement, together with the compliance report required pursuant to Section VI(C) of these rules, shall be submitted to and approved by the Board before the establishment, enlargement or modification of the solid waste transfer, disposal, recycling or resource recovery facility is begun.

B. Each person proposing to construct a new solid waste transfer, disposal, recycling or resource recovery facility, or proposing to enlarge or modify an existing solid waste transfer, disposal, recycling or resource recovery facility, shall submit five (5) copies of general plans and specifications for the proposed improvement, together with copies of the compliance report described in Section VI(C) hereof. Such general plans and specifications shall contain all of the information required in Section VI(C) hereof, so that the Board can determine whether the criteria set forth in Sections VI(A) and VI(B) hereof are satisfied.

C. Upon receipt of the general plans and specifications and the compliance report required by Section VI(C) of these rules, or a modification thereto as authorized by Section V(F) of these rules, the Board shall promptly:

1. Distribute one copy thereof to the Policy Committee. With the advice and assistance of the TAC, if then established, the Policy Committee shall review the proposed improvement or modified proposed improvement for its compliance with the Plan. The Policy Committee shall render its non-binding recommendation to the Board, and explain the basis for its recommendation, at the public hearing to be convened in accordance with Section V(D) of these rules.
2. Distribute one copy thereof to, at a minimum, the Warren County Board of County Commissioners.
3. Prepare and publish a public notice which describes the proposed improvement or modified proposed improvement, specifies the location where the general plans, specifications, and compliance report, or revisions thereto, are available for review, and establishes a period of no less than thirty (30) days for comments

- B. The Board shall approve the general plans and specifications as complying with the Plan only if it determines that the proposed improvement does not compete with or inhibit the financing, use or operation of proposed or existing solid waste management programs or facilities developed by or on behalf of the District; that the proposed improvement avoids or mitigates adverse socioeconomic impacts, environmental impacts and/or health effects to the maximum extent practicable; and the proposed improvement is consistent with the District's siting strategy. In determining whether the proposed improvement complies with the Plan, the Board shall give due consideration to the general plans, specifications and compliance report submitted by the applicant, the applicant's presentation at the public hearing, the non-binding recommendation of the Policy Committee, written comments submitted by interested persons pursuant to Section V(C)(3) and, if applicable, Section V(F) of these rules, and comments made at the public hearing convened pursuant to Section V(D) of these rules.
- C. Compliance Report. Together with the general plans and specifications, the applicant shall submit to the Board a compliance report containing sufficient information so that the Board can determine whether the standards and criteria set forth in Sections VI(A) and VI(B) hereof are satisfied. The report shall contain, at a minimum, that information described in Sections VI(C)(1), (2), and (3) hereof.
1. The compliance report shall include an analysis which describes the effects of the proposed improvement on the District's existing solid waste management infrastructure and programs, including, without limitation, the effect of the proposed improvement on the financing, use or operation of existing or proposed facilities developed by or on behalf of the District. In particular, but without limitation, the compliance report shall describe the effects and impacts of the proposed improvement in light of the following:
 - a. the technical feasibility and reliability of the proposed improvement;
 - b. the relevant costs of the proposed improvement, including fully loaded life cycle costs and the costs of procuring, developing, permitting, operating, closing and monitoring (both pre-closure

and post-closure) the proposed improvement;

c. the costs of inspection, testing or supervision at the proposed improvement by the District and/or the Warren County Combined Health District;

d. the maximum capacity of the proposed improvement, if any;

e. the minimum daily volume of waste which will need to be received at the proposed improvement in order to operate without financial loss;

f. the proposed improvement's relationship to existing or proposed solid waste management programs or facilities that have been or will be developed by or on behalf of the District, and pursuant to which solid waste generated within the District will be managed in accordance with the Plan;

g. the proposed improvement's relationship to existing or proposed source separation and recycling activities within the District; and

h. the proposed improvement's relationship to existing or proposed regional initiatives for the management of solid waste.

2. The compliance report shall also include an analysis describing the impacts and effects of the proposed improvement on the District's environment. In particular, but without limitation, the compliance report shall describe the effects and impacts of the proposed improvement in light of the following:

a. acreage involved in the proposed improvement;

b. soil types at the proposed improvement site, and their current use;

c. proximity of the proposed site to any building, site or district listed on the

State or National Register of Historic Places;

- d. depth to water table at the site;
- e. proximity of the site to any aquifer;
- f. slopes at the site, in terms of percentage of site that is sloped and steepness of the slope;
- g. hunting, trapping or fishing opportunities currently available at the site;
- h. regular utilization of the site by any endangered species for habitat, forage or range;
- i. surface waters on or near the site;
- j. traffic impacts related to the proposed improvement (during and after development);
- k. amounts and types of vegetation to be permanently removed from the site;
- l. odors to be produced by the proposed improvement and impact on the community;
- m. noise to be produced by the proposed improvement and impact on the community;
- n. the proposed improvement's projected consumption of energy or natural resources;
- o. the proposed improvement's projected consumption of the potable water supply in the District;
- p. the proposed improvement's compatibility with land use ordinances, township zoning resolutions, county rural zoning resolutions, and existing land uses at the proposed site and for one-quarter mile in all directions;
- q. demand of the proposed improvement on community-provided services (e.g. fire, police, and emergency services);

- r. the proposed improvement's increased demands on the community's sewer capacity;
- s. impacts on property values in the District;
- t. impacts on job opportunities and tax revenues in the District;
- u. impacts on population distribution and community growth in the District;
- v. impacts on aesthetics;
- w. the measures to be taken by the applicant to ensure worker and community safety; and
- x. socioeconomic impacts.

The analysis of the foregoing contained in the compliance report shall be sufficient to allow the Board to understand the environmental, health and/or socioeconomic impacts or effects of the proposed improvement on the District, in order that the Board may determine whether the proposed improvement complies with the Plan. Nothing in these rules shall be deemed or construed to establish design standards.

3. Siting Analysis. If the proposed improvement involves the construction of a new facility or the enlargement of an existing facility, the compliance report shall include a siting analysis. The siting analysis must describe the process used to select the proposed site, including evaluation criteria, elimination criteria, assumptions made, data sources, numerical ranking systems utilized and all other factors used to make siting decisions. The analysis must demonstrate that the range of alternative sites evaluated was reasonable in light of the objectives and capabilities of the applicant, and that, of the evaluated sites, the selected site is most appropriate. Finally, the analysis must include maps of sites and describe the results of field investigations, the comparative advantages and disadvantages of the highest ranked sites and the basis for selecting the proposed site. The site selection process must be

comprehensive and must identify and evaluate the complete range of alternative sites within the District which are reasonable, given the objectives and capabilities of the applicant. All criteria used to eliminate and evaluate the suitability of potential sites shall be clearly defined and consistently applied. A phased approach shall be used, in which a more detailed evaluation of sites is undertaken as the number of potential is reduced. If the proposed improvement involves the enlargement of an existing facility, including without limitation the lateral expansion of a landfill, the siting analysis may be limited to a demonstration that the applicable prohibited siting criteria described in Section VI(C)(3)(d) of these rules have not been violated.

- a. In the first phase of the siting process, areas where siting is impossible or prohibited should be eliminated. Prohibited siting criteria for specified facilities are listed in Section VI(C)(3)(d) of these rules.
- b. The second phase of the siting process results in the identification of potential sites by application of a two part analysis. In the first part of the second phase, the applicant should identify preferred siting areas through the designation and application of evaluation criteria most pertinent to the siting of the proposed improvement, thereby identifying candidate areas which may contain suitable sites for the proposed improvement. In the second part of the second phase, potentially suitable sites are identified within the preferred siting areas through the application of additional evaluation criteria to all available potential sites within the candidate areas. A list of potentially suitable sites should result at the completion of both parts of the second phase. Evaluation criteria utilized in identifying potential

sites shall include, at a minimum, those provided in Section VI(C)(3)(e) of these rules.

- c. In the third phase, a ranking methodology is utilized to select a preferred site. To identify the preferred site, an applicant must compare two or more similar sites that remain in the site selection process after the first two phases, and shall assign numerical values to the qualitative evaluation of the subject sites, rating them numerically for each evaluation criteria. Each evaluation criteria must then be weighed to reflect its relative importance as compared to other evaluation criteria. This rating matrix provides a method by which potential sites can be objectively evaluated and rated in order of suitability, and ensures that the site which demonstrates acceptable risk levels while minimizing environmental consequences will be selected.
- d. Prohibited Siting Criteria. The siting analysis required by Section VI(C)(3) hereof shall include the following areas as prohibited sites for the specified solid waste facility types:
 - i. With respect to sanitary landfills:
 - aa. any area that would be prohibited as a location for a sanitary landfill site pursuant to the Ohio Administrative Code;
 - bb. any area located within 5,000 feet of any airport runway used by piston type aircraft, or within 10,000 feet of any runway used by turbojet aircraft; unless the owner or operator of the

sanitary landfill can demonstrate that the sanitary landfill will be so designed and operated that it will not increase likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to the occupants of the aircraft;

cc. any area where environmental monitoring and site remediation cannot be conducted, based upon the ability to characterize ground water and surface water flow and locate upgradient/downgradient directions, ability to place environmental monitoring points which will detect releases from the sanitary landfill, ability to characterize and define a release from the sanitary landfill and determine necessary corrective actions, and ability to successfully implement those corrective actions;

dd. any part of any wetland; and

ee. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.

ii. With respect to recycling facilities and transfer

facilities:

- aa. any area that would be prohibited as a location for a solid waste transfer facility pursuant to the Ohio Administrative Code;
 - bb. any site that will call for placement of waste within fifty (50) feet of the proposed improvement's property line;
 - cc. any part of any wetland; and
 - dd. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.
- iii. With respect to yard waste composting facilities:
- aa. any area that would be prohibited as a location for a yard waste composting facility pursuant to the Ohio Administrative Code; and
 - bb. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.
- iv. With respect to solid waste incinerators, resource recovery facilities or waste tire

storage facilities:

- aa. any area that would be prohibited as the location of a solid waste transfer facility pursuant to the Ohio Administrative Code;
 - bb. any area that would call for the placement of solid waste within fifty (50) feet of the facility's property line;
 - cc. any part of any wetland; and
 - dd. any area where, despite the applicant's avoidance or mitigation of adverse impacts, the proposed improvement presents an unreasonable or unacceptable hazard to health or the environment.
- e. Evaluation Criteria. The siting analysis required by Section VI(C)(3) hereof shall consider the following criteria, at a minimum, as evaluation criteria:
- i. hydrogeologic characteristics of the site, particularly with regard to:
 - aa. the thickness and prevalence of low permeability materials to minimize the migration of contaminants from the facility;
 - bb. depth to bedrock;
 - cc. ground water flow patterns and water quality should be such that contaminant releases would do the least environmental damage and

would be easiest to correct;

- dd. the facility's proximity and relationship to water supply sources;
 - ee. the impacts of the site's natural topography on the facility; and
 - ff. anomalous hydrogeologic features that might alter ground waste flow, such as mines, caves, or other like features;
- ii. population density and anticipated growth, both around the site and around major transportation routes to the facility;
 - iii. adequacy of transport routes for additional traffic anticipated to result from the development of the proposed improvement and increased safety hazards incident to the traffic increase;
 - iv. proximity of the site to incompatible structures such as schools, churches, nursing homes, hospitals or commercial centers;
 - v. impacts on the host community, including local land use planning and zoning, and any financial impacts the proposed improvement may have on the community;
 - vi. proximity to and availability of necessary emergency services;
 - vii. proximity of the facility to open spaces or cultural, historical and recreational resources;

viii. impacts on agriculture and agricultural land; and

ix. improvements proposed by or on behalf of the District may be subjected to additional criteria provided in the Plan.

VII. Supervision of Construction, Enlargement or Modification; Costs

- A. The construction, enlargement or modification of any solid waste transfer, disposal, recycling or resource recovery facility shall be done under the supervision of the county sanitary engineer designated by the Board.
- B. Any person constructing, enlarging or modifying any solid waste transfer, disposal, recycling or resource recovery facility under the supervision of the county sanitary engineer designated by the Board, or proposing such improvements, shall pay to the District all expenses incurred by the Board in connection therewith.

VIII. Submission of Permit to Install Application to Board

Any person submitting an application to OEPA for a permit to install to construct, enlarge or modify a solid waste transfer, disposal, recycling or resource recovery facility located in the District shall simultaneously submit a copy of such application to the Board.

IX. Rights of Access for Sanitary Engineer

- A. The county sanitary engineer designated by the Board, or any assistant(s) authorized by the county sanitary engineer, shall have the right to enter upon public or private property for the purpose of making surveys or examinations at solid waste facilities located within the District, or to otherwise supervise their construction, enlargement, modification or operation.
- B. No person shall forbid or interfere with the county sanitary engineer designated by the Board, or any authorized assistant(s), in making surveys or examinations at, or otherwise supervising the construction, enlargement, modification or operation of, solid waste facilities located within the District.
- C. The owner of any property actually damaged by the county

sanitary engineer designated by the Board, or any authorized assistant(s), in the exercise of their rights under this section shall be compensated by the Board in an amount representing the reasonable value of the damage to the property.

X. Daily Logs to Policy Committee

Copies of annual reports summarizing daily logs required to be prepared and maintained by OEPA in accordance with the Ohio Administrative Code shall be provided to the Policy Committee at the same time as their submission to OEPA.

XI. Submission of OEPA Materials to Policy Committee

In addition to the other requirements of these rules, any person who obtains from OEPA a permit to install a solid waste transfer, recycling, or resource recovery facility in the District shall provide to the Policy Committee a copy of all plans, specifications, and other materials submitted to OEPA, whether such materials were submitted as a part of the permit to install application process, or are required to be submitted to OEPA pursuant to the permit to install.

XII. Notice of Intent to Close Required

No less than one hundred eighty (180) days prior to the anticipated date on which the owner of any solid waste transfer, disposal, recycling or resource recovery facility intends to cease accepting waste at that facility, the facility owner, or an authorized representative, shall provide to the Board, by certified mail, notice of the anticipated date on which the solid waste transfer, disposal, recycling or resource recovery facility will cease accepting solid waste.

XIII. Submission of Inventory Information

Not later than the first day of April of each year, every operator of a solid waste transfer, disposal, recycling, or resource recovery facility located within the District shall submit to the Policy Committee a verified report detailing the amount and types of solid waste disposed of, stored or treated at the facility and, to the extent available, the origins of the waste, in order to allow the District to fulfill its reporting obligations under OAC 3745-29-02(C) and 3745-29-02(C), as they may be from time to time amended.

XIV. Penalties, Prosecution

- A. Whoever violates any provision of these rules shall be fined not more than five thousand dollars (\$5,000) for each offense. Each separate day of each violation is a separate offense.
- B. The Prosecuting Attorney of Warren County is hereby authorized, upon the request of the Board, to prosecute to termination or bring a civil action for appropriate relief against any person that has violated, is violating, or is threatening to violate any of these rules within their respective jurisdictions. The court of common pleas in which the civil action is filed has jurisdiction to and shall grant appropriate relief including a temporary restraining order or a temporary or permanent injunction, upon a showing that the person against whom the action is brought has violated, is violating, or is threatening to violate any of these rules.
- C. All fines imposed under this section shall be deposited in the District's special fund maintained pursuant to Revised Code Section 3734.57(E).

XV. Zoning Override

The owner or operator of any solid waste collection, transfer, disposal, recycling, or resource recovery facility, or any proposed solid waste collection, transfer, disposal, recycling or resource recovery facility, provided for in the Plan is hereby exempted from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the solid waste collection, transfer, disposal, recycling, or resource recovery facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit to install under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste collection, transfer, disposal, recycling, or resource recovery facility.

XVI. Storage in Recycling Facilities

- A. All putrescible materials stored at a recycling facility within the District shall be transferred as soon as possible. In any event, all putrescible materials which are not transferred within twelve (12) hours of receipt shall be placed in closed containers, or in totally

enclosed buildings or structures, so that water, birds, insects, rodents, or other vectors are prevented from reaching the materials.

B. Non-putrescible materials may be stored at a recycling facility for up to thirty (30) consecutive calendar days. Non-putrescible materials may be stored for a longer period of time only with the approval of the Board, after a finding by the Board that:

1. there is demonstrable need to do so (such as a bona fide arm's length marketing agreement with terms of receipt based on greater than thirty (30) day intervals or in amounts that require more than thirty (30) days to acquire); and
2. the storage of the materials at the recycling facility for such extended lengths of time will not pose a nuisance or sanitary or environmental problem.

XVII. Succession of Rule Authority

The Warren County Solid Waste Management District's Rules, upon adoption, will supersede the Clinton-Warren Joint Solid Waste Management District's rules.

XVIII. Severability

The provisions of these rules shall be severable, and if any section, clause or portion hereof, or the applicability hereof to any person or circumstance be invalidated, the remainder of these rules shall not be affected.

XIX. Effective Date

These rules shall be effective immediately.

XX. Transition Rules

These rules shall apply to the construction, enlargement or modification of every solid waste collection, transfer, disposal, recycling or resource recovery facility in the District for which a final and binding permit to install or other authorization has not been issued by the Director of the Environmental Protection, or in the case of a composting facility, which facility has not been registered with OEPA prior to the effective date of the rules.

PERFORMANCE OBLIGATION

THIS OBLIGATION, made this _____ day of _____, 20__, with the Warren County Board of County Commissioners on behalf of the Warren County Solid Waste Management District, 406 Justice Drive, Lebanon, Ohio 45036, and Forest Green Waste Service, 10990 State Route 128, Harrison, OH 45030.

WITNESSETH: In accordance with the standards for Solid Waste Management Districts, as promulgated by the Ohio Environmental Protection Agency (hereinafter "OEPA") within Ohio Administrative Code 3745-27-90, pursuant to Ohio Revised Code 3734.50, the Warren County Solid Waste Management Plan, the Warren County Solid Waste Management District (hereinafter "District") has created a Warren County Solid Waste Management Plan, approved by the OEPA, and is soliciting Performance Obligations and Demonstration of Services for residential curbside recycling.

WITNESSETH: The District has implemented a Waste Reduction Strategy as included in the Warren County Solid Waste Management Plan and approved by OEPA. This strategy requires residential solid waste haulers (hereinafter "haulers") operating in the District to include non-subscription curbside recycling services as part of their basic solid waste services to residents in the District. The District will enter into Performance Obligations for Residential Curbside Recycling Services with the haulers. In this Performance Obligation the haulers shall, at a minimum,

1. provide mandatory, non-subscription curbside recycling to all residential units located in the District;
2. obtain and/or maintain the licenses as required by the Warren County Combined Health District;
3. collect and submit the generation fee to the District. Regardless of where the solid waste is disposed, this fee shall apply to all waste generated from within the District;
4. remove solid waste, including the collected recyclables, generated from the residential units on a weekly basis as required by the Warren County Combined Health District;
5. collect and recycle newspapers #1 and #2 plastic bottles, steel containers, and aluminum cans.

WITNESSETH: Annually, the haulers shall provide literature to the residential units that explain curbside recycling. The literature may address solid waste issues but must describe recycling services. A sample of the literature shall be included with the Demonstration of Services.

If the haulers have other educational opportunities available to the residential units then that may also be described. Examples of the literature may include brochures, flyers, stickers, magnets, videos, personally presentations, or lesson plans and any other promotional type items. Samples are welcomed to be included with the Demonstration of Services.

WITNESSETH: The haulers shall submit an annual report to the District. The report is due to the District by March 15th of each year and shall include information from the previous calendar year. If a company has a contract for the collection of solid waste services with any municipality or township located in the District, this information must be listed separately for each. The annual report shall include tons of recyclables collected and processed plus tons of yard waste collected and composted

If any hauler can not provide the annual report by March 15th, that hauler must provide to the District a detailed description, in writing, as to their inability to comply by March 10th.

WITNESSETH: It is the intent of the Warren County Solid Waste Management District to enter into Performance Obligations. Entering into the Performance Obligations will be based upon the Demonstration of Services. Responses to each question listed in the Demonstration of Services shall be complete and accurate. Additionally, the responses shall fully explain operations to implement the curbside recycling.

WITNESSETH: The attached Demonstration of Services and any other supporting materials submitted by the above listed hauler shall be attached and included as part of this Performance Obligation.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this document in two counterparts, each of which shall be deemed an original on the date first above written.

ATTEST:

Warren County
Board of County Commissioners

Name:

(Seal)
ATTEST:

Company Name

Name:

Approved as to Form:

Atty:
Assistant Prosecuting Attorney

Demonstration of Services

For single family units, multi family units without dumpsters, and multi family units with dumpsters describe recycle collection service for the various residential units. Address the following areas of operations including:

1. materials to be collected and recycled,
2. description of vehicle used for collection,
3. description of collection container,
4. replacement policy for containers,
5. location of material recovery facility or recycling facility,
6. contact information for residents,
7. attach a sample of educational and informational literature that will be sent to the residents on an annual basis,
8. plus any other information that will allow review of operations to collect and process curbside recyclables.

Warren County Solid Waste Management District

Annual Monitoring Report

1. 80% Access Goal

Waste Hauler	Date Submitted	Number of Customers
Rumpke		
Republic		
WM		
	Total Number of Customers:	

Total number of households in Warren County:

2. Co-mingled Curbside Recycling

Waste Hauler	Tons of Recycling for
Rumpke	
Republic	
WM	
Total:	

3. Results of Phone Call Monitoring

Rumpke -				
Township:	Qtr 1 Date	Recyc. offered?	Qtr 2 Date	Recyc. offered?
All Townships				

Waste Management				
Township:	Qtr 1 Date	Recyc. offered?	Qtr 2 Date	Recyc. offered?
Clearcreek				

Republic				
Township:	Qtr 1 Date	Recyc. offered?	Qtr 2 Date	Recyc. offered?
All Townships				

4. Results of Visual Monitoring

Name of Township Visited: _____ Date: _____

Road surveyed: _____

____ out of ____ houses had recycling containers out.

Names of hauler on containers:

PERFORMANCE OBLIGATION

THIS OBLIGATION, made this 18th day of August, 2005, with the Warren County Board of County Commissioners on behalf of the Warren County Solid Waste Management District, 406 Justice Drive, Lebanon, Ohio 45036, and CSI Waste Services, a subsidiary of Republic Services, 11563 Mosteller Road, Cincinnati, OH 45241.

WITNESSETH: In accordance with the standards for Solid Waste Management Districts, as promulgated by the Ohio Environmental Protection Agency (hereinafter "OEPA") within Ohio Administrative Code 3745-27-90, pursuant to Ohio Revised Code 3734.50, the Warren County Solid Waste Management Plan, the Warren County Solid Waste Management District (hereinafter "District") has created a Warren County Solid Waste Management Plan, approved by the OEPA, and is soliciting Performance Obligations and Demonstration of Services for residential curbside recycling.

WITNESSETH: The District has implemented a new Waste Reduction Strategy as included in the Warren County Solid Waste Management Plan and approved by OEPA. This new strategy requires residential solid waste haulers (hereinafter "haulers") operating in the District to include non-subscription curbside recycling services as part of their basic solid waste services to residents in the District. The District will enter into Performance Obligations for Residential Curbside Recycling Services with the haulers. In this Performance Obligation the haulers shall, at a minimum,

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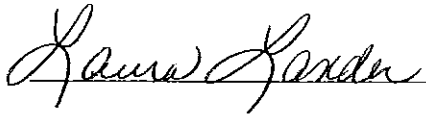
WITNESSETH: It is the intent of the Warren County Solid Waste Management District to enter into Performance Obligations. Entering into the Performance Obligations will be based upon the Demonstration of Services. Responses to each question listed in the Demonstration of Services shall be complete and accurate. Additionally, the responses shall fully explain operations to implement the curbside recycling.

WITNESSETH: The attached Demonstration of Services and any other supporting materials submitted by the above listed hauler shall be attached and included as part of this Performance Obligation.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this document in two counterparts, each of which shall be deemed an original on the date first above written.

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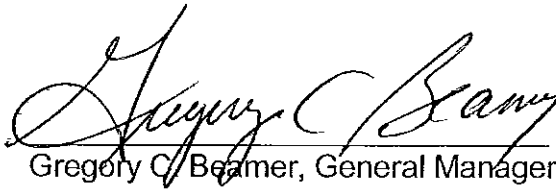
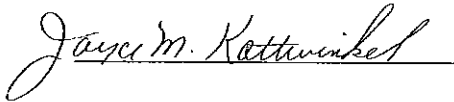
Warren County
Board of County Commissioners



Pat South, President

(Seal)
ATTEST:

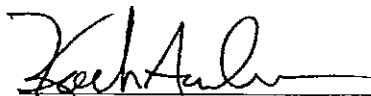
CSI Waste Services



Gregory C. Beamer, General Manager

JOYCE M. KATTWINKEL
Notary Public, State of Ohio
My Commission Expires Jan. 29, 2009

Approved as to Form:



Keith Anderson
Assistant Prosecuting Attorney

CSI Waste Services a Subsidiary of Republic Services

Demonstration of Services for Warren County, Ohio

For single-family units and multi-family units without dumpsters, CSI Waste Services will provide access to non-subscription (**universal**) curbside recycling to all of our customers in Warren County, Ohio, as defined on page 30 of the Warren County Solid Waste Plan, codified by Ohio Environmental Protection Agency on March 4, 2005. For multi-family units using dumpster service, CSI Waste Services will address recycling on a case-by-case basis. Determination for accessibility to recycling for multi-family units using dumpsters will be based on logistical feasibility and safety. *(Non-subscription in this context refers to all residents of Warren County.)*

1. Materials to be collected:

CSI will collect for purposes of recycling the following items:

- a. Newspapers
- b. Steel food cans
- c. Aluminum beverage cans
- d. Bi-metal Cans
- e. #1 PET bottles
- f. #2 HDPE bottles
- g. Corrugated cardboard (cut down to 2 ft x 2 ft strips)
- h. Junk mail and phone books – as markets allow

2. Description of vehicle used for collection:

CSI may utilize one or all of the following collection vehicles.

- a. For Garbage Collection
 - i. Closed rear-load packer type trucks,
 - ii. Front-load residential trucks
 - iii. Side-load automatic truck
 - iv. Supervisor's pick-up truck

The cab of CSI Waste Services' trucks is usually painted white with black and red lettering displaying the CSI logo and truck numbers. The body of CSI's trucks is usually grey with red and black lettering displaying the CSI logo and telephone number.

- b. For Recycling Collection
 - i. Dual streamed recycling trucks
 - ii. Closed rear-load packer type single streamed recycling trucks
 - iii. Supervisor's pick-up truck

The cab of CSI Waste Services' trucks is usually painted white with black and red lettering displaying the CSI logo and truck numbers. The body of CSI's trucks is usually grey with red and black lettering displaying the CSI logo and telephone number.

CSI Waste Services reserves the right to utilize trucks bearing the colors of any of our sister companies from whom any trucks may be borrowed at any time.

3. Description of collection container:

CSI Waste Services will provide the following containers to single-family units and multi-family units not using dumpsters:

CSI Waste Services will provide each of our customers with a recycling container that is appropriate to its curbside recycling program. CSI's 14-gallon bins have historically been green with the CSI logo imprinted in white. Any container used for the purpose of recycling will bear the CSI logo and the universal symbol for

recycling.



CSI Waste Services will determine the appropriate container for multi-family units using dumpster services on a case-by-case basis.

4. Replacement policy for recycling containers:

CSI Waste Services will provide each of our customers with one container to be used specifically for recycling. If the container is victim to normal wear and tear, CSI will replace the container with a new one at no additional cost to the customer. CSI will replace lost or damaged containers at a price dictated by the marketplace.

5. Location of material recovery facility or recycling facility:

CSI Waste Services does not own and/or operate a recycling facility in the Greater Cincinnati area at this time. CSI does, however, work in partnership with Omaha Paper Stock Company located at 5636 Vine Street, Cincinnati, Ohio. At present, CSI hauls all of our curbside recycling materials to Omaha Paper Stock Company. Omaha processes all of the materials collected and accepted at the MRF.

6. CSI Waste Services' contact information for residents is

Phone: 513.771.4200
Fax: 513.771.9214
Website: www.republicservices.com

CSI Waste Services, a Subsidiary of Republic Services, Inc., reserves the right to act in the best interest of the customers and stockholders we serve. Accordingly, CSI Waste Services reserves the right to change any item in this document, substantively, at any time.

Complete Waste Disposal and Removal Services



Waste Services

A Subsidiary of Republic Services

Keys to Proper Recycling

Plastics	Acceptable	Not Acceptable	Reasons
 PET HDPE	Soda bottles, Milk Jugs, Detergent Bottles and small-mouthed drink containers (20 oz.) All plastics with a 1 or a 2 inside the recycling triangle. Labels can be left on plastic item. Remove lids, rinse and flatten containers to save space. Rinse.	Plastic items with a 3, 4, 5, 6 or 7 inside the recycling triangle. Pop bottle tops. Plastic trays; Oil containers; Plastic bags; and Styrofoam	Plastic items with a 3, 4, 5, 6 or 7 and Oil containers and Styrofoam are not yet recyclable in this marketplace. The market simply cannot support recycling of these items at this point in time.
Cans Multi-metal Aluminum	Aluminum and bi-metal beverage cans Steel/tin food cans Empty steel aerosol cans with tips removed Labels can be left on container. Rinse.	Paint Cans Coat Hangers Steel Scrap	Paint cans may have wet paint in them that is not allowed in landfills. You may dry it out with cat litter. Coat Hangers are dangerous. Steel Scrap is not recyclable in curbside programs.
Paper 	Newspapers with glossy inserts Magazines & telephone books Brown grocery bags Junk Mail Mixed paper	Tissue paper Wrapping paper Toilet tissue	These items are very low grade and cannot be recycled. These items contaminate other recyclable materials.
Cardboard 	Corrugated Cardboard Must be cut & tied in 2'X2'	Gift boxes Pizza boxes	Gift boxes are low quality paper. Pizza boxes contain grease.

PERFORMANCE OBLIGATION

THIS OBLIGATION, made this 18th day of August, 2005, with the Warren County Board of County Commissioners on behalf of the Warren County Solid Waste Management District, 406 Justice Drive, Lebanon, Ohio 45036, and Rumpke, 10795 Hughes Road, Cincinnati, OH 45251.

WITNESSETH: In accordance with the standards for Solid Waste Management Districts, as promulgated by the Ohio Environmental Protection Agency (hereinafter "OEPA") within Ohio Administrative Code 3745-27-90, pursuant to Ohio Revised Code 3734.50, the Warren County Solid Waste Management Plan, the Warren County Solid Waste Management District (hereinafter "District") has created a Warren County Solid Waste Management Plan, approved by the OEPA, and is soliciting Performance Obligations and Demonstration of Services for residential curbside recycling.

WITNESSETH: The District has implemented a new Waste Reduction Strategy as included in the Warren County Solid Waste Management Plan and approved by OEPA. This new strategy requires residential solid waste haulers (hereinafter "haulers") operating in the District to include non-subscription curbside recycling services as part of their basic solid waste services to residents in the District. The District will enter into Performance Obligations for Residential Curbside Recycling Services with the haulers. In this Performance Obligation the haulers shall, at a minimum,

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3. collect and submit the generation fee to the District. Regardless of where the solid waste is disposed, this fee shall apply to all waste generated from within the District;
4. remove solid waste, including the collected recyclables, generated from the residential units on a weekly basis as required by the Warren County Combined Health District;
5. collect and recycle newspapers #1 and #2 plastic bottles, steel containers, and aluminum cans.

WITNESSETH: Annually, the haulers shall provide literature to the residential units that explain curbside recycling. The literature may address solid waste issues but must describe recycling services. A sample of the literature shall be included with the Demonstration of Services.

If the haulers have other educational opportunities available to the residential units then that may also be described. Examples of the literature may include brochures, flyers, stickers, magnets, videos, personally presentations, or lesson plans and any other promotional type items. Samples are welcomed to be included with the Demonstration of Services.

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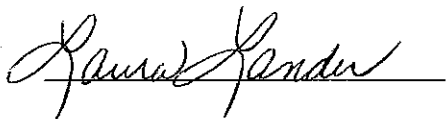
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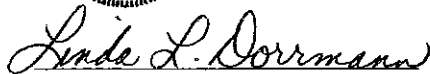
Warren County
Board of County Commissioners





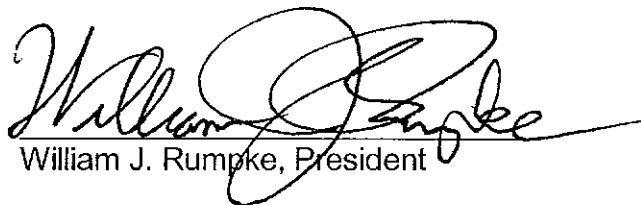
Pat South, President






LINDA L. DORRMANN
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES MAY 14, 2008

Rumpke



William J. Rumpke, President

Approved as to Form:



Keith Anderson
Assistant Prosecuting Attorney

Demonstration of Services

For single family units, multi family units without dumpsters, and multi family units with dumpsters describe recycle collection service for the various residential units. Address the following areas of operations including:

1. materials to be collected and recycled,
2. description of vehicle used for collection,
3. description of collection container,
4. replacement policy for containers,
5. location of material recovery facility or recycling facility,
6. contact information for residents,
7. attach a sample of educational and informational literature that will be sent to the residents on an annual basis,
8. plus any other information that will allow review of operations to collect and process curbside recyclables.

Warren County Demonstration of Services

Materials Collected:

Plastic Bottles #1 and # 2 (no lids)
Glass Jars and Bottles
Aluminum, Steel and Bi-Metal Cans
Empty Aerosol Cans (with lids and tips removed)
Brown Grocery Bags
Computer Paper and other Mixed Office Paper
Corrugated Cardboard (broken down to 3'X 3')
Envelopes (with or without windows)
Junk Mail
Magazines
Newspapers (with inserts)
Paperboard (such as cereal boxes)
Telephone Books

Description of Vehicles Collecting Recyclables:

We will be using late model International Rear Load, Front Load, Side-Load and "Box Trucks" for the collection of recyclables in Warren County. Trucks are identified by a Rumpke Recycling Logo and are painted white.

Containers:

We will provide all single-family homes with an 18-Gallon recycling bin placquered with Rumpke Recycling. Multi-Family will have the option of 18-Gallon Bins or a front load 6yd container.

Replacement/Additional Containers:

Each single family home will be provided with one 18-Gallon recycling bin. If additional or replacement bins are required, they can be purchased directly through Rumpke Recycling by call (513) 242-4600. The cost for replacement/additional containers is \$8.00 per bin.

Location of Material Recovery Facility:

Rumpke Recycling
5535 Vine St.
St. Bernard, Ohio 45217

Contact Information For Residents:

Rumpke Recycling
Customer Service: (513) 242-4600
Website: www.Rumpke.com
E-Mail: amy.miller@rumpke.com

Implementation Schedule for Warren County Recycling

October 2005

*Hamilton Twp
Deerfield Twp
Union Twp
Salem Twp
Turtlecreek Twp*

November 2005

*Franklin Twp
Clearcreek Twp
Wayne Twp*

December 2005

*Massie Twp
Washington Twp
Harlan Twp*

PERFORMANCE OBLIGATION

THIS OBLIGATION, made this 18th day of August, 2005, with the Warren County Board of County Commissioners on behalf of the Warren County Solid Waste Management District, 406 Justice Drive, Lebanon, Ohio 45036, and Waste Management of Ohio, Inc., 1700 N. Broad Street, Fairborn, OH 45241.

WITNESSETH: In accordance with the standards for Solid Waste Management Districts, as promulgated by the Ohio Environmental Protection Agency (hereinafter "OEPA") within Ohio Administrative Code 3745-27-90, pursuant to Ohio Revised Code 3734.50, the Warren County Solid Waste Management Plan, the Warren County Solid Waste Management District (hereinafter "District") has created a Warren County Solid Waste Management Plan, approved by the OEPA, and is soliciting Performance Obligations and Demonstration of Services for residential curbside recycling.

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WITNESSETH: The haulers shall submit an annual report to the District. The report is due to the District by March 15th of each year and shall include information from the previous calendar year. If a company has a contract for the collection of solid waste services with any municipality or township located in the District, this information must be listed separately for each. The annual report shall include tons of recyclables collected and processed plus tons of yard waste collected and composted

If any hauler can not provide the annual report by March 15th, that hauler must provide to the District a detailed description, in writing, as to their inability to comply by March 10th.

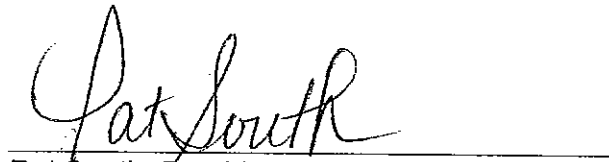
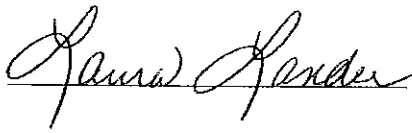
WITNESSETH: It is the intent of the Warren County Solid Waste Management District to enter into Performance Obligations. Entering into the Performance Obligations will be based upon the Demonstration of Services. Responses to each question listed in the Demonstration of Services shall be complete and accurate. Additionally, the responses shall fully explain operations to implement the curbside recycling.

WITNESSETH: The attached Demonstration of Services and any other supporting materials submitted by the above listed hauler shall be attached and included as part of this Performance Obligation.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this document in two counterparts, each of which shall be deemed an original on the date first above written.

ATTEST:

Warren County
Board of County Commissioners


Pat South, President


(Seal)
ATTEST:

Waste Management of Ohio, Inc.


Mike Jones, District Manager

SHARON WITHERSPOON
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES JULY 18, 2010

Approved as to Form:


Keith Anderson
Assistant Prosecuting Attorney

Demonstration of Services

For single family units, multi family units without dumpsters, and multi family units with dumpsters describe recycle collection service for the various residential units. Address the following areas of operations including:

1. materials to be collected and recycled,
2. description of vehicle used for collection,
3. description of collection container,
4. replacement policy for containers,
5. location of material recovery facility or recycling facility,
6. contact information for residents,
7. attach a sample of educational and informational literature that will be sent to the residents on an annual basis,
8. plus any other information that will allow review of operations to collect and process curbside recyclables.



Demonstration of Services

For single-family units, multi family units without dumpsters, and multi family units with dumpsters describe recycle collection service for the various residential units. Address the following areas of operations including:

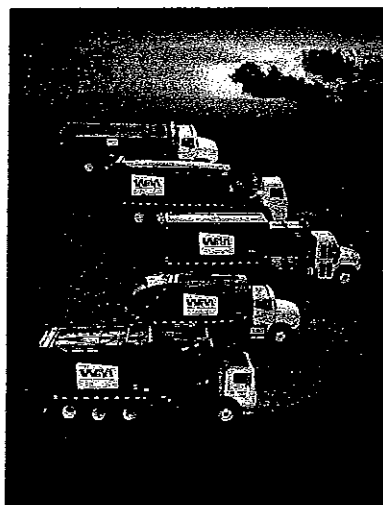
1. Materials to be collected and recycled;

Waste Management will provide for the opportunity for residents to participate in our curbside recycling programs. Materials approved for collections are: recycle newspapers, steel food cans, aluminum beverage cans, #1 PETE bottles, #2 HDPE bottles, bi-metal cans, plus mixed paper including corrugated cardboard, junk mail and phone books.

2. Description of vehicle used for collection;

All Waste Management vehicles that collect recyclables are green with a Waste Management logo. We do not use labels on our recycling trucks to indicate that they are picking up only recyclables due to the complete utilization of our fleet (a truck may perform more than recycling collection activity). However, Waste Management employee's strict disciplinary guidelines for workers violate "non-commingling" prohibition of recyclables with trash policy. Waste Management may utilize the following type of vehicles to collect the above listed recyclable materials:

- Rear load packer truck with capacity between 30 to 60 cubic yards
- Front Load packer truck with capacity between 30 to 60 cubic yards
- Side Load packer truck with capacity between 10 to 60 cubic yards
- Roll-off vehicles with capacity between 10 to 40 cubic yards
- One-ton pickup trucks that may or may not have trailer



3. Description of collection container;

Waste Management will provide to all participating customers the following recycling containers to each of the listed housing units:

- Single family units will receive a recycling container that is at a minimum 14 gallons in capacity;
- Single family units without dumpsters will receive a recycling container that is at least 14 gallon in capacity;
- Multi family units with dumpsters will receive a recycling container that is at a minimum of 14 gallons in capacity.

4. Replacement policy for containers;

Waste Management will provide each participating customer, current or new family unit, with one of the recycling containers. Additional recycling containers may be purchased by contacting 1-800-343-6047. There may be a minimum charge for each additional container. Recycling containers will be replaced in the event they become damaged and are no longer functional.

5. Location of material recovery facility or recycling facility;

Waste Management's material recovery facility is located at:
1700 North Broad Street
Fairborn, OH 45324

Note: Waste Management also has regional facilities throughout Ohio, Indiana, Michigan and Illinois that we may elect to utilize for the processing and marketed of all recyclables collected in Warren County.


6. Contact information for residents;

Waste Management contact information for residents is:

Phone: 1-800-343-6047

www.wm.com

jminear@wm.com

Resident's can access information about recycling through this above link and clicking on the  Recycle America Alliance link.

7. Attach a sample of educational and informational literature that will be sent to the residents on an annual basis.

Attached are samples of educational materials we have utilized for educating our customers about what they can recycle. These materials and others may be used to assist us in educating our customer about their recycling opportunities in Warren County.

8. Plus any other information that will allow review of operations to collect and process curbside recyclables.

Waste Management through our alliance with Recycle America Alliance is committed to providing recycling opportunities to all of customers. We are happy to partner with the Warren County Solid Waste Management District to provide all residential customers in Warren County the opportunity to participate in our curbside recycling program.

AN EASY GUIDE TO RECYCLING

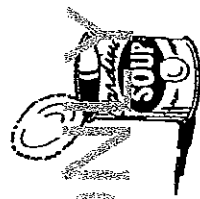
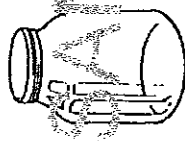
PLASTIC

GLASS

(ALL COLORS)

METAL

NEWSPAPER/ CARDBOARD



1-6 Soft plastic household bottles or jars and other plastic containers such as

- liter soda bottles
- Salad dressing bottles
- Milk/water jugs
- Laundry/cleaning products containers

HOW TO PREPARE:

REMOVE & DISCARD LIDS IN TRASH, rinse and flatten, if possible.

DO NOT RECYCLE:

- Plastic bags
- Plastic containers used for motor oil, automotive products, paint, solvents, lawn care products, and chemicals

- Juice, pop & soda bottles
- Water bottles
- Beer & wine bottles
- Food jars

HOW TO PREPARE:

REMOVE & DISCARD LIDS IN TRASH, rinse well to remove food residue.

DO NOT RECYCLE:

- Drinking glasses, dishes
- Mirrors or window glass
- Light bulbs
- Broken glass



➤ Place recyclables near but separate from your refuse.

➤ If your hauler leaves something - it is not currently recyclable. Please dispose of these items as trash.

➤ If you have any questions, please feel free to call our Customer Service Center at 1-800-343-6047

- Tin food cans
- Aluminum & Steel beverage cans
- Aluminum foil and pie pans
- Aerosol spray cans

HOW TO PREPARE:

REMOVE & DISCARD LIDS IN TRASH, Rinse cans to remove all food residue. Remove labels from tin cans.

DO NOT RECYCLE

- Cans used for chemicals or paints
- Appliances, power tools
- Batteries
- Hangers

- All newspapers, including color inserts (including glossy)
- Corrugated cardboard (breakdown and tie in bundles)
- Drink boxes, milk & juice cartons
- Food boxes, cereal, etc.) - Remove liners in boxes
- Phone books
- Junk mail or other papers
- Magazines

HOW TO PREPARE:

Place papers in paper bag or in the bottom of your recycling container to prevent papers from blowing out.

DO NOT RECYCLE

- Books
- Beverage cartons (soft drink & beer cases)



Recycle Amerit

APPENDIX U: RATIFICATION RESULTS

Warren County				
Board of County Commissioners		Approved	Rejected	Date Resolution Adopted
		✓		9/5/2023
Community	Population (2020)	Population		Date Resolution Adopted
		Approved	Rejected	
Cities				
Franklin City	11,690	11,690		8/21/2023
Lebanon City	20,841	20,841		8/22/2023
Mason City	34,792	34,792		8/14/2023
Springboro City	19,062	19,062		8/17/2023
Carlisle City	5,501	5,501		9/12/2023
South Lebanon City	6,384	6,384		9/7/2023
Townships				
Clearcreek Township	18,367	18,367		8/14/2023
Deerfield Township	40,525	40,525		8/15/2023
Franklin Township	12,154	12,154		8/14/2023
Hamilton Township	26,299	26,299		8/20/2023
Harlan Township	4,645	4,645		9/6/2023
Massie Township	641	641		9/5/2023
Salem Township	3,166	3,166		8/9/2023
Turtlecreek Township	16,294	16,294		8/28/2023
Union Township	2,750	2,750		8/7/2023
Washington Township	2,752	2,752		8/14/2023
Wayne Township	5,505	5,505		8/15/2023
Villages				
Butlerville Village	155			
Corwin Village	484	484		8/14/2023
Harveysburg Village	554	554		8/14/2023
Maineville Village	1,405	1,405		8/10/2023
Morrow Village	2,049	2,049		8/8/2023
Pleasant Plain Village	129			
Waynesville Village	2,669	2,669		8/21/2023
Total	232,429	238,529	0	
County Population		238,813		
Ratification percentage		99.88%		

APPENDIX V: INVENTORY OF OPEN DUMPS AND OTHER

A. Existing Open Dump Sites and Waste Tire Dumps

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)
None	

B. Ash, Foundry Sand, and Slag Disposal Sites

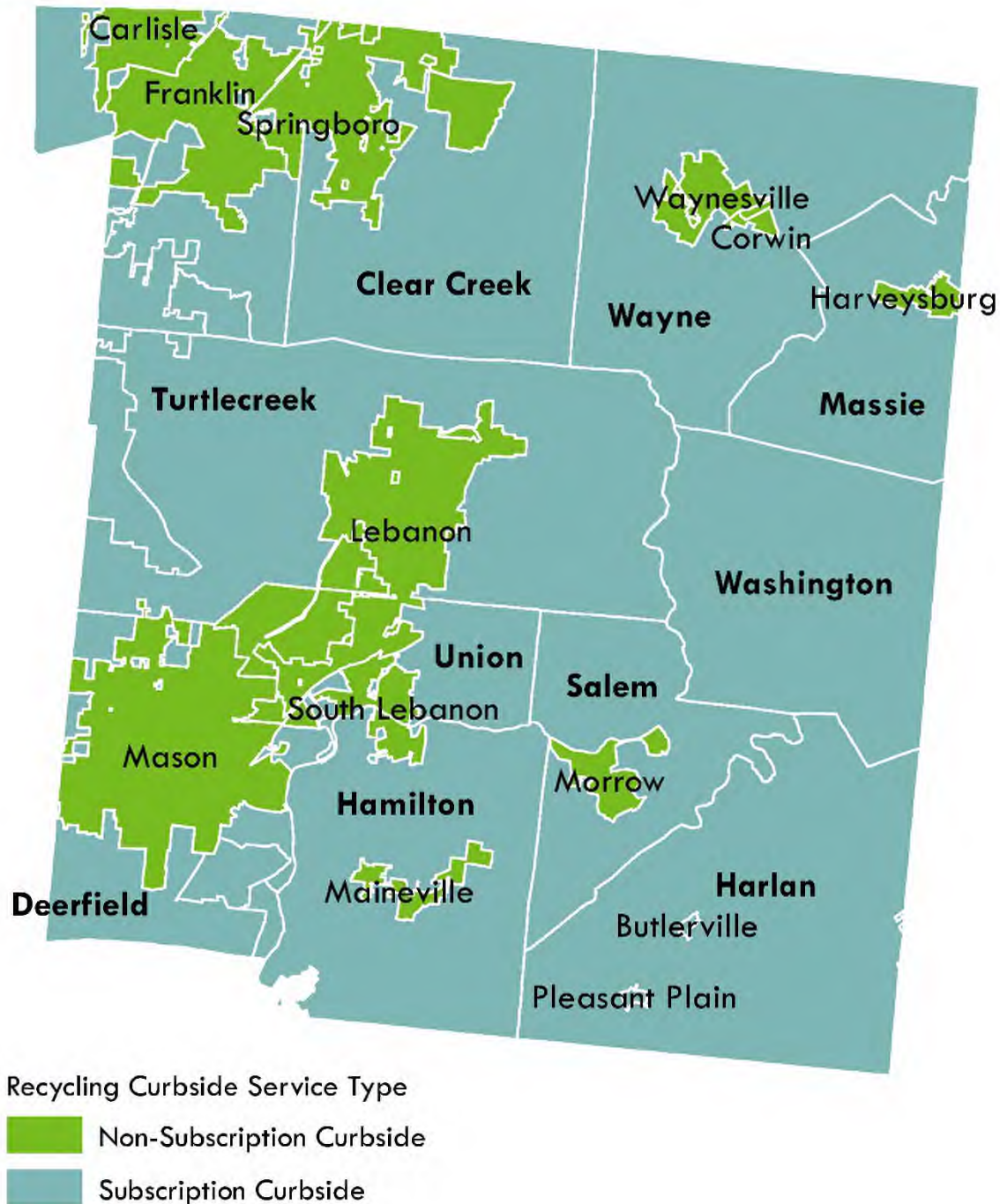
Table V-2 Inventory of Ash, Foundry Sand, and Slag Disposal Sites

Site Location (Address, description of site location)	Materials at Site (fly ash, bottom ash, foundry sand, and/or slag)
None	

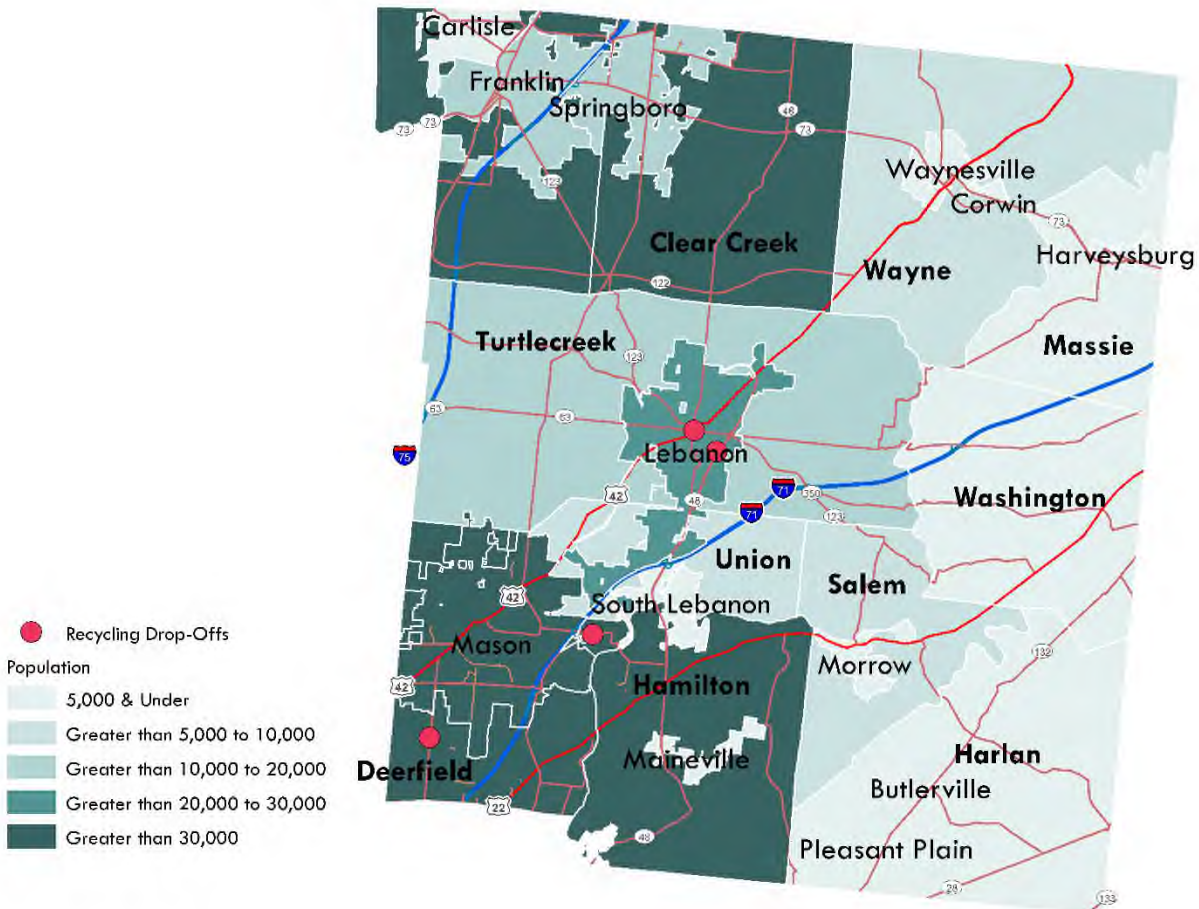
APPENDIX W: DISTRICT MAP

A. Solid Waste Management and Recycling Inventories Response

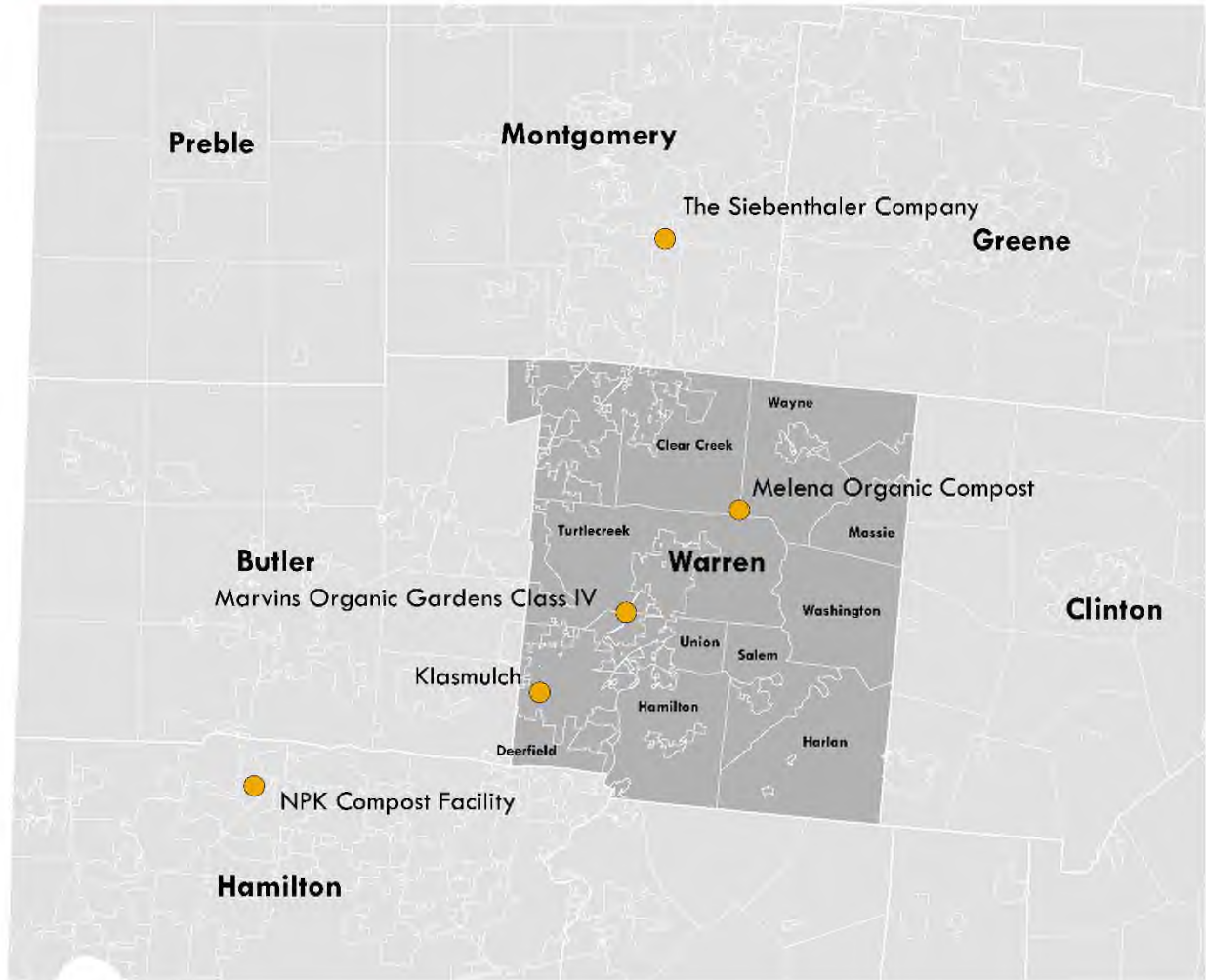
Curbside Recycling Access Map



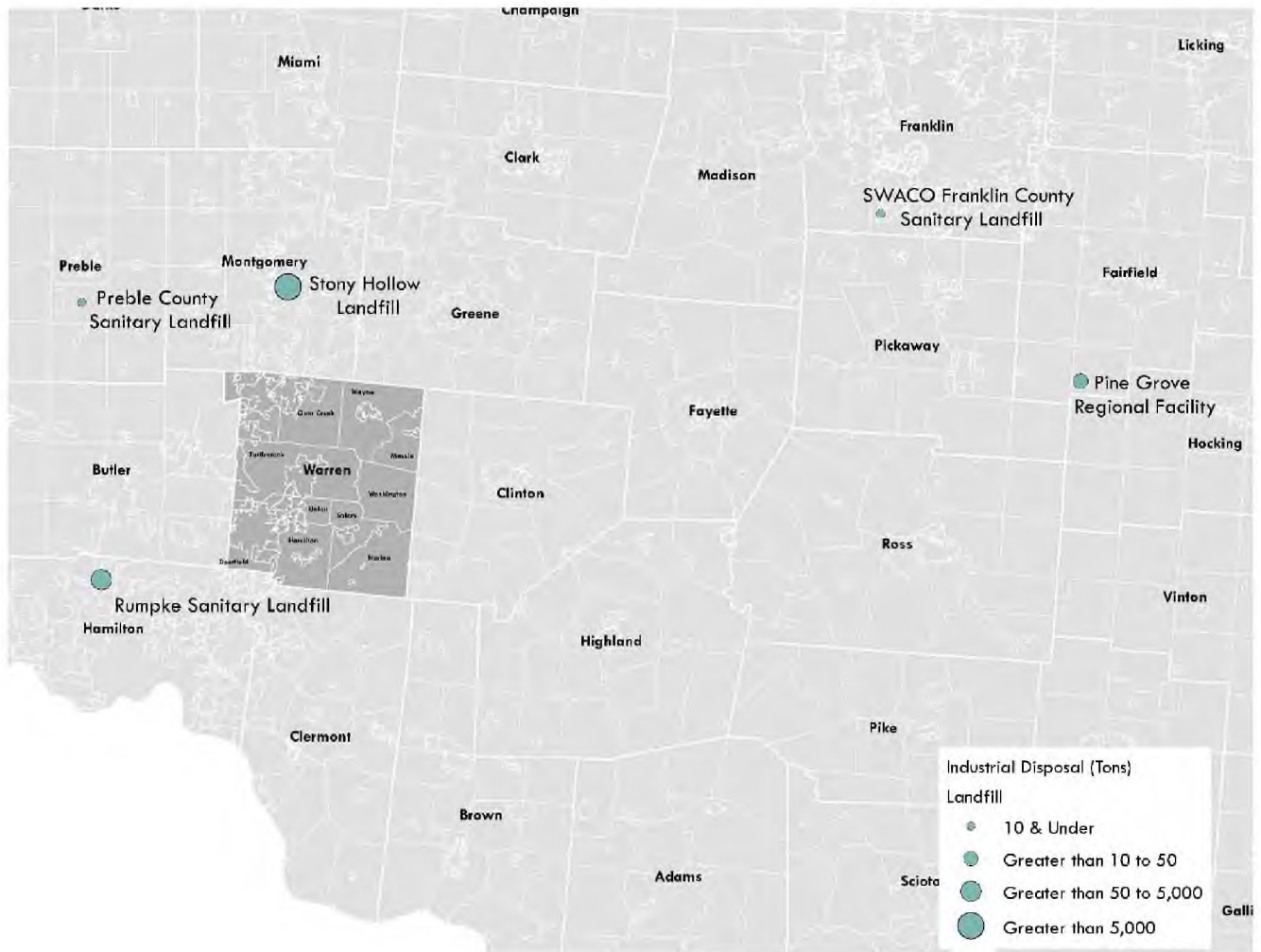
Drop-off Recycling Access Map



Compost Facilities Map



Industrial Disposal Map



**SOLID WASTE
APPROVED**
OHIO ENVIRONMENTAL PROTECTION AGENCY
March 12, 2024
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
ATTACHED HERETO