



# Ratified 2024-2033 Solid Waste Management Plan

Lorain County Solid Waste Management District

Website: <https://www.loraincountyohio.gov/175/Solid-Waste-Management-District>

Phone: 440-329-5777





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## Section i. Solid Waste Management District Information

**Table i-1. Solid Waste Management District Information**

SWMD Name	Lorain County Solid Waste Management District
Member Counties	Lorain
Coordinator's Name (main contact)	David Blevins
Job Title	District Director
Street Address	226 Middle Avenue
City, State, Zip Code	Elyria, Ohio 44035
Phone	440-329-5440
Fax	440-329-5777
E-mail address	dblevins@loraincounty.us
Webpage	<a href="https://www.loraincountyohio.gov/solidwaste">https://www.loraincountyohio.gov/solidwaste</a>

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

Member Name	Representing
<b>Lorain County</b>	
David J. Moore	County Commissioners
Jack Bradley	Municipal Corporations (City of Lorain)
David Urig	Townships
Mark Adams	Health Departments
Barbara Kantola	Industrial Generators
Vacant	Citizens Rep
William Oliver	Public Rep

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

Name	David Urig, Acting Chairperson
Street Address	226 Middle Avenue
City, State, Zip Code	Elyria, Ohio 44035
Phone	440-329-5440
Fax	440-329-5777
E-mail address	Dcu59@yahoo.com

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

<b>Commissioner Name</b>	<b>County</b>
David J. Moore, President	
Jeff Riddell, Vice President	Lorain
Michelle Hung, Member	

**Technical Advisory Committee**

The District did not establish a technical advisory committee (TAC) for the preparation of this 2024 Plan Update.

## 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 These issues combined with Ohio's outdated and incomplete solid waste regulations caused Ohio's General Assembly to pass House Bill (H.B.) 592. H.B. 592 dramatically revised Ohio's outdated solid waste regulatory program and established a comprehensive solid waste planning process.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 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*

Because 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. 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.<sup>1</sup>

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.<sup>2</sup>

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<sup>1</sup>Counties 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.

<sup>2</sup>In 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.

## 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.

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 way 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

On March 21, 1989, the Lorain County Board of Commissioners created the Lorain County Solid Waste Management District. The District was created to provide for

the management of solid waste in a safe, environmentally sound, and effective manner. Lorain County consists of largely rural areas with two moderately sized cities. The population is currently around 315,000. Most of the land cover is cultivated cropland, forest, and a few more heavily developed cities. The type of demographic setting will influence the opportunities and barriers that the District has for implementing recycling programs.

The District's mission is to implement the Lorain County Solid Waste Management Plan by educating and encouraging recycling efforts, waste reduction, and litter prevention in Lorain County. Implementing these actions will help solidify a longer lifespan of the landfill and help ensure Lorain County's use for a longer timeframe.

The District several strategies to monitor and manage their solid waste practices. The District provides county-wide curbside access to all their communities within the District. The District also provides Lorain County residents and businesses with full access to utilize their Collection Center. The Collection Center serves as a great resource for collecting household hazardous waste (HHW), electronic waste, appliances, and more. The District also has a waste consortium that provides services to twelve of the communities in Lorain County. The consortium has provided residents living in more rural areas greater access to recycling and fair market cost for services.

The District's administration consists of one centralized office, which is located at 226 Middle Avenue in Elyria, Ohio

#### **D. Waste Reduction and Recycling Goals**

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

## 2020 State Plan Goals

### Goal 1

- The SWMD shall ensure that there is adequate infrastructure (80%) to give residents and commercial businesses opportunities to recycle solid waste.

### Goal 2

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

### Goal 3

- The SWMD shall provide the following required programs: a website, a comprehensive resource guide, an inventory of available infrastructure, and a speaker or presenter.

### Goal 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.

### Goal 5

- The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.

### Goal 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.

### Goal 7

- The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.

### Goal 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.

### Goal 9

- The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.

### Goal 10

- The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan.

All nine 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 must devote more resources to achieving those two goals than to the remaining goals. Thus, Goals 1 and 2 are 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 Section B and Appendix I for descriptions of the programs the SWMD will use to achieve the ten goals.

## CHAPTER 2 DISTRICT PROFILE

### A. Profile of Political Jurisdictions

#### 1. ***Counties in the Solid Waste Management District***

As its name suggests, the Lorain County Solid Waste Management District is a single-county district comprised of Lorain County, with the addition of the portion of Vermilion city residents located in Erie County.<sup>1</sup>

#### 2. ***County Overview***

Lorain County is the ninth most populous county in Ohio after Franklin, Cuyahoga, Hamilton, Summit, Montgomery, Lucas, Butler, and Stark Counties. The county has a total area of 492.6 square miles. It is the fourth-largest county in Ohio by total area but only the 28<sup>th</sup> largest county in Ohio based on land mass. According to the Ohio Development Services Agency's Ohio County Profiles, there are 131,211 housing units in Lorain County. Approximately 91.7% of housing units are occupied (72.3% by owners and 27.7% by renters) and 8.3% of housing units are vacant. Lorain County consists of the following notable communities:

- Lorain is the largest city. In 2019, it had a population of 63,855 people which comprised approximately 20 percent of the county's population.
- Elyria had a population of 53,757 in 2019.
- North Ridgeville had a population of 34,392 in 2019.
- There are nine cities ranging in population from 5,808 to 63,855 people.
- There are six villages ranging in population from 175 people to 5,707 people.
- There are eighteen townships ranging in population from 632 people to 7,490 people.

### B. Population

#### 1. ***Reference Year Population***

After adding the population of Vermilion city that was partially located in another SWMD (Erie County SWMD), the District had a total of adjusted population of 314,419 people in 2019.

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<sup>1</sup> When a community's population resides in more than one SWMD, the entire community's population is added to the SWMD where the majority of the community's population is located. The SWMD where the minority of the population lives subtracts the community's population when calculating the total SWMD's population.

Table 2-1 presents the adjusted population, the largest city, and the population of the largest city in the SWMD during the reference year:

**Table 2-1. Population of Lorain County SWMD in 2019**

County		Largest Political Jurisdiction		
Name	Population	Community Name	Population	Percent of County Population
Lorain	314,419	City of Lorain	63,855	20%

**Source(s) of information:** Ohio Development Services Agency, "2021 Population Estimates by County, City, Village, and Township." June 2022.

## 2. *Population Distribution*

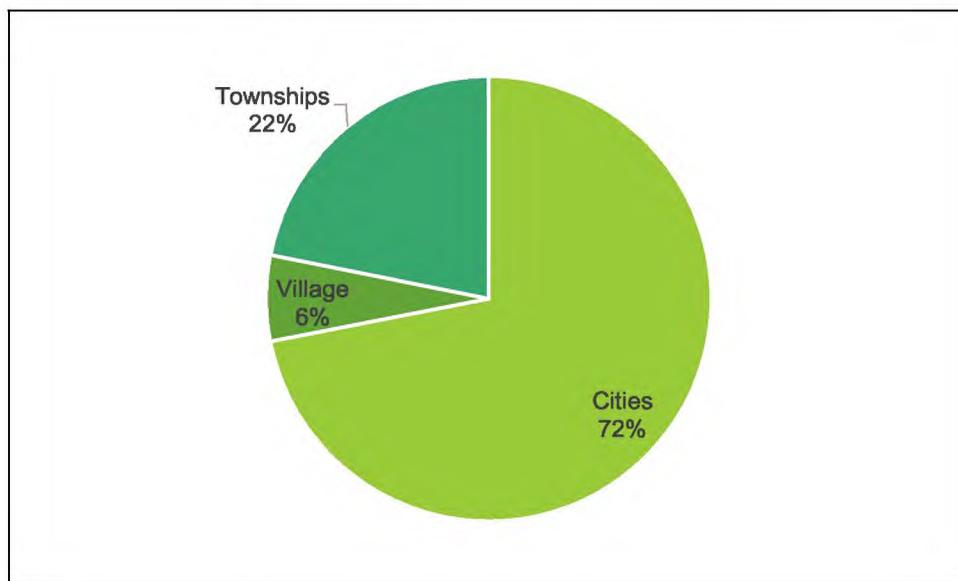
Table 2-2 below presents the distribution of Lorain County's population in cities, villages, and unincorporated areas.

**Table 2-2. Population Distribution**

County	Percent of Population in:		
	Cities	Villages	Unincorporated Townships
Lorain	72%	6%	22%

**Source(s) of information:** Ohio Development Services Agency, "2021 Population Estimates by County, City, Village, and Township." June 2022.

**Figure 2-1. Population Distribution**



According to the Ohio Development Services Agency's profile for Lorain County, it is comprised of nearly equal parts of urban and rural areas. The bullet points below show the largest uses of land in the county:

- 42.8% of land use was agricultural (cultivated crops, pasture/hay)
- 22% of land use was developed (mostly lower density)
- 29.5% of land cover was forest, wetlands, open water, shrub/grasslands, or barren (strip mines, gravel pits)

The majority of the District's population is concentrated in the northern half of the county.

### 3. ***Population Change***

The District's population is expected to increase by 2.5% from 2019 through the fifth year of the planning period (2027) and increase by more than 4% by the end of the planning period.

### 4. ***Implications 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.

## C. **Profile of Commercial and Institutional Sector**

There are approximately 9,175 commercial businesses and institutions in Lorain County. The top employers include health care, education, and retail trade. The following table lists the top five employers in the commercial and institutional sector.

**Table 2-3. Top Commercial/Institutional Sector Employers**

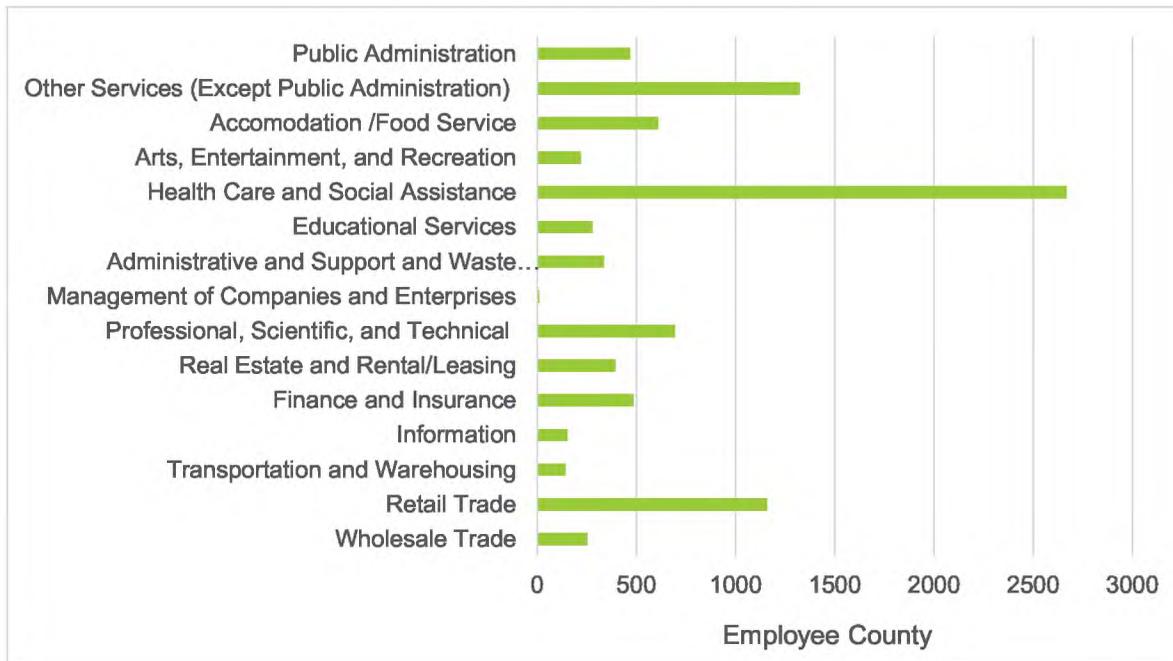
Company Name	NAICS	Employees
Mercy Regional Medical Center	62	1,525
Invacare Continuing Care Group	45	1,500
University Hospitals Elyria	62	1,496
Lorain County Community College	61	1,000
Ridge Tool Company	61	950

Source: U.S. Business Database. Rep. Reference USA. Web. 22. July.2022

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

**Table 2-4. 2019 Commercial/Institutional Establishment Statistics**

NAICS Code	NAICS Description	Number of Commercial/Institutional Establishments
42	Wholesale Trade	252
44-45	Retail Trade	1,157
48-49	Transportation and Warehousing	143
51	Information	151
52	Finance and Insurance	482
53	Real Estate and Rental and Leasing	392
54	Professional, Scientific, and Technical Services	692
55	Management of Companies and Enterprises	10
56	Administrative and Support and Waste Management and Remediation Services	334
61	Educational Services	278
62	Health Care and Social Assistance	2667
71	Arts, Entertainment, and Recreation	220
72	Accommodation/Food Service	610
81	Other Services (Except Public Administration)	1321
92	Public Administration	466

**Figure 2-2. Employment Sectors**

**Figure 2-2** shows the comparison of the different employment sectors in Lorain County and how many total employees are captured in each sector.

## E. Profile of Industrial Sector

There are approximately 470 industries operating in Lorain County. About 86% of District industries have an average employment of 10 or more individuals. Only a small percentage of industries (7%) have a staff of greater than 100 employees. However, there are more than 30 industries with more than 100 employees; the top 10 industrial sector employers are presented in the table below.

**Table 2.5-Top Industrial Sector Employers**

Company Name	NAICS	Staff
Ford Ohio Assembly Plant	33	2,296
Invacare Corporation	33	1,500
Ridge Tool Co	33	950
Forest City Technologies	32	540
Elyria Foundry	33	501
Forest City Technologies Inc	326	500
Avient Corp	32	500
Riddell Sports	33	500
Nordson Nordson Corp	33	400
AJ Rose Manufacturing Company	32	350

The industrial sector accounts for 24% of total waste generated in the District. Industries are responsible for implementing their own recycling programs and contracting waste haulers. The District provides resources to the industries for helping them understand their recycling needs by advertising free waste audits, and zero waste planning.

## F. Other Characteristics

Lorain County is host to Oberlin College which has an undergraduate student population of approximately 3,000 and Lorain Community College which has a student population of approx.12,000. Approximately 90% of students live in college-owned, operated, or affiliated housing. The students comprise a transitory population that is not included in the count of Lorain County residents for the census. However, the waste generated by the students is included in the amount of waste generated by the residential/commercial sector and in the per capita generation rate for that sector.

## CHAPTER 3. WASTE GENERATION

This chapter of the Solid Waste Management Plan provides a summary of the SWMD's historical and projected solid waste generation. The District's Policy Committee needs to understand the amounts and types of waste the SWMD will generate before it can make decisions regarding how to manage the waste. Thus, the District analyzed the amounts and types of waste generated within the SWMD in the past and that could be generated in the future.

The District 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. In order to calculate how much waste was generated, the District added the quantities of waste disposed of in landfills and reduced/recycled.

Reduction and recycling data was obtained 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 District relies upon an entity's ability and willingness to provide data. When entities do not respond to surveys, only a partial picture of recycling activity can be developed. How much data the District obtains has a direct effect on the SWMD's waste reduction and recycling and generation rates.

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

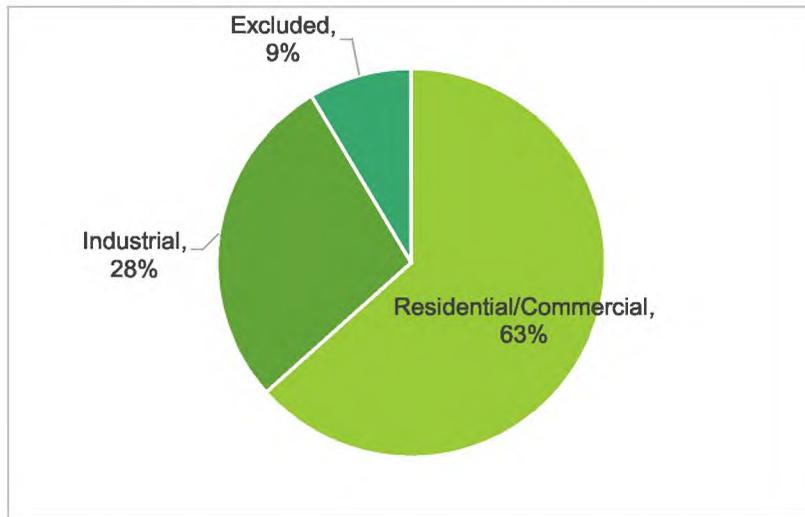
The District also analyzed historic quantities of waste generated to project future waste generation. The details of this analysis are presented in Appendix G. The Policy Committee used the projections to make decisions on how best to manage waste and to ensure future access to adequate waste management capacity, including recycling infrastructure and disposal facilities.

### A. Solid Waste Generated in Reference Year

**Table 3-1** shows the amounts of residential/commercial (R/C) and industrial waste generated within the District during 2019 (the reference year). The amount generated is defined by the tons disposed in landfills plus the tons recycled, composted, and otherwise diverted from landfill disposal.

**Table 3-1. Solid Waste Generated in the Reference Year**

Type of Waste	Quantity Generated (tons)
Residential/ Commercial	348,990
Industrial	156,075
Excluded	47,800
<b>Total</b>	<b>552,866</b>

**Figure 3-1 Waste Generation by Sector**

**Figure 3-1** demonstrates what is represented in **Table 3-1**. This figure shows how much each sector is represented in the total waste generated in the District during the reference year 2019. Majority of the waste, (63%) is coming from the residential/commercial sector, the industrial sector generated (28%) and excluded waste generated (9%) of overall waste.

### **1. Residential/Commercial Waste Generated in Reference Year**

The Residential/Commercial sector generated 348,990 tons of solid waste during the reference year. This estimated generation shows that each person generates approximately 6 pounds per person per day. When compared to other Solid Waste District's in **Table 3-2** below, Lorain County falls in the middle when compared to other similar District's and is less than the statewide average of 7.1 PPD. The total recycling rate for the residential/commercial sector was 22%.

**Table 3-2 Per Capita Residential/Commercial Solid Waste Comparison**

County	Per Capita Disposal
Butler	6.4
Lake	8.1
Lorain	6.0
Summit-Akron	6.1
Warren	5.2
Statewide	7.1

## 2. *Industrial Waste Generated in Reference Year*

The industrial sector total generated a total of 156,075 tons during 2019, which was 28% of the total waste generation across all sectors. The industrial sector's total recycling rate was 52%.

## 3. *Excluded Waste Generated in Reference Year*

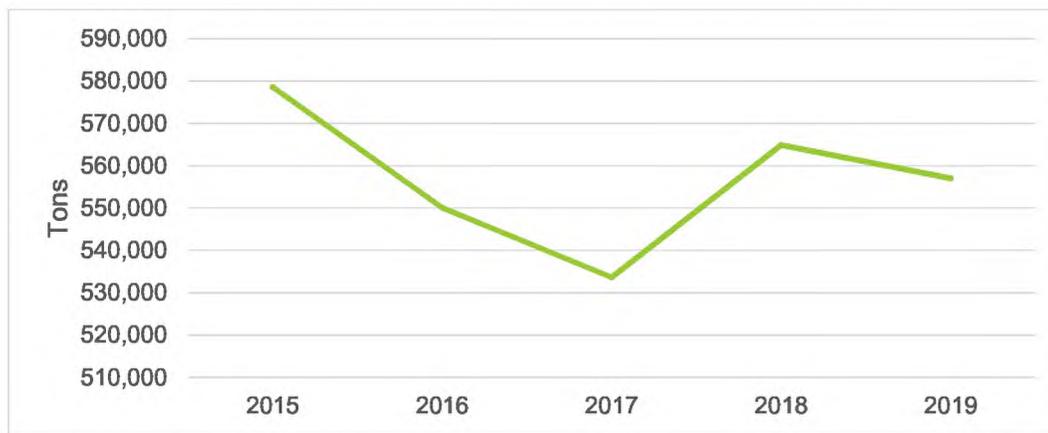
The excluded waste generated in the reference year was 47,800 tons. This represented 9% of total waste generated. Excluded waste was less than 10% of the total waste stream. Ohio EPA 4.1 format states that if excluded waste is less than 10% of total waste generated then it may be exempt. The excluded waste will not be included in the analysis due to accounting for only 9% of total generation.

## B. Historical Waste Generated

The overall waste generation for Lorain County from all sectors from 2015 to 2019 is shown below in **Table 3-3**. Waste generation had a large decline from 2015 to 2017 of roughly 44,000 tons, and then spiked up during 2018 by roughly 30,000 tons.

**Table 3-3. Historical Waste Generated**

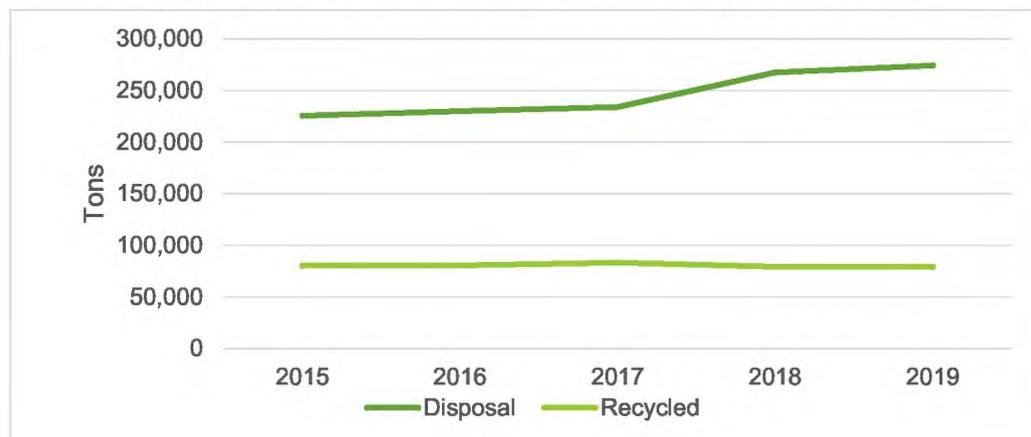
Year	Population	Residential/Commercial		Industrial		Excluded (tons)	Total	Per Capita Generation (ppd)	Annual % Change in Total Tons
		Disposal	Recycled	Disposal	Recycled				
2015	309,851	225,458	80,373	60,212	87,747	124,777	578,567	10.23	-
2016	310,798	229,743	80,673	62,385	104,112	73,161	550,074	9.70	-0.05
2017	307,924	233,980	83,205	61,351	113,244	41,856	533,636	9.50	-3.0%
2018	312,994	267,422	79,421	72,177	74,883	70,991	564,894	9.89	5.9%
2019	314,419	274,082	74,908	74,788	81,287	47,800	552,866	9.63	-2.2%

**Figure 3-2 Historical Waste Generated Trends**

**Figure 3-2** shows the trends of total waste generation from all sectors from 2015 to 2019. There was a total of 552,866 tons of waste generated during 2019. There has been a decrease in Per Capita Generation (PPD) from 10.2 during 2015 to 9.6 during 2019.

#### *1. Historical Residential/Commercial Waste Generated*

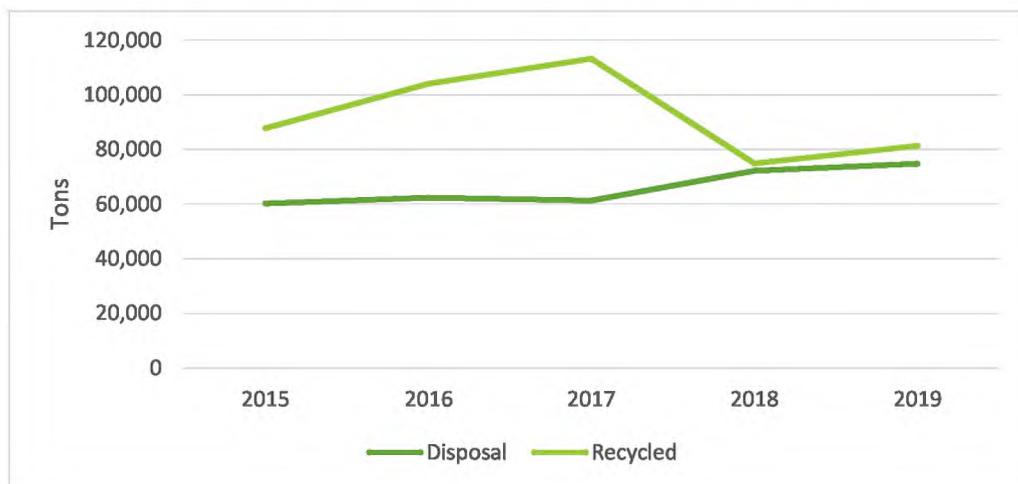
Residential/Commercial waste generation has fluctuated through the past 5 years. **Figure 3-3** shows the trends between disposal and recycling. During 2017 and 2018 there is an increase in disposal. Disposal was recorded at 225,000 tons in 2015 and during 2018 it had increased by 40,000 tons. There has been a 21% increase in total disposal within the previous 5 years. Recycling trends have remained constant through the 5-year trend.

**Figure 3-3. Residential/Commercial Waste Trends**

## 2. Historical Industrial Waste Generated

Industrial waste generation has shown very small change over the past 5 years. **Figure 3-4** below shows the disposal and recycling trends for the industrial sector. Overall, the trends are showing a large fluctuation for recycling and relatively little fluctuation for disposal. Recycling trends remained constant then there was a decrease of nearly 40,000 tons. There has been a 24.2% increase in disposal and a decrease of -7.4% in recycling. There have been major industries that have closed or have reduced sales, impacting the total generation.

**Figure 3-4 Industrial Waste Trends**



## C. Waste Generation Projections

**Table 3-4** presents projections for the first 6 years of the planning period.

**Table 3-4 Generation Projection**

Year	Residential/Commercial Waste	Industrial Waste	Excluded Waste	Total
2024	351,477	168,885	71,717	592,050
2025	357,385	170,802	71,717	599,903
2026	364,895	172,775	71,717	609,388
2027	371,021	174,808	71,717	617,546
2028	378,853	176,901	71,717	627,471
2029	385,233	179,055	71,117	636,005

Residential/Commercial Projections are made using the historical and reference year data. Residential and commercial waste generation is expected to steadily

increase throughout the planning period. The increase is based on an increase in per capita generation rate from the previous 5 years.

Industrial projections were made assuming change in disposal tons annually based on averaging the projected annual change in tonnage and recycling tonnage was projected based on the average Projected Change in Employment Percent 2018-2028 using Ohio Job Outlook.

Excluded waste average from 2015 to 2019 is 71,717 tons, with the lowest total being 41,000 tons during 2017 and the highest being 124,000 tons during 2015. The average excluded waste from the 5-year period was used to make the projections for the remaining planning period. The average is projected to remain flat through the planning period.

## CHAPTER 4. WASTE MANAGEMENT

### Purpose of Chapter 4

Chapter 3 provides 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. Chapter 4 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 District expects will take the SWMD's trash, compost, and recyclables. Those facilities must be adequate to manage all 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 District 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 40 years of remaining landfill capacity. That is more than enough capacity to dispose of all of Ohio's waste. However, landfills are not distributed equally around the state. Therefore, there is still the potential for a regional shortage of available landfill capacity, particularly if an existing landfill closes. If that happens, then the SWMDs in that region would likely rely on transfer facilities to transport waste to an existing landfill instead of building a new landfill.

Finally, the 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 flow control). A SWMD's authority to designate facilities is explained in more detail later in this chapter.

### A. Waste Management Overview

Lorain County manages waste through a combination of landfills, recycling programs and facilities, composting facilities, and transfer facilities. Figure 4-1 depicts total waste generation management in the reference year. Almost 68% of

the waste generated is landfilled while 22% is recycled. These methods of waste management are anticipated to continue handling the District's solid waste throughout the planning period.

**Figure 4-1 Methods of Managing Waste (tons)**

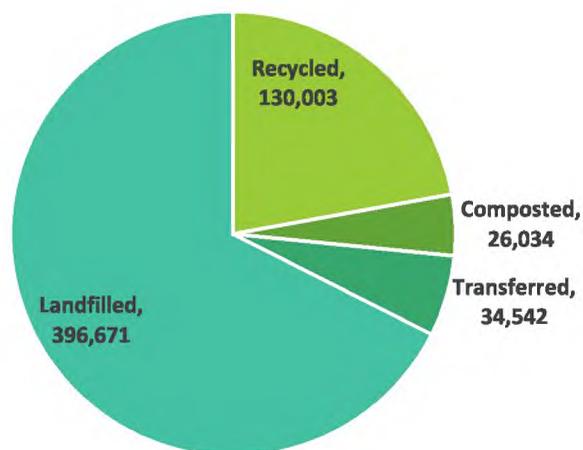


Table 4-1 shows the projections for each management method for the first six years of the planning period and indicates that recycling will continue to comprise the largest category.

**Table 4-1. Methods for Managing Waste**

Year	Generate <sup>1</sup>	Recycle <sup>2</sup>	Compost <sup>3</sup>	Transfer <sup>4</sup>	Landfill <sup>5</sup>
<b>Reference Year</b>					
2019	552,708	130,161	26,034	32,201	396,671
<b>Planning Years</b>					
2024	592,050	122,081	36,410	35,195	433,558
2025	599,903	121,597	36,523	35,863	441,783
2026	609,388	122,614	36,630	36,542	450,145
2027	617,546	122,116	36,736	37,236	458,694
2028	627,471	123,193	36,843	37,945	467,435

<sup>1</sup> "Generate" represents the total of the other columns except transfer as this is included in the landfill totals

<sup>2</sup> "Recycle" is the total amount reduced and recycled minus composting.

<sup>3</sup> "Compost" is the total amount of composting

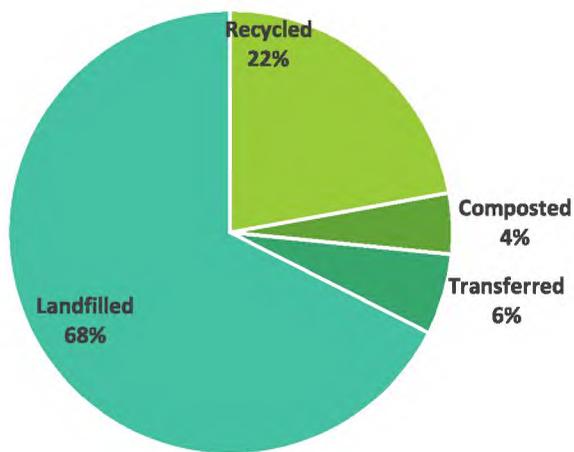
<sup>4</sup> "Transferred" is the amount sent to transfer stations, prior to delivery to a landfill.

<sup>5</sup> "Landfilled" plus the "Transferred" amount equals the total disposal.

The proportion of each method used to manage the District's waste during the first six years of the planning period are predicted to change. Recycling numbers are projected to decrease from 2019 to 2023 and then remain relatively stable the following years with minor fluctuations year over year. Waste generated is expected to increase a sizeable amount. This comes from two

sources, a projected increase in composting and a projected increase in landfilled waste.

**Figure 4-2. Waste Management Methods: 2019**



**B. Profile of Solid Waste Infrastructure and Solid Waste Facilities Used in the Reference Year**

There is one landfill located in Lorain County. There are no transfer stations located in the District. There were nine compost facilities that were used during the reference year for composting material. There were several other disposal facilities that were utilized during the reference year. The various facilities that were used during the reference year are listed below.

**1. Landfill Facilities**

All the landfills which received waste directly from the District during the reference year of 2019 are shown below in **Table 4-2**. This table illustrates that 89% of the direct-hauled waste was disposed at the Lorain County Landfill, which is publicly available, privately owned facility. Other landfills that received waste from the District in 2019 had an average of nearly 50 years of remaining capacity.

**Table 4-2 Landfill Facilities Used by District in Reference Year**

Facility Name	Location		Tons Accepted from SWMD	% of all SWMD Tons Disposed	Remaining Years
	County	State			
<b><i>In-District</i></b>					
Lorain County II Landfill LLC	Lorain	OH	325,056	89%	14
<b><i>Out-of-District</i></b>					

Facility Name	Location		Tons Accepted from SWMD	% of all SWMD Tons Disposed	Remaining Years
	County	State			
Geneva Landfill	Ashtabula	OH	1	0.00%	82.0
Crawford County Landfill	Crawford	OH	52	0.01%	20.0
Erie County Sanitary Landfill	Erie	OH	8,720	2.39%	25.0
Pine Grove Regional Facility	Fairfield	OH	48	0.01%	88.0
Kimble Sanitary Landfill	Richland	OH	170	0.05%	18.0
Port Clinton Landfill Inc	Stark	OH	78	0.02%	83.0
Noble Road Landfill	Richland	OH	27,439	7.53%	11.0
American Landfill Inc	Stark	OH	2,586	0.71%	84.0
Republic Services Countywide Recycling & Disposal Facility	Stark	OH	17	0.00%	91.0
Wood County Landfill	Wood	OH	4	0.00%	2.0
<b>Out-of-State</b>					
Misc. Facilities	Multiple	IN	298	0%	N/A
<b>Totals</b>			<b>364,470</b>	<b>100%</b>	<b>518</b>

Source: "Analytics Solid Waste Flows to Landfills and Incinerators in Ohio" Table 14

Appendix D, Table D-1

Sample Calculations: Residential/Commercial + Industrial + Excluded = Total

**Note:** The "tons accepted from SWMD" represent only the amount of waste which was directly hauled to landfills. It does not include the tonnage, which was sent to transfer stations, then delivered to a landfill.

The majority (89%) of all waste disposed of by the District went to the Lorain County Landfill. The second most used landfill was the Noble Road landfill at roughly 8%. The remaining 3% of material was sent to various other landfills located in Ohio and Indiana. The District disposed of a total of 364,470 tons in the reference year.

## 2. Transfer Facilities

The transfer facilities receiving waste from the District entities during 2019 are listed in **Table 4-3**. Approximately 8% of the total waste processed by transfer stations, and 92% of was directly hauled to landfills. There are no transfer stations within the District. All of the transfer stations used were out-of-district.

Harvard Road, Rumpke Inc Richland County, and Kimble transfer stations handled most of the District's transferred waste. Together these three stations accounted for 82% of all transferred waste. The District transferred a total of 32,201 tons of material.

**Table 4-3. Transfer Facilities Used by District in the Reference Year**

Facility Name	Location		Tons Accepted from District	% of all District Waste Transferred	Final Waste Destination
	County	State			
<b><i>In-District</i></b>					
None					
<b><i>Out-of-District</i></b>					
Broadview Heights Transfer Station	Cuyahoga	OH	2,533.54	7.87%	Noble Road Landfill
Cleveland Transfer/Recycling Station	Cuyahoga	OH	561.43	1.74%	American Landfill Inc
Harvard Road Transfer Station	Cuyahoga	OH	9,504.54	29.52%	Noble Road Landfill
Strongsville Transfer Station	Cuyahoga	OH	2,628.62	8.16%	Lorain County Landfill
Huron County Solid Waste Facility	Huron	OH	3.52	0.01%	Noble Road Landfill
Rumpke Waste Inc Richland County Transfer Facility	Richland	OH	8,706.42	27.04%	Noble Road Landfill
Kimble Transfer & Recycling - Canton	Stark	OH	8.14	0.03%	Kimble Sanitary Landfill
Kimble Transfer & Recycling - Twinsburg	Summit	OH	8,254.54	25.63%	Kimble Sanitary Landfill
<b><i>Out-of-State</i></b>					
None					
<b>Total</b>			32,200.75	100%	

Source: "2020 Ohio Facility Data Report Tables". Ohio EPA.

Appendix D, Table D-2

Sample Calculations: Residential/Commercial + Industrial + Excluded = Total

### 3. Composting Facilities

**Table 4-4** shows the composting facilities that received yard and food waste from the District during 2019. The largest recipients of the District's composted waste were Kurtz Bros, Avon Lake Central Fueling, which are both located in Lorain County and Barnes Nursery in Erie County. These three locations managed 72% of the District's compost. The District had a total of 18,003 tons of composted material in the reference year.

**Table 4-4. Composting Facilities Used by the District in the Reference Year**

Facility Name	Location (County)	Tons Composted	Percent of all Material Composted
<b><i>In-District</i></b>			
Eaton Township Composting Center	Lorain	51	0.29%
Oberlin Composting Facility	Lorain	630	3.50%
Avon Lake Central Fueling	Lorain	4,638	25.76%
Kurtz Bros Inc - Avon Production Facility	Lorain	4,998	27.76%
City of Lorain Composting Facility	Lorain	1,492	8.29%
Amherst Township Yard Waste Collection Site	Lorain	1,140	6.33%
Alvarado Landscaping, Inc	Lorain	930	5.16%
Z Men Enterprises Inc	Lorain	317	1.76%
Good Nature Organics, LLC	Lorain	438	2.43%
<b><i>Out-of-District</i></b>			
Barnes Nursery Inc Yard Waste Recovery Division Class II	Erie	3,210	17.83%
Paradise Composting II	Wayne	75	0.42%
Zollinger Sand & Gravel Co	Wayne	28	0.15%
Sand Road Ent Inc	Huron	15	0.08%
Number One Landscape	Medina	42	0.23%
<b>Total</b>		18,003	

Source:  
Appendix B, Table B-7

Note: This table does not include the total tonnages recorded in the Ohio EPA Composting data from Hauler/Grocer. The tons recorded was 743.16.

#### **4. Processing Facilities**

**Table 4-5** shows the major processing facilities which reported processing recyclables from the District during the reference year. There were two processing facilities that reported processing materials. One is a MRF and the other is a transfer facility. Together, these facilities processed 9,873 tons of material.

**Table 4-5. Processing Facilities Used by the District in the Reference Year**

Name of Facility	Location		Type of Facility	Recyclables Accepted from District
	County	State		Weight (tons)
<b>In-District</b>				
None				
<b>Out-of-District</b>				
Lorain County Resource Recovery	Lorain	OH	Single-stream MRF	7,727
Richland County Transfer Facility	Richland	OH	Transfer Facility	2,146
<b>Out-of-State</b>				
None				
<b>Total</b>				<b>9,873</b>

Source(s): Ohio EPA Material Recovery Facility Report 2019

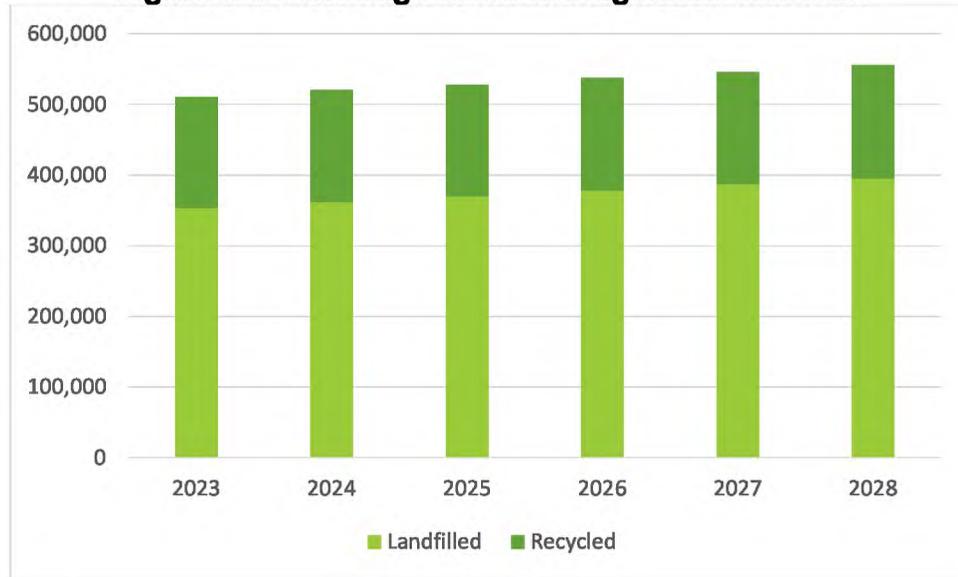
## 5. **Other Waste Management**

There were no other methods used for waste management during the reference year.

## C. **Use of Solid Waste Facilities During the Planning Period**

The District anticipates that facilities which were used to manage District generated waste during the reference year will continue to be available throughout the planning period, and in aggregate, will continue to provide adequate capacity for the District's needs.

Transfer stations processed a minor portion percentage of the District's waste in past years and are expected to do so throughout the planning period. No information currently available to the District suggests that the existing transfer stations used to process District waste will close in the near future. Figure 4-3 below details the expected waste landfilled and recycled for the first six years of the planning period.

**Figure 4-3 Planning Period Management Methods**

#### D. Siting Strategy

The District Siting Strategy for solid waste facilities ensures that proposals to construct a new solid waste facility within the District or modify an existing in-District solid waste facility follow the Plan. The District Board of Directors (Board of County Commissioners) shall not approve the general plans and specifications for any proposed solid waste facility or modification of an existing in-District solid waste facility where the modification, construction, and operation of the proposed solid waste facility, as determined by the Board, will:

1. Adversely affects the Board's ability to finance and implement the Plan.
2. Interfere with the Board's obligation to provide for the maximum feasible utilization of existing in-District solid waste facilities.
3. Materially and adversely affect the quality of life of residents within 300 feet of the proposed modification or construction of a solid waste facility; or
4. Materially and adversely affect the local community, including commercial businesses within 500 feet of the proposed modification or construction of a solid waste facility and the adequacy of existing infrastructure to serve the proposed solid waste facility as modified or constructed.

For a more detailed explanation of the District's siting strategy, see Appendix S of this Plan Update.

## E. Designation

### Purpose of Designation (authored by the Ohio EPA)

Ohio law gives each SWMD 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.<sup>1</sup>

Even though a SWMD has the legal right to designate, it cannot do so until the policy committee (or the board in the case of an Authority) specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If the SWMD desires 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 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 343.013, 343.014 and 343.015. 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 receive the SWMD's waste. In more explicit terms, 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 when 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 the time period available to the board for making a decision on a waiver request.

### 1. Description of the SWMD's Designation Process

The District's existing Plan authorizes the Board of Directors to designate solid waste facilities. Authorization to designate solid waste facilities will continue with the approval of this Plan Update.

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<sup>1</sup> Source-separated recyclables delivered to a "legitimate recycling facility" as defined in Ohio law are not subject to the requirements of designation. (A legitimate recycling facility is loosely defined as a facility which consistently recycles a majority of the materials processed on-site.)

Where the District designates facilities, it may grant a waiver to a non-designated entity to provide solid waste disposal, transfer, or resource recovery facilities or activities at any time after the plan update is approved and in accordance with the criteria specified in ORC 343.01(I)(2). The District and County Commissioners will evaluate each request for designation or waiver.

## 2. ***List of Designated Facilities***

The currently designated facility for the solid waste generators is shown in **Table 4-6**. This facility was designated in 2009.

**Table 4-6. Facilities Currently Designated**

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

## CHAPTER 5. WASTE REDUCTION AND RECYCLING

As was explained in Chapter 1, a SWMD must have programs and services to achieve reduction and recycling goals established in the state solid waste management plan. A SWMD must also ensure 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.

Through achieving the goals of the *State Plan* and meeting local needs, the SWMD ensures that a wide variety of stakeholders have access to reduction and recycling programs. These stakeholders include residents, businesses, institutions, schools, and community leaders. Programs and services collectively represent the SWMD's strategy for furthering reduction and recycling within its jurisdiction.

Before deciding upon the programs and services that are necessary and will be provided, the Policy Committee performed a strategic, in-depth review of the District's existing programs and services, recycling infrastructure, recovery efforts, finances, and overall operations. This review consisted of a series of 14 analyses that allowed the Policy Committee to obtain a holistic understanding of the District by answering questions such as:

- Is the SWMD adequately serving all waste-generating sectors?
- Is the SWMD recovering high volume wastes such as yard trimmings and cardboard?
- How well is the SWMD's recycling infrastructure being used, and how well is it performing?
- What is the District'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, and 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's Priorities

Priority areas to focus efforts in the 2024 Plan include:

Priority Program	Priority Area
Sustainability Education Center	Hands on learning and education
Education – School Diversion Outreach	Increase the schools recycling rates by five percent over the next three years
Education - Social Media Outreach	Increase social media presence and develop short videos
Education – Curbside Outreach	Outreach to reduce contamination
Organics Infrastructure Development	Expand organic processing in the County

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.

The following section defines the major programs and services the District will have available during the planning period. See Appendix I for the complete list of programs and descriptions.

## 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*

The District had 21 non-subscription and 8 subscription curbside programs.

**Table 5-1. Curbside Recycling Services**

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
NSC1	Amherst (City)	Republic	ongoing
NSC2	Amherst Township	Rumpke	ongoing
NSC3	Avon City	Republic	ongoing
NSC4	Avon Lake City	Kimble	ongoing

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
NSC5	Brighton Township	Rumpke	ongoing
NSC6	Carlisle Township	Republic	ongoing
NSC7	Eaton Township	Rumpke	ongoing
NSC8	Elyria City	City of Elyria	ongoing
NSC9	Elyria Township	Rumpke	ongoing
NSC10	Grafton Township	Rumpke	ongoing
NSC11	Grafton Village	Republic	ongoing
NSC12	Huntington Township	Rumpke	ongoing
NSC13	LaGrange Village	Republic	ongoing
NSC14	Lorain City	Republic	ongoing
NSC15	New Russia Township	Republic	ongoing
NSC16	North Ridgeville City	Republic	ongoing
NSC18	Penfield Township	Rumpke	ongoing
NSC19	Pittsfield Township	Rumpke	ongoing
NSC20	Rochester Village	Rumpke	ongoing
NSC21	Rochester Township	Rumpke	ongoing
NSC22	Sheffield Village	Republic	ongoing
NSC23	Sheffield Lake City	Republic	ongoing
NSC24	Sheffield Township	Rumpke	ongoing
NSC25	Vermilion city	Republic	ongoing
NSC26	Wellington Village	Republic	ongoing
NSC27	Wellington Township	Republic	ongoing

NS = Non-subscription, S = Subscription

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
SC1	Brownhelm Township	Republic	ongoing
SC2	Camden Township	Republic	ongoing
SC3	Columbia Township	Republic	ongoing
SC4	Henrietta Township	Republic	ongoing
SC5	Kipton Village	Republic	ongoing
SC6	LaGrange Township	Republic	ongoing
SC7	South Amherst (Village)	Republic	ongoing
SC8	Oberlin City	City of Oberlin	ongoing

*Drop-off Recycling*

ID	Name	Service Provider	When Service Was/Will be Available
FTU1	Eaton Township	Republic	ongoing

Recyclables collected include cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. Materials are collected in a single commingled stream. Access is 24/7. Tonnages recovered are included in the curbside totals and not separately tracked. This drop-off is provided by the political jurisdiction and their private hauler. The intent is availability for their households and businesses only.

**Target for Next 3 Years:** The District will offer to meet with the Village to provide technical assistance and help with exploring options to keep the program operational.

ID	Name	Service Provider	When Service Was/Will be Available
PTR1	Huntington Township	Republic	ongoing

Recyclables collected include cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. Materials are collected in a single commingled stream. Access is available on a part-time basis. Huntington Township's drop-off recycling location is available every Saturday 9am to 2pm. Tonnages recovered are included in the curbside totals and not separately tracked. This drop-off is provided by the political jurisdiction and their private hauler. The intent is availability for their households and businesses only. Paper and cardboard are collected through the Paper Retriever recycling bins and commingled containers are collected with a private hauler the township contracts with. Location is 45955 State Route 162.

**Target for Next 3 Years:** The District will offer to meet with the Township to provide technical assistance and help with exploring options to keep the program operational.

ID	Name	Service Provider	When Service Was/Will be Available
n/a	Camden Township	Republic	ongoing

This drop-off is provided by the political jurisdiction and their private hauler. The materials collected are paper and cardboard.

**Target for Next 3 Years:** The District will offer to meet with the Township to provide technical assistance and help with exploring options to keep the program operational

ID	Name	Service Provider	When Service Was/Will be Available
PTU1	Lorain County Collection Center (Elyria)	SWMD	ongoing

The District operates the Lorain County Collection Center in Elyria which is open to all District residents. The Collection Center is typically open Monday and Saturday 9am-3pm and Wednesday 12pm-6pm. (Note: Hours are subject to change. District website will maintain the most up-to-date hours of operation.) Recyclables collected include cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. Materials are collected in a single commingled stream. The Collection Center also accepts other materials, which are discussed in more detail in Appendix I.

### ***Multi-Family Unit Recycling***

Name	Description
Identify Concentrations of Multi-Family Housing Units to Assess Where is the Greatest Need for Additional Infrastructure	Work with property managers to identify the biggest challenges for service. Assist political jurisdictions in expanding service contracts to include Multi-Family Housing. Conduct research to understand existing services and opportunities in the sector. Examine what has worked in other communities and develop interventions for Lorain.

### ***Other Residential Recycling Programs***

Name	Description
Shred Truck	A mobile document shred truck travels to communities for their residents and shreds documents on site using the shredding equipment attached to the truck. Interested communities reach out to the District for available dates and complete an event request application.

Name	Description
Yard Waste Contracting Consortiums	Evaluate whether there is interest in establishing municipal yard waste contracting consortiums to obtain longer contracts and stable pricing for communities. If communities' express interest, the District would facilitate the development of the consortium.

Name	Description
Drop-Off Recycling Analysis - Initiative to improve convenience and access	The District will identify urban areas that do not host a drop-off recycling site and provide technical assistance for improving access for residents that do not have curbside recycling.

Name	Description
Consortium for Waste Services	The District participates by providing technical assistance and keeping meeting minutes at the direction of the Consortium Board. The Consortium Board meets quarterly.

Name	Description
Paper Retriever	Paper Retriever is a privately-operated company that operates in the District and provides drop-off containers to non-profit organizations and schools collecting paper-only, and phone books.

## 2. Commercial/Institutional Reduction and Recycling Programs

Name	Description
Specialized Bottle/Can Collection Program	Upon request, the District provides schools, businesses, and organizations with containers designed to collect bottles and cans for recycling.

Name	Description
Waste Audits	The District advertises free waste auditing services on its website. Create a waste assessment toolkit to allow self-conducting waste audits. Write case studies of successful audits. Pair with grants to assist service costs for reduction and/or diversion programs. Promote and add to the website and social media.

Name	Description
Infrastructure Development	Focus on how the District and economic development agencies can collaborate to expand infrastructure in Lorain County. Infrastructure such as processing and end markets.

Name	Description
Zero Waste Planning	The goal is to provide more outreach and information for businesses that want to incorporate zero waste into their practices and encourage these tactics through the community.

Name	Description
Business Recycling Assistance	The goal is to expand the number of businesses diverting materials from the landfill. The District will work with businesses to set up recycling programs. The focus will expand to all materials.

Name	Description
Food Waste Program	To continue traction with the rest of the county, the District will expand beyond the bottom of the food waste hierarchy – end of life management by developing a Food Waste Task Force in Lorain County or by joining one if one already exists.

### 3. Industrial Sector Reduction and Recycling Programs

Name	Description
Waste Audits	Create a waste assessment toolkit to allow self-conducting waste audits. Write case studies of successful audits. Pair with grants to assist service costs for reduction and/or diversion programs. Promote and add to the website and social media.

### 4. Special Waste Streams

Name	Description
Lorain County Collection Center	The Collection Center is one stop shop for managing: HHW, residential recyclables, scrap tires, rechargeable batteries, ballasts, scrap metal, books, paper, cardboard, fluorescent bulbs, and electronics. The Collection Center is typically open Monday and Saturday 9am-3pm and Wednesday 12pm-6pm. (Note: Hours and Acceptable Materials are subject to change. District website will maintain the most up-to-date information.)

Name	Description
Scrap Tire Collection	Beginning January 2023, two scrap tire collection sites will be available. It is the eventual plan to transfer the Lorain tire collection site to a small business and the District will maintain the tire collection site at the Lorain County Collection Center.

Name	Description
Appliance Recycling	The District connects with Goodwill Industries and Habitat for Humanity and refers residents to these organizations that accept televisions, microwave ovens, and other small appliances.

## 5. Funding/Grants

Name	Description
Recycling Revolving Loan Program	The District operates a Recycling Revolving Loan Fund (RRLF) for businesses and organizations (including non-profits) that utilize post-consumer recyclable materials either in their building materials or in their manufacturing processes. The fund contains up to \$500,000 that was available to Lorain County businesses contingent upon funding available.

Name	Description
New Programs Funding	The District reserves a fund of \$130,000 to assist programs that require additional funding or to establish new programs. This will also support grant matches to support the community incentive program.

Name	Description
Lorain County Community Scholarship	The District worked with DoppstadtUS to raise funding for and establish the Lorain County Recycling Scholarship. DoppstadtUS is a Lorain County-based company that engineers and manufactures recycling and processing equipment.  To participate, students must write an essay on a topic related to recycling, litter/litter prevention, or sustainability.

Name	Description
Multifamily Housing Recycling Grant	The District recognizes that recycling for residents residing in multi-family housing is important to the successful implementation of recycling and waste diversion goals.

Name	Description
Yard Waste Incentive Grant	The Yard Waste Recycling Incentive Grant is available to the District's cities, villages, and townships. The objective of the grant is to encourage political subdivisions to implement a yard waste collection program or improve an existing collection program.

Name	Description
Community Incentive	The District will revise the criteria of expenses which the Community Incentive grant awards funding. The purpose is to adjust funding expenses for programs to focus on the needs of the District to improve recycling tonnages. Through this next planning cycle, the District will not fund the Community Incentive Grant as traditionally funded. The District will support and assist communities to write grants for projects. The District will set aside funding up to a maximum for supporting the required grant match.

## 6. Market Development Programs

Name	Description
Recycling/Market Development Grant	The objective of the Recycling/Market Development Grant Program is to identify grant opportunities from a variety of federal state, and local sources that are applicable to the District and/or Lorain County businesses or political subdivisions.

Name	Description
District Market Development Grant	The District provides grants for special projects initiated by the Lorain County Commissioners. These projects included market development opportunities and buy recycled projects.

## 7. Feasibility Studies

Name	Description
Energy From Waste Feasibility Study	The District will explore potential improvements in waste reduction via EFW technologies and/or solicit interest from other organizations to implement these technologies locally.

Name	Description
Organics Facility	Continuing discussions with private sector operators and exploring opportunities for infrastructure. Seek public/private partnership grants. Work to educate political jurisdictions on economic and environmental benefit of an in-district organics facility.

## 8. Data Collection

Name	Description
Yard Waste Data Reporting	The District uses tonnage information supplied in Ohio EPA's annual composting report to monitor the tons composted at registered facilities.

Name	Description
Hauler Outreach for Community Data	The District can approach the haulers in Lorain County to identify whether solid waste data is available on a community level. If data is available, the District will begin collecting the information.

Name	Description
ADR Surveys Collection	The District annually surveys commercial businesses for survey data and will annually make the determination to survey industrial businesses.

## 9. County Assistance

Name	Description
County Engineer Road Funding	The District does not currently provide funding to the County Engineer for road repairs.

## 10. Enforcement & Clean Up

Name	Description
Health Department Financial Assistance	The District does not currently provide funding to the City of Lorain and the City of Elyria Boards of Health and the Lorain County Health Department for enforcement of solid waste regulations.

Name	Description
Open Dump and Scrap Tire Clean Up	The District does not currently provide funding to the Boards of Health (Lorain County, City of Elyria, and City of Lorain) for funding to clean-up open dump sites.

Name	Description
Lorain Beautiful Day – Volunteer Litter Collection	The District hosts and promotes the Annual Lorain County Pride Day, a county-wide litter collection and beautification event. Each participating community is involved in the recruitment and scheduling of volunteers for the day's activities.

Name	Description
Clean and Beautiful (C.A.B.)	The District lends volunteer groups a trailer containing the tools and supplies needed to complete litter collection and beautification activities for free. The trailer was branded "C.A.B." (Clean And Beautiful) and is stocked with equipment and supplies.

Name	Description
Collaboration Focus with Health District for Clean-ups	Ensure the Health District is identifying open dump and scrap tire dump facilities for clean-up.

Name	Description
Environmental Crimes Unit	The District does not currently provide funding to the Environmental Crimes Unit (ECU).

Name	Description
Law Enforcement Focus	Assist law enforcement to enforce open dumping laws. The District does not currently provide funding for Law enforcement. District has flow control regulations that include penalties.

Name	Description
Disaster Debris Management Plan	The District's Disaster Debris Management Plan remains incorporated in the master emergency plan for Lorain County.

Name	Description
Legal Assistance	The District may solicit legal advice for important solid waste management issues from the prosecutor's office as well as outside counsel.

Name	Description
Third Party Financial Audit	To maximize confidence in the District and transparency between the District and policy committee, the District solicits a third-party financial audit on a biannual basis.

Name	Description
Host Community Fee Agreement	The District reserves the right to negotiate a host community agreement with any solid waste facility operator where the Board of Directors believes an agreement is in the best interests of the District. Approval of a Host Community Agreement must be in accordance with all applicable Ohio laws and regulations. The Host Community Agreement between Republic Waste Services remains in effect.

Name	Description
Landfill Capacity Conservation Initiatives	To date, Republic has not been interested in a waste characterization study and one is not budgeted for the District to implement. If a waste characterization study is conducted, the District will provide a data collection system for significant generators of waste that is accepted at the Lorain County Landfill to track the amount generated, disposed, recycled, and reused.

Name	Description
Host Community Agreement Hauler Data Requirements	The District will strive to secure required data and information reporting the hauler for the Host Community Agreement.

## 11. Outreach, Education, Awareness

*Minimum education requirements prescribed by Goal 3:*

- District maintains a website at <https://loraincountyohio.gov/solidwaste>.
- District's webpage serves as a resource guide.
- Solid Waste Management Plan and website serve as an infrastructure inventory.

- The District has a Community Outreach Coordinator available for presentations and speaking engagements. Additionally, any of the District staff are available to speak or present when needed.
- The District is intending to complete the inside display installation for a Sustainability Education Center starting in 2023 that is housed in the existing Lorain County Collection Center on South Abbe Rd. in Elyria. The Sustainability Center will educate the community on the process and importance of recycling, composting, and waste reduction. This facility should be a visually impacting and interactive space that inspires visitors to change their waste habits. Visitors will be informed about the issue of waste and encouraged to make positive changes in their waste habits at home, school, and work that will make a difference for years to come. The goal is to provide an engaging educational opportunity for people of all ages and backgrounds. The primary audience of this project is K-12 students. The secondary audience is made up of adults, including college-age students, and the tertiary audience is children younger than kindergarten age. It is important to reach this group of young children, while at the same time reaching their parents with the waste reduction message.

Supplying information and seeking behavior changes is the central objective for the District's outreach and marketing. The District will employ various collateral and promotions. The key is to integrate communication such that promotional efforts are effective with the marketing activities. Incorporating the strategies and best practices described below provides a multi-layered, multi-faceted marketing and outreach strategy. Flyers, ads, postcards, print/digital advertisements, etc. are all District branded with consistent recognizable look that ties the resident/business back to the District. The following table lists the education/outreach programs.

Existing Programs	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
<b>District Website</b>	✓	✓	✓	✓	✓
<b>Social Media</b>	✓	✓	✓	✓	✓
<b>District Annual Report</b>	✓	✓			✓
<b>Composting Outreach – OSU Extension</b>	✓				✓
<b>Adult Presentations</b>	✓				
<b>Events</b>	✓	✓			
<b>Informational Handouts</b>	✓	✓		✓	✓
<b>Telephone Information Line</b>	✓	✓	✓	✓	✓
<b>Curbside Outreach</b>	✓				
<b>Tours</b>		✓			
<b>School Contests</b>		✓			
<b>School Presentations</b>		✓			

<b>Lending Library</b>		✓			
<b>Sustainability Education Center</b>	✓	✓		✓	✓
<b>Keep Lorain County Beautiful</b>	✓	✓			
<b>Environmental Stewardship Award</b>		✓	✓	✓	
<b>Business Technical Assistance</b>			✓	✓	
<b>Consortium for Waste Services</b>					✓
<b>Elected Official Outreach</b>					✓

### Outreach Priority

Name	Description
<b>School Diversion Outreach</b>	Paper recycling rates have been flat for several years. The District will focus on developing school programs and set a goal to increase the schools recycling rates by five percent over the next three years.

## C. Waste Reduction and Recycling Rates

### 1. Residential/Commercial Recycling in the District

The District is projected to divert 21% in the first year of the planning period. To reach Ohio EPA's 25% goal, the District needs to increase diversion. The District is planning education efforts over this next planning period that should directly impact diversion rates. However, education efforts are difficult to measure so the modeled projections are conservative.

**Table 5-1. Residential/Commercial Waste Reduction and Recycling Rate**

Year	Projected Tons Collected	Residential/Commercial WRR <sup>1</sup>
2024	74,542	21.2%
2025	74,443	20.8%
2026	75,838	20.8%
2027	75,717	20.4%
2028	77,171	20.4%
2029	77,038	20.0%

<sup>1</sup>WRR means waste reduction and recycling rate

Source:

Appendix K, Table K-1

Waste reduction and recycling in the residential/commercial sector is expected to hold flat during the first six years of the planning period.

### 2. Industrial Recycling in the District

**Table 5-2. Industrial Waste Reduction and Recycling Rate**

Year	Projected Tons Collected	Industrial WRR <sup>1</sup>
2024	83,950	49.7%
2025	83,677	49.0%
2026	83,405	48.3%
2027	83,135	47.6%

Year	Projected Tons Collected	Industrial WRR <sup>1</sup>
2028	82,865	46.8%
2029	82,596	46.1%

The District projects a slight decline in industrial sector diversion because tonnage was projected based on the average Projected Change in Employment Percent 2018-2028 using Ohio Job Outlook, which is expected to decline.

## CHAPTER 6. BUDGET

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).

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 the District's Budget

During the 2019 reference year, the District's overall revenue was \$2,828,729. This is projected to decrease through 2023.

In response to the projected decrease, the District investigated multiple financial options to ensure that the Solid Waste Plan Update provided financial stability over the planning period. Each potential financial plan was evaluated on:

- Reliability and type of revenue source
- Amount and value of programming budget and the contribution of that program to meet state goals
- Impact of funding and budget on fund balance and long-term financial liquidity

The District Policy Committee investigated the need for a generation fee of \$4.00 per ton starting July 2024 after approval of the Plan from Ohio EPA. This fee would have resulted in higher monthly disposal costs for all Lorain County residents, businesses, and industries. The Policy Committee rejected the option of a Generation Fee. Instead, the 2023 budget was revised based on the selection criteria to match the conservative projected 2023 to 2037 income. The need for a

2023 budget reduction was evidenced by the \$206K negative spending that occurred in 2022. Budgets now align with revenue providing a responsible, stable, fund balance.

This Solid Waste Plan Update now provides a responsible, conservative, flexible financial projection with no increase in fees.

#### Disposal Fees

The District receives more waste from out-of-District than it does in District. In the reference year, the District accepted almost 330,000 tons from in district waste and just over 830,000 tons from out of District. Revenues generated through fees on both amounts of waste disposed was \$2,322,095 in the reference year. This equates to 82% of the District's total revenue generated. Of this 82%, approximately 71% is received from fees on out-of-district waste. Total disposal revenue decreased steadily from 2019 to a total of \$2,142,206 in 2022. Revenue for the period 2023 to 2037 is held steady at the 2022 total to provide a conservative, responsible financial framework.

#### Contract Fees

The District also receives revenue through contract fees from the Host Community Agreement. The District had a contract with Republic and received \$0.60 per ton on waste disposed at contracted facilities. The previous five years averaged roughly \$466,000 annually in revenue. In 2022, the contract fee was reduced to \$0.40 per ton disposed resulting in \$252,855. Contract revenue for the period 2023 to 2037 is held steady at the 2022 total to further provide a conservative, responsible financial framework.

#### Miscellaneous Revenue

Miscellaneous revenue includes mainly waiver fees and donations. Waiver fees are collected on each ton of solid waste that is delivered to an undesignated disposal facility. Any person, legislative authority of a municipal corporation, or township may apply for a waiver from the designation requirements established in this Plan Update. Waiver agreements between the Board and the person who applied for the waiver will contain the terms and conditions upon which the waiver was granted and the payment by the grantee of the waiver fee, if any, assessed on each ton of solid waste covered by the waiver. 2023 to 2037 Misc. Revenue is held constant through the planning period based on \$85,494 actuals for 2022.

**Figure 6-1** below details the total projected revenue and expenses throughout the first five years of the planning period.

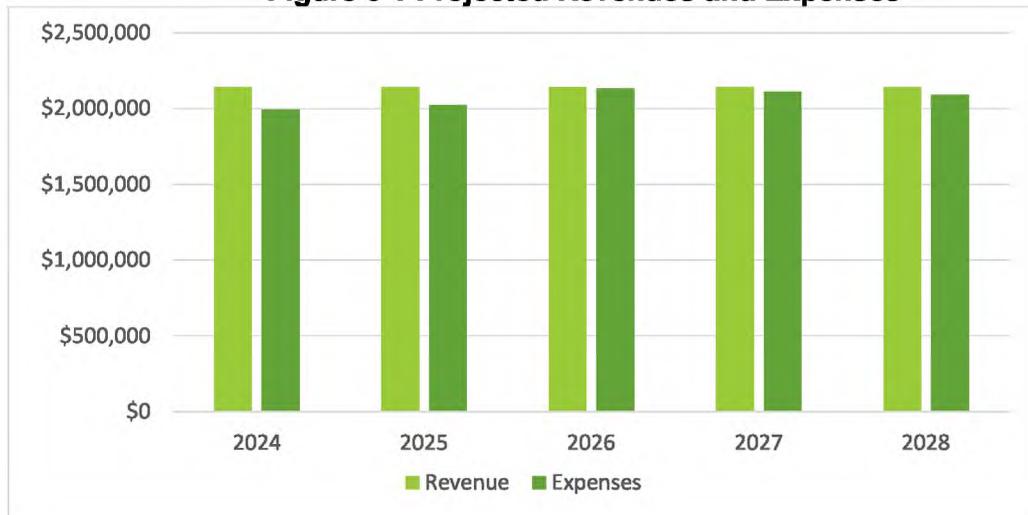
**Figure 6-1 Projected Revenues and Expenses**

Figure 6-1 illustrates the results of the District Policy Committee thorough financial investigation of the need for a \$4.00/ton generation fee. Starting in 2024 and continuing for the planning period, the revised budget has been matched to the conservative projected income with no anticipated deficit spending.

## B. Revenue

### Overview of How Solid Waste Management Districts Earn Revenue

The District Policy Committee evaluated all potential funding sources in 2022 when conducting a financial investigation for the 2023 to 2037 planning period.

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 is 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 of 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 no greater than 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.

The following summarizes the actual funding sources for the District:

#### **1. *Disposal Fees***

There is one landfill in Lorain County, the Lorain County Landfill. The SWMD's fee structure is: \$2.00 per ton of solid waste in-district; \$2.00 per ton of solid waste out-of-district; and \$2.00 per ton of solid waste out-of-state. This is the District's primary source of revenue.

## 2. ***Generation Fees***

The Policy Committee considered the need for a Generation Fee. Instead, the 2023 budget was revised based on the selection criteria to match the conservative projected 2023 to 2037 income. The need for 2023 budget reductions was evidenced by the \$206K negative spending that occurred in 2022. Budgets now align with revenue providing a responsible, stable, fund balance.

This Solid Waste Plan Update provides a responsible, conservative, flexible financial projection with no increase in fees.

## 3. ***Contract Fees***

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. Republic Waste Services and the District have a Host Community Agreement. At the beginning of the planning period the agreement required Republic to pay Lorain County \$0.60 per ton for each ton of waste disposed at the Lorain County Landfill that is generated outside of the District. This fee amount changed in 2021 to \$0.40 per ton of waste disposed in the Lorain County Landfill. The agreement requires Republic to bring all the waste controlled by Republic in Cuyahoga County to the Lorain County Landfill in New Russia Township.

## 4. ***Other Sources of Revenue***

Other sources of revenue include:

- **Grants** – The District received four grants from 2015 to 2019. A majority of the funding came from the Ohio EPA to help the District develop and promote its recycling and awareness programs. There were various other small grants that were also awarded throughout this time.

Grants obtained by the District are competitive and therefore not a guaranteed source of revenue. Potential revenue from future grants has been excluded from the future projections.

- **Recycling Revenue** – The District receives revenue from the sale of materials delivered to the Collection Center. The District peaked

in 2015 at roughly \$12,000 from recycling revenue. The District did not receive any Recycling Revenue in 2022 and does not project receiving any through the planning period.

- **Fee Penalty** – In 2015 there was a one-time fee penalty assess to a hauler. The District does not project receiving any more fee penalties through the planning period.
- **Miscellaneous Revenue** – Miscellaneous revenue resulting from waiver fees and donations. The other revenue category includes mainly waiver fees and donations. Waiver fees are collected on each ton of solid waste that is delivered to an undesignated disposal facility. Any person, legislative authority of a municipal corporation, or township may apply for a waiver from the designation requirements established in this Plan Update. Waiver agreements between the Board and the person who applied for the waiver will contain the terms and conditions upon which the waiver was granted and the payment by the grantee of the waiver fee, if any, assessed on each ton of solid waste covered by the waiver.

The revenue from this source had a low of \$60,000 in 2017 and a high of \$93,000 in the reference year. The District projected this revenue source for the planning period based on the 2022 actuals of \$85,494.

- **Reimbursements** – Typically, the reimbursements are from communities that do not use their entire Community Incentive Grant. This amount is unpredictable.
- **Other Revenue** – There was a one-time manual transfer out of revenue in 2019. The District does not project any manual transfers throughout the planning period.

## 5. **Summary of Revenue**

The following table presents the District's total revenue by source for the 2019 reference year and the first six years of the planning period.

**Table 6-1 Summary of Revenue**

Year	Disposal Fees	Contract Fees	Generation Fees	Other Revenue	Total Revenue
2019	\$2,322,095	\$499,471	\$0	\$7,163	\$2,828,729
2020	\$2,025,323	\$444,690	\$0	\$143,481	\$2,613,494
2021	\$1,902,758	\$334,186	\$0	\$121,974	\$2,358,919
2022	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2023	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2024	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2025	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2026	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2027	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2028	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2029	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206

Source(s) of Information:

Year 2019 sourced from Quarterly Fee Reports

Planning period years sourced from Appendix O

Sample Calculations:

Total Revenue = Generation Fees + Other Revenue

## C. Expenses

### Overview of How Solid Waste Management Districts Spend Money

Ohio's 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.

- 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 trimmings, HHW and scrap tires);
- Providing outreach and education;
- Providing services (such as curbside recycling services); and
- Paying for community clean-up programs.

**Table 6-2** presents a summary of expenses for the 2019 reference year and for the first 6 years of the planning period (2024 to 2028) broken into specific expense categories. Expense categories were evaluated, and cuts made to balance the budget through the planning period. One of the programs discontinued as historically funded is the Community Incentive Grants. To offset the projected inflation increases and declined revenue, this program is changing. Communities will receive direct District support to help complete grant applications. Additionally, the District plans to fund the required grant match up to a maximum dollar value for the community projects.

**Table 6-2 Summary of Expenses**

Expense Category	Reference	Year				
		Planning Period				
	2019	2024	2025	2026	2027	2028
Plan Monitoring/Preparation	\$153,698	\$97,760	\$103,981	\$147,340	\$127,340	\$107,340
Plan Implementation	\$2,065,630	\$1,896,662	\$1,919,354	\$1,985,609	\$1,985,609	\$1,985,609
County Assistance	\$45,833	0	0	0	0	0
Health Department	\$170,000	0	0	0	0	0
Law Enforcement	\$140,360	0	0	0	0	0
Other	\$0	0	0	0	0	0
<b>Total Expenses</b>	<b>\$2,575,521</b>	<b>\$1,994,422</b>	<b>\$2,023,335</b>	<b>\$2,132,949</b>	<b>\$2,112,949</b>	<b>\$2,092,949</b>

Source(s) of Information:

Year 2019 sourced from Quarterly Fee Reports

Planning period years sourced from Appendix O

Sample Calculations:

Total Expenses = sum of expenses category

#### D. Budget Summary

**Table 6-3** presents a summary of the budget for the 2019 reference year and the first five years of the planning period (2024 to 2028). The summary includes revenue, expenditures, net balance, and year-end fund balance.

**Table 6-3 Budget Summary**

Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
2019	\$2,828,729	\$2,575,521	\$253,208	\$3,543,011
2020	\$2,613,494	\$1,982,101	\$631,393	\$4,174,404
2021	\$2,358,919	\$2,341,218	\$17,701	\$4,192,105
2022	\$2,142,206	\$2,348,544	-\$206,338	\$3,985,767
2023	\$2,142,206	\$1,790,265	\$351,941	\$4,337,708
2024	\$2,142,206	\$1,994,422	\$147,784	\$4,485,493
2025	\$2,142,206	\$2,023,335	\$118,871	\$4,604,364
2026	\$2,142,206	\$2,132,949	\$9,257	\$4,613,621
2027	\$2,142,206	\$2,112,949	\$29,257	\$4,642,878
2028	\$2,142,206	\$2,092,949	\$49,257	\$4,692,135

Source(s) of Information:

Year 2019 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

**Conclusion**

As inflation continues to be high, expenses are expected to increase throughout the planning period. The District applied inflationary percentage of from 0% to 8% based on the actual 2022 8% inflationary rate and the continuing uncertainty of the international economy and energy markets. The District expects to revisit this projection in the next plan renewal but will continue to exercise an abundance of caution in this plan forecast.

The 2023 budget as shown in Table 6-2 and detailed in Table O-7 was decreased from \$2.348M in 2022 to \$1.79M in 2023. The \$560K 2023 budget savings were a result of eliminating funding for the Health Dept., Local Law Enforcement, and Community Grants. The reduced 2023 actual budget was used as the foundation for the updated 2024 to 2037 budget.

The need for the 2023 budget reductions was evidenced by the \$206K negative spending that occurred in 2022. Budgets now align with revenue providing a responsible, stable, fund balance. This Solid Waste Plan Update provides a responsible, conservative, flexible financial projection with no increase in fees.



## APPENDIX A

# **REFERENCE YEAR, PLANNING PERIOD, GOAL STATEMENT, MATERIAL CHANGE IN CIRCUMSTANCES, EXPLANATIONS OF DIFFERENCES IN DATA**



## **Appendix A. Reference Year, Planning Period, Goal Statement, Material Change in Circumstances, Explanations of Differences in Data**

### **A. Reference Year**

The reference year for this solid waste management plan is **2019**. The District initially would have used 2020 as the reference year. However, due to COVID-19, the District concluded that 2020 waste generation was unusual and unsuitable for projecting future years' waste generation.

### **B. Planning Period (First and Last Years)**

The planning period for this solid waste management plan is: **2024-2033**.

### **C. Goal Statement**

The SWMD will achieve the following Goal(s): **Goal 1**

### **D. Explanations of Differences Between Data Previously Reported and Data Used in the Solid Waste Management Plan**

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

The 2019 ADR reported a total of 79,307.4 tons of residential/commercial material recycled. However, the plan going forward will use a total of 74,908 tons of residential/commercial material recycled, a difference of 4,399.3 tons due to updated survey answers and corrected totals. The 4,399.3 tons are made up of an added 49 tons to food waste, 308.5 tons to glass, and 5.3 tons to plastics as well as a decrease of 4,499.3 tons to yard waste and 263 tons to tires.

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

The 2019, 2020, 2021 and 2022 Quarterly Fee Reports differ from the financial data in Appendix O and Chapter 6. The District reconciled the fee report differences in the following tables.

2020 Quarterly Fee Reports

RE-TRAC FEE REPORTS					
Source	2020				
	Q1	Q2	Q3	Q4	TOTAL
<b>Revenue</b>					
Disposal Fees - Tier 1	\$122,939.94	\$41,684.52	\$233,778.38	\$144,620.16	\$543,023.00
Disposal Fees - Tier 2	\$335,752.54	\$112,076.22	\$645,996.84	\$388,474.58	\$1,482,300.18
Disposal Fees - Tier 3					\$0.00
Contracts	\$100,725.77	\$33,622.87	\$193,799.05	\$116,542.37	\$444,690.06
Recycling Revenue			\$300.00		\$300.00
Reimbursements					\$0.00
Grants					\$0.00
Fee Penalty					
Other	\$22,238.72	\$20,951.29	\$65,403.02	\$27,945.48	\$136,538.51
<b>Total</b>	<b>\$581,656.97</b>	<b>\$208,334.90</b>	<b>\$1,139,277.29</b>	<b>\$677,582.59</b>	<b>\$2,606,851.75</b>
<b>Expenses</b>					
Plan Prep			\$7,430.00		\$7,430.00
Plan Monitoring	\$13,091.13	\$8,274.17	\$12,650.00	\$7,430.00	\$41,445.30
Plan P&M - Other	\$13,091.13	\$8,274.17	\$12,650.00		\$34,015.30
Personnel	\$82,132.35	\$50,616.88	\$96,801.29	\$127,814.47	\$357,364.99
Office Overhead	\$22,472.51	\$22,034.01	\$105,760.32	\$64,303.98	\$214,570.82
Admin - Other	\$1,060.00	\$8,242.69	\$3,471.50	\$36,867.90	\$49,642.09
MRF/ Recycling Center					\$0.00
Business					\$0.00
Special Waste	\$117,062.28	\$55,091.00	\$23,573.13	\$114,082.60	\$309,809.01
Curbside/Drop-off	\$225,360.45		\$4,594.31	\$88,409.48	\$318,364.24
Other					\$0.00
Scrap Tires	\$11,936.30	\$8,210.15	\$6,984.10	\$15,912.25	\$43,042.80
HHW	\$40,760.01		\$39,010.87	\$106,479.05	\$186,249.93
Electronics	\$2,553.50	\$3,566.05	\$2,385.75	\$3,964.15	\$12,469.45
Other Collection Drive	\$4,700.55		\$15,110.68		\$19,811.23
Yard Waste					\$0.00

RECONCILED FEE REPORTS					
Source	2020				
	Q1	Q2	Q3	Q4	TOTAL
<b>Revenue</b>					
Disposal Fees - Tier 1	\$122,939.94	\$41,684.52	\$233,778.38	\$144,620.16	\$543,023.00
Disposal Fees - Tier 2	\$335,752.54	\$112,076.22	\$645,996.84	\$388,474.58	\$1,482,300.18
Disposal Fees - Tier 3					
Contracts	\$100,725.77	\$33,622.87	\$193,799.05	\$116,542.37	\$444,690.06
Recycling Revenue				\$300.00	\$300.00
Reimbursements					
Grants					
Fee Penalty					
Other	\$21,744.47	\$20,951.29	\$65,403.02	\$35,081.78	\$143,180.56
<b>Total</b>	<b>\$581,162.72</b>	<b>\$208,334.90</b>	<b>\$1,139,277.29</b>	<b>\$684,718.89</b>	<b>\$2,613,493.80</b>
<b>Expenses</b>					
Plan Prep					\$7,430.00
Plan Monitoring	\$13,091.13	\$8,274.17	\$12,650.00	\$7,430.00	\$41,445.30
Plan P&M - Other	\$13,091.13	\$8,274.17	\$12,650.00		\$34,015.30
Personnel	\$82,132.35	\$50,616.88	\$96,801.29	\$127,814.47	\$357,364.99
Office Overhead	\$22,472.51	\$22,034.01	\$105,760.32	\$64,303.98	\$214,570.82
Admin - Other	\$1,060.00	\$8,242.69	\$3,471.50	\$36,867.90	\$49,642.09
MRF/ Recycling Center					\$0.00
Business					\$0.00
Special Waste	\$117,062.28	\$55,091.00	\$23,573.13	\$114,082.60	\$309,809.01
Curbside/Drop-off	\$225,360.45		\$0.00	\$4,595.31	\$88,409.48
Other					\$0.00
Scrap Tires	\$11,936.30	\$8,210.15	\$6,984.10	\$15,912.25	\$43,042.80
HHW	\$40,760.01		\$0.00	\$39,010.87	\$106,479.05
Electronics	\$2,553.50	\$3,566.05	\$2,385.75	\$3,964.15	\$12,469.45
Other Collection Drive	\$4,700.55		\$0.00	\$15,110.68	\$0.00
Yard Waste					\$0.00

**Lorain County Solid Waste Management District**

**Ratified Plan, November 14, 2023**

MultiFamily					\$0.00
Litter Collection					\$0.00
Education Staff		\$8,700.00	\$8,700.00	\$17,400.00	
Education-Contracted Agencies/Services					
Education - Advertisement	\$1,973.40		\$2,395.00		\$4,368.40
Education - Other					\$0.00
Market Development - General					\$0.00
ODNR pass-through grant					
Waste Audits					\$0.00
Emergency Debris					\$0.00
Other Plan Imp					\$0.00
Health Dept		\$14,166.67	\$56,666.68	\$56,666.68	\$127,500.03
Maintaining Roads	\$16,666.64	\$12,499.98	\$12,499.98	\$12,499.98	\$54,166.58
Maintaining Public Facilities					
Health Dept - Open Dump	\$28,333.00				\$28,333.00
Local Law Enforcement	\$37,219.76	\$32,138.21	\$39,358.92	\$47,399.62	\$156,116.51
<b>Total</b>	<b>\$618,413.01</b>	<b>\$223,113.98</b>	<b>\$442,612.53</b>	<b>\$697,960.16</b>	<b>\$1,982,099.68</b>

Multifamily					\$0.00
Litter Collection					\$0.00
Education Staff		\$0.00	\$0.00	\$8,700.00	\$8,700.00
Education-Contracted Agencies/Services					\$17,400.00
Education - Advertisement	\$1,973.40		\$0.00	\$2,395.00	\$0.00
Education - Other					\$4,368.40
Market Development - General					\$0.00
ODNR pass-through grant					
Waste Audits					\$0.00
Emergency Debris					\$0.00
Other Plan Imp					\$0.00
Health Dept		\$14,166.67	\$56,666.68	\$56,666.68	\$127,500.03
Maintaining Roads	\$16,666.64	\$12,499.98	\$12,499.98	\$12,499.98	\$54,166.58
Maintaining Public Facilities					
Health Dept - Open Dump	\$28,333.00				\$28,333.00
Local Law Enforcement	\$37,219.76	\$32,138.21	\$39,358.92	\$47,399.62	\$156,116.51
<b>Total</b>	<b>\$618,413.01</b>	<b>\$223,113.98</b>	<b>\$442,613.53</b>	<b>\$697,960.16</b>	<b>\$1,982,100.68</b>

Beginning Balance  
2021 Quarterly Fee Reports

\$3,543,010.41

Ending Balance

\$4,174,403.53

RE-TRAC FEE REPORTS					
	2021				
Source	Q1	Q2	Q3	Q4	TOTAL
<b>Revenue</b>					
Disposal Fees - Tier 1	\$122,625.42	\$141,423.12	\$153,470.00	\$141,202.70	\$558,721.24
Disposal Fees - Tier 2	\$306,231.84	\$347,554.68	\$353,434.72	\$336,815.86	\$1,344,037.10
Disposal Fees - Tier 3					\$0.00
Contracts	\$91,869.54	\$104,266.41	\$70,686.94	\$67,363.17	\$334,186.06
Recycling Revenue					\$0.00
Reimbursements		\$266.14			\$266.14
Grants					\$0.00
Fee Penalty					\$0.00

RECONCILED FEE REPORTS					
	2021				
Source	Q1	Q2	Q3	Q4	TOTAL
<b>Revenue</b>					
Disposal Fees - Tier 1	\$122,625.42	\$141,423.12	\$153,470.00	\$141,202.70	\$558,721.24
Disposal Fees - Tier 2	\$306,231.84	\$347,554.68	\$353,434.72	\$336,815.86	\$1,344,037.10
Disposal Fees - Tier 3					\$0.00
Contracts	\$91,869.54	\$104,266.41	\$70,686.94	\$67,363.17	\$334,186.06
Recycling Revenue					\$0.00
Reimbursements		\$266.14			\$266.14
Grants					\$0.00
Fee Penalty					\$0.00

**Lorain County Solid Waste Management District**

**Ratified Plan, November 14, 2023**

Other	\$31,568.35	\$23,156.30	\$28,771.85	\$38,211.70	\$121,708.20
<b>Total</b>	<b>\$552,295.15</b>	<b>\$616,666.65</b>	<b>\$606,363.51</b>	<b>\$583,593.43</b>	<b>\$2,358,918.74</b>
<b>Expenses</b>					-
Plan Prep					-
Plan Monitoring	\$2,550.00	\$33,909.32	\$9,989.94	\$13,058.40	\$59,507.66
Plan P&M - Other					\$0.00
Personnel	\$94,407.63	\$99,033.54	\$209,638.63	\$151,577.61	\$554,657.41
Office Overhead	\$39,236.73	\$23,020.04	\$55,924.74	\$37,326.99	\$155,508.50
Admin - Other	\$13,460.78	\$49,136.82	\$10,727.09	\$4,690.50	\$78,015.19
MRF/ Recycling Center					\$0.00
Business					\$0.00
Special Waste	\$110,962.06	\$39,694.31	\$100,336.46	\$25,102.94	\$276,095.77
Curbside/Drop-off	\$255,794.66	\$6,764.25	\$1,968.07	\$103,204.92	\$367,731.90
Other					\$0.00
Scrap Tires	\$18,413.05	\$6,000.00	\$9,700.00	\$72,364.00	\$106,477.05
HHW	\$2,755.13	\$2,678.34	\$2,932.20	\$2,969.54	\$11,335.21
Electronics	\$5,256.48	\$11,653.63	\$4,638.30	\$6,711.95	\$28,260.36
Other Collection Drive	\$51,407.41	\$52,642.95	\$69,334.39	\$35,423.31	\$208,808.06
Yard Waste					\$0.00
MultiFamily					\$0.00
Litter Collection					\$0.00
Education Staff				\$17,400.00	\$17,400.00
Education-Contracted Agencies/Services					
Education - Advertisement		\$4,108.00	\$8,213.00	\$3,423.00	\$15,744.00
Education - Other					\$0.00
Market Development - General				\$23,468.00	\$23,468.00
ODNR pass-through grant					
Waste Audits					\$0.00
Emergency Debris					\$0.00
Other Plan Imp					\$0.00
Health Dept	\$14,166.67	\$85,000.02	\$42,500.01	\$42,500.01	\$184,166.71
Maintaining Roads	\$8,333.32	\$16,666.64	\$13,061.19	\$8,333.32	\$46,394.47
Maintaining Public Facilities					
Health Dept - Open Dump					\$0.00
Local Law Enforcement	\$33,096.87	\$35,663.63	\$44,046.47	\$48,764.30	\$161,571.27

Other	\$31,568.35	\$23,156.30	\$28,771.95	\$38,211.70	\$121,708.30
<b>Total</b>	<b>\$552,295.15</b>	<b>\$616,666.65</b>	<b>\$606,363.61</b>	<b>\$583,593.43</b>	<b>\$2,358,918.84</b>
<b>Expenses</b>					-
Plan Prep					\$0.00
Plan Monitoring	\$2,550.00	\$33,909.32	\$9,989.94	\$15,433.86	\$61,883.12
Plan P&M - Other					\$0.00
Personnel	\$94,407.63	\$99,233.54	\$232,622.81	\$151,577.61	\$577,841.59
Office Overhead	\$39,236.73	\$23,020.04	\$51,314.94	\$45,530.81	\$159,102.52
Admin - Other	\$13,460.78	\$49,136.82	\$10,727.09	\$4,690.50	\$78,015.19
MRF/ Recycling Center					\$0.00
Business					\$0.00
Special Waste	\$110,962.06	\$39,694.31	\$99,681.47	\$19,793.55	\$270,131.39
Curbside/Drop-off	\$255,794.66	\$6,764.25	\$1,968.07	\$103,204.92	\$367,731.90
Other					\$0.00
Scrap Tires	\$18,413.05	\$6,000.00	\$9,700.00	\$68,214.00	\$102,327.05
HHW	\$2,755.13	\$2,678.34	\$5,819.80	\$2,969.54	\$14,222.81
Electronics	\$5,256.48	\$11,653.63	\$8,417.65	\$6,711.95	\$32,039.71
Other Collection Drive	\$51,407.41	\$52,642.95	\$74,614.87	\$35,423.31	\$214,088.54
Yard Waste					\$0.00
MultiFamily					\$0.00
Litter Collection					\$0.00
Education Staff					\$17,400.00
Education-Contracted Agencies/Services					\$0.00
Education - Advertisement		\$0.00	\$4,108.00	\$8,213.00	\$15,744.00
Education - Other					\$0.00
Market Development - General					\$23,468.00
ODNR pass-through grant					\$0.00
Waste Audits					\$0.00
Emergency Debris					\$0.00
Other Plan Imp					\$0.00
Health Dept	\$14,166.67	\$85,000.02	\$42,500.01	\$42,500.01	\$184,166.71
Maintaining Roads	\$8,333.32	\$16,666.64	\$13,061.19	\$8,333.32	\$46,394.47
Maintaining Public Facilities					\$0.00
Health Dept - Open Dump					\$0.00
Local Law Enforcement	\$33,096.87	\$35,663.63	\$48,764.30	\$67,449.83	\$40,450.50
					\$176,660.83

**Lorain County Solid Waste Management District**

**Ratified Plan, November 14, 2023**

<b>Total</b>	<b>\$649,840.79</b>	<b>\$465,971.49</b>	<b>\$583,010.49</b>	<b>\$596,318.79</b>	<b>\$2,295,141.56</b>
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<b>Total</b>	<b>\$649,840.79</b>	<b>\$466,171.49</b>	<b>\$636,080.67</b>	<b>\$589,124.88</b>	<b>\$2,341,217.83</b>
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### Beginning Balance

**\$4,174,403.53**

**Ending Balance**

**\$4,192,104.54**

## 2022 Quarterly Fee Reports

RE-TRAC FEE REPORTS					
Source	2022				
	Q1	Q2	Q3	Q4	TOTAL
<b>Revenue</b>					
Disposal Fees - Tier 1	\$120,039.12	\$92,241.46			\$212,280.58
Disposal Fees - Tier 2	\$274,087.62	\$217,955.26			\$492,042.88
Disposal Fees - Tier 3					\$0.00
Contracts	\$54,817.52	\$43,591.05			\$98,408.57
<b>Recycling Revenue</b>					\$0.00
<b>Reimbursements</b>					\$0.00
Grants					\$0.00
<b>Fee Penalty</b>					
Other	\$33,222.14	\$31,606.21			\$64,828.35
<b>Total</b>	<b>\$482,166.40</b>	<b>\$385,393.98</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$867,560.38</b>
<b>Expenses</b>					-
Plan Prep					-
Plan Monitoring	\$18,280.00	\$23,400.00			\$41,680.00
Plan P&M - Other					\$0.00
Personnel	\$134,530.69	\$138,863.82			\$273,394.51
Office Overhead	\$23,152.50	\$12,511.93			\$35,664.43
Admin - Other	\$2,281.00	\$3,153.50			\$5,434.50
MRF/ Recycling Center					\$0.00
Business					\$0.00
Special Waste	\$261,953.45	\$4,131.60			\$266,085.05

RECONCILED FEE REPORTS					
	2022				
Source	Q1	Q2	Q3	Q4	TOTAL
<b>Revenue</b>					
Disposal Fees - Tier 1	\$120,039.12	\$92,241.46			\$212,280.58
Disposal Fees - Tier 2	\$274,087.62	\$217,955.26			\$492,042.88
Disposal Fees - Tier 3					\$0.00
Contracts	\$54,817.52	\$43,591.05			\$98,408.57
<b>Recycling Revenue</b>					\$0.00
Reimbursements					\$0.00
Grants					\$0.00
<b>Fee Penalty</b>					\$0.00
Other	-\$8,237.19	\$26,876.23			\$18,639.04
<b>Total</b>	<b>\$440,707.07</b>	<b>\$380,664.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$821,371.07</b>
<b>Expenses</b>					-
Plan Prep					\$0.00
Plan Monitoring	\$18,280.00	\$23,400.00			\$41,680.00
Plan P&M - Other					\$0.00
Personnel	\$134,530.69	\$138,863.82			\$273,394.51
Office Overhead	\$21,157.42	\$14,373.48			\$35,530.90
Admin - Other	\$2,326.00	\$3,153.50			\$5,479.50
MRF/ Recycling Center					\$0.00
Business					\$0.00
Special Waste	\$90,414.04	\$1,825.54			\$92,239.58

**Lorain County Solid Waste Management District**

**Ratified Plan, November 14, 2023**

Curbside/Drop-off	\$316,160.22	\$8,317.40			\$324,477.62
Other					\$0.00
Scrap Tires	\$13,305.00	\$16,722.00			\$30,027.00
HHW	\$4,843.63	\$4,014.19			\$8,857.82
Electronics	\$0.00	\$11,797.18			\$11,797.18
Other Collection Drive	\$71,190.87	\$24,469.99			\$95,660.86
Yard Waste					\$0.00
MultiFamily					\$0.00
Litter Collection					\$0.00
Education Staff					\$0.00
Education-Contracted Agencies/Services					\$0.00
Education - Advertisement	\$450.00	\$461.00			\$911.00
Education - Other					\$0.00
Market Development - General					\$0.00
ODNR pass-through grant					
Waste Audits					\$0.00
Emergency Debris					\$0.00
Other Plan Imp					\$0.00
Health Dept	\$28,333.34	\$42,500.01			\$70,833.35
Maintaining Roads	\$16,666.64	\$12,499.98			\$29,166.62
Maintaining Public Facilities					
Health Dept - Open Dump					\$0.00
Local Law Enforcement	\$36,120.77	\$37,796.19			\$73,916.96
<b>Total</b>	<b>\$927,268.11</b>	<b>\$340,638.79</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$1,267,906.90</b>

Curbside/Drop-off	\$316,160.22	\$8,317.40			\$324,477.62
Other					\$0.00
Scrap Tires	\$13,305.00	\$16,722.00			\$30,027.00
HHW	\$2,996.00	\$4,014.19			\$7,010.19
Electronics	\$1,847.63	\$11,797.18			\$13,644.81
Other Collection Drive	\$71,190.87	\$24,469.99			\$95,660.86
Yard Waste					\$0.00
MultiFamily					\$0.00
Litter Collection					\$0.00
Education Staff					\$0.00
Education-Contracted Agencies/Services					\$0.00
Education - Advertisement	\$450.00	\$461.00			\$911.00
Education - Other					\$0.00
Market Development - General					\$0.00
ODNR pass-through grant					\$0.00
Waste Audits					\$0.00
Emergency Debris					\$0.00
Other Plan Imp					\$0.00
Health Dept	\$28,333.34	\$42,500.01			\$70,833.35
Maintaining Roads	\$12,499.98	\$12,499.98			\$24,999.96
Maintaining Public Facilities					\$0.00
Health Dept - Open Dump					\$0.00
Local Law Enforcement	\$35,895.77	\$37,796.19			\$73,691.96
<b>Total</b>	<b>\$749,386.96</b>	<b>\$340,194.28</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$1,089,581.24</b>

Beginning Balance

\$4,192,104.54

Ending Balance

\$3,923,894.37

## **E. Material Change in Circumstances/Contingencies**

A material change in circumstances or deviation from the approved *Plan Update* has been defined by the District to include a reduction in available capacity, a reduction in funding, or a delay in program implementation that would significantly affect the chances of achieving the District goals. The District staff will monitor circumstances affecting plan implementation as specified herein and report such circumstances to the Board where warranted.

The following procedures shall be used by the District to monitor circumstances affecting plan implementation and for the Board to make a determination of whether a material change in circumstances has occurred—requiring an amendment to the plan.

### **1. Assurance of Waste Disposal Capacity**

#### **a. Reduction in Available Capacity**

A reduction in available capacity shall include closure and/or a 20% or greater reduction in the ability to process or dispose of District waste at any solid waste management facility designated or identified in the Plan that receives 20% or more of the District's waste stream. This does not include normal downtime to fix or install equipment. This would include solid waste management facilities that do not receive approval for expansion due to site environmental problems, facilities that experience a reduction in capacity or facilities for which a permit or license was revoked.

District staff will regularly monitor solid waste disposal capacity and report any significant changes in available capacity to the District Director. If the District Director determines that a reduction in available capacity meeting the above criteria has occurred, the District Director will determine if the other identified in-district, out-of-district, or out-of-state solid waste management facilities will be able to provide sufficient disposal capacity and access to disposal capacity for District-generated waste. If, in the aggregate, the landfills or other solid waste management facilities identified in Appendix D or Appendix M are unable to provide the District with sufficient disposal capacity or access to disposal capacity and no other disposal alternatives are available through the existing Plan's authority and options, the District Director shall report such findings to the Board of County Commissioners (Board) for the Board's determination of whether a Material Change in Circumstances has occurred.

A material change in circumstances has not occurred if the District is able to secure arrangements to manage the waste by any other properly licensed and permitted solid waste management facility.

**b. Increase in Waste Generation**

Future capacity needs of the District as outlined in the Plan are based on waste generation estimates. A twenty-five percent increase in solid waste generation within the District may affect capacity requirements and result in diminished capacity for handling or disposing of solid waste. The District will evaluate the impact of the increases prior to determining a material change in circumstances that has occurred. Currently, the District has a contract with Republic Waste Services (Company). During the term of this Host Community Agreement, the Company shall provide one thousand, two-hundred fifty (1,250) tons per day or approximately 357,000 tons per year in reserved disposal capacity at the Landfill for solid waste generated within the District. The Reserved Capacity shall be available each operating day for the disposal of solid wastes that are generated within the District on a "first come - first served" basis. Nothing herein shall permit or require the "banking" of any unused Reserved Capacity by the District as provided herein. The Reserved Capacity assured under this Host Community Agreement shall be provided and made available solely for solid wastes that are generated in the District and delivered to the Landfill on a per operating day basis. "Operating day" means the normal hours of waste receipt at the Landfill during each calendar day that the Landfill is open for business. The District shall incur no liability to the Company by reason of there being delivered to the Landfill solid wastes generated within the District in an amount less than the Reserved Capacity.

A material change in circumstances may have occurred if sustained waste generation increases have a significant adverse impact on capacity for handling or disposing of solid waste generated within the District at facilities identified in the Plan. A material change in circumstances has not occurred, however, if the District can secure arrangements to manage the increased waste volume at any other properly licensed and permitted solid waste management facility.

District staff, by the third quarter of each year during the term of the Plan, will review waste generation figures from the previous calendar year and report to the District Director. If the District Director determines that a significant sustained increase in waste generation has occurred, and there are no other facilities with adequate capacity available to manage the waste, a report of such findings shall be presented to the Board.

The Board will review the report and the availability of capacity for the District's solid waste and determine whether sufficient capacity is available to the District or whether a material change in circumstances has occurred.

A material change in circumstances has not occurred if the District is able to secure arrangements to manage the waste by any other properly licensed and permitted solid waste management facility within Ohio or outside the state.

## 2. Compliance with Applicable Waste Reduction or Access Goals

### c. Delay in Program Implementation or Discontinuance of Waste Reduction or Recycling Activities

The District plans to demonstrate compliance with Goal #1 of the *2020 State Plan*. To determine if Goal #1 is being achieved, the District staff will annually review the information presented in Appendices B and D by the second quarter of each year of the planning period to determine if the facilities and programs are still in operation, the type of operation (i.e., non-subscription or subscription curbside recycling programs and/or full-service or part-time drop-offs) and the type of materials accepted at each facility or program. The District will estimate the population in Lorain County using information from the Ohio Department of Development or the County Planning Agency for the above referenced evaluation. The District staff will calculate the percentage of population that has access to each facility and program using the methodology prescribed in the Ohio EPA's Solid Waste Management Plan Format version 4.1.

The District staff shall report to the District Director the results of the facility and recycling program evaluation. If the District Director believes a significant delay of more than one year in facility or program implementation or the discontinuance of essential facilities or programs result in the inability of the District to achieve Goal #1, a Board meeting to discuss this issue will be held within 30 days. The Board will review the circumstances and determine whether alternative programs can be implemented to achieve either Goal #1 or in the alternative, Goal #2, or whether a material change in circumstances has occurred. If Goal #2 is selected, the District will submit a revised Plan Update for ratification and approval. A material change in circumstances has not occurred, however, if the District is able to implement new programs or modify existing programs to meet the current goal or utilize the alternate goal available to the District to meet State of Ohio requirements.

Though the District is committing to achieving Goal #1 in this Plan Update, the District will strive to achieve a modified version of Goal #2, as well. The District believes that increasing the residential/commercial sector recycling goal from 25% to 35% is more in line with goals set by the U.S. EPA. The higher 35% goal is more inspiring and gives the District an ambitious goal to strive for over the planning period.

## 3. Financing of Plan Implementation

### d. Decrease in Waste Generation

Implementation of the District's Plan requires that the District receive adequate annual funding to implement programs. The District staff will monitor District revenues and report adverse changes in revenues to the District Director.

The District Director will prepare a financial report of revenues and expenses for presentation at Policy Committee meetings. A material change in circumstances in the *Plan Update* will occur if there is a reduction in revenues greater than 25 percent on an annual basis that negatively impacts the ability to fund plan activities. The District Director will notify the Board of Directors of any such revenue reductions that negatively impacts the ability to fund plan activities within 30 days of it being identified. The Board of Directors will direct the Policy Committee to convene within 90 days to revise the budget or develop additional funding mechanisms.

If financial conditions exist that prevent the District from implementing programs, the District staff will prepare a report that prioritizes the programs the District will provide based upon the following criteria:

- The program's impact on reducing the waste stream
- Long-term impacts of the program
- The program's association with the enforcement of solid waste management laws and regulations
- The program's impact on Lorain County's health and environment; and
- The availability of non-District entities to provide the program.

This report will be provided to the District Director for review and recommendations regarding modification or elimination of District programs. Based upon this report, if the District Director determines that elimination or modification of District programs will have a substantial impact on the implementation of the District's Plan, a Board meeting will be held to discuss this issue within 30 days. The Board will review the circumstances and determine if a material change in circumstances has occurred. No material change in circumstances has occurred where the Board is able to maintain critical programs at current or decreased funding levels through re-allocation of District funds, elimination of non-essential programs or through an increase in District fees or contracts as permitted by the Ohio Revised Code and the Plan. Critical programs are those deemed necessary by the Board to enable the District to achieve and maintain the applicable goals for waste reduction or access to recycling opportunities.

#### **4. Procedures where Material Change in Circumstances has Occurred**

If, at any time, the Board determines that a material change in circumstances has occurred and a revision to the Plan is necessary, the Board will request the Policy Committee to prepare a Draft Amended Plan to the Board within 90 days of the Board request. The Board will review the Draft Amended Plan and approve

or return the Draft Amended Plan for further revision within 60 days of receipt. The Policy Committee shall incorporate necessary revisions and submit the final Draft Amended Plan within 60 days to the Board.

The Board will notify the Ohio EPA in writing within fifteen working days after the Board has determined that a material change in circumstances has occurred. Nothing contained in this section shall be construed as limiting the authority of the Policy Committee or the Board to otherwise amend this Plan.



## **APPENDIX B**

# **RECYCLING INFRASTRUCTURE INVENTORY**



## Appendix B. Recycling Infrastructure Inventory

This appendix provides a review of the recycling infrastructure available in the reference year (2019), which includes curbside recycling programs, recycling drop-off sites, collection service providers, and compost facilities/activities.

### A. Inventory of Residential Recycling Infrastructure Available in the Reference Year

**Table B-1** presents curbside recycling data for the 34 communities located in the Lorain County Solid Waste Management District. All programs are serviced by automated collection systems. Out of 34 programs, 26 are non-subscription of which 13 are volume-based, using either carts or limited use of cans. In 2019, 17,985 tons of recyclables were collected from the communities' curbside recycling programs. Tonnage reported in **Table B-1** reflects the most accurate information available, which was reported by cities, villages, townships, and haulers.

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

County	Community	Type of Curbside		Service Provider	How Service is Provided	Collection Frequency	Materials Collected <sup>(1)</sup>	Type of Collection	PAYT ✓	Tons
		NS	S							
Lorain	Amherst (City)	X		Republic	Individual customer contracts	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		958.1
Lorain	Amherst Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	388.8
Lorain	Avon (City)	X		Republic	MOU	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		1,383.0
Lorain	Avon Lake (City)	X		Kimble	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	1,584.8
Lorain	Brighton Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	58.8

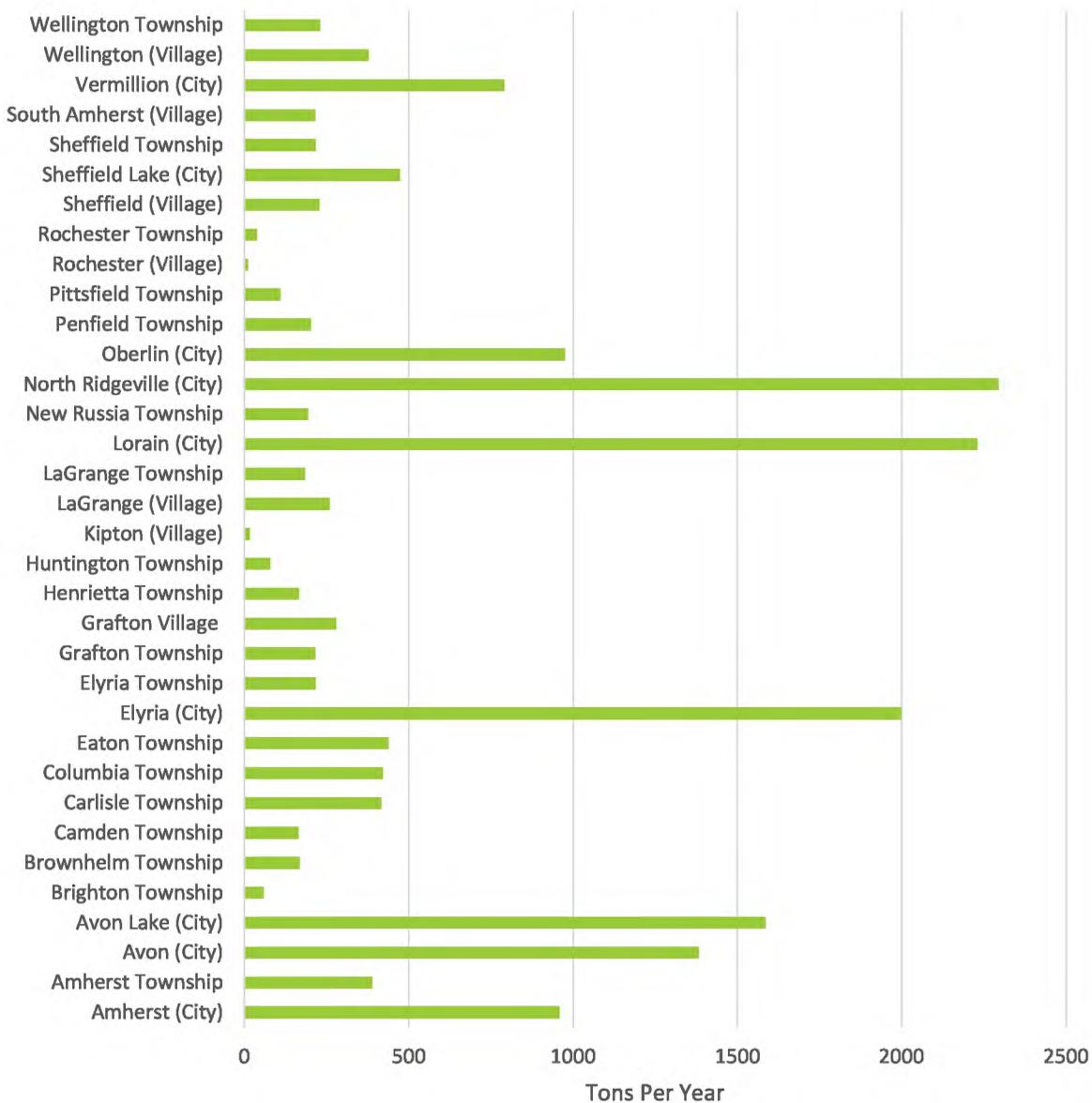
County	Community	Type of Curbside		Service Provider	How Service is Provided	Collection Frequency	Materials Collected <sup>(1)</sup>	Type of Collection	PAYT	Tons
		NS	S						✓	
Lorain	Brownhelm Township		X	Republic	Individual customer contracts	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		168.9
Lorain	Camden Township		X	Republic	Individual customer contracts	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		165.1
Lorain	Carlisle Township	X		Republic	No community contract	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		416.9
Lorain	Columbia Township		X	Republic	Individual customer contracts	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		422.7
Lorain	Eaton Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	437.6
Lorain	Elyria (City)	X		City of Elyria	City collection	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		1,998.3
Lorain	Elyria Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	168.3
Lorain	Grafton Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	214.7
Lorain	Grafton Village	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		278.9
Lorain	Henrietta Township		X	Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		166.3
Lorain	Huntington Township	X		Rumpke	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	78.1

County	Community	Type of Curbside		Service Provider	How Service is Provided	Collection Frequency	Materials Collected <sup>(1)</sup>	Type of Collection	PAYT	Tons
		NS	S						✓	
					through consortium					
Lorain	Kipton (Village)		X	Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		16.8
Lorain	LaGrange (Village)	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		259.0
Lorain	LaGrange Township		X	Republic	Individual customer contracts	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		184.6
Lorain	Lorain (City)	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		2,229.5
Lorain	New Russia Township	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		194.0
Lorain	North Ridgeville (City)	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		2,293.2
Lorain	Oberlin (City)		X	City of Oberlin	City collection	weekly	AC, SC, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		975.1
Lorain	Penfield Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	203.4
Lorain	Pittsfield Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	110.0
Lorain	Rochester (Village)	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	10.1

County	Community	Type of Curbside		Service Provider	How Service is Provided	Collection Frequency	Materials Collected <sup>(1)</sup>	Type of Collection	PAYT	Tons
		NS	S						✓	
Lorain	Rochester Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	37.5
Lorain	Sheffield (Village)	X		Republic	MOU	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		228.2
Lorain	Sheffield Lake (City)	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		473.1
Lorain	Sheffield Township	X		Rumpke	Contract between community and hauler through consortium	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	217.6
Lorain	South Amherst (Village)		X	Republic	Individual customer contracts	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated	ü	215.7
Lorain	Vermillion (City)	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		639.8
Lorain	Wellington (Village)	X		Republic	Contract between community and hauler	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		378.4
Lorain	Wellington Township	X		Republic	No community contract	weekly	AC, SC, GL, PL, ONP, OCC, Mag, OffP, MxP	single-stream automated		229.8
<b>Totals</b>										<b>17,985</b>

**Notes:**<sup>1</sup> NS = Non-Subscription, S = Subscription<sup>2</sup> Materials Collected: AC = aluminum containers, GL = glass containers, PL = plastic containers, ONP = newspaper, OCC = cardboard, SC = steel containers, Mag = magazines, OffP = office paper, MxP = mixed paper, Oth = other<sup>3</sup> PAYT = Pay-As-You-Throw

The following figure shows the tons recycled by community curbside recycling programs in 2019. The cities of North Ridgeville, Lorain, and Elyria recycled the most in the reference year.

**Figure 1. Curbside Recycling Tons in Reference Year (2019)**

The following table summarizes the number of curbside recycling programs and the tons recycled by the programs. Approximately 17,985 tons of materials were recycled by 26 non-subscription and 8 subscription curbside recycling programs in 2019.

**Table B-1b. Total Number of Curbside Programs and Total Quantity**

County	Total # of Non-Subscription Curbside Programs	Total # of Subscription Curbside Programs	Total Tons from all Curbside Programs
Lorain	26	8	17,985
<b>Totals:</b>	<b>26</b>	<b>8</b>	<b>17,985</b>

Four recycling drop-off locations are available to residents of the District. These sites accept a wide range of material types, with only one site (Eaton Township) classified as a full-time drop-off. The tons of recyclables collected at the drop-offs are not available since they are included in the curbside totals, except for the Collection Center which is not affiliated with one specific community.

**Table B-2. Inventory of Drop-off Sites Available in the Reference Year**

County	Name of Drop-off Site	Type				How Service is Provided	Open to Public	Materials Accepted <sup>(1)</sup>	Tons Collected from SWMD				
		Urban		Rural									
		FT	PT	FT	PT								
Lorain	Eaton Township	✓				Part of curbside contract	yes	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Included in curbside				
Lorain	Brighton Township				✓	Part of curbside contract	yes	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Included in curbside				
Lorain	Huntington Township				✓	Part of curbside contract	yes	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Included in curbside				
Lorain	Lorain County Collection Center		✓			Multiple contractors	yes	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP, EW, WG, BR, Other	1,040				
<b>Total</b>													
<b>1,040</b>													

**Notes:**

<sup>1</sup> Mg = Magazines, Mp = Mixed Paper, N = Newspaper, Cc = Corrugated Cardboard, As = Aseptic Containers, GI = Glass Bottles, PI = Plastic Bottles/Jugs, Al = Aluminum Cans, Sc = Steel Cans, Ph = Phone Books, EW = Electronic Waste, FM = Ferrous Metal, NFM = Non-Ferrous Metal, WG = White Goods/Applications, O = Other, B = Books, BR = Batteries (Rechargeable), F = Furniture

FT = Full-Time, PT = Part-Time, DNR = Did Not Report

Approximately 1,040 tons of materials were recycled by 1 full-time drop-off and 3 part-time drop-offs (additional tonnage included in the curbside data presented earlier). The following table summarizes the number of drop-offs and the total tons recycled:

**Table B-2b. Total Number of Drop-offs by Type and Total Quantity Collected**

County	Total # of FT, Urban	Total # of PT, Urban	Total # of FT, Rural	Total # of PT, Rural	Tons of Materials Collected
Lorain	1	1	0	2	1,040
<b>SWMD Totals</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1,040</b>

FT = Full-Time, PT = Part-Time

In 2019, there were no mixed municipal solid waste material recovery facilities in the District, as shown in **Table B-3**. There are currently none of these facilities operating in Ohio.

**Table B-3. Mixed Municipal Solid Waste Material Recovery Facility**

Name of Facility	Location	Communities Served	Types of Materials Recovered <sup>(1)</sup>	Tons of Materials Recovered	Total Waste	Recovery Rate in 2015
None					0	0

The haulers available in the District provide a variety of services that give residential, commercial, and industrial sectors the opportunity to haul trash and recycling. The list of haulers was obtained through District records and survey responses to the ADR.

**B-4. Inventory of Curbside Recycling and Trash Collection Service Providers in the Reference Year**

Name of Provider	County Served	Trash Collection Service				Recycling Collection Service		
		PAYT	RES	COM	IND	RES	COM	IND
<b>Public Sector</b>								
City of Oberlin	Lorain		✓	✓		✓	✓	
City of Elyria	Lorain	✓	✓			✓		
<b>Private Sector</b>								
Rumpke	Lorain	✓	✓	✓	✓	✓	✓	✓
Kimble	Lorain	✓	✓	✓	✓	✓	✓	✓
Republic	Lorain	✓	✓	✓	✓	✓	✓	✓
Cooper Disposal	Lorain			✓	✓			
Legacy Waste & Recycling, Inc.	Lorain			✓	✓			
1-2-3 Disposal, Inc.	Lorain			✓	✓			
Pete and Pete Container Service, Inc.	Lorain			✓	✓			
Miles Waste Disposal, Inc.	Lorain			✓	✓			
Royal Oak	Lorain						✓	
Shred-It	Lorain						✓	

**Notes:**

PAYT = Pay-As-You-Throw, RES = Residential, COM = Commercial, IND = Industrial

**Table B-5** identifies the yard waste management facilities and activities which received yard waste and other organic waste during the reference year. This table includes the facilities and programs that managed food waste, leaves, brush, trees, grass clippings and logs. As shown in the table, most of the yard waste is managed at in-district compost facilities.

**Table B-5. Inventory of Composting/Yard Trimmings Management Activities Available in the Reference Year**

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD (2019)					
					Food Scraps	Yard Trimmings				
<b>Compost Facilities</b>										
<i>In-District</i>										
47-C4R0884	Eaton Township Composting Center	4.00		12043 Avon Belden Road, Grafton		51.34				
47-C4R0083	Oberlin Composting Facility	4.00		44436 St Rte 511 East, Oberlin		629.83				
47-C4R0131	Avon Lake Central Fueling	4.00		750 Avon Belden Road, Avon Lake		4,638.15				
47-C4R0900	Kurtz Bros Inc - Avon Production Facility	4.00		1180 Miller Road, Avon		4,997.52				
47-C4R1110	City of Lorain Composting Facility	4.00		3000 East 28th Street, Lorain		1,491.60				
47-C4R1133	Amherst Township Yard Waste Collection Site	4.00		7595 Oberlin Road, Amherst		1,140.15				
47-C4R008774	Alvarado Landscaping, Inc	4.00		7450 Deer Trail Lane, Lorain		929.78				
47-C4R05361	Z Men Enterprises Inc	4.00		34020 Royalton Road, Columbia Station		316.80				
47-C4R1152	Good Nature Organics, LLC	4.00		875 North Ridge Road, Lorain		438.08				
<i>Out-of-District</i>										
22-C2R0001	Barnes Nursery Inc Yard Waste Recovery Division Class II	2.00		1630 Camp Road, Huron	766.09	2,444.07				
85-C2R1014	Paradise Composting Class II	2.00		4300 Mechanicsburg Road, Wooster	75.13					
85-C4R0402	Zollinger Sand & Gravel Co	4.00		11687 Wadsworth Road, Rittman		27.72				
39-C4R0391	Sand Road Ent Inc	4.00		4352 Sand Road, Norwalk		15.18				
52-C4R0819	Number One Landscape	4.00		3775 Ridge Rd, Medina		41.91				
<b>Total</b>					<b>841.22</b>	<b>17,162.13</b>				
<b>Community Yard Waste Collection Programs</b>										
Amherst						269				
Amherst Township						825				
Avon						803				
Avon Lake						2,031				
Eaton Township						477				
Grafton Village						253				
Lagrange Village						101				

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD (2019)	
					Food Scraps	Yard Trimmings
North Ridgeville						1,616
Oberlin						727
Sheffield Lake						164
Sheffield Township						241
Sheffield Village						177
Vermillion						327
				Total	0	8,012.41
<b>Mulching Operations</b>						
None						
				Total	0	0
<b>Land Application</b>						
None						
				Total	0	0
<b>Anaerobic Digestion</b>						
None						
				Total	0	0
<b>Hauler and Walmart Food Scraps Data</b>						
Hauler/Grocer					743.16	
				Grand Total	1,584.38	25,174.54

**Table B-5b. Total Number of Composting/Yard Trimmings Management Activities by Type and Total Quantity Managed**

Number of Each Type of Facility/Program					Quantities (tons)			Total Quantity of Materials
Compost Facilities	Community Collection Programs	Mulching Operations	Land Applications	Anaerobic Digestion	Food Scraps	Yard Trimmings		
14	13	0	0	0	1,584.4	25,174.5		26,758.9

There were 14 registered compost facilities in Ohio that managed food scraps and yard trimmings generated in the District. A total of 26,759 tons of organics were diverted from landfills in 2019 through a combination of registered compost facilities and community collection programs.

Backyard composting is encouraged and advertised in multiple District educational channels including the District Annual Report which reserves one whole page for composting. The District also has a backyard composting flyer which describes composting kitchen waste and yard waste and worm composting. The Lorain County OSU Extension office also presents many topics about composting.

One material recovery facility (MRF) reported processing and one transfer facility reported handling Lorain County single stream recyclable material. Rumpke owns the Richland County Recycling and Transfer Facility. Recyclables are loaded onto a material mover and hauled to Rumpke's Columbus MRF for further processing. **Table B-7** below shows tonnage accepted at each facility. The Rumpke Columbus MRF is not listed because the tonnage was captured at the Transfer Facility. Most single stream recyclables were processed at Republic's MRF in Lorain County.

**Table B-7. Inventory of Material Handling Facilities Used by the District in the Reference Year**

Facility Name	County	State	Type of Facility	Tons Accepted from SWMD
Lorain County Resource Recovery Complex	Lorain	OH	Single-stream MRF	7,727
Richland County Recycling and Transfer Facility	Richland	OH	Transfer Facility	2,146
<b>Total</b>				<b>9,873</b>

Source: Ohio EPA 2019 MRF report.

Note: MRF = Material Recovery Facility



## **APPENDIX C**

## **POPULATION DATA**



## APPENDIX C. Population Data

As of July 1, 2019, the population of the District totaled 314,419. The community populations, which need to be added or subtracted to the District total to obtain the total district population for the reference year, are shown in **Table C-1**. Estimates for 2019 are based on Ohio Department of Development (ODOD) Office of Strategic Research document, “2019 Population Estimates for Cities, Villages and Townships”, published in May 2020. Table C-1 shows the addition of Vermillion residents located in Erie County since the majority of Vermillion’s population is located in Lorain County, making the whole of the city a part of Lorain County Solid Waste Management District.

**Table C-1. Population Adjustments and Total Reference Year Population**

Community	Lorain
<b>Before Adjustment</b>	309,833
<b>Additions</b>	
Vermillion	4,586
<b>Subtractions</b>	
None	
<b>After Adjustment</b>	<b>314,419</b>
<b>Total District Adjusted Population</b>	<b>314,419</b>

**Source of Information:**

Ohio Development Services Agency, “2019 Population Estimates by County, City, Village, and Township,” May 2020

Population projections for the entire planning period are shown below in **Table C-2**. The reference year 2019 population represents the actual estimates for that year. The District populations calculated for 2020, 2025, 2030, and 2035 have been determined using projection estimates for those years from the Ohio Development Services Agency<sup>1</sup>. Straight-line projections have been used to develop the population estimates for years between the five-year intervals.

**Table C-2. Population Projections**

Year	Total District Population
2019	314,419
2020	315,407
2021	316,395

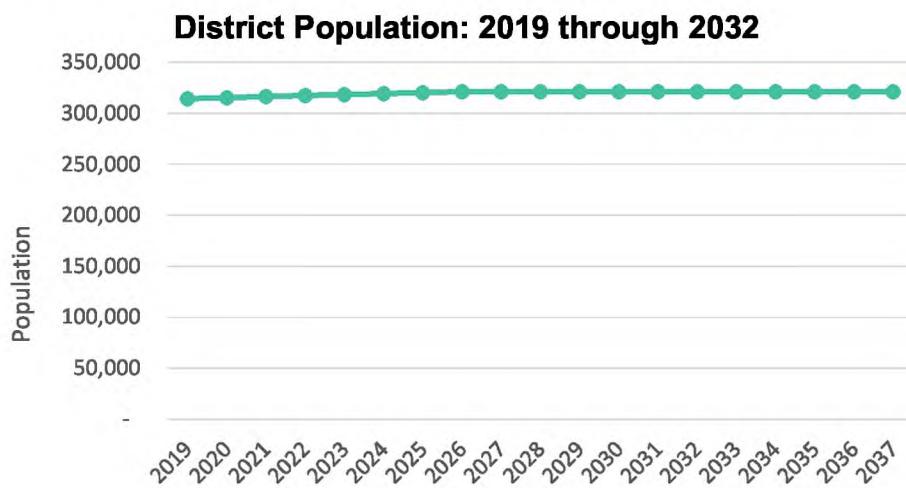
<sup>1</sup> “2010 to 2040 Projected Population for Ohio Counties: Summary 2010 to 2040 Projected,” Ohio Development Services Agency (ODSA) publication, April 2018.

<http://www.development.ohio.gov/files/research/P6090.pdf>

Year	Total District Population
2022	317,383
2023	318,370
2024	319,358
2025	320,346
2026	321,280
2027	321,280
2028	321,280
2029	321,280
2030	321,280
2031	321,280
2032	321,280

**Source(s) of Information:** Ohio Development Services Agency, "2010 to 2040 Projected Population for Ohio Counties - Summary 2010 to 2040 Projected," April 2018. <http://www.development.ohio.gov/files/research/P6090.pdf>.

The figure below shows a slight increase in the population throughout the planning period. The population is expected to increase by nearly 2.5% from 2019 through the fifth year of the planning period (year 2027) and increase by more than 4% by the end of the planning period.





## **APPENDIX D**

## **DISPOSAL DATA**



## Appendix D. Disposal Data

### A. Reference Year Waste Disposed

The majority of the District waste which was direct-hauled for disposal in the reference year was sent to the in-district Lorain County II Landfill (see Table D-1a). The Noble Rd Landfill, Erie County Sanitary Landfill, and American Landfill also accepted substantial amounts of the District's direct-hauled waste, respectively. These four landfills received more than 99% of the District's direct-hauled waste sent for disposal.

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

Facility Name	Location		Waste Received from SWMD (TPY)			
	County	State	Residential/ Commercial	Industrial	Excluded	Total
<b><i>In-district facilities</i></b>						
Lorain County II Landfill LLC	Lorain	OH	231,727	70,594	22,736	325,056.37
<b><i>Out-of-district facilities</i></b>						
Geneva Landfill	Ashtabula	OH		0.63		0.63
Crawford County Landfill	Crawford	OH	50.82		0.95	51.77
Erie County Sanitary Landfill	Erie	OH	3,339.99	2.50	5,377.10	8,719.59
Pine Grove Regional Facility	Fairfield	OH	0.67	0.75	46.74	48.16
Kimble Sanitary Landfill	Tuscarawas	OH		170.39		170.39
Port Clinton Landfill Inc	Ottawa	OH	78.30			78.30
Noble Road Landfill	Richland	OH	9,177.35	1,233.28	17,028.76	27,439.39
American Landfill Inc	Stark	OH		2,415.66	170.68	2,586.34
Republic Services Countywide Recycling & Disposal Facility	Stark	OH			16.78	16.78
Wood County Landfill	Wood	OH	4.45			4.45
<b><i>Out-of-state facilities</i></b>						
Misc. Facilities	Multiple	IN	4.28	293.74		298.02
<b>Total Direct Haul Waste Disposed in Landfills</b>			<b>244,383.02</b>	<b>74,710.64</b>	<b>45,376.53</b>	<b>364,470.19</b>

**Source(s) of Information:** Ohio Environmental Protection Agency, "2019 Annual District Review Forms"

There were no captive landfills located within the District during the reference year. In addition, no captive landfills located outside the SWMD were used to manage waste generated within the District.

**Table D-1b. Reference Year Waste Disposed – Captive Landfills**

Facility Name	Location		Tons Received from SWMD		
	County	State	Industrial	Excluded	Total
<b><i>In-district facilities</i></b>					
None				0	0
<b>Total Waste Disposed in Captive Landfills</b>			0	0	0

Source(s) of Information: Ohio Environmental Protection Agency

Transfer facilities process additional District waste sent for disposal (see **Table D-2**). The Harvard Rd Transfer Station in Cuyahoga County reported the highest tonnage received from the District, followed by the Richland County Transfer Facility and the Kimble Recycling & Transfer in Twinsburg. Overall, more than 32,000 tons of waste for disposal from Lorain County was first sent to transfer stations in 2019.

**Table D-2. Reference Year Waste Transferred**

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/ Commercial	Industrial	Excluded	Total	
<b><i>In-district facilities</i></b>							
None						0	
<b><i>Out-of-district facilities</i></b>							
Broadview Heights Transfer Station	Cuyahoga	OH	2,384.33	6.69	142.52	<b>2,533.54</b>	Noble Road Landfill
Cleveland Transfer/Recycling Station	Cuyahoga	OH	561.43			<b>561.43</b>	American Landfill Inc
Harvard Road Transfer Station	Cuyahoga	OH	9,446.46	4.34	53.74	<b>9,504.54</b>	Noble Road Landfill
Strongsville Transfer Station	Cuyahoga	OH	2,328.80		299.82	<b>2,628.62</b>	Lorain County Landfill
Huron County Solid Waste Facility	Huron	OH	3.52			<b>3.52</b>	Noble Road Landfill
Rumpke Waste Inc Richland County Transfer Facility	Richland	OH	8,706.42			<b>8,706.42</b>	Noble Road Landfill
Kimble Transfer & Recycling - Canton	Stark	OH	8.14			<b>8.14</b>	Kimble Sanitary Landfill
Kimble Transfer & Recycling - Twinsburg	Summit	OH	6,260.29	66.73	1,927.52	<b>8,254.54</b>	Kimble Sanitary Landfill
<b><i>Out-of-state facilities</i></b>							
None							
<b>Total Transferred Waste</b>			<b>29,699.39</b>	<b>77.76</b>	<b>2,423.60</b>	<b>32,200.75</b>	

**Source(s) of Information:** Ohio Environmental Protection Agency, “2019 Annual District Review Forms” and “2019 Facility Data Report.”

There was no waste managed at incinerators during the reference year, therefore **Table D-3**, “Waste Incinerated/Burned for Energy Recovery in Reference Year,” has been omitted.

**Table D-4** shows the total waste disposed in the reference year for the District. Excluded waste has been included in this table since it accounted for more than 10 percent of the total waste disposed.<sup>1</sup>

**Table D-4. Reference Year Total Waste Disposed**

Disposal Method	Residential/Commercial	Industrial	Excluded	Total	% of Total Waste Disposed
Direct Hauled	244,383	74,711	45,377	364,470	92%
Transferred	29,699	78	2,424	32,201	8%
<b>Total</b>	<b>274,082</b>	<b>74,788</b>	<b>47,800</b>	<b>396,671</b>	<b>100%</b>
<b>% of Total</b>	<b>69%</b>	<b>19%</b>	<b>12%</b>	<b>100%</b>	

**Source(s) of Information:** Ohio Environmental Protection Agency, “2019 Annual District Review Forms”

## B. Historical Waste Analysis

The amount of total solid waste disposed from the District since 2010 has fluctuated slightly, ranging from a low of 337,187 tons in 2017 to the highest amount reported in 2018 at 410,590 tons (see **Table D-5**).

**Table D-5. Historical Disposal Data**

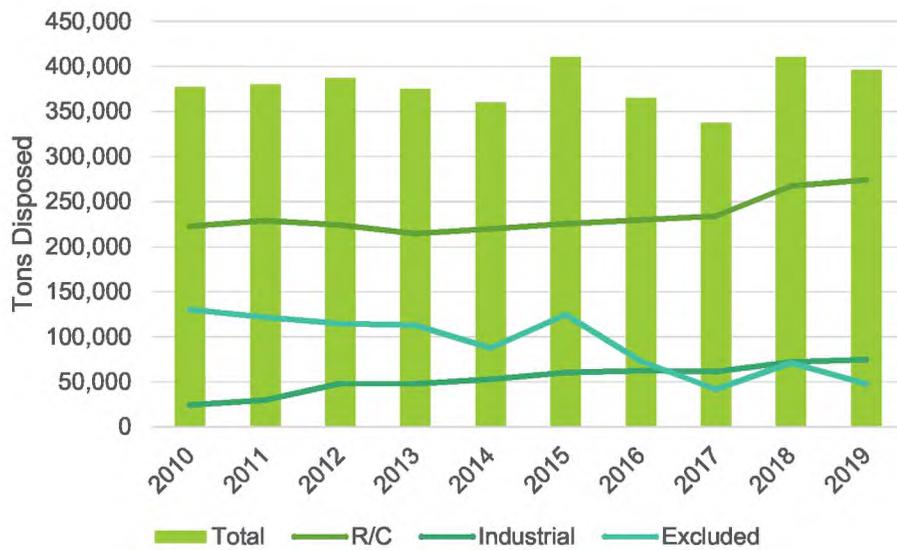
Year	Population	Residential/Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (ppd)	Tons	Tons	Weight	Tons
2010	301,356	4.04	222,454	24,355	130,164	376,973
2011	305,958	4.10	229,014	29,661	121,649	380,324
2012	305,818	4.01	223,927	48,438	114,526	386,891
2013	307,787	3.82	214,534	47,858	112,972	375,364
2014	308,536	3.90	219,636	52,907	87,846	360,389
2015	309,851	3.99	225,458	60,212	124,777	410,447
2016	310,798	4.05	229,743	62,385	73,161	365,289
2017	307,924	4.16	233,980	61,351	41,856	337,187
2018	312,994	4.68	267,422	72,177	70,991	410,590
2019	314,419	4.78	274,082	74,788	47,800	396,671

<sup>1</sup> Ohio EPA’s Format v4.0 instructs solid waste management districts to include this waste if it comprises at least 10 percent of the total waste disposed.

**Source(s) of Information:** Ohio Environmental Protection Agency, Annual District Review Forms

The disposal tonnages for the residential/commercial (R/C) sector, the industrial sector, excluded waste, and total disposal are shown graphically below. The figure shows an increase in both residential/commercial and industrial disposal, while excluded waste continues to decrease.

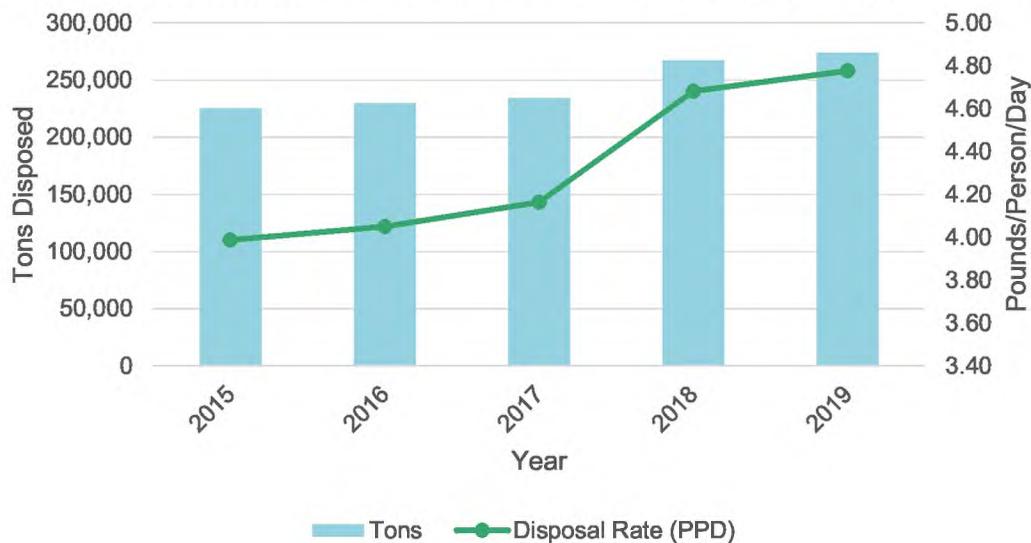
**Figure D-1 District Disposal: 2010 – 2019**



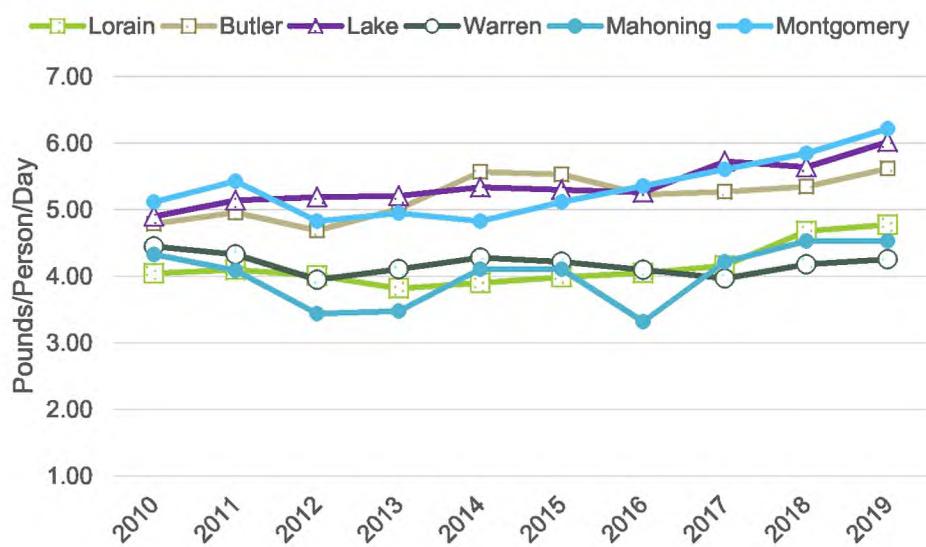
## 1. Residential/Commercial Disposal

Residential/commercial (R/C) disposal has increased from approximately 225,458 tons in 2015 to 274,082 tons in 2019 (see **Figure D-2**).

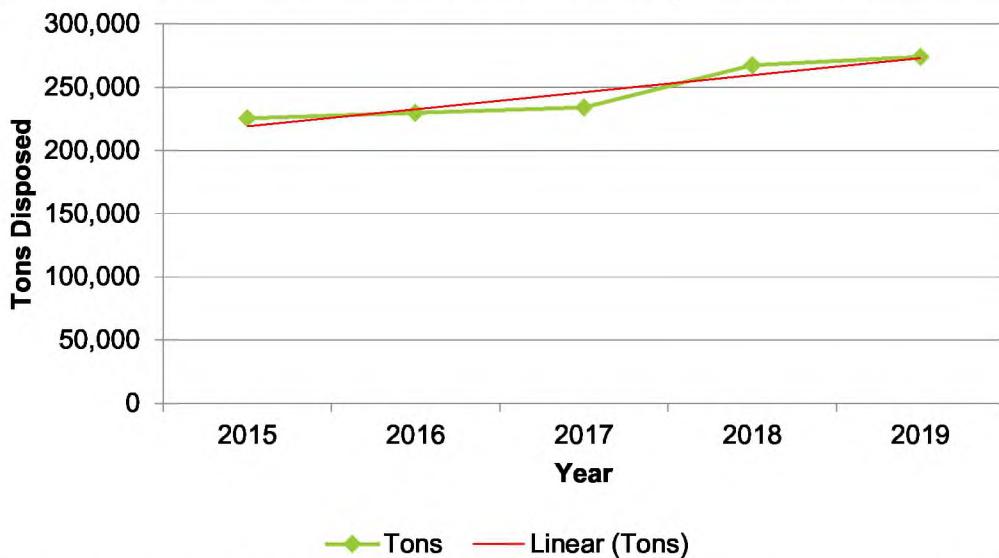
The changes in tons disposed have been closely tracked by changes in the per capita disposal rate. The highest disposal rate during the five-year period occurred in 2019 at 4.78 lbs. per person per day (ppd) and the lowest disposal rate occurred in 2015 at 3.99 ppd. The disposal rate has continued to rise between 2015 and 2019.

**Figure D-2. Residential/Commercial Tons Disposed vs. Disposal Rate: 2015-2019**

The R/C disposal rate for the District was compared with disposal rates for Butler, Lake, Warren, Mahoning, and Montgomery solid waste districts which are other single county districts with similar populations and mixes of urban and rural areas. The figure below shows each of these SWMDs' residential/commercial disposal rate from 2015-2019. Lorain County's residential/commercial disposal rate has continued to slowly increase in the last ten years, but it is still lower than the average compared to similar districts.

**Figure D-3. R/C Disposal Rate for Selected SWMDs: 2010-2019**

The residential/commercial tons disposed for the District is also shown in **Figure D-4** with a trend line included.

**Figure D-4. Residential/Commercial Sector Disposal Trends: 2015-2019**

In 2019, the actual disposal of residential/commercial waste from the District was approximately 14.7% higher than the amount projected in the currently approved plan. The plan projected that the rate of disposal would increase by approximately 1% each year starting in 2016. However, between 2016 (the previous plan's reference year) and 2019, the average annual increase in the disposal rate was 5.8%. The rate of disposal increased the most from 2017 to 2018 with an increase of 12.8% from 4.16 ppd to 4.68 ppd. The District is unsure why the disposal rate increased more than expected, but the disposal rate is still in line with similar districts.

**Table D-6 Actual vs. Current Plan Projections for Residential/Commercial Disposal: 2015-2019**

Residential/Commercial Sector Tons Disposed			
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2017	233,980	232,785	0.5%
2018	267,422	235,869	13.4%
2019	274,082	238,991	14.7%

## 2. Industrial Sector Disposal

As shown in **Figure D-5**, industrial disposal also slightly increased from 2015 through 2019. On average, industrial disposal has increased 5.8% annually from the previous year.

**Figure D-5. Industrial Sector Disposal: 2015 – 2019**

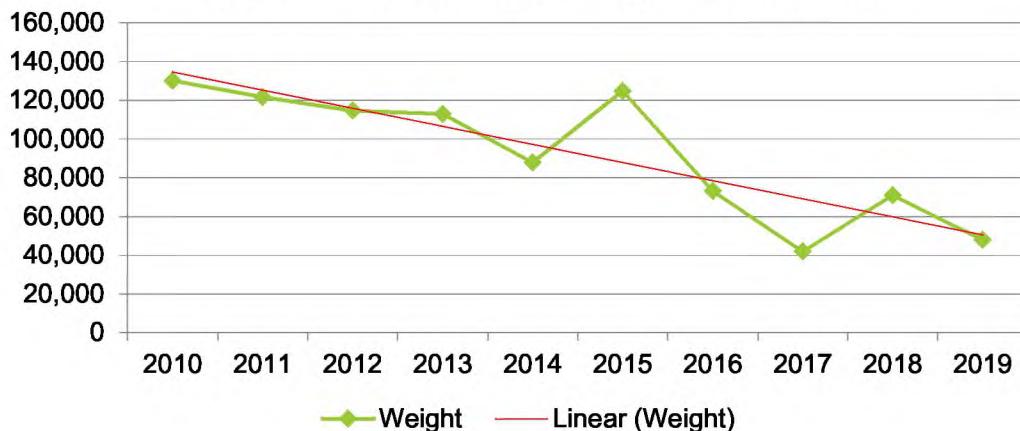
Actual industrial disposal in 2017 was lower than projected but was higher than projected in 2018 and 2019 (see the table below). The previous plan projected that high historical annual increases would not continue but would slow down. The previous plan set conservative projections that were only about 2% lower than the actual annual increase in industrial disposal.

**Table D-7 Actual vs. Current Plan Projections, Industrial Sector Disposal: 2017-2019**

Year	Industrial		
	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2017	61,351	64,301	-4.8%
2018	72,177	66,230	8.2%
2019	74,788	68,217	8.8%

### **3. Excluded Waste Disposal**

The figure below shows the tons of excluded waste disposed from the District from 2010 through 2019.

**Figure D-6. Excluded Waste Disposal: 2010-2019**

The amount of excluded waste disposed from the District continues to decline. The average disposal amount and the average annual rate of change in the excluded waste tonnage have been calculated and shown in the table below.

**Table D-8 Average Annual Tons and Rate of Change in Excluded Waste Disposal**

Metric	2015-2019	2010-2019
Average (tons)	71,717	92,574
Average annual rate of change	-11.8%	-4.6%

## C. Disposal Projections

### 1. Residential/Commercial Sector

The District examined several approaches for projecting disposal for the planning period. Four scenarios which were thought to be the best approaches are included in the table below. The primary assumptions differentiating each scenario are explained, with the disposal projection resulting from applying the assumptions. For comparison, the last two columns in the table show the highest disposal amount reported during the last ten years (2010 through 2019), and the disposal tonnage reported for 2019.

**Table D-9 Tonnages Projected for R/C Sector: 4 Scenarios**

#	Scenarios Description	Tonnage		
		2032 Projection	Highest during last 10 years	2019
1	Assume constant disposal rate of 4.33 PPD based upon 2015-2019 average	258,564		
2	Assume annual change in tonnage of 5.13% based upon average annual percent change 2015-2019	525,335		
3	Assume increase in disposal rate of 1.9% based on average annual rate of change 2010-2019	328,757	274,082	274,082
4	Assume change in disposal rate annually based on annual rate of change in population	465,117		

**Scenario 1** assumes a constant disposal rate of 4.33 ppd, based upon the historical average from 2015 through 2019. This scenario results in a very modest decrease in tons disposed by the end of the planning period (approximately 15,000 tons or 5.7%).

**Scenario 2** applies the average annual percent change in tonnage which occurred during 2015 through 2019 (5.13% increase per year). This scenario results in a larger increase in projected tonnage by 2032, approximately 251,253 tons or 92%.

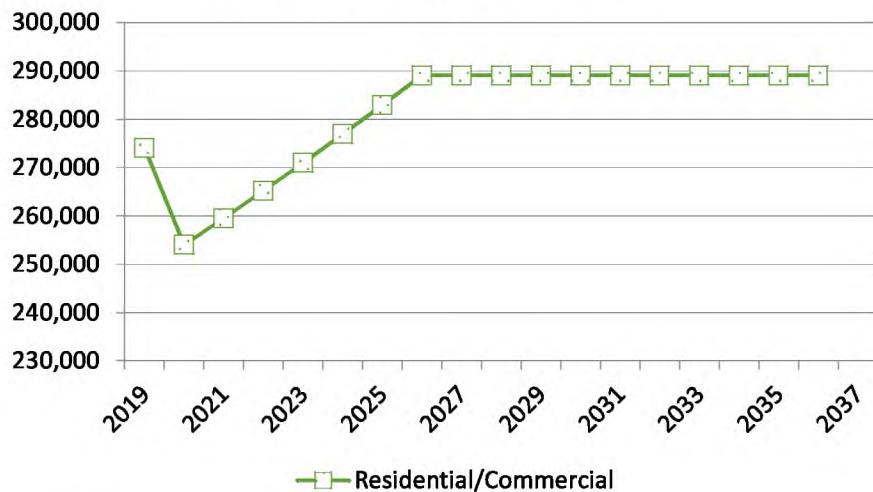
**Scenario 3** applies the average annual percent change in disposal rate from 2010-2019 through the entirety of the planning period (increase of 20%).

**Scenario 4** assumes that the ppd disposal rate changes annually based on the projected annual rate of change of population. The average annual rate of change of population through the planning period is a decrease of 0.3% annually.

Although several conclusions could be drawn from the last ten years of disposal data, the District believes that **Scenario 3** represents the most reasonable approach for disposal projections. This scenario incorporates the increasing annual disposal rate experienced during previous years and the increasing population.

**Figure D-7. Projected Residential/Commercial Disposal 2019-2032**

### Residential/Commercial



## 2. Industrial Sector

The District evaluated three alternative methodologies for projecting industrial waste disposal (see the table below).

**Table D-10 Tonnages Projected for Industrial Sector: 3 Scenarios**

#	Scenarios Description	Tonnage		
		2032 Projection	Highest during last ten years	2019
1	Assume average annual increase in tonnage of 5.8% based upon 2015-2019 average change	155,724		
2	Assume annual decrease in tonnage of 0.65% based on projected change of industrial employment throughout the Cleveland-Elyria area of Ohio 2018-2028	68,715	74,788	74,788

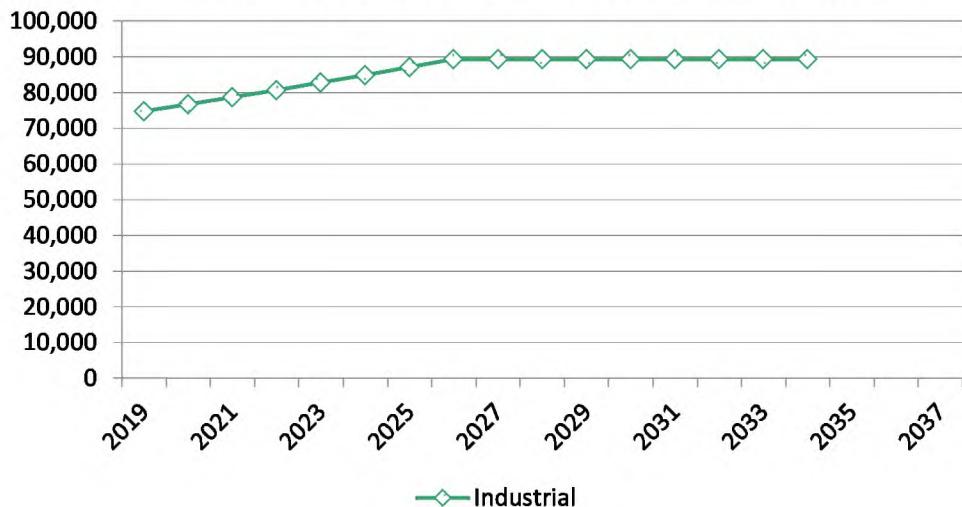
Scenarios		Tonnage		
#	Description	2032 Projection	Highest during last ten years	2019
3	Assume change in disposal tons annually based on averaging the projected annual change in tonnage described in Scenario 1 and Scenario 2 (2.58%).	104,111		

**Scenario 1** applies the average annual percent change in reported disposal from 2015 through 2019 (5.8%), which results in a projected tonnage of 155,724 tons for 2032. This estimate is much higher than the most recent tonnage in 2019 and the highest of the last ten years (74,788).

**Scenario 2** uses the average annual decrease in manufacturing employment projected for the Cleveland-Elyria region of the State of Ohio by the Ohio Department of Jobs and Family Services. Employment is projected to decrease annually by 0.65% through 2028 and continue through the end of the planning period.

**Scenario 3** utilizes both Scenario 1 and Scenario 2 since both affect the projected tons, but both show extreme changes that are unlikely. Scenario 3 averages the projected annual percent change in tons from the other two scenarios to estimate a future annual change in tons of 2.58% per year. Industrial tons have historically risen in the recent past, but it is unlikely that the generation of industrial tons for disposal will be doubled by the end of the planning period. Additionally, manufacturing employment in the region is expected to decrease; however, it is unlikely that industrial tons will decrease as well according to the past ten years.

Although several conclusions could be drawn from the last ten years of disposal data, the District believes that Scenario 3 represents the most reasonable approach for disposal projections. This scenario acknowledges that an increase in industrial tons generation will continue in the region but projects using a conservative factor.

**Figure D-8. Projected Industrial Disposal 2019-2032**

### 3. Summary

**Table D-11** represents the results of using the approaches proposed above by the District for R/C and industrial disposal projections. The tons of R/C projected for disposal continue to increase throughout the planning period due to the anticipated increase in population and the increase in disposal rates. The industrial tonnage projected for disposal continues to increase throughout the planning period due to conservative estimate using historical annual percent changes in tons. Additionally, excluded waste was projected to remain constant at the average of 2015-2019 tons.

**Table D-11 Waste Disposal Projections**

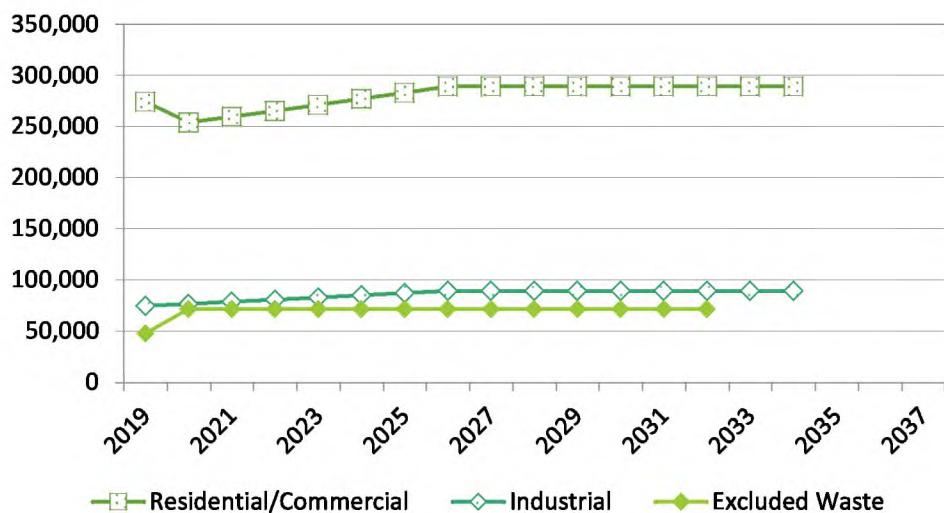
Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Solid Waste	Total Waste	Waste Transferred (as part of Total Disposal)	
	Tons	Tons	Tons	Tons	Tons	Percent
2019	274,082	74,788	47,800	396,671	32,201	
2020	253,998	76,716	71,717	402,431	32,668	
2021	259,545	78,693	71,717	409,955	33,279	
2022	265,210	80,721	71,717	417,648	33,904	
2023	270,996	82,802	71,717	425,514	34,542	
2024	276,906	84,936	71,717	433,558	35,195	
2025	282,941	87,124	71,717	441,783	35,863	
2026	289,058	89,370	71,717	450,145	36,542	
2027	289,058	89,370	71,717	450,145	36,542	
2028	289,058	89,370	71,717	450,145	36,542	
2029	289,058	89,370	71,717	450,145	36,542	
2030	289,058	89,370	71,717	450,145	36,542	
2031	289,058	89,370	71,717	450,145	36,542	

8.1%

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Solid Waste	Total Waste	Waste Transferred (as part of Total Disposal)	
	Tons	Tons	Tons	Tons	Tons	Percent
2032	289,058	89,370	71,717	450,145	36,542	
2033	289,058	89,370	71,717	450,145	36,542	
2034	289,058	89,370	71,717	450,145	36,542	

The figure below shows projected amounts for residential/commercial and industrial waste for the planning period.

**Figure D-9. Projected Disposal: 2019-2032**



**Waste Transferred.** Approximately 8.1% of disposed waste was transferred before being sent to a landfill in 2019. This amount is projected to remain at this ratio throughout the planning period.

## Appendix D. Disposal Data

### A. Reference Year Waste Disposed

The majority of the District waste which was direct-hauled for disposal in the reference year was sent to the in-district Lorain County II Landfill (see Table D-1a). The Noble Rd Landfill, Erie County Sanitary Landfill, and American Landfill also accepted substantial amounts of the District's direct-hauled waste, respectively. These four landfills received more than 99% of the District's direct-hauled waste sent for disposal.

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

Facility Name	Location		Waste Received from SWMD (TPY)			
	County	State	Residential/ Commercial	Industrial	Excluded	Total
<b><i>In-district facilities</i></b>						
Lorain County II Landfill LLC	Lorain	OH	231,727	70,594	22,736	325,056.37
<b><i>Out-of-district facilities</i></b>						
Geneva Landfill	Ashtabula	OH		0.63		0.63
Crawford County Landfill	Crawford	OH	50.82		0.95	51.77
Erie County Sanitary Landfill	Erie	OH	3,339.99	2.50	5,377.10	8,719.59
Pine Grove Regional Facility	Fairfield	OH	0.67	0.75	46.74	48.16
Kimble Sanitary Landfill	Tuscarawas	OH		170.39		170.39
Port Clinton Landfill Inc	Ottawa	OH	78.30			78.30
Noble Road Landfill	Richland	OH	9,177.35	1,233.28	17,028.76	27,439.39
American Landfill Inc	Stark	OH		2,415.66	170.68	2,586.34
Republic Services Countywide Recycling & Disposal Facility	Stark	OH			16.78	16.78
Wood County Landfill	Wood	OH	4.45			4.45
<b><i>Out-of-state facilities</i></b>						
Misc. Facilities	Multiple	IN	4.28	293.74		298.02
<b>Total Direct Haul Waste Disposed in Landfills</b>			<b>244,383.02</b>	<b>74,710.64</b>	<b>45,376.53</b>	<b>364,470.19</b>

Source(s) of Information: Ohio Environmental Protection Agency, "2019 Annual District Review Forms"

There were no captive landfills located within the District during the reference year. In addition, no captive landfills located outside the SWMD were used to manage waste generated within the District.

**Table D-1b. Reference Year Waste Disposed – Captive Landfills**

Facility Name	Location		Tons Received from SWMD		
	County	State	Industrial	Excluded	Total
<b><i>In-district facilities</i></b>					
None				0	0
<b>Total Waste Disposed in Captive Landfills</b>			0	0	0

Source(s) of Information: Ohio Environmental Protection Agency

Transfer facilities process additional District waste sent for disposal (see **Table D-2**). The Harvard Rd Transfer Station in Cuyahoga County reported the highest tonnage received from the District, followed by the Richland County Transfer Facility and the Kimble Recycling & Transfer in Twinsburg. Overall, more than 32,000 tons of waste for disposal from Lorain County was first sent to transfer stations in 2019.

**Table D-2. Reference Year Waste Transferred**

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/ Commercial	Industrial	Excluded	Total	
<b><i>In-district facilities</i></b>							
None						0	
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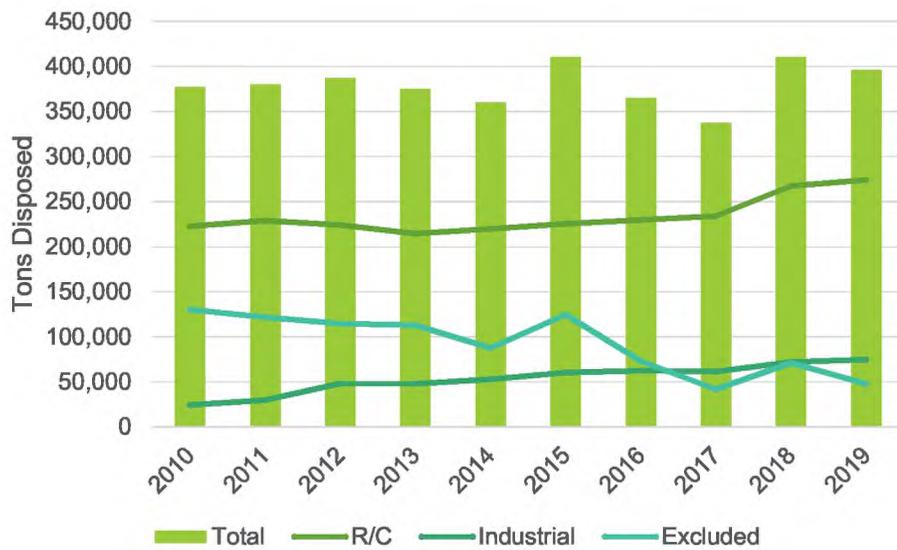
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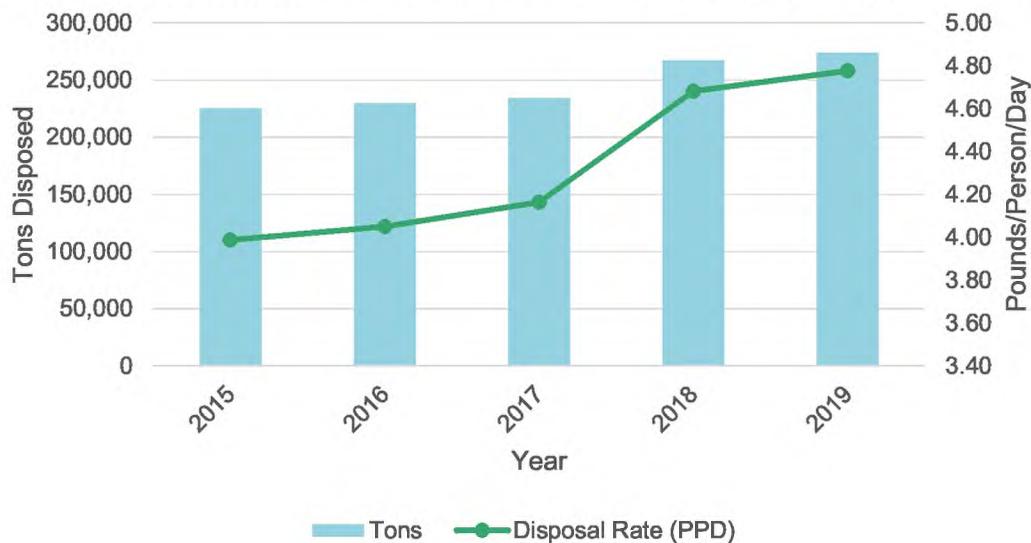
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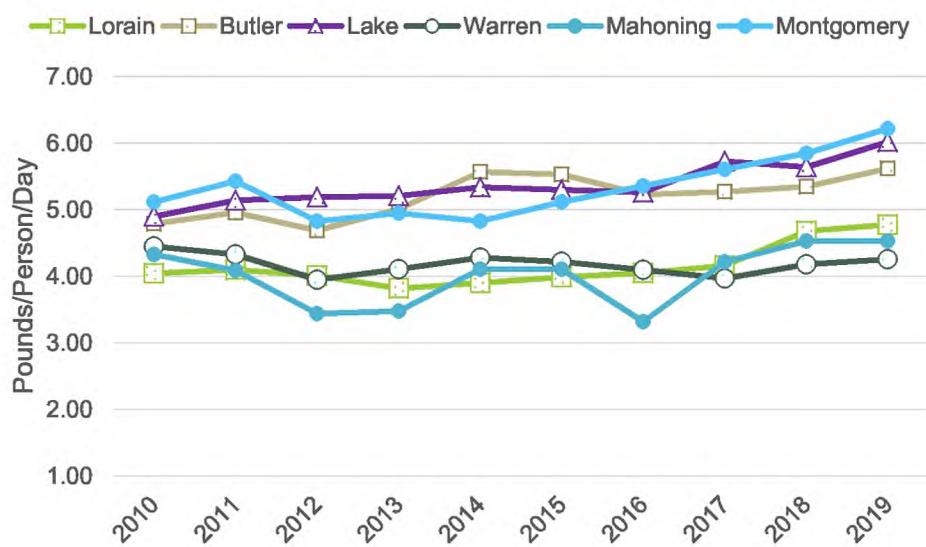
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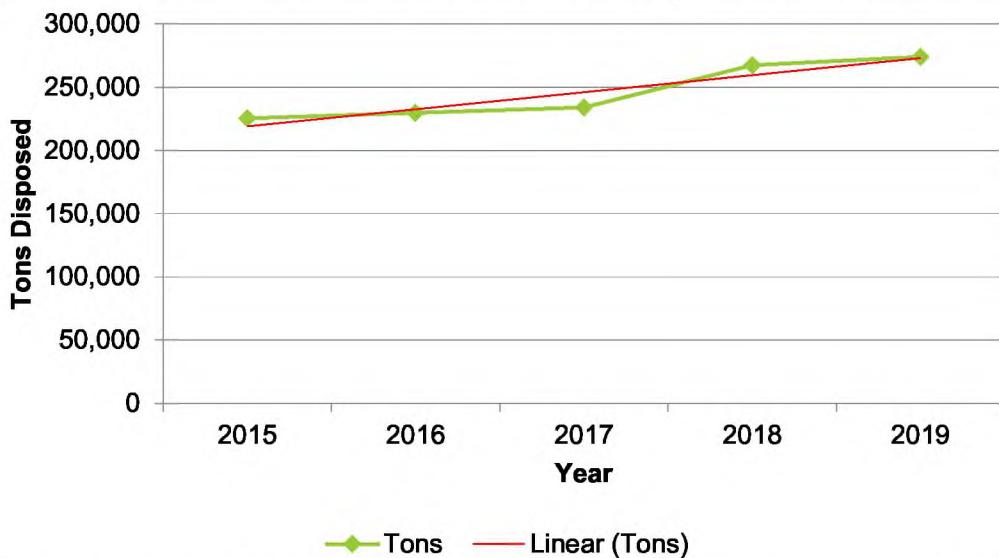
The changes in tons disposed have been closely tracked by changes in the per capita disposal rate. The highest disposal rate during the five-year period occurred in 2019 at 4.78 lbs. per person per day (ppd) and the lowest disposal rate occurred in 2015 at 3.99 ppd. The disposal rate has continued to rise between 2015 and 2019.

**Figure D-2. Residential/Commercial Tons Disposed vs. Disposal Rate: 2015-2019**

The R/C disposal rate for the District was compared with disposal rates for Butler, Lake, Warren, Mahoning, and Montgomery solid waste districts which are other single county districts with similar populations and mixes of urban and rural areas. The figure below shows each of these SWMDs' residential/commercial disposal rate from 2015-2019. Lorain County's residential/commercial disposal rate has continued to slowly increase in the last ten years, but it is still lower than the average compared to similar districts.

**Figure D-3. R/C Disposal Rate for Selected SWMDs: 2010-2019**

The residential/commercial tons disposed for the District is also shown in **Figure D-4** with a trend line included.

**Figure D-4. Residential/Commercial Sector Disposal Trends: 2015-2019**

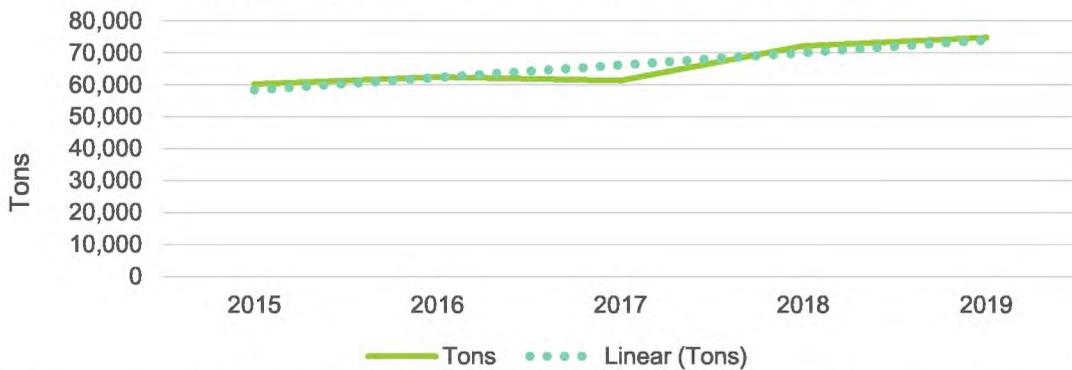
In 2019, the actual disposal of residential/commercial waste from the District was approximately 14.7% higher than the amount projected in the currently approved plan. The plan projected that the rate of disposal would increase by approximately 1% each year starting in 2016. However, between 2016 (the previous plan's reference year) and 2019, the average annual increase in the disposal rate was 5.8%. The rate of disposal increased the most from 2017 to 2018 with an increase of 12.8% from 4.16 ppd to 4.68 ppd. The District is unsure why the disposal rate increased more than expected, but the disposal rate is still in line with similar districts.

**Table D-6 Actual vs. Current Plan Projections for Residential/Commercial Disposal: 2015-2019**

Residential/Commercial Sector Tons Disposed			
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2017	233,980	232,785	0.5%
2018	267,422	235,869	13.4%
2019	274,082	238,991	14.7%

## 2. Industrial Sector Disposal

As shown in **Figure D-5**, industrial disposal also slightly increased from 2015 through 2019. On average, industrial disposal has increased 5.8% annually from the previous year.

**Figure D-5. Industrial Sector Disposal: 2015 – 2019**

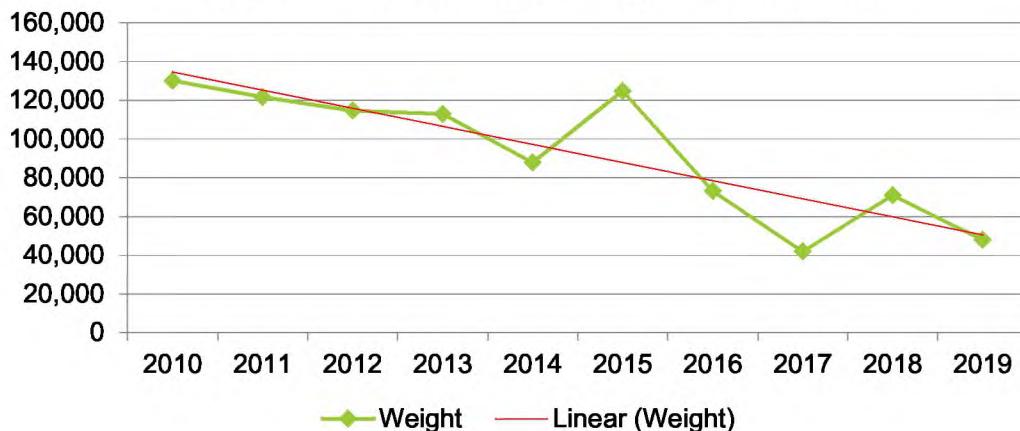
Actual industrial disposal in 2017 was lower than projected but was higher than projected in 2018 and 2019 (see the table below). The previous plan projected that high historical annual increases would not continue but would slow down. The previous plan set conservative projections that were only about 2% lower than the actual annual increase in industrial disposal.

**Table D-7 Actual vs. Current Plan Projections, Industrial Sector Disposal: 2017-2019**

Year	Industrial		
	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2017	61,351	64,301	-4.8%
2018	72,177	66,230	8.2%
2019	74,788	68,217	8.8%

### **3. Excluded Waste Disposal**

The figure below shows the tons of excluded waste disposed from the District from 2010 through 2019.

**Figure D-6. Excluded Waste Disposal: 2010-2019**

The amount of excluded waste disposed from the District continues to decline. The average disposal amount and the average annual rate of change in the excluded waste tonnage have been calculated and shown in the table below.

**Table D-8 Average Annual Tons and Rate of Change in Excluded Waste Disposal**

Metric	2015-2019	2010-2019
Average (tons)	71,717	92,574
Average annual rate of change	-11.8%	-4.6%

## C. Disposal Projections

### 1. Residential/Commercial Sector

The District examined several approaches for projecting disposal for the planning period. Four scenarios which were thought to be the best approaches are included in the table below. The primary assumptions differentiating each scenario are explained, with the disposal projection resulting from applying the assumptions. For comparison, the last two columns in the table show the highest disposal amount reported during the last ten years (2010 through 2019), and the disposal tonnage reported for 2019.

**Table D-9 Tonnages Projected for R/C Sector: 4 Scenarios**

#	Scenarios Description	Tonnage		
		2032 Projection	Highest during last 10 years	2019
1	Assume constant disposal rate of 4.33 PPD based upon 2015-2019 average	258,564		
2	Assume annual change in tonnage of 5.13% based upon average annual percent change 2015-2019	525,335		
3	Assume increase in disposal rate of 1.9% based on average annual rate of change 2010-2019	328,757	274,082	274,082
4	Assume change in disposal rate annually based on annual rate of change in population	465,117		

**Scenario 1** assumes a constant disposal rate of 4.33 ppd, based upon the historical average from 2015 through 2019. This scenario results in a very modest decrease in tons disposed by the end of the planning period (approximately 15,000 tons or 5.7%).

**Scenario 2** applies the average annual percent change in tonnage which occurred during 2015 through 2019 (5.13% increase per year). This scenario results in a larger increase in projected tonnage by 2032, approximately 251,253 tons or 92%.

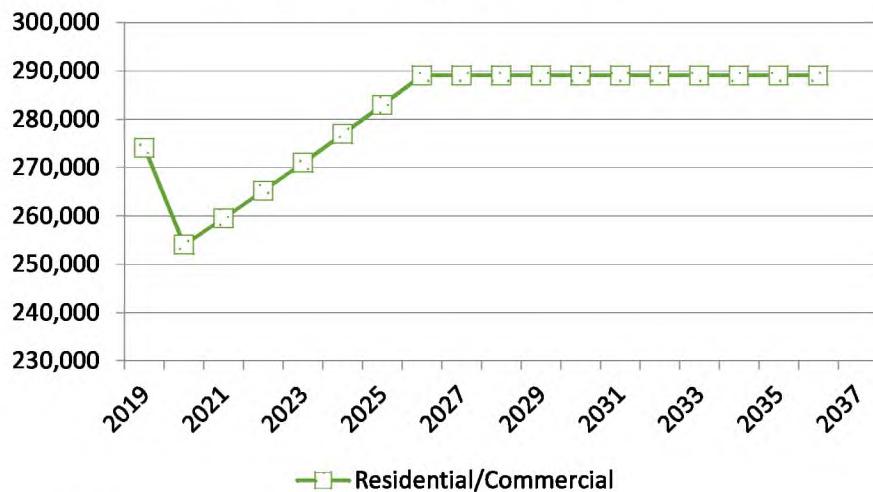
**Scenario 3** applies the average annual percent change in disposal rate from 2010-2019 through the entirety of the planning period (increase of 20%).

**Scenario 4** assumes that the ppd disposal rate changes annually based on the projected annual rate of change of population. The average annual rate of change of population through the planning period is a decrease of 0.3% annually.

Although several conclusions could be drawn from the last ten years of disposal data, the District believes that **Scenario 3** represents the most reasonable approach for disposal projections. This scenario incorporates the increasing annual disposal rate experienced during previous years and the increasing population.

**Figure D-7. Projected Residential/Commercial Disposal 2019-2032**

### Residential/Commercial



## 2. Industrial Sector

The District evaluated three alternative methodologies for projecting industrial waste disposal (see the table below).

**Table D-10 Tonnages Projected for Industrial Sector: 3 Scenarios**

#	Scenarios Description	Tonnage		
		2032 Projection	Highest during last ten years	2019
1	Assume average annual increase in tonnage of 5.8% based upon 2015-2019 average change	155,724		
2	Assume annual decrease in tonnage of 0.65% based on projected change of industrial employment throughout the Cleveland-Elyria area of Ohio 2018-2028	68,715	74,788	74,788

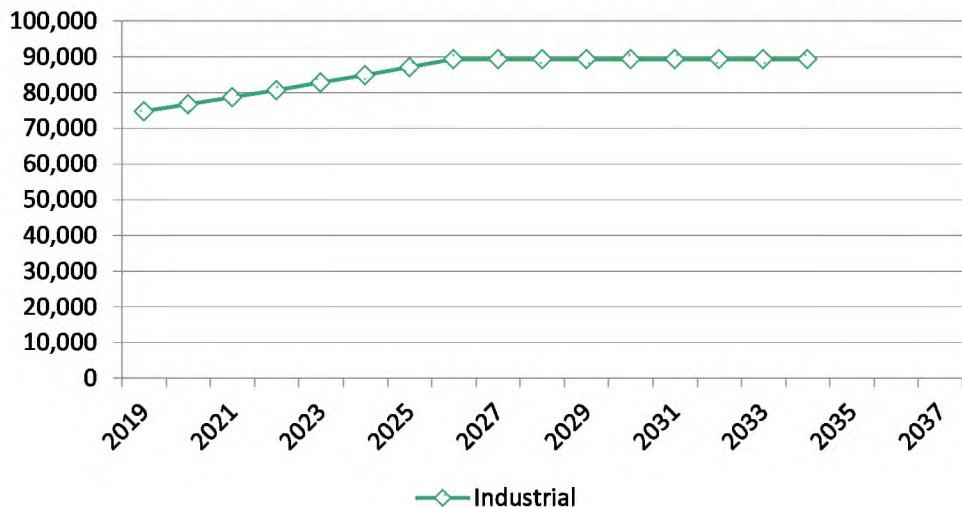
Scenarios		Tonnage		
#	Description	2032 Projection	Highest during last ten years	2019
3	Assume change in disposal tons annually based on averaging the projected annual change in tonnage described in Scenario 1 and Scenario 2 (2.58%).	104,111		

**Scenario 1** applies the average annual percent change in reported disposal from 2015 through 2019 (5.8%), which results in a projected tonnage of 155,724 tons for 2032. This estimate is much higher than the most recent tonnage in 2019 and the highest of the last ten years (74,788).

**Scenario 2** uses the average annual decrease in manufacturing employment projected for the Cleveland-Elyria region of the State of Ohio by the Ohio Department of Jobs and Family Services. Employment is projected to decrease annually by 0.65% through 2028 and continue through the end of the planning period.

**Scenario 3** utilizes both Scenario 1 and Scenario 2 since both affect the projected tons, but both show extreme changes that are unlikely. Scenario 3 averages the projected annual percent change in tons from the other two scenarios to estimate a future annual change in tons of 2.58% per year. Industrial tons have historically risen in the recent past, but it is unlikely that the generation of industrial tons for disposal will be doubled by the end of the planning period. Additionally, manufacturing employment in the region is expected to decrease; however, it is unlikely that industrial tons will decrease as well according to the past ten years.

Although several conclusions could be drawn from the last ten years of disposal data, the District believes that Scenario 3 represents the most reasonable approach for disposal projections. This scenario acknowledges that an increase in industrial tons generation will continue in the region but projects using a conservative factor.

**Figure D-8. Projected Industrial Disposal 2019-2032**

### 3. Summary

**Table D-11** represents the results of using the approaches proposed above by the District for R/C and industrial disposal projections. The tons of R/C projected for disposal continue to increase throughout the planning period due to the anticipated increase in population and the increase in disposal rates. The industrial tonnage projected for disposal continues to increase throughout the planning period due to conservative estimate using historical annual percent changes in tons. Additionally, excluded waste was projected to remain constant at the average of 2015-2019 tons.

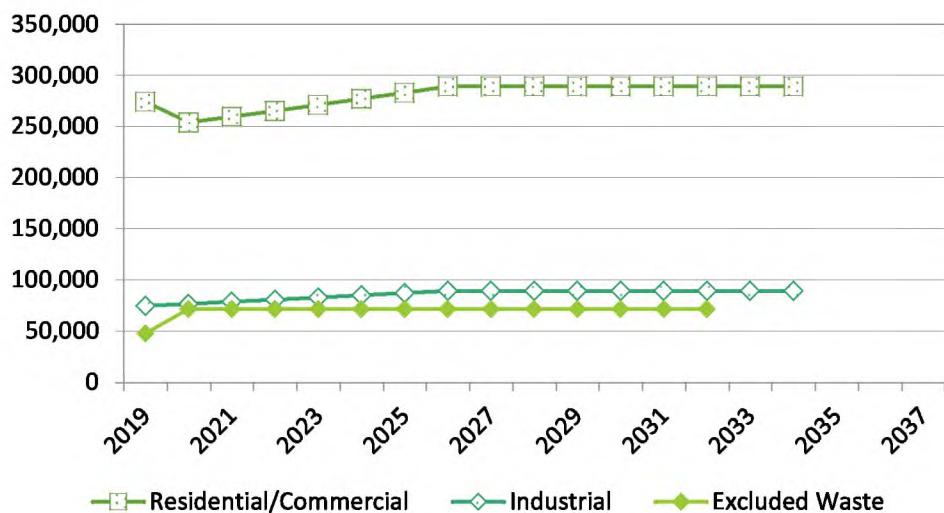
**Table D-11 Waste Disposal Projections**

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Solid Waste	Total Waste	Waste Transferred (as part of Total Disposal)	
	Tons	Tons	Tons	Tons	Tons	Percent
2019	274,082	74,788	47,800	396,671	32,201	
2020	253,998	76,716	71,717	402,431	32,668	
2021	259,545	78,693	71,717	409,955	33,279	
2022	265,210	80,721	71,717	417,648	33,904	
2023	270,996	82,802	71,717	425,514	34,542	
2024	276,906	84,936	71,717	433,558	35,195	
2025	282,941	87,124	71,717	441,783	35,863	
2026	289,058	89,370	71,717	450,145	36,542	
2027	289,058	89,370	71,717	450,145	36,542	
2028	289,058	89,370	71,717	450,145	36,542	
2029	289,058	89,370	71,717	450,145	36,542	
2030	289,058	89,370	71,717	450,145	36,542	
2031	289,058	89,370	71,717	450,145	36,542	

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Solid Waste	Total Waste	Waste Transferred (as part of Total Disposal)	
	Tons	Tons	Tons	Tons	Tons	Percent
2032	289,058	89,370	71,717	450,145	36,542	
2033	289,058	89,370	71,717	450,145	36,542	
2034	289,058	89,370	71,717	450,145	36,542	

The figure below shows projected amounts for residential/commercial and industrial waste for the planning period.

**Figure D-9. Projected Disposal: 2019-2032**



**Waste Transferred.** Approximately 8.1% of disposed waste was transferred before being sent to a landfill in 2019. This amount is projected to remain at this ratio throughout the planning period.



## **APPENDIX E**

# **RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA**



## Appendix E. Residential/Commercial Reduction and Recycling Data

This appendix presents the reduction and recycling data for the residential and commercial sectors in the 2019 reference year. To avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities such as programs, brokers, and scrap yards will be demonstrated. A historic analysis of the residential/commercial sector's recycling is included in this appendix. Information in this section as well as information from other sources was used to calculate the recycling projections from 2019 to the end of the planning period (2032) which are included at the end of this Appendix.

### A. Reference Year Recovery Data

The North American Industry Classification System (NAICS) classifies business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. economy. The NAICS industry codes define establishments based on the activities in which they are primarily engaged.

To obtain commercial sector recycling data, the District annually surveys establishments that are classified under the following NAICS codes:

52	•Finance and Insurance
53	•Real Estate Rental and Leasing
54	•Professional, Scientific, and Technical Services
55	•Management of Companies and Enterprises
56	•Administrative and Support Services •Waste Management and Remediation Services
61	•Educational Services
62	•Health Care and Social Assistance
71	•Arts, Entertainment, and Recreation
72	•Accommodation and Food Services
81	•Civic Organizations •Other Services (except Public Administration)
92	•Public Administration

Table E-1. Commercial Survey Results

NAICS	WG	EW	LAB	FS	GL	FM	NFM	OCC	MxP	PL	Tx	W	CoM	YT	UO	ST	DCB	HHW	Other	Total	Adj.	Adj. Total
42	0.1	0.7	5.1			77.3	942.2	756.3	8.2	71.1	182.0	1472.7	2.4	1.8	1.3		0.2	0.1	2.2	3523.6	12.9	3510.7
44		0.1	6.0			43.2	15.5	118.7	0.4	10.7			416.0		173.6	263.0		10.0	10.2	1067.3	704.4	362.9
45	3.0	15.3	7.0			309.3	20.6	120.0	84.8	6.6	602.3	16.0	115.0		17.4	7.0			31.5	1355.7	63.0	1292.7
48								27.6												27.6		27.6
49																				0.0		0.0
51		0.1						0.3	11.3										0.0	11.6	1.6	10.0
52		0.0		0.0				0.0	2.2	0.1								0.0	0.0	2.4	0.3	2.1
53								0.3										0.0	0.3	0.3	0.0	
54	0.5	0.0	0.1	0.0	0.1	42.0	4.9	94.0	38.4	4.1		39.6	70.2		0.4	1.7	0.0		0.0	295.9	252.6	43.4
55																				0.0		0.0
56		0.0						0.1	5.0				9393.1					0.0	9398.2	2993.2	6405.0	
61	1.0	0.7		5.0	5.0	33.3	1.0	3030.6	2515.5	36.8		27.7	1.0	1.7			0.7	0.4	5660.4	5619.2	41.2	
62	1.1	1.0	1.0	5.0		1.5	0.6	2.8	1021.8	101.5		0.1	67.8	77.2		0.2		0.0	5.5	1287.0	1280.8	6.2
71		0.0		0.0				0.0	0.0	0.0		0.0	0.0			0.0			0.1	0.0	0.0	
72	0.3		0.0	103.0	31.1	21.5		191.1	0.3	0.1							0.0		0.0	319.3	319.0	0.3
81			2.0			8.9	3.3	10.0	39.1	10.0		5.0	3.0		1.0	3.0				85.3	72.1	13.3
92				100.8	0.0	28.8		2.0	21.1	0.1	29.1	142.4	15.6					0.0	339.9	125.1	214.8	
Other:	2.3	0.2				3368.8	468.0	903.6	18.4	7.6		86.3	0.3	8.4	62.0	0.1	0.9	7.8	4934.6	159.8	4774.8	
<b>Total</b>	<b>6.0</b>	<b>20.2</b>	<b>21.4</b>	<b>213.8</b>	<b>8.2</b>	<b>3934.5</b>	<b>1456.0</b>	<b>5257.0</b>	<b>3761.7</b>	<b>253.7</b>	<b>813.4</b>	<b>1675.8</b>	<b>804.0</b>	<b>9473.3</b>	<b>203.8</b>	<b>336.9</b>	<b>0.4</b>	<b>11.7</b>	<b>57.6</b>	<b>28309.3</b>	<b>11604.2</b>	<b>16705.1</b>
<b>Adj.</b>	<b>1.0</b>	<b>1.7</b>	<b>5.2</b>	<b>203.8</b>	<b>3.2</b>	<b>92.0</b>	<b>14.2</b>	<b>3,381.6</b>	<b>3,628.8</b>	<b>161.9</b>			<b>688.8</b>	<b>3,071.0</b>	<b>6.4</b>	<b>330.9</b>	<b>0.2</b>	<b>0.1</b>	<b>13.5</b>	<b>11,604.2</b>		
<b>Adj. Total</b>	<b>5.0</b>	<b>18.6</b>	<b>16.3</b>	<b>10.0</b>	<b>5.0</b>	<b>3,842.5</b>	<b>1,441.8</b>	<b>1,875.4</b>	<b>133.0</b>	<b>91.7</b>	<b>813.4</b>	<b>1,675.8</b>	<b>115.2</b>	<b>26,402.3</b>	<b>197.4</b>	<b>6.0</b>	<b>0.2</b>	<b>11.6</b>	<b>44.1</b>	<b>16,705.1</b>		

NAICS = North American Industrial Classification System, WG = Appliances/ "White Goods", EW = Electronics, LAB = lead-acid batteries, FS = Food Scraps, GL = Glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = Corrugated Cardboard, MxP = mixed paper, PL = plastics, Tx = Textiles, W = wood, R = Rubber, CoM = Cmingled Recyclables (Mixed), YT = Yard Trimmings, UO = used motor oil, ST = Scrap Tires, DCB= Dry-cell Batteries, Adj. = Adjusted or Adjustments

Data from a total of 147 commercial businesses was used to complete Table E-1. Companies reported recycling 28,309 tons of materials in 2019. Approximately 11,604 tons were adjusted to avoid double-counting.

Table E-2. 2019 Data from Other Recycling Facilities

Source of Materials	FM	NFM	OCC	MxP	PL	CoM	UO	Total	Adj.	Adj. Total
<b>Buybacks</b>										
None								0.0		0.0
<b>Unadjusted Total</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Adjustments</b>								0.0		
<b>Adjusted Total</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Scrap Yards</b>										

Source of Materials	FM	NFM	OCC	MxP	PL	CoM	UO	Total	Adj.	Adj. Total
Bluestar Metal Recycling				6.1			2.6	8.7	6.1	2.6
<b>Unadjusted Total</b>	0.0	0.0	0.0	6.1	0.0	0.0	2.6	8.7	6.1	2.6
<b>Adjustments</b>				6.1				6.1		
<b>Adjusted Total</b>	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6		
<b>Processors</b>										
None								0.0		0.0
<b>Unadjusted Total</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Adjustments</b>								0.0		
<b>Adjusted Total</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>MRF's</b>										
Lorain County Resource Recovery Complex	454.3	164.5	1,440.1	4,229.9	1,438.3			7,727.0		7,727.0
Richland County Recycling and Transfer Facility						2,146.1		2,146.1		2,146.1
<b>Unadjusted Total</b>	454.3	164.5	1,440.1	4,229.9	1,438.3	2,146.1	0.0	9,873.2	0.0	9,873.2
<b>Adjustments</b>								0.0		
<b>Adjusted Total</b>	454.3	164.5	1,440.1	4,229.9	1,438.3	2,146.1	0.0	9,873.2		
<b>Grand Totals</b>										
<b>Unadjusted Total</b>	<b>454.3</b>	<b>164.5</b>	<b>1,440.1</b>	<b>4,235.9</b>	<b>1,438.3</b>	<b>2,146.1</b>	<b>2.6</b>	<b>9,881.8</b>		
<b>Total Adjustments</b>	0.0	0.0	0.0	6.1	0.0	0.0	0.0	6.1		
<b>Adjusted Total</b>	<b>454.3</b>	<b>164.5</b>	<b>1,440.1</b>	<b>4,229.9</b>	<b>1,438.3</b>	<b>2,146.1</b>	<b>2.6</b>	<b>9,875.8</b>		

WG = Appliances/ "White Goods", EW = Electronics, LAB = lead-acid batteries, FS = Food Scraps, GL = Glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = Corrugated Cardboard, MxP = mixed paper, PL = plastics, Tx = Textiles, W = wood, R = Rubber, CoM = Cmingled Recyclables (Mixed), YT = Yard Trimmings, Adj. = Adjusted or Adjustments

Source(s) of Information: District records

**Table E-2** contains tonnage collected from the MRFs managing waste from the District. Adjustments were made to avoid double counting. For example, materials sent to a scrap yard for processing were adjusted because the tonnage was also reported by a MRF.

**Table E-3. 2019 Data Reported to Ohio EPA**

Ohio EPA Data Source	PL	OCC	MxP	NFM	W	Food	CoM	Other	Total	Adj.	Adj. Total
Walmart	85.0	2,708.2	7.5	0.4				227.2	3,028.3		3,028.3
Lowe's	2.3	247.8		16.4	68.5			50.8	385.7		385.7
Home Depot	1.5	166.7			508.0			39.9	716.0		716.0
Target	16.5	651.1	3.4	23.4			7.6	3.3	705.3		705.3
Dollar General		555.1	5.0						560.1		560.1
Aldi	5.3	662.4				49.0			716.7		716.7
Kohl's	19.2	181.0					0.2	1.0	201.5		201.5
Sam's Club	14.5	403.3	1.3	14.1	87.6			18.4	539.1		539.1

Ohio EPA Data Source	PL	OCC	MxP	NFM	W	Food	CoM	Other	Total	Adj.	Adj. Total
USPS	2.3	6.8	127.5						136.6		136.6
Commercial 1	94.3	1,257.1	13.5					18.6	1,383.5		1,383.5
Hauler/Grocer Data						743.2			743.2		743.2
<b>Unadjusted Total</b>	<b>241.0</b>	<b>6,839.4</b>	<b>158.1</b>	<b>54.3</b>	<b>664.0</b>	<b>792.2</b>	<b>7.8</b>	<b>359.2</b>	<b>9,115.9</b>	<b>0.0</b>	<b>9,115.9</b>
<b>Adjustments</b>									-		
<b>Adjusted Total</b>	<b>241.0</b>	<b>6,839.4</b>	<b>158.1</b>	<b>54.3</b>	<b>664.0</b>	<b>792.2</b>	<b>7.8</b>	<b>359.2</b>	<b>9,115.9</b>		

PL = Plastics, FM = Ferrous Metals, NF = Non-Ferrous Metals, OCC = Corrugated Cardboard, MxP = Mixed Paper, W = Wood, CoM = Commingled Recyclables (Mixed)

Source(s) of Information: 2019 Ohio EPA MRF Report

Assumptions: No adjustments were made to data reported to Ohio EPA.

**Table E-4. 2019 Other Recycling Programs/Other Sources of Data**

Other Sources of Data	HHW	EW	ST	LAB	FS	MxP	GL	FM	NFM	OCC	PL	YT	Other: FI Bulbs	Other: Latex Paint	Totals	Adj.	Adj. Totals
OEPA Scrap Tire Data			3,051.1												3,051.1		3,051.1
Curbside and Drop-off Programs						6,955.6	4,570.6	703.9	230.6	2,535.2	2,788.8				17,784.7	4,003.6	13,781.1
Compost Facilities					841.2							17,162.1			18,003.4	681.2	17,322.2
Community Yard Waste Collection Programs												8,012.4			8,012.4	6,567.2	1,445.3
Royal Oak						2,826.7									2,826.7		2,826.7
Lorain County Collection Center	191.9	249.9	256.2	9.4		44.9		2.1	0.1	34.5			138.0	100.0	1,027.0	256.2	770.8
Eaton Dumpster Day Event	14.2														14.2		14.2
<b>Unadjusted Total</b>	<b>206.1</b>	<b>249.9</b>	<b>3,307.2</b>	<b>9.4</b>	<b>841.2</b>	<b>22.8</b>	<b>4,570.6</b>	<b>706.0</b>	<b>230.7</b>	<b>2,569.7</b>	<b>2,788.8</b>	<b>25,174.5</b>	<b>138.0</b>	<b>100.0</b>	<b>50,719.4</b>	<b>11,508.1</b>	<b>39,211.3</b>
<b>Adjustments</b>			256.2				4,003.6					7,248.3			11,508.1		
<b>Adjusted Total</b>	<b>206.1</b>	<b>249.9</b>	<b>3,051.1</b>	<b>9.4</b>	<b>841.2</b>	<b>22.8</b>	<b>567.0</b>	<b>706.0</b>	<b>230.7</b>	<b>2,569.7</b>	<b>2,788.8</b>	<b>17,926.2</b>	<b>138.0</b>	<b>100.0</b>	<b>39,211.3</b>		

HHW = Household Hazardous Waste, ST = Scrap Tires, FS = Food Scraps, GL = Glass, FM = Ferrous Metals, NFM = Non-Ferrous Metals, OCC = Corrugated Cardboard, MxP = Mixed Paper, PL = Plastics, CoM = Commingled Recyclables (Mixed), YT = Yard Trimmings, Adj. = Adjusted or Adjustments

Source(s) of Information: 2019 Ohio EPA Scrap Tire Report, 2019 Ohio EPA Compost Report, Survey Data

**Table E-5. Reference Year (2019) Residential/Commercial Material Reduced/Recycled**

Material	Tons
Appliances/ "White Goods"	5.0
Household Hazardous Waste	217.7
Used Motor Oil	200.0
Electronics	268.5
Scrap Tires	3,057.1

Material	Tons
Dry Cell Batteries	0.2
Lead-Acid Batteries	25.7
Food	1,643.4
Glass	572.0
Ferrous Metals	5,002.8
Non-Ferrous Metals	1,891.2
Corrugated Cardboard	12,724.7
All Other Paper	14,348.1
Plastics	4,559.9
Textiles	813.4
Wood	2,339.8
Rubber	0.0
Commingle Recyclables (Mixed)	2,269.1
Yard Trimmings	24,328.5
Other (Aggregated)	641.3
Recycling Subtotals	74,908.1
Incineration	0
<b>Grand Total</b>	<b>74,908.1</b>

**Note:** Tonnage presented in this Plan Update reflects the most up-to-date and accurate data available. Tonnage presented in the Plan Update differs from the amended Annual District Report.

**Source(s) of Information:** 2019 ADR calculation spreadsheets, 2019 Ohio EPA MRF Reports, 2019 Ohio EPA Scrap Tire Report, 2019 District program and survey data, 2019 Ohio EPA Compost Report, 2019 ADR Review Forms

**Table E-5** shows different numbers compared to the Annual District Report submitted to the EPA. The 2019 ADR reported a total of 79,307.4 tons of residential/commercial material recycled. However, the plan going forward will use a total of 74,908 tons of residential/commercial material recycled, a difference of 4,399.3 tons due to updated survey answers and corrected totals. The 4,399.3 tons are made up of an added 49 tons to food waste, 308.5 tons to glass, and 5.3 tons to plastics as well as a decrease of 4,499.3 tons to yard waste and 263 tons to tires.

**Table E-6**, “Quantities Recovered by Program/Source,” presents a summary of the sources of residential/commercial sector recycling tonnage. Tonnage listed in this table reflects quantities that were adjusted to avoid double-counting, so this table does not reflect the true tonnage from each source. For example, a total of 17,784.7 tons were collected from curbside recycling programs; however, **Table E-6** only credits 13,781.1 tons toward curbside recycling.

**Table E-6. 2019 Quantities Recovered by Program/Source**

Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	16,705
Buybacks	0
Scrap Yards	3
Processors	0
MRFs	9,873
Ohio EPA Commercial Retail Data	9,116
OEPA Scrap Tire Data	3,051
Curbside and Drop-off Programs	13,781
Compost Facilities	17,322
Community Yard Waste Collection Programs	1,445
Royal Oak	2,827
Lorain County Collection Center	771
Eaton Dumpster Day Event	14
	74,908

Source(s) of Information: Tables E-2, E-3, and E-4.

## B. Historical Recovery

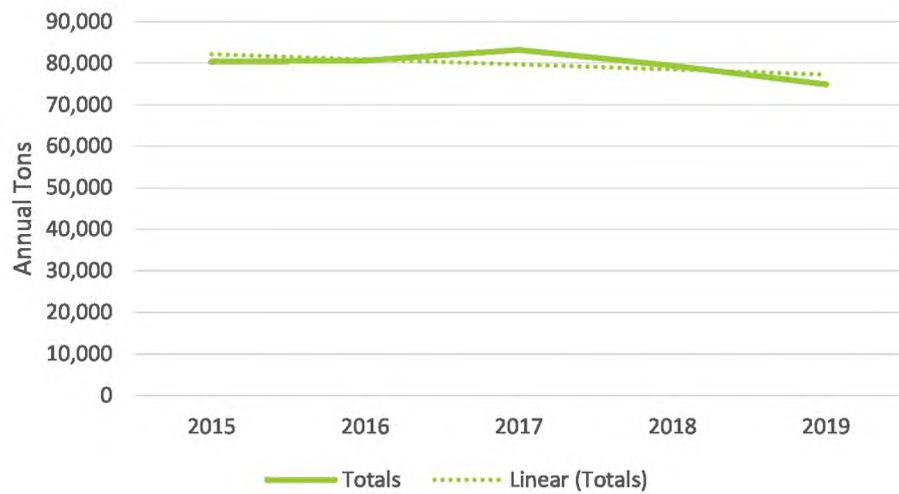
Total recovery includes recycling, composting, and waste reduction from incineration. The District's historical recovery for the residential/commercial sector over a five-year period spanning from 2015 to 2019 is presented in the following table.

**Table E-7. Historical Recycling Analysis**

Year	Residential/Commercial							
	Lorain County Collection Center	Yard Waste	Scrap Tires	Curbside and Drop-off Recycling	Other Recycling	Total	Annual Percentage Change	Annual Tonnage Change
2015	656	33,339	2,693	17,661	26,023	80,373	-	-
2016	763	24,745	2,676	16,638	35,852	80,673	0.4%	300
2017	628	30,802	2,364	15,812	33,599	83,205	3.1%	2,532
2018	657	33,062	2,647	12,782	30,272	79,421	-4.5%	-3,784
2019	772	25,972	3,320	13,795	31,049	74,908	-5.7%	-4,513
<b>2015-2019 Average</b>								
Average Annual Percent Change					-1.7%			
Average Tons over 5-Year Period					79,716			
Average Annual Tonnage Change					-1,366			

An examination of the recovery patterns over the five-year period reveals that in 2017, a high of 83,20537 tons were recovered and in 2019, a low of 74,908 tons were recovered. Waste recycling/reduction decreased from 2015 to 2019. Over the five-year period, recovery decreased by an average of 1,366 tons, or 1.7% annually. The following figure presents the District's historical residential/commercial recovery totals from 2015 to 2019.

### Figure E-1 Historical Recycling Analysis: 2015-2019



The District used historical program data to develop projections shown in **Table E-8**. The categories in this table are somewhat different than those envisioned in the Format 4.1 in order to associate tonnage projections with actual District programs. The remainder of this appendix provides explanations for each of the projections for category included in **Table E-8**.

**Table: E-8. Residential/Commercial Recovery Projections by Program/Source**

Year	Lorain County Collection Center	Yard Waste	Scrap Tires	Curbside and Drop-off Recycling	Other Recycling	Totals
<b>2019</b>	<b>772</b>	<b>25,972</b>	<b>3,320</b>	<b>13,795</b>	<b>31,049</b>	<b>74,908</b>
2020	465	29,492	3,198	12,508	18,249	63,913
2021	774	36,073	3,297	13,839	18,006	71,988
2022	776	36,185	3,307	13,882	19,130	73,281
2023	779	36,298	3,318	13,925	18,875	73,195
2024	781	36,410	3,328	13,968	20,054	74,542
2025	784	36,523	3,338	14,011	19,787	74,443
2026	786	36,630	3,348	14,052	21,022	75,838
2027	786	36,630	3,348	14,052	21,022	75,838
2028	786	36,630	3,348	14,052	21,022	75,838
2029	786	36,630	3,348	14,052	21,022	75,838
2030	786	36,630	3,348	14,052	21,022	75,838
2031	786	36,630	3,348	14,052	21,022	75,838
2032	786	36,630	3,348	14,052	21,022	75,838
2033	786	36,630	3,348	14,052	21,022	75,838
2034	786	36,630	3,348	14,052	21,022	75,838

**Lorain County Collection Center:** The reported 2019 tonnage was used to calculate projected material based on population projections found in Appendix C.

**Scrap Tires:** The reported 2019 tonnage was used to calculate projected scrap tires based on population projections found in Appendix C.

**Yard Waste:** The reported 2019 tonnage was used to calculate projected yard waste based on population projections found in Appendix C.

**Curbside and Drop-Off Recycling:** The reported 2019 tonnage was used to calculate projected recycling from community programs based on population projections found in Appendix C.

**Other Recycling:** The reported 2019 tonnage was used to calculate projected commercial recycling based on the historical average annual percentage change.



## **APPENDIX F**

# **INDUSTRIAL SECTOR REFERENCE YEAR RECYCLING**



## Appendix F. Industrial Reduction and Recycling Data

This appendix presents the reduction and recycling data for the industrial sector in the 2019 reference year. To avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities such as programs, brokers, and scrap yards will be demonstrated. A historic analysis of the industrial sector's recycling and recycling projections for the planning period are included in this appendix.

### A. Reference Year Recovery Data

The North American Industry Classification System (NAICS) classifies business establishments for collecting, analyzing, and publishing statistical data related to the U.S. economy. The NAICS industry codes define establishments based on the activities in which they are primarily engaged.

To obtain industrial sector recycling data, the District annually surveys establishments that are classified under the following NAICS codes:

22

- Utilities

31

- Food Manufacturing
- Beverage and Tobacco Product Manufacturing
- Textile and Textile Product Mills
- Apparel Manufacturing
- Leather and Allied Product Manufacturing

32

- Wood Product Manufacturing
- Paper Manufacturing
- Printing and Related Support Activities
- Petroleum and Coal Products Manufacturing
- Chemical Manufacturing
- Plastics and Rubber Products Manufacturing
- Nonmetallic Mineral Product Manufacturing

33

- Primary Metal Manufacturing
- Fabricated Metal Product Manufacturing
- Machinery Manufacturing
- Computer and Electronic Product Manufacturing
- Electrical Equipment, Appliance, and Component Manufacturing
- Transportation Equipment Manufacturing
- Furniture and Related Product Manufacturing
- Miscellaneous Manufacturing

The following tables present the industrial sector recycling data that was used to calculate the total tons recycled during the reference year. These tables include:

- **Table F-1: Industrial Survey Results**, which presents the total tons recycled by material and by NAICS code.
- **Table F-2: Data from Other Recycling Facilities**, which presents the total tons recycled at buybacks, scrap yards, processors, and material recovery facilities (MRFs).
- **Table F-3: Other Recycling Programs/Other Sources of Data**, which presents data from miscellaneous sources. This table was not applicable to the District.

**Table F-1. Industrial Survey Results**

NAICS	FW	GL	FM	NFM	OCC	MxP	PL	Tx	W	R	CoM	Ash	FS	Other: Misc.	Total	Adj.	Adj. Total
<b>22</b>															0.0		<b>0.0</b>
<b>31</b>	60.0	7.0	10.0	25.5	235.3	1,079.3	43.9		263.5					0.1	1,724.6	137.3	<b>1,587.3</b>
<b>32</b>			235.3		270.6	19.5	0.2		70.3					0.0	595.9	270.6	<b>325.3</b>
<b>33</b>	7.0	23.8	47,374.1	1,716.5	8,172.0	236.0	248.3		2,757.9	11.1	1,884.4	0.5	16,125.4	129.1	78,686.0	6,536.0	<b>72,150.0</b>
<b>Other:</b>			10.0	0.7	20.4	125.3	0.3		52.0					0.0	198.7	0.0	<b>198.7</b>
<b>Total</b>	67.0	30.8	47,629.4	1,742.7	8,698.3	1,460.1	292.7	0.0	3,143.7	11.1	1,884.4	0.5	16,125.4	129.2	81,215.2	6,944.0	<b>74,271.2</b>
<b>Adj.</b>	5.0	1.7			6,937.3		0.0								6,944.0		
<b>Adj. Total</b>	62.0	29.2	47,629.4	1,742.7	1,761.0	1,460.1	292.6	0.0	3,143.7	11.1	1,884.4	0.5	16,125.4	129.2	74,271.2		

FW = food waste, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, Tx = Textiles, W = Wood, R = Rubber, CoM = commingled, FS = non-exempt foundry sand, Adj. = adjusted/adjustments

**Source(s) of information:** 2017-2019 District Industrial Surveys

**Table F-2. Data from Other Recycling Facilities**

Program and/or Source of Materials/Data	FM	OCC	MxP	PL	W	Unadjusted Total	Adjustments	Adjusted Total
<b>Buybacks</b>								
None						0.0		<b>0.0</b>
<b>Unadjusted Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>
<b>Adjustments</b>						<b>0.0</b>		
<b>Adjusted Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>
<b>Scrap Yards</b>								
None						0.0		<b>0.0</b>
<b>Unadjusted Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>
<b>Adjustments</b>						<b>0.0</b>		
<b>Adjusted Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		<b>0.0</b>
<b>Processors</b>								
PR1	0.8	84.7	1.3	68.0	3.4	158.1		<b>158.1</b>
PR2		0.5				0.5	0.5	<b>0.0</b>

Program and/or Source of Materials/Data	FM	OCC	MxP	PL	W	Unadjusted Total	Adjustments	Adjusted Total
<b>Unadjusted Total</b>	<b>0.8</b>	<b>85.2</b>	<b>1.3</b>	<b>68.0</b>	<b>3.4</b>	<b>158.6</b>	<b>0.5</b>	<b>158.1</b>
<b>Adjustments</b>		<b>0.5</b>				<b>0.5</b>		
<b>Adjusted Total</b>	<b>0.8</b>	<b>84.7</b>	<b>1.3</b>	<b>68.0</b>	<b>3.4</b>	<b>158.1</b>		
<b>MRF's</b>								
MRF1		6,857.4				6,857.4		<b>6,857.4</b>
<b>Unadjusted Total</b>	<b>0.0</b>	<b>6,857.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>6,857.4</b>	<b>0.0</b>	<b>6,857.4</b>
<b>Adjustments</b>						<b>0.0</b>		
<b>Adjusted Total</b>	<b>0.0</b>	<b>6,857.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>6,857.4</b>		
<b>Grand Total</b>	<b>0.8</b>	<b>6,942.1</b>	<b>1.3</b>	<b>68.0</b>	<b>3.4</b>	<b>7,015.5</b>		

FM = ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, W = Wood, Adj. = adjusted/adjustments

The District annually surveys scrap yards, processors, and brokers that are located in the District or known to accept materials generated in the District. The District maintains a list of scrap yards, processors, and brokers that is regularly updated. The District adds new entities to this list throughout the year as they are identified. Each year during the preparation of the Annual District Report, a list of scrap yards and secondary materials processors and brokers is compiled based on NAICS codes using Reference USA, a business database. New additions to the surveying list are sent a cover letter and survey via mail and when possible, via e-mail. This is performed to gather the necessary information from the new company so they can be added to District survey effort the following year. Follow-up requests are made via telephone and e-mail to entities that do not respond.

Responses are evaluated by comparing data submitted by each entity from previous years. Significant increases or decreases in overall tonnage, or tonnage reported for each sector are investigated using a variety of strategies, which include (1) contacting the respondent, verifying tonnage, and asking for an explanation, (2) identifying fluctuations in the economy/market that could cause tonnage to fluctuate, and (3) researching changes to the survey respondent's establishment such as a company merger, receiving a Notice of Violation, or unexpected events impacting operations such as a facility fire, etc.

Clear instructions are presented on the survey which instruct survey respondents to only include tonnage generated within the District's jurisdiction. Survey respondents are also instructed to refrain from reporting any metals from auto bodies, train boxcars, or construction and demolition debris (C&DD).

Responses are thoughtfully reviewed to ensure materials are not handled by more than one entity surveyed. The data used to compile the industrial sector's annual recycling totals are typically reported by end users, brokers, and processors. Adjustments are not frequently necessary for the industrial sector because program data is not factored in, as it is on the residential/commercial sector totals.

There was no data to report in Table F-3, "Other Recycling Programs/Other Sources of Data." Therefore, this table has been omitted.

**Table F-4. Reference Year (2019) Industrial Waste Reduced**

Material	Quantity
Food	62.0
Glass	29.2
Ferrous Metals	47,630.2
Non-Ferrous Metals	1,742.7
Corrugated Cardboard	8,703.2
All Other Paper	1,461.4
Plastics	360.6
Textiles	0.0
Wood	3,147.0
Rubber	11.1
Commingled Recyclables (Mixed)	1,884.4
Ash	0.5
Non-Excluded Foundry Sand	16,125.4
Flue Gas Desulfurization	0.0
Other (Aggregated)	129.2
<b>Recycling Subtotals</b>	<b>81,286.7</b>
Incineration	0.0
<b>Grand Total</b>	<b>81,286.7</b>

**Source(s) of Information:** 2019 ADR Calculation Spreadsheets, 2019 Ohio EPA MRF Reports, 2019 Ohio EPA Compost Report, 2019 ADR Review Forms

**Table F-5. Reference Year (2019) Industrial Material Recovered**

Data Source	Tons
Industrial Survey	74,271
Scrap Yards	0
MRFs	6,857
<b>Total</b>	<b>81,287</b>

Source(s) of Information: Tables F-1 and F-2

## B. Historical Recovery

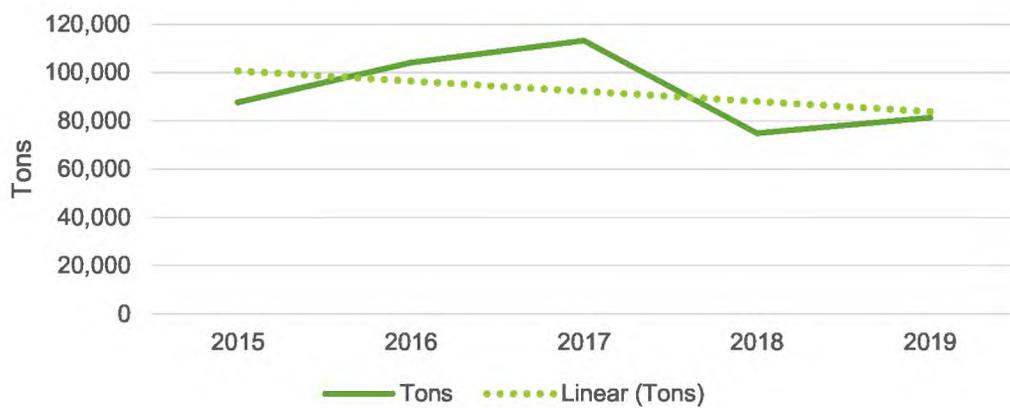
Total recovery includes recycling, composting, and waste reduction from incineration. The District's historical recovery for the industrial sector over a five-year period spanning from 2015 to 2019 is presented in the following table.

**Table F-6. Recycling Program/Source**

Year	Industrial Sector		
	Tons	Annual Percentage Change	Annual Tonnage Change
2015	87,747	----	----
2016	104,112	18.7%	16,365
2017	113,244	8.8%	9,132
2018	74,883	-33.9%	-38,361
2019	81,287	8.6%	6,404
<b>2015-2019 Average</b>			
Average Annual Percentage Change			0.5%
Average Tons Over 5 Year Period			92,255
Average Annual Tonnage Change			-1,615

An examination of the recovery patterns over the five-year period reveals that in 2018, a low of 74,883 tons were recovered and in 2017, a high of 113,244 tons were recovered. Over the five-year period, recovery decreased by an average of 1,615 tons, or 0.5%, annually. The District's recovery of 113,244 tons in 2019 was approximately 12% less than the 2015- 2019 average of 92,255 tons. The following figure presents the District's historical industrial recovery totals from 2015 to 2019.

#### **Historical Recycling Analysis: Industrial Sector (2015-2019)**



#### **C. Industrial Recovery Projections**

The projections for the planning period were based on 2020 tonnage, which was the most recent recycling and waste generation statistics available for the District at the time this appendix was prepared. Tonnage was projected based on the average Projected Change in Employment Percent 2018-2028 using Ohio Job Outlook. This percentage (-65%) was divided in half as waste is not always directly proportional to employment growth. In order to take a conservative approach, and to address the uncertainty associated with determining industrial recycling into the future, the

tonnage reported is projected to decline annually at half the projected change in employment rate. The following table presents the industrial sector recovery statistics and projections from 2021 to 2034.

**Table F-7. Industrial Recovery Projections**

<b>Total</b>	<b>Total</b>
2019	81,287
2020	85,049
2021	84,773
2022	84,498
2023	84,223
2024	83,950
2025	83,677
2026	83,405
2027	83,405
2028	83,405
2029	83,405
2030	83,405
2031	83,405
2032	83,405
2033	83,405
2034	83,405



## **APPENDIX G**

# **WASTE GENERATION**



## APPENDIX G. Waste Generation

### A. Historical Year Waste Generated

The historical waste generation for the District (years 2015 through 2019) is shown in **Table G-1** below. Generation has been calculated based upon the sum of reported disposal and recycling for each year. Overall generation has remained steady. Out of the three sectors, the residential/commercial (R/C) sector was the most stable. The per capita generation rate for total generation experienced a decrease from 10.2 to 9.6 pounds per person per day (PPD).

**Table G-1. Reference Year and Historical Waste Generated**

Year	Population	Residential/ Commercial		Industrial		Excluded (tons)	Total	Per Capita Generation (ppd)	Annual % Change in Total Tons
		Disposal	Recycled	Disposal	Recycled				
2015	309,851	225,458	80,373	60,212	87,747	124,777	578,567	10.23	-
2016	310,798	229,743	80,673	62,385	104,112	73,161	550,074	9.70	-0.05
2017	307,924	233,980	83,205	61,351	113,244	41,856	533,636	9.50	-3.0%
2018	312,994	267,422	79,421	72,177	74,883	70,991	564,894	9.89	5.9%
2019	314,419	274,082	74,908	74,788	81,287	47,800	552,865	9.63	-2.1%

**Source(s) of Information:** Ohio EPA Facility Data Reports and ADR Review Forms, Annual District Reports.

#### Sample Calculations (2019):

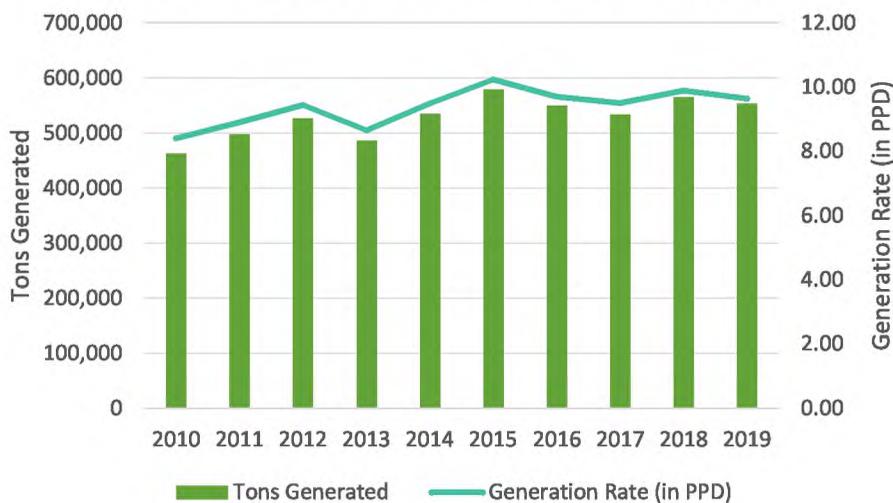
Per capita generation rate =  $((\text{tons generated} \times 2000) \div 365) \div \text{population}$

$9.6 = (552,865 \text{ tons} \times 2,000) \div (365 \times 314,419 \text{ residents})$

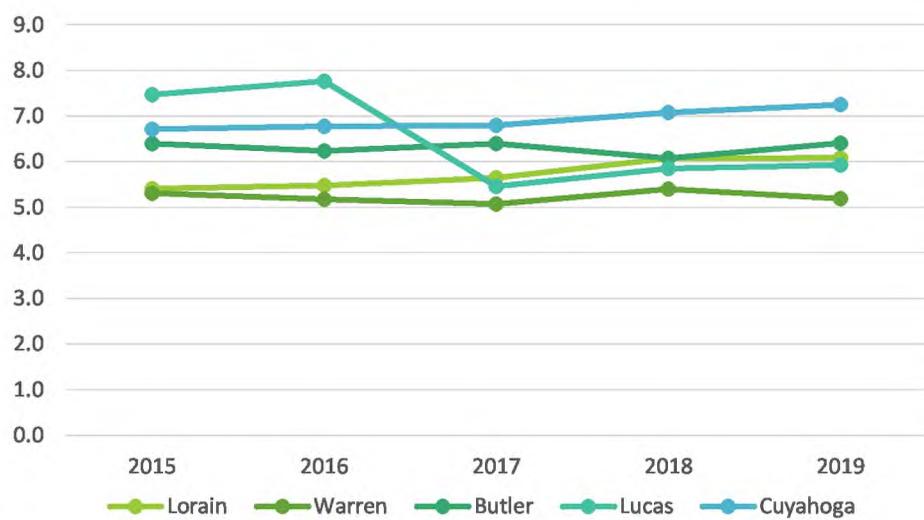
Annual percentage change (R/C)=  $((\text{New year} - \text{old year}) \div \text{old year}) \times 100$

$-2.1\% = (552,865 \text{ tons} - 564,894 \text{ tons}) \div 552,865 \text{ tons}$

**Figure G-1** shows the District's waste generation over a longer historical period. Both the tons generated and the generation rate have stayed steady since 2015.

**Figure G-1. District Total Generation: 2015 - 2019**

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

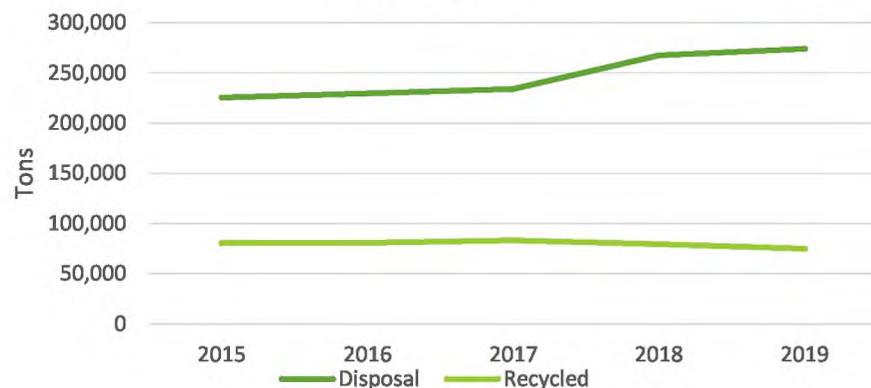
**Figure G-2. MSW Generation Rates for Selected Ohio SWMDs: 2015 - 2019**

Most SMWDs analyzed in **Figure G-2** stayed consistent with generation rates from 2017 to 2019. Generation rates also consider increased data collection in the recycling data. By 2019, it had the third highest generation rate. Out of the comparable SWMDs, Warren SWMD had a significantly lower generation rate than all other SWMDs analyzed. Investigating Warren SWMD's programming may provide opportunities to the District to further reduce its generation rate.

## 1. Residential/Commercial Waste

Total residential/commercial waste generation in the District has increased approximately 43,000 tons or 14% since 2015 as illustrated in **Figure G-3**. Disposal increased approximately 48,500 tons or 21.6% from 2015 to 2019, while recycling decreased about 5,400 tons or 6.8%.

**Figure G-3. District Residential/Commercial Waste Generation: 2015 - 2019**



The following table presents the residential/commercial sector per capita generation rates in pounds per person per day (PPD).

**Table G-2 Residential/Commercial Per Capita Generation Rates: 2015 - 2019**

Year	Daily Per Capita Recycling (PPD)	Daily Per Capita Disposal (PPD)	Daily Per Capita (PPD)
2015	1.4	4.0	5.4
2016	1.4	4.1	5.5
2017	1.5	4.2	5.6
2018	1.4	4.7	6.1
2019	1.3	4.8	6.1

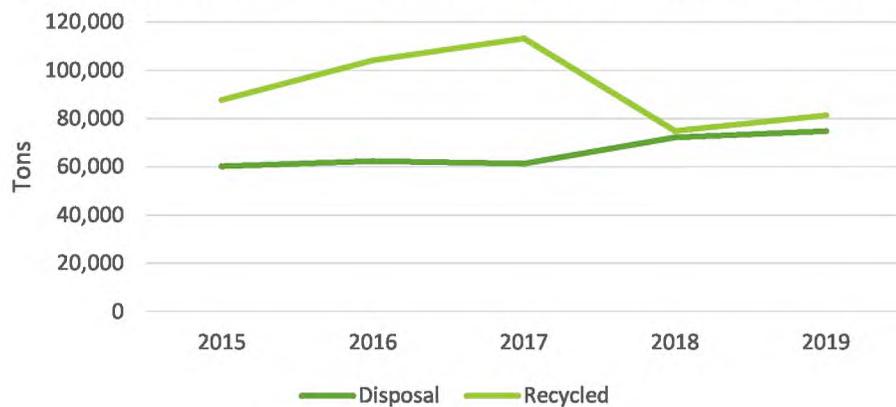
Per capita recycling rates have generally remained the same over the past several years as education and outreach, municipal yard waste composting programs, and District recycling programs have continued. Overall generation increased a modest amount and disposal has increased approximately a half pound per person per day. The greatest change in the management of waste generated in the District is the increase in recycling.

## 2. **Industrial Waste**

Total industrial waste generation has fluctuated between 2015 and 2019. Overall industrial sector generation has generally been constant. While overall generation is consistent, the District does not anticipate that these

totals to fluctuate much in the planning period. Some major industries have closed or have reduced sales, which has impacted the waste generation rates and recycling rates. As demonstrated in the following figure, disposal totals have fluctuated and remained somewhat stagnant.

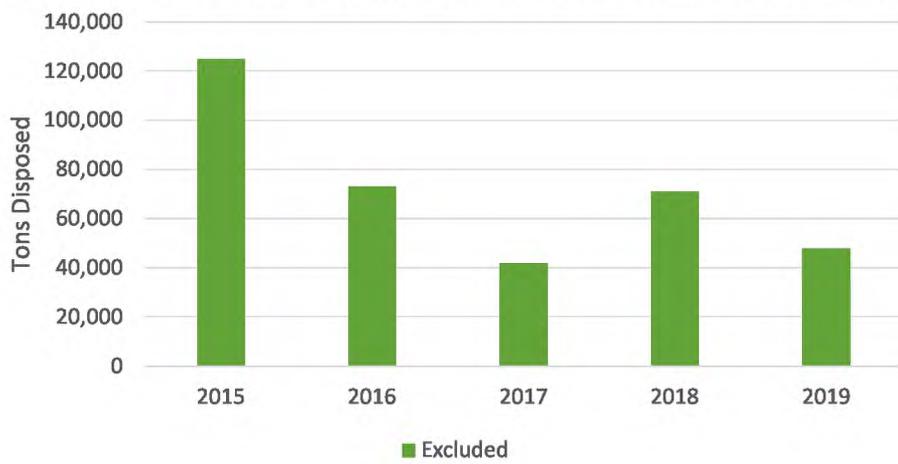
**Figure G-4. District Industrial Waste Generation: 2015 - 2019**



### 3. Excluded Waste

Excluded waste included in the calculation because it was more than 10% of the total waste disposed in the reference year. The following figure indicates that the amount of excluded waste disposed from the District has, in general, remained steady over time.

**Figure G-5. Excluded Waste Disposed in the District: 2015 - 2019**



## B. Generation Projections

Generation 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. These projections presented in detail in Appendices D, E and F, are

summarized below in **Table G-3**. In general, residential/commercial disposal tonnages are expected to increase annually. Recycling for the residential/commercial sector is projected to increase each year of the planning period.

Industrial disposal is projected to increase annually throughout the planning period. Industrial recycling is expected to decrease slightly annually throughout the planning period.

Excluded waste is projected to remain constant from 2019 of 71,717 tons annually throughout the planning period.

**Table G-3. Generation Projections**

Year	Population	Residential/ Commercial		Industrial		Excluded Waste	Total Tons	Per Capita Generation (ppd)	Annual % Change in Total Tons
		Disposal	Recycle	Disposal	Recycle				
<b>2019</b>	314,419	274,082	74,908	74,788	81,287	47,800	552,866	9.63	-----
2020	315,407	253,998	63,913	76,716	85,049	71,717	551,393	9.58	-0.3%
2021	316,395	259,545	71,988	78,693	84,773	71,717	566,716	9.81	2.8%
2022	317,383	265,210	73,281	80,721	84,498	71,717	575,426	9.93	1.5%
2023	318,370	270,996	73,195	82,802	84,223	71,717	582,933	10.03	1.3%
2024	319,358	276,906	74,542	84,936	83,950	71,717	592,050	10.16	1.6%
2025	320,346	282,941	74,443	87,124	83,677	71,717	599,903	10.26	1.3%
2026	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	1.6%
2027	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	0.0%
2028	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	0.0%
2029	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	0.0%
2030	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	0.0%
2031	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	0.0%
2032	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	0.0%
2033	321,280	289,058	75,838	89,370	83,405	71,717	609,388	10.39	0.0%



## **APPENDIX H**

# **STRATEGIC EVALUATION**



## APPENDIX H. Strategic Evaluation

The state solid waste management plan establishes recycling and reduction goals for solid waste management districts. At the time of the District's 2019 Plan Update, the 2009 State Plan was in effect. Programs and strategies approved by Ohio EPA in the 2019 Plan are evaluated in Appendix H.

This Appendix is divided into thirteen (13) separate analyses or sections as directed in Format v4.1. The status of the reduction and recycling efforts were evaluated in the context of factors presented in the thirteen analyses described in Format v4.1. Some of the more extensive sections are further subdivided, such as Section 1.

The following table provides a directory for the analyses within Appendix H.

<b>SECTION H-1 (page H-3)</b>	•RESIDENTIAL RECYCLING INFRASTRUCTURE ANALYSIS
<b>SECTION H-2 (page H-24)</b>	•COMMERCIAL SECTOR ANALYSIS
<b>SECTION H-3 (page H-28)</b>	•INDUSTRIAL SECTOR ANALYSIS
<b>SECTION H-4 (page H-30)</b>	•RESIDENTIAL/COMMERCIAL WASTE COMPOSITION ANALYSIS
<b>SECTION H-5 (page H-37)</b>	•ECONOMIC INCENTIVE ANALYSIS
<b>SECTION H-6 (page H-39)</b>	•RESTRICTED AND DIFFICULT TO MANAGE WASTE ANALYSIS
<b>SECTION H-7 (page H-45)</b>	•DIVERSION ANALYSIS
<b>SECTION H-8 (page H-49)</b>	•SPECIAL PROGRAM NEEDS ANALYSIS
<b>SECTION H-9 (page H-51)</b>	•FINANCIAL ANALYSIS
<b>SECTION H-10 (page H-56)</b>	•REGIONAL ANALYSIS
<b>SECTION H-11 (page H-59)</b>	•DATA COLLECTION ANALYSIS
<b>SECTION H-12 (page H-62)</b>	•EDUCATION AND OUTREACH ANALYSIS
<b>SECTION H-13 (page H-66)</b>	•PROCESSING CAPACITY ANALYSIS

## SECTION 1: RESIDENTIAL RECYCLING INFRASTRUCTURE ANALYSIS

This evaluation of the District'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 District'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, and thrift stores. The District's role instituting this network of available opportunities varies.

### A. Curbside Evaluation

This analysis takes a macro look at the residential infrastructure to identify service gaps and then further evaluates the system parts to evaluate performance, service levels, and cost.

One of the first metrics analyzed is recycling collection infrastructure. The District's recycling infrastructure relies on curbside recycling programs for residential recycling. All 34 political jurisdictions in the County have curbside recycling, achieving county-wide curbside access. An important aspect in achieving countywide curbside is the Consortium for Waste Services. Twelve political jurisdictions have joined the consortium which provided savings in contracted services and expanded service offerings.

To evaluate the curbside recycling programs' performance, one of the metrics analyzed was historic tons collected. Table H-1.1 shows the tons collected curbside by non-subscription and subscription programs. The collected curbside tonnage has declined from 2017 to 2020 by 24%.

**Table H-1.1 Historical Curbside Recycling Recovery**

	2017	2018	2019	2020	Percent Change
<b>Non-Subscription (27 political jurisdictions)</b>	19,345	18,046	16,445	14,752	-24%
<b>Subscription (7 political jurisdictions)</b>	1,491	1,303	1,340	1,075	-28%
<b>Total</b>	<b>20,836</b>	<b>19,349</b>	<b>17,785</b>	<b>15,827</b>	<b>-24%</b>

Source: Lorain County Annual District Reports (2017 – 2021)

Note: The number of non-subscriptions and subscriptions program changed when Oberlin City switched their non subscription program to subscription in 2020.

When looking at program attributes, most curbside programs are implementing best practices. A strength is automated non-subscription recycling, where residents do not have to sign up for recycling collection (whether they participate or not). The other strength of the program is the wide practice of Pay-As-You-Throw (PAYT) structures. In PAYT, the more trash that a household produces and

sets out, the more the household will pay while recycling is no charge. These structures incentivize the household to recycle more and waste less. This economic incentive is analyzed later in section 5.

The District would need to conduct additional research to determine the reasons behind the decline. It could be a result of less participation, or the PAYT rate structures may no longer be incentivizing enough. Lack of new education materials and promotion can also contribute to 'stale' recycling rates.

A second metric analyzed is the per capita recycling rate or the pounds of recyclable materials collected per person. According to The Recycling Partnership's (TRP) 2016 study, on average, Americans recycle 143 pounds per person per year via curbside recycling<sup>1</sup>. In their survey, TRP found that high performing communities captured approximately 160 pounds per person per year and that the vast majority of those communities had universal (no sign up required) single-stream cart-based curbside programs with automatic collections. Additionally, high performing communities tend to have local governments that are highly engaged in programs that incentivize waste diversion and recycling, such as mandated recycling with trash services or PAYT programs. For reference, on average American's generate 320 to 400 pounds of recyclables per year per capita.

**Table H-1.2 Historical Non-Subscription Per Capita Curbside Recycling**

Community	2017	2018	2019	2020
<b>Pounds per Person</b>				
Amherst City	176	156	157	162
Amherst Township	141	137	135	141
Avon City	141	119	118	121
Avon Lake City	163	141	129	141
Brighton Township	134	127	129	126
Carlisle Township	153	136	113	163
Eaton Township	153	149	147	149
Elyria City	116	97	74	17
Elyria Township	153	132	106	159
Grafton Township	154	147	150	152
Grafton village	85	86	98	179
Huntington Township	106	100	116	103
LaGrange Village	232	215	209	262
Lorain City	74	84	70	66

<sup>1</sup> The 2016 State of Curbside Report by The Recycling Partnership: <https://recyclingpartnership.org/wp-content/uploads/2018/05/state-of-recycling-report-Jan2017.pdf>

	2017	2018	2019	2020
New Russia Township	189	171	200	160
North Ridgeville City	156	142	133	122
Oberlin City	186	231	238	45
Penfield Township	129	140	225	204
Pittsfield Township	145	138	135	143
Rochester Village	147	142	116	105
Rochester Township	139	131	119	120
Sheffield Village	132	117	104	134
Sheffield Lake City	143	111	106	169
Sheffield Township	123	133	120	143
Vermilion city	360	278	220	166
Wellington Village	157	165	154	156
Wellington Township	307	327	328	117
<b>Average</b>	<b>158</b>	<b>150</b>	<b>146</b>	<b>137</b>

Source:

U.S. Census <https://www.census.gov/data/tables/time-series/demo/popest/2010s-total-cities-and-towns.html>

U.S. Census <https://www.census.gov/quickfacts/loraincountyohio> and estimated population for each community

Lorain County Annual District Reports (2017 – 2021)

Table H-1.2 lists each non-subscription community and the per capita recycling rate. The per capita rate is highlighted in Table H-1.2 to signify when a community achieved greater than the benchmarked 160 pounds per person per year. In 2020, 7 of the political jurisdictions measured at or above the benchmark.

**Table H-1.3 Historical Subscription Per Capita Curbside Recycling**

Community	2017	2018	2019	2020
<b>Pounds Per Person</b>				
Brownhelm Township	118	100	173	166
Camden Township	163	181	233	157
Columbia Township	136	123	113	79
Henrietta Township	248	193	181	172
Kipton Village	156	117	144	182
LaGrange Township	116	93	91	84
South Amherst Village	316	262	257	177
<b>Average</b>	179	153	170	145

Source:

U.S. Census <https://www.census.gov/data/tables/time-series/demo/popest/2010s-total-cities-and-towns.html>

U.S. Census <https://www.census.gov/quickfacts/loraincountyohio> and estimated population for each community

Lorain County Annual District Reports (2017 – 2021)

Table H-1.3 lists the subscription community and the per capita recycling rate. Population for the entire political jurisdiction was used to calculate the pounds per person (not number of subscribers). The per capita rate is highlighted in Table H-1.3 to signify when a community achieved greater than the benchmarked 160 pounds per person per year. In 2020, 4 of the political jurisdictions measured at or above the benchmark.

## B. Drop-off Evaluation

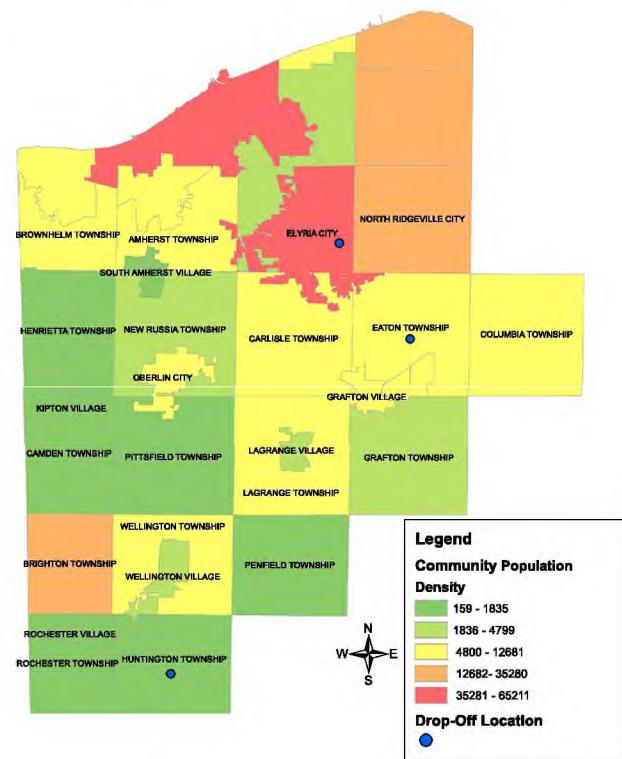
The District provides one drop-off for single stream recycling located at the Collection Center. This drop-off serves as an opportunity for overflow, multi-family, or in areas where subscription curbside is offered. The Collection Center drop-off is located in Elyria which is one of the denser population centers in the County. See Figure H-1.1.

One metric analyzed to evaluate the performance of the drop-offs is historic tons collected. The single stream materials collected at the Collection Center have fluctuated over the time frame between 2017 to 2020 in terms of tons recovered. In 2020, 704 tons of materials were recycled via the drop-off.

## C. Take Back Retailers

Buybacks, take-back retailers, reuse centers, and thrift stores are other outlets for diversion. The District surveys these businesses; however, if a survey is not returned, the recovery of materials to be recycled or reused is not captured. As a best practice, in addition to the Collection Center, the District could maintain a list of scrap yards, buybacks and take-back retailers, as well as other collection points for materials such as batteries, used oil, etc. on the District's website for residents to be able to use.

Figure H-1.1., Drop-Off Collection Locations



## D. Reuse and Thrift Stores

Reuse and thrift stores are available throughout the county. Reuse infrastructure heavily falls on non-profits and their development of reuse centers. The District is not involved and does not plan to be involved in developing reuse infrastructure. An area of focus that could be expanded is the District's role to encourage support of reuse and thrift stores. Additionally, education to address waste minimization for residents and businesses could be enhanced and added to the website. Creation and promotion of a reuse and repair network. The District could work with reuse/thrift stores and other take-back retailers to develop and publish a resource guide for take-back and donating materials.

## E. Food Banks and Food Donation Centers

The US EPA food recovery hierarchy, shown in Figure H-1.2, moves from preferred to least preferred food recovery methods reinforcing the highest and best use of food waste. The top management hierarchy is reducing waste at the source. The second is feeding hungry people, where food banks and food donation centers fall. The District does not actively serve a role in the collection or processing of food recovery, but there are synergies where the District is helping to develop infrastructure. As approximately 10% of the County's population has an income level below the poverty level<sup>2</sup>, amplifying recovery for food banks and food donation has social and waste reduction benefits. Could the District serve an organizational role to bring all stakeholders to the table to explore the management methods available in each county? Could the District develop a network? Could the District provide educational support? These are avenues to explore as the Policy Committee looks at programming in the 2023 Plan.

## F. Conclusions/Findings

The District is averaging about a 23% diversion rate. One area to focus improvements is reviewing each political jurisdictions PAYT rate structure. It may be that a greater economic incentive is needed to encourage more diversion. If



Figure H-1.2 U.S EPA's Food Recovery Hierarchy

<sup>2</sup> Ohio Office of Research. "Ohio County Profiles, Lorain County." 2021.

each community reached 160 pounds per person recycling rate the District's diversion rate would increase.

Glass is accepted in the program, however, the management of the glass at the MRF is not marketing the glass to end markets. There may be opportunities to work with the processor or find another processor that markets glass to end processors.

Education/outreach are a huge part of any program's success and also need evaluation for best practices.

While take-back retailers, reuse centers, food donation and food banks offer a collection style of service to divert away from the landfill they need little support from the District in their program operations. Since they do support diversion and reduction, the District should explore whether they can serve a role to help promote and educate residents about the values of waste minimization, repair, and reuse.

Opportunities to explore as programs for this 2023 Plan Update:

- PAYT Study (new program) – Setting a goal to review all PAYT curbside program rate structures.
  - Engage community stakeholders and gather rate and contract end dates.
  - Conduct a community interest survey of citizens/households.
  - Provide technical assistance to calculate the rate differential for each PAYT program.
  - Engage with community stakeholders to report findings of study.
- Education/Outreach – Setting several goals 1) change behavior and cultural of citizens to move beyond “take, make, waste” system 2) increase materials recovered per capita 3) decrease contamination in curbside bins 4) enhance take-back retailers, reuse centers, food donation and food bank infrastructure
  - Develop an outreach plan to achieve each of the 4 goals identified above.
  - Develop a resource guide to donating.
  - Add available outlets for diverting materials on the District website.
  - Continue to enhance District social media outreach.

## SECTION 2: COMMERCIAL/INSTITUTIONAL SECTOR ANALYSIS

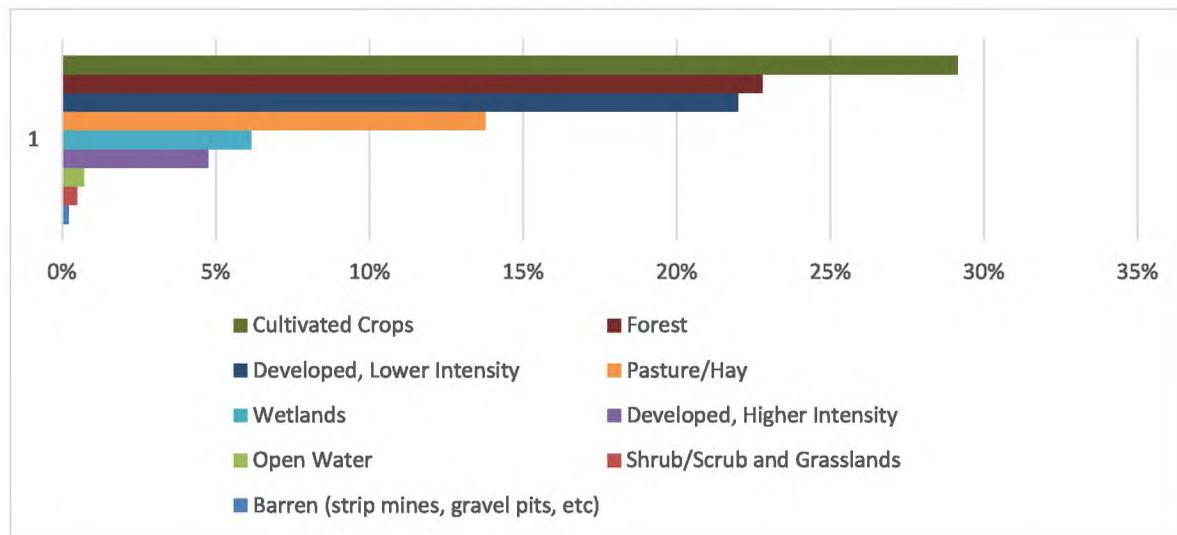
### A. Commercial/Institutional Establishments

Numerous commercial businesses and institutional organizations may have multiple properties within Lorain County and many of these make solid waste management decisions independent of their parent business or organization. Therefore, for planning purposes, the district defines "establishment" as the physical location of a commercial/institutional property. Based on this definition, there were approximately 9,000 commercial/institutional establishments in Lorain County during the reference year.

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

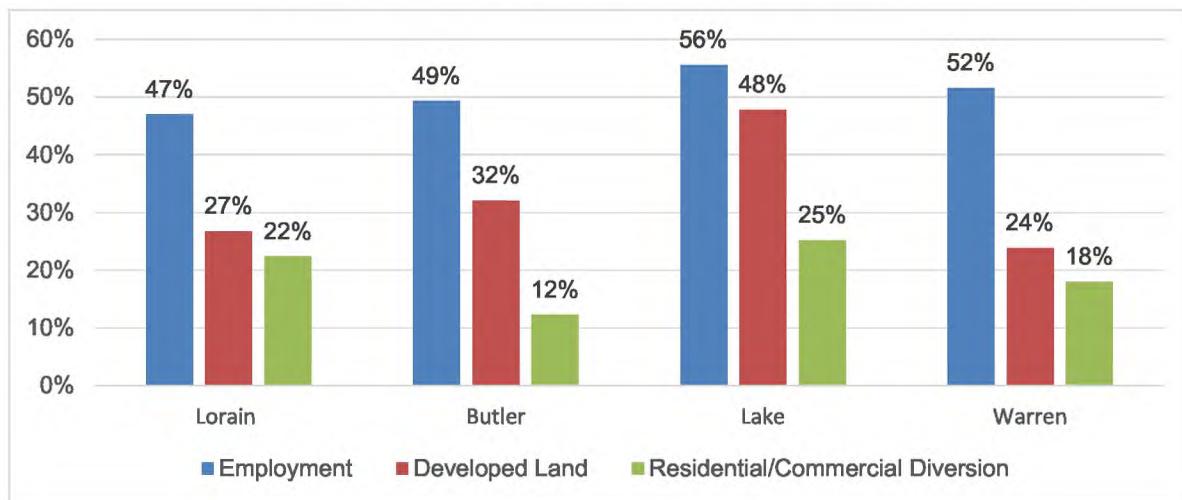
### B. Geographical

What is rural and urban is defined after each decennial census using specific criteria related to population thresholds, density, distance, and land use. In Lorain County the land use is predominantly rural (figure H-2.1), with cultivated crops covering 29% and land forested area 22%. Roughly 22% is Lower Intensity developed area. The population density is about mid-level (613 person/square mile) (2019 Ohio County Profiles for Lorain County., n.d.), with the most densely populated community being City of Lorain. The City of Lorain is an urbanized cluster where roughly 21% of the population resides. The largest cities by population are City of Elyria, City of North Ridgeville, and Avon Lake City. Most of the commercial businesses are located within Lorain and Elyria cities.

**Figure H-2.1 Land Cover**

## C. Labor Force

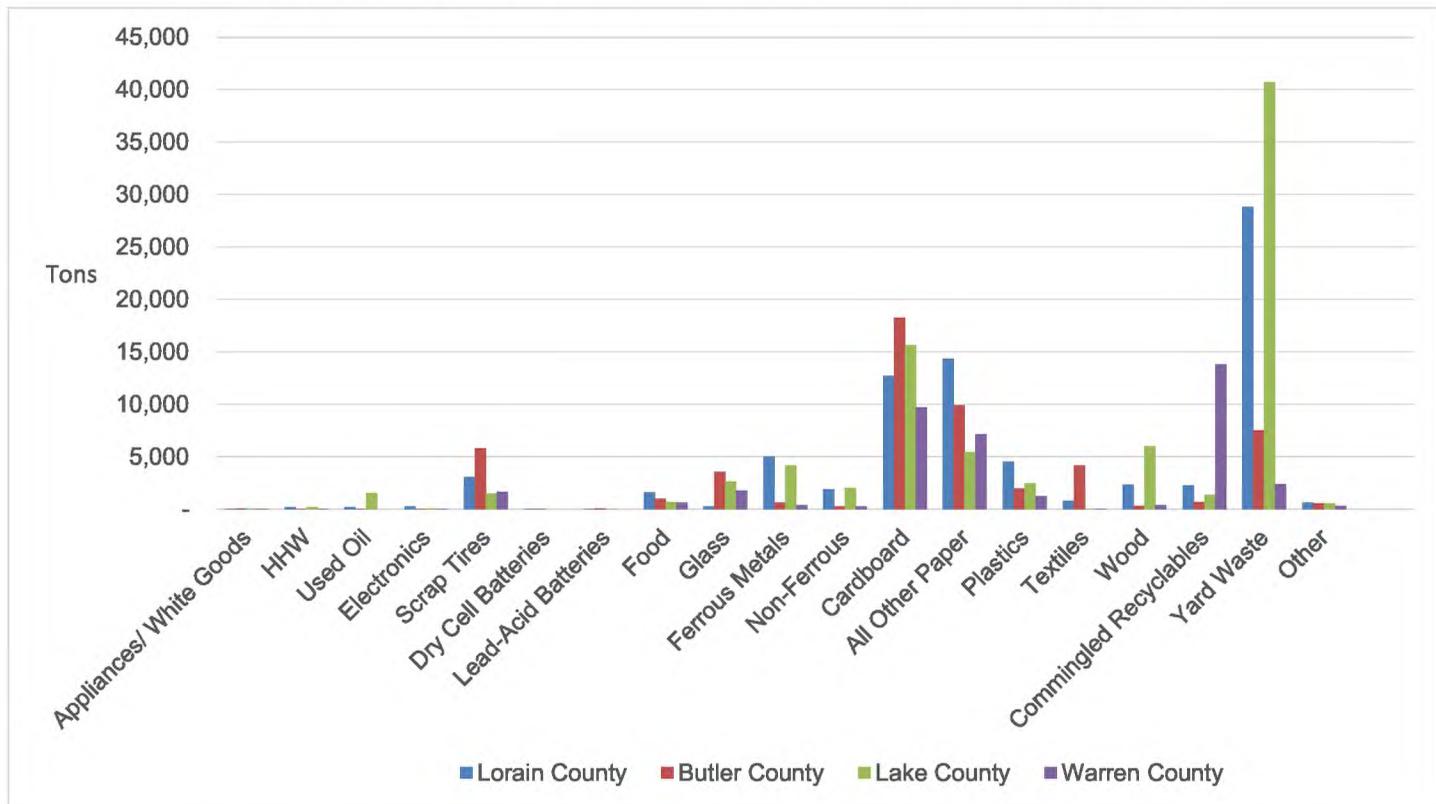
Three other single county solid waste districts were found with similar labor force statistics. Butler County, Lake County, and Warren County all share similar workforce and demographic statistics. Butler and Warren demonstrate close to 50% of employment where Lorain is at 47%. Land Use is also similar where Lorain, Butler, and Warren are between 20-30%, while Lake is a little higher at 48%. Due to similarities in demographics, there was a comparison of residential/commercial diversion rates. As shown in figure H-2.2, Lorain shares similar diversion rates with Lake and Warren counties while Lake is slightly higher than Lorain by 3%, and Butler exhibits the lowest diversion by 12%.

**Figure H-2.2 Correlations with other SWMD**

#### D. Diversion

All Districts were analyzed by specific material diverted for the reference year, 2019. Based on the analysis of the districts in figure H-2.3, the most notable materials diverted are cardboard, all other paper, and yard waste. In all three of these materials Lorain demonstrates high diversion. Like Lorain, Warren has county-wide curbside.

**Figure H-2.3 Residential/Commercial Diverted Material (2019)**



As shown in Table H-2.1, the majority of commercial/institutional businesses in Lorain County are Health care and Social Assistance, Retail Trade, and Businesses Providing Other Services.

**Table H-2.1 Estimated Commercial Stream Recycling (2019)**

Source of Commercial Recycling Data	Quantities (Tons)
Commercial Survey	20,299.00
Ohio EPA Commercial Data	8,945.00
Ohio EPA Scrap Tire Data	3,051.00
Ohio EPA Composting Data	15,740.00
Material Recovery Facility	9,873.00
Lorain County Collection Center	1,027.00
<b>Total Commercial Recycling</b>	<b>58,935.00</b>

Table H-2.1 shows the source of recorded diversion and gives the breakdown of how much material was recorded as diverted. This will help guide the district in understanding how to improve their data collection by knowing their main sources. Data was collected from commercial surveys, brokers, haulers, and Ohio EPA sourced data from commercial businesses, Lorain County Collection Center, and Material Recovery Facilities (MRFs).

**Table H-2.2 Comparison Residential/Commercial Recycling**

Recycling Data	Quantity (tons)	Percentage
Residential and Commercial Recycling	79,051	
Estimated Residential Only	20,114	25%
Estimated Commercial Only	58,937	75%

As estimated in Table H-2.2, 25% of total diversion is in the residential sector and 75% is in the commercial sector.

#### E. Commercial/Institutional Establishments

There are approximately 9,000 commercial/institutional establishments in Lorain County during the reference year. Table H-2.3 shows the number of commercial/institutional establishments within each North American Industry Classification System (NAICS) code.

**Table H-2.3 Commercial/ Institutional Establishment Statistics**

NAICS Code	NAICS Description	Number of Commercial/Institutional Establishments
42	Wholesale Trade	252
44-45	Retail Trade	1,157
48-49	Transportation and Warehousing	143
51	Information	151
52	Finance and Insurance	482
53	Real Estate and Rental/Leasing	392
54	Professional, Scientific, and Technical	692
55	Management of Companies and Enterprises	10
56	Administrative and Support and Waste Management and Remediation Services	334
61	Educational Services	278
62	Health Care and Social Assistance	2667
71	Arts, Entertainment, and Recreation	220
72	Accommodation /Food Service	610

NAICS Code	NAICS Description	Number of Commercial/Institutional Establishments
81	Other Services (Except Public Administration)	1321
92	Public Administration	466

Source: U.S. Business Database. Rep. Reference USA. Web. 7 Jun 2022

## F. Functionality

Commercial businesses, schools and universities, government agencies, and event venues all rely on private sector haulers for their recycling programs. Businesses can request recycling services from local brokerage companies. The District keeps an updated list of local haulers that provide recycling services. The haulers will then transport the diverted materials to material recovery facilities where the material will then be processed to sell to manufacturers. The District advertises free waste auditing services for commercial and industrial businesses on their website. The District began this program in 2016 and attempts to complete at least one waste audit a year. The District has been able to complete one or two audits per year since their last plan update. For the main areas of focus on improvement, the sector has been organized into the following categories.

### **Events/Venues and Parks**

This is currently a gap for the District in terms of implementing recycling bins at local beach parks around the county. These local beach parks are a great opportunity to implement recycling services due to the large number of tourists traveling there during the summer months. There is currently no infrastructure to support this, and research to determine any possible challenges that there might be. The District could also compare it to other similar districts that have similar park geography and establish a plan for the program.

### **Commercial Businesses**

Commercial businesses have the opportunity to contract with a private hauler for recycling services. The District provides technical assistance to help commercial businesses participate in recycling programs. There are adequate service providers that accept general recycling or provide collection and processing services to the business sector. The District receives recycling data from most of the largest generators.

### **Schools and Institutions**

This analysis will be focusing only on public schools and universities due to the large number of school buildings in the District. Private schools will not be included in this analysis. Lorain County has 15 total school districts, 80 public school buildings at an estimated enrollment of 42,444 students during the reference year (2019). There are a total of 2 universities, 1 vocational school, and 4 other alternative educational institutions. The total degrees awarded in the reference year were 3,990. The two

largest districts in Lorain County are in the most densely populated cities, Lorain, and Elyria. There are a total of 33 school buildings out of the 80 schools that received a paper retriever bin for recycling. There are three school districts that have paper retriever bins at every school building in their district, which are Midview Local School District, North Ridgeville City School District, and Oberlin City Schools. The other school districts only have about half or less of their school buildings supplied with a paper retriever bin, and Lorain City Schools only has one school building with a paper retriever bin. Currently Lorain County Community College and Oberlin College have recycling programs, but they did not respond to commercial recycling survey in 2019.

Currently only 41% of the public-school buildings have access to a paper retriever bin. This is an opportunity to increase recycling at these school buildings by implementing more paper retriever bins, along with conducting a survey in order to understand more materials that the schools are recycling, their barriers, and how the District can help overcome them.

Table H-2.4 illustrates the list of all the public schools in Lorain County and which school buildings have access to a paper retriever.

**Table H-2.4 School Buildings and Recycling Programs**

Public Schools District	Average Enrollment	Paper Retriever/Recycling Program
<i>Amherst Exempt Village Schools</i>	3542	
Amherst Junior High School		
Marion L Steele High School		
Powers Elementary School		
Walter G. Nord Middle School		
<i>Avon Lake City School District</i>	3781	
Avon Lake High School		X
Eastview Elementary School		
Erieview Elementary School		X
Learwood Middle School		X
Redwood Elementary School		
Troy Intermediate Elementary School		
Westview Elementary School		X
<i>Avon Local School District</i>	4331	
Avon Early Learning Center		
Avon East Elementary School		
Avon Heritage Elementary School		
Avon High School		
Avon Middle School		
<i>Clearview Local School District</i>	1644	
Clearview High School		X
Durling Middle School		X

Public Schools District	Average Enrollment	Paper Retriever/Recycling Program
Vincent Elementary School		
<i>Columbia Local School District</i>	831	
Columbia High School		
Columbia Middle School		
Copopa Elementary School		
<i>Elyria City School District</i>	6093	
Crestwood Elementary School		
Eastern Heights Middle School		X
Ely Elementary School		X
Elyria Early Childhood Center		
Elyria High School		
Franklin Elementary School		
Mckinley Elementary School		
Northwood Middle School		X
Oakwood Elementary School		
Prospect Elementary School		X
Westwood Middle School		X
Windsor Elementary School		X
<i>Firelands School District</i>	1626	
Firelands Elementary School		
Firelands High School		
South Amherst Middle School		X
<i>Keystone Local School District</i>	1470	
Keystone Elementary School		
Keystone High School		X
Keystone Middle School		
<i>Lorain City School District</i>	6416	
Admiral King Elementary School		
Frank Jacinto Elementary		
Garfield Elementary School		
General Johnnie Wilson Middle School		
Hawthorne Elementary School		
Helen Steiner Rice ES		
Larkmoor Elementary School		
Longfellow Middle School		
Lorain High School		X
New Beginnings		
Palm Elementary School		
Southview Middle School		
Stevan Dohanos Elementary School		

Public Schools District	Average Enrollment	Paper Retriever/Recycling Program
Toni Wofford Morrison ES		
Washington Elementary School		
<i>Midview Local School District</i>	2924	
Midview East Intermediate School		X
Midview High School		X
Midview Middle School		X
Midview North Elementary School		X
Midview West Elementary School		X
<i>North Ridgeville City School District</i>	4387	
Liberty Elementary School		X
North Ridgeville Academic Center		X
North Ridgeville Early Childhood Learning Community		X
North Ridgeville High School		X
Ranger High Tech Academy		X
<i>Oberlin City Schools</i>	963	
Eastwood Elementary School		X
Langston Middle School		X
Oberlin High School		X
Prospect Elementary School		X
<i>Sheffield-Sheffield Lake School District</i>	1653	
Brookside High School		
Brookside Intermediate School		
Brookside Middle School		
Forestlawn Elementary		
Knollwood Elementary School		
<i>Vermilion City School District</i>	1775	
Vermilion High School		X
Sailorway Middle School		X
Vermilion Elementary		
<i>Wellington Exempted Village Schools</i>	1008	
McCormick Middle School		
Wellington High School		X
Westwood Elementary School		X

## G. Conclusions/Findings:

- Schools
  - Consider conducting a survey to gather more information on what materials schools are currently recycling outside of the paper retriever bins. Learn

- more about the school Districts and develop relationships with them to discover how the District can help manage recycling programs.
- Develop partnership with Lorain Community College and Oberlin College. Both institutions currently have recycling programs, but do not report that information to the District. These institutions could play a vital role in the District's recycling initiatives.
- Commercial Business
  - Promote and encourage commercial businesses to require their hauler to provide the tonnages of how much they recycle. Businesses can enforce this in their contract with the hauler, so the hauler is required to provide the business with this information.
  - Start a commercial consortium that would be serviced by one hauler. This could be implemented in the more developed areas where businesses are more clustered, such as Lorain, Elyria, North Ridgeville, and Avon Lake City.
  - Initiate a recognition award for businesses that are participating in recycling programs. This would help encourage other surrounding businesses to become active in the program.
- Parks
  - Research other districts that have recycling bins installed in parks to see what challenges they might have faced, necessary infrastructure, and how they can best serve these away from home areas.

## SECTION 3: INDUSTRIAL SECTOR ANALYSIS

The analysis of the industrial sector determines if existing programs offered through the District are adequate to serve that sector and determine if additional programs are needed to support the manufacturing entities.

### A. Evaluation

There were approximately 470 industrial businesses operating in Lorain County during the reference year (2019). Most of the industrial establishments only operate out of one location. Table H-3.1 lists the top industrial sector employers in Lorain County by employee size.

**Table H-3.1 Top Industrial Employers**

Company	Employee Size
Ford Motor Company	2,296
Ridge Tool Company	950
Forest City Technologies Inc	540
Elyria Foundry Inc	501
Avient Corporation	500
Riddell Sports	500
Nordstrom Nordson	400
AJ Rose Manufacturing Company	350
Bendxi Commercial Vehicle	350
Nelson Stud Welding Inc	240
Parker Hydraulic Valve Division	240
Camaco LLC	235
Meijer Bakery	220
Crane Co	200
Shiloh Industries	200
Nylonge Corp	180
BASF Catalyst LLC	175
Duraline	150
Beckett Air Inc	130

Source: U.S. Business Database. Rep. Reference USA. Web. 7 Jun 2022

The District's industrial sector businesses are largely concentrated in the city of Elyria (136 out of 473). The top five communities with the largest presence of Industrial businesses are below in Table H-3.2.

**Table H-3.2- Largest Industrial Communities**

Community	Number of Industries
Elyria	136
Lorain	55
North Ridgeville	46
Avon	41
Avon Lake	27

Source: U.S. Business Database. Rep. Reference USA. Web. 7 Jun 2022

According to information from the Ohio Office of Research "County Profiles, Lorain County". 2021 Edition. There was a 6.4% decrease in Manufacturing establishments in the County between 2013 and 2019. This sector had the largest decrease between that time compared to other private sector establishments.

## B. Landfill Diversion

In 2019, industrial businesses recycled approximately 81,213 tons of waste. The District diverted 52% from the landfill. The tons of industrial waste recycled, including the types of materials recycled, are discussed in more detail in the section "Diversion Analysis". Figure H-3.1 provides the breakdown of the type of recyclables recovered during the reference year. Ferrous Metals comprise most of the industrial sector's recyclables, while Non-Exempt Foundry is at 19.8% and Cardboard is 10%.

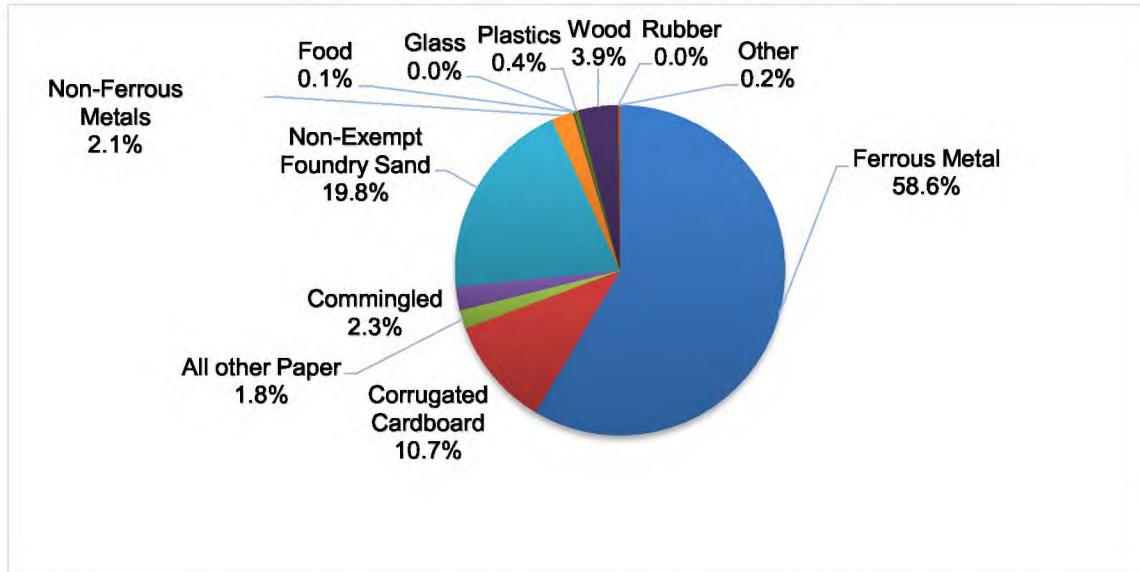
**Figure H-3.1 Industrial Sector Recyclables**

Table H-3.3 shows the quantity of material diverted by the industrial sector between 2017 and 2021.

Table H-3.3 Industrial Recycling by Material

Materials	2016	2017	2018	2019	2020	2021
Ferrous Metal	70,337.64	80,832.92	40,264.82	47,630.30	47,570.16	47,452.00
Non-Exempt Foundry	16,000.00	16,151.20	16,125.36	16,125.36	16,125.36	16,125.36
Cardboard	8,394.40	8,804.51	8,683.38	8,703.15	10,746.01	10,833.95
Wood	4,234.72	4,008.76	3,694.61	3,146.98	2,206.66	2,230.36
Non-Ferrous Metals	1,717.88	1,008.41	1,375.20	1,742.72	5,681.39	7,222.87
Commingled	1,419.34	1,227.00	1,781.02	1,884.36	687.75	1,592.53
Tires	-	-	-	-	-	-
Mixed Paper	642.87	412.91	1,692.34	1,461.32	1,365.82	1,358.75
Plastics	357.74	156.94	245.44	360.59	289.54	293.00
Glass	21.07	34.06	26.82	29.15	7.83	7.33
Batteries	-	-	-	-	-	-
Food Waste	-	-	-	-	62.00	63.00
Textiles	-	-	-	-	-	-
Rubber	-	-	-	-	1.91	1.91
Ash (recycled ash only)	-	-	-	-	-	-
Other	986.46	606.89	994.02	129.15	302.58	0.96
<b>Total:</b>	<b>104,112.12</b>	<b>113,243.60</b>	<b>74,883.01</b>	<b>81,213.08</b>	<b>85,047.01</b>	<b>87,182.02</b>

As demonstrated by Table H-3.3, there have been fluctuations in recycling quantities during the last five years. Ferrous metals demonstrated one of the largest fluctuations. There was a large decrease in 2018, which was due to a large decrease from a high generating company. A large variable for fluctuations throughout the years is whether or not an industry responds to the District's recycling survey. Other factors include economic factors and energy/fuel pricing, and COVID-19.

While some information is gathered through the annual voluntary recycling survey, there are still challenges from industries disclosing recycled data and collecting responses from surveys. The District conducts annual surveys reaching out to a list of industrial businesses to gather their recycling data. The number of responding industries has fluctuated through the years. As shown in Table H-3.4.

**Table H-3.4 Survey Responding Industries**

<b>Survey Year</b>	<b>Number of Respondents</b>
2017	18
2018	11
2019	42
2020	46
2021	35

The District is available as a resource for the industrial generators in the County because they offer waste audits, recycling seminars, Assisting with different grants such as the Ohio EPA Market Development Grants and the Recycling Revolving Loan Grant. Maintaining and establishing relationships within this sector is a challenge because waste streams generated are specialized, and businesses have on-site employees to manage the waste stream. It has become exceedingly more difficult with the rise of the COVID-19 pandemic to reach specific industries and large turnovers in companies have become more common and contacts lost.

The District offers free Waste Audits for industrial businesses in the County at business request. There have not been any waste audits for the industrial sector conducted in the last 3 years.

## C. Conclusions/Findings

The District has not prioritized the industrial sector in previous years for increasing recycling efforts. There are several potential opportunities which the District could consider:

- The District can promote Ohio EPA's Material Marketplace
- Obtaining and maintaining up-to-date contact information for staff managing the recycling program in hopes to achieve responses to surveys
- Connecting with local economic and industrial business partners to determine the desire for a materials management working group
- Promoting the EPA's Sustainable Management of Construction and Demolition Materials<sup>3</sup> webpage to the District's construction companies.

<sup>3</sup> Source: Sustainable Management of Construction and Demolition Materials. <https://www.epa.gov/smm/sustainable-management-construction-and-demolition-materials>.

## SECTION 4: RESIDENTIAL/COMMERCIAL WASTE COMPOSITION

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

### A. Residential/Commercial Sector

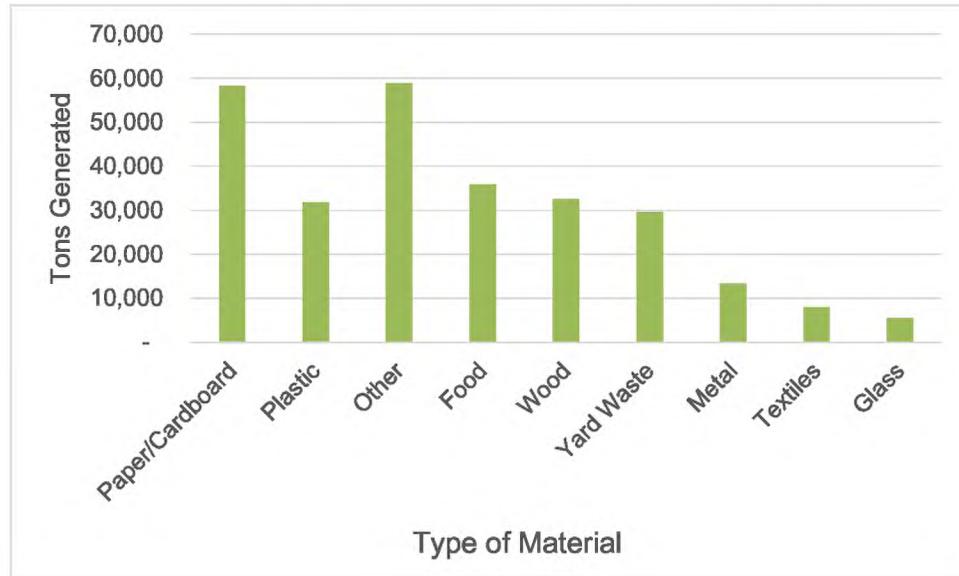
In 2019, the District generated 274,082 tons of residential and commercial waste, 22% of which was recycled. The diversion rate of the district has fluctuated from 22%- 30% within the past four years (2017-2020). To better understand the material, which is not being diverted, roughly 78%, there was a waste characterization analysis which compared the district data to Ohio EPA's waste characterization data from their report, *"Economic Impact Potential of Recycling in Ohio"*.

Presented in Table H-4.1, are the average percentages that were collected from the Ohio EPA's waste characterization study. Without a specific waste composition study from Lorain County, it is not possible to know the exact percentage of material that is entering the landfill. This analysis applies the results from the Ohio EPA study to capture a per material estimate of landfill material.

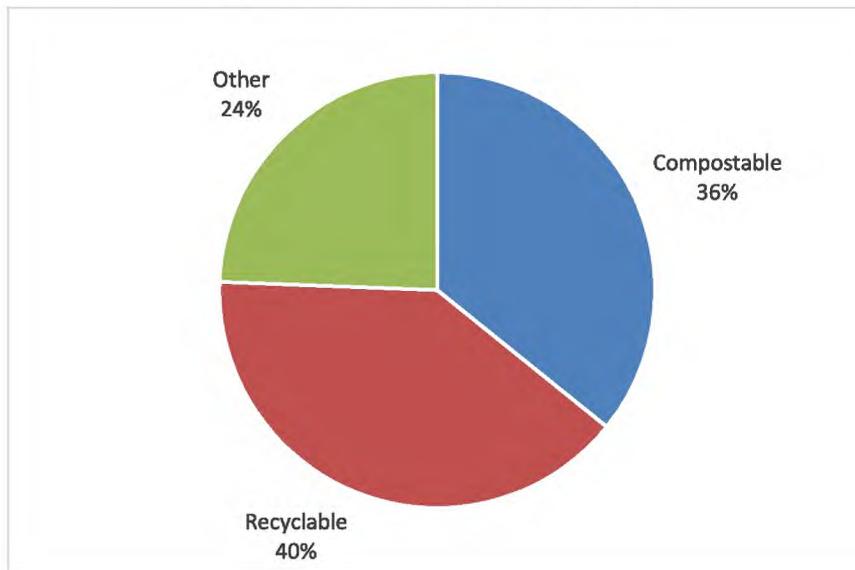
**Table H-4.1 Ohio EPA Waste Composition**

Material	Ohio EPA
Paper	21.3%
Plastic	11.6%
Other	21.5%
Food	13.1%
Wood	11.9%
Yard Waste	10.8%
Metal	4.9%
Textiles	2.9%
Glass	2%

By applying this method to the total waste from Lorain County the total per landfilled diverted is displayed in Figure H-4.1.

**Figure H-4.1 Estimated Residential/Commercial Total Generation**

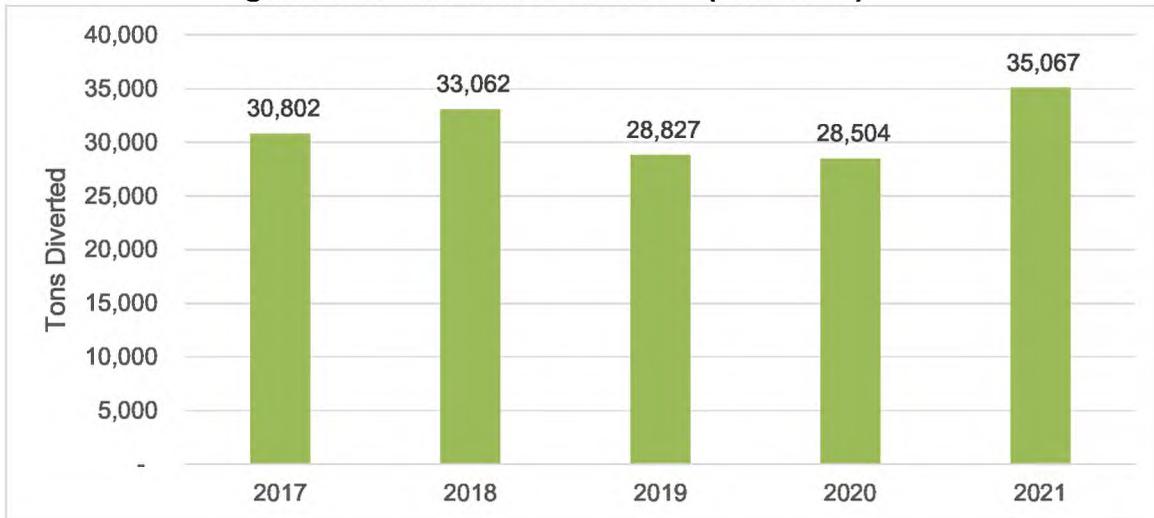
The average waste composition by material was calculated by multiplying the average percentages from the Ohio EPA study to the District's 2019 total disposed tons. Using this methodology Paper/Cardboard, Other, Food, and Plastic comprise the greatest materials landfilled. The "Other" category is comprised of hard to recycle electronics and other similar materials which makes it more difficult to divert. Excluding Other, 76% of the waste stream is recyclable or compostable.

**Figure H-4.2 Waste Composition**

## B. Yard/Food Waste

Using Ohio EPA waste estimates, approximately 36% of the waste stream is compostable. Lorain County has several Class IV compost facilities within the County for yard waste but is lacking food waste infrastructure.

**Figure H-4.3 Yard Waste Diversion (2017-2021)**



According to Figure H-4.3, yard waste diversion fluctuated slightly over the years. This is likely due to community waste contract collection service being robust and increasing education and outreach around composting. Convenient and adequate infrastructure is attributable to higher diversion amounts. Plus, the facilities are in various locations across the county which make these facilities accessible to residents and for haulers collecting the yard waste. A concern is whether the current facility infrastructure is capable of processing additional amounts if programming increases diversion.

In 2019, 13 out of the 32 political subdivisions in the District operated or contracted a yard waste and or/leaf collection program. District communities that reported having yard waste or a leaf collection program are listed in Table H-4.2.

**Table H-4.2 Community Yard Waste Diversion**

City	Yard Waste Diverted (tons)
City of Amherst	269
Amherst Township	825
City of Avon	803
City of Avon Lake	2,030
Eaton Township	477
Village of Grafton	253
Village of LaGrange	101

City	Yard Waste Diverted (tons)
City of North Ridgeville	1,616
City of Oberlin	727
City of Sheffield Lake	164
Sheffield Township	241
Village of Sheffield	177
<b>Total:</b>	<b>8,012.4</b>

These community yard waste and leaf collection programs are valuable and divert a good amount of material.

**Figure H-4.4 Food Waste Diversion (2017-2021)**

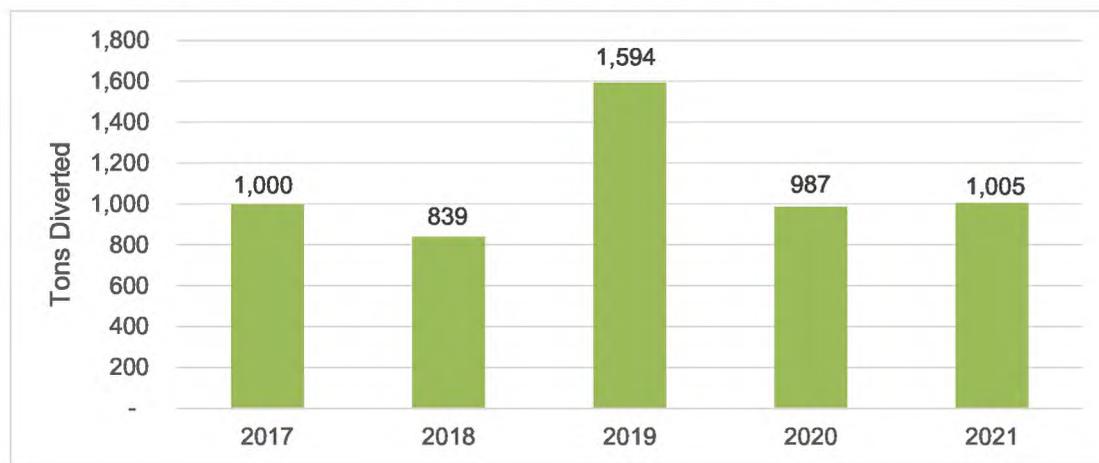


Figure H-4.3, shows the historical tonnages of food waste diversion from 2017 to 2021. Food waste fluctuated slightly through the years. Using the composition estimates, the County generated 37,499 tons of food waste in 2019 and only diverted 4%. Increasing food waste diversion can help the County achieve higher diversion rates.

Barnes Nursery Class II Compost Facility located out-of-district offers a processing infrastructure solution for Lorain. However, transportation costs for food waste limits this from being an economical solution.

The District laid out a program to analyze a potential site for a Class II facility that included a pro forma for assessing various operation arrangements. The District is facing challenges which is moving this forward at a slower than expected pace.

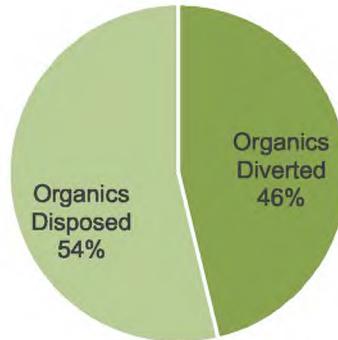
**Figure H-4.5 Total Organics Disposed and Diverted (2019)**

Figure H-4.2, shows the total amount of organics (food and yard waste) diverted versus disposed. The District made considerable efforts to improve their overall diversion through their education programs surrounding composting, and their residential yard waste collection. However, more than half of the generated organics are being landfilled indicating there is more room for improvement both with education and processing infrastructure.

Table H-4.3 benchmarks other District's with similar accessibility to compost facilities. The District's tonnage diverted is similar to District's lacking in-district infrastructure.

**Table H-4.3 Benchmarked SWMD's Food Waste**

SWMD	Food Waste Diverted (Tons)	Number of In-District Class II Compost Facilities
Lorain	1,594	None
Lake	696	1-Class II
Butler	1,006	None
Warren	646	1-Class II
Summit-Akron	1,101	None

### Education

The District provides funding to the OSU Agricultural Extension Office to educate residents about backyard composting through compost seminars, information posted on the website, radio broadcasts, and a stand at the Lorain County Fair. The Extension Office offers multiple composting seminars during the spring and fall throughout Lorain County. The seminars educate residents about the science of composting and provide residents with how-to-compost instruction. The Lorain County website includes the following:

- Yard waste composting tips

- Suggestions to participate in municipal compost programs
- Encouragement to compost at home
- A direct phone number to the OSU Agricultural Educator
- Information on OSU Extension Office's programs to bring to schools

#### Opportunities

The District currently does not have any registered Class II Compost facilities but has made many efforts to try and establish a Class II Compost Facility in the City of Lorain. The latest challenge is a moratorium passed in the City of Lorain halting permits.

#### **C. Fiber (Paper) Recycling Programs**

Fiber includes cardboard, paper, mixed paper, office paper, and newspaper and on average compromises about 25% of all residential/commercial waste. Lorain County has several recycling collection programs which target paper products. All of the curbside recycling programs in the District accept fiber as well as all the drop-offs listed in Appendix B. Paper Retriever is a privately operated company that operates in the District and provides drop-off bins at non-profit organizations and schools. During 2019 there were 143 sites that were serviced and a total of 1,413 tons of paper were recycled. The District also uses a mobile shred truck which processed a total of 22.8 tons of paper in 2021. The Lorain County Collection Center also collected 68.9 tons of fiber in 2019.

**Figure H-4.6 Fiber Waste Diversion (2017-2020)**

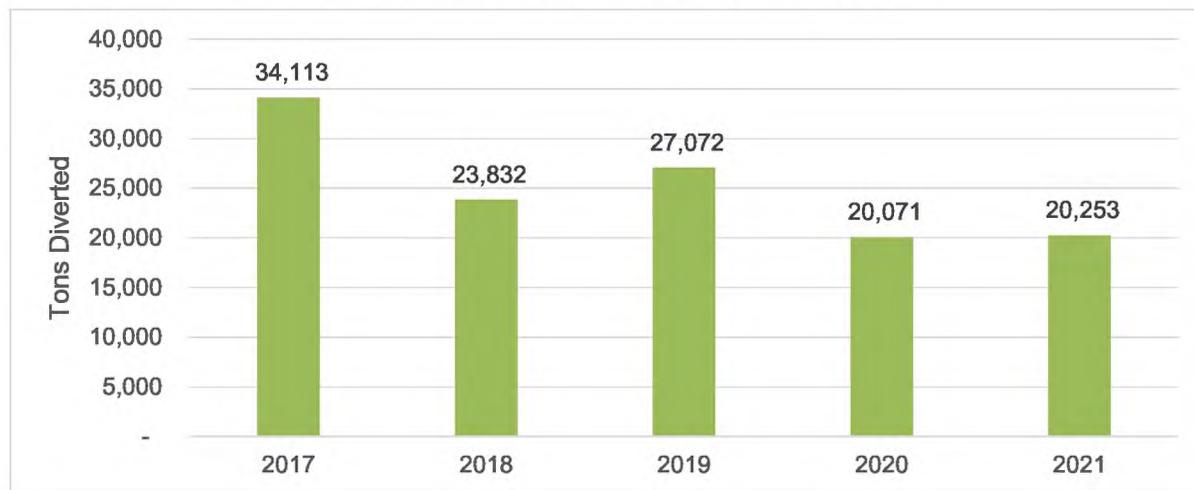
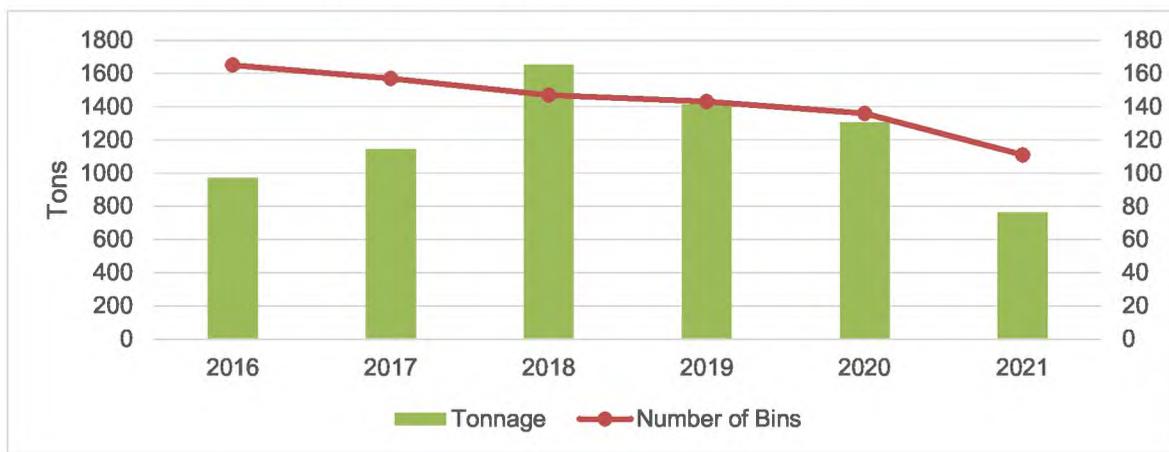


Figure H-4.3 documents the decline in fiber diversion over the four-year period of 2017 to 2020. The District recycled approximately 27,072 tons during 2019. Approximately 34%, or 9,276 tons were recovered from

residential curbside and drop-off recycling programs. The remaining 66%, or 17,796 tons, was recycled from the commercial sector. Cardboard and paper materials have potential to be recovered at even higher rates.

Residents have access to paper and cardboard recycling through drop-off recycling and paper retriever bins located throughout the District and schools, organizations, and community centers. A common factor which is always a challenge with drop-off sites is contamination, and whether the residents are using these correctly. There has been a decline in the number of paper retriever bins that are available in the District. Figure H-4.4 shows the historical trends of the paper retrievers through years 2017 to 2020. From this graph we see the trend of a decline in paper retrievers available which equates to a decline in total tonnages captured for diversion.

**Figure H-4.7 Paper Retriever Trends**



### Opportunities

Most of the fiber is being generated by the commercial sector, which would serve the District well to focus their efforts on the recycling programs for the commercial sector. Specifically, the District should develop measurable statistics from a baseline to evaluate the success of a targeted program.

The District could meet with fiber recyclers face-to-face to discuss opportunities for expanding fiber-collection infrastructure to commercial sector. The District could also investigate the feasibility of establishing its own fiber drop-offs using municipal facilities. These could serve small businesses and multi-family residents.

## **SECTION 5: ECONOMIC INCENTIVE ANALYSIS**

By definition, economic incentives are designed to encourage participation in recycling programs. In accordance with Goal 7 of the 2020 State Solid Waste Management Plan, the District is required to explore how to incorporate economic incentives into source reduction and recycling programs.

## A. Evaluation

### a. PAYT Programs

The District has Pay-As-You-Throw (PAYT) programs in almost every municipality, village, and township in the District. Some of the townships allow the residents to opt out of their contracted programs. The PAYT program is cart based where residents can choose the size trash cart with differential costs for each size container. Container sizes are standard 96-gallon for trash at the outset of the program and 64-gallon container for recycling. In some communities, senior citizens are provided a smaller cart. The cost differential was a requirement when communities initially rolled out their PAYT programs and is a contractual requirement of the Consortium which includes 11 communities. Trash is limited to the cart and collected weekly along with recyclables. There is a mix of managing the collection costs for trash, recycling, and in some cases yard waste. Cities can collect the costs through the utility bills.

Initial data from the conception of PAYT programs in Lorain County showed a dramatic increase in recycling. However, the trend has been decreasing over the last couple of years. Since the rollout, the District has not had a clear understanding of the number and types of carts out in each community. It will be necessary to evaluate each of the community's programs in partnership with the recycling coordinator from each community.

### b. Community Incentive Grant

The traditional Community Incentive Grant is being discontinued in 2023 due to budget constraints. The District will instead maintain a budget detailed in Table O-7 Line 2.p "Other" for grant match dollars starting in 2023 and ongoing. The District will assist communities in applying for Ohio EPA and other grants and has funding set aside to assist with the required grant match. The District plans to fund the required grant match up to a maximum dollar value for the community projects based on grant criterion to be established by the District Policy Committee.

## Conclusions/Findings

The budget for the traditional Community Incentive Grant was not sustainable and caused a deficit reducing the ending fund balance for 2022. The reduced amount for grant detailed in Table O-7 Line 2.p "Other" is affordable and will be an ongoing budget pending any major changes in projected revenues. The grant match budget

leverages Ohio EPA and other grants to ensure maximum value to the District. The District Policy Committee will need to approve an approval process for applicant projects based on new grant criterion.

## SECTION 6: RESTRICTED AND DIFFICULT TO MANAGE WASTE

Goal 5 of the 2009 State Plan requires District's to provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices. This analysis evaluates the District strategies and considers other materials and programs for difficult to manage waste.

### A. Evaluation

#### Lorain Collection Center Statistics

**Figure H-6.1 Grand Totals – Five Year Summary**

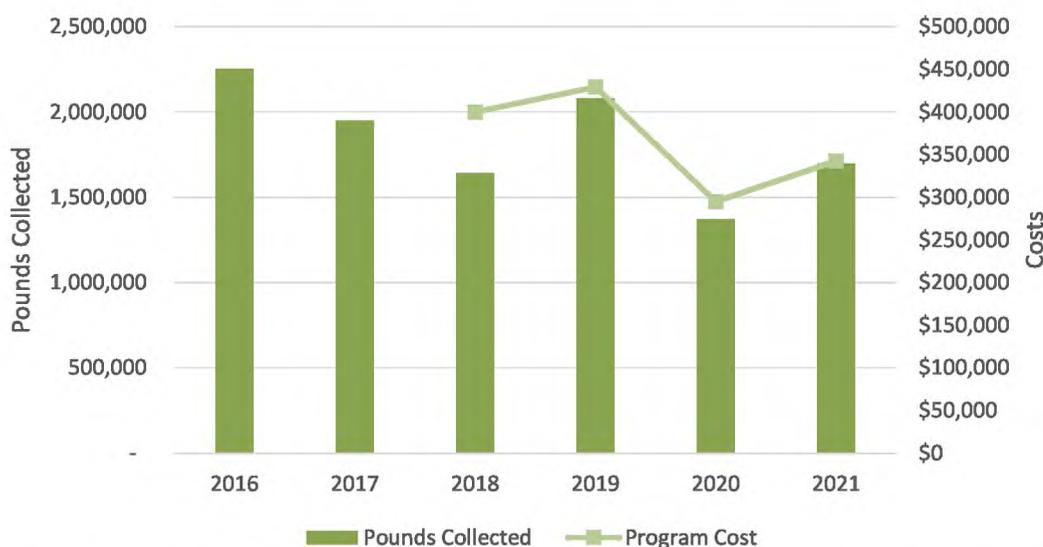


Figure H-6.1 details five years' worth of data to illustrate the Lorain Collection Center's total pounds collected and the cost associated with the program. Data regarding information prior to 2018 was not able to be located.

As seen in the figure above, there has been a decrease in the total number of pounds collected from 2016 to current. The reference year saw the second highest number of pounds collected in the six-year span with a total program cost of \$429,000. In 2021, the total number of pounds collected saw a decrease from 2,080,000 pounds to 1,698,000 pounds, a decrease of 19%.

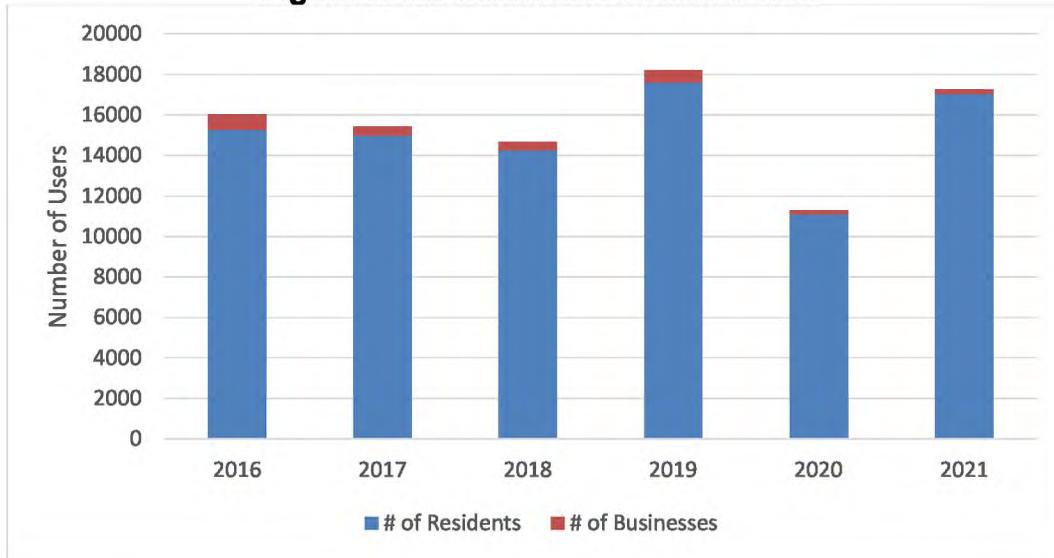
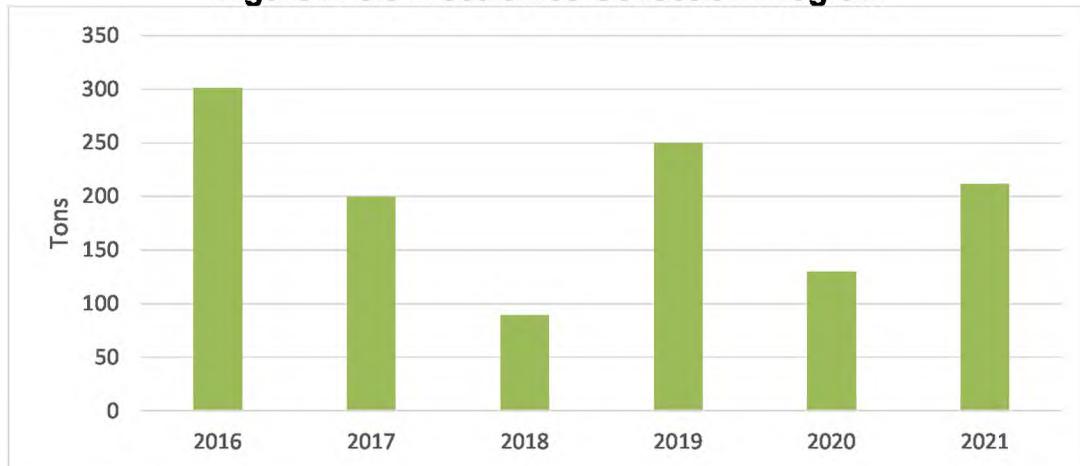
**Figure H-6.2 Collection Center Users**

Figure H-6.2 presents the Lorain County Collection Center's users broken down by residential users and business users for a five-year span. The Collection Center served 17,084 residents and 224 businesses in 2021 and collected almost 850 tons of total materials in 2021.

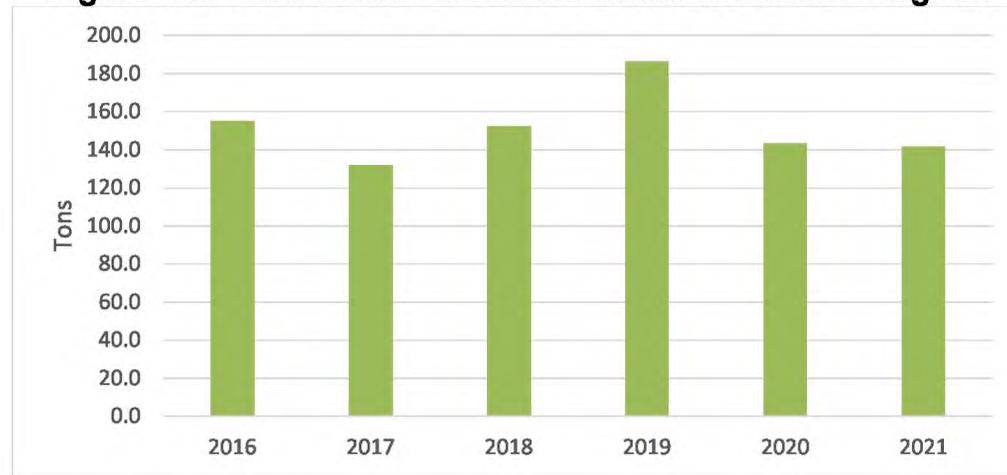
**Figure H-6.3 Electronics Collection Program**

Electronics contain hazardous materials that can pose threats to human health and the environment after disposal. The preferred method of handling is through the donation of working electronics and recycling of non-functional electronics.

Lorain County tracks the tonnage of electronics recycled annually at its Collection Center. Figure H-6.3 presents the total amount of electronics recycled across a six-year span. In 2021 The District accepted 211 tons of electronics, an increase

of 62% from 2020. This is due to the collection center not being open from March-July due to COVID-19.

**Figure H-6.4 Household Hazardous Waste Collection Program**



Household Hazardous waste (HHW) are materials that may be generated in the house and if handled improperly may result in pollution and safety risks. HHW includes oil, gasoline, diesel, heating oil, kerosene, household batteries, pesticides, paint, paint thinners, devices containing mercury, lights and bulbs, and electronics.

The District manages HHW at their collection facility. The most recent year collected a total of 142 tons of HHW at the collection facility. The cost of collected HHW totaled to \$162,517 in 2021, with an average cost per ton of \$1,145. This was 50% of the total cost of the collection facility.

**Figure H-6.5 Books & Paper Collection Program**

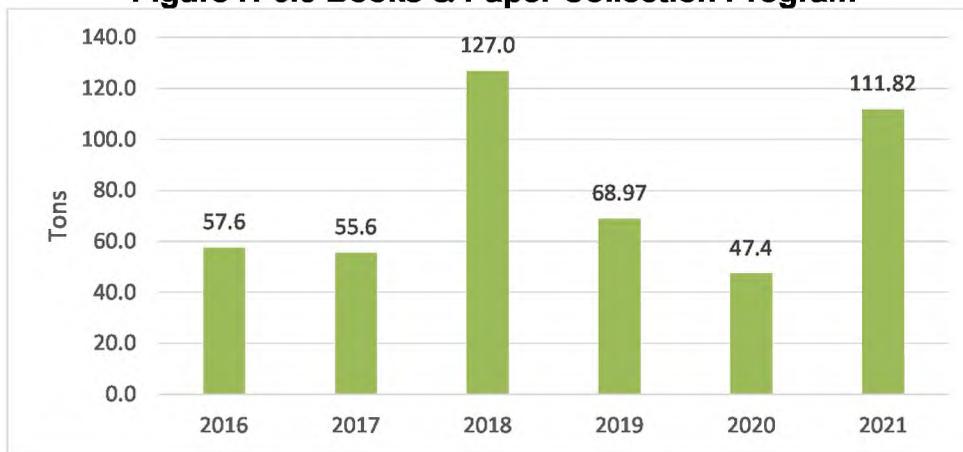


Figure H-6.5 demonstrates the trend for the Collection Center collecting books and paper products. This has fluctuated throughout the years and has hit a high during 2018 of 127 tons and a high during 2021 of 111 tons.

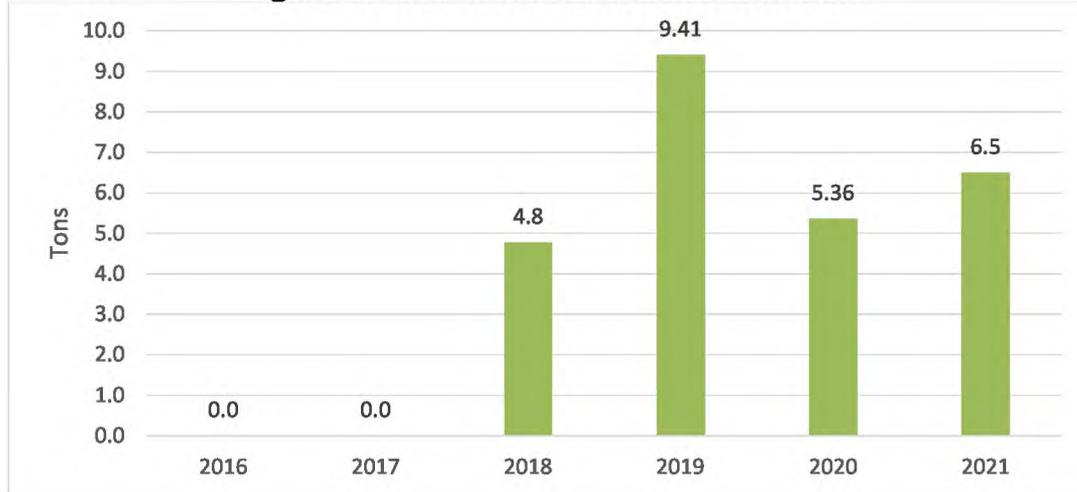
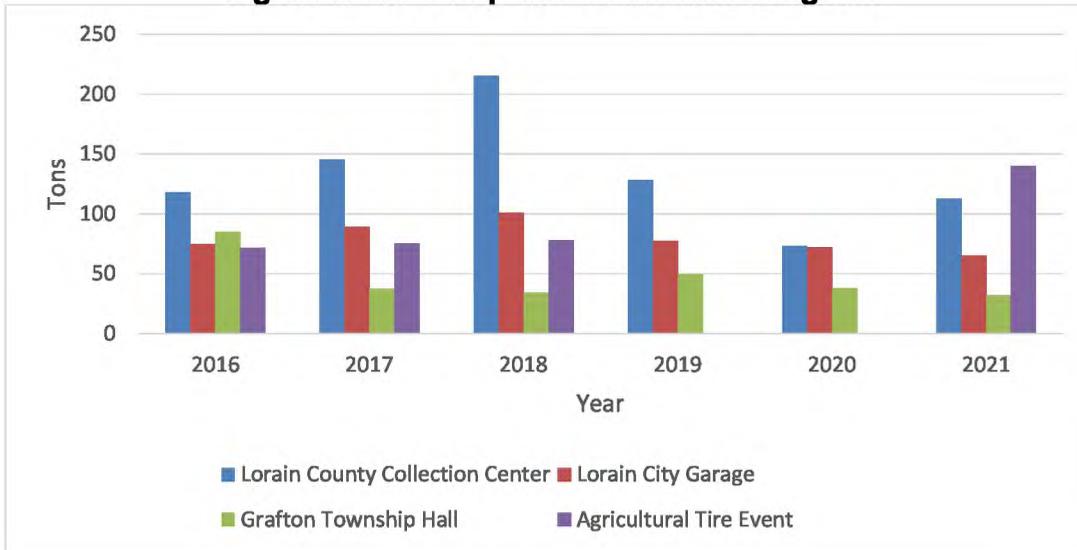
**Figure H-6.6 Historic Lead Acid Batteries**

Figure H-6.6 presents the lead acid batteries collected by the county over a five-year period. Data prior from 2018 was unable to be located. The average across the six-year span was 4.3 tons of lead acid batteries collected annually, with the highest during that period being 9.4 tons.

**Figure H-6.7 Scrap Tire Collection Program**

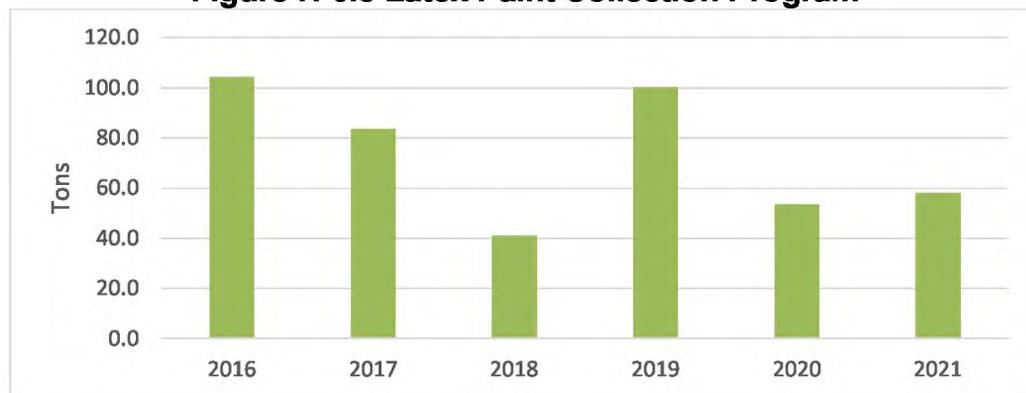
Improper disposal of scrap tires may lead to illegal dumping of tires, creating hazards to public health and the environment. The District collects scrap tires from residents so that they may be properly disposed of.

Figure H-6.7 presents the scrap tire collection program totals. The District maintained four permanent scrap tire collection sites that collected roughly 350 tons of scrap tires in 2021. Historically, the Lorain County Collection Center has been the collection site that handles the most scrap tires. However, in 2021 the

Agricultural Collection Event handled 20% more tires by weight than the Lorain County Collection Center. This influx may be due to the 2-year gap from 2019-2020 where the Agricultural Tire Event was not held due to COVID-19 complications.

Through 2022, the District maintained three tire collection sites. Beginning January 2023, two sites are now maintained. It is the eventual plan to transfer the Lorain tire collection site to a small business and the District will maintain the tire collection site at the Lorain County Collection Center.

**Figure H-6.8 Latex Paint Collection Program**



**Figure H-6.9 Average Material Managed at Collection Facility (2016-2021)**

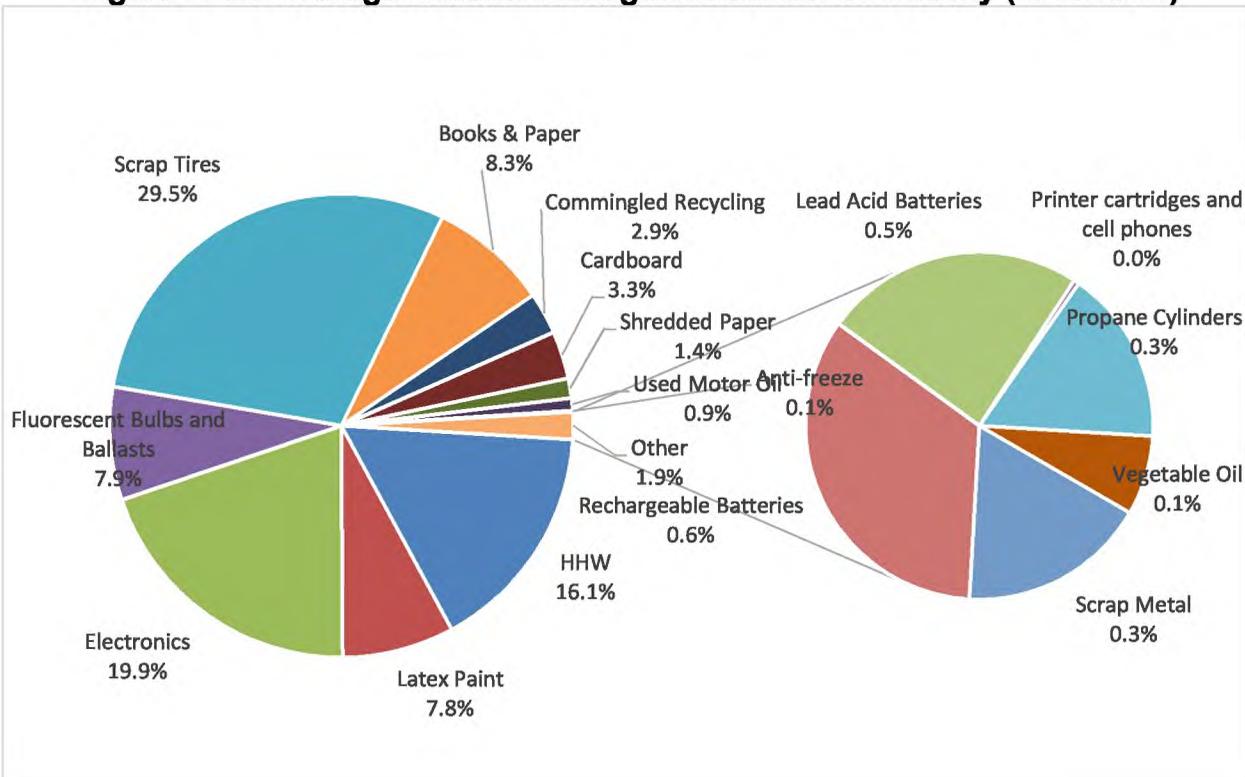


Figure H-6.9 details the average material managed at the Lorain County Collection Facility from 2016 to 2021. The most managed materials by tonnage were scrap tires at roughly 30% (1663 tons), electronics at roughly 21% (1123 tons), and household hazardous waste (HHW) at roughly 17% (911 tons). These three materials combined to account for 68% of all the materials managed at the collection facility in the given timespan.

The creation of the Collection Center changed how Lorain County manages difficult, restricted, and special materials. The early operations for one-day collection of HHW were more expensive and did not provide the convenience that a year-round facility offers. The Collection Center is truly a public-private partnership with the County operating the facility and working with numerous private sector vendors to process and return many of these special materials back to commerce or use as alternative fuels.

More than 1.6 million pounds of materials were diverted and recycled in 2021. There was a large decrease in materials diverted from 2019 to 2020, although 2021 saw a roughly 19% increase in materials diverted and recycled compared to the previous year. The annual costs for the operation of the facility are carefully managed, and the District spent \$342,605 in total costs in 2021.

## SECTION 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 looks at the diversion programs, infrastructure, rate and trends, and materials. This analysis will evaluate the District's diversion rate over the planning period and assess any major impacts that the District has had in regard to diversion fluctuations through the years, and how to better assess those impacts.

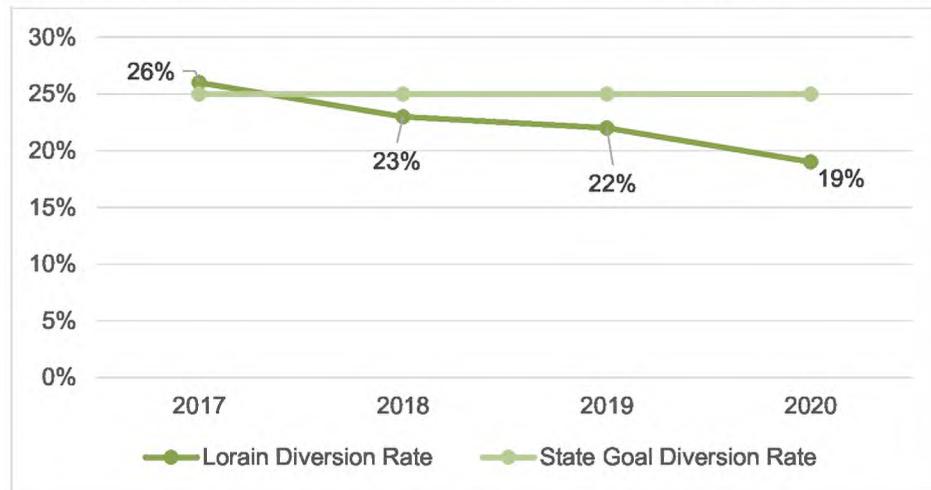
### A. Evaluation

Table H-7.1, below shows the amounts of solid waste which was generated and diverted from 2017 to 2020. Overall, total recycling has fluctuated each year. Generation was on an upward trend from 2017 to 2019, during 2020 the generation decreased likely due to the COVID-19 pandemic having an impact on business operations, along with a population decrease in that same year. There was a decrease in recycling between 2017 and 2018 due to a large generator having decreased tonnages.

**Table H-7.1 Disposal and Recycling Trends 2017-2020**

Year	Population	Total Generation (Tons)	Total Recycling (Tons)	Per Capita Generation (PPD)	Per Capita Recycling (PPD)	Annual % Change in Tons Generated	Annual % Change in Tons Recycled
2017	307,924	491,780	196,449	8.75	3.50	-	-
2018	312,994	493,903	154,304	8.65	2.70	0.43%	-21%
2019	315,015	509,209	160,338	8.86	2.79	3%	4%
2020	310,616	476,356	148,987	8.40	2.63	-6%	-7%

The residential/commercial sector recycling gradually fluctuated through the last 4 years. Figure H-7.1 shows Lorain's diversion rate fell below Ohio EPA's goal of diverting 25% of residential/commercial waste in 2018. During the reference year (2019) Lorain diverted 22%. The district makes many efforts and strides to obtain accurate recycling data, and to continue to make efforts to obtain new data, but this is still a challenging factor when reporting each year. The average recycling rate during this period was 23%.

**Figure H-7.1 Residential/Commercial Diversion Compared to EPA**

Like the residential/commercial sector the industrial sector diversion rate also fluctuated throughout the four-year period. Lorain's diversion rate dropped below Ohio EPA's goal of diverting 66% of the industrial sector in 2018. There was a large decrease in the diversion between 2017 and 2018, since that year there has been a steady decline. This is due to a large lack of responses from industrial companies. Overall, the District increased their response rate throughout the four-year period, but it is still a challenge to capture accurate and consistent data from this sector. During the reference year (2019) the District diverted 52% of the industrial waste stream.

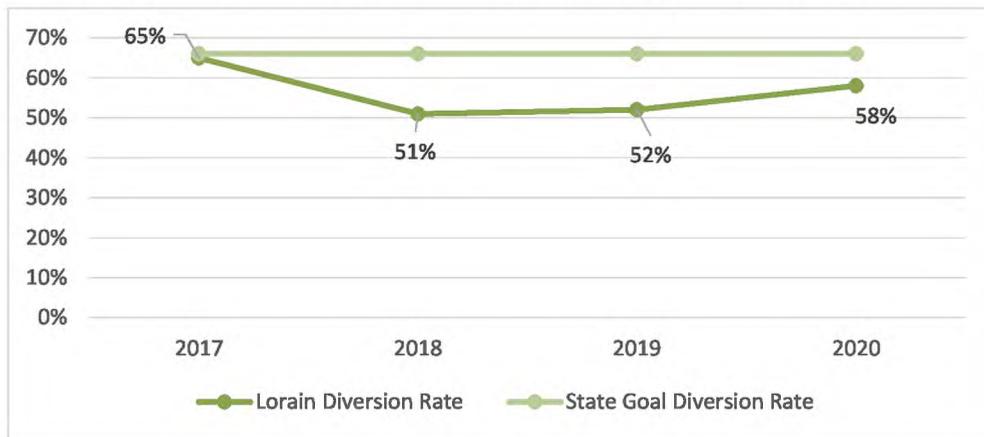
**Figure H-7.2 Industrial Diversion Compared to EPA**

Figure H-7.3 shows historical trend of diverted, disposed, and generated waste in the District. The trends show a slight increase in the disposal rate from 2017 through 2020 which correlates with a decrease in diversion. The total amount of material that is being landfilled slightly decreased from 2019 to 2020. This slight decrease in the total being generated is likely due to the many challenges that

were faced during the COVID-19 pandemic with less activity within the commercial sectors. The decrease in diversion is also likely attributable to the overall decrease in the residential curbside and drop-off tonnages as well.

**Figure H-7.3 Disposal and Diversion Trends**

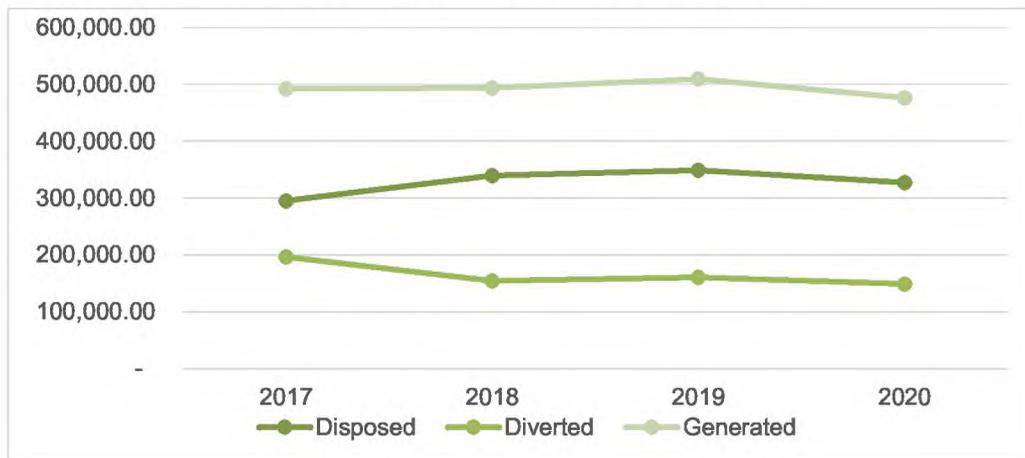


Figure H-7.4 demonstrates percentage of material diverted in the reference year (2019). Yard Waste, Paper, and Cardboard are the greatest diverted materials in 2019, representing 68% of the total diversion. Other categories represented are Scrap Tires, Ferrous Metals, Non-Ferrous Metal, Commingled Recyclables, Food, Plastics and Wood.

The data collection process is very important when evaluating the diversion rates for the District. There are several sources that the District collects data from for the residential/commercial sector. About 11% of the data is sourced from the Ohio EPA Commercial Data, which is an effort by the Ohio EPA to collect large commercial box stores generated recycling. The Ohio EPA commercial sources reported diverting 8,945 tons during 2019. Recycling processors or MRF's that were out-of-district reported 12% of materials processed from Lorain County. Ohio EPA scrap tire data accounted for 4% of material diverted. Ohio EPA Composting data, which represents the total food and yard waste that was processed by facilities in and out of the District has a total of 20%. Other Commercial responses that were collected by the District compose a total of 26% of the total. Residential curbside programs and other special collection events in the District collected a total of 25% of the total material diverted.

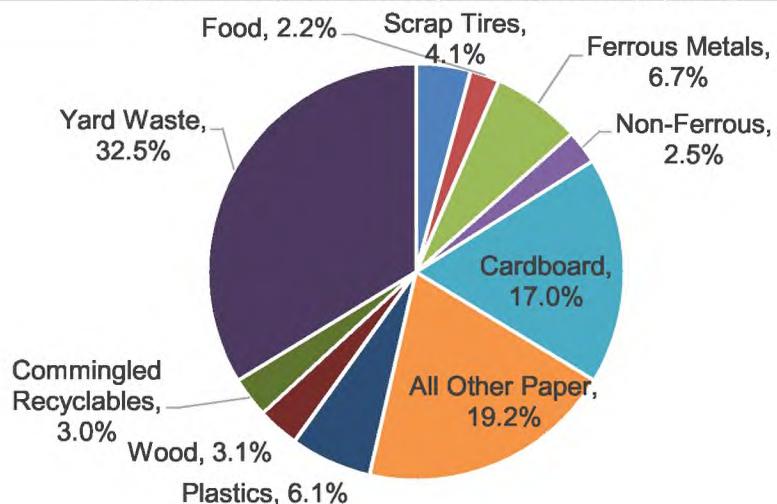
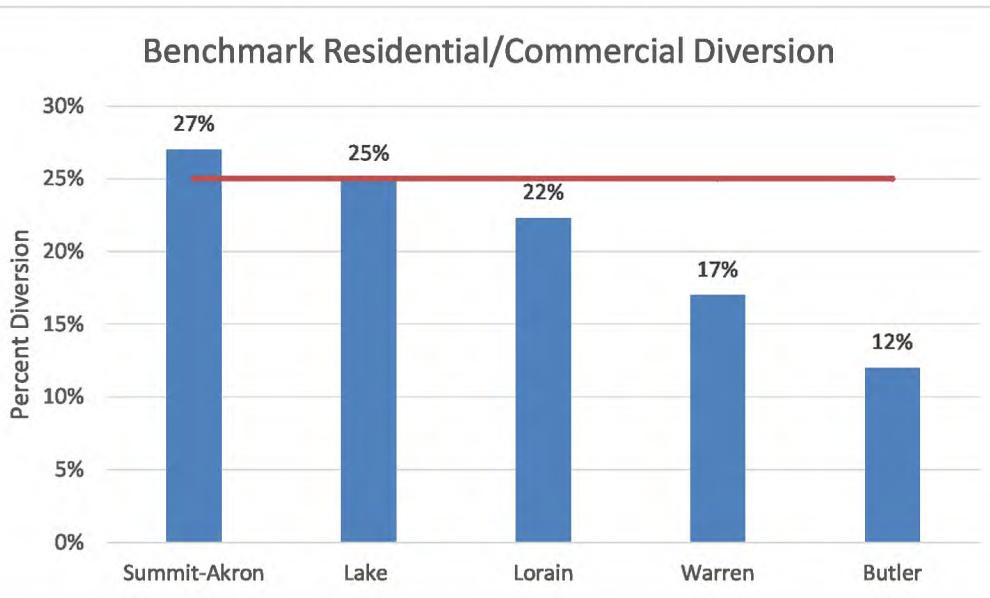
**Figure H-7.4, Diversion per Commodity (2019)**

Figure H-7.5 compares the District's 2019 diversion rate with other District's that have similar population and demographics. When compared, Lorain's diversion rate of 22% is below two of the other District's. Summit-Akron has a population of around 500,000 and Lake's population was around 200,000. Lorain falls in between those two around 300,000. Differences in diversion may vary depending on other variables, such as distance to markets, processing facilities, funding, and population density.

**Figure H-7.5, Benchmark Residential/Commercial Diversion**

**B. Conclusions/Findings**

The District's total diversion rate has declined over the four-year historic period from 2017 to 2020. The District did not meet the state's residential/commercial sector diversion goal of 25%. There has been an increase in overall waste generation, except during 2020 when there was a decline due to the COVID-19 pandemic. This also caused a decrease in recycling tonnages for the District. The pandemic has decreased access to education and recycling programs in the District during 2020 and part of 2021, which is likely the cause for a slight decline in diversion.

Opportunities moving forward for the District is to continue exploring more ways to expand education and outreach. The District has currently been working towards this through increasing large group presentations. Since the pandemic has been a lack of outreach, there is room to continue to increase efforts in this area. Increasing survey responses from Commercial and Industrial businesses will also be another major step for the District.

## SECTION 8: SPECIAL PROGRAMS NEEDS ANALYSIS

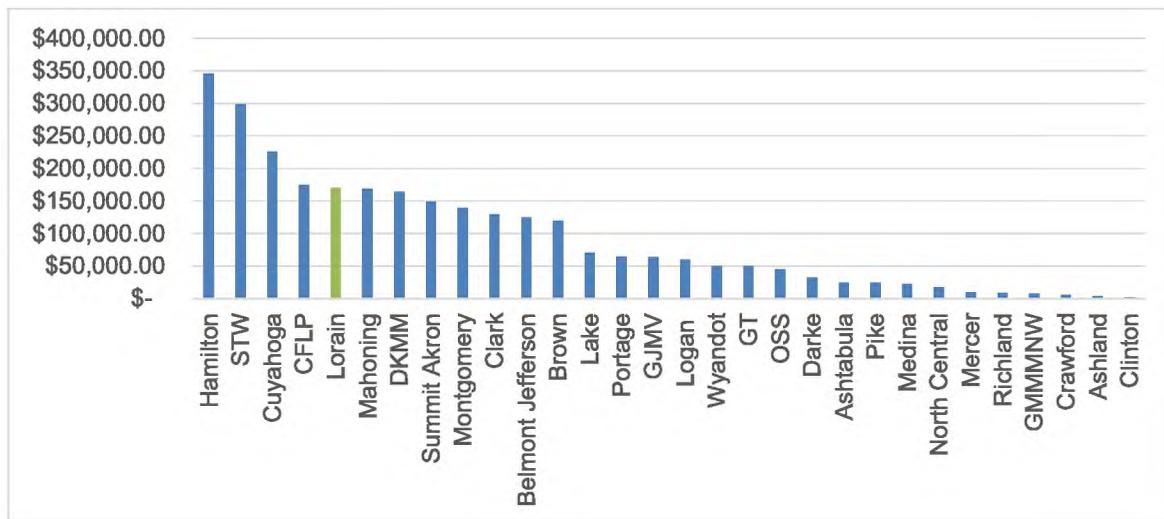
Ohio law gives districts the ability to fund activities that are not related to achieving the goals of the state's solid waste management plan. The policy committee is to evaluate the performance of any existing programs and discuss if there is a need to add any special programs to this Plan Update.

The programs presented in Section H-8 are all programs conducted or funded by the District which were identified and implemented through the previous Plan Update. They include:

- Funding for the Disaster Debris Program under the Lorain County Emergency Management Agency
- Implementation of the Host Community Agreement for Reserved Landfill Capacity
- Third Party Financial Audit

These special programs are important to the success of managing solid waste and planning for emergencies and maintaining revenues for operations. Each program is summarized and highlighted below.

### A. Evaluation



#### 1. Open Dump & Scrap Tire Clean-Up

The Open Dump & Scrap Tire Clean-Up Grant program has been in existence since the initial Plan was approved and is the District's policy for open dump cleanups. Open dumps include illegally disposed solid waste or waste tires. The Board of Health can apply for funding for the cleanup of open dump sites. The funding will be allocated out of the unencumbered fund balance. The Board of Health seeking these funds shall meet the following guidelines:

1. Applications for funding will be accepted throughout the year. The District will provide the application form
2. Funds will be allocated to County or Health Department. The District shall allocate funds from the unencumbered fund balance with County Commissioners' approval.
3. The Board of Health can apply for clean-up funds at more than one site.
4. Funds can only be used for clean-up of properties located within the District.
5. Applications will be reviewed by the District Director. The District Director will formulate a recommendation for approval/disapproval. The County Commissioners will take final action for approval/disapproval.
6. It is recommended that all legal processes should be exhausted before District funds are requested by the Board of Health. However, under certain circumstances it may be appropriate to apply for the funding before exhausting all legal remedies. The circumstances may include, but not be limited to, immediate health threats, fire hazards, etc. The Board of Health will make a recommendation to the District if a site meets the circumstances for immediate attention.
7. The District shall be reimbursed from any monies collected from judgments against the owners/operators of properties with open dumps. The Board of Health and/or related agencies shall place a lien against the property.
8. Once the cleanup is complete the Board of Health must file a final report with the District. The report must include:
  - An estimate of the number of tires or weight of the tires removed.
  - The weight of the solid waste removed.
  - The total cost for the cleanup.
  - Methodology for recovering District funds.
  - Name of the contractor used for cleanup and location where materials are delivered for disposal or recycling.

## 2. The Host Community Agreement

The District has a Host Community Agreement fee, which was \$0.60 from 2015 to 2021 and amended by contract to \$0.40 effective 2022. The waste disposed at contracted facilities is held constant from 2023 through the planning period due to the decrease in contracts by Republic. As of 2021, the District renewed the Host Community Agreement until 2026 and has options to extend the agreement on an annual basis through 2026. The District will need to renegotiate an agreement with Republic after the current contract expires.

The District determined that entering into a host community agreement provides stability for long term solid waste management needs. It would also result in substantial economic development as well as fiscal and environmental benefits for the District and the County in general. The District entered into the Agreement to maintain adequate reserved disposal capacity at the landfill to

handle all or a substantial portion of the future solid waste needs of the District. The following sections were included in the agreement.

1. Term of the initial period was three years and has an option for three one-year extensions.
2. Solid Waste – must be accepted as part of the Agreement. Hazardous Waste or Infectious Waste is not permitted.
3. Reserved Capacity – 1,250 tons per day are reserved for the District.
4. Out-of-district waste – All Cuyahoga County waste collected by the company must be delivered to Lorain County.
5. Facility Improvements – The Company shall make facility improvements to allow the Landfill to comply with the in-District solid waste reserved capacity.
6. Tipping Fee Discount – The Company must provide Lorain County residents with a discount of ten percent off of the gate rate posted for the disposal of self-hauled residential solid waste.
7. Pride Day – The Company must provide one solid waste dumpster to each participating political subdivision in the District in connection with Pride Day. The District will work with political subdivisions to include a recycling dumpster for Pride Day when new bid specifications for collection services are developed.
8. Free Collection and Disposal for County Facilities – The Company will provide free solid waste collection, disposal services, recycling collection, and processing to all Lorain County buildings noted in Exhibit A.
9. District Fees – The Company shall pay the District each month all disposal and generation fees levied on waste delivered to the landfill. The District shall support and work diligently to set and keep the amount of the District fee levied on out-of-District solid waste delivered to the Landfill to equal two dollars per ton for each ton of out-of-district solid waste. The Company shall pay the District sixty cents per ton (\$0.40) on any out-of-district solid waste disposed at the landfill (the Additional Fee).
10. District Consideration – The District shall use best efforts to support the Company's future expansion of the landfill, provide District-wide programs that will direct any natural disaster debris with the exception of wood waste from all communities to the Landfill and the District assuming the cost of collection and disposal of the natural disaster debris, and continue to exercise flow control pursuant to the provisions in the District's Plan during the term of this Agreement including any extensions.
11. Daily Log Inspection – The Company shall note the County and State, if other than Ohio, of generation of each shipment of solid waste accepted for disposal at the Landfill on daily operating log kept for the Landfill as required by Ohio Administrative Code. Inspections of logs shall be conducted during normal business hours and the District shall provide 24-hour notice.

12-19. Remaining Sections include Breach, Termination, Notices, Entire Agreement, Waiver, Applicable Laws, and Binding Effect, No Third-Party Beneficiaries.

### **3. Third Party Financial Audit**

The District has conducted an independent accountant report annually for many years. The accountant's review of all expenditures included payroll, administrative costs, and programmatic costs. The review identifies if there are outstanding issues that the District must correct or remediate.

The review indicated that all expenditures were in compliance with the ten allowable uses without exception. All expenditures were within the District budget without exception.

### **B. Opportunities**

- Extending the host community agreement in 2026 and ensuring current services are implemented.
- Securing required report data and information from the hauler.
- Continue to update the Disaster Debris Plan and pricing for hauling, collection and disposal of debris from storm damage, flooding or other natural disasters.

## SECTION 9: FINANCIAL ANALYSIS

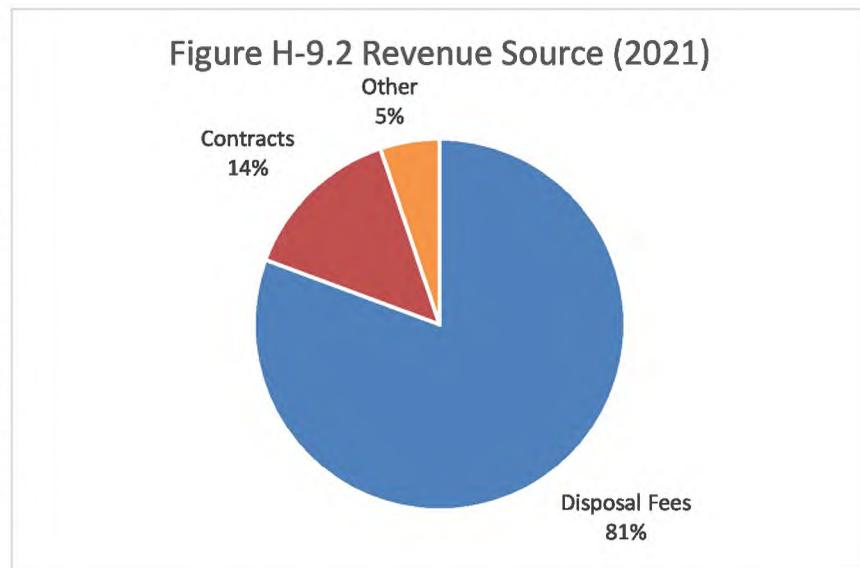
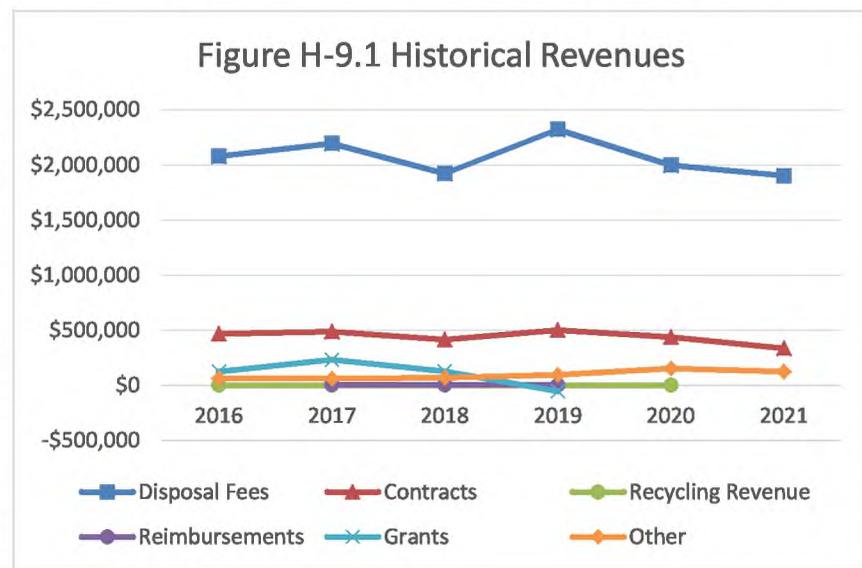
The purpose of this analysis is to examine the District's current financial position and assess the financial requirements and revenue sources throughout the next planning period. The District is currently funded through revenues from disposal fees and contract fees.

### 1. Revenue

In accordance with ORC Section 3734.53(B), the District has set its disposal fees at \$2.00 per ton for waste generated in -district, out-of-district, and out-of-state.

Historical revenues from 2016 to 2020 shown in Figure H-9.1 have remained fairly stable. Over that time frame, revenues averaged \$2,738,261. In 2021, revenues received dropped 14% from the average historical revenues.

The largest source of revenue for the District is tiered disposal fees, which account for 81% as seen in Figure H-9.2. Contract fee revenue shown is collected from a Host Community Agreement of \$0.60 per ton. Republic Waste Services did pay \$0.60 per ton for each ton of waste generated outside of the District and disposed of at the Lorain County Landfill. The fee was reduced to \$0.40 in 2022. This means that 95% of the District's revenue is dependent on a dollar per ton of waste disposed in the in-district landfill.



Trash is a commodity dependent on economic activity and contract cycles. Thus, the District revenue will be greatly impacted if for instance contracts change so that waste

is disposed of in a different landfill, or haulers change routes for their economic benefit. In 2021, the negative impacts of contract cycles became noticeable and in the first quarter of 2022 are trending lower.

**Table H-9.1 Actual versus 2019 Plan Projected Revenues**

Year	District Disposal Fees	Contract Fees	Other	Total Revenue (\$)
2021 - Actual	\$1,902,758	\$334,186	\$121,974.34	\$2,358,918
2021 – 2019 Plan projections	\$2,099,908	\$471,143	\$61,174	\$2,632,225
Percent Change	-9%	-29%	99%	-10%

As shown in Table H-9.1, the 2021 actual revenues received were about 10% lower than the 2019 Plan projected. This decrease is attributed to less out-of-district waste being disposed in the in-district landfill demonstrative of contract cycles and the loss of a waste disposal contract.

Rates and charges are a stable funding mechanism un-reliant on tonnage disposed in the landfill. Rates and charges are levied on improved parcels in the county. User fees are another funding mechanism that could provide revenue.

**Table H-9.2 Benchmarked District Main Funding Sources**

District	Tipping Fee	Generation Fee	Recycling Revenue	User Fees	Disposal Fees	Contract Fee	Other
Erie	0%	98%	0%	1%	0%	0%	0%
Huron	0%	98%	3%	2%	0%	0%	1%
Medina	97%	0%	0%	0%	0%	0%	3%
Cuyahoga	0%	91%	0%	0%	0%	0%	4%
Richland	3%	51%	1%	3%	0%	42%	0%
Lorain	0%	0%	0%	0%	81%	14%	5%

Note: Excludes other funding mechanisms such as grants, miscellaneous, etc.

Source: Solid Waste Management District Fee Summary: 2020

Table H-9.2 benchmarks main funding sources of regional districts. As shown main funding sources vary across the districts. Erie, Richland, and Lorain all have landfills. Unlike Erie and Lorain, Richland's funding is more diversified with 51% sourced from generation fees and 42% sourced from contract fees. This comparison also shows that most of the regional districts heavily rely on their own County residents and businesses to support the programming through the use of generation fees. Lorain's

funding is structured so that the fees levied on the residents and businesses are minimal.

**Table H-9.3 Benchmarked District Revenues**

District	Population	Revenue	Per Capita Revenue
Cuyahoga	1,235,072	\$2,153,329	\$1.74
Huron	58,168	\$210,017	\$3.61
Erie	69,678	\$456,765	\$6.56
<b>Lorain</b>	<b>310,616</b>	<b>\$2,587,441</b>	<b>\$8.33</b>
Richland	121,488	\$1,579,424	\$13.00
Medina	180,295	\$8,107,298	\$44.97

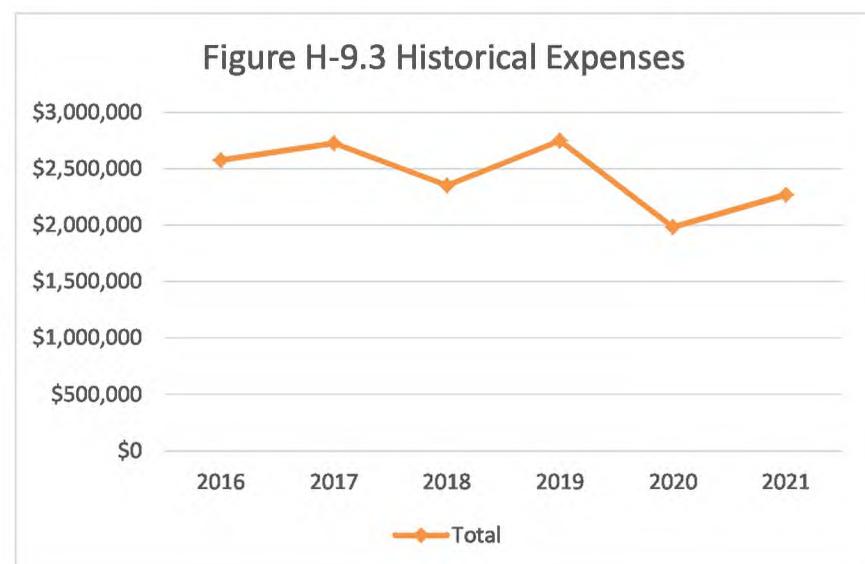
Revenue Source: Solid Waste Management District Fee Summary: 2020

Population Source: 2020 SWMD Disposal, Recycling, and Generation Ohio EPA report

Compared to surrounding solid waste management districts, Lorain reported one of the highest revenues in 2020 and highest per capita revenue as seen in Table H-9.3. While Lorain has the third highest per capita revenue, most of the revenues are sourced from outside the District through out-of-district disposal fees, keeping in-district fees at the minimum.

## 2. Expenses

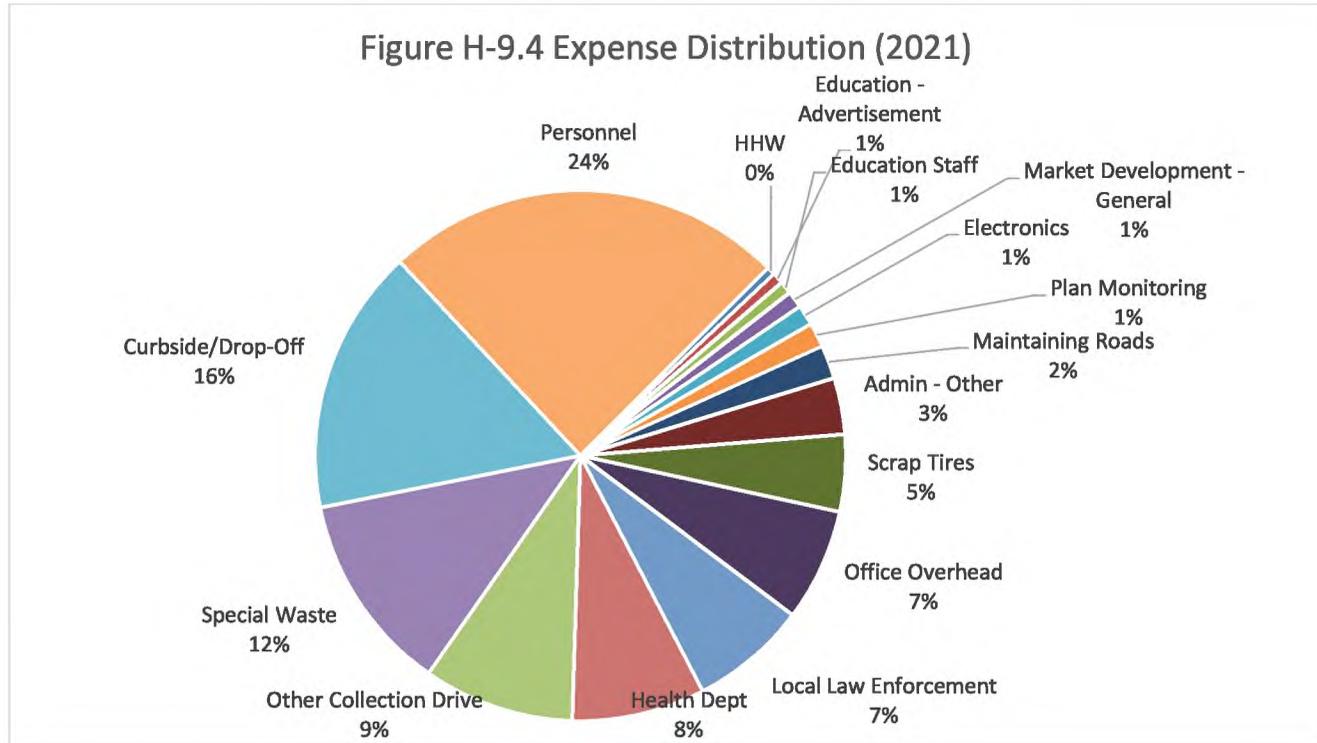
Historical expenses from 2016 to 2020 shown in Figure H-9.3 fluctuated. Over that time frame, expenses averaged \$2,476,585. In 2021, expenses dropped 8% from the average historical expenses.



**Table H-9.4 Actual versus 2019 Plan Projected Expenses**

Year	Total Expenses (\$)
2021 - Actual	\$2,269,534
2021 – 2019 Plan projections	\$2,998,683
Percent Change	-24%

The District's 2019 Plan projected expenditures at around \$2.9 million expenses. As shown in Table H-9.4, the actual expenses were 24% less than forecasted in the 2019 Plan.



The District's program expenditures are depicted in Figure H-9.5. The larger expenses include personnel (which includes fringes and benefits), Curbside/Drop-off, and Special Waste.

**Table H-9.5 Benchmarked District Expenses**

District	Population	Expenses	Per Capita Expenditure
Cuyahoga	310,616	\$2,276,994	\$1.84
Erie	1,235,072	\$324,142	\$4.65
Huron	58,168	\$323,776	\$5.57

District	Population	Expenses	Per Capita Expenditure
Lorain	180,295	\$1,982,100	\$6.38
Richland	121,488	\$1,165,621	\$9.59
Medina	69,678	\$8,659,745	\$48.03

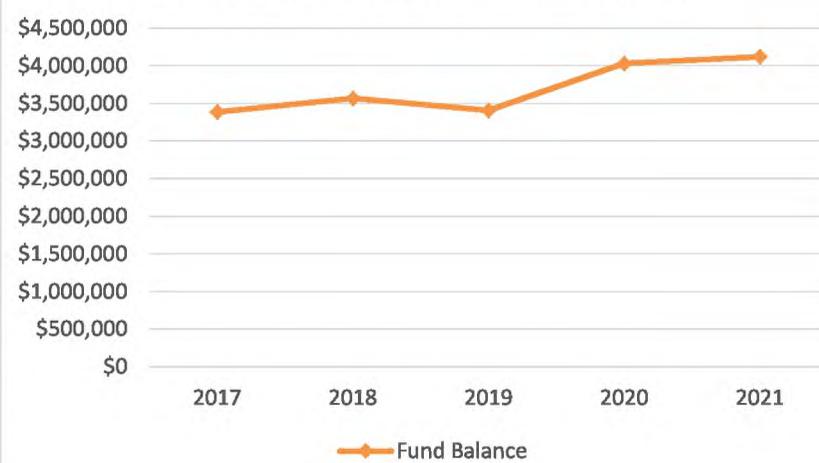
Revenue Source: Solid Waste Management District Fee Summary: 2020

Population Source: 2020 SWMD Disposal, Recycling, and Generation Ohio EPA report

Comparison of neighboring solid waste management district program expenses is found in Table H-9.5. The District is below the average spending of \$12.68 per person at \$6.38 per person. Medina County has the highest per capita spending at \$48.03 per person, while Cuyahoga has the lowest at \$1.84 per person.

Figure H-9.6 shows the fund balance accruing over the past 5 years. The District adjusted spending levels in 2021 as revenues declined.

Figure H-9.5 Historical Fund Balance



If the District spends roughly \$2.8 million annually in the 10-year planning period, annual revenues will need to be at least \$2.5 million annually. At \$2.5 million annual revenues an annual draw from the fund balance is expected. Revenues of \$2.3 million, as received in 2021, are not adequate to support a \$2.8 million annual expense budget. Exploring options, the District considered:

1. Reducing expenses
2. Increasing funding mechanisms

In response to the projected decrease based on the current level of spending, the District investigated multiple financial options to ensure that the Solid Waste Plan Update provided financial stability over the planning period. Each potential financial plan was evaluated on:

- Reliability and type of revenue source
- Amount and value of programming budget and the contribution of that program to meet state goals
- Impact of funding and budget on fund balance and long-term financial liquidity

The District Policy Committee investigated the need for a generation fee of \$4.00 per ton starting July 2024 after approval of the Plan from Ohio EPA. This fee would have resulted in higher monthly disposal costs for all Lorain County residents, businesses and industries.

The Policy Committee rejected the option of a Generation Fee. Instead, the 2023 budget was revised based on the selection criteria to match the conservative projected 2023 to 2037 income. The need for a 2023 budget reduction was evidenced by the \$206K negative spending that occurred in 2022. Budgets now align with revenue providing a responsible, stable, fund balance.

This Solid Waste Plan Update now provides a responsible, conservative, flexible financial projection with no increase in fees.

## SECTION 10: REGIONAL ANALYSIS

The purpose of the regional analysis is to consider regional opportunities for collaboration and partnerships and to also consider how the District's decisions may impact other stakeholders in the region. This analysis may result in the creation of a systematic plan to communicate, collaborate, and/or partner with the stakeholders identified through this process. This analysis may also indicate that the actions of the District and current regional initiatives are sufficient, and no further efforts are warranted.

### A. Regional Partnerships, Communication and Collaboration

The District has initiated programmatic discussions on a regional level regarding solid waste management in northeast Ohio. The District has included other solid waste districts in the northeast Ohio region in several regional discussions on glass, organics and food waste, waste consortiums, solid waste enforcement, Household Hazardous Waste (HHW), and other solid waste management issues including the following Regional strengths:

### B. Strengths

- The District investigated opportunities to establish a regional glass processing facility. Meetings were held with northeast Ohio districts to evaluate methods of collection from commercial facilities end users and potential processors. Meetings with Ohio EPA were also held to discuss statewide opportunities. Issues with glass contamination, a lack of sorting equipment to adequately sort glass from trash at the Republic MRF in Lorain County, and the low commodity value of glass cullet have resulted in the District postponing its efforts to attempt to expand glass recycling in the region.
- The District was evaluating an organics processing facility. Meetings were held with districts in the region to determine whether a District facility could serve as a regional solution for food waste and other organic materials. Currently, the District was unable to identify adequate tonnage to justify the facility and ensure its financial sustainability, so the project is on hold until circumstances change.
- The District established a trash and recycling consortium with political subdivisions. Initial discussions for membership included political subdivisions outside the District. Due to the success of the first consortium, the process was continued after the first contract was set to expire. The second bid development for the consortium round began in June 2018. In December of 2018, bids were received by three service providers. Communities will make a decision on service providers and the new contract will begin in April of 2019.

The District is evaluating a scrap tire facility project that could serve the northeast Ohio region. The project is dependent upon the location of an end market user of scrap tires in the region.

- The District has held solid waste enforcement seminars with sheriff personnel that included Districts from northeast Ohio.
- The District has held other meetings with surrounding districts regarding the Lorain County Collection Center and possible opportunities between counties.

### **C. Regional Impact Considerations**

Lorain County is the home to one of the larger private sector landfills operating in northeast Ohio. The Republic Waste Services facility manages approximately 1.1 million tons annually. The District generates approximately 365,000 tons with most of it disposed at the in-District facility. The landfill has just over 10 years of capacity remaining without an expansion. The Lorain County Landfill receives waste from most of the counties in northeast Ohio - a truly regional solution for counties without landfill capacity. In addition, Republic Waste Services also operates a full-service material recovery facility adjacent to the landfill. This facility also serves communities in adjacent counties and processed 35,000 tons of recyclable material in 2016. Solid waste management in Lorain County is important to Lorain County's economy and the northeast Ohio region.

### **D. Regional Analysis Conclusions and Challenges**

The District provides the northeast Ohio region with disposal and recycling solutions due to the fact one of the largest private sector facilities is located in Lorain County. The District has also served as a leader in programming and providing opportunities for other solid waste districts to consider partnering on joint programs.

Developing joint programs and/or facilities is difficult due to the following challenges:

- Regional economics
- Managing a joint resource
- Regional project controls
- Cost structure
- Guarantees and contracts for materials and end uses.

The District intends to continue the development of facilities and programs that can be modeled at the regional level if feasible with economics and markets making sense.

## SECTION 11: DATA COLLECTION ANALYSIS

The State of Ohio classifies solid waste by three generation sectors: residential, commercial, and industrial. Solid waste districts are required to quantify the amount of solid waste that all generators source reduce, recycle, compost, incinerate, and dispose in order to establish a baseline and to demonstrate achieving Ohio's landfill diversion goals. Collecting data is challenging due to a variety of factors and takes considerable time and effort to gather and analyze. Regardless, the primary objective of the District is to divert materials from landfills, therefore data collection is important to measure results. The data collection process from beginning to end for each type of generator is described below.

The District was not able to demonstrate achieving Goal #2 of the State Plan, which requires a waste reduction and recycling rate of at least 25% for residential/commercial waste and a recycling rate of at least 66% for industrial waste. In the reference year, the District's residential/commercial sector achieved a 22.39% waste reduction and recycling rate, and the industrial sector achieved a 52.08% recycling rate.

The District devotes staff time to overseeing the data collection efforts as well as hiring a consultant to advise the District.

### ***A. Analysis and Evaluation***

#### ***Residential***

The District operated the Recycling Incentive Grant Program which was discontinued in the current form starting 2023 and ongoing. The District has an accurate base line of data from this grant application process that required all cities, townships, and villages to report residential recycling totals to the District using an electronic survey platform (Re-TRAC) to be eligible for grant funding.

Although the traditional Community Incentive Grant is being discontinued in 2023 due to budget constraints, the District will instead maintain a budget detailed in Table O-7 Line 2.p "Other" for grant match dollars starting in 2023 and ongoing. Similar data will be required for this grant match program so the District expects to continue accurate thorough data gathering and analysis.

Residential sector recycling tonnages reported by communities includes data from curbside and drop-off recycling programs, yard waste collection programs, and special waste collection programs, such as Household Hazardous Waste (HHW) and scrap tires.

Data reported by communities for curbside and drop-off programs is cross-referenced against tonnage reported by community from the two haulers that

provide service to the residential sector for accuracy. If discrepancies are identified, they are investigated with the community and/or hauler.

Data from District-sponsored programs, such as its Scrap Tire Collection, Used Anti-Freeze Recycling, HHW Collection, and Electronics Collection are included in residential sector recycling totals. The District's various contractors provide data for these programs

### ***Commercial/Institutional***

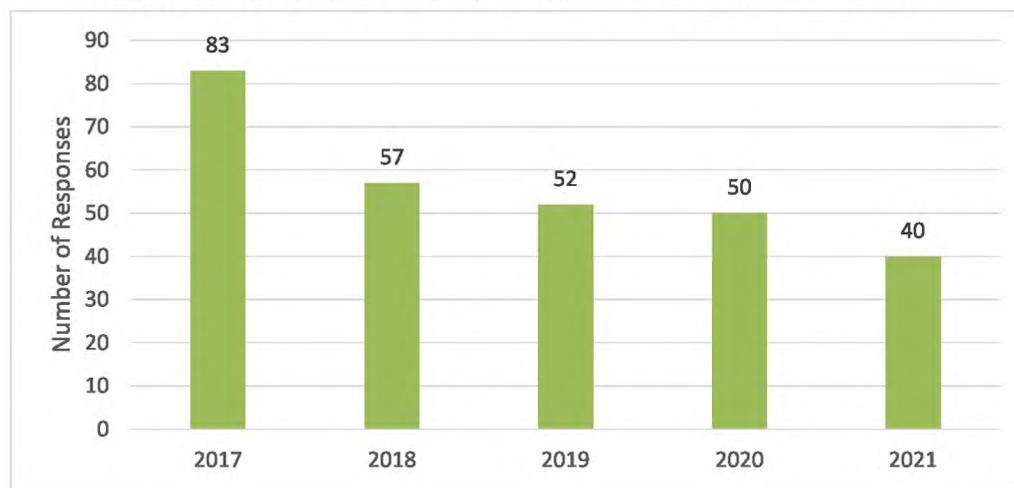
The District gathers data from commercial businesses and Ohio EPA annual published data. According to the U.S. Census Data, the District has about

The District uses the following Ohio EPA's annually published data for the commercial sector data: Material Recovery Facility and Commercial Recycling Data Report, Compost Facility Data Report, and Scrap Tire Data Report.

The District ensures that double counting does not take place when using Ohio EPA data and District collected data from commercial entities and other third parties. No issues with using Ohio EPA data for the commercial/institutional sector have been identified.

The District surveys commercial businesses every year. In the survey year, there is a hard copy of the survey which is mailed to all the commercial businesses and an electronic version of the survey is available to previous repeating businesses to give the businesses the option for a more convenient submission. Survey recipients are given the option to submit their survey by online submission, direct mail, email, or fax.

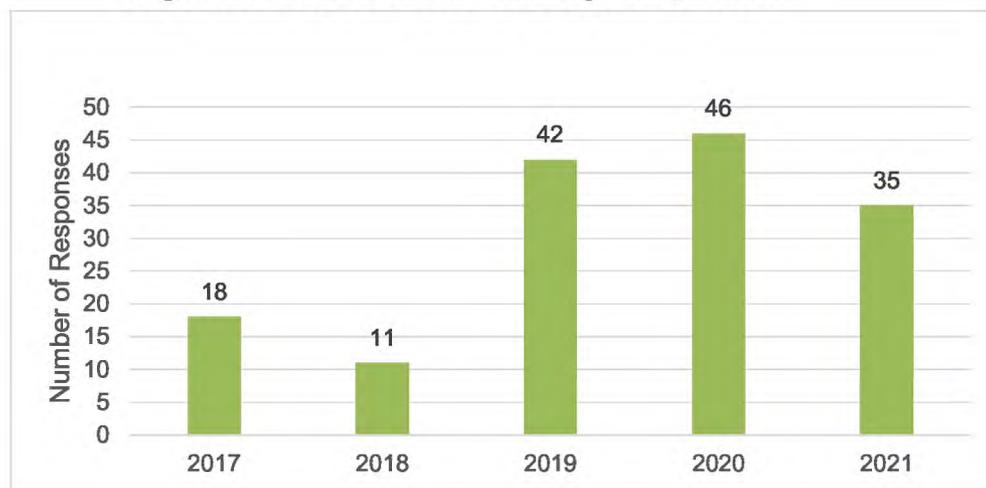
The goal of the District is to target the larger generators, which suggests surveying over 500 Commercial businesses. In the past, the District has spent considerable efforts tracking down data, which has since helped their overall response rate increase through the years. Giving recipients the option of responding online has made the process easier for them to participate, and they are able to see their progress through the years with historical survey data online for them to review. Below is a table showing the trends of response rates through the years. The District works with a consultant to regularly update the mailing list to capture any new businesses and prioritize large generators that have not responded previously. Response rate fluctuations are demonstrated in Table H-11.1 below.

**Figure H-11.1 Residential/Commercial Response Rate**

Response rates have fluctuated through the years due to different factors such as COVID-9 pandemic, loss of staff and previous contacts, and businesses closing operations. The district focuses on capturing responses from the largest generators in the district. The district has attempted multiple strategies to continue to increase the response rate, which includes providing businesses with the online survey option, mailing surveys and cover letters, contacting them through email and allowing them to fax their response.

#### ***Industrial***

The District gathers data by surveying the industrial sector businesses and uses the same Ohio EPA data reports as the commercial and residential sector. The same survey procedure described for the commercial sector is applied to the industrial sector. Surveys were mailed to the operating industrial businesses and employers were contacted via phone and email. The response rate for the Industrial sector is demonstrated in Figure H-11.2.

**Figure H-11.2 Industrial Survey Responses**

## SECTION 12: EDUCATION/OUTREACH ANALYSIS

The 2009 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 2009 State Plan refocused the general “awareness” of recycling to changing behavior through outreach. This was maintained in the 2020 State Plan.

The following analysis evaluates the District'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.

### A. Minimum Education Requirements - Evaluation

In accordance with Goal 3 of the 2020 State Plan, each District is required to provide four minimum education programs: website, resource guide, infrastructure inventory and speaker/presenter.

#### District Sustainability Education Center

The District is intending to complete the inside display installation for a Sustainability Education Center starting in 2023 that is housed in the existing Lorain County Collection Center on South Abbe Rd. in Elyria. The Sustainability Center will educate the community on the process and importance of recycling, composting, and waste reduction. This facility should be a visually impacting and interactive space that inspires visitors to change their waste habits. Visitors will be informed about the issue of waste and encouraged to make positive changes in their waste habits at home, school, and work that will make a difference for years to come. The goal is to provide an engaging educational opportunity for people of all ages and backgrounds. The primary audience of this project is K-12 students. The secondary audience is made up of adults, including college-age students, and the tertiary audience is children younger than kindergarten age. It is important to reach this group of young children, while at the same time reaching their parents with the waste reduction message.

#### Website

The District maintains a website at <https://loraincountyohio.gov/solidwaste>. The website is a subdomain address connected to the Lorain County Commissioners website loraincountyohio.gov. However, depending on a google search, it may take the user several steps to arrive at the District page. Advertising the subdomain helps and directs the user to the solid waste and recycling page.

District solid waste and recycling webpages tout a simple, attractive format. Despite the limitations of changing the design format, the webpage does follow best practices for the minimal text, easy to follow links and attractive images.

The webpage is strongly focused on District programs but could be improved by including a full inventory of the infrastructure such as composting facilities, reuse centers, scrap tire outlets, electronic outlets, etc. This would help users find other outlets and to serve as a comprehensive resource guide.

The website is managed by Lorain County, but the District has direct access to post or change information on the webpage. The District has capability for tracking web stats and flexibility for posting/adding information. The website is a resource which provides much of the information that residents and educational institutions would seek. The homepage is key to user navigation and has the ability to be updated regularly to reflect recycling services, seasonal program info, and simple opportunities. The webpage provides information on education programs, other programs, community recycling, the collection center, and much more.

**Conclusions/Findings:**

The District could further enhance the website site by taking the following steps:

- Prioritize the top 3-5 subjects that residents inquire about solid waste and recycling.
- Inquire with telephone, tour, volunteers, and other front-line staff about the most prominent inquiries they receive from the public.
- Reduce the number of menu options on the drop-down menus.
- Include less than one-minute educational videos on key pages of the website.
- Continue to update images from events, as the county currently endeavors on social media.
- Consider adding the acceptable single stream materials to recycle on the District's landing page.
- Consider re-organizing business services and programs for ease in finding on the webpage. Possibly creating a new menu heading "Business Resources".
- Consider changing "Lorain County & Ohio State University" menu heading to "Composting Resources" for clarity to those seeking compost information.

**Comprehensive Resource Guide**

The District's webpage includes information for businesses and households to find outlets for recycling materials. The website is a resource guide for SWMD managed outlets and services. Additionally, the District has a list of resources and links to outside information.

**Conclusions/Findings:**

- The District could include a link to Ohio EPA's Material Marketplace which is a reuse network.

#### **Infrastructure Inventory**

Infrastructure inventory can be found in the Plan, which is updated every five years, and specific infrastructure is identified on the website. Web infrastructure is updated at least annually, or more frequent if changes occur. The website is an inventory for District managed outlets and services. The District has no control over third party waste management outlets which can improperly manage materials.

The District maintained an interactive database, available at [recyclesearch.com](http://recyclesearch.com), which informs residents of additional recycling opportunities in Lorain County for hard to recycle items.

#### **Conclusions/Findings:**

- Only including District managed outlets does not provide the SWMD with a one-stop resource guide. If a resident or business wants to divert a material such as yard waste, they must reach out to other resources to find an outlet.
- A few businesses offer "take back" programs for plastic grocery bags, computers, cell phones, lead-acid batteries, and ink cartridges. These types of "take back" programs help alleviate burdens to the District. The District may consider maintaining a website list of retailers and businesses available which offer point of sale returns or "take back" programs.

#### **Speaker**

The Community Outreach Coordinator serves the primary role to be available for speaking engagements. However, there are 2 other District staff able to give presentations and speak regarding available programs.

### **B. Goal 4 Outreach and Education - Evaluation**

In accordance with Goal 4 of the State Plan, the District is required to provide education, outreach, marketing, and technical assistance to identified target audiences.

All types of behavior change initiatives, even mass-media based campaigns, can successfully employ the tools of social marketing, which include social norms, goals/commitments, feedback, prompts, and one-on-one interactions. The District has a toolbox of offerings. Types of outreach strategies and marketing collateral include:

- Flyers & Postcards
- Events
- Dynamic Website
- Media Opportunities
- Internal Communication

- Contests
- School Outreach
- Digital Communication
- Specific Outreach to Target Audience

The District uses a multi-layered, multi-faceted marketing and outreach strategy that targets audiences by identifying who they are, where they live, and events going on in their lives. Evaluating the District's education and outreach through the lens of the five target audiences identified in the 2020 State Solid Waste Management Plan the District is doing well in reaching each of the target audiences.

Outreach and education are critical to a recycling program's success. Strategic communications campaigns provide the most powerful results in creating behavior change. The District is implementing best practices education campaigns that are simple and engaging with regular consistent messaging across multimedia platforms. Investments have been made in expanding communication programs to target groups and ensuring diversion efforts succeed. As the primary hub of information, the District website contains accurate and up-to-date information. Education also goes hand in hand with operational and programmatic changes. The website and collateral marketing materials reflect any changes.

Multi-layered and multi-faceted means various marketing materials, approaches, and collateral are used. Flyer best practices include:

- Limited text with a visible call for action, typically to visit the website for more information.
- Colors consistent with the branding of the District.
- Images that tell the story and compliment the call for action.
- Layout should be easy for the eyes to flow between images and content without overwhelming the user with additional repetitive text.

Flyers designed as a hand-out should include content information that is more static and doesn't change frequently. Including a QR code on a flyer can lead the intended party to a website with the updated information.

#### a. Target Audience – Residents

The District has several programs targeted towards this audience sector. As described below are the activities conducted from 2019 to 2021.

- i. Social Media - Social media such as Facebook, Twitter, Instagram, etc. allows for a two-way conversation with residents. However, a plan for regular management of social media should be considered before initiating an account. Often an inactive social media account can pose a greater risk than not having one. Social media also offers an unparalleled way to measure interaction with your target audience through reports on audience engagement. When using social media, the District, should use these reports to create a baseline and set goals for future online engagement measurements.

The District posts 2-3 times per week on Facebook, Instagram, and Twitter pages. The content posted ranges from upcoming public presentations, holiday posts, 5 core recycling groups (cans, paper, plastic, cartons, and glass), did you know facts, contest winners, proclamation announcements, and information about the Collection Center.

	Start of 2021	End of 2021
Number of Likes	671	736
Number of Followers	689	764

- ii. District Annual Report - The DAR is written for an audience of residents for transparency. The 2019, 2020 and 2021 District Annual Reports were written as a summary of district activities. The DAR was then mailed to all residents in the District as well as posted on the website and social media for all of the political subdivisions in the District.
- iii. OSU Extension - The District provides funding to the OSU Agricultural Extension Office to educate residents about composting. Outreach tactics include: seminars, brochures, website postings, radio broadcasts, a phone help-line, and a stand at the Lorain County Fair. Composting how-to information was distributed to individuals who visit the Lorain County Agricultural Center in 2019, 2020, and 2021. Information was also made available at programs and Extension outreach events. No outreach events were conducted in 2020 and in 2021 there were 8, with 2 focused on youth audience. In 2021, the Ohio Master Gardeners of Lorain County conducted an informal survey of fair goes to learn more about thoughts on composting and barriers to composting. The office responded to questions from residents interested in learning more about composting and recycling and questions about strategies to improve the soil. Information was broadcast on WEOL 930AM to inform residents about recycling and composting.
- iv. Community Group Outreach - The District coordinated multiple presentations to adult civic groups but were cancelled due to COVID-19. In 2021, the District's Community Outreach Coordinator performed 12 presentations to adult organizations that took place at libraries, community centers, YMCA, etc. There was a total of 282 adults that were reached at these events. This program is the same as Adult Presentations.
- v. Establish Community Participation Methodology – The 2019 Plan set an opportunity to establish a methodology to measure participation in each community providing PAYT or curbside recycling. The 2019 Plan did not establish how but did suggest the District count households set-outs and pass-bys on routes or conduct a sample survey in the communities. This was not implemented and the program itself is a better “fit” categorized

elsewhere in the 2023 Plan. See "Other Residential Sector Reduction and Recycling Programs" in Appendix I.

- vi. Plan to Identify Residential Recycling Program Participants – The 2019 Plan set to establish a plan to identify residential recycling program participants that have significant amounts of contamination in their recycling containers. The 2019 Plan did not establish what plan the District would take but did offer a few suggestions such as: hiring interns to remind residents of what is and what is not acceptable in containers. Outreach to waste haulers to seek their assistance. Or develop an advertising program with messaging. In 2020 the District met with the City of Oberlin to begin a cart tagging program, however, due to COVID 19 the activity was postponed to 2021. Then due to staffing issues, the City of Oberlin cart tagging project was put on hold till Summer of 2022.
- vii. Adult Presentations - The District coordinated multiple presentations to adult civic groups but were cancelled due to COVID-19. In 2021, the District's Community Outreach Coordinator performed 12 presentations to adult organizations that took place at libraries, community centers, YMCA, etc. There was a total of 282 adults that were reached at these events. This program is the same as Community Group Outreach.
- viii. Events - No activities in 2020 due to the district staff being furloughed for 8 months. During 2021, District joined the North Coast Chamber of Commerce and Lorain County Chamber of Commerce, and the Power of More. District attended 12 events for each chamber.
- ix. Brochures - No activities in 2020 due to the District staff being furloughed for 8 months. Brochures were available online and at the collection center but were not distributed at the office. The District did a mailing in 2021 to 7,700 homes to the City of Lorain. District identified where most of the contamination was coming from and sent a letter to those households to clarify what is considered recyclable.
- x. Telephone Information line - The District answers phone calls from residents and businesses on their phone line. However, in 2020, while the employees were out of the office due to COVID-19, residents and businesses were directed to the commissioner's office. In 2021, the District established a phone tree which provides information to commonly asked questions regarding recycling, collection center, etc.

Current education for this target audience provides a general awareness of the service offerings. The District has not fully explored understanding the needs of this target audience to develop specific behavior changing outreach. The District has several outreach methods to reach this audience. Facebook and other social media allow for a two-way conversation with residents. To engage residents the District needs to continue regular management of social media. Often an inactive social media account can pose a greater risk than not having one. Social media also offers an unparalleled way to measure interaction with the District's target audience through reports on audience

engagement. The District can use these reports to create a baseline and set goals for future online engagement measurement.

To best reach residents in today's world of information overload, the District should consider creating short - no more than one-minute - videos to focus on key educational initiatives, (i.e., proper recycling to avoid illegal dumping, HHW, and other ways to reduce waste). Videos are more popular than ever and are a worthwhile investment to deliver one-way messages in a variety of media: website, social media, etc. These videos could be added to each community's website within the District as an additional educational tool to engage their residents and businesses. Videos also provide another communication measure as it tracks the number of people the videos reach.

In-person engagements are education-based and not designed as behavior changing outreach to residents. As described above, the District has several education activities that fall in this education-based category.

Efforts to change behavior through the "Plan to Identify Residential Recycling Program Participants" is yet to be implemented. Before implementing this program, the District should conduct research to identify attainable and measurable goals for this target sector. It would be most helpful to collect a sample set of quantitative data to discover a baseline for recycling behavior and current educational knowledge. The research may discover a need to focus more specific topic, demographic or resident behavior change.

It is assumed there are barriers with private haulers disseminating recycling messages to encourage proper recycling and informing residents of potential contamination. There may be barriers to reaching residents via a house-to-house, but one approach could deploy residential billing stuffers. Other barriers for delivering proper recycling education are that some political jurisdictions may not have the staffing power to concentrate on recycling education while others may prefer to approach the residents in their own way unassisted by the District. Establishing relationships with haulers and MRF facilities could maximize residential communication opportunities at the curb, through curbside educational flyer distribution or inquiries about common contamination seen in the field.

b. Target Audience – Schools

- i. Focus Education Programs with Consistent Message for Middle School Grades – The 2019 Plan suggested the District may narrow education and focus on middle school grades 6<sup>th</sup> and 7<sup>th</sup> for presentation on recycling. This is not scheduled to start in 2023.
- ii. Tours/Contests/School Presentations - Education to school-age children concentrates on delivering presentations, school contests, and conducting tours. Measurement of number of submissions and number of calendars distributed trend relatively high.

- iii. Measurement of School Education Programs – The 2019 Plan suggested calculating a percentage of entries that meet a certain criterion. The goal is to increase the schools for presentations. The District monitors the activities but did not add a criteria measurement.
- iv. Lending Library – The library is maintained and resources available for borrowing.
- v. America Recycles Day Pledge - America Recycles Day is a nationally recognized day dedicated to promoting recycling programs. KAB's "Take the Pledge" is a commitment to recycle more. The District holds pledge drives throughout Lorain County Schools. Teachers and students are asked to make a pledge and then commit to that pledge. In 2019, 26 schools participated with 1,204 signing pledges. An additional 75 pledges were received from other District events. The District also offered a drawing for a chance to win a rain barrel. In 2020 and 2021, no pledge drive occurred due to COVID-19.

To reach teachers amid a sea of information, regular, meaningful contact must be made in addition to the regular tours, contests, and event reminders. A list of teachers who have brought their students on tour in the past could be engaged at least quarterly. Automatic email surveys should be delivered after class or group tours. These surveys aim to discover what was most impactful about the tour, does the current tour align with their environmental education goals and would be willing to incorporate follow-up projects after the tour.

Collecting data from students can be accomplished on the tour in a more subtle capacity; quantifiable post-tour quiz data could be collected through the interactive exhibits. This will help to create a quantitative measure of the experience and investment. The tour is an educational opportunity with a take-home message potential.

America Recycles Day Pledge incorporates social marketing principles of commitments and behavior change. The focus is on getting the audience to perform an action. Take home cards or in-home prompts to recycle in the form of pledge cards to start recycling at home. The District also tied an incentive to the pledge cards with the opportunity to win a rain barrel.

- c. Target Audience – Institutions and Commercial Businesses  
Commercial sector entities are defined as commercial businesses, multifamily facilities, schools and universities, government agencies, office buildings, stadiums, amusement parks, event venues (stadiums, concert halls), hospitals and non-profit organizations that receive dumpster or compactor service for garbage. Target for this audience is administration and facilities maintenance.
  - i. Branded Message for Businesses - The 2019 Plan targeted a start date of 2023.

- ii. Recognition Program – No activity. The challenge with this program was the hurdle of requiring businesses to apply. This extra step resulted in this program not developing.
- iii. Business Recycling Roundtable – No activity.

The District has been very effective targeting school administration for education and awareness as well as to set Paper Retriever Programs. Thirty-three of the eighty school buildings in Lorain County have Paper Retriever Programs. The District accomplished this through direct outreach to the school administrators. The next step is to set up school recycling programs where the generated paper and other materials are getting collected from the school and recycled. This would require direct outreach to the school administrators to evaluate the options for collection service and in-school collection handling. Once the programs are set up additional direction and education is provided to the staff, custodial staff, and students to explain the new program.

Creating a dedicated menu option on the website for businesses would allow for easier navigation. This could link resources for businesses to clarify what is and is not recyclable in a given program, toolkit for commercial recycling, and other educational collateral.

The District could consider a Recognition Program that would expand to encompass Environmental Stewardship. Potential exists for the District to nominate businesses in the area going above and beyond in the field of environmental stewardship. Self-nominations could be welcomed, but not required. Environmental Stewardship Awards provide newsworthy angles to include in the District Annual Report, website, and social media.

**d. Target Audience – Industries**

- i. Industrial sector handout for public events for infrastructure opportunities – The 2019 Plan targeted a start date of 2020, however with COVID-19 and stay at home this program was not implemented.

Industries in Lorain County demonstrate a high level of recovery year after year. The District has traditionally provided little assistance to this sector. Adding a link to Ohio EPA's Materials Marketplace to the District's website with an explanation may help those industries looking for reuse and recycling solutions that would further help their diversion efforts. The District needs to continue to promote the Recycling Revolving Loan Program and Market Development Grants.

**e. Target Audience – Community and Elected Officials**

- i. Educational Toolkit to Communities to Decrease Contamination – The 2019 Plan identified an activity the District could develop as a toolkit of customizable collateral materials. This could be provided to communities to post on community webpages and/or social media

platforms that educate residents on allowable and unacceptable materials for curbside recycling programs.

- ii. Invitation to Elected Officials for events in their community – The 2019 Plan set to
- iii. Sponsor an Annual Educational Seminar – The 2019 Plan set a plan to sponsor an annual education seminar for elected officials.
- iv. Community Recycling Coordinator Meetings – The 2019 Plan set a plan for the District to hold bi-monthly or quarterly meetings with recycling coordinators from communities. The intent was to provide updates on District programming and solicit assistance in the measurement and contamination review.

Elected officials are reached primarily through two programs: Consortium for Waste services to Communities and Community Incentive Grant Program. These programs connect the District and elected officials one-on-one and are designed to improve communication with elected officials to promote curbside recycling. The District engages at least annually with the communities.

The Consortium was a successful behavior change for the community elected officials which resulted in bringing county-wide curbside access to Lorain County.

The one-on-one outreach to this sector has been successful in building trust and establishing relationships. However, COVID-19 made this outreach challenging and with lack of being in person the District has noted challenges with the correct community contact. Through this outreach the District learned at least annual in person contacts are needed to ensure community involvement.

## SECTION 13: RECYCLEABLE MATERIAL PROCESSING CAPACITY

The purpose of this analysis is to evaluate 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.

Data collection is vital to continuing to measure waste reduction within the District and continue to make improvements. Limits to data collection continue to make it difficult to understand barriers for why businesses do not recycle. The District updates their mailing list every year by using an online database for tracking currently operating businesses. Many of the businesses on this list are large generators within the District and having a response from them would largely impact the recycling rate for the District. There are still major haulers in the community who do not share their disposal data with the District. Opportunities for improving data collection are as follows for both residential/commercial and industrial sectors.

- The District can develop a program where they target specific large generators each year to build a relationship with them and collect recycling data from them.
- If large generators do not have any recycling programs or access to recycling, then the District can work with them to help understand their barriers and how they can best assist them.

### ***Processing Capacity***

In 2019 the District required processing for 79,051 tons of Residential/Commercial tons and 81,287 tons of Industrial tons. There are several facilities operating in the District that processed quantities of District-generated recyclables in 2019 including:

- Republic Waste Services Lorain County Resource Recovery Complex
- Sugar Ridge Recycling, Elyria - ferrous and non-ferrous metals
- Kurtz Bros. Avon Lake Compost Facility
- Cloverleaf Composting Facility
- Barnes Nursery
- Oberlin Compost
- Avon Lake Central Fueling
- Three Z Inc. Composting
- Eaton Township Composting Center
- Carlisle Township Composting
- City of Lorain Composting Facility
- Lorain County Collection Center – collects special materials for processing
- Ross Environmental – Household Hazardous Waste

There are also processing facilities that manage Lorain County recyclables outside the District including:

- Rumpke Waste Columbus, OH
- Liberty Tire Company, OH
- Kurtz Bros. Independence Facility, OH
- #1 Landscape Composting – Medina, OH
- Green Wave Computer Recycling, LLC – Indianapolis
- ERG Environmental Services, LLC, Bowling Green, OH
- American Paint Recyclers, Middle Point, OH
- Environmental Specialists, Inc. Youngstown, OH
- Caraustar, Inc. Cleveland, OH
- Gateway Recycling, Inc. Cleveland, OH
- Cylinder Recyclers, Inc. Cleveland, OH
- Sunset Cylinder Exchange, St. Mary's, OH
- Curie Environmental Services, Albuquerque, NM

**Table H-13.1 Reference Year (2019) Residential/Commercial Material Recycled**

Material	Tons
Appliances/ 'White Goods"	5
Household Hazardous Waste	217.7
Used Motor Oil	200
Electronics	268.5
Scrap Tires	3,063.87
Dry Cell Batteries	0.2
Lead-Acid Batteries	25.7
Food	1,594.37
Glass	263.5
Ferrous Metals	5,002.8
Non-Ferrous Metals	1,891.2
Corrugated Cardboard	12,724.63
All Other Paper	14,348.1
Plastics	4,554.58
Textiles	813.4
Wood	2,339.8
Commingled Recyclables (Mixed)	2,269.1

Material	Tons
Yard Waste	28,827.7
Other (Aggregated)	641.32
<b>Total:</b>	<b>79,051.3</b>

### ***Organics Processing Facility***

The highest quantities of residential/commercial materials recycled include yard and food waste at 30,421 tons. The District's network of composting facilities has managed the generated yard waste tonnage. However, there are some concerns regarding some of the facilities that manage large volumes of organic material and whether the existing sites can continue to service the District if volumes increase. There are also concerns that there are not enough options for competing hauling companies to allow them to bid on yard waste services. There are no Class II compost facilities in District to take food waste organics.

The District completed an analysis of a potential site located in the City of Lorain to potentially serve as a Class II organics processing facility. The facility would be able to serve political subdivisions that are not currently collecting yard waste material from their residents. The facility was also projected to manage food waste from commercial facilities. This would expand the market in Lorain County as the facility would need to be classified as a Class II facility. The major challenge that the District faces is that there has been a moratorium passed in the City of Lorain which halts opening the organics facility until that is lifted. The lack of a Class II facility for food waste will make it difficult to increase diversion tonnages for Lorain. One of the greatest challenges facing the future of food waste collection is making it more economical. If this can be accomplished, new opportunities for diverting food waste from the residential sector may arise. There will also be a need for local service for processing this material. The District needs to determine the following:

- Will a District facility be economically viable should the District become an early leader in food waste composting?
- Can the District provide another marketplace option for communities for yard waste composting? and
- Is there enough market demand for a District facility that can serve as a regional solution for this large volume material?

### ***Traditional Recyclables Processing Capacity***

Traditional recyclables collected from curbside recycling programs and commercial facilities (including corrugated cardboard, paper, non-ferrous metal, plastics, glass, and commingled recyclables) totaled 36,000 tons in 2019. In 2013, Republic completed a comprehensive retrofit of the Republic Waste Recyclery. The facility can now process up to 150,000 tons of recycling materials annually. The facility is designed to process 35 tons per hour as compared to 15 tons per hour prior to the retrofit. This facility has provided service to communities in the Cleveland and Toledo markets. Having this facility located

in the District should continue to be a benefit to the District providing ample processing capacity for recyclables.

***Special Materials Processing Capacity***

The District processes other materials such as scrap tires (approximately 3,063 tons) and household hazardous waste (217 tons) through specialized facilities. The District's Collection Center, which is open throughout the year, collects residential HHW, tires, and other recyclable materials. Materials are collected, segregated, packed, and shipped to facilities for recycling.



## **APPENDIX I**

# **CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS**



## APPENDIX I Conclusions, Priorities, and Program Descriptions

The District's 2020 Plan was developed to meet the State of Ohio 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 2024 Plan is prepared to meet compliance with the State of Ohio 2020 State Plan. In accordance with the 2009 State Solid Waste Management Plan, a SWMD must prepare a solid waste management plan that ensures the SWMD makes progress toward achieving the following nine goals:

### Goal #1

- The SWMD shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.

### Goal #2

- The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector and at least 66 percent of the solid waste generated by the industrial sector.

### Goal #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.

### Goal #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.

### Goal #5

- The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.

### Goal #6

- The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.

### Goal #7

- 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.

### Goal #8

- The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.

### Goal #9

- The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management 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, the SWMD must demonstrate being able to achieve either Goal 1 or Goal 2. The SWMD demonstrates Goal 1 by demonstrating over 90% of the population has access to recycling infrastructure.

This Appendix describes the accomplishments of the strategies/programs and their future direction for the District's 2024 Plan.

#### A. Actions and Priorities

##### a. 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 2020 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 areas of improvement do not commit the SWMD to undertake every specific action. To help the SWMD determine priority areas for actions, the SWMD staff engaged in a strategy session and conducted a SWOT analysis. The list of potential opportunities of what the District could do is found in Appendix H under the "Conclusion" section of each analysis.

##### b. Priorities

The District is fortunate to have many best practice programs that will continue through the planning period. To maintain effectiveness and growth in the programs the District identified areas to modify or enhance the current programs. Through this planning evaluation process the District also identified a couple programs that were absorbed into other programs or will not be continuing in this 2024 Plan.

The waste composition analysis identified most materials being landfilled have opportunity for diversion. Two materials, if targeted, could result in large diversion impacts are paper and organics. The District's 2024 Plan is setting a pathway for targeted education and outreach to schools (a large generator of paper) and continued collaborations for organics processing in the District.

Priority areas to focus efforts in the 2024 Plan include:

Priority Program	Priority Area
Sustainability Education Learning Center	Hands on learning and education
Education – School Diversion Outreach	Increase the schools recycling rates by five percent over the next three years
Education - Social Media Outreach	Increase social media presence and develop short videos
Education – Curbside Outreach	Outreach to reduce contamination
Organics Infrastructure Development	Expand organic processing in the County

## B. Program Descriptions

### ***Residential Recycling Infrastructure***

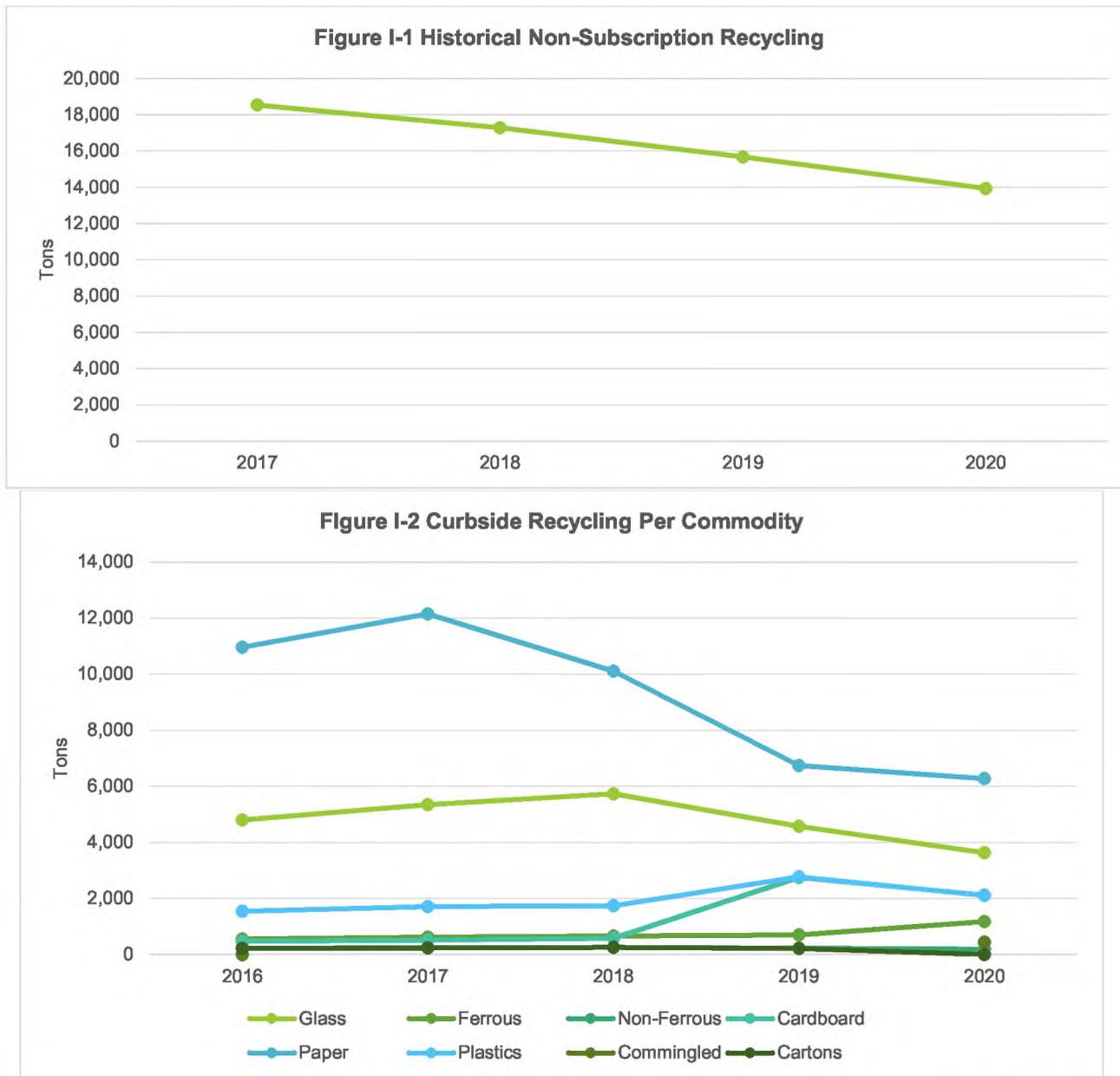
#### Curbside Recycling Services

ID	Name	Start Date	End Date	Recycled Tons (2021)	Goal
<b>Non-Subscription Curbside Recycling</b>					
NSC1	Amherst (City)	Ongoing	Ongoing	911.96	1 and 2
NSC2	Amherst Township	Ongoing	Ongoing	384.4	1 and 2
NSC3	Avon City	Ongoing	Ongoing	1,218.5	1 and 2
NSC4	Avon Lake City	Ongoing	Ongoing	1,597.4	1 and 2
NSC5	Brighton Township	Ongoing	Ongoing	54.7	1 and 2
NSC6	Carlisle Township	Ongoing	Ongoing	551.2	1 and 2
NSC7	Eaton Township	Ongoing	Ongoing	431.1	1 and 2
NSC8	Elyria City	Ongoing	Ongoing	172.8	1 and 2
NSC9	Elyria Township	Ongoing	Ongoing	238.1	1 and 2
NSC10	Grafton Township	Ongoing	Ongoing	202.2	1 and 2
NSC11	Grafton village	Ongoing	Ongoing	401.5	1 and 2
NSC12	Huntington Township	Ongoing	Ongoing	69.1	1 and 2
NSC13	LaGrange Village	Ongoing	Ongoing	151.5	1 and 2
NSC14	Lorain City	Ongoing	Ongoing	2,516.2	1 and 2
NSC15	New Russia Township	Ongoing	Ongoing	159.6	1 and 2
NSC16	North Ridgeville City	Ongoing	Ongoing	2,173.1	1 and 2
NSC18	Penfield Township	Ongoing	Ongoing	154.6	1 and 2
NSC19	Pittsfield Township	Ongoing	Ongoing	117.8	1 and 2
NSC20	Rochester Village	Ongoing	Ongoing	7.8	1 and 2
NSC21	Rochester Township	Ongoing	Ongoing	35.1	1 and 2
NSC22	Sheffield Village	Ongoing	Ongoing	311.2	1 and 2
NSC23	Sheffield Lake City	Ongoing	Ongoing	768.6	1 and 2
NSC24	Sheffield Township	Ongoing	Ongoing	259.7	1 and 2
NSC25	Vermilion city	Ongoing	Ongoing	589	1 and 2
NSC26	Wellington Village	Ongoing	Ongoing	392.5	1 and 2
NSC27	Wellington Township	Ongoing	Ongoing	94.9	1 and 2

The above listed political jurisdictions offer non-subscription curbside recycling programs. All but two political jurisdictions, Elyria City and Oberlin City, contract collection and processing services to the private sector. Elyria City and Oberlin City both use municipal collection. All non-subscription recycling programs use wheeled carts. Two political

jurisdictions, Lorain City and Sheffield Village, offer a volume-based billing structure that allows residents to choose one available option of a wheeled cart, bin, or bag.

The District graphed the historical curbside (subscription and non-subscription) tonnage per material to look for trends. Paper and glass declined most notably while cardboard and plastic both saw increases.



The City of Oberlin delivered recyclables to Republic's recycling center. From April 2019 to January 2020 Republic intermittently increased the City's recycling processing fee from \$27.50/ton to \$100/ton. An additional surcharge of \$75/ton was added to contaminated loads beginning in July 2019. These increased costs created a difficult financial scenario for the City. In March 2020, due to COVID, the City of Oberlin stopped hauling recyclables.

The City utilized this program suspension as an opportunity to re-evaluate their program. The goal was to restructure their program into an efficient program while still providing a free recycling service to residents. This pause lasted about 6 months and service was resumed in November 2020. When service was restored, the program changed to subscription base so only those households that sign up are serviced.

Materials accepted include: cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. (Note: Oberlin's program stopped accepting glass in 2020.) Materials are collected in a single commingled stream.

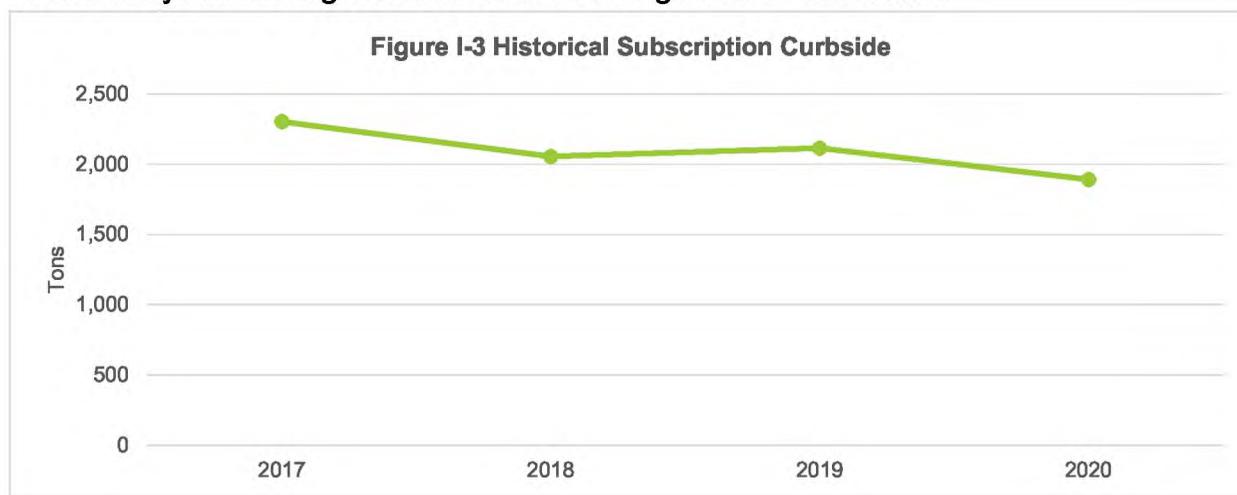
Historically the tonnage recovered is following a downward trend.

Target for Next 3 Years: Continue through planning period.

ID	Name	Start Date	End Date	Recycled Tons (2021)	Goal
<b>Subscription Curbside Recycling</b>					
SC1	Brownhelm Township	Ongoing	Ongoing	54.7	1 and 2
SC2	Camden Township	Ongoing	Ongoing	128.3	1 and 2
SC3	Columbia Township	Ongoing	Ongoing	340	1 and 2
SC4	Henrietta Township	Ongoing	Ongoing	232.2	1 and 2
SC5	Kipton Village	Ongoing	Ongoing	23.7	1 and 2
SC6	LaGrange Township	Ongoing	Ongoing	338.8	1 and 2
SC7	South Amherst (Village)	Ongoing	Ongoing	133.9	1 and 2
SC8	Oberlin City	November 2020	Ongoing	703.1	1 and 2

The above listed political jurisdictions offer subscription curbside recycling programs. Each household contracts individually with a private hauler for collection and processing services. Henrietta Township offers carts, bins, etc. for collection, the remaining jurisdiction households use wheeled carts.

Historically the tonnage recovered is following a downward trend.



Materials accepted include: cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. Materials are collected in a single commingled stream.

The City of Oberlin's recycling program switched to an opt-in subscription-based service where residents have to pledge the following guidelines:

- 4-strike enforcement program
- Recycling collected bi-weekly
- Trash and recycling collected on 3 days per week rather than 4
- No glass and no plastics #3-7 are accepted

In 2022, the City of Oberlin reported 1,350 subscribers. Oberlin's estimated household count is 2,511<sup>1</sup>, thus this equates to roughly a 54% participation rate. The benefit of this change is that contamination rates lowered to between 3-5% in 2021 from the 15% measured in 2019.

The District received an Ohio EPA Community Grant (in 2021) to fund a targeted education and awareness campaign for Oberlin's curbside recycling program. This campaign will address educational gaps and provide recycling feedback to the residents who participate in the new curbside program. This program will also analyze how participating residents are adapting to the changes. The campaign will involve direct engagement with residents in the program by inspecting recycling carts for proper participation before they are collected by the City. If recycling carts have materials that are not acceptable in the program, the cart will be tagged with information as to why the materials placed in the cart are not acceptable and will include detailed information on what is accepted in the program. The education program will inspect each household at

<sup>1</sup> 2020 data. <https://datacommons.org/place/geoid/3957834?category=Housing>

least three times over the course of the program. Program implementation was delayed due to lack of labor the program has since been completed and the grant closed out.

Target for Next 3 Years: Continue through the planning period.

### Drop-off Recycling Services

ID	Name	Start Date	End Date	Goal
Full-Time Urban Drop-off				
FTU1	Eaton Township	ongoing	ongoing	1 and 2

Recyclables collected include cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. Materials are collected in a single commingled stream. Access is 24/7. Tonnages recovered are included in the curbside totals and not separately tracked. This drop-off is provided by the political jurisdiction and their private hauler. The intent is availability for their households and businesses only.

Target for Next 3 Years: The District will offer to meet with the Village to provide technical assistance and help with exploring options to keep the program operational.

ID	Name	Start Date	End Date	Goal
Part-Time Rural Drop-off				
PTR1	Huntington Township	ongoing	ongoing	1 and 2

Recyclables collected include cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. Materials are collected in a single commingled stream. Access is available on a part-time basis. Huntington Township's drop-off recycling location is available every Saturday 9am to 2pm. Tonnages recovered are included in the curbside totals and not separately tracked. This drop-off is provided by the political jurisdiction and their private hauler. The intent is availability for their households and businesses only. Paper and cardboard are collected through the Paper Retriever recycling bins and commingled containers are collected with a private hauler the township contracts with. Location is 45955 State Route 162.

Target for Next 3 Years: The District will offer to meet with the Township to provide technical assistance and help with exploring options to keep the program operational.

ID	Name	Start Date	End Date	Goal
Part-Time Rural Drop-off				
n/a	Camden Township	ongoing	ongoing	1 and 2

This drop-off is provided by the political jurisdiction and their private hauler. The materials collected are paper and cardboard.

Target for Next 3 Years: The District will offer to meet with the Township to provide technical assistance and help with exploring options to keep the program operational

ID	Name	Start Date	End Date	Goal
Part-Time Urban Drop-off				
PTU1	Lorain County Collection Center (Elyria)	ongoing	ongoing	1 and 2

The District operates the Lorain County Collection Center in Elyria which is open to all District residents including the City of Vermilion which spans two counties. The Collection Center is typically open Monday and Saturday 9am-3pm and Wednesday 12pm-6pm. (Note: Hours are subject to change. District website will maintain the most up-to-date hours of operation.) Recyclables collected include cardboard, aseptic containers, mixed paper, plastic bottleneck containers, steel/tin/aluminum cans, and glass. Materials are collected in a single commingled stream. The Collection Center also accepts other materials, which are discussed in more detail in Appendix I.

The historical trend from 2016 to 2020 shows fluctuation ranging between 700 and 1,120 tons. Tonnages were trending down but spiked in 2019 and dipped even lower in 2020. Tonnage data includes single stream recyclable materials handled at the Collection Center.

Table I-1 Recovery at Collection Center

Program	2016	2017	2018	2019	2020
Collection Center (tons)	1,128	976	822	1,040	704

Target for Next 3 Years: Conduct a cardboard campaign for users to recycle cardboard at the Collection Center to increase user participation. Conduct a user analysis of visitors using the Collection Center to assess where users are coming from. Assess a satellite collection in North of County that is monitored for more opportunity for households and offshoot the Collection Center. Create a learning center available for tours.

#### ***Multi-Family Unit Recycling***

Name	Start Date	End Date	Goal
Identify Concentrations of MFH Units to Assess Where is the Greatest Need for Additional Infrastructure	2020	2029	1 and 2

Recycling at multi-family housing (MFH) locations is challenging for the recycling hauler and apartment managers due to several factors. Recognizing there is a large portion of recyclables that are not being captured from residents of MFH units, the District initiated a drop-off recycling location at the Collection Center to provide opportunity. Wanting to

bring more convenient opportunities to multi-family housing, the District developed this program to work with communities and regional planning agencies to identify communities or areas with the greatest concentrations of MFH units. The intent is to further investigate those high concentration areas to identify if there is an opportunity to provide additional infrastructure that will measurably improve residential sector recycling rates. The challenges include lack of services, anonymity in disposal, high turnover, space from containers, and lack of ownership.

Investigation will require research as well as outreach and engagement to regional planning agencies and communities.

This program was identified as an opportunity in the 2020 Plan and assigned a priority ranking of 4.0 which was intended for the District to implement. In 2020, challenges with COVID 19 prohibited the District from starting new programs. No activity in 2020 or 2021.

**Target for Next 3 Years:** Work with property managers to identify the biggest challenges for service. This will be information gathering research conducted with face-to-face meetings or phone interviews. Assist political jurisdictions in expanding service contracts to include Multi-Family Housing. Conduct research to understand existing services and opportunities in the sector. Understanding the barriers to service is key to design programs. Develop estimates of participation, generation, and diversion. Examine what has worked in other communities and develop interventions for Lorain. Examine options for data collection, benchmarking, and tracking. Consider implementation of programs ranging from requirements for equal space for recycling and trash in new build, to social marketing campaigns, on-site assistance, hauler-based programs, and others. Push social marketing or direct mail piece to MFH tenants to inform about the Collection Center.

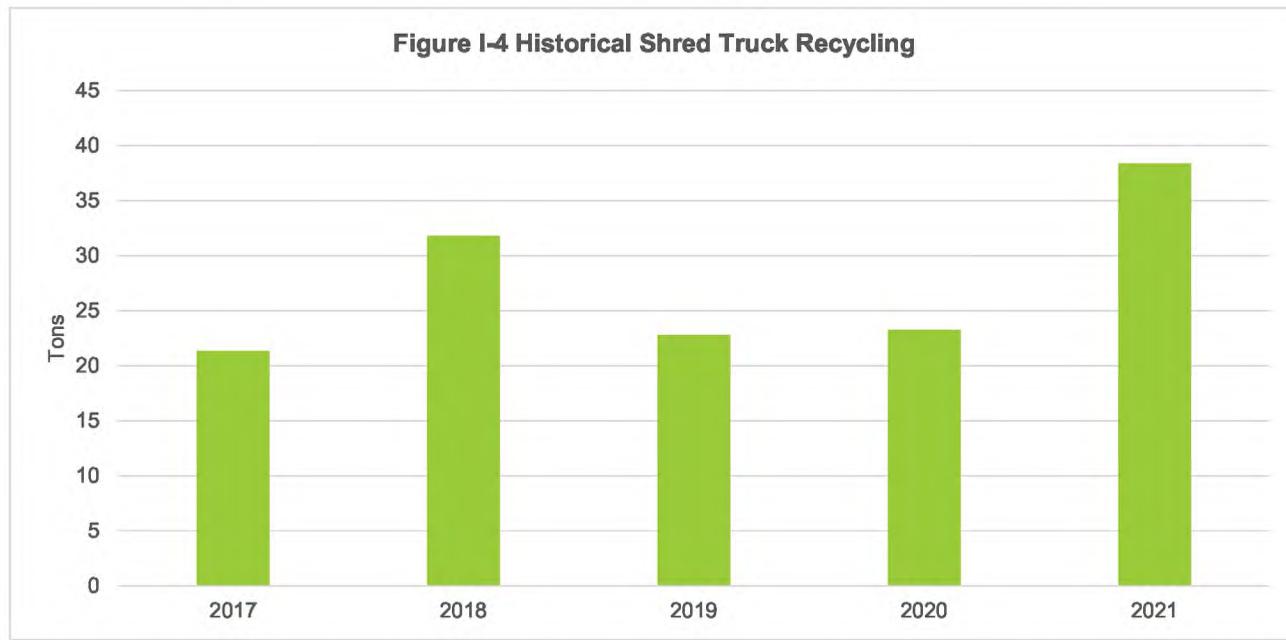
### ***Other Residential Recycling Programs***

Name	Start Date	End Date	Goal
Sustainability Education Center	2022	ongoing	1

The District is intending to complete the inside display installation for a Sustainability Education Center starting in 2023 that is housed in the existing Lorain County Collection Center on South Abbe Rd. in Elyria. The Sustainability Center will educate the community on the process and importance of recycling, composting, and waste reduction. This facility should be a visually impacting and interactive space that inspires visitors to change their waste habits. Visitors will be informed about the issue of waste and encouraged to make positive changes in their waste habits at home, school, and work that will make a difference for years to come. The goal is to provide an engaging educational opportunity for people of all ages and backgrounds. The primary audience of this project is K-12 students. The secondary audience is made up of adults, including college-age students, and the tertiary audience is children younger than kindergarten age. It is important to reach this group of young children, while at the same time reaching their parents with the waste reduction message.

Name	Start Date	End Date	Goal
Shred Truck	2017	ongoing	1

The District received a grant for a mobile document shred truck in 2016. The District advertised the program but did not begin using the shred truck until 2017. A mobile document shred truck travels to communities for their residents and shreds documents on site using the shredding equipment attached to the truck. Documents shredded in the mobile document shred truck are recycled. Historical tonnages shredded are shown in the following graph. In 2020, in April-June no events were held due to COVID-19.



Community document shredding is provided by the Lorain County Board of Commissioners free of charge to residents of Lorain County and residents of Vermilion City. Events are hosted on Saturday's from 9am to 12pm. Interested communities reach out to the District for available dates and complete an event request application. Materials from businesses or organizations are not accepted during community shredding events.

Residents are also able to drop off paper for shredding at the Collection Center. In 2021, this service offering was expanded to allow businesses and non-profits to bring their paper to the collection center. Businesses and non-profits are asked to call before dropping off paper.

**Table I-2 Shred Truck Data**

Program	2016	2017	2018	2019	2020	2021
Number of Communities	Program not yet available	6	2	2	0	6
Tons Recycled		21.3	31.8	22.8	23.24	38.4

Shred truck is also used for County Records and an occasional second community request.

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Yard Waste Contracting Consortiums	2022	ongoing	1 and 2

Evaluate whether there is interest in establishing municipal yard waste contracting consortiums to obtain longer contracts and stable pricing for communities. If communities' express interest, the District would facilitate the development of the consortium and handle the bid in the same way it developed its disposal and recycling consortiums. To determine the level of interest, the District could survey those communities that operate municipal leaf collection programs and rely on private sector facilities for processing to determine the following:

- Community interest in participating in a contracting consortium
- Bid specifications and parameters
- Potential locations for the delivery of the consortium's materials.

No activities in 2020. This program is not scheduled to start until 2023.

Target for Next 3 Years: Conduct a survey of communities. Study yard waste diversion in each community to show current and potential diversion impacts, along with diversion comparison of contracted versus non-contracted communities.

Name	Start Date	End Date	Goal
Drop-Off Recycling Analysis - Initiative to improve convenience and access	ongoing	2023	1 and 2

The District will identify urban areas that do not host a drop-off recycling site and provide technical assistance for improving access for residents that do not have curbside recycling. No activities in 2019, 2020, and 2021.

The District has an extensive curbside recycling program with all 34 political jurisdictions implementing curbside recycling programs. Since Oberlin's curbside program has been reestablished as a subscription program, the total count is that non-subscription programs are implemented in 26 and subscription programs in 8 political jurisdictions. With curbside in all political jurisdictions the District concentrated efforts more on the Collection Center, located in Elyria, to provide expanded service offerings for single stream recyclables as well as hard to recycle materials rather than expanding drop-off recycling access. A collection service gap where drop-off containers could be beneficial is for the multi-family

sector. That discussion is included in another program. Also, as identified in the Collection Center program a potential drop-off site in the North could provide more access.

**Target for Next 3 Years:** This program will continue to be absorbed into other programs. The research and evaluation for more convenient access is captured in other programs.

Name	Start Date	End Date	Goal
Consortium for Waste Services	2014	ongoing	1 and 2

The District participates by providing technical assistance at the direction of the Consortium Board. The Consortium Board meets quarterly. In 2021, the District noted challenges with reaching contacts due to political official turnover.

An important aspect in achieving countywide curbside is the Consortium for Waste Services, which provided savings in contracted services and expanded service offerings to political jurisdictions. The first consortium began in 2014. In 2019, the District assisted and completed another bid process for the consortium. When consortium contracts expire other communities may join. Twelve political jurisdictions were members of the consortium in 2020.

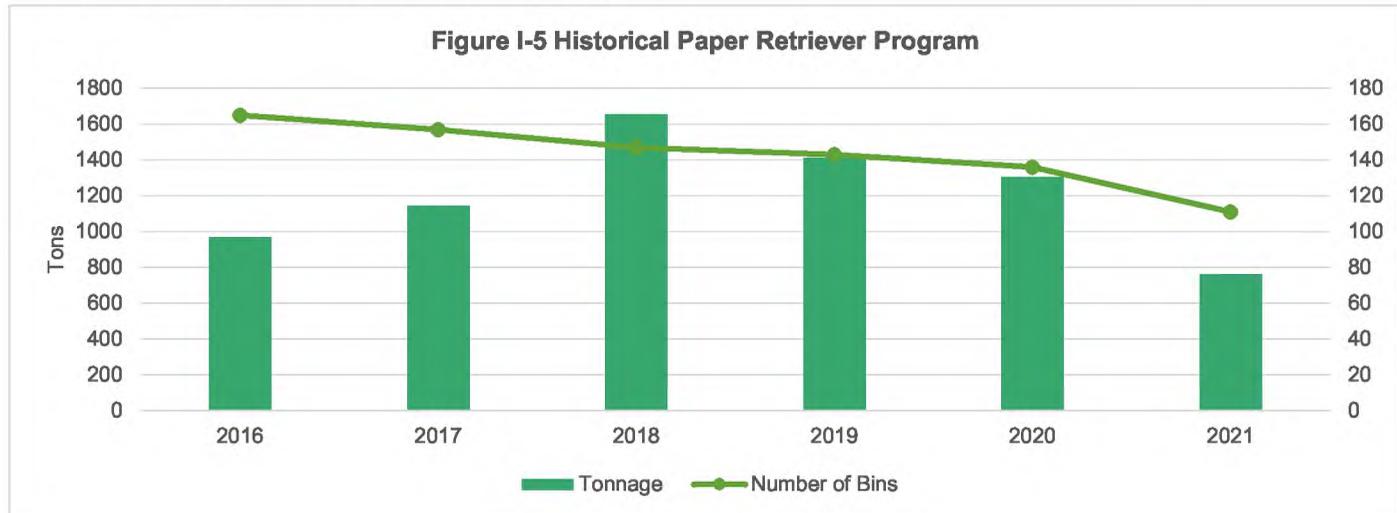
The consortium currently includes 12 communities in Lorain County. The waste consortium joins the political subdivisions together to aggregate a contract for service that achieves a greater service offering and expanded cost savings to the community members. This is beneficial to the community because it helps lower the cost of waste services for those living in the rural areas that are further from the city, and still provides them with curbside recycling and trash collection access.

**Target for Next 3 Years:** Continue through the planning period.

Name	Start Date	End Date	Goal
Paper Retriever	ongoing	ongoing	1

Paper Retriever is a privately-operated company that operates in the District and provides drop-off containers to non-profit organizations and schools collecting paper-only, and phone books. Containers are located at various drop-off locations throughout the County.

The District noticed a decline in Paper Retriever bins placed and serviced in the County, since 2016. In 2016, there were 165 paper retriever bins placed in various locations throughout the County and in 2021 there were 111. As the number of locations declined the tonnage also followed a declining trend.



#### **Paper Retriever Program Data**

Paper Retrievers	2016	2017	2018	2019	2020	2021
Number of Bins	165	157	147	143	136	111
Tonnage	971	1,146	1,655	1,413	1,307	764

**Target for Next 3 Years:** This is not a District implemented program and not within control to service or manage. However, the District would like to see this continue through the planning period.

#### ***Commercial/Institutional Sector Reduction and Recycling Programs***

##### **Large Venue Recycling**

Name	Start Date	End Date	Goal
Specialized Bottle/Can Collection Program	ongoing	ongoing	1

Upon request, the District provides schools, businesses, and organizations with containers designed to collect bottles and cans for recycling. The District continued to provide collection containers to schools, businesses, and organizations as requested.

Events	2016	2017
Number of Boxes	278	294
Number of Bags	3,360	2,412

A Recycling Boxes for Events program flyer is on the website, where a registration request can be found.

Target for Next 3 Years: Continue through the planning period.

#### Waste Assessments/Waste Audits

Name	Start Date	End Date	Goal
Waste Audits	ongoing	ongoing	4

The District advertises free waste auditing services on its website. Since 2016, the District attempts to conduct at least one waste audit a year. In 2020, a waste audit was conducted for 2 schools in Elyria that were planning on closing and reopening as one combined school. The schools' waste flows and waste generation were assessed, and recommendations provided for improvement. In 2021, a waste audit was conducted for the Neighborhood Alliance. Waste flows and waste generation were assessed, and recommendations provided for improvement.

The District advertises free waste auditing services on its website.

Target for Next 3 Years: Create a waste assessment toolkit to allow self-conducting waste audits. Write case studies of successful audits. Pair with grants to assist service costs for reduction and/or diversion programs. Promote and add to the website and social media.

#### Workgroup/Roundtable

Name	Start Date	End Date	Goal
Business Recycling Roundtable	ongoing	discontinued	

The Business Recycling Roundtable was included in the previous solid waste plan to incorporate participation between businesses to collaborate upon recycling initiatives that could be implemented within the District. This program has been on hold since 2015 and the District wanted to restructure it before relaunching the program. This program has not shown to increase the participation of commercial businesses. Moving forward the District will discontinue this program due to no activity, and the District will be furthering other commercial business outreach methods through other programs.

Target for Next 3 Years: Discontinue

Name	Start Date	End Date	Goal
Infrastructure Development	2020	ongoing	4

[Note: Program name change from Meet with Economic Development Directors in Communities].

The District could meet to educate economic development directors about the District's services which may help promote the District's programs to their constituents. Ideally the District would develop a relationship with a network of economic development directors throughout Lorain County to keep the District informed about major changes in the

commercial/industrial landscape. This program was to kick off in 2020 but with COVID 19 pandemic was delayed.

**Target for Next 3 Years:** The next planning cycle will rename the program and place focus on how the District and economic development agencies can collaborate to expand infrastructure in Lorain County. Infrastructure such as processing and end markets. Collaborate with economic development agencies to educate about the need of recycling feedstock for manufacturing. Prepare a feedstock study to show the volume of commodities available and potential as well as collection and processing infrastructure to support businesses.

### Other Programs

Name	Start Date	End Date	Goal
Zero Waste Planning	ongoing	ongoing	4

The District approached the Lorain County Community College about a zero-waste planning project in 2016. The management of the school changed, and the project was put on hold. The District has not assisted any businesses with Zero Waste planning or projects. The District has Zero Waste planning advertised on their website for businesses to reach out to the District with any questions or help.

**Target for Next 3 Years:** The goal is to provide more outreach and information for businesses that want to incorporate zero waste into their practices and encourage these tactics through the community. To improve this program the District has made modifications to implement moving forward in the planning period. First, the District will define what zero waste for Lorain County, by determining the percentage of diversion required consider an event “zero waste”. The District will create a Zero Waste Events toolbox kit, which will help provide businesses with some of the basic knowledge around zero waste planning. The District will develop a tagline for commercial businesses to use and create a membership page to list businesses that have implemented zero waste events. Additionally, the District will pair this with grants to assist businesses implementing zero waste or zero waste events.

Name	Start Date	End Date	Goal
Business Recycling Assistance	ongoing	ongoing	4

Program was called “Commercial Sector Paper Recycling “ and is changing to “Business Recycling Assistance”.

The intent of this program is to continue growing collection infrastructure to businesses. The District would provide bins to businesses to collect paper for recycling and the business would subscribe to service or drop-off at the collection center or one of the available Paper Retriever locations. In 2013 a grant was received which assisted in

offsetting costs for the District to purchase bins and distribute. Since then, grants have not been received.

The District directs businesses to private service providers, the Collection Center, and Paper Retriever programs. The Collection Center's document shredding is an available service offered to businesses. There are more than 100 paper retriever bin locations throughout the County.

**Target for Next 3 Years:** The goal is to expand the number of businesses diverting materials from the landfill. The District will work with businesses to set up recycling programs. The focus will expand to all materials. One way to implement this is to provide technical assistance as follow-up to any waste audits conducted. Another is by direct contact to businesses to engage and assist in setting up recycling programs. Either method is effective, but the goal will be to assist at least 2 businesses a year. Expected costs will be indirect from District staff and direct costs may include containers, signs, or other equipment/materials to set up a business recycling program. Another avenue to explore is communicating with community elected officials to review ordinances because space for recycling receptacles is a best practice for managing waste.

The District offices are a great starting point for assessing ways to minimize packaging waste and adopting in-house procedures that can be used for example, in other offices and businesses.

Name	Start Date	End Date	Goal
Food Waste Program	2023	ongoing	4

Program was called "Target High Volume Food Waste Generators" and is changing to "Food Waste Program".

This program is not scheduled to start until 2023, however diversion programs have started in two communities. Avon Lake started a Food Waste program with Rust Belt Recyclers and City of Oberlin started their own food scraps program.

**Target for Next 3 Years:** To continue traction with the rest of the county, the District will expand beyond the bottom of the food waste hierarchy – end of life management by developing a Food Waste Task Force in Lorain County or by joining one if one already exists. There are upstream strategies for deterring food waste in the first place and for managing other than through composting such as feeding the hungry. The District is also willing to assist in implementing a food waste diversion pilot program. The District's grant program can be paired with this program to ensure grants for food waste diversion programs primarily for communities, and possibly at the school level are issued. The goal of this program is to establish a system in which the large food generators have outlets to send their food waste to help divert it from the landfill.

Name	Start Date	End Date	Goal
Facilitate Food Rescue Program	2022	2022	

This program will combine with the Food Waste Program (see above). It is important to identify issues, gaps, and challenges for which solutions can be developed. It's also beneficial to include a wider stakeholder group for achieving greater benefits.

Target for Next 3 Years: Discontinue

### ***Industrial Sector Reduction and Recycling Programs***

#### **Waste Assessments/Waste Audits**

Name	Start Date	End Date	Goal
Waste Audits	ongoing	ongoing	4

The District advertises free waste auditing services on its website. No waste audits were provided since 2016.

Target for Next 3 Years: Create a waste assessment toolkit to allow self-conducting waste audits. Write case studies of successful audits. Pair with grants to assist service costs for reduction and/or diversion programs. Promote and add to the website and social media.

### ***Restricted/Difficult to Manage Wastes***

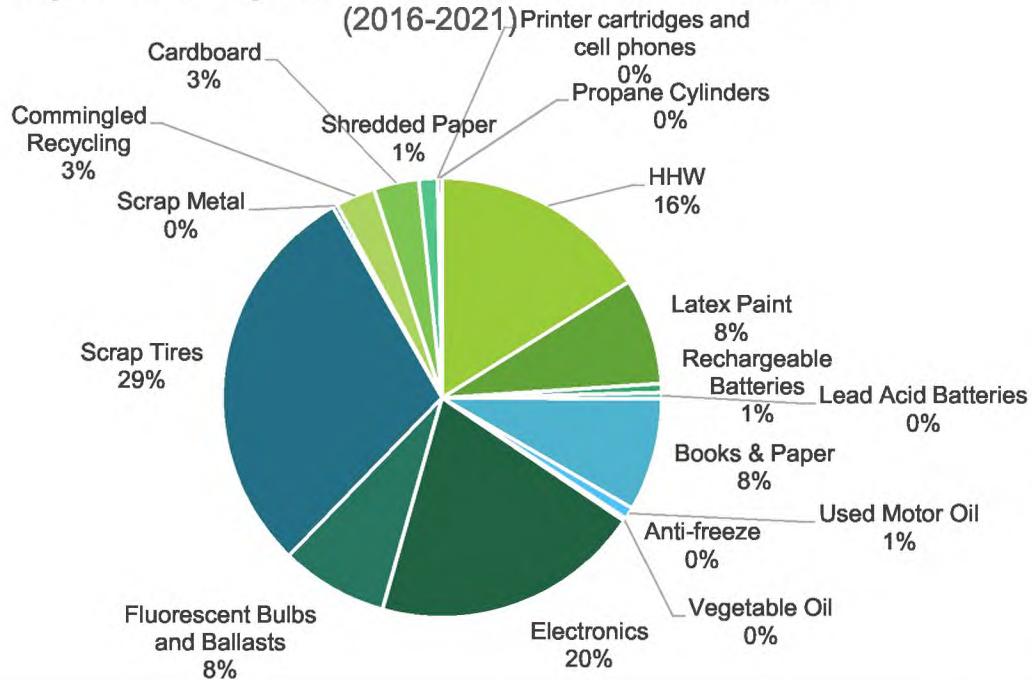
#### **Household Hazardous Waste**

Name	Start Date	End Date	Goal
Lorain County Collection Center	ongoing	ongoing	2, 5

The Lorain County Collection Center began operating in June 2010. This facility is available for all District residents. The Collection Center is one stop shop for managing: HHW, residential recyclables, scrap tires, rechargeable batteries, ballasts, scrap metal, books, paper, cardboard, fluorescent bulbs, and electronics. The Collection Center is typically open Monday and Saturday 9am-3pm and Wednesday 12pm-6pm. (Note: Hours and Acceptable Materials are subject to change. District website will maintain the most up-to-date information).

The Collection Center provides residents with a convenient, accessible option for managing HHW and other specialized materials. Historically user fees are not charged for use of the facility or per material dropped off.

Figure I-6 Average Material Managed at Collection Center (2016-2021)



Many factors were considered in the Collection Center design process including: health and safety for employees and patrons, ample space for sorting/staging and packing materials, along with the ability for vendors to easily access the loading docks to pick up the trailers of materials. This facility enables residents to not only divert materials from the landfill but also properly dispose of household hazardous waste materials. It was important to have the Collection Center maintain the delivery and storage of accepted special waste in-house.

Residents arrive at the facility and pass through the entrance and long corridor where they are instructed to move forward carefully to the drop-off zone. District employees assigned to work at the Collection Center greet the residents during hours of operation and empty the special wastes from the vehicles. Residents are asked to provide their driver's license to verify that they are Lorain County residents. Staff then swipe the license through a hand-held device to log resident's information and the type of materials brought to the Collection Center. The District is now servicing over 15,000 vehicles per year through the Collection Center

Once removed from vehicles, special wastes are separated by type of material. HHW materials are separated by type of material and placed in appropriate containers for shipping. Similarly, bulbs and ballasts are sorted and placed in shipping containers. The facility design includes rear docks where tires can be directly loaded onto trailers to transport to scrap tire recycling facilities.

Document shredding is one of the service offerings at the Collection Center. Households may drop off documents to be shredded at the Lorain County Collection Center (Center) year-round. The material dropped off at the Collection Center does not get shredded immediately. The material gets stored in locked containers until there is enough material for the truck to shred this material during non-public operating days. Shredding occurs approximately every other week. However, this operation process will change in 2022. In 2021, the District received an Ohio EPA Community Grant to install a stationary shredder and dust filter to allow documents to be shredded immediately.

The shredded paper is processed at the Center via a horizontal baler and sent to a third-party processor for recycling. This program provides a free opportunity for residents to securely destroy their confidential documents and recycle this material instead of sending it to the landfill. Additionally, the District receives revenue from the sale of shredded material which offsets expenses related to maintenance of shredding equipment.

**Target for Next 3 Years:** Consider user fees for materials or per household. Conduct user study and survey to ascertain the hours of availability and service offerings for meeting the needs of users. Continue to assess the material collections and look for expansion when feasible (possibly Styrofoam, other types of plastics, glass, etc.).

Name	Start Date	End Date	Goal
Used Anti-freeze Recycling	ongoing	Ongoing but will no longer be a separate program	5

**Target for Next 3 Years:** This material is accepted at the Lorain County Collection Center and does not need to be identified as its own program in the 2024 Plan.

Name	Start Date	End Date	Goal
Fluorescent Bulb and Ballast Recycling	ongoing	Ongoing but will no longer be a separate program	5

The District collected and recycled fluorescent and high intensity discharge (HID) light bulbs and their ballasts as well as compact fluorescent lamps (CFLs) at the Collection Center.

**Target for Next 3 Years:** This material is accepted at the Lorain County Collection Center and does not need to be identified as its own program in the 2024 Plan.

### Scrap Tires

Name	Start Date	End Date	Goal
Scrap Tire Collection	ongoing	ongoing	5

The District had traditionally provided three permanent scrap tire collection sites: Lorain County Collection Center, the Lorain City Garage, and Grafton Township Hall. Lorain County residents are able to drop off scrap tires to be properly managed. Historically user fees are not charged for use of the facility or per tire dropped off.

Stopping retailers or other out of district users from dropping off tires has been a challenge. Late in 2016, improvements and operational changes were made to both the Lorain City Garage and Grafton Township collection sites. Sites are staffed, proof of residency is checked and enforced, cameras were added, and a cage was constructed around the site to detour tire dumping. After these changes, the tires collected at the Grafton Township Hall declined.

Although the District has maintained three tire collection sites, beginning January 2023, two sites will be available. It is the eventual plan to transfer the Lorain tire collection site to a small business and the District will maintain the tire collection site at the Lorain County Collection Center.

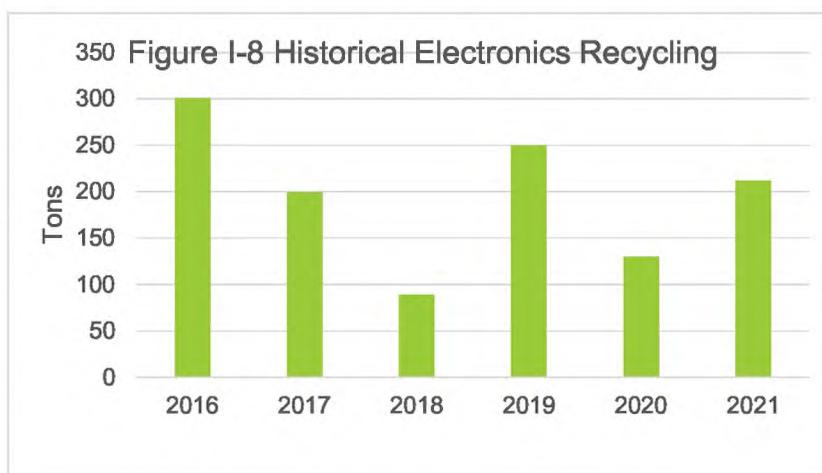
Target for Next 3 Years: Continue collections from two sites through the planning period.

### Electronic Equipment

Name	Start Date	End Date	Goal
Electronics Collection	ongoing	ongoing	5

Electronics are accepted at the Lorain County Collection Center. Accepted electronic waste includes: flat screen TV's, monitors, DVD and CD players, cell phones, printer cartridge, microwave ovens, streaming devices, speakers, power cords, etc. (Note: Acceptable Materials are subject to change. District website will maintain the most up-to-date information.)

Individuals with larger loads are asked to contact the District first. Electronics are sent to a processor who refurbishes functioning computers to qualified organizations upon request. Organizations requesting a refurbished computer must be able to demonstrate that they are considered a non-profit by the IRS, under Regulation 501(3)(c), or any similar regulation, in the U.S. Tax Code.



The tonnage of electronics collected fluctuates annually. In 2018, the decrease in electronics is attributable to phasing out of CRT TVs and the fact that destruction certificates are not provided. It is believed less businesses are using the District's electronics collection program. Also, a notable decrease in 2020 was due to the Collection Center being closed March to July because of COVID-19.

Electronics	2016	2017	2018	2019	2020	2021
Tonnage	301.2	199.4	89.2	249.9	129.8	211.6

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Printer Cartridge & Cell Phone Recycling	ongoing	Ongoing but will no longer be a separate program	5

The District had a partnership with the Lorain County Office on Aging to collect used printer cartridges and cell phones throughout the County. Printer cartridges were collected and sent to a vendor to add new ink and sale. The Office on Aging received revenue from the recycling vendor for each printer cartridge. The revenue is used to support the Office on Aging programs to aid senior citizens in Lorain County. Lorain County Office on Aging stopped collecting these materials in 2016.

Target for Next 3 Years: This material is accepted at the Lorain County Collection Center.

#### Appliances

Name	Start Date	End Date	Goal
Microwave Collection	ongoing	Ongoing but will no	5

		longer be a separate program	
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**Target for Next 3 Years:** This material is accepted at the Lorain County Collection Center and does not need to be identified as its own program in the 2024 Plan.

Name	Start Date	End Date	Goal
Appliance Recycling	ongoing	ongoing	5

Appliance recyclers lists were updated in 2021 and will be updated annually.

The District connects with Goodwill Industries and Habitat for Humanity and refers residents to these organizations that accept televisions, microwave ovens, and other small appliances. Although no formal partnership is contemplated at this time, the District will continue to encourage both organizations to pick up larger appliances whenever the opportunity presents itself and to take them directly to one of several metal scrap yards in the county. Information for Goodwill Industries and Habitat for Humanity is listed on the website for appliances. The District also refers residents to organizations that are certified Freon removal organizations.

**Target for Next 3 Years:** Continue through the planning period.

### ***Funding/Grants***

Name	Start Date	End Date	Goal
Community Incentive	ongoing	ongoing	7

The District operates an annual Community Incentive Grant program to encourage political subdivisions with curbside recycling to continue or improve their programs. To participate in the grant program, political subdivisions are required to submit recycling and compost tonnage information to the District's online data collection system, Re-TRAC Connect.

The traditional Community Incentive Grant is being discontinued in 2023 due to budget constraints. The District will instead maintain a budget detailed in Table O-7 Line 2.p "Other" for grant match dollars starting in 2023 and ongoing. The District will assist communities in applying for Ohio EPA and other grants and has funding set aside to assist with the required grant match. The District plans to fund the required grant match up to a maximum dollar value for the community projects based on grant criterion to be established by the District Policy Committee.

The budget for the traditional Community Incentive Grant was not sustainable and caused a deficit reducing the ending fund balance for 2022. The reduced amount for grant detailed in Table O-7 Line 2.p "Other" is affordable and will be an ongoing budget pending any major changes in projected revenues. The grant match budget leverages Ohio EPA and other grants to ensure maximum value to the District. The District Policy Committee

will need to approve an approval process for applicant projects based on new grant criterion.

**Target for Next 3 Years:** The District will revise the criteria of expenses which the Community Incentive grant awards funding. The purpose is to adjust funding expenses for programs to focus on the needs of the District to improve recycling tonnages. Impacts of low revenue will require the traditional calculations funding to change. The District will support and assist communities to write grants for projects. The District will set aside funding up to a maximum for supporting the required grant match.

### **Market Development Programs**

Name	Start Date	End Date	Goal
Recycling/Market Development Grant	ongoing	ongoing	7

This program is being re-named from Recycling Market Development Grant from Ohio EPA.

The objective of the Recycling/Market Development Grant Program is to identify grant opportunities from a variety of federal state, and local sources that are applicable to the District and/or Lorain County businesses or political subdivisions.

Ohio EPA offers funding to support recycling, litter cleanup, scrap tire management and market development. Ohio EPA's Recycling and Litter Prevention program supports communities, nonprofits, businesses, and academic institutions that initiate or expand recycling programs, encourage sustainable practices, stimulate economic growth, and support litter prevention efforts through four different grants: Community and Litter Grant, Academic Institution Grant, Market Development Grant, and Scrap Tire Grant.

Other available grants: Keep America Beautiful ( <https://kab.org/grants/> ), USDA Rural Development ( <https://www.rd.usda.gov/programs-services> ), US Department of Agriculture ( <https://www.usda.gov/foodlossandwaste/funding> ), US EPA Bipartisan Infrastructure Law ( <https://www.epa.gov/rcra/bipartisan-infrastructure-law-transforming-us-recycling-and-waste-management> ), and The Recycling Partnership ( <https://recyclingpartnership.org/polypropylene-coalition/> and <https://recyclingpartnership.org/recycling-cart-grant/> ). The District will continue to update and research available grants as grant opportunities may change.

Past grant applications and awards include:

Year	Grant Applications and Awards
2016	<ul style="list-style-type: none"> <li>Assisted Barnes Nursery in receiving an Ohio EPA Recycling Market Development Grant in the amount of \$66,538.</li> </ul>

	<ul style="list-style-type: none"> <li>Received an Ohio EPA Litter Grant for the District in the amount of \$12,000.</li> </ul>
2017	<ul style="list-style-type: none"> <li>Assisted Full Circle Technologies in receiving an Ohio EPA Recycling Market Development Grant in the amount of \$350,000.</li> <li>Received an Ohio EPA Litter Management Grant for the District in the amount of \$25,000.</li> </ul>
2018	<ul style="list-style-type: none"> <li>Received an Ohio EPA Community Development Grant for a Harris horizontal 2 ram baler in the amount of \$200,000.</li> <li>Received an Ohio EPA Litter Management Grant for the District in the amount of \$25,000.</li> </ul>
2019	<ul style="list-style-type: none"> <li>Received an Ohio EPA grant for a tire amnesty/agricultural tire collection event in the amount of \$8,347.90.</li> <li>A Community Development Grant for a Harris horizontal 2 ram baler in the amount of \$299,500.</li> </ul>
2020	<ul style="list-style-type: none"> <li>No Awards.</li> </ul>
2021	<ul style="list-style-type: none"> <li>A Community Development Grant for a Stationary Shredder at the Collection Center and City of Oberlin Grant Tagging Project.</li> </ul>

Grants helped expand drop-off recycling program for scrap tires, expand the Collection Center services, support processing infrastructure,

Target for Next 3 Years: The District will continue to seek grants to develop and expand infrastructure through the planning period.

Name	Start Date	End Date	Goal
District Market Development Grant	ongoing	ongoing	7

The District provides grants for special projects initiated by the Lorain County Commissioners. These projects included market development opportunities and buying recycled projects. The District and the Commissioners support the philosophy that the recycling of recycled content materials products and equipment (Market Development) creates jobs, economic growth and a better environment for Lorain County residents and businesses.

The projects promote recycled materials markets including the following materials and/or equipment:

- Recycled Content Carpet.
- Recycled Content Plastic Furniture and Benches; and

- Other Materials and or Equipment as Identified.

Past grant applications and awards include:

Year	Grant Applications and Awards
2016	<ul style="list-style-type: none"> <li>• District awarded three grants to Habitat for Humanity, Columbia Local School District, and Grafton Midview Public Library for a total of \$14,167.</li> </ul>
2017	<ul style="list-style-type: none"> <li>• No grants were awarded.</li> </ul>
2018	<ul style="list-style-type: none"> <li>• No grants were awarded.</li> </ul>
2019	<ul style="list-style-type: none"> <li>• No grants were awarded.</li> </ul>
2020	<ul style="list-style-type: none"> <li>• No grants were awarded.</li> </ul>
2021	<ul style="list-style-type: none"> <li>• The District awarded 6 grants. 5 awards actually issued funding. \$137,160.34 awarded. Totaled \$107,160.34 was sent to recipients.</li> </ul>

The District will evaluate funding for this program on an annual basis. If the District determines that increases in the level of funding are warranted, the additional funding will come from the New Programs Funding budget line item.

The District will revise guidelines for the District Market Development Grant to include that the District will evaluate on a case-by-case basis whether funding for the maintenance of materials or equipment originally purchased under the District Market Development Grant will be available. Grant guidelines are included in Appendix K

Target for Next 3 Years: Continuing through the planning period.

### **Feasibility Studies**

Name	Start Date	End Date	Goal
Energy From Waste Feasibility Study	2016	ongoing	none

Lorain County has the benefit of having the third largest landfill in the State of Ohio and relatively low tipping fees. There are some energy from waste (EFW) technologies that are capable of further reducing the amount of waste being landfilled after recyclables have been diverted through traditional programs, while also generating energy from a renewable resource. Most EFW technologies have historically been considered economically unfeasible in regions where tipping rates are low.

The District will explore potential improvements in waste reduction via EFW technologies and/or solicit interest from other organizations to implement these technologies locally.

There are and continue to be a number of interested parties approaching the District to implement these potential technologies. This program is to authorize funding to analyze any proposals and perhaps provide seed funding if there is an organization that has legitimate technology and financing. The District may provide technical assistance and possibly financial assistance in developing a local project using one of the following technologies:

- Anaerobic digestion
- Plasma gasification
- Pyrolysis
- Thermal gasification
- Waste-to-energy incineration
- Refuse-derived fuel (RDF)
- High-solids, dry fermentation anaerobic digestion and in-vessel composting

Since 2016, no additional studies have been identified.

Target for Next 3 Years: Continuing through the planning period.

Name	Start Date	End Date	Goal
Organics Facility	2016	ongoing	1, 2, 5

The District was evaluating an organics processing facility. Meetings were held with districts in the region to determine whether a District facility could serve as a regional solution for food waste and other organic materials. Currently, the District was unable to identify adequate tonnage to justify the facility and ensure its financial sustainability, so the project is on hold until circumstances change.

There are some concerns regarding some of the facilities that manage large volumes of organic material and whether the existing sites can continue to service the District if volumes increase. There are also concerns that there are not enough options for competing hauling companies to allow them to bid on yard waste services. There are no Class II compost facilities in District to take food waste organics.

The lack of a Class II facility for food waste will make it difficult to serve and collect this large volume material. One of the greatest challenges facing the future of food waste collection is making it more economical. If this can be accomplished, new opportunities for diverting food waste from the residential sector may arise. There will also be a need for collection service for the processor.

In 2017, the District completed an analysis of a potential site owned by the District to be operated as an organics processing facility. The facility would be able to serve political subdivisions that are not currently collecting yard waste material from their residents. The facility was also projected to manage food wastes from commercial facilities. This would

expand the market in Lorain County as the facility would need to be classified as a Class II facility.

**Target for Next 3 Years:** Continuing discussions with private sector operators and explore opportunities for infrastructure. Seek public/private partnership grants. Work to educate political jurisdictions on economic and environmental benefit of an in-district organics facility.

#### ***Data Collection***

Name	Start Date	End Date	Goal
Yard Waste Data Reporting	ongoing	ongoing	2

The District uses tonnage information supplied in Ohio EPA's annual composting report to monitor the tons composted at registered facilities. The District identifies political subdivisions and institutions that conduct composting activities at un-registered locations. In 2020, the District contracted with GT Environmental to consolidate data on compost sites that operated in 2020.

It was thought the development of a yard waste management fact sheet would be beneficial. The fact sheet is targeted at facility owners or operators and contains information about how to properly estimate quantities of yard waste, brush and leaves. It will also inform them on how they can report their data to the District using Re-TRAC Connect, an online recycling and composting reporting system. The fact sheet would provide information about registration requirements and exemptions for compost sites to educate political subdivisions and individuals about whether a composting site complies with Ohio EPA's rules. This fact sheet will then be distributed to political subdivisions and institutions that conduct composting activities but are not required to report annually to Ohio EPA.

**Target for Next 3 Years:** Continuing through the planning period.

Name	Start Date	End Date	Goal
Hauler Outreach for Community Data	2020	ongoing	none

The District can approach the haulers in Lorain County to identify whether solid waste data is available on a community level. If data is available, the District will begin collecting the information.

**Target for Next 3 Years:** Continue through planning period.

Name	Start Date	End Date	Goal

ADR Surveys Collection	ongoing	ongoing	1
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[Note: Program name change from Business Awareness Outreach.] The District annually surveys commercial businesses for survey data and will annually make the determination to survey industrial businesses.

Target for Next 3 Years: Continue through planning period.

Name	Start Date	End Date	Goal
Lorain Beautiful Day – Volunteer Litter Collection	ongoing	ongoing	none

The District hosts and promotes the Annual Lorain County Pride Day, a county-wide litter collection and beautification event. Each participating community is involved in the recruitment and scheduling of volunteers for the day's activities.

Pride Day is part of Keep America Beautiful (KAB) Great American Cleanup. The District has been a KAB affiliate since 1995 and has partnered with the local chapter, Keep Lorain County Beautiful (KLCB), on many programs and projects since its inception. During the reference year, KLCB's Board was expanded in hopes of improving programs and bringing new ideas to the table. The District works with KLCB's Board on Pride Day and similar events to identify opportunities for partnerships that further the mutual goals of both the District and KLCB.

The District will work with private sector entities to help increase the budget for Pride Day activities.

Year	Number of Communities	Labor Hours	Activities
2016	21, 1 state park, 1 school, and Metro Park	6,200	The volunteers collected 80 tons of litter and trash while cleaning 84 miles of roadways, 199 acres of parks, 28 playgrounds, 14.25 miles of nature trails, 2.5 miles of waterways, and 2.75 miles of railroad tracks. In addition to litter clean-up, they planted 163 gardens and 412 flats of flowers.
2017	21 and 1 county office		The volunteers collected 783 bags of litter, 520 tires, 217 bags of newspapers, 95 bags of plastic bottles, and 107 bags of aluminum cans while cleaning 77 miles of roadways, 140 acres of parks, 23 playgrounds, 4 illegal dumpsites, 19 miles of bike/nature trails, 3 acres of wetlands, 2 miles of lakeshores/beaches, and 1 mile of railroad tracks. In addition to litter clean-up, they planted 160 gardens, 6 edible community gardens, 287 hanging baskets, 8 trees, 128 bulbs/seedlings, and 321 flats of flowers.

Year	Number of Communities	Labor Hours	Activities
2018	23 and the Metro Park		<p>The volunteers collected 2,423 bags of litter and trash (30 gallon) while cleaning 103 miles of roadways, 3.5 miles of railroad tracks, 186 acres of parks, 27 playgrounds, and 1.3 miles of waterways. There were 64 bags of plastic bottles collected for recycling along with 56 bags of aluminum cans, 20 bags of paper collected for recycling, 10 tons of paper collected for shredding, 179 pounds of Styrofoam, and 376 tires collected for recycling. In addition to litter clean-up, they planted 156 gardens or green spaces, 2 homes/buildings were painted/renovated, 58 trees planted, 274 flats of flowers planted, 257 baskets of flowers hung, and 8 seedlings/shrubs planted. Additionally, 13 communities reported in kind donations of \$10,738.</p>
2019	24	6,345	<p>The volunteers collected 1,592 30-gallon bags of litter equaling 47.15 tons of trash sent to Republic Waste and 254 tires, 31 bags of paper, 23 bags of plastic bottles, and 21 bags of aluminum cans were collected for recycling while cleaning 102 miles of roadways, 168.5 acres of parks, 24 playgrounds, 2 illegal dumpsites, 4.45 miles of bike/nature trails, 4 graffiti sites, 3 miles of lakeshores/beaches, and 2 miles of railroad tracks and renovating 9 community buildings and homes. In addition to litter clean-up, they planted 195 gardens, 377 hanging baskets, 3 trees, 172 shrubs/seedlings, and 190 flats of flowers.</p> <p>Additionally, a \$10,000 grant from Keep America Beautiful was received for their Cigarette Litter Prevention Program (CLPP). The money was used to purchase ash receptacles that were placed in the cities of Sheffield Lake, Lorain, and Amherst. Grant money also went towards a public service campaign about stopping cigarette butt litter with paid advertisements on Facebook and in the Morning Journal.</p>
2020	Cancelled		
2021	22	6,171	<p>The volunteers collected 649 30-gallon bags of litter equaling 29.05 tons of trash sent to Republic Waste and 98 tires, 31 bags of paper, 23 bags of plastic bottles, and 21 bags of aluminum cans were collected for recycling while cleaning 82.1 miles of roadways,</p>

Year	Number of Communities	Labor Hours	Activities
			128.75 acres of parks, 15 playgrounds, 5 illegal dumpsites, 3 graffiti sites, and renovating 19 community buildings and homes. In addition to litter clean-up, they planted 213 gardens, 195 hanging baskets, 12 trees, 168 shrubs/seedlings, and 331 flats of flowers.

Target for Next 3 Years: Continuing through the planning period. The District will continue to be a Keep America Beautiful (KAB) affiliate and hold affiliate status of the Keep Lorain County Beautiful chapter. At least one member from the District will continue to attend meetings of the KLCB Advisory Board.

Name	Start Date	End Date	Goal
Clean and Beautiful (C.A.B.)	2016	ongoing	none

The District lends volunteer groups a trailer containing the tools and supplies needed to complete litter collection and beautification activities for free. The trailer was branded "C.A.B." (Clean And Beautiful) and is stocked with equipment and supplies. Community groups or organizations are able to borrow the trailer to complete clean-ups, community gardens or other beautification projects at no cost. Volunteer groups can perform activities similar to those done on Lorain County Pride Day year-round. The availability of this program may reach more volunteers who were previously unable to attend Pride Day because of scheduling conflicts. C.A.B. trailers will be used for litter collection and beautification activities.

Target for Next 3 Years: Continuing through the planning period.

#### Disaster Debris / Disaster Assistance

Name	Start Date	End Date	Goal
Disaster Debris Management Plan	ongoing	ongoing	none

The District's Disaster Debris Management Plan remains incorporated in the master emergency plan for Lorain County. Lorain County political subdivisions have experienced severe floods, windstorms, ice storms, and tornados. All these weather-related events have the potential to generate significant amounts of debris that will need to be managed for collection and proper disposal. The Plan also discusses potential plans for terrorism. In order to activate policies and procedures in the Disaster Debris Management Plan, the Commissioners (or their designee) must provide approval.

The Disaster Debris Plan covers many topics including:

#### a. Situation & Assumptions

**b. Concept of Operations**

- Direction and Control
- Disaster Intelligence
- Communications
- Notification and Warning
- Emergency Public Information
- Protective Actions
- Mass Care
- Health & Medical: Environmental Compliance, Household Hazardous Waste
- Resource Support – Debris Estimating, Contracts, Temporary Storage, Landfills, Terrorism, Documentation & forms, Volunteer Organizations.
- Recovery – Debris Removal Priorities and Operations, Phase II

**c. Organizational Roles and Responsibilities**

- Local Government Agencies and Departments: Local Jurisdictions Debris Manager, Local Jurisdiction Service Personnel, County Prosecutor, County Engineer/Road Maintenance Department, Lorain County Solid Waste District, Lorain County Purchasing, supporting state agencies

**d. Administration & Logistics****e. Plan Development & Maintenance**

The District entered an MOU with Republic Waste Services which confirms pricing and hauling costs if a disaster was to occur. The District periodically adjusts the pricing and MOU to bring costs and services up to date.

The Disaster Debris Management Plan provides guidance to officials in the event of a disaster event. The guidance may range from simple education programs to funding clean-up efforts. An annual budget of \$25,000 is reserved for this program. There have been no requests to date for funding.

Name	Start Date	End Date	Goal
Legal Assistance	ongoing	ongoing	none

The District may solicit legal advice for important solid waste management issues from the prosecutor's office as well as outside counsel. Counsel representing the District may assist with issues related to the negotiation of contracts, enforcement, flow control, and other legal issues impacting the District. The District will monitor the use of legal services and their monthly costs.

Target for Next 3 Years: Continuing through the planning period.

Name	Start Date	End Date	Goal
Third Party Financial Audit	ongoing	ongoing	none

To maximize confidence in the District and transparency between the District and policy committee, the District solicits a third-party financial audit on a biannual basis. The last third-party audit was completed for the 2019 accounting year. The audit is conducted to ensure proper expenditures under the general accounting requirements of the State of Ohio. The audit also ensures that expenditures are in compliance with the ten allowable uses of solid waste disposal fees and the District budget. The District also presents a financial overview of revenue and expenditures at most policy committee meetings to keep members informed and maintain transparency between audits.

Target for Next 3 Years: Continuing through the planning period.

Name	Start Date	End Date	Goal
Host Community Fee Agreement	ongoing	ongoing	none

The District reserves the right to negotiate a host community agreement with any solid waste facility operator where the Board of Directors believes an agreement is in the best interests of the District. Approval of a Host Community Agreement must be in accordance with all applicable Ohio laws and regulations. The Host Community Agreement between Republic Waste Services remains in effect. The Agreement requires Republic Waste Services to pay \$0.60 for each ton of out-of-district waste delivered to the Lorain County Landfill. This fee was changed to \$0.40 per ton of out-of-district waste delivered to the Lorain County Landfill in 2021.

The District will periodically review and renegotiate the terms of this Agreement with the owner of the Landfill.

The following sections are included in the agreement.

1. Term of the initial period was three years and has an option for three one-year extensions.
2. Solid Waste – must be accepted as part of the Agreement. Hazardous Waste or Infectious Waste is not permitted.
3. Reserved Capacity – 1,250 tons per day are reserved for the District.
4. Out-of-district waste – All Cuyahoga County waste collected by the company must be delivered to Lorain County.
5. Facility Improvements – The Company shall make facility improvements to allow the Landfill to comply with the in-District solid waste reserved capacity.

6. Tipping Fee Discount – The Company must provide Lorain County residents with a discount of ten percent off of the gate rate posted for the disposal of self-hauled residential solid waste.
7. Pride Day – The Company must provide one solid waste dumpster to each participating political subdivision in the District in connection with Pride Day. The District will work with political subdivisions to include a recycling dumpster for Pride Day when new bid specifications for collection services are developed.
8. Free Collection and Disposal for County Facilities – The Company will provide free solid waste collection, disposal services, recycling collection, and processing to all Lorain County buildings noted in Exhibit A.
9. District Fees – The Company shall pay the District each month all disposal and generation fees levied on waste delivered to the landfill. The District shall support and work diligently to set and keep the amount of the District fee levied on out-of-District solid waste delivered to the Landfill to equal two dollars per ton for each ton of out-of-district solid waste. The Company shall pay the District sixty cents per ton (\$0.40) on any out-of-district solid waste disposed at the landfill (the Additional Fee).
10. District Consideration – The District shall use best efforts to support the Company's future expansion of the landfill, provide District-wide programs that will direct any natural disaster debris with the exception of wood waste from all communities to the Landfill and the District assuming the cost of collection and disposal of the natural disaster debris, and continue to exercise flow control pursuant to the provisions in the District's Plan during the term of this Agreement including any extensions.
11. Daily Log Inspection – The Company shall note the County and State, if other than Ohio, of generation of each shipment of solid waste accepted for disposal at the Landfill on daily operating log kept for the Landfill as required by Ohio Administrative Code. Inspections of logs shall be conducted during normal business hours and the District shall provide 24-hour notice.
- 12-19. Remaining Sections include Breach, Termination, Notices, Entire Agreement, Waiver, Applicable Laws, and Binding Effect, No Third-Party Beneficiaries.

Target for Next 3 Years: Continuing through the planning period.

Name	Start Date	End Date	Goal
Landfill Capacity Conservation Initiatives	2016	ongoing	none

To date, Republic has not been interested in a waste characterization study and one is not budgeted for the District to implement. If a waste characterization study is conducted, the District will provide a data collection system for significant generators of waste that is accepted at the Lorain County Landfill in order to track the amount generated, disposed,

recycled, and reused. This type of information would facilitate establishing higher rates of recovery.

The District has not developed a sample standard operating procedure (SOP) document for materials recycling specification for publicly funded construction and demolition projects within a political jurisdiction. It was the intent, to educate political jurisdictions about the importance of reducing waste from C&D projects and the benefits of establishing an SOP to address the issue. Once adopted by political jurisdictions, private sector construction and demolition projects could also be encouraged to adopt the specification. The District will keep this in the Plan to implement within the next 2 to 3 years.

The District is available to provide technical assistance to contractors and construction firms to improve recycling of construction and demolition debris, using Ohio EPA best practices and resources for exempt and construction/demolition materials.

Target for Next 3 Years: Continuing through the planning period.

Name	Start Date	End Date	Goal
Host Community Agreement Extension	2020	Ongoing	none

Extending the host community agreement and ensuring current services are implemented.

Target for Next 3 Years: This is repetitive programming and is not needed here in the Plan nor in the annual district report.

Name	Start Date	End Date	Goal
Host Community Agreement Hauler Data Requirements	2020	ongoing	none

The District will strive to secure required data and information reporting the hauler for the Host Community Agreement.

Target for Next 3 Years: Continue through planning period.



## **APPENDIX J**

# **REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL I**



## APPENDIX J. Reference Year Opportunity to Recycle and Demonstration of Achieving Goal 1

The Lorain County Solid Waste Management District (District) is committed to achieving Goal 1 of the 2020 State Plan. This section demonstrates the District's achievement of Goal 1 in the reference year and the programs that will help maintain the achievement of Goal 1 throughout the planning period.

### Residential Sector Opportunity to Recycle

The following table presents the recycling opportunities in the reference year and years 1, 5, and 10 of the planning period, as well as the population credit received for each opportunity. The drop-off locations show a credit of zero because the community where the drop-off is located has curbside recycling. Municipalities are not permitted to have population credits exceeding 100%.

**Table J-1. Opportunity to Recycle**

**Sources of Information:** Ohio Development Services Agency, 2019 Population Estimates by County, City, Village, and Township, May 2020.

ID #	Lorain Name of Community	2019		2023		2027		2032	
		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
<b>Non-subscription curbside</b>									
NSC1	Amherst (City)	12,219	12,219	12,373	12,373	12,486	12,846	12,486	12,486
NSC2	Amherst Township	5,753	5,753	5,825	5,825	5,879	5,879	5,879	5,879
NSC3	Avon (City)	23,399	23,399	23,693	23,693	23,910	23,910	23,910	23,910
NSC4	Avon Lake (City)	24,504	24,504	24,812	24,812	25,039	25,039	25,039	25,039
NSC5	Brighton Township	911	911	922	922	931	931	931	931
NSC6	Carlisle Township	7,396	7,396	7,489	7,489	7,557	7,557	7,557	7,557
NSC7	Eaton Township	5,961	5,961	6,036	6,036	6,091	6,091	6,091	6,091
NSC8	Elyria (City)	53,757	53,757	54,433	54,433	54,930	54,930	54,930	54,930
NSC9	Elyria Township	3,176	3,176	3,216	3,216	3,245	3,245	3,245	3,245
NSC10	Grafton Township	2,854	2,854	2,890	2,890	2,916	2,916	2,916	2,916
NSC11	Grafton Village	5,707	5,707	5,779	5,779	5,832	5,832	5,832	5,832
NSC12	Huntington Township	1,351	1,351	1,368	1,368	1,380	1,380	1,380	1,380
NSC13	LaGrange (Village)	2,479	2,479	2,510	2,510	2,533	2,533	2,533	2,533
NSC14	Lorain (City)	63,855	63,855	64,657	64,657	65,248	65,248	65,248	65,248
NSC15	New Russia Township	1,942	1,942	1,966	1,966	1,984	1,984	1,984	1,984
NSC16	North Ridgeville (City)	34,392	34,392	34,824	34,824	35,142	35,142	35,142	35,142
SC7	Oberlin (City)	8,199	8,199	8,302	0	8,378	0	8,378	0
NSC17	Penfield Township	1,811	1,811	1,834	1,834	1,851	1,851	1,851	1,851
NSC18	Pittsfield Township	1,635	1,635	1,656	1,656	1,671	1,671	1,671	1,671
NSC19	Rochester (Village)	175	175	177	177	179	179	179	179
NSC20	Rochester Township	632	632	640	640	646	646	646	646
NSC21	Sheffield (Village)	4,402	4,402	4,457	4,457	4,498	4,498	4,498	4,498
NSC22	Sheffield Lake (City)	8,916	8,916	9,028	9,028	9,111	9,111	9,111	9,111
NSC23	Sheffield Township	3,624	3,624	3,670	3,670	3,703	3,703	3,703	3,703
NSC24	Vermillion (City)	10,394	10,394	10,525	10,525	10,621	10,621	10,621	10,621
NSC25	Wellington (Village)	4,912	4,912	4,974	4,974	5,019	5,019	5,019	5,019
NSC26	Wellington Township	1,401	1,401	1,419	1,419	1,432	1,432	1,432	1,432

<b>Subscription curbside</b>									
SC1	Brownhelm Township	1,954	489	1,979	495	1,997	499	1,997	499
SC2	Camden Township	1,417	354	1,435	359	1,448	362	1,448	362
SC3	Columbia Township	7,490	1,873	7,584	1,896	7,653	1,913	7,653	1,913
SC4	Henrietta Township	1,835	459	1,858	465	1,875	469	1,875	469
SC5	Kipton (Village)	233	58	236	59	238	60	238	60
SC6	LaGrange Township	4,058	1,015	4,109	1,027	4,147	1,037	4,147	1,037
SC7	Oberlin (City)	8,199	0	8,302	4,483	8,378	4,189	8,378	4,524
SC8	South Amherst (Village)	1,675	419	1,696	424	1,712	428	1,712	428
<b>Full-time, urban drop-off</b>									
FT-U1	Eaton Township	5,961	0	6,036	0	6,091	0	6,091	0
<b>Part-time, urban drop-off</b>									
PT-U1	None	53,757	0	54,433	0	54,930	0	54,930	0
<b>Full-time, rural drop-off</b>									
None	None	0	0	0	0	0	0	0	0
<b>Part-time, rural drop-off</b>									
PT-R1	Brighton Township	911	0	922	0	931	0	931	0
PT-R2	Huntington Township	1,351	0	1,368	0	1,380	0	1,380	0
<b>Total County Population</b>		314,419		318,370		321,280		321,280	
<b>Total Population Credit</b>		300,423		300,379		303,149		303,125	
<b>Percent of Population</b>		96%		94%		94%		94%	

All curbside programs operating during the reference year (2019) are expected to continue. Oberlin switched its curbside service from non-subscription to subscription based in 2020. The standard credit for a subscription service is 25%. However, the Plan states, on page 1-7, that Oberlin's participation rate is 54%. Table J-1 shows 54% credit of Oberlin's population to achieving Goal 1.

The District will continue to meet Goal 1 for each year of the planning period. Drop-offs operating during the reference year that are discontinued and new ones implemented are captured in J-1. The District reserves the right to adjust (remove, add, change, modify) drop-off sites throughout the planning period as location may need adjusted to meet drop-off and host-site needs. None of the District's drop-off recycling sites meet the criteria to be eligible for access credit toward achieving Goal 1. All sites in the table are listed with a population credit of zero. These sites are located in cities, villages, or townships that provide non-subscription curbside recycling access. Communities with non-subscription curbside recycling programs have a population credit equal to 100% of the total population; therefore, additional population credit for drop-offs cannot be counted toward achieving Goal 1 because the access credit would exceed the total population of the political subdivision.

### Summary of Recycling Infrastructure

Twenty-eight communities have non-subscription curbside recycling and six with subscription curbside recycling. The drop-off program also adds access for the residents. There are 4 drop-off sites within the District which allow for additional recycling options. These drop-offs help multi-family housing have access to recycling too. Due to the non-subscription credits given to some of the programs, not all drop-offs receive access credit.

Tables J-2 and J-3 are not applicable to the District and have been omitted.

### Commercial Sector Opportunity to Recycle

**Table J-4. Infrastructure Demonstration for the Commercial Sector**

Service Provider	Type of Recycling Service Provided	Cc	Mp	SM	PI	W
<b>Lorain</b>						
Republic Services	Hauler	✓	✓	✓	✓	
Rumpke Waste & Recycling	Hauler	✓	✓	✓	✓	
Waste Management	Hauler	✓	✓	✓	✓	
FerroTrade	Broker, Buy-Back			✓		
Cimino Pallet	Broker					✓
Midwest	Broker, Buy-Back			✓		
Intercon	Broker	✓		✓	✓	
MD Packaging	Broker				✓	
Green Innovations	Broker	✓	✓		✓	
BlueStar	Broker, Buy-Back			✓		
Sam's Pallet	Broker					✓

CC = corrugated cardboard, MP = mixed paper, SC = steel cans, PL = plastics, W = wood pallets and packaging, FW = food waste

Table J-4, “Infrastructure Demonstration for the Commercial Sector,” presents drop-offs, buy backs, scrap yards, haulers, pallet refurbishes, and material recovery facilities that provide recycling opportunities to the commercial/institutional sector. The total number of recycling opportunities in the District’s jurisdiction for five materials designated for the commercial sector to demonstrate compliance with Goal 1 are as follows:

- Corrugated cardboard: 5
- Mixed paper: 4
- Steel cans: 7
- Plastics: 6
- Wood/Wood pallets: 2

### Demonstration of Meeting Other Requirements for Achieving Goal 1

## **1. Residential/Commercial Waste Reduction and Recycling Rate**

In the reference year, the District's residential/commercial sector achieved a 21.46% waste reduction and recycling rate, which is below the 25% requirement to achieve Goal 2. The waste reduction and recycling rate for the R/C sector is projected to meet or exceed the 25% requirement throughout the planning period based on anticipated volumes of recycling from scrap yards, processors, MRFs, retailers that report to Ohio EPA, scrap tire recyclers, HHW programs, recycling drop-off program, curbside recycling programs, and organics diversion facilities.

## **2. Industrial Waste Reduction and Recycling Rate**

The Ohio EPA eliminated the industrial percentage goal. The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.

## **3. Encouraging Participation**

The District will encourage residents and commercial generators to participate in available recycling infrastructure using a variety of outreach, education, and incentive programs, including the following:

- District Web Site**

The District maintains several pages of information within its general website for the Lorain County government. The website is regularly updated and includes the District's contact information, background on solid waste districts in Ohio, social media connections, upcoming District events, drop-off recycling locations for traditional and special materials, District news, dates of policy committee meetings, educational services and materials, recycling tips, annual reports, publications, information for reporting environmental crimes, and more. The District's main page can be accessed at: [www.loraincounty.us/solidwaste](http://www.loraincounty.us/solidwaste).

- District Sustainability Education Center**

The Sustainability Center will be available in 2023 to educate the community on the process and importance of recycling, composting, and waste reduction. This facility should be a visually impacting and interactive space that inspires visitors to change their waste habits. Visitors will be informed about the issue of waste and encouraged to make positive changes in their waste habits at home, school, and work that will make a difference for years to come. The goal is to provide an engaging educational opportunity for people of all ages and backgrounds.

- **Annual Report**

An Annual Report booklet was created to share information on the District's past year and promote the programs the District hosts. These are specifically designed to provide the general public with an overview of the District's activities and programs, its finances, its organization, and the general state of recycling in Lorain County. Photographs and graphics are used throughout to make the report more informative and more readable.

- **Community Outreach Coordinator**

The Community Outreach Coordinator performs presentations, hosts Collection Center tours, and participates in community events. Presentations focused on the importance of the 3 R's (Reduce, Reuse and Recycle), including specifically which items to recycle in Lorain County, litter prevention, waste reduction, landfills, and disposing of hazardous materials properly.

- **Calendar Contest**

The District holds an annual calendar contest for Lorain County students' grades K-12. Students were given the option to create a recycling or litter prevention-themed picture for their entry. Twelve winners were selected to have their pictures used in the calendar. The drawings were made into calendars that were distributed at fairs, festivals, and other District events.

- **The Lorain County Collection Center**

This facility is available for all District residents. In addition to HHW, the Collection Center also accepts residential recyclables, scrap tires, rechargeable batteries, ballasts, scrap metal, books, paper, cardboard, fluorescent bulbs, and electronics.

- **Volunteer Litter Collection (Lorain County Pride Day)**

The District hosted and promoted the Annual Lorain County Pride Day, a county-wide litter collection and beautification event. Each participating community was involved in the recruitment and scheduling of volunteers for the day's activities.

- **C.A.B. (Clean and Beautiful)**

The District staff collaborated to create a design for an enclosed landscape trailer to be used for litter cleanups and beautification activities. The trailer was branded "C.A.B." and stocked with equipment and supplies. Community groups or organizations are able to borrow the trailer to complete clean-ups, community gardens, or other beautification projects at no cost.

*Appendices I and L include detailed information about each program.*



## **APPENDIX K**

# **WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL**



## APPENDIX K. Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2

Even though the District has chosen to demonstrate compliance with Goal 1 of the State Plan, the District will strive to achieve Goal 2 as well, which states that the District will recycle or reduce at least 25% of the solid waste generated by the residential/commercial sector. The District Policy Committee has set a higher goal of 35% to match up with Region 5 US EPA goals.

**Table K-1** below shows the waste reduction and recycling (WRR) rates for the residential/commercial sector in the reference year and projected for the planning period. The District does exceed the state's WRR goal for the residential/commercial sector for each year of the planning period.

**Table K-1. Annual Rate of Waste Reduction: Residential/Commercial Solid Waste**

Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate	Per Capita Waste Reduction & Recycling Rate (ppd)
2019	314,419	74,908	274,082	348,990	21.46%	1.3
2020	315,407	63,913	253,998	317,911	20.10%	1.1
2021	316,395	71,988	259,545	331,533	21.71%	1.2
2022	317,383	73,281	265,210	338,491	21.65%	1.3
2023	318,370	73,195	270,996	344,191	21.27%	1.3
2024	319,358	74,542	276,906	351,447	21.21%	1.3
2025	320,346	74,443	282,941	357,385	20.83%	1.3
2026	321,280	75,838	289,058	364,895	20.78%	1.3
2027	322,214	75,717	295,304	371,021	20.41%	1.3
2028	323,148	77,171	301,682	378,853	20.37%	1.3
2029	324,082	77,038	308,196	385,233	20.00%	1.3
2030	325,016	78,554	314,847	393,401	19.97%	1.3
2031	326,040	78,421	321,729	400,150	19.60%	1.3
2032	327,064	80,019	328,757	408,776	19.58%	1.3
2033	324,082	79,188	331,834	411,022	19.27%	1.3
2034	325,016	80,839	338,996	419,834	19.25%	1.4

**Sources of Information:** Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix E, Table E-5 (for reference year) and Table E-8 (for planning period)

- Waste Disposed: Appendix D, Table D-4 (for reference year) and Table D-6 (for planning period)
- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)
- Population: Appendix C, Table C-1 (for reference year) and Table C-2 (for planning period)

### Sample Calculations:

*2019 Waste Generated = 2019 Waste reduced, and recycled + 2019 waste disposed*  
*348,990 tons = 74,908 tons + 274,082 tons*

*2019 Waste Reduction & Recycling Rate = (2019 Waste Reduced & Recycled ÷ 2019 Waste Generated) x 100*  
*21.46% = (74,908 tons ÷ 348,990 tons) x 100*

*2019 Per Capita Waste Reduction & Recycling Rate = (2019 tons recycled x 2,000) ÷ 365) ÷ population*  
*1.31 PPD = ((74,908 tons x 2,000) ÷ 365 days/year) ÷ 314,419 residents*

**Table K-1** demonstrates that the District does not exceed the requirements of Goal 2 to reduce and recycle at least 25% of the solid waste generated by the residential/commercial during the reference year and is not projected to meet the requirements of Goal 2 during the planning period.

Even though the recycling rate for the industrial sector is no longer required by the Ohio EPA, the District surveyed the industrial sector and therefore was able to document the industrial sector data and projection for waste reduction.

**Table K-2** shows the District's industrial sector's annual rate of waste reduction.

**Table K-2. Annual Rate of Waste Reduction: Industrial Solid Waste**

Year	Waste Reduced and Recycled	Waste Disposed	Waste Generated	Waste Reduction and Recycling Rate
2019	<b>81,287</b>	<b>74,788</b>	<b>156,075</b>	<b>52.08%</b>
2020	85,049	76,716	161,765	52.58%
2021	84,773	78,693	163,466	51.86%
2022	84,498	80,721	165,219	51.14%
2023	84,223	82,802	167,025	50.43%
2024	83,950	84,936	168,885	49.71%
2025	83,677	87,124	170,802	48.99%
2026	83,405	89,370	172,775	48.27%
2027	83,135	91,673	174,808	47.56%
2028	82,865	94,036	176,901	46.84%

Year	Waste Reduced and Recycled	Waste Disposed	Waste Generated	Waste Reduction and Recycling Rate
2029	82,596	96,459	179,055	46.13%
2030	82,327	98,945	181,273	45.42%
2031	82,060	101,495	183,556	44.71%
2032	81,794	104,111	185,905	44.00%
2033	81,528	106,794	188,322	43.29%
2034	81,263	109,547	190,810	42.59%

**Sources of Information:** Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix F, Table F-4 (for reference year) and Table F-5 (for planning period)
- Waste Disposed: Appendix D, Table D-3 (for reference year) and Table D-5 (for planning period)
- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)

#### Sample Calculations:

*2019 Waste Generated = 2019 Waste reduced, and recycled + 2019 waste disposed  
156,075 tons = 81,287 tons + 74,788 tons*

*2019 Waste Reduction & Recycling Rate = (2019 Waste Reduced & Recycled + 2019 Waste Generated) x 100  
52.08% = (81,287 tons ÷ 156,075 tons) x 100*

To attempt to improve the WRR rate for the industrial sector for each year of the planning period, the District will implement the programs and/or initiatives detailed in Appendix I.

The combined WRR rate for residential/commercial and industrial sectors is shown in Table K-3. Overall, the WRR rate is projected to decrease to 27.25% by the end of the planning period from 30.90% in 2019.

**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)
2019	156,195	348,871	505,066	30.93%
2020	148,962	330,714	479,676	31.05%
2021	156,761	338,238	494,999	31.67%

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2022	157,778	345,931	503,709	31.32%
2023	157,418	353,797	511,216	30.79%
2024	158,491	361,841	520,332	30.46%
2025	158,120	370,066	528,186	29.94%
2026	159,243	378,428	537,671	29.62%
2027	158,852	386,977	545,829	29.10%
2028	160,036	395,718	555,754	28.80%
2029	159,633	404,655	564,288	28.29%
2030	160,882	413,793	574,674	28.00%
2031	160,482	423,224	583,706	27.49%
2032	161,813	432,868	594,681	27.21%
2033	160,716	438,628	599,344	26.82%
2034	162,102	448,542	610,644	26.55%

**Sources of Information:** Tables K-1 and K-2, excludes exempt waste

**Sample Calculations:**

*2019 Waste Generated = 2019 Waste reduced, and recycled + 2019 waste disposed  
 504,907 tons = 156,037 tons + 348,871 tons*

*2019 Waste Reduction & Recycling Rate = (2019 Waste Reduced & Recycled ÷ 2019 Waste Generated) x 100  
 30.9% = (156,037 tons ÷ 504,907 tons) x 100*



## **APPENDIX L**

# **MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS**



## APPENDIX L. Minimum Required Education Programs: Outreach and Marketing Plan and General Education Requirements

This section discusses the District's strategies to satisfy the requirements of State Plan Goals 3 and 4. The following bullet points summarize each goal, as presented in Ohio EPA's Plan Format v4.1:

### Goal 3: Waste Reduction and Recycling Rates

- The SWMD shall provide the following required programs:
  - A website
  - A comprehensive resource List
  - An inventory of available infrastructure
  - A speaker or presenter
  - A Sustainability Education Center

### 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.

#### A. Minimum Required Education Programs

In accordance with Goal 3 of the *2020 State Plan*, the District is required to provide four minimum education programs including: (1) a website, (2) a comprehensive resource list, (3) an inventory of available infrastructure, and (4) a speaker or presenter. The District met these requirements in the reference year.

##### **Website**

The District maintains a website address at <https://loraincountyohio.gov/solidwaste>.

**Target for Next 5 Years:** The homepage is key to user navigation and will be updated regularly to reflect recycling services, seasonal program info, and simple opportunities. A business menu option will be added to provide access to recycling survey forms, waste audits information, grants, links to Ohio EPA's Material Exchange, etc.

Other changes the District will incorporate:

- Develop a business menu option pull down to include: survey forms, waste audit info, grants, link to Ohio EPA Material Market Place etc.
- Prioritize the top 3-5 subjects that residents inquire about solid waste and recycling.

- Include less than one-minute educational videos on key pages of the website
- Continue to update images from events, as the county currently endeavors on social media.
- Add the acceptable single stream materials to recycle on the District's landing page.
- Re-organize business services and programs for ease in finding on the webpage. Possibly creating a new menu heading "Business Resources".
- Change "Lorain County & Ohio State University" menu heading to "Composting Resources" for clarity to those seeking compost information.

The webpage address will be added on all collateral and business cards, as well as promoted on Facebook.

The District will also explore adding a Web Widget, a search tool where residents could search for an item that they would like to recycle in a particular zip code or address. A photo and description of the item would appear. Benefits of an online widget is that it could serve as a full infrastructure inventory by adding special instructions for items that have specifications to be recycled elsewhere, i.e., drop-off locations, store take-back programs or special waste disposal. The District will explore the costs and capability of adding this to the website.

### ***Comprehensive Resource List and Inventory of Available Infrastructure***

The District maintains an inventory of infrastructure for solid waste management and disposal and waste reduction and recycling activities/facilities in the Solid Waste Management Plan.

### ***Speaker/Presenter***

The District has a Community Outreach Coordinator available for presentations and speaking engagements. Additionally, any of the District staff are available to speak or present when needed. Speaking engagements for 2019 through 2021 include:

Activity	School Presentations	Community Group Presentations
2019	95 presentations – 2,897 children and adults	Written into the 2019 Plan, ratified August 2019
2020	15 presentations – 311 children and adults	None
2021	15 presentations – 482 children and adults	12 presentations – 282 adults

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

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

- Five target audiences as identified in Ohio EPA Format v4.1.
- Follow basic best practices when developing and selecting outreach programs.
- Outreach priority.
- 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 District will address all of the five target audiences.
- Explain how the District will align its outreach and education programs with recycling opportunities (both existing and needed).
- Explain how the District will incorporate principles and tools for changing behavior into the outreach and marketing plan.

Outreach and education are critical to a recycling program's success. Strategic communications campaigns provide the most powerful results in creating behavior change. Appendix H evaluated the programs.

The SWMD needs to implement best practices education campaigns that are simple and engaging with regular consistent messaging across multimedia platforms. Investments should be made in expanding communication programs to target groups and ensure diversion efforts succeed.

To align with Format v4.1, the District's existing programs were organized by target audience. (Note: some of these are new, some have been consolidated for streamline and preventing cross-over reporting, and some are existing.)

**Table L-1. Outreach and Education by Target Audiences**

Existing Programs	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website	✓	✓	✓	✓	✓
Social Media	✓	✓	✓	✓	✓
District Annual Report	✓	✓			✓

Existing Programs	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
Composting Outreach – OSU Extension	✓				✓
Adult Presentations	✓				
Events	✓	✓			
Informational Handouts	✓	✓		✓	✓
Telephone Information Line	✓	✓	✓	✓	✓
Curbside Outreach	✓				
Tours		✓			
School Contests		✓			
School Presentations		✓			
Lending Library		✓			
Sustainability Education Center	✓	✓		✓	✓
Keep Lorain County Beautiful	✓	✓			
Environmental Stewardship Award		✓	✓	✓	
Business Technical Assistance			✓	✓	
Consortium for Waste Services					✓
Elected Official Outreach					✓

### 1. Audience: Residents

Name	Start Date	End Date	Goal
Social Media	Ongoing	Ongoing	4

The District uses Facebook, Twitter, and Instagram as a social media outlet to regularly post information about District events. The District will use postings to drive traffic to the webpage. The type of posts to Facebook will also direct residents to social norms of recycling, composting, and reducing waste.

The District will develop a social media calendar with blast topics. Type of topics to include:

- How and where to recycle
- Proper recycling techniques
- “What not to do Tuesday”
- Weather related closures

Target for Next 3 Years: Continue through the planning period. In 2024, the District will schedule a Facebook contest for Earth Day, with daily questions and prizes, plus one large random raffle at end of week. The

District will aim to increase the number of Facebook followers by 10% by year 2025.

Name	Start Date	End Date	Goal
District Annual Report	Ongoing	Ongoing	4

The DAR is written for an audience of residents for transparency. The 2019, 2020 and 2021 District Annual Reports were written as a summary of district activities. The DAR was then mailed to all residents in the District as well as posted on the website and social media for all of the political subdivisions in the District.

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Composting Outreach – OSU Extension	Ongoing	Ongoing	4

(Note: Program was originally split into three separate programs. "OSU-Extension Webpage", "OSU-Extension composting and manure handling", and "OSU Extension Yard Waste -Brochures, phone-line, radio". The program name is changing to "Composting Outreach-OSU Extension" because all three programs are in collaboration with OSU Extension.)

The District provides funding to the OSU Agricultural Extension Office to educate residents about composting. Outreach tactics include: seminars, brochures, website postings, radio broadcasts, a phone helpline, and a stand at the Lorain County Fair. Composting how-to information was distributed to individuals who visit the Lorain County Agricultural Center in 2019, 2020, and 2021. Information was also made available at programs and Extension outreach events. No outreach events were conducted in 2020 and in 2021 there were 8, with 2 focused on youth audience. In 2021, the Ohio Master Gardeners of Lorain County conducted an informal survey of fair goers to learn more about thoughts on composting and barriers to composting. The major barriers to composting from survey respondents were, lack of space, physical limitations, concerns about compost piles drawing in wildlife, and odor. The office responded to questions from residents interested in learning more about composting and recycling and questions about strategies to improve the soil. Information was broadcast on WEOL 930AM to inform residents about recycling and composting.

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Adult Presentations	Ongoing	Ongoing	4

The District coordinated multiple presentations to adult civic groups but were cancelled due to COVID-19. In 2021, the District's Community Outreach Coordinator performed 12 presentations to adult organizations

that took place at libraries, community centers, YMCA, etc. There was a total of 282 adults that were reached at these events.

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Events	Ongoing	Ongoing	4

Program was called “Residential Recycling Education and Awareness Program/Events” and is changing to “Events”

The District sets up an educational booth and attends community events. During community events, the District distributes information related to District events and programs while engaging with the public.

No activities in 2020 due to the district staff being furloughed for 8 months. During 2021, District joined the North Coast Chamber of Commerce and Lorain County Chamber of Commerce, and the Power of More. District attended 12 events for each chamber.

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Informational Handouts	Ongoing	Ongoing	4

Program was called “Residential Recycling Education and Awareness Program/Brochures” name is changing to “Informational Handouts”

No activities in 2020 due to the District staff being furloughed for 8 months. Brochures were made available online and at the collection center but were not distributed at the office. The District did a mailing in 2021 to 7,700 homes to the City of Lorain. District identified where most of the contamination was coming from and sent a letter to those households to clarify what is considered recyclable.

Target for Next 3 Years: Continue to use this type of education and marketing collateral through the planning period. Additionally, the District will review the handouts for the following best practices:

- brand consistency (District colors, logos, and fonts),
- ensure website and social media links are used on handouts, and
- limited text and visible calls to action.

Another method that will help handouts stay current is to include QR codes.

Name	Start Date	End Date	Goal
Telephone Information Line	Ongoing	Ongoing	4

Program was called “Residential Recycling Education and Awareness Program/Brochures” name is changing to “Telephone Information Line”

The District answers phone calls from residents and businesses on their phone line. However, in 2020, while the employees were out of the office due to COVID-19, residents and businesses were directed to the commissioner's office. In 2021, the District established a phone tree which provides information to commonly asked questions regarding recycling, collection center, etc.

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Curbside Outreach	2019	Ongoing	4

[Note: 2019 Plan identified this program as "Plan to Identify Residential Recycling Program Participants".] This is a behavior change campaign targeted at households to reduce contamination by recycling right. In 2022, the City of Oberlin will conduct a curbside recycling tagging project to begin a behavior study to deter contaminates that are being collected in the curbside recycling program. The District received an Ohio EPA Recycling Market grant during 2021 to fund this project. The District is steering the project to inspect and tag carts, over the duration of the project, which includes a pre- and post-audit to capture contamination measurement to determine behavior change.

Target for Next 3 Years: The goal for this program is to continue targeting education around curbside recycling to decrease the contaminates that are being placed in the recycling bins. This cart tagging project is centered around a behavior study to see if people will change their actions once they learn they are placing the incorrect materials into their recycling bins. These types of campaigns are proven to be effective. The District will continue to explore helping other interested communities with curbside, drop-off or other behavior change program campaigns in this planning period.

Name	Start Date	End Date	Goal
Keep Lorain County Beautiful	Ongoing	Ongoing	4

Keep Lorain County Beautiful is an affiliate of Keep America Beautiful (KAB). KAB has several programs, two of which the District actively participates in are America Recycles Day and Cigarette Litter Prevention Program.

America Recycles Day is a nationally recognized day dedicated to promoting recycling programs. Keep America Beautiful "Take the Pledge" is a commitment to recycle more. The District holds pledge drives throughout Lorain County Schools. Teachers and students are asked to make a pledge and then commit to that pledge. In 2019, 26 schools participated with 1,204 signing pledges. An additional 75 pledges were received from other District events. The District also offered a drawing for a

chance to win a rain barrel. In 2020 and 2021, no pledge drive occurred due to COVID-19.

Pride Day is an annual county-wide beautification and clean up specific to Lorain County. Organizations and individuals comprising several hundred volunteers join for Pride Day activities which include littering activities, mulching, and planting, shred day, beach clean-ups, etc. Additionally, as mentioned above, several school contests align to promote the event.

Target for Next 3 Years: Continue through the planning period.

## 2. **Audience: Schools**

Name	Start Date	End Date	Goal
Tours	Ongoing	Ongoing	4

Program was called “Residential Recycling Education and Awareness Program/Collection Center Tours” is changing to “Tours”

Tours of the Collection Center are available upon request. In 2019, three tours were given. In 2020 and 2021, no tours due to COVID-19. The District will develop a quantifiable post-tour quiz to create more interactive teaching methods and ensure that everyone that participates in the tour is learning and create a take-home message that they want everyone to gain from the experience.

Target for Next 3 The goal of this program is to increase the number of people that are visiting the collection center and make it a destination that residents are aware of and that residents know the proper materials to bring there.

Name	Start Date	End Date	Goal
School Contests	Ongoing	Ongoing	4

Program was called “Residential Recycling Education and Awareness Program/School Presentations” is changing to “School Contests”

Annually the District assesses which and what contest to invite school students to participate in. The District found that changing the contest is engaging with the audience helping to keep participation at a high level.

The calendar contest is a contest that is usually held annually for K-12 students. Students are given the option to create a recycling or litter prevention themed picture/drawing for their entry. Selected drawings are made into calendars and distributed at fairs, festivals, and other District

events. On average 13 winners are selected and receive an award. All winners are invited to attend a Lorain County Board of Commissioners meeting to receive recognition, certificate, and their award. The contest was put on hold in 2020. In 2019 and 2021, the number of entries received were 1,465 and 1,725, respectively.

Photo and Caption Contest was held in 2019. Individuals submitted a paired photo and caption about recycling which was displayed at District events. All 12 entries received were displayed. This contest received less participation than other contests.

Pride Day T-Shirt Contest was held in 2019. Students were asked to design a T-Shirt for Lorain County Pride Day. There were 192 entries, and the selected winning design was used on the Pride Day volunteer T-shirts.

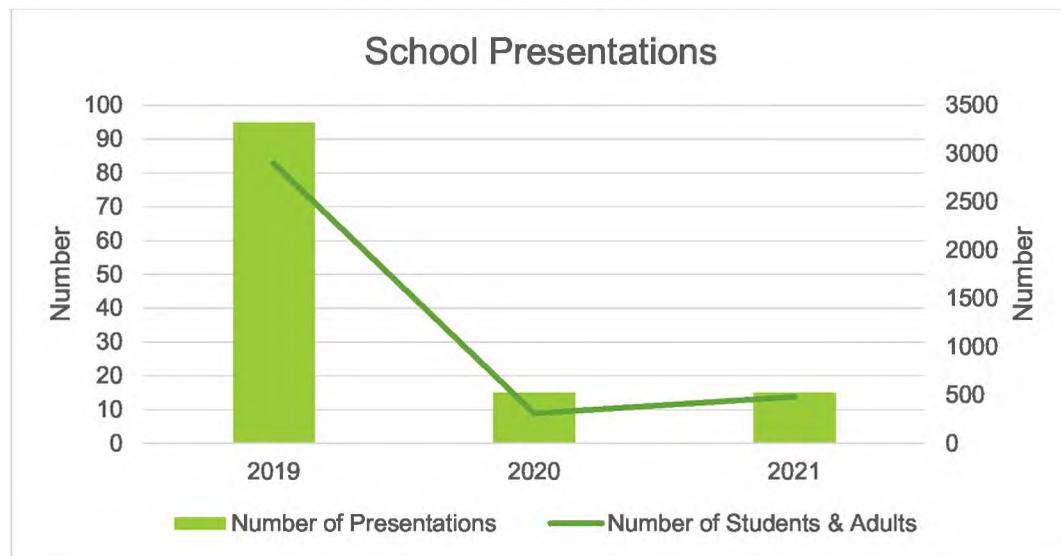
Then in 2021, the District hosted a billboard contest for students to design a billboard promoting Lorain County Beautiful Day. There were 797 students that participated. Three winners were chosen to have their artwork turned into actual billboards that went up in Lorain County. Contest winners received an award and recognition in a County Commissioners meeting and on social media.

**Target for Next 3 Years:** The District will continue offering contests and will continue evaluating the more effective contests to offer the students through the planning period.

Name	Start Date	End Date	Goal
School Presentations	Ongoing	Ongoing	4

Program was called "Residential Recycling Education and Awareness Program/School Presentations" is changing to "School Presentations"

Age-appropriate presentations were developed for each grade from first grade to sixth grade. Teachers can request school presentations by contacting the District. Presentations are education-based and teach students on various topics such as recycling, litter prevention, and other solid waste related issues. The number of school presentations declined due to COVID 19 as shown in the below table.



Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Lending Library	Ongoing	Ongoing	4

A library of reference materials is available to school districts and educators. The library contains books, videos, CDs and DVDs for teachers to borrow for classroom use. Reference material topics include waste reduction, recycling, solid waste, household hazardous waste, and litter management. Materials can be requested online or in person. Additional materials such as environmental themed color sheets and activities are available for educators to print directly from the website.

Target for Next 3 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Sustainability Education Center	2023	Ongoing	4

The District is developing, designing, and building a Sustainability Education Center (SEC) on the campus of the Lorain County Collection Center. This facility will include museum-quality exhibits and interactive games designed to encourage waste reduction, recycling, and water and energy conservation.

The center is currently being designed with the goal to provide visitors who tour the center the opportunity to directly experience environmental challenges and learn personal strategies to reduce their waste and conserve natural resources. Tours of the center will be free for schools,

businesses, and community groups. The District will explore regional collaboration efforts and access to the facility.

The goals of the SEC are designed to be specific, measurable, and attainable. Current goals include:

- Host 1,000 visitors in the first year upon opening.
- Align the ELC exhibits and tour with Ohio's Learning Standards for 4<sup>th</sup> and 5<sup>th</sup> grade students.
- Maintain the SEC with relevant and current information about environmental issues for a variety of facility visitors.
- Educate the public about solid waste and material management. Present information that promotes sustainability with a focus on personal responsibility and personal engagement.
- Collaborate with similar agencies to promote the ELC as a regional asset to foster sustainable behaviors.

### 3. ***Audience: Institutions & Commercial Businesses***

Name	Start Date	End Date	Goal
Environmental Stewardship Award	2013	Ongoing	4

[Note: Program name changed from Recognition Program.] This program was designed to recognize businesses that have innovative recycling programs and that actively participate in the District's annual surveying efforts. Businesses apply for membership in the District's Green Business Directory by submitting an application to the District. The Green Business Directory was not established. The challenge with this program was the hurdle of requiring businesses to apply. This extra step resulted in this program not developing.

Target for Next 3 Years: Expand to encompass Environmental Stewardship in institutions, commercial, and industrial businesses. The District will nominate 1 business a year. Self-nominations could be welcomed, but not required. Environmental Stewardship will encompass businesses demonstrating sustainable materials management and implementing elements of the waste management and food recovery hierarchy. Environmental Stewardship Awards provide newsworthy angles to include in the District Annual Report, website, and social media. The District will also outreach to the Lorain Chamber of Commerce to present the award at a Chamber event.

Name	Start Date	End Date	Goal
Business Recycling Roundtable	2013	2022	4

This was District facilitated gathering of area business owners/managers to focus on innovative recycling processes and applications related to solid

waste. Topics could include recycling contracts, cooperatives, programs, etc. Building interest has been a long-time challenge.

**Target for Next 3 Years:** This program will not continue through the planning period.

Name	Start Date	End Date	Goal
Business Technical Assistance	2024	ongoing	4

Technical assistance will be structured to support types of establishments. The first priority for the 2024 Plan will be schools (see Outreach Priority).

**Target for Next 3 Years:** Also see Outreach Priority. The District will target direct outreach to 2 different school districts and their administrators a year. The goal is to set up source reduction and school recycling programs. Direct outreach to the school administrators to evaluate the options for collection service and in-school collection handling. The District will assist schools to:

- determine what is needed to set up a program,
- provide meeting, cost analysis, and contract assistance,
- apply for grant funding for capital expenses, if needed, and
- provide training to staff and students once programs are established.

#### **4. Audience: Industries**

Name	Start Date	End Date	Goal
Business Technical Assistance	2024	ongoing	4

The District will help any industries seeking technical assistance, see above description.

#### **5. Audience – Communities & Elected Officials**

Name	Start Date	End Date	Goal
Consortium for Waste Services	2014	ongoing	4

Consortium bidding aggregates the purchasing power of multiple political jurisdictions which creates leverage. The District's role is to facilitate meetings (organize, agendas, notes, etc.), draft RFP, host bid meetings, evaluate bids, and any other technical assistance needs.

The consortium holds meetings quarterly. The topics discussed in the meetings include: current consortium budget, fuel costs, service issues, quarterly newsletter, recycling report, and updates from the District.

**Target for Next 3 Years:** Continue through the planning period.

Name	Start Date	End Date	Goal
Elected Official Outreach	ongoing	ongoing	4

[Note: Program name changed from Invitation to elected officials for events in their community.]

Elected Official Outreach will include direct email engagement, hosting an educational seminar, and semi- or annual meetings with recycling coordinators.

Target for Next 3 Years: Anytime the District hosts an event or pushes out education collateral it will be pushed out to the elected official email contact list as well. Outreach details and attendance at events will be tracked.

Name	Start Date	End Date	Goal
Customizable Toolkit	ongoing	ongoing	4

The District can provide communities with customizable toolkit to educate households on the materials that can be recycled. The collateral provided in the toolkit can be posted on community webpages and/or social media platforms.

Target for Next 3 Years: Continue through planning period.

## C. Outreach Priority

The District has selected Business Technical Assistance as its outreach priority.

Target Audience: Schools	Tier	Tactic	Deliverable	Metrics
<b>Program: School Diversion Outreach</b>  Goals: Increase the schools recycling rates by five percent over the next three years	Tier 1	Conduct school survey to determine recycling programs and interest.	FY 2024	
	Tier 1	Contact school administrators to develop a program.	FY 2024	
	Tier 1	Determine baseline metrics: waste generated, landfilled, and recycled. May need to outreach to haulers.	FY 2024: Baseline analytics	Measure baseline recovery
	Tier 1	Design program and outreach	FY 2024:	
	Tier 2	Program implementation and Release of strategic campaign (Note:	FY 2024 - targeted communications	Measure all campaign media engagements methods of

Target Audience: Schools	Tier	Tactic	Deliverable	Metrics
have been flat for several years. The District recommends focusing on developing school programs		Campaign materials will be determined using best management practices and benchmark campaigns with successful outcomes. Resources and outside consultant assistance are budgeted.)	campaign: increase teacher and student participation	delivery, and increased recycling rate numbers.
	Tier 2	Host contests among each classroom to encourage friendly competition to increase recycling	FY 2025: Increase teacher and student participation	Measure participation, recycling request increase, recycling tonnage over a year



## **APPENDIX M**

# **WASTE MANAGEMENT CAPACITY ANALYSIS**



## APPENDIX M. Waste Management Capacity Analysis

### A. ACCESS TO PUBLICLY-AVAILABLE LANDFILL FACILITIES

The Lorain County Solid Waste Management District (District) has one in-District municipal solid waste landfill that accepted solid waste in the reference year which has a remaining capacity of 14 years.

During the reference year, District-generated waste was directly hauled to 10 out-of-District landfills. These facilities had an average remaining capacity of more than 36 years.

During the reference year, District-generated waste was directly hauled to 1 in-district and 10 out-of-state landfills. Facilities out-of-District had an average remaining capacity of more than 50 years.

For all direct haul landfills used by the District in the reference year, the overall average remaining capacity of more than 47 years. All of the facilities had enough currently permitted capacity to last through the end of the District's planning period. As a result, the District has concluded that adequate landfill capacity is available to serve the needs of the District for the entire planning period.

**Table M-1. Remaining Operating Life of Publicly-Available Landfills**

Facility	Location	Years of Remaining Capacity <sup>a</sup>
<b><i>In-District</i></b>		
Lorain County II Landfill LLC	Lorain County, OH	14
<b><i>Out-of-District</i></b>		
Geneva Landfill	Ashtabula County, OH	82
Crawford County Landfill	Crawford County, OH	20
Erie County Sanitary Landfill	Erie County, OH	25
Pine Grove Regional Facility	Fairfield County, OH	88
Kimble Sanitary Landfill	Tuscarawas County, OH	18
Port Clinton Landfill Inc	Ottawa County, OH	83
Noble Road Landfill	Richland County, OH	11
American Landfill Inc	Stark County, OH	84
Republic Services Countywide Recycling & Disposal Facility	Stark County, OH	91
Wood County Landfill	Wood County, OH	2
<b><i>Out-of-State</i></b>		
Misc. Facilities		

**Source(s) of Information:** Ohio EPA Facility Data, 2019, State-Level Project and Landfill Totals from the LMOP Database, 2021.

**B. ACCESS TO CAPTIVE LANDFILL FACILITIES**

No captive landfills exist within the District; therefore, **Table M-2** has been omitted.

**C. INCINERATORS AND ENERGY RECOVERY FACILITIES**

The District sent less than 10 percent of waste to incinerators. Therefore, **Table M-3**, "Incinerators and Energy Recovery Facilities Used by the District in the Reference Year," has been omitted.



## **APPENDIX N**

# **EVALUATING GREENHOUSE GAS EMISSIONS**



## APPENDIX N. Evaluating Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions associated with solid waste management activities were estimated for the District using U.S. Environmental Protection Agency's Waste Reduction Model (WARM). The WARM was applied to reference year data and data projected for the sixth year of the planning period, or year 2028. Only residential/commercial waste has been included in the first and second analysis. Sources of waste or recyclables have been combined as necessary to create waste category totals corresponding to input entries available in the WARM. For instance, the "Mixed Recyclables" material category represents the sum of commingled recyclable materials that were notated on the reference year's Annual District Report.

The top half of **Table N-1** shown below provides the results from the WARM analysis, assuming that all waste recycled and composted in the reference year was disposed in landfills. The model estimates a net savings of 2,339.61 metric tons of carbon dioxide equivalents (MTCO<sub>2</sub>E) using this assumption which is characterized as the baseline scenario. The second half of **Table N-1** represents the actual amounts recycled and composted in 2019 and is termed the alternative scenario. The alternative scenario results in a savings of 133,745.67 MTCO<sub>2</sub>E.

**Table N-1. Greenhouse Gas Emissions from All Recyclables in 2019**

### If Landfilled Model

GHG Emissions from Baseline Waste Management (MTCO <sub>2</sub> E):						2,339.61
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO <sub>2</sub> E
Corrugated Containers	-	12,724.67	-	NA	NA	3,253.00
Mixed Paper (general)	-	14,348.06	-	NA	NA	2,051.87
Food Waste	NA	1,643.39	-	-	-	891.01
Yard Trimmings	NA	24,328.47	-	-	-	(4,375.46)
Mixed Plastics	-	4,559.86	-	NA	NA	92.36
Mixed Electronics	-	268.51	-	NA	NA	5.44
Aluminum Cans	-	1,891.23	-	NA	NA	38.31
Steel Cans	-	5,002.80	-	NA	NA	101.33
Mixed Metals	-	4.99	-	NA	NA	0.10
Glass	-	572.00	-	NA	NA	11.59
Tires	-	3,057.07	-	NA	NA	61.92
Mixed Recyclables	-	2,269.15	-	NA	NA	208.15

### If Recycled Model

GHG Emissions from Baseline Waste Management (MTCO2E):						(133,745.67)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO <sub>2</sub> E
Corrugated Containers	12,724.67	-	-	NA	NA	(39,896.11)
Mixed Paper (general)	14,348.06	-	-	NA	NA	(50,871.39)
Food Waste	NA	-	-	1,643.39	-	(289.26)
Yard Trimmings	NA	-	-	24,328.47	-	(3,559.55)
Mixed Plastics	4,559.86	-	-	NA	NA	(4,700.91)
Mixed Electronics	268.51	-	-	NA	NA	(211.88)
Aluminum Cans	1,891.23	-	-	NA	NA	(17,261.94)
Steel Cans	5,002.80	-	-	NA	NA	(9,165.50)
Mixed Metals	4.99	-	-	NA	NA	(21.91)
Glass	572.00	-	-	NA	NA	(157.92)
Tires	3,057.07	-	-	NA	NA	(1,150.39)
Mixed Recyclables	2,269.15	-	-	NA	NA	(6,458.92)

Combining the results from the two scenarios in **Table N-1** shows the GHG emissions saved within each material category, which is achieved by recycling and composting instead of landfilling all materials in the waste stream (see **Table N-2**). The total estimated GHG emissions savings is 136,085.28 MTCO<sub>2</sub>E.

**Table N-2. Net GHG Reductions for 2019: Alternative vs. Baseline Scenarios**

Waste Category	Difference Between Scenarios in MTCO <sub>2</sub> E (Alternative-Baseline)
Corrugated Containers	(43,149.12)
Mixed Paper (general)	(52,923.25)
Food Waste	(1,180.27)
Yard Trimmings	815.91
Mixed Plastics	(4,793.27)
Mixed Electronics	(217.32)
Aluminum Cans	(17,300.25)
Steel Cans	(9,266.83)
Mixed Metals	(22.01)
Glass	(169.51)
Tires	(1,212.31)
Mixed Recyclables	(6,667.07)
<b>Net Totals</b>	<b>(136,085.28)</b>

Note: "MTCO<sub>2</sub>E" means metric tons of carbon dioxide equivalent.

**Table N-3** shows the material categories as well as the amounts recycled and composted which were entered into the model. This first analysis compares reference year (2019)

residential/commercial recycling data to projected data for year six of the planning period (2028). The top half of **Table N-3** provides results from the WARM analysis of actual residential/commercial recycling tonnage and MTCO<sub>2</sub>E generation in 2019. The bottom half of the table represents the projected tonnage and MTCO<sub>2</sub>E generation for year 2028.

**Table N-3. Tons of Solid Waste Applied to WARM**

**2019 WARM Model**

GHG Emissions from Baseline Waste Management (MTCO <sub>2</sub> E):						(133,745.67)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO <sub>2</sub> E
Corrugated Containers	12,724.67	-	-	NA	NA	(39,896.11)
Mixed Paper (general)	14,348.06	-	-	NA	NA	(50,871.39)
Food Waste	NA	-	-	1,643.39	-	(289.26)
Yard Trimmings	NA	-	-	24,328.47	-	(3,559.55)
Mixed Plastics	4,559.86	-	-	NA	NA	(4,700.91)
Mixed Electronics	268.51	-	-	NA	NA	(211.88)
Aluminum Cans	1,891.23	-	-	NA	NA	(17,261.94)
Steel Cans	5,002.80	-	-	NA	NA	(9,165.50)
Mixed Metals	4.99	-	-	NA	NA	(21.91)
Glass	572.00	-	-	NA	NA	(157.92)
Tires	3,057.07	-	-	NA	NA	(1,150.39)
Mixed Recyclables	2,269.15	-	-	NA	NA	(6,458.92)

**2028 WARM Model**

GHG Emissions from Baseline Waste Management (MTCO <sub>2</sub> E):						(140,123.50)
Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO <sub>2</sub> E
Corrugated Containers	13,331.46	-	-	NA	NA	(41,798.61)
Mixed Paper (general)	15,032.27	-	-	NA	NA	(53,297.25)
Food Waste	NA	-	-	1,721.76	-	(303.05)
Yard Trimmings	NA	-	-	25,488.60	-	(3,729.29)
Mixed Plastics	4,777.30	-	-	NA	NA	(4,925.08)
Mixed Electronics	281.31	-	-	NA	NA	(221.98)
Aluminum Cans	1,981.41	-	-	NA	NA	(18,085.10)
Steel Cans	5,241.36	-	-	NA	NA	(9,602.57)
Mixed Metals	5.23	-	-	NA	NA	(22.95)
Glass	599.28	-	-	NA	NA	(165.46)
Tires	3,202.85	-	-	NA	NA	(1,205.24)
Mixed Recyclables	2,377.35	-	-	NA	NA	(6,766.92)

The two scenarios in **Table N-3** above are combined into **Table N-4** below to show that the added GHG emissions between 2019 and 2028 by slightly increasing recycling is 6,377.83 MTCO<sub>2</sub>E.

**Table N-4. Net GHG Reductions for 2029: Alternative vs. Baseline Scenarios**

Waste Category	Difference Between Scenarios in MTCO <sub>2</sub> E (2019 and 2028)
Corrugated Containers	(1,902.50)
Mixed Paper (general)	(2,425.87)
Food Waste	(13.79)
Yard Trimmings	(169.74)
Mixed Plastics	(224.17)
Mixed Electronics	(10.10)
Aluminum Cans	(823.16)
Steel Cans	(437.07)
Mixed Metals	(1.04)
Glass	(7.53)
Tires	(54.86)
Mixed Recyclables	(308.00)
<b>Net Totals</b>	<b>(6,377.83)</b>



## **APPENDIX O**

## **FINANCIAL DATA**



## APPENDIX O. Financial Data

This Appendix summarizes the District's funding mechanisms, projected revenues, and expenses for the planning period of 2018-2032. The District has prepared the budget section of this Plan Update to meet the requirements in the Ohio Revised Code, Section 3734.53 (A)(13)(d):

*The methods of financing implementation of the plan and a demonstration of the availability of financial resources for that purpose.*

The budget tables prepared for this Plan Update demonstrate that the District has the financial funding throughout the planning period to implement the planned programs and initiatives.

The District reserves the right to revise the budget and reallocate funds as programs change or when otherwise determined to be in the best interest of the District. If the budget in this Plan Update is affected to the point that it must be revised, the District will first determine if a material change in circumstance has occurred. If a material change in circumstance has not occurred but budget revisions are needed that go beyond normal adjustments, the District may revise the budget per ORC Section 3734.56(E) and follow the appropriate ratification requirements to finalize the budget revisions. The District is committed to implementing planned strategies, facilities, programs, and/or activities in a cost-effective manner.

### A. Funding Mechanisms and Revenue Generated

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

#### 1. *Disposal Fees*

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 is 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 of 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 cannot be more than the in-state portion.

Statute (Ohio Revised Code 3734.57(B)) allows for the SWMD to generate revenues by levying fees on any waste disposed in landfills located in the SWMD. There is one landfill in Lorain County, the Lorain County Landfill. The SWMD's fee structure is: \$2.00 per ton of solid waste in-district; \$2.00 per ton of solid waste out-of-district; and \$2.00 per ton of solid waste out-of-state.

To project revenues, the SWMD analyzed historical revenue receipts and changes that happened to revenue sources. Total disposal fee revenue fluctuated from roughly \$2.7 million to \$1.7 million, with an average of \$2.1 million over the past 2012 through 2019 time period. Revenue from in-district waste has been fairly stable over this time, averaging approximately \$530,522. Out-of-district revenue from the disposal fee demonstrates a little more fluctuations and averaged \$1,580,876.

The historical revenues were used to guide the budget projections for this plan update. 2020, 2021, and 2022 revenues shown in Table O-1 are actual revenues reconciled from the Lorain County Auditor's records. In-district disposal averaged a 1.7% increase from 2013 to 2022. However, to ensure a conservative revenue projection, 1.7% increase was not applied to 2023-2037 projections. 2022 actuals are used for the planning period 2023 – 2037. This stable revenue departs slightly from the model increase in In-District illustrated in Table D-11.

**Table O-1 Disposal Fee Schedule and Revenue (in accordance with ORC Section 3734.57(B))** **Source(s) of information:** 2015-2022 actual revenues sourced from SWMD quarterly fee reports and reconciled from Lorain County Auditor Reports. All other amounts projected.

**Sample Calculations:** Total Disposal Fee Revenue= in District fees + out of District fee = Out of state fee

**Table O-1: Disposal Fee Schedule and Revenue (in accordance with ORC Section 3734.57(B))**

Year	Disposal Fee Schedule (\$/ton)			Revenue		Total Disposal Fee Revenue
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	
2012	\$2.00	\$2.00	\$2.00	\$486,225	\$2,226,749	\$2,712,974
2013	\$2.00	\$2.00	\$2.00	\$477,277	\$1,324,453	\$1,801,730
2014	\$2.00	\$2.00	\$2.00	\$448,774	\$1,330,028	\$1,778,802
2015	\$2.00	\$2.00	\$2.00	\$537,386	\$1,541,317	\$2,078,702
2016	\$2.00	\$2.00	\$2.00	\$523,620	\$1,555,559	\$2,079,180
2017	\$2.00	\$2.00	\$2.00	\$572,620	\$1,623,196	\$2,195,817
2018	\$2.00	\$2.00	\$2.00	\$541,081	\$1,380,802	\$1,921,883

2019	\$2.00	\$2.00	\$2.00	\$657,191	\$1,664,903	\$2,322,095
2020	\$2.00	\$2.00	\$2.00	\$543,023	\$1,482,300	\$2,025,323
2021	\$2.00	\$2.00	\$2.00	\$558,721	\$1,344,037	\$1,902,758
2022	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2023	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2024	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2025	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2026	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2027	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2028	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2029	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2030	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2031	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2032	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2033	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2034	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2035	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2036	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857
2037	\$2.00	\$2.00	\$2.00	\$539,583	\$1,264,274	\$1,803,857

## 2. Generation Fees

In accordance with ORC 3734.573, a solid waste management district may levy fees on the generation of solid wastes within the SWMD. The SWMD does not currently levy a generation fee and does not anticipate the need to establish a generation fee during the planning period.

### 3. Contract Fees

Republic Waste Services entered into a Host Community Agreement with the District. At the beginning of the planning period the agreement required Republic to pay Lorain County \$0.60 per ton for each ton of waste disposed at the Lorain County Landfill that is generated outside of the District. There has since been an update to the Host Community Agreement and the new cost is \$0.40 per ton of waste disposed in the Lorain County Landfill. It also requires Republic to bring all the waste controlled by Republic in Cuyahoga County to the Lorain County Landfill in New Russia Township. The District receives the following benefits:

- hauling and container costs for Pride Day
- free waste collection services at County buildings
- reservation of capacity for District waste at the landfill
- guarantee that all Cuyahoga County waste controlled by Republic will be brought to the Lorain County Landfill.

Contract fee projections in **Table O-3** beginning in 2023 are calculated by dividing the out-of-district disposal fee revenue (**Table O-1**) by the \$2 per ton fee and multiplying the derived total tons by the Host Community Agreement fee, which was \$0.60 from 2015 to 2021 and amended by contract to \$0.40 effective 2022. The waste disposed at contracted facilities is held constant from 2023 through the planning period due to the decrease in contracts by Republic. As of 2021, the District renewed the Host Community Agreement until 2026 and has options to extend the agreement on an annual basis through 2026. The District will need to renegotiate an agreement with Republic after the current contract expires. 2022 Contract fees are actual not projected and became the basis for projected 2023 – 2025.

**Table O-3: Contract Fee Schedule and Revenue**

Year	Contract Fee Schedule (\$ per ton)	Waste Disposed at Contracted Facilities	Total Contract Fee Revenue
2015	\$0.60	770,660	\$462,396
2016	\$0.60	777,779	\$466,667
2017	\$0.60	811,598	\$486,959
2018	\$0.60	690,401	\$414,241
2019	\$0.60	832,435	\$499,461
2020	\$0.60	741,150	\$444,690

2021	\$0.60	556,977	\$334,186
2022	\$0.40	632,137	\$252,855
2023	\$0.40	632,137	\$252,855
2024	\$0.40	632,137	\$252,855
2025	\$0.40	632,137	\$252,855
2026	\$0.40	632,137	\$252,855
2027	\$0.40	632,137	\$252,855
2028	\$0.40	632,137	\$252,855
2029	\$0.40	632,137	\$252,855
2030	\$0.40	632,137	\$252,855
2031	\$0.40	632,137	\$252,855
2032	\$0.40	632,137	\$252,855
2033	\$0.40	632,137	\$252,855
2034	\$0.40	632,137	\$252,855
2035	\$0.40	632,137	\$252,855
2036	\$0.40	632,137	\$252,855
2037	\$0.40	632,137	\$252,855

**Source(s) of Information:** Quarterly Fee Reports, District records

**Sample Calculation (2019):**

Total contract fee revenue = 2019 Contract Fee per ton x Waste Disposed at Facilities =  
 $0.60 \times 832,452 = 499,461$ .

#### 4. Loans

The District does not have current loans and does not anticipate securing loans during the planning period and therefore Table O-4 has been omitted.

**Table O-4. Loans**

Year Loan Obtained	Outstanding Balance	Lending Institution	Loan Term (years)	Annual Debt Service
None.				

#### 5. Other Sources of Revenue

##### a. Grants

The District received a variety of grants from the Ohio EPA between 2017 and 2021. During 2021 the District received a Recycling Market Grant from the Ohio EPA to fund a new paper shredder and to fund a curbside recycling outreach project with the City of Oberlin. Due to staffing limitations this grant has been extended until December

2022, and due to extension of the grant the District will not receive the funding until 2022. Grants obtained by the District are competitive and therefore not a guaranteed source of revenue. Potential revenue from future grants has been excluded from revenue projections in **Table O-5**.

**b. Recycling Revenue**

The District receives revenue from the sale of materials delivered by residents to the Collection Center during 2015, 2016, 2017 and 2020. In some years, revenue from the sale of recyclables was captured in a general fund versus the District's account. There was no record of recycling revenue that was recovered for 2018 and 2019. No recycling revenue was projected for the planning period due to the uncertainty of recycling markets.

**c. Fee Penalties**

A one-time fee penalty was assessed to a hauler during 2015. The issue has since been remedied, and no further revenue from this source is projected.

**d. Miscellaneous Revenue**

The other revenue category includes mainly waiver fees and donations. Waiver fees are collected on each ton of solid waste that is delivered to an undesignated disposal facility. Any person, legislative authority of a municipal corporation, or township may apply for a waiver from the designation requirements established in this Plan Update. Waiver agreements between the Board and the person who applied for the waiver will contain the terms and conditions upon which the waiver was granted and the payment by the grantee of the waiver fee, if any, assessed on each ton of solid waste covered by the waiver.

Waiver fees reported in **Table O-5** reflect actual totals for 2015-2022.

2023 to 2037 Misc. Revenue is held constant through the planning period based on 2022 actuals.

**e. Reimbursements**

Typically, the reimbursements are from communities that do not use their entire Community Incentive Grant. This amount is unpredictable; therefore, only actual values are reported in **Table O-5**. No future values have been projected.

**f. Other**

The other revenue category includes adjustment transfers from the auditor. In 2019 it was an advance of the solid waste funds.

**Table O-5: Other Revenue and Other Revenue Sources**

Year	Reimbursements	Grants	Recycling Revenue	Fee Penalty	Miscellaneous	Other	"Other Revenue" Total
2015	\$0	\$181,616	\$12,223	\$10,000	\$67,516		\$271,355
2016	\$0	\$121,521	\$9,301	\$0	\$62,004		\$192,826
2017	\$5,013	\$231,269	\$900	\$0	\$59,714		\$296,896
2018	\$6,000	\$125,500	\$0	\$0	\$67,700		\$199,200
2019	\$0	\$0	\$0	\$0	\$93,087	-\$85,924	\$7,163
2020	\$0	\$0	\$300	\$0	\$143,181		\$143,481
2021	\$266	\$0	\$0	\$0	\$121,708		\$121,974
2022	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2023	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2024	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2025	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2026	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2027	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2028	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2029	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2030	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2031	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2032	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2033	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2034	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2035	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2036	\$0	\$0	\$0	\$0	\$85,494		\$85,494
2037	\$0	\$0	\$0	\$0	\$85,494		\$85,494

**Source(s) of information:** Quarterly Fee Reports 2015- 2021, District Records

**Sample Calculations:** 2019 other revenue= reimbursements + grants + recycling revenue + fee penalties + miscellaneous + other.

**6. Summary of District Revenues**

**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 finances its operations with mostly disposal fee and contract sources of revenue.

**Table O-6. Total Revenue**

**Source(s) of information:** Quarterly Fee Reports and Auditor Records

**Sample Calculations (2019):** Total Revenue = Disposal Fees + Contracts Fees + Generation Fees + Other Revenues

$$\$2,322,095 + \$499,471 + \$0 + \$7,163 = \$2,828,729$$

**Table O-6: Total Revenue**

Year	Disposal Fees	Contract Fees	Generation Fees	Other Revenue	Total Revenue
2015	\$2,078,702	\$462,396	\$0	\$271,355	\$2,812,453
2016	\$2,079,180	\$466,667	\$0	\$192,826	\$2,738,673
2017	\$2,195,817	\$486,958	\$0	\$296,896	\$2,979,671
2018	\$1,921,883	\$414,241	\$0	\$199,200	\$2,535,324
2019	\$2,322,095	\$499,471	\$0	\$7,163	\$2,828,729
2020	\$2,025,323	\$444,690	\$0	\$143,481	\$2,613,494
2021	\$1,902,758	\$334,186	\$0	\$121,974	\$2,358,919
2022	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2023	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2024	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2025	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2026	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2027	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2028	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2029	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2030	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2031	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2032	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2033	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2034	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2035	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2036	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206
2037	\$1,803,857	\$252,855	\$0	\$85,494	\$2,142,206

## B. Cost of Implementing Plan

**Table O-7** includes actual expenses from 2015 to 2022, anticipated expenses from the District's approved budgets for 2023, and projected expenditures from 2024 to 2037. In preparing this 2024 Plan Update the ending balance for 2021 reported on the Quarterly Fee Report was not aligning with the auditor reports. Further investigations and review identified discrepancies in submitted Quarterly Fee Reports. The District reconciled 2019, 2020 and 2021. Discrepancies track prior to 2019 but the District did not reconcile prior to 2019. The expenses shown in this 2024 Plan Update for years 2019, 2020 and 2021 are accurate.

Line items explained below are numbered according to the corresponding line-item number in the District's Quarterly Fee Reports. Line items that did not have any expenditures projected throughout the planning period were omitted from the discussion below. In 2015, the Ohio EPA updated the expense line items on the quarterly fee report. In some cases, the line items used to report expenses historical quarterly fee reports will differ from the line items represented in Table O-7. Each of the expenses that was applicable to the District line items in Table O-7 are explained here:

**Table O-7 Expenses**

Line #	Category/Program	2015	2016	2017	2018	2019	2020
1	<b>1. Plan Monitoring/Prep.</b>	\$105,204	\$86,022	\$92,485	\$152,272	\$153,698	\$82,891
1.a	a. Plan Preparation	\$0		\$15,500	\$133,408		\$7,430
1.b	b. Plan Monitoring	\$105,204	\$86,022	\$76,985	\$18,500	\$76,849	\$41,445
1.c	c. Other	\$0			\$364	\$76,849	\$34,015
2	<b>2. Plan Implementation</b>	\$1,904,347	\$2,106,263	\$2,270,715	\$1,852,198	\$2,065,630	\$1,533,094
2.a	a. District Administration	\$763,975	\$826,539	\$792,791	\$989,862	\$693,372	\$621,578
2.a.1	Personnel	\$526,215	\$596,299	\$605,426	\$577,010	\$457,002	\$357,365
2.a.2	Office Overhead	\$237,760	\$219,777	\$187,365	\$388,500	\$196,130	\$214,571
2.a.3	Other	\$0	\$10,463		\$24,351	\$40,241	\$49,642
2.b	b. Facility Operation	\$224,444	\$301,304	\$228,832	\$253,242	\$247,108	\$309,809
2.b.1	MRF/Recycling Center	\$224,444	\$3,878				
2.b.2	Compost	\$0					
2.b.3	Transfer	\$0					
2.b.4	Special Waste	\$0	\$297,426	\$228,832	\$253,242	\$247,108	\$309,809
2.c	c. Landfill Closure/Post-Closure	\$0					
2.d	d. Recycling Collection	\$321,344	\$362,225	\$548,286	\$320,837	\$550,369	\$318,365
2.d.1	Curbside	\$0					
2.d.2	Drop-off	\$0					
2.d.3	Combined Curbside/Drop-off	\$321,344	\$361,620	\$548,286	\$320,837	\$408,819	\$318,365
2.d.4	Multi-family	\$0					
2.d.5	Business/Institutional	\$0					
2.d.6	Other	\$0	\$605			\$141,550	
2.e	e. Special Collections	\$382,261	\$430,354	\$429,523	\$217,617	\$393,191	\$261,573

2.e.1	Tire Collection	\$56,663	\$40,452	\$70,543	\$86,497	\$45,924	\$43,043
2.e.2	HHW Collection	\$138,951	\$162,882	\$358,980	\$111,793	\$275,860	\$186,250
2.e.3	Electronics Collection	\$6,750	\$11,871		\$19,327	\$18,800	\$12,469
2.e.4	Appliance Collection	\$0					
2.e.5	Other Collection Drives	\$169,955	\$215,149			\$52,606	\$19,811
2.f	f. Yard Waste/Other Organics	\$9,942			\$17,400		
2.g	g. Education/Awareness	\$88,888	\$59,045	\$57,941	\$28,007	\$121,696	\$21,768
2.g.1	Education Staff	\$10,512	\$8,113	\$24,730		\$8,700	\$17,400
2.g.2	Advertisement/Promotion	\$78,376	\$50,932	\$33,211	\$27,507	\$11,620	\$4,368
2.g.3	Other				\$500	\$101,376	
2.h	h. Recycling Market Development	\$81,332	\$126,796	\$144,935	\$25,234	\$57,184	\$0
2.h.1	General Market Development Activities	\$81,332	\$17,081	\$9,523	\$25,234	\$57,184	
2.h.2	ODNR pass-through grant		\$109,715	\$135,412			
2.i	i. Service Contracts						
2.j	j. Feasibility Studies						
2.k	k. Waste Assessments/Audits			\$68,407			
2.l	l. Dump Cleanup						
2.m	m. Litter Collection/Education	\$32,161					
2.n	n. Emergency Debris Management					\$2,710	
2.o	o. Loan Payment						
2.p	p. Other						
3	<b>3. Health Dept. Enforcement</b>	\$0	\$0	\$0	\$0	\$0	\$0
	<b>Health Department Name:</b>	Lorain County Health Department					
3.a	a. Personnel						
3.b	b. Supplies						
3.c	c. Equipment						
3.d	d. Vehicles						
3.e	e. Other						
4	<b>4. County Assistance</b>	\$50,000	\$115,403	\$50,000	\$50,000	\$45,833	\$54,167
4.a	a. Maintaining Roads	\$50,000	\$50,000	\$50,000	\$50,000	\$45,833	\$54,167
4.b	b. Maintaining Public Facilities		\$65,403				
4.c	c. Providing Emergency Services						
4.d	d. Providing Other Public Services						
5	<b>5. Well Testing</b>						
6	<b>6. Out-of-State Waste Inspection</b>						
7	<b>7. Open Dump, Litter Law Enforcement</b>	\$311,159	\$268,922	\$322,018	\$297,123	\$310,360	\$311,950
7.a	a. Heath Departments	\$178,700	\$181,100	\$193,700	\$155,833	\$170,000	\$127,500
7.b	b. Local Law Enforcement	\$132,459	\$87,822	\$128,318	\$141,289	\$140,360	\$156,117
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$28,333
8	<b>8. Heath Department Training</b>						
9	<b>9. Municipal/Township Assistance</b>						
10	<b>10. Compensation to Affected Community (ORC Section 3734.35)</b>						
	<b>***Total Expenses***</b>	\$2,370,710	\$2,576,610	\$2,735,218	\$2,351,593	\$2,575,521	\$1,982,101

Line #	Category/Program	2021	2022	2023	2024	2025	2026
1	<b>1. Plan Monitoring/Prep.</b>	\$61,883	\$88,480	\$92,000	\$97,760	\$103,981	\$147,340
1.a	a. Plan Preparation		\$0	\$0			\$40,000
1.b	b. Plan Monitoring	\$61,883	\$88,480	\$72,000	\$77,760	\$83,981	\$87,340
1.c	c. Other		\$0	\$20,000	\$20,000	\$20,000	\$20,000
2	<b>2. Plan Implementation</b>	\$1,872,113	\$1,887,304	\$1,698,265	\$1,896,662	\$1,919,354	\$1,985,609
2.a	a. District Administration	\$814,959	\$727,808	\$782,959	\$843,595	\$909,083	\$944,446
2.a.1	Personnel	\$577,842	\$631,511	\$682,032	\$736,595	\$795,522	\$827,343
2.a.2	Office Overhead	\$159,103	\$70,302	\$75,926	\$82,000	\$88,561	\$92,103
2.a.3	Other	\$78,015	\$25,995	\$25,000	\$25,000	\$25,000	\$25,000
2.b	b. Facility Operation	\$270,131	\$211,518	\$228,440	\$246,715	\$266,452	\$277,110
2.b.1	MRF/Recycling Center						
2.b.2	Compost						
2.b.3	Transfer						
2.b.4	Special Waste	\$270,131	\$211,518	\$228,440	\$246,715	\$266,452	\$277,110
2.c	c. Landfill Closure/Post-Closure			c			
2.d	d. Recycling Collection	\$367,732	\$578,657	\$0	\$30,000	\$30,000	\$30,000
2.d.1	Curbside						
2.d.2	Drop-off						
2.d.3	Combined Curbside/Drop-off	\$367,732	\$578,657	\$0	\$0	\$0	\$0
2.d.4	Multi-family						
2.d.5	Business/Institutional				\$30,000	\$30,000	\$30,000
2.d.6	Other						
2.e	e. Special Collections	\$362,678	\$341,269	\$368,570	\$398,056	\$429,901	\$447,097
2.e.1	Tire Collection	\$102,327	\$84,565	\$91,330	\$98,637	\$106,528	\$110,789
2.e.2	HHW Collection	\$14,223	\$14,899	\$16,091	\$17,379	\$18,769	\$19,520
2.e.3	Electronics Collection	\$32,040	\$27,367	\$29,557	\$31,921	\$34,475	\$35,854
2.e.4	Appliance Collection						
2.e.5	Other Collection Drives	\$214,089	\$214,437	\$231,592	\$250,119	\$270,129	\$280,934
2.f	f. Yard Waste/Other Organics						
2.g	g. Education/Awareness	\$33,144	\$28,052	\$130,296	\$190,295	\$95,919	\$98,956
2.g.1	Education Staff	\$17,400	\$17,400	\$18,792	\$20,295	\$21,919	\$22,796
2.g.2	Advertisement/Promotion	\$15,744	\$10,652	\$11,504	\$50,000	\$54,000	\$56,160
2.g.3	Other			\$100,000	\$120,000	\$20,000	\$20,000
2.h	h. Recycling Market Development						
	General Market Development						
2.h.1	Activities	\$23,468	\$0	\$25,000	\$25,000	\$25,000	\$25,000
2.h.2	ODNR pass-through grant						
2.i	i. Service Contracts						
2.j	j. Feasibility Studies						
2.k	k. Waste Assessments/Audits			\$15,000	\$15,000	\$15,000	\$15,000
2.l	l. Dump Cleanup						
2.m	m. Litter Collection/Education			\$8,000	\$8,000	\$8,000	\$8,000
2.n	n. Emergency Debris Management			\$10,000	\$10,000	\$10,000	\$10,000
2.o	o. Loan Payment						
2.p	p. Other			\$130,000	\$130,000	\$130,000	\$130,000
3	<b>3. Health Dept. Enforcement</b>	\$0	\$0	\$0	\$0	\$0	\$0
	<b>Health Department Name:</b>						

3.a	a. Personnel					
3.b	b. Supplies					
3.c	c. Equipment					
3.d	d. Vehicles					
3.e	e. Other					
4	<b>4. County Assistance</b>	\$46,394	\$54,167	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$46,394	\$54,167	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities					
4.c	c. Providing Emergency Services					
4.d	d. Providing Other Public Services					
5	<b>5. Well Testing</b>					
6	<b>6. Out-of-State Waste Inspection</b>					
7	<b>7. Open Dump, Litter Law Enforcement</b>	\$360,828	\$318,593	\$0	\$0	\$0
7.a	a. Heath Departments	\$184,167	\$155,833	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$176,661	\$162,760	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0
8	<b>8. Heath Department Training</b>					
9	<b>9. Municipal/Township Assistance</b>					
10	<b>10. Compensation to Affected Community (ORC Section 3734.35)</b>					
	<b>***Total Expenses***</b>	\$2,341,218	\$2,348,544	\$1,790,265	\$1,994,422	\$2,023,335
						\$2,132,949

Line #	Category/Program	2027	2028	2029	2030	2031	2032
1	<b>1. Plan Monitoring/Prep.</b>	\$127,340	\$107,340	\$107,340	\$147,340	\$127,340	\$107,340
1.a	a. Plan Preparation	\$20,000			\$40,000	\$20,000	
1.b	b. Plan Monitoring	\$87,340	\$87,340	\$87,340	\$87,340	\$87,340	\$87,340
1.c	c. Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2	<b>2. Plan Implementation</b>	\$1,985,609	\$1,985,609	\$1,985,609	\$1,985,609	\$1,985,609	\$1,985,609
2.a	a. District Administration	\$944,446	\$944,446	\$944,446	\$944,446	\$944,446	\$944,446
2.a.1	Personnel	\$827,343	\$827,343	\$827,343	\$827,343	\$827,343	\$827,343
2.a.2	Office Overhead	\$92,103	\$92,103	\$92,103	\$92,103	\$92,103	\$92,103
2.a.3	Other	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.b	b. Facility Operation	\$277,110	\$277,110	\$277,110	\$277,110	\$277,110	\$277,110
2.b.1	MRF/Recycling Center						
2.b.2	Compost						
2.b.3	Transfer						
2.b.4	Special Waste	\$277,110	\$277,110	\$277,110	\$277,110	\$277,110	\$277,110
2.c	c. Landfill Closure/Post-Closure						
2.d	d. Recycling Collection	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
2.d.1	Curbside						
2.d.2	Drop-off						
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family						
2.d.5	Business/Institutional	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
2.d.6	Other						
2.e	e. Special Collections	\$447,097	\$447,097	\$447,097	\$447,097	\$447,097	\$447,097

2.e.1	Tire Collection	\$110,789	\$110,789	\$110,789	\$110,789	\$110,789	\$110,789
2.e.2	HHW Collection	\$19,520	\$19,520	\$19,520	\$19,520	\$19,520	\$19,520
2.e.3	Electronics Collection	\$35,854	\$35,854	\$35,854	\$35,854	\$35,854	\$35,854
2.e.4	Appliance Collection						
2.e.5	Other Collection Drives	\$280,934	\$280,934	\$280,934	\$280,934	\$280,934	\$280,934
2.f	f. Yard Waste/Other Organics						
2.g	g. Education/Awareness	\$98,956	\$98,956	\$98,956	\$98,956	\$98,956	\$98,956
2.g.1	Education Staff	\$22,796	\$22,796	\$22,796	\$22,796	\$22,796	\$22,796
2.g.2	Advertisement/Promotion	\$56,160	\$56,160	\$56,160	\$56,160	\$56,160	\$56,160
2.g.3	Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2.h	h. Recycling Market Development	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.h.1	General Market Development Activities	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.h.2	ODNR pass-through grant						
2.i	i. Service Contracts						
2.j	j. Feasibility Studies						
2.k	k. Waste Assessments/Audits	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
2.l	l. Dump Cleanup						
2.m	m. Litter Collection/Education	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
2.n	n. Emergency Debris Management	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
2.o	o. Loan Payment						
2.p	p. Other	\$130,000	\$130,000	\$130,000	\$130,000	\$130,000	\$130,000
3	<b>3. Health Dept. Enforcement</b>	\$0	\$0	\$0	\$0	\$0	\$0
	<b>Health Department Name:</b>						
3.a	a. Personnel						
3.b	b. Supplies						
3.c	c. Equipment						
3.d	d. Vehicles						
3.e	e. Other						
4	<b>4. County Assistance</b>	\$0	\$0	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities						
4.c	c. Providing Emergency Services						
4.d	d. Providing Other Public Services						
5	<b>5. Well Testing</b>						
6	<b>6. Out-of-State Waste Inspection</b>						
7	<b>7. Open Dump, Litter Law Enforcement</b>	\$0	\$0	\$0	\$0	\$0	\$0
7.a	a. Heath Departments	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0
8	<b>8. Heath Department Training</b>						
9	<b>9. Municipal/Township Assistance</b>						
10	<b>10. Compensation to Affected Community (ORC Section 3734.35)</b>						
	<b>***Total Expenses***</b>	\$2,112,949	\$2,092,949	\$2,092,949	\$2,132,949	\$2,112,949	\$2,092,949

Line #	Category/Program	2033	2034	2035	2036	2037
1	<b>1. Plan Monitoring/Prep.</b>	\$107,340	\$147,340	\$127,340	\$107,340	\$107,340
1.a	a. Plan Preparation		\$40,000	\$20,000		
1.b	b. Plan Monitoring	\$87,340	\$87,340	\$87,340	\$87,340	\$87,340
1.c	c. Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2	<b>2. Plan Implementation</b>	\$1,985,609	\$1,985,609	\$1,985,609	\$1,985,609	\$1,985,609
2.a	a. District Administration	\$944,446	\$944,446	\$944,446	\$944,446	\$944,446
2.a.1	Personnel	\$827,343	\$827,343	\$827,343	\$827,343	\$827,343
2.a.2	Office Overhead	\$92,103	\$92,103	\$92,103	\$92,103	\$92,103
2.a.3	Other	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.b	b. Facility Operation	\$277,110	\$277,110	\$277,110	\$277,110	\$277,110
2.b.1	MRF/Recycling Center					
2.b.2	Compost					
2.b.3	Transfer					
2.b.4	Special Waste	\$277,110	\$277,110	\$277,110	\$277,110	\$277,110
2.c	c. Landfill Closure/Post-Closure					
2.d	d. Recycling Collection	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
2.d.1	Curbside					
2.d.2	Drop-off					
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family					
2.d.5	Business/Institutional	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
2.d.6	Other					
2.e	e. Special Collections	\$447,097	\$447,097	\$447,097	\$447,097	\$447,097
2.e.1	Tire Collection	\$110,789	\$110,789	\$110,789	\$110,789	\$110,789
2.e.2	HHW Collection	\$19,520	\$19,520	\$19,520	\$19,520	\$19,520
2.e.3	Electronics Collection	\$35,854	\$35,854	\$35,854	\$35,854	\$35,854
2.e.4	Appliance Collection					
2.e.5	Other Collection Drives	\$280,934	\$280,934	\$280,934	\$280,934	\$280,934
2.f	f. Yard Waste/Other Organics					
2.g	g. Education/Awareness	\$98,956	\$98,956	\$98,956	\$98,956	\$98,956
2.g.1	Education Staff	\$22,796	\$22,796	\$22,796	\$22,796	\$22,796
2.g.2	Advertisement/Promotion	\$56,160	\$56,160	\$56,160	\$56,160	\$56,160
2.g.3	Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2.h	h. Recycling Market Development					
	General Market Development					
2.h.1	Activities	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.h.2	ODNR pass-through grant					
2.i	i. Service Contracts					
2.j	j. Feasibility Studies					
2.k	k. Waste Assessments/Audits	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
2.l	l. Dump Cleanup					
2.m	m. Litter Collection/Education	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000
2.n	n. Emergency Debris Management	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
2.o	o. Loan Payment					
2.p	p. Other	\$130,000	\$130,000	\$130,000	\$130,000	\$130,000
3	<b>3. Health Dept. Enforcement</b>	\$0	\$0	\$0	\$0	\$0
	<b>Health Department Name:</b>					

3.a	a. Personnel					
3.b	b. Supplies					
3.c	c. Equipment					
3.d	d. Vehicles					
3.e	e. Other					
4	<b>4. County Assistance</b>	\$0	\$0	\$0	\$0	\$0
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities					
4.c	c. Providing Emergency Services					
4.d	d. Providing Other Public Services					
5	<b>5. Well Testing</b>					
6	<b>6. Out-of-State Waste Inspection</b>					
7	<b>7. Open Dump, Litter Law Enforcement</b>	\$0	\$0	\$0	\$0	\$0
7.a	a. Heath Departments	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0
8	<b>8. Heath Department Training</b>					
9	<b>9. Municipal/Township Assistance</b>					
10	<b>10. Compensation to Affected Community (ORC Section 3734.35)</b>					
	<b>***Total Expenses***</b>	\$2,092,949	\$2,132,949	\$2,112,949	\$2,092,949	\$2,092,949

## 1. Plan Monitoring/Prep.

### 1.a Plan Preparation

2015 – 2022 – The costs shown for 2015 through 2022 are actual expenses for preparing the solid waste management plan.

2023 – 2033 – The expense line items shown are estimates for consulting fees for plan preparation expected every three years.

### 1.b Plan Monitoring

2015 – 2022 – The costs shown for 2015 through 2022 are actual expenses for monitoring the solid waste management plan and conducting annual district report surveys.

2023 – 2032 – The expense line items shown are estimates for plan monitoring and consultant costs. Inflation of 8% annually was applied through 2025 and then decreases to 4% annually.

### 1.c Other

2015 – 2022 – The costs shown for 2015 through 2022 are actual expenses for other monitoring the solid waste management plan and conducting annual district report surveys.

2023 – 2034 – The expense line items shown are estimates for plan monitoring. Inflation of 8% annually was applied through 2025 and then decreases to 4% annually.

## 2. Plan Implementation

**2.a District Administration****2.a.1 Personnel**

2015 – 2022 - Expenses line items include cost for payroll, payroll taxes, and benefits (including PERS, Medicare, and insurances) for District and Collection Center personnel. The costs shown for 2015 through 2022 are actual expenses. Administrative costs also include some program costs which are difficult to separate into their own line item. Those program costs are absorbed into the various administrative costs line items.

2023 – 2034 - In 2022, the U.S. national inflation rate is at 8.5%. Inflation of 8% annually was applied through 2025 and then decreases to 4% annually.

**2.a.2 Office Overhead**

2015 – 2022 - Budget includes expenditures for a variety of administrative costs, including but not limited to supplies, county gas, postage, computer system equipment and software, equipment, equipment leases, furniture/fixtures, copier contract, utilities, dues, rent for administration building, record center fees, in-kind county office expenses, insurance expenses, travel, staff training, and other miscellaneous expenses. The costs shown for 2015 through 2022 are actual expenses.

2023 – 2034 - Projecting into the future, costs are projected to inflate at 8% annually through 2025 and then decrease to 4% annually.

**2.b. Facility Operation****2.b.1 MRF/Recycling Center**

Expenses in 2015 and 2016 were costs for the Collection Center. These costs are located in line item 2.b.4 Special Waste.

**2.b.2 Compost – no planned direct expenses****2.b.3 Transfer – no planned direct expenses****2.b.4 Special Waste**

This budget includes building maintenance, repairs, rent, and internet service for the Collection Center. Costs are projected to increase at 8% annually through 2025 and then decrease to 4% annually.

**2.d. Recycling Collection****2.d.1 Curbside – no planned direct expenses****2.d.2 Drop-off – no planned direct expenses****2.d.3 Combined Curbside/Drop-off**

2015 – 2022 – Expenses for the Community Incentive Grant. As with most grant programs, grant cycles, and grant reimbursement period, the total grants awarded do not always match the dollars expended during a calendar year. Grant funding levels were \$375,000, \$300,000, and \$275,000 in 2015, 2016, and 2017 respectively. In addition, in 2017, \$300,000 was paid to the City of Lorain to convert to a PAYT program. This was a financial agreement made in previous solid waste plans.

Line 2.3d will not include an ongoing budget. Line 2.p Other includes budgeting for grant match dollars starting in 2023 and ongoing. The District will assist communities in applying for Ohio EPA and other grants and has funding set aside to assist with the required grant match. The District plans to fund the required grant match up to a maximum dollar value for the community projects based on grant criterion to be established by the District Policy Committee.

#### 2.d.4 Multi-family – no planned direct expenses

2.d.5 Business/Institutional – Budget includes a flat annual amount to address new initiatives related to targeting school generators to implement programs.

#### 2.d.6 Other – no planned direct expenses

### 2.e Special Collections

2.e.1 Tire Collection – Through 2022, the District maintained three tire collection sites. Beginning January 2023, two sites are now maintained. It is the eventual plan to transfer the Lorain tire collection site to a small business and the District will maintain the tire collection site at the Lorain County Collection Center. Costs shown from 2015 to 2022 are actual costs. Planning period costs are projected to inflate at 8% annually through 2025 and then decrease to 4% annually.

2.e.2 HHW Collection – Budget varied significantly from 2015 to 2022 due to administrative and operational changes at the Collection Center. The budget includes costs to manage HHW materials collected at the Collection Center, including a contract with a third party to transport and process the materials. Planning period costs are projected to inflate at 8% annually through 2025 and then decrease to 4% annually.

2.e.3 Electronics Collection – Costs include vendor costs to manage electronics. In 2017, the District used an electronics vendor that did not charge the District to manage electronics and then provided the District with a share of the profit from the sale of the recycled materials. Planning period costs are projected to inflate at 8% annually through 2025 and then decrease to 4% annually.

2.e.5 Other Collection Drives – The budget for “Other Collection Drives” includes costs to manage fluorescent bulbs and ballasts collected at the Collection Center, including a contract with a third party to transport and

process the materials. Planning period costs are projected to inflate at 8% annually through 2025 and then decrease to 4% annually.

**2.f Yard Waste/Other Organics** – Funding allocated in 2018 was earmarked for completing a study to evaluate the feasibility of building and operating an organics processing facility in Lorain County. The amount allocated was based on a proposal received by a private contractor. The full amount was not spent because after the initial phases of the study were completed, it was identified that adequate tonnage could not be secured in order to make the facility financially sustainable. Funding to evaluate whether there is interest in establishing a yard waste/organics collection consortium or District organics facility is absorbed in the District personnel costs.

**2.g. Education/Awareness**

**2.g.1. Education Staff** - The budget includes funding to supplement the salary of the Agricultural Agent from the OSU Extension Office. The Agricultural Agent provides organics and composting education to residents. Planning period costs are projected to inflate at 8% annually through 2025 and then decrease to 4% annually.

**2.g.2 Advertisement/Promotion** - Budget is allocated for promoting special recycling events. Planning period costs are projected to inflate at 8% annually through 2025 and then decrease to 4% annually.

**2.g.3 Other** - Included funding for the Lorain County Recycling Scholarship for 2018 and 2019. From 2024 to the end of the planning period, the budget includes funding for providing an educational toolkit for communities to decrease contamination. The budget also includes funding to assist with zero waste plans, initiatives, and programs for communities. The Zero Waste planning process can include professional services costs such as consulting and attorney fees, as well as expenditures related to equipment or infrastructure in order to implement the zero waste plans.

While the District does not specify how the budget will be broken down amongst these activities, it expects that there will be an initial outlay of costs to develop the educational toolkit, then minimal costs for updating and making it available thereafter.

The District also expects to use this line to provide match funds for grants, donations, and sponsorships to assist in the build out of the existing County Sustainability Collection Center located in the same building as the Lorain County Collection Center at 540 S Abbe Rd, Elyria, OH 44035. The goal is to outfit the current empty space with educational and interactive exhibits designed to teach visitors about the solid waste management process. The District will be soliciting grants and donation funding to provide the educational exhibits for this space. Funding is provided in this line to pay for

some exhibits up front to be reimbursed by sponsors, donors, and grantees. The revenue from these reimbursements will then be recorded in Income "Other" and will not impact the ongoing fund balance.

If the District does not use all of the allocated resources for this program annually, the remaining budget will go into the unencumbered fund balance.

**2.h. Recycling Market Development**

**2.h.1. General Market Development Activities** - A flat annual budget is allocated for District Market Development Grants (Commissioner Grants).

**2.h.2. ODNR pass-through grant** - The District is not projecting any expenditures from grant related revenue since grants are not projected on the revenue side.

**2.i. Service Contracts** – no planned direct expenses

**2.j. Feasibility Studies** - no planned direct expenses

**2.k. Waste Assessments/Audits** - The District is allocating a flat annual amount for completing a small-scale audit/assessment annually or a more involved study bi-annually. This amount is based on the District's knowledge of how much these projects have cost in the past to complete. The District's ability to use this funding is completely reliant on identifying appropriate candidates and having the candidates agree to participate in an assessment/audit. If non-profits or businesses are not interested or do not agree to participate in the District's program, unspent funding will be carried over to the next year.

**2.l. Dump Cleanup** - no planned direct expenses

**2.m. Litter Collection/Education** - A flat annual amount is allocated for the Clean and Beautiful (CAB) program and Pride Day.

**2.n. Emergency Debris Management** - A flat budget is allocated annually for Emergency Debris Management.

**2.o. Loan Payment** - no planned direct expenses

**2.p. Other** - A flat amount of \$130,000 is allocated annually beginning in 2024 for community investment and matching funds to communities and for other projects. The District plans to fund the required grant match up to a maximum dollar value for the community projects. Also, as the District continues to explore the organics infrastructure and landscape there could be development of an organics processing facility (Class IV minimum) which funds could be used to support. If funding for this line item is not used, it

can be rolled over for a period of three years. If it is not spent within three years of the budget allocation, the funding will revert to the District's fund balance.

3. **Health Department Enforcement** - no planned direct expenses
4. **County Assistance**  
4.a. Maintaining Roads – no planned direct expenses.
5. **Well Testing** - no planned direct expenses
6. **Out-of-State Waste Inspection** - no planned direct expenses
7. **Open Dump, Litter Law Enforcement**  
7.a. Health Departments –Note that expenditure categories were not consistently reported in Quarterly Fee Reports prior to 2018. In 2017, all funding provided to health departments in Lorain County, regardless of the purpose, was reported in budget line item 7.a *Health Departments*. No further budget for this activity is planned to start in 2023.  
7.b. Local Law Enforcement – Prior year funding was provided for the Sheriff's Department Environmental Crimes Unit. No further budget for this activity is planned to start in 2023.

Table O-8 presents a summary of the revenues, expenses, and balance. The balance shown for year 2018 is forced and not calculated. In preparing this 2024 Plan Update the ending balance for 2021 reported on the Quarterly Fee Report was not aligning with the auditor reports. Further investigations and review identified discrepancies in submitted Quarterly Fee Reports. The District reconciled 2019, 2020 and 2021. Discrepancies track prior to 2019 but the District did not reconcile prior to 2019. The end balance for 2018 was forced in and matches the auditor reports. The expenses shown in this 2024 Plan Update for years 2019, 2020, 2021, and 2022 are accurate.

**Table O-8. Budget Summary**

Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
2014			Ending Balance	\$2,047,150
2015	\$2,812,453	\$2,370,710	\$441,743	\$2,488,893
2016	\$2,738,673	\$2,576,610	\$162,063	\$2,650,956
2017	\$2,979,671	\$2,735,218	\$244,453	\$2,895,409
2018	\$2,535,324	\$2,351,593	\$183,731	\$3,289,803
2019	\$2,828,729	\$2,575,521	\$253,208	\$3,543,011
2020	\$2,613,494	\$1,982,101	\$631,393	\$4,174,404
2021	\$2,358,919	\$2,341,218	\$17,701	\$4,192,105

2022	\$2,142,206	\$2,348,544	-\$206,338	\$3,985,767
2023	\$2,142,206	\$1,790,265	\$351,941	\$4,337,708
2024	\$2,142,206	\$1,994,422	\$147,784	\$4,485,493
2025	\$2,142,206	\$2,023,335	\$118,871	\$4,604,364
2026	\$2,142,206	\$2,132,949	\$9,257	\$4,613,621
2027	\$2,142,206	\$2,112,949	\$29,257	\$4,642,878
2028	\$2,142,206	\$2,092,949	\$49,257	\$4,692,135
2029	\$2,142,206	\$2,092,949	\$49,257	\$4,741,393
2030	\$2,142,206	\$2,132,949	\$9,257	\$4,750,650
2031	\$2,142,206	\$2,112,949	\$29,257	\$4,779,907
2032	\$2,142,206	\$2,092,949	\$49,257	\$4,829,165
2033	\$2,142,206	\$2,092,949	\$49,257	\$4,878,422
2034	\$2,142,206	\$2,132,949	\$9,257	\$4,887,679
2035	\$2,142,206	\$2,112,949	\$29,257	\$4,916,937
2036	\$2,142,206	\$2,092,949	\$49,257	\$4,966,194
2037	\$2,142,206	\$2,092,949	\$49,257	\$5,015,451

### 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 District is intending to complete the inside display installation for a Sustainability Education Center starting in 2023 that is housed in the existing facility Lorain County Collection Center on South Abbe Rd. in Elyria.



## **APPENDIX P**

## **DESIGNATION**



## APPENDIX P. Designation

### A. Statement Authorizing/Precluding Designation

Ohio law gives each SWMD 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.<sup>1</sup>

Even though a SWMD has the legal right to designate, it cannot do so until the policy committee (or the Board in the case of an Authority) specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If the SWMD desires 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 (Board) designates facilities, only designated facilities can receive the SWMD's waste. In more explicit terms, 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 when 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 the time period available to the board for making a decision on a waiver request.

#### 1. Authorization Statement to Designate

The District is hereby authorized to establish facility designations in accordance with ORC Section 343.013, 343.014 and 343.015.

#### 2. Description of the SWMD's Designation Process

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<sup>1</sup> Source-separated recyclables delivered to a "legitimate recycling facility" as defined in Ohio law are not subject to the requirements of designation. (A legitimate recycling facility is loosely defined as a facility which consistently recycles a majority of the materials processed on-site.)

Decisions regarding designation, or the granting of a designation waiver, shall be made by the District, following a review of the request by the Policy Committee. Copies of applicable resolutions for the District's most recent designation process are included in Appendix V.

Where the District designates facilities, it may grant a waiver to a non-designated entity to provide solid waste disposal, transfer, or resource recovery facilities or activities at any time after the plan update is approved and in accordance with the criteria specified in ORC 343.01(I)(2). The District and County Commissioners will evaluate each request for designation or waiver based upon, at least, the following general criteria:

- The facility's compatibility with the District's Solid Waste Management Plan.
- The facility's compliance with all rules promulgated by the District and the District's Solid Waste Management Plan.

## B. Designated Facilities

The currently designated facilities for the solid waste generators are shown in **Table P-1**.

**Table P-1. Facilities Designated**

Facility Name	Location		Facility Type	Year Designated
	County	State		
<b><i>In-District</i></b>				
Lorain County Landfill	Lorain	OH	Landfill	2009
<b><i>Out-of-District</i></b>				
None.				
<b><i>Out-of-State</i></b>				
None.				

## C. Waiver Process for the Use of Undesignated Facilities

Any person may apply for a waiver from the designation requirements established in this Plan Update. The Waiver Process clarifies who may request a waiver and the information to be provided. The application for the waiver must explain the basis for the Board to grant the waiver request. Any person or the legislative authority of a municipal corporation or township may request a waiver authorizing the delivery of solid waste generated within the District to an undesignated solid waste facility. The waiver request shall include the following:

1. The name, address, telephone number, and email address of the person requesting the waiver.
2. The source and name of the generator of the solid waste included in the waiver request.
3. The name, address, telephone number, and email address of the undesignated solid waste facility where solid waste generated within the District will be delivered if the waiver is approved by the Board.
4. The estimated annual tonnage of the solid waste that will be delivered to the undesignated solid waste facility covered by the waiver request.
5. An explanation describing how approval of the waiver request is not inconsistent with the projections contained in the District's initial or amended Plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code.
6. An explanation describing how the approval of the waiver request will not adversely affect implementation and financing of the District's initial or amended Plan pursuant to the implementation schedule contained in the District's initial or amended Plan under division (A)(12)(a) of section 3734.53 of the Revised Code.

Any waiver granted by the Board of Commissioners shall be included in a waiver agreement by and between the Board of Commissioners and the person granted the waiver. The waiver agreement shall contain the terms and conditions upon which the waiver was granted and the payment by the grantee of the waiver fee, if any, assessed on each ton of solid waste covered by the waiver.

#### **D. Documents**

The most current resolution to designate the Lorain County Landfill to receive solid waste generated within the District is on file in the District offices.



## **APPENDIX Q**

### **DISTRICT RULE**



## APPENDIX Q. District Rules

### A. Existing Rules

The following rules were adopted during implementation of the previously ratified solid waste management district plan. These rules will remain in place following the approval of this Plan update. The Board reserves the right to modify any of these rules at any time and nothing contained in these proposed rules limits the authority of the Board to promulgate further rules in accordance with Section 343.01(G) of the Ohio Revised Code in order to fully implement this Plan.

The purpose of the rules and regulations is to give the District a basis for future solid waste management planning and to provide direction in achieving the recycling and waste minimization goals.

#### 1. ***Rule Lorain SWMD-01 – Definitions for Applicants for Solid Waste Facility Permits, Registrations or Licenses***

The following definitions are applicable to all District rules.

- a. **Person** shall mean a person, municipal corporation, township or other political subdivision proposing to construct or modify a Solid Waste Facility, Incinerator or Solid Waste Energy Recovery Facility within the District.
- b. **Board of Commissioners** means the Board of County Commissioners of Lorain County, Ohio.
- c. **Designated Facility** or **Designation** means a Solid Waste disposal, transfer, recycling or resource recovery facility which the Board of Commissioners has authorized to receive solid waste generated within the District pursuant to R.C. 343.01(I)(2) and the District's solid waste management plan.
- d. **District** means the Lorain County Solid Waste Management District.
- e. **General Plans and Specifications** shall mean that information required to be submitted to the Board for review for the construction or modification of any proposed Solid Waste Facility and includes, but is not limited to, a site plan for the proposed facility, architectural drawings or artists' renderings of the proposed facility, the projected size and capacity of the proposed facility and all other information identified in this Siting Strategy.

- f. **Incinerator** means any equipment, machine, device, article, contrivance, structure or part of a structure used to burn solid or infectious wastes to ash.
- g. **Material Recovery Facility** means a facility used to separate, sort, or process Solid Waste in order to segregate materials with value for recycling.
- h. **Modify** shall mean a significant change in the operation of an existing in-District Solid Waste Facility: (1) that requires the approval of the Director of the Ohio Environmental Protection Agency; or (2) that involves a change in the type of material, manner of operation, or activities conducted at the facility (i.e., a conversion of a legitimate recycling facility to a transfer station).
- i. **Person** shall mean a natural person, partnership, association, public or private corporation, limited liability company, municipal corporation, township, government unit or other political subdivision or agency thereof, or any other entity.
- j. **Recycle** or **Recycling** means the activity of collecting, sorting, cleansing, processing and reconstituting Solid Waste and returning reconstituted materials to commerce as valuable commodities for use or exchange.
- k. **Recycled Materials** means articles of Solid Waste that have been Recycled.
- l. **Siting Strategy** shall mean the process by which the Board of Commissioners shall review proposals for the construction or modification of any Solid Waste Facility and determine whether such proposal complies with the *Plan Update*.
- m. **Solid Waste** means such unwanted residual solid or semisolid 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 normally would be included in demolition debris, nontoxic fly ash and bottom ash, including at least ash that results from the combustion of coal and ash that results from the combustion of coal in combination with scrap tires where scrap tires comprise not more than fifty percent of heat input in any month, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health, and includes, but is not limited to, garbage, scrap tires, combustible and noncombustible material, street dirt, and

debris. **Solid Waste** does not include any material that is an infectious waste or a hazardous waste.

- n. **Solid Waste Energy Recovery Facility** means any site, location tract of land, installation or building where mixed solid waste or select solid waste streams, including scrap tires, is used as or intends to be used as fuel to produce energy, heat, or steam.
- o. **Solid Waste Facilities** shall mean all solid waste collection, storage, disposal (landfill), transfer, recycling, processing, and resource recovery facilities.
- p. **Solid Waste Transporter (SWT)** shall be defined as a person or company who engages in the enterprise of collection and transportation of solid waste, source separated recyclables, source separated yard waste or organic waste, by truck, or other hauling vehicle that uses the public roadways for the loading and unloading of solid waste, recyclables, yard waste and who possesses all required licenses and registrations from local, state, and federal governmental entities and authorities as appropriate and relevant including all requirements under these regulations.
- q. **Source-separated Recyclable Materials** means Solid Waste which the generator or producer intends to be Recycled and has separated from other Solid Waste at the point of generation or the point of collection.
- r. **Waiver Agreement** means the standard form of agreement, approved by the Board of Commissioners, that is entered into between the District and a party that requests a waiver under R.C. 343-01(I)(2) and the District's solid waste management plan, to authorize delivery of Solid Waste generated within the District to a facility not designated by the Board of Commissioners.
- s. **Yard Waste** means yard waste that has been separated at the point of generation or at the point of collection from other Solid Wastes.

Any applicant as defined above for a permit-to-install, registration or license for a solid waste facility, incinerator or energy recovery facility under Ohio solid waste law or regulations shall comply with the Siting Strategy presented in the solid waste management *Plan Update*. In this Plan Update, the siting strategy is located in *Appendix S*.

**2. Rule Lorain SWMD-02-Solid Waste Facility Review**

Any person owning or operating a solid waste or recycling facility within the District shall do the following:

- a. Submit three copies of any Permit-to-Install (PTI) application required by the Ohio EPA to the District for review and approval.
- b. Submit three copies of all plans and specifications for expansion, modification or new solid waste or recycling facility to the District for review and approval.
- c. Comply with the requirements of the *Plan Update Appendix S Siting Strategy for Facilities*.

**3. Rule Lorain SWMD-03- Reporting Collection of Recyclable Materials and Solid Waste Facility Annual Report Data Submittal**

- a. Any person that collects Solid Waste generated within the District, or provides Solid Waste transfer, processing, resource recovery, Recycling or Material Recovery Facility services within the District, shall report the quantity, volume or amount of Source-separated Recyclable Materials collected, and the amount of Recyclable Materials recovered, to the District's Re-TRAC Connect Survey System using the form prescribed by the District and the reporting periods prescribed by the District. The District shall provide copies of its prescribed reporting form, and instructions for completing and submitting the reporting form on the District's website at and/or by regular mail upon request.
- b. By April 1 of each year, any person owning or operating a solid waste facility shall submit information and data summarizing solid waste disposal; residential, commercial, and industrial recycling; and solid waste transfers for the preceding calendar year. Such information shall be submitted in a format to be provided by the District, or if approved by the District, the same format and forms submitted to the Ohio EPA.

**4. Rule Lorain SWMD-04 – Waiver Process for the Use of Undesignated Facilities**

Any person may apply for a waiver from the requirements of Designation by submitting an application for a Waiver Agreement in compliance with the application process specified in *Appendix P* of the District's solid waste management plan. Waivers that are granted shall use the standard form of

Waiver Agreement approved by the Board of Commissioners. A party that enters into a Waiver Agreement with the District shall comply with all of the terms and conditions of the Waiver Agreement.

The Waiver Process clarifies who may request a waiver and the information to be provided. The application for the waiver must explain the basis for the Board to grant the waiver request. Any person or the legislative authority of a municipal corporation or township may request a waiver authorizing the delivery of solid waste generated within the District to an undesignated solid waste facility. The waiver request shall include the following:

- a. The name, address, telephone number and email address of the person requesting the waiver.
- b. The source and name of the generator of the solid waste included in the waiver request.
- c. The name, address, telephone number and email address of the undesignated solid waste facility where solid waste generated within the District will be delivered if the waiver is approved by the Board.
- d. The estimated annual tonnage of the solid waste that will be delivered to the undesignated solid waste facility covered by the waiver request.
- e. An explanation describing how approval of the waiver request is not inconsistent with the projections contained in the District's initial or amended Plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code.
- f. An explanation describing how the approval of the waiver request will not adversely affect implementation and financing of the District's initial or amended Plan pursuant to the implementation schedule contained in the District's initial or amended Plan under division (A)(12)(a) of section 3734.53 of the Revised Code.

Any waiver granted by the Board shall be included in a waiver agreement by and between the Board and the person granted the waiver. The waiver agreement shall contain the terms and conditions upon which the waiver was granted and the payment by the grantee of the waiver fee, if any, assessed on each ton of solid waste covered by the waiver.

## 5. **Rule Lorain SWMD-05 – Fee Payment Forms**

A solid waste facility, incinerator or energy recovery facility, as defined in Rule Lorain-01 or the District Siting Strategy in the solid waste management

plan, which is required to make a fee payment to the solid waste district as required by Ohio Revised Code or contractual requirements must complete in full the district fee form. The fee form must be completed per the instructions on the form. A fee form that is not completed per the instructions will be considered deficient and the owner/operator of the solid waste facility, incinerator or energy recovery facility will receive a written request from the District to revise the submitted Fee Payment Form with the missing requested information. The owner/operator will have 14 business days from receipt of the letter to complete the form and return it in compliance with the request.

#### **6. *Rule Lorain SWMD-06 – Designated Solid Waste Facility***

No person, municipal corporation, township, or other political subdivision shall deliver, or cause the delivery of, any Solid Waste generated within the Lorain County Solid Waste Management District to any Solid Waste transfer, disposal, recycling, or resource recovery facility other than a facility designated by the Board of Commissioners pursuant to the District's solid waste management plan, unless such Solid Waste is: (a) expressly exempted from the requirements of Designation under Ohio law or District Rules; or (b) delivered directly to a properly licensed and permitted solid waste facility located outside the State of Ohio; or (c) delivered in compliance with the terms and conditions of a Waiver Agreement entered into with the District authorizing delivery to a facility that is not designated by the Board of Commissioners. The only facility currently designated by the Board of Commissioners to receive Solid Waste generated within the district is the Lorain County Landfill, located at 43502 Oberlin-Elyria Road, Oberlin, Ohio 44074.

#### **7. *Rule Lorain SWMD-07 – Solid Waste Exempt from Designation***

The following Solid Waste is exempt from the requirements of designation and may be delivered to a properly licensed and permitted facility that is not designated by the Board of Commissioners:

- a. Solid Waste generated by and collected at industrial facilities located within the District that are classified in SIC code 20 and 22-39 or North American Industrial Classification System (NAICS) manufacturing codes 31, 32 and 33.
- b. Source-separated Recyclable Materials that are delivered to a community drop-off, resource recovery facility, Material Recovery Facility, transfer facility for collection and delivery to a legitimate Recycling facility, or a broker, processor or manufacturer that uses post-consumer products as a raw material.

- c. Source-separated Yard Waste is to be delivered to any registered, licensed, permitted yard waste management composting facility.

**8. *Rule Lorain SWMD-08 – Registration of Solid Waste Transporters***

All Solid Waste Transporters, as defined in Rule Lorain County SWMD-01 definitions doing business within the borders of the Lorain County Solid Waste Management District must register with the Lorain County Sheriff's Department and obtain a registration sticker. Registration must be completed in person at the Lorain County Sheriff's Department on forms provided by the Sheriff's Department and must be completed in full.

All Solid Waste Transporters operating within the borders of the Lorain County Solid Waste Management District at the time this Rule is adopted must register with the Lorain County Sheriff's Department within three (3) months of the effective date of this Rule.

Following the effective date of this Rule, prior to commencement of operations within the borders of the Lorain County Solid Waste Management District, any new Solid Waste Transporter must register with the Lorain County Sheriff's Department.

All Solid Waste Transporters must annually update registration information during the month of December and obtain an annual registration sticker from the Lorain County Sheriff prior to January 1.

Any Solid Waste Transporter that fails to comply with the registration requirements in this Rule shall be fined \$5,000. Each day of violation constitutes a separate offense.

**9. *Rule Lorain SWMD-09 – Commingled Loads Hauled by Registered Solid Waste Transporters***

Registered solid waste transporters shall not combine waste or recyclables generated within the jurisdiction of the Lorain County Solid Waste District with any other solid waste districts solid waste as defined by ORC 343.

**10. *Rule Lorain SWMD-10 – Enforcement of District Rules***

The violation or threatened violation by any person of any rule promulgated by the Board of Commissioners of Lorain County, as the statutory Board of Directors of the Lorain County Solid Waste Management District, shall be referred to the Lorain County Prosecuting Attorney, who shall take such action as he or she deems appropriate pursuant to ORC Section 343.03 and 343.99 of the Ohio Revised Code, or as otherwise deemed appropriate under the laws of the State of Ohio or any applicable political subdivision.

**B. Rule Making Authority – ORC 343.01**

The solid waste management plan provides the authority to the Board of County Commissioners to adopt, publish, and enforce all the rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

**ORC 343.01(G)(1)**

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of directors of a joint district may adopt, publish, and enforce rules doing any of the following:

- (1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities covered by the plan, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code, except that the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:
  - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
  - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
  - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;
  - (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;

- (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met;
- (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

**ORC 343.01(G)(2)**

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary engineer or, in the case of a joint district, a county sanitary engineer designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or operation of any such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

"Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules

adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility under general plans and specifications for the proposed improvement have been submitted to and approved by the Board of County Commissioners . . . as complying with solid waste management plan or amended plan of the District. The construction of such a facility . . .”

#### **ORC 343.01(G)(3)**

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district's solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district's solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

#### **ORC 343.01(G)(4)**

Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan or amended plan 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 facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

### **C. Rule Making Authority – ORC 3734.53**

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

- (1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this

section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:

- (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
- (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
- (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;
- (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
- (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met;
- (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

(2) Governing the maintenance, protection, and use of solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district;

(3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan;

- (4) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan 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 facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

**D. Proposed Rules**

The District is not proposing to develop any new rules but reserves the right to develop new rules or amend existing rules at any point in the planning process.

**E. Rule Approval Process**

The Board of Commissioners shall consider the following process when adopting solid waste management rules.

1. Public Notice of the solid waste management rules in a daily newspaper operating in the District.
2. 30-day public comment period.
3. Public Hearing on the proposed rules (Commissioners meetings will suffice as a public hearing).
4. Make any appropriate changes to the proposed rules as a result of C1, C2, and C3.

Following steps (C) 1-4, the Board shall adopt the rules of the solid waste management district.

For the proposed changes in this *Plan Update*, the public notice, comment period and public hearing required for the ratification of this Plan along with the Board of Commissioners approval, will be sufficient for rule adoption.



## **APPENDIX R**

### **BLANK SURVEY FORMS AND RELATED INFORMATON**





## LORAIN COUNTY COMMISSIONERS

Matt Lundy  
President

Michelle Hung  
Vice President

David J. Moore  
Member



### 2021 Business Recycling Survey

This recycling survey is being conducted by the Lorain County Solid Waste District to identify the type and amount of recyclables generated within Lorain County during 2021. The District will use this information for summary purposes only; no company's survey response will be reported individually. Your response to this survey will help measure Lorain County's progress toward state-mandated recycling goals and help us provide programs that meet local needs.

PLEASE RETURN COMPLETED SURVEY BY APRIL 2, 2022 USING ONE OF THESE METHODS:

Email: [ebarber@genvironmental.com](mailto:ebarber@genvironmental.com)

Fax: (614) 899-9255

Mail: use pre-paid envelope.

If you have any questions or need assistance completing the survey, contact the District's consultant, Emily Barber, at (614) 964-7294 or the email above.

#### 1. Contact Information (this information will be kept private):

Company Name: \_\_\_\_\_

Company Mailing Address: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Number of Employees: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email address: \_\_\_\_\_

NAICS Code: \_\_\_\_\_  I would like someone to reach out to me for more information about recycling options.

#### 2. Does your organization recycle? (please check one)

Yes (CONTINUE)

No (END – Please return survey as directed above)

#### 3. Materials Recycled in 2021

Please complete the following table (cont. on other side) by reporting the amount of materials recycled in **2021** that were generated within Lorain County. In the "Amount" column, enter the quantity recycled in 2021, then check the unit of measurement in the "Measurement" column. You may estimate if necessary. In the "Recycler" column, please indicate the hauler that collects the reported material or where the material will go after it leaves your establishment.

Material	Amount	Measurement	Name of Recycler or Hauler
Example: Mixed/Commingled Recycling	3.5	<input type="checkbox"/> Pounds <input checked="" type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards  <i>Recycling Brothers of Ohio</i>
Mixed/Commingled Recycling		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Paper (Newsprint, Office, Glossy, Books etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Cardboard/Paperboard		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards
Glass		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons	<input type="checkbox"/> Cubic Yards

Material	Amount	Measurement	Name of Recycler or Hauler
Ferrous Metals (Steel, Iron): <i>NO</i> auto bodies or construction/demolition materials such as rebar		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Non-Ferrous Metals (Aluminum, Copper, Brass): <i>NO</i> auto bodies or construction/demolition materials such as aluminum siding		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Plastics (#1-#7)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Other Plastic Bags/Film Plastics		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Wood (Excluding Pallets)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Wood - Pallets		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units	
Food <i>NO</i> Cooking Oil		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons	
Yard Waste (Grass, Leaves, Branches)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Appliances (White Goods)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units	
Rubber (Excluding Tires)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Used Tires		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units	
Electronics (Computers, TVs, Cellphones, etc.)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units	
Dry-cell/Household Batteries		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Lead-acid Batteries (i.e. Automotive Batteries)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units	
Ink/Toner Cartridges		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Number/Units	
Textiles (Clothing, Fabrics)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Non-Exempt Foundry Sand		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Gallons	
Ash (recycled only)		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Flue Gas Desulfurization Waste		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	
Other (specify):		<input type="checkbox"/> Pounds <input type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards	

(Optional): The following chart may provide assistance with calculating **cardboard** recycling:

Cardboard Dumpster	Size of Dumpster (cubic Yards) (a)	Percentage Full When Picked Up (b)	No. of Pickups per Week (c)	Estimated Cardboard Recycled (Tons) (a) x (b) x (c) x 52 / 20
Example	6 cubic yards	80% full	1 time/week	(6 x 0.80 x 1 x 52 / 20) = 12.48 tons
1				
2				
Total Cardboard Recycled in Tons (Enter in <b>Cardboard</b> row below)				

**THANK YOU FOR YOUR HELP!**



## **APPENDIX S**

### **SITING STRATEGY**



## APPENDIX S. Siting Strategy

The District's Siting Strategy includes the following:

Submission and Review of Plans and Specifications and Application of Siting Strategy to Proposed Solid Waste Facilities, Maximum Feasible Utilization, and Exemption of Existing in-District Solid Waste Facilities.

### A. Definitions

For the purposes of this appendix, the following definitions shall apply:

- a. **Solid Waste Facilities** shall mean all solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities.
- b. **Incinerator** means any equipment, machine, device, article, contrivance, structure, or part of a structure used to burn solid or infectious wastes to ash.
- c. **Solid Waste Energy Recovery Facility** means any site, location tract of land, installation, or building where mixed solid waste or select solid waste streams, including scrap tires, is used as or intends to be used as fuel to produce energy, heat, or steam.
- d. **Siting Strategy** shall mean the process by which the Board of Commissioners shall review proposals for the construction or modification of any Solid Waste Facility and determine whether such proposal complies with the Plan Update.
- e. **General Plans and Specifications** shall mean that information required to be submitted to the Board for review for the construction or modification of any proposed Solid Waste Facility and includes, but is not limited to, a site plan for the proposed facility, architectural drawings or artist renderings of the proposed facility, the projected size and capacity of the proposed facility, and all other information identified in this Siting Strategy.
- f. **Applicant** shall mean a person, municipal corporation, township, or other political subdivision proposing to construct or modify a Solid Waste Facility, Incinerator, or Solid Waste Energy Recovery Facility within the District.
- g. **Modify** shall mean a significant change in the operation of an existing in-District Solid Waste Facility: (1) that requires the approval of the Director of the Ohio Environmental Protection Agency; or (2) that involves a change in the type of material, manner of operation, or activities conducted at the facility (i.e., a conversion of a legitimate recycling facility to a transfer station).

**B. Purpose and Objective**

The District's Siting Strategy for Solid Waste Facilities ensures that proposals to construct a new Solid Waste Facility, Incinerator, or Solid Waste Energy Recovery Facility within the District or modify an existing Solid Waste Facility, Incinerator, or Solid Waste Energy Recovery Facility within the District are in compliance with the *Plan Update*. The Board shall not approve the General Plans and Specifications for any proposed Solid Waste Facility, Incinerator, or Solid Waste Energy Recovery Facility or the modification of any existing in-District Solid Waste Facility, Incinerator, or Solid Waste Energy Recovery Facility where the construction and operation of the proposed facility, as determined by the Board, will: (1) have significant adverse impacts upon the Board's ability to finance and implement the *Plan Update*; (2) interfere with the Board's obligation to provide for the maximum feasible utilization of existing in-District Solid Waste Facilities; (3) materially and adversely affect the quality of life of residents within 500 feet of the proposed facility; or (4) have material adverse impacts upon the local community, including commercial businesses and other public facilities (schools, hospitals, libraries, places of worship, etc.) within 500 feet of the proposed facility and the adequacy of existing infrastructure to serve the proposed facility.

Except as otherwise provided herein, all proposed Solid Waste Facilities, Incinerators or Solid Waste Energy Recovery Facilities whether to be sited by or on behalf of the District, or by or on behalf of any person, municipal corporation, township, or other political subdivision, shall be subject to this Siting Strategy and shall comply with the requirement to submit General Plans and Specifications to the District.

**C. Siting Procedure Limited Exemption**

Notwithstanding the foregoing requirement, existing in-District Solid Waste Facilities specifically identified in this Siting Strategy are not subject to this Siting Strategy unless the owner or operator of any such in-District Solid Waste Facility proposes a modification to the operation of the in-District Solid Waste Facility:

- (1) Requires the approval of the Director of the Ohio Environmental Protection Agency; or
- (2) Involves a change in the type of material, manner of operation or activities conducted at the facility (i.e., a conversion of a legitimate recycling facility to a transfer station).

**D. Requirements**

The District requires that General Plans and Specifications for all proposals to construct any new Solid Waste Facility, Incinerator or Solid Waste Energy Recovery Facility within the District or modify any existing in-District Solid Waste

Facility be submitted for a determination by the Board of whether such General Plans and Specifications and the proposals comply with the *Plan Update*. The District may adopt a rule upon final approval of this *Plan Update* as follows:

"No person, municipal corporation, township or other political subdivision, shall construct or modify any solid waste transfer facility, disposal facility, recycling facility, material recovery facility, incinerator or solid waste energy recovery facility until the General Plans and Specifications for the proposed improvement have been submitted to and approved by the Board as complying with the *Plan Update*."

## **E. Procedure Implementing Siting Strategy**

Unless otherwise provided herein, or an exemption or waiver from this requirement has been granted by the Board, the following procedure and process shall be followed in the event the construction of a new Solid Waste Facility, Incinerator or Solid Waste Energy Recovery Facility or the modification of an existing in-District Solid Waste Facility is proposed within the District:

### **STEP 1: Submittal of Plans and Specifications**

Any person, municipal corporation, township or other political subdivision proposing to construct a new Solid Waste Facility, Incinerator or Solid Waste Energy Recovery Facility or modify an existing in-District Solid Waste Facility shall:

- a. Provide General Plans and Specifications of the proposed facility to the Board. Such General Plans and Specifications shall include, but may not be limited to, the following documents and information:
  - i. a site plan for the proposed facility;
  - ii. architectural drawings or artists renderings of the proposed facility;
  - iii. availability of necessary utilities;
  - iv. projected size, daily and annual processing capacity in tons, and air space capacity using the proposed maximum daily waste receipt limit;
  - v. hours of operation;
  - vi. anticipated source of solid waste or recyclable materials to be received at the proposed Solid Waste Facility, Incinerator or Solid Waste Energy Recovery Facility. If recycling activities will be conducted at the proposed facility, a detailed description of the recycling activity including materials to be recycled, technology to be utilized to accomplish the separation and processing of the recyclable materials, the anticipated percentage of waste reduction

anticipated from the operation of the facility and the identification of the market for the sale of the recyclable materials recovered at the facility must be submitted;

vii. types and anticipated number of vehicles utilizing the proposed Solid Waste Facility, Incinerator or Solid Waste Energy Recovery Facility on an hourly and daily basis;

viii. routes to be used by vehicles utilizing the facility and methods of ingress and egress to the facility; and

ix. any other information necessary for the Board to evaluate whether the proposed Solid Waste Facility, Incinerator or Solid Waste Energy Recovery Facility complies with each of the criteria listed below.

b. Adequately demonstrate to the Board that the construction or modification and subsequent operation of the proposed Solid Waste Facility will:

i. be consistent with the goals, objectives, projections and strategies contained in the *Plan Update*;

ii. not adversely affect financing for the implementation of the *Plan Update*;

iii. not adversely affect the Board's obligation to provide for the maximum feasible utilization of existing in-District solid waste facilities;

iv. be installed, operated and maintained to be harmonious and appropriate in appearance and use with the existing or intended character of the area;

v. be adequately served by essential public facilities and services;

vi. not create excessive additional requirements at public cost for public facilities or services;

vii. not be detrimental to the economic welfare of the community;

viii. not involve the excessive production of traffic, noise, smoke, fumes or odors;

ix. have vehicular approaches to the property that are designed not to create an interference with traffic;

x. does not result in the destruction, loss or damage of a natural, scenic, or historic feature of major importance; and

- xi. not adversely affect property values within the surrounding community.
- c. The Applicant shall submit any additional information the Board requests to establish, to the reasonable satisfaction of the Board, that the construction or modification and subsequent operation of the proposed Solid Waste Facility or proposed modification of an existing in-District Solid Waste Facility will comply with the *Plan Update*.

## STEP 2: Board Review

The Board shall conduct a review of the information submitted for the proposed Solid Waste Facility to determine whether the Applicant has adequately demonstrated that the proposed Solid Waste Facility will be constructed or modified and subsequently operated in compliance with the *Plan Update* and demonstrated that the impacts listed in Step 1 do not adversely affect the District, its residents and businesses. The Board may expend District funds to employ a consultant or consultants familiar with Solid Waste Facility construction and operation, land use planning and solid waste planning to assist the Board in implementing this Siting Strategy and in its determination of whether a proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility complies with the *Plan Update*.

Within sixty days of receiving the General Plans and Specifications from an applicant, the Board shall make a determination as to whether the General Plans and Specifications submitted by the applicant contain sufficient information for the Board to complete its review of the proposal. In the event the Board determines that more information is necessary to complete its review of the proposal, the Board shall notify the Applicant of such request in writing.

Within ninety days of determining that the Applicant has submitted a complete set of General Plans and Specifications, the Board shall determine whether the proposal complies with the *Plan Update* and the criteria identified in Step 1 herein. The Board shall notify the Applicant of its decision in writing. While the Board has broad discretion regarding the approval of General Plans and Specifications for a proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility, it is the intent of this Siting Strategy that the Board shall not approve General Plans and Specifications for a proposed Solid Waste Facility unless the Board determines that the proposed Solid Waste Facility or modification of an existing in-District Solid Waste Facility complies with the *Plan Update* and the criteria identified in Step 1 herein.

## STEP 3: Development Agreement

In the event the Board determines that the proposed construction or modification and subsequent operation of a Solid Waste Facility complies with the *Plan Update*,

the person, municipal corporation, township or other political subdivision proposing to construct or modify the Solid Waste Facility shall enter into a development agreement with the District which memorializes the obligations that are the basis of the Board's conclusion that the General Plans and Specifications demonstrate that the proposed facility or its modification complies with the *Plan Update*. The party proposing to construct a Solid Waste Facility shall have an ongoing obligation to comply with the *Plan Update* and the development agreement.

## F. Waiver

The Board reserves the right to waive application of the requirement for the submission and Board approval of General Plans and Specifications, and any portion or all of the Siting Strategy or otherwise grant exceptions to the rules of the District, or unilaterally modify or amend the Siting Strategy if the Board concludes such waiver, modification or amendment is in the best interest of the District, its residents and businesses and will assist the Board in the successful implementation of the *Plan Update* and further District goals with respect to solid waste and waste reduction activities.

A determination by the Board to construct or modify any District-owned Solid Waste Facility shall be deemed to be in compliance with the *Plan Update* and the other requirements of these rules.

### **Waiver for Legitimate Recycling Facilities**

The Board has a strong commitment to encouraging the development of recycling and waste reduction activities that are consistent with the waste reduction, reuse and recycling goals as may be required by the Ohio Revised Code, the Ohio Administrative Code, the State Solid Waste Management Plan and the *Plan Update*. Upon adequate demonstration to the Board of the likelihood of attainment of certain waste reduction goals, the Board may waive application of the Siting Strategy for any facility determined by the Board as likely to qualify as a "legitimate recycling facility" as defined in Section 3745-27-01(C)(2) of the Ohio Administrative Code.

In the event an Applicant desires a waiver from the application of the Siting Strategy for a legitimate recycling facility, the Applicant shall submit sufficient information to the Board regarding the proposed facility, the waste reduction method to be implemented, technology to be used in the operation of the facility, the source and type of waste to be received at the facility, the materials to be removed from the waste stream and the anticipated amount of waste reduction.

The Board shall review the proposal following the procedures and process in Step 2 of this Siting Strategy and determine whether the waste reduction standards required by OAC Section 3745-27-01(C)(2) are likely to be satisfied at the proposed facility. In the event the Board determines that such facility is likely to

qualify as a legitimate recycling facility, the Board may grant a waiver of the application of the Siting Strategy to the proposed facility.

Such waiver may be made contingent upon the execution of a development agreement by which the proposed facility will be obligated to meet the proposed waste reduction standards on a continuing basis and such other obligations regarding operation of the facility as the Board shall require, including such recordkeeping and reporting requirements as may be necessary to establish compliance with the waste reduction goals. Failure to comply with the terms of any such agreement may result in the revocation of Board approval for operation of any such facility. As part of any such development agreement, the Board may require such bond or other assurances in such amounts as the Board determines, in its discretion, shall be necessary to assure that funds are available for the removal of the facility or conversion of the facility to a legal use in the event of non-compliance with waste reduction standards or other obligations as set forth in the development agreement.



## **APPENDIX T**

### **MISCELLANEOUS PLAN DOCUMENTS**



## **APPENDIX T. Miscellaneous Required Information**

During the process of preparing the plan, the policy committee signs three official documents certifying the plan. These documents are as follows.

1. Certification Statement for the Draft of the Solid Waste Management Plan- The policy committee signs this statement to certify that the information presented in the draft plan submitted to the Ohio EPA is accurate and complies with format 4.1.

## CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the Lorain 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 Lorain 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 ten 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.

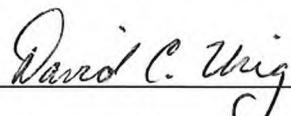
Representing the County Commissioners



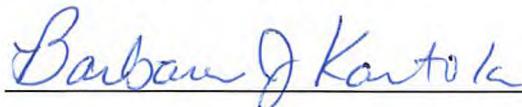
Representing CEO of Largest City



Representing County Health Department



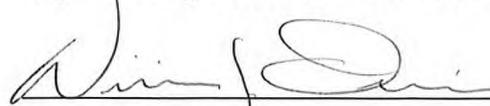
Representing Townships



Representing Commercial/Industrial Generators



Representing the General Interest of Citizens



Representing the Public

Date Signed

10/11/2022

Date Signed

10/11/2022

Date Signed

10-11-2022

Date Signed

10/11/2022

Date Signed

10/11/2022

Date Signed

10/11/2022

Date Signed

## RECEIPT

## THE MORNING JOURNAL

MorningJournal.com

05/24/23

401 Broadway Ave. Suite B  
Lorain, Ohio 44052

Phone: (440) 245-6901 Fax:

Account:	1428932
Name:	<b>VICTORIA KISH</b>
Company:	<b>LORAIN COUNTY SOLID WASTE</b>
Address:	<b>226 MIDDLE AVE 5TH FLR ELYRIA, OH 44035</b>
Telephone:	<b>(440) 328-2248</b>
Description:	<b>PUBLIC NOTICE LORAIN COUNTY SOLID WA</b>

Gross:	<b>\$437.60</b>
Paid Amount:	<b>- \$437.60</b>
Amount Due:	<b>\$0.00</b>

Date:	<b>05/24/23</b>
Ad Date:	<b>05/26/23</b>
Class:	<b>1201</b>
Ad ID:	<b>2476736</b>
Ad Taker:	<b>CRSKELLNER</b>
Sales Person:	<b>Stephanie Kellner</b>
(029358)	
Words:	<b>586</b>
Lines:	<b>73</b>
Agate Lines:	<b>148</b>
Depth:	<b>8.125</b>
Inserts:	<b>2</b>
Blind Box:	
P.O. Number:	
Notes:	<b>victoria</b>

## Publication

The Morning Journal, morningjournal.com

## Ad sample

**PUBLIC NOTICE**  
LORAIN COUNTY SOLID WASTE MANAGEMENT DISTRICT  
Public Comment Period and Public Hearing  
Notice for the Draft Solid Waste Management Plan Update

**Waste Management Plan Update**  
The Lorain County Solid Waste Management District (District) is establishing a 30-day written comment period (June 1, 2023 – June 30, 2023) on the draft Solid Waste Management Plan Update, which complies with Section 373.05 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 developed, and a demonstration of the District's ability to achieve state solid waste access and 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. Solid Reduction, and 6. Solid Waste Business Plan. 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 Solid Waste/Industrial/Commercial/Recycling, Waste Generation Data, a Strategic Evaluation of Old and New Proposed District Programs, Methodology to Select Program Priorities, 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 more than 25 years of capacity remaining for the Lorain County Landfill located in the District and other landfills available to the District. The average for all landfills used to manage waste generated in Lorain County during the 2019 reference year had an average life expectancy of more than 50 years. Under the plan, the District will continue to encourage and to designate facilities in accordance with Section 343.014 and 343.015 of the Ohio Revised Code. The Lorain County Landfill is the only facility currently designated. Additional facilities will be designated by the Board of Commissioners upon a waiver for the facility.

The draft Plan Update complies with State Plan Goal #1: Providing infrastructure for recycling access to over 80% of the population. The District is committed to maintaining its status as one of the top recyclers in the state.

The District primarily funds plan programs and current operations through a disposal fee and contract fees. A disposal fee of \$2.00 per ton is charged on in-district, out-of-district, and out-of-state solid waste disposed in Lorain County. The District also charges a disposal fee of \$1.00 per ton to Lorain Waste Services for each ton of waste disposed at the Lorain County Landfill that is generated outside the District. Currently, the District is not considering changes to the main funding source for the Plan.

The District will hold a public hearing to obtain oral comments regarding the draft Plan Update on Tuesday, July 11, 2023, at 8:00 AM at the Lorain County Administration Building on the 1st floor in the Community Hearing Room located at 226 Middle Ave., Lorain, OH 44035. The District will also accept written comments as required by Ohio Revised Code Section 373.455 on the draft Plan Update from June 1, 2023 until June 30, 2023. Written comments should be sent to Mr. David Barnes, Director of Solid Waste Management, 226 Middle Ave., 5th Floor, Elyria, OH 44035, or by email to [dwbarne@loraincountyo.oh.us](mailto:dwbarne@loraincountyo.oh.us). The draft Plan Update is available for review at the following locations: • District Office: 226 Middle Ave., 5th Floor, Elyria, OH 44035 • City Hall: 401 Broadway Ave., Lorain, OH 44052 • District website at: <https://www.loraincountyo.oh.us/solidwaste> Please call (440) 329-5440 with any questions about the Plan Update.

2476736/May 26, 2023

We Appreciate Your Business!  
Thank You VICTORIA KISH!



MediaNews Group

## **Resolution Adopting the Solid Waste Management Plan**

**Resolution # 2023-02**

**A RESOLUTION DECLARING THAT THE AMENDED SOLID WASTE MANAGEMENT PLAN FOR THE LORAIN COUNTY SOLID WASTE MANAGEMENT DISTRICT (DISTRICT) HAS BEEN ADOPTED.**

Whereas, the District has completed the draft amended solid waste management Plan and submitted it to the Ohio Environmental Protection Agency for review and comment on October 14, 2022 and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on November 22, 2022.

Whereas, the Policy Committee has reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and taken their comments into consideration and incorporated changes into the amended Plan as appropriate;

Whereas the District has conducted a 30-day comment period (June 1 – June 30) and a public hearing held on Tuesday, July 11, 2023 to provide the public an opportunity to have input in this Plan;

**NOW, THEREFORE, BE IT RESOLVED** that the Lorain County Solid Waste Management District:

1. Adopts the amended Plan for the Lorain County Solid Waste Management District.
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 the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the ten-year period covered by the Plan, are accurate and are in compliance with the requirements of the District Solid Waste Management Plan Format, version 4.1.

This resolution shall be in effect immediately upon its adoption.

**Voting for the Resolution:**

**Voting Against the Resolution:**

David C Zieg

\_\_\_\_\_

Barbora Kartola

\_\_\_\_\_

Mun Alld

\_\_\_\_\_

J Bradley

\_\_\_\_\_

Wing Pois

\_\_\_\_\_

Dac A Bain

\_\_\_\_\_

D. J.

\_\_\_\_\_

Total Votes for the resolution: 7

Total Votes against the resolution: 0

*PASSED 7.11.23*

## Resolution Certifying Ratification of the Solid Waste Management Plan

Resolution No. \_\_\_\_\_

A resolution declaring that the amended solid waste management plan for the Lorain County Solid Waste Management District has been ratified in accordance with Section 3734.55 of the Ohio Revised Code.

Whereas, the Lorain County Solid Waste Management District held a public hearing on July 11, 2023, and the Policy Committee adopted the amended solid waste management plan on July 11, 2023 following the hearing.

Whereas, the Lorain County Solid Waste District Policy Committee has received copies of resolutions and ordinances approving the amended solid waste management plan from the Board of County Commissioners, the legislative body of the largest municipality in the Lorain County Solid Waste Management District and from legislative jurisdictions representing 100% of the population of the District, which exceeds the minimum of at least 60 percent of the population within the District.

NOW THEREFORE BE IT RESOLVED that the Solid Waste Management District Policy Committee of the Lorain County Solid Waste Management District declares the amended Solid Waste Management Plan to be ratified in accordance with Section 3734.55 of the Ohio Revised Code, and shall cause the amended solid waste management 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 the resolution:

Barbara J. Kardis  
Alvin J. Davis  
David C. Urig  
J. Bradley  
D. J. M.  
D. L. K.  
John R. Czaputa

Voting against the resolution:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This is to certify that the foregoing is a true and correct copy of the resolution passed by the Solid Waste Management District Policy Committee on November 14, 2023 and recorded in the Journal of said Policy Committee.

Date: \_\_\_\_\_

Barbara J. Kardis  
Policy Committee Chairman



## **APPENDIX U**

## **RATIFICATION RESULTS**



## APPENDIX U. Ratification Results

Lorain County Solid Waste District			
Community	Population		Date Resolution Adopted
	Approved	Rejected	
Lorain County Commissioners	✓		8/22/2023
Cities			
Amherst city	12,870		8/28/2023
Avon city	25,266		9/25/2023
Avon Lake city	25,588		10/24/2023
Elyria city	52,816		9/6/2023
Lorain city**	65,430		9/19/2023
North Ridgeville city	36,240		10/2/2023
Oberlin city	8,249		10/16/2023
Sheffield Lake city	8,973		9/26/2023
Vermilion city*	10,688		8/7/2023
Townships			
Amherst township	5,515		8/8/2023
Brighton township	863		8/14/2023
Brownhelm township	1,899		10/9/2023
Camden township	1,292		8/7/2023
Carlisle township	7,143		8/21/2023
Columbia township	4,234		8/7/2023
Eaton township	5,904		8/15/2023
Elyria township	3,252		8/4/2023
Grafton township	2,801		8/15/2023

Henrietta township	1,786		8/10/2023
Huntington township	960		9/5/2023
LaGrange township	4,013		8/14/2023
New Russia township	1,840		8/15/2023
Penfield township	1,823		9/19/2023
Pittsfield township	1,597		10/14/2023
Rochester township	633		8/14/2023
Sheffield township	1,496		8/21/2023
Wellington township	1,347		8/11/2023
<b>Villages</b>			
Grafton village	5,594		9/19/2023
Kipton village	208		9/25/2023
LaGrange village	2,797		9/28/2023
Rochester village	159		8/7/2023
Sheffield village	4,312		9/25/2023
South Amherst village	1,573		9/25/2023
Wellington village	4,824		10/9/2023
<b>Total</b>	<b>313,985</b>	<b>0</b>	
<b>County Population</b>	<b>313,985</b>	<b>313,985</b>	
<b>Ratification Percentage:</b>		<b>100%</b>	

*\*Adjusted population includes residents of Vermilion city in Erie County.*

*\*\*Largest municipality - Required for ratification.*





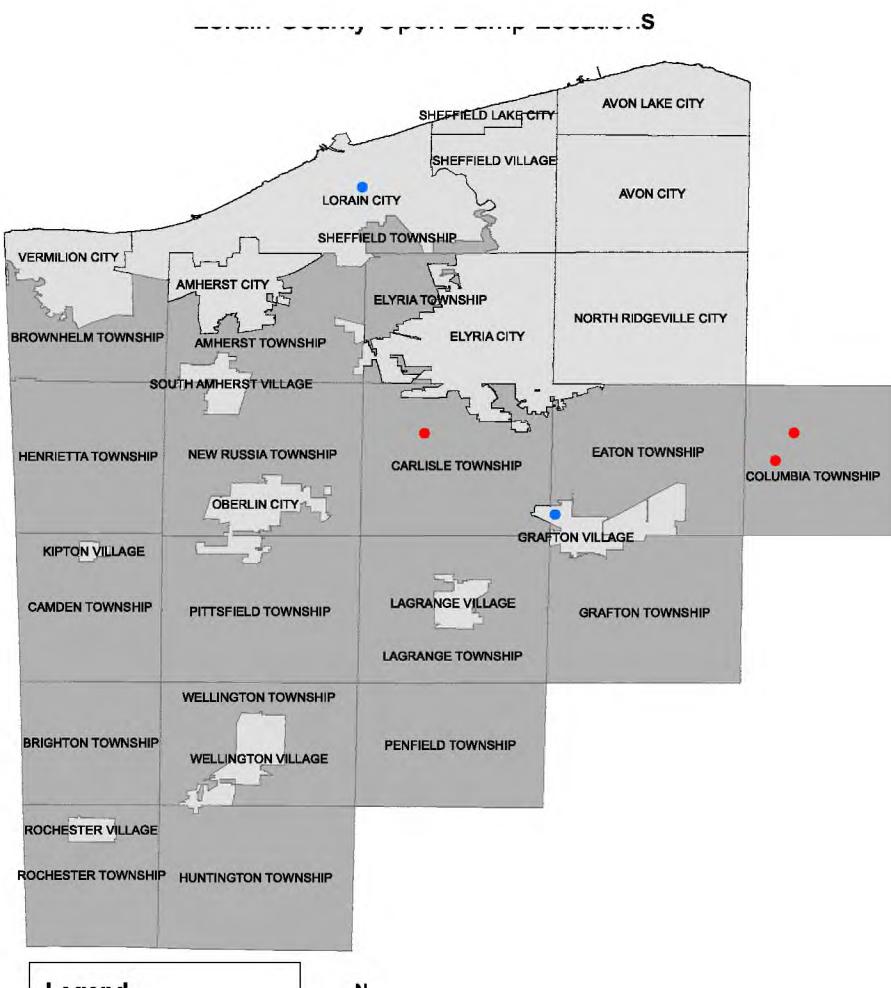
## **APPENDIX V**

# **INVENTORY OF OPEN DUMPS AND OTHER DISPOSAL FACILITIES**

## APPENDIX V. Inventory of Open Dumps and Other Disposal Facilities

In accordance with Ohio Revised Code 3734.53(A)(2) and (A)(6) the District must provide an inventory of the following facilities in the District.

- Solid Waste open dump sites, including scrap tires
- Disposal facilities for fly ash and bottom ash, foundry sand, and slag (none – map omitted).





## **APPENDIX W**

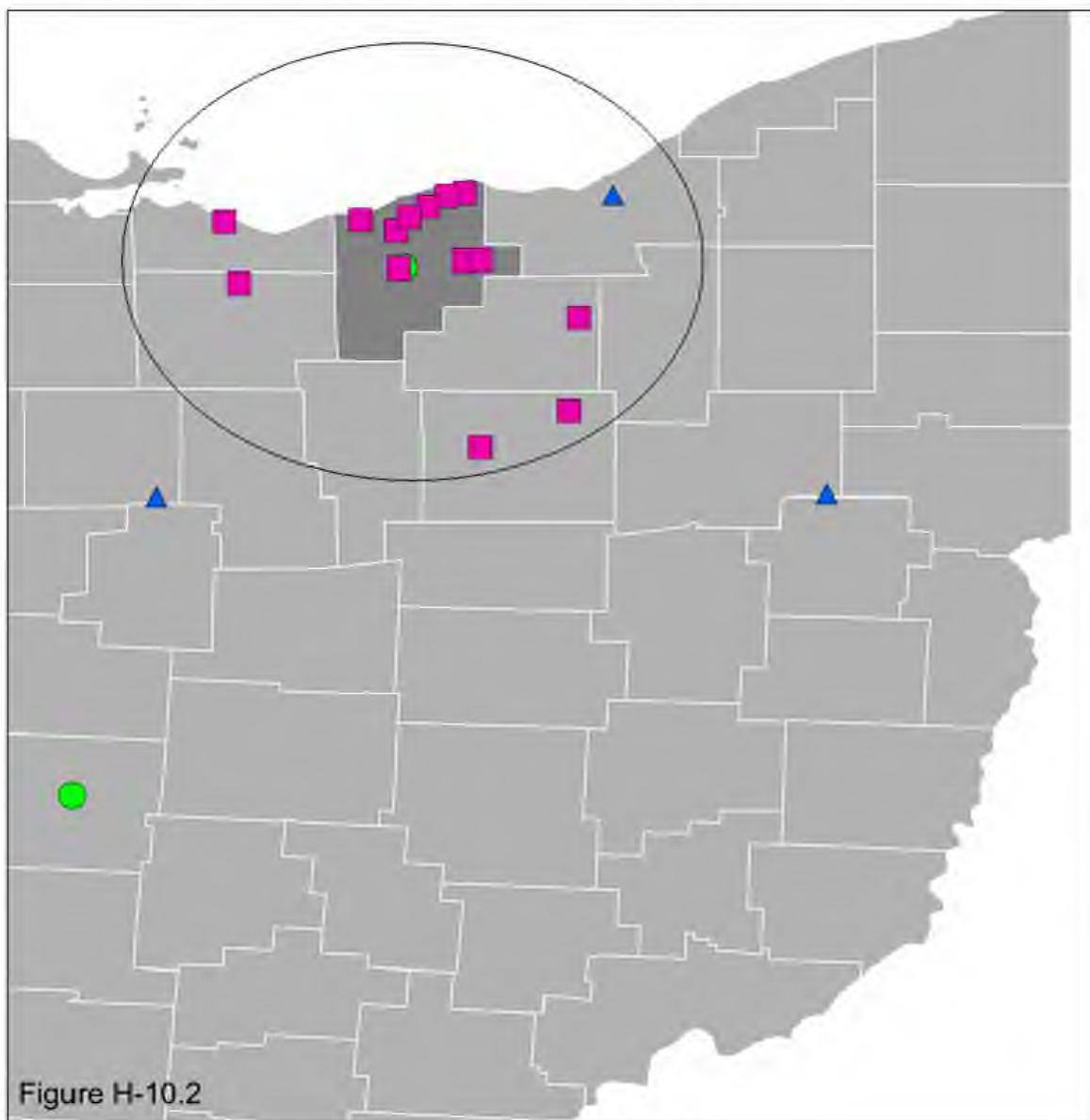
## **DISTRICT MAP**



## **APPENDIX W. District Map**

In accordance with Ohio Revised Code 3734.53(A)(2) and (A)(6) the District must provide an inventory of the following facilities in the District.

## Lorain Regional Recovery Facilities



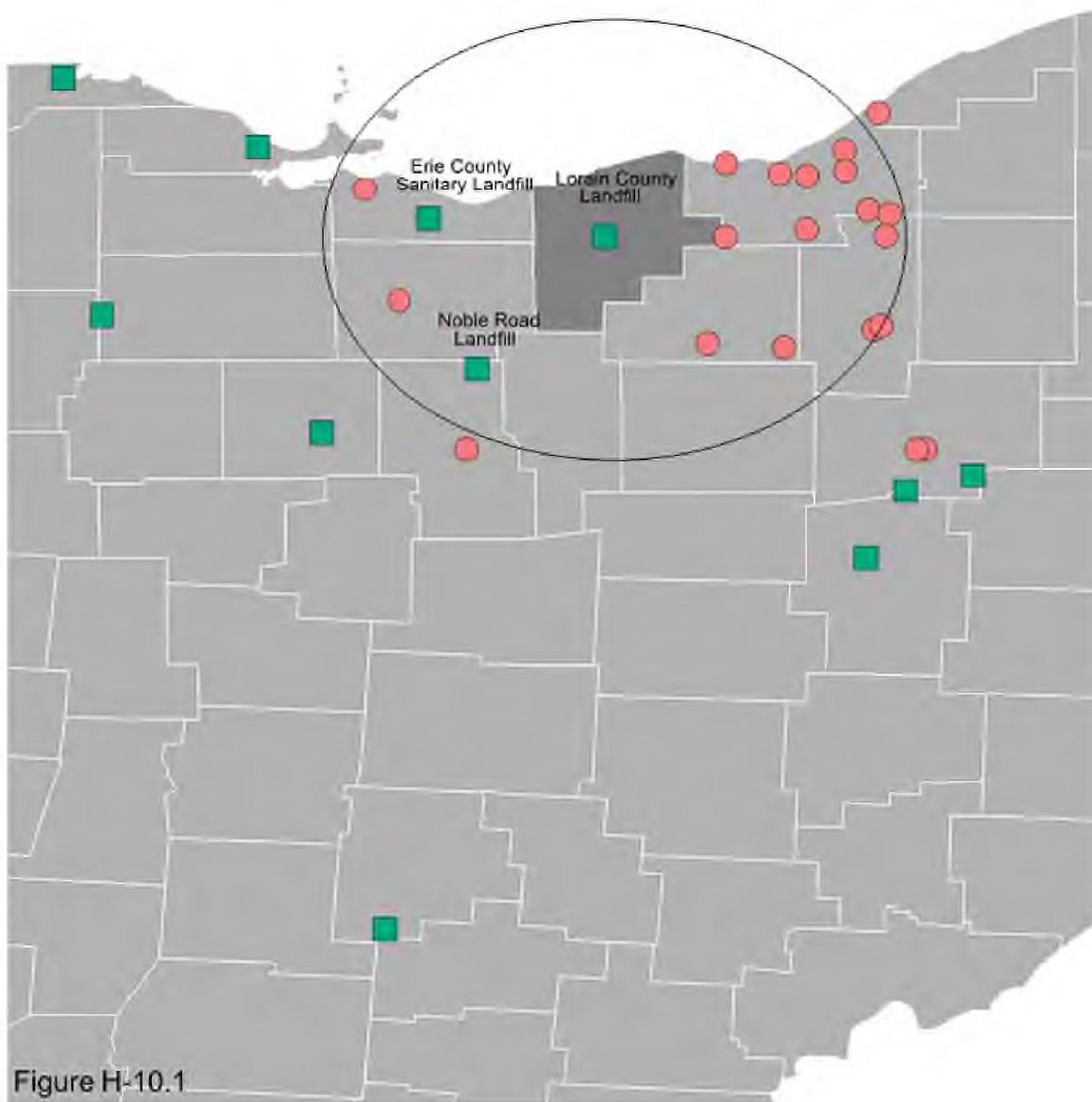
### Legend

- ▲ Scrap Tire Facility
- Compost Facility
- Material Recovery Facility



**SOLID WASTE  
APPROVED**  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
February 21, 2024  
AS EVIDENCED BY COPY OF  
LETTER OF APPROVAL  
ATTACHED HERETO

## Regional Disposal Facilities



### Legend

- Regional Landfills
- Regional Transfer Stations

